TRANSPORTATION 2040 TOMORROW

A Long Range Transportation Plan for the Rockford Region





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5/14/2015 Version

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Rockford Metropolitan Agency For Planning

our future, our goals, our map

2040 LONG RANGE TRANSPORTATION PLAN
FOR THE
ROCKFORD METROPOLITAN AGENCY FOR PLANNING

DRAFT- Released May 14, 2015

This plan was prepared by RMAP Staff in collaboration with its member agencies, partnership organizations, and local stakeholders.

Federal law requires the Plan to be updated every five years. This Plan can be amended or updated at any time. Comments and proposed refinements or changes should be directed as follows:

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SECTION 1
INTRODUCTION

Background

Planning for the transportation needs of the Rockford Region is an ongoing process that has been performed by the Metropolitan Planning Organization (MPO) for the past 50 years. This Long Range Transportation Plan (LRTP) reflects the historic work of the Rockford Area Transportation Study (RATS), the current work of the Rockford Metropolitan Agency for Planning (RMAP) and suggests how the Region will provide for its transportation needs over the next 30 years. This version of the LRTP is an update of the 2040 plan rather than an entirely new plan. This allows the MPO to reflect present-day Federal guidelines and regulations while being able to utilize comments from the public, information gleaned at publicly held meetings and other events. Comments from the various committees of RMAP made over the past five years as well as recommendations from Federally mandated MPO Certification Reviews also serve as a foundation for the changes to the document. Additionally, this document utilizes data from the 2010 decennial census; 2012 American Community Survey (ACS) 3-Year Estimates and 2012 ACS 5-Year Estimates. Other data sources have been maintained or updated as necessary, and new national, regional and local planning initiatives have been incorporated in as appropriate. Even while the Plan is being prepared there are unforeseen events and factors occurring that create the necessity to update the LRTP every five years; thus this plan is a constantly ongoing process of revision and refinement; a living document.

Evolution of the Metropolitan Planning Organization

Until 2008, the MPO was known as the Rockford Area Transportation Study (RATS) and was situated within the Public Works Department of the City of Rockford. In 2008, RATS was reorganized, relocated and renamed the Rockford Metropolitan Agency for Planning (RMAP). The RMAP offices are located in the Pioneer Building at 313 N. Main Street, on the West Side of the Rock River in Rockford's downtown River District. Please note that throughout this and other documents, the legacy term RATS may be used for historical accuracy. The terms RATS and RMAP are meant to be interchangeable, and should be viewed as such.

Until the reorganization, RATS was primarily able to manage only that which was required by law: federally mandated documents, allocation of federal funds to projects desired by the member organizations of the MPO, and other such duties. However, with the reorganization, RMAP staff was increased, allowing the potential for the MPO to partake in more planning activities than before. While RMAP's primary task is transportation planning, as being primarily provided with transportation funding through the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA) and the Illinois Department of Transportation (IDOT); corridor studies, independent research projects, and participation in the land use and environmental planning processes of the surrounding municipalities are just a few examples of the types of undertakings that RMAP has been involved in. As such, this LRTP is also expanded to include analyses and recommendations on a level that was not possible in previous Long-Range Plans for the Rockford Region. Moving forward, RMAP intends to modernize and improve the quality and content of not only the LRTP itself, but the entire library of its documents and initiatives.

In 2010, the Rockford Metropolitan Agency for Planning and Rockford Region was one of forty-five communities nationwide to secure a grant from the HUD-DOT-EPA Partnership for Sustainable Communities. From 2010-2013 RMAP was able to utilize these funds to collect data, generate regional indicators, form committees that furthered regional collaboration among various stakeholders and develop the area's first Regional Plan for Sustainable Development (RPSD). As part of this process, it was determined that the most prudent way to proceed forward with the development of sustainable practices, strengthening and subsequent furthering of regional economic development and coordinated infrastructure investments would be to develop a regional governance model.

This structure would be fashioned through either a regional planning commission (RPC) or council of governments (COG). RMAP as it currently exists is neither a RPC nor a COG. Some of the core areas of the RPSD fall outside of the MPO planning goals and primary objectives of the information that is required to be included in a long-range transportation plan. From a professional planning perspective, the RPSD would be a central focus task of a regional planning commission/council of governments that would include and connect many of the issues that urban areas and the overall planning process are confronted with. The FHWA/FTA planning funds that RMAP receives through our IDOT Intergovernmental Agreements are restricted to transportation planning activities/factors and those direct impacts that are set forth under the authorized federal legislation. Transportation planning factors are meant to be for projects that are based upon the "continuing, comprehensive transportation planning process carried out cooperatively by states and local communities in conformance" (3-C) with federal law. As the development of the Rockford Region RPC/COG moves forward, the MPO will play a key role in the transportation planning elements of its overall regional planning initiatives.

LRTP

Local, state and federal governments have the responsibility of constructing, operating, and maintaining most of the transportation systems in the Rockford Metropolitan Planning Area (MPA). The movement of people and goods is an important function of government, as it affects the economic well-being of the Region. RMAP has the responsibility of planning for the future connectivity and integration of the transportation system. RMAP is also known as an MPO, which is a federal designation used for government agencies responsible for transportation planning in urban areas. MPO and RMAP are used interchangeably in this LRTP.

The primary elements of the LRTP pertain to the transportation network of the Region which addresses all modes of transportation and stresses the integration and connectivity of these components. Additionally information regarding land use, environmental and economic linkages and trends to the transportation network of the region are incorporated into this document as well. The final chapter of this long range transportation plan compiles and responds to any and all Public Comments that were received by RMAP staff regarding the LRTP process.

The 3-C Planning Process

Beginning with 1962 Federal Aid Highway Act, MPOs have been federally required to develop metropolitan transportation plans and programs following a Continuing, Cooperative, and Comprehensive (3-C) Planning Process:

Cooperative- A collaborative effort involving collaboration between federal, state, and local levels of governments and including multiple opportunities for public participation.

Continuing- Frequent revisions and updates to reflect changing needs and conditions.

Comprehensive- Integrating a broad range of land use, economic, demographic, social, and environmental considerations into the transportation planning process.

Goal and Objectives

The overall goal of this Plan is to promote a safe and efficient transportation system for people and goods in the RMAP MPA through a continuing, comprehensive, cooperative process. The intent is to provide a balanced multi-modal transportation system that minimizes costs and impacts to the taxpayer, society and the environment. The Plan is a cooperative venture of RMAP, all area local governments, the Illinois Department of Transportation and the public and private transit providers. The plan seeks to not only satisfy existing federal requirements for an MPO, but to look forward to forthcoming issues and important topics to the region as a whole and better prepare the regional landscape for the challenges and needs of the future. The Plan adopts the following goals in meeting federal guidelines for transportation planning:

- Support the economic vitality of the Rockford MPA, especially by enabling global competitiveness, productivity and efficiency.
- Increase the safety and security of the transportation system for motorized and non-motorized users.
- Increase the accessibility and mobility options available to people and freight. Accessibility and mobility is discussed throughout this LRTP. Emphasis is placed on linking low-income households with employment opportunities, community services and community amenities through public transit. Transportation is a concern for low-income persons. Some low-income persons simply cannot afford to own or maintain automobile and as a result are often times public-transit dependent.
- Protect and enhance the environment, promote energy conservation, and improve the quality of life. These goals are discussed throughout the LRTP.
- Integrate and connect the transportation modes for people and freight. Integration and connectivity are major themes that are discussed throughout this LRTP.
- Promote efficient system management and operation. Again, the promotion of an efficient transportation system is a theme throughout this LRTP.
- Efficiently preserve the existing transportation system. It is important that the existing system be maintained and used in the fullest and most cost-effective manner before funds are used on new transportation facilities. Funding priority is assigned to maintaining existing facilities.

Table 1-1 below shows a list of all maps within this LRTP, for ease of access.

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SECTION 2
MPO FRAMEWORK

This section explains the elements that define the Long Range Transportation Plan (LRTP), including federal guidance, state guidance, the planning process of the Rockford Metropolitan Agency for Planning (RMAP), socio-economic trends and forecasts, local land use planning, transportation modeling, public funding, public participation, and environmental justice.

Federal Guidance

The federal government has a distinct and important role in the overall transportation planning process for the Rockford Metropolitan Planning Area (MPA). The federal government is the primary provider of funding for transportation planning and capital improvements. The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), the 1998 Transportation Efficiency Act for the 21st Century (TEA-21), the 2005 Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) and the 2012 Moving Ahead for Progress (MAP-21), require that the Rockford urbanized area, as a condition of federal financial assistance, have a continuing, cooperative and comprehensive (3-C) transportation planning process. These laws provide policy and funding directives for multiple modes of transportation including aviation, automobiles, bicycles, pedestrian, rail, transit, and trucks.

SAFETEA-LU officially expired at the end of 2009, but the federal government enacted temporary extensions prolonging its authority until September 30th, 2012. On July 6, 2012, President Obama signed into law P.L. 112-141, the Moving Ahead for Progress in the 21st Century Act (MAP-21). MAP-21 creates a streamlined, performance-based, and multimodal program to address the many challenges facing the U.S. transportation system. These challenges include improving safety, maintaining infrastructure condition, reducing traffic congestion, improving efficiency of the system and freight movement, protecting the environment, and reducing delays in project delivery. Various MAP-21 provisions will be discussed in further detail throughout this document. MAP-21 has been extended through Continuing Resolution.

The federal government provides ongoing guidance for the transportation planning process. For example, the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) conduct certification reviews of the RMAP transportation planning process. The most recent review, dated June 2012, requested that RMAP put more emphasis on the following:

- RMAP should perform an annual self-assessment in support of the federally required self-certification and including a more formal tracking of their compliance with these requirements as well as more formal tracking of progress towards planning and public participation goals. This assessment should utilize performance measurement wherever feasible.
- The next iterations of the Metropolitan Transportation Plan and the Transportation Improvement Program must identify costs in Year of Expenditure dollars to accurately reflect the time-value of money.
- The next iteration of the Metropolitan Transportation Plan should maximize the use of performance measures including those identified by the Congestion Management Process and the Regional Plan for Sustainable Development in order to direct and prioritize transportation investments and policy.
- RMAP should investigate a variety of outreach and marketing techniques to increase visibility of the MPO's website. Additionally, RMAP should explore the use of social media for outreach and informational purposes.
- The MPO should continue to utilize its substantial foundation of demographic and socioeconomic analysis as well as their wealth of data concerning transportation investments and services in the region to document the conclusion that traditionally underserved populations are not being neglected or discriminated against by the MPO directly, its individual members, or by the region collectively on a broader scale.
- U.S. DOT encourages close coordination among the MPO, implementing agencies, and State and Federal representatives concerning the environmental screening of projects in the MTP. It should be understood that all decisions are preliminary and may change, perhaps even substantially, in the NEPA process. The goal for now should be to be able to identify issues or concerns that will need to be studied in NEPA and begin to identify data and analysis that may be appropriate to carryover from planning to NEPA.

RMAP has taken these recommendations from the previous Certification Review into consideration and to its best extent possible, incorporated these elements into the updated Long Range Transportation Plan. Efforts to further integrate these recommended elements will continue within the RMAP transportation planning process.

State Guidance

IDOT has responsibility for planning, construction and maintenance of its extensive transportation network, which encompasses, highways, bridges, airports, public transit, rail freight and rail passenger systems. As such, IDOT has the following roles in transportation planning:

- IDOT is a voting member on both the RMAP Policy and Technical Committees.
- IDOT reviews and comments on the planning documents prepared by RMAP including the LRTP, the Unified Work Program (UWP) and the Transportation Improvement Plan (TIP).
- Illinois is actively involved in the funding of transportation projects in the MPA (see Section 8, Roadways and Section 7, Transit).
- IDOT is responsible for the operation and maintenance of its roads in the Rockford MPA.
- The IDOT Bureau of Design and Environment Manual establishes uniform policies and procedures for the location, design and environmental evaluation of highway construction and reconstruction projects on the state highway system. While this manual is directed towards the state highway system, it provides standards that are used for many local roadways projects.

The Regional Planning Process

The transportation planning process is required for the Region to obtain federal transportation funding for transportation projects. This section will explain how RMAP undertakes this task.

Rockford Metropolitan Agency for Planning

RMAP is an organization of officials, planners, engineers and citizens that meet on an ongoing basis to study transportation needs and formulate transportation plans and programs. The laws of Illinois allow multiple government jurisdictions to contract together for the purpose of carrying out federally mandated planning duties. The authority of RMAP and its responsibilities and duties are set forth in a Cooperative Agreement dated August 28, 2014. The government jurisdictions that are signatories to the Cooperative Agreement make up the RMAP Policy Committee. The Policy Committee is responsible for directing the activities and procedures of RMAP. The government jurisdictions and their representatives are listed in Table 2-1.

The Cooperative Agreement also calls for a Technical Committee that provides advice and recommendations to the Policy Committee. Table 2-2 lists the representatives that make up the Technical Committee.

RMAP Staff, consisting of five planning professionals and one office manager, is assigned to perform day-to-day transportation planning staff functions, long-range planning, and a host of other duties as coordinated by the Executive Director at the behest of the Policy Committee.

The RMAP Metropolitan Planning Area (MPA)

The area where RMAP performs transportation planning is called the Rockford MPA. The Rockford MPA has three parts:

- The urbanized area, as defined by the U.S. Bureau of the Census.
- The adjusted urbanized area includes other small areas that round off the irregular boundaries of the urbanized area. It also includes additional lands that are likely to be developed within the next five years and other abutting or nearby already developed lands.
- The forecasted area, which is expected to become included in the urbanized area in the next 30 years. This area is determined through a consensus of the RMAP Technical and Policy Committee members and is based on growth trends, local land use plans and general planning judgment.

TABLE 2-1

RMAP Policy Committee
City of Belvidere – Mayor
Boone County – Board Chairman
Illinois Department of Transportation – Deputy Director, Region 2 Engineer
City of Loves Park – Mayor
Village of Machesney Park – Village President
City of Rockford – Mayor
Rockford Mass Transit District – Board Chairman
Winnebago County – Board Chairman

TABLE 2-2

RMAP Technical Committee	
Voting Members	
Belvidere Public Works Department	Rockford Community Development Department
Belvidere – Boone County Planning Department	Rockford Mass Transit District
Boone County Conservation District	Rockford Park District
Boone County Highway Department	Rockford Public Works Department
Village of Cherry Valley	Rock River Water Reclamation District
Chicago/Rockford International Airport	Village of Roscoe
Illinois Department of Transportation, District 2	Winnebago County Highway Department
Loves Park Community Development Department	Village of Winnebago
Loves Park Public Works Department	Winnebago County Forest Preserve Distirct
Machesney Park Planning Department	Winnebago County Planning and Economic Development Department
Village of Poplar Grove	Winnebago County Soil and Water Conservation District
Non-Voting Members	
Boone County Council on Aging	Illinois Department of Transportation, Division of Urban Program Planning
Federal Highway Administration, Illinois Division	Ogle County Highway Department
Growth Dimensions	Rockford Area Economic Development Council
Illinois Environmental Protection Agency	Rockford Metropolitan Agency for Planning
Illinois Tollway	Rockford Region Economic Development District
Illinois Department of Transportation, Division of Public Transportation	State Line Area Transportation Study

The Rockford MPA is smaller than the boundaries of Boone, Ogle and Winnebago Counties (see Map 2-A). However, to a limited extent, RMAP coordinates planning and transportation improvement activities throughout those counties. This occurs voluntarily via the communication and cooperation of the Boone, Ogle and Winnebago County officials serving on the RMAP Policy Committee, RMAP Technical Committee and RMAP Mobility Subcommittee.

Regarding the addition of parts of Ogle County within the RMAP Planning Area, staff from the Rockford Metropolitan Agency for Planning (RMAP) met with stakeholders from Ogle County and its various municipal representatives on August 2nd, 2012, to discuss possible inclusion within the RMAP Metropolitan Planning Area (MPA). Several meetings with technical staff (Ogle County Engineer and Ogle County Planning & Zoning Administrator) were held prior to this engagement to determine interest and feasibility of including portions of Ogle County. The overall dialogue was prompted due to the release of the 2010 Census Defined Urbanized Areas and Census Defined Urban Clusters by the United States Census Bureau. Designation of the Census Defined Urbanized Areas (50,000 population and above) and the Census Defined Urban Clusters (2,500-49,999 population) is determined once every ten years succeeding the collection of nation-wide census data.

The RMAP Metropolitan Planning Area is the twenty-year planning boundary in which the metropolitan planning organization (MPO) carries out transportation, land use, and environmental planning activities. This area is determined though a collaborative, consensus-based planning process of the RMAP Technical and Policy Committee members and is based on growth trend, local land use plans and general planning judgment. Discussion was been initiated with Ogle County due to the following reasons:

1. The City of Rockford annexed property in the southern portion of Winnebago County & northern portion of Ogle County making the municipal boundaries of the City of Rockford and Village of Davis Junction contiguous to one another.

2. From the 2010 Census data, urban clusters were determined for each of the Davis Junction area (population 2,631) and Byron area (population 7,057). With the RMAP MPO Urban Area population of 296,863 and the close proximity of the two above urban cluster areas, Federal planning guidelines warranted a more thorough review of these three areas for possible inclusion in the MPO's MPA. The area between these three areas remains primarily agriculture, with isolated large-lot single family housing.

3. In order to promote regional coordination and further good planning practice, it was determined by the RMAP MPO and Ogle County staff that this issue should be further explored with other stakeholders in the county to determine Ogle County's views regarding being included in the metropolitan planning area. Included in this analysis are current and possible changes in the land use between the MPO area and these near-by areas.

It should be noted that inclusion within the RMAP MPO was at the discretion of Ogle County and its various jurisdictions. As discussed at the August 2nd, 2012, meeting, Ogle County presence within the RMAP MPA would include:

- Provision of technical assistance from the MPO. Examples of this include data and GIS analysis, addition of Ogle County within the Regional Transportation Network model, etc.

- Inclusion of Ogle County in various regional planning documents which RMAP is responsible for producing. Examples would be the Long Range Transportation Plan, the Coordinated Human Services-Transportation Plan, Transportation Improvement Program, Unified Work Program, etc.

- Membership on the RMAP Technical Committee. Monthly meetings provide coordination between various jurisdictions in both Boone and Winnebago Counties.

Currently, Ogle County presence within the RMAP MPA would not:

- Cost Ogle County or any of its participating jurisdictions any membership fees to be included in the MPA. In other words, it would not cost Ogle County to participate on the RMAP Technical Committee.

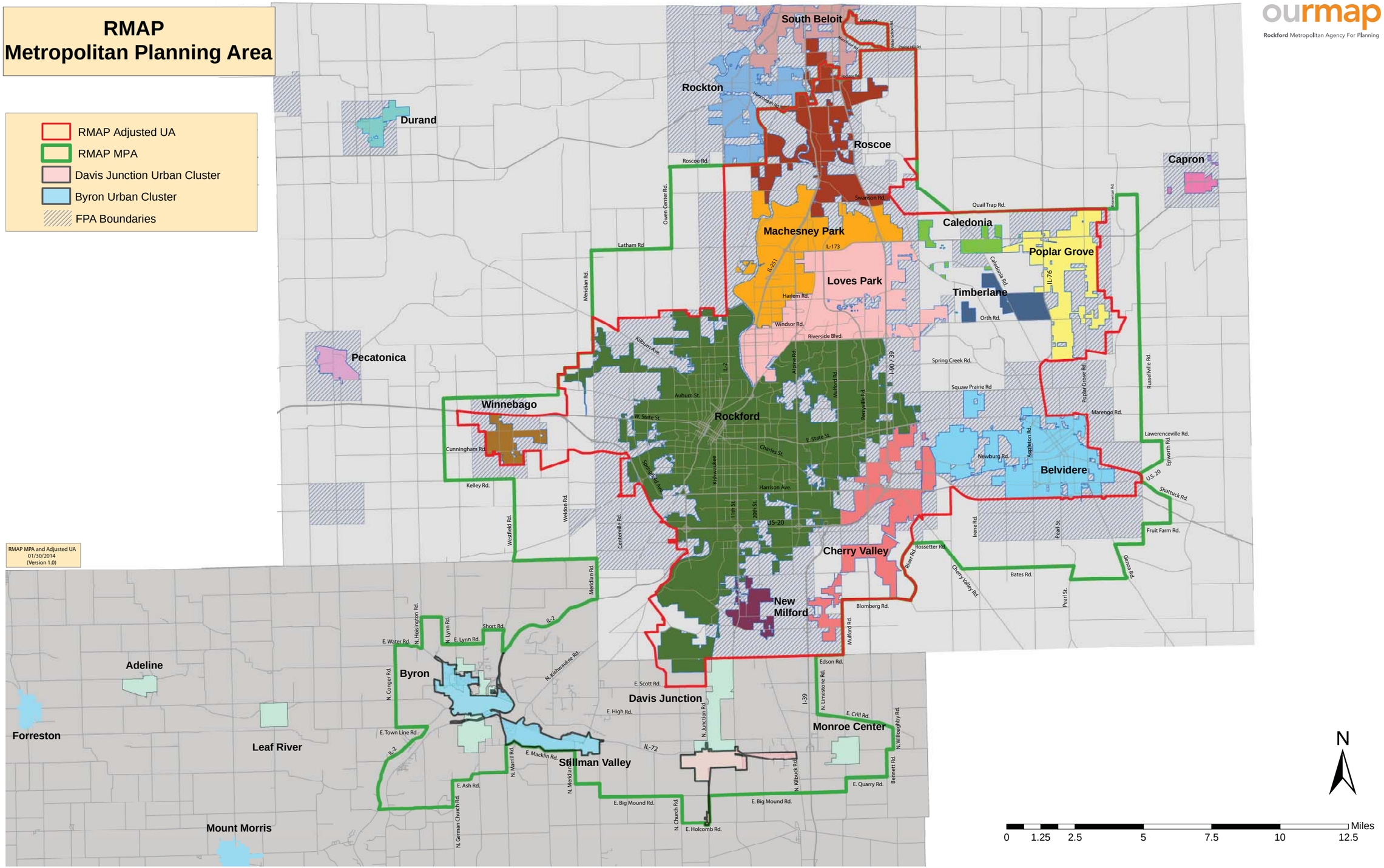
- Place Ogle County within the Rockford Urbanized Area. The Metropolitan Planning Area and Urbanized area are separate boundaries. The Census Bureau determines the urbanized areas, the RMAP MPO determines the MPA, with assistance from other local agencies.

The Ogle County Board passed a resolution on August 21, 2012 authorizing portions of Ogle County including Byron, Stillman Valley, Davis Junction, and Monroe Center to be included within the RMAP Metropolitan Planning Area.

RMAP
Metropolitan Planning Area

ourmap
Rockford Metropolitan Agency For Planning

- RMAP Adjusted UA
- RMAP MPA
- Davis Junction Urban Cluster
- Byron Urban Cluster
- FPA Boundaries



Additionally, RMAP coordinated with its numerous partner agencies (individual meetings as well as periodic updates to the RMAP Technical Committee from 2012-2014) and incorporated recommendations from IDOT regarding the proposed RMAP Adjusted Urbanized Area (UA) and Metropolitan Planning Area. The RMAP Adjusted UA and MPA were adopted by the RMAP Policy Committee on January 30th, 2014 through RMAP Resolution 2014-1. RMAP formally received approval from the Federal Highway Administration on May 28, 2014 for the updated RMAP Adjusted UA, MPA and Functional Classification System.

Significant Changes in the Planning Process

Since adoption of the previous edition of the 2040 LRTP (July 29, 2010) the following significant changes have occurred in the RMAP planning process:

- As previously mentioned, the addition of portions of Ogle County in the RMAP Metropolitan Planning Area and Adjusted Urbanized Area due to changes in the Census Defined Urbanized Area and recent local municipal annexations.

- The development of the Regional Plan for Sustainable Development (RPSD) via grant funding awarded to RMAP from the HUD/DOT/EPA Federal Partnership

- The adoption of the Moving Ahead for Progress in the 21st Century Act (MAP-21) for as the guiding transportation authorization document.

- Addition of the Rockford Mass Transit District (RMTD) to the RMAP Policy Committee as required by the MAP-21 transportation law.

- Emphasis on Performance Based Planning and Performance Management

- Issuance of revised United States Department of Transportation Planning Emphasis Areas (PEA), which include:
  - -MAP-21 Implementation
  - -Models of Regional Planning Cooperation
  - -Ladders of Opportunity

On March 18, 2015, FHWA/FTA jointly issued Planning Emphasis Areas (PEAs) for MPOs. The PEAs are relevant planning areas FHWA/FTA want MPOs to develop and identify work tasks for inclusion in the annual UWP. With refurbished focus on transportation planning activities brought about in MAP-21, Transportation Secretary Foxx and the pending issuance of proposed transportation planning regulations, FHWA/FTA are focusing on three specific planning subjects for MPOs to concentrate and encourage work activities in these areas.

Listed below are the three PEAs and RMAP's current and short-term work activities programmed in our annual planning document:

1. MAP–21 Implementation: IDOT, RMAP and other MPOs in Illinois have established a Performance Measures Technical Advisory Group on how to development a strong methodology and approach on this planning topic as required by MAP-21. Work for this item has included attending meetings hosted by IDOT to discuss feasibility of measures to be created within the MPOs and IDOT frameworks as well as research regarding final USDOT guidance for the development of measures within the specified areas required by MAP-21. Another planning area is RMAP's joint cooperation in working with IDOT in the development of a Strategic Highway Safety Plan (SHSP). At this time, tasks have included coordinating with IDOT to receive the final draft versions of Strategic Highway Safety Plans for Boone County, IL and Winnebago County, IL; reviewing the draft documents; coordinating with Winnebago County and Boone County Highway Departments to provide feedback regarding the drafts; and coordinating with IDOT and MPO partner agencies to distribute the draft plans to organizations pertaining to the four E's of engineering, education, enforcement, and EMS. Also, requests have gone out to RMAP partner agencies to provide feedback for the document, so that IDOT may finalize this planning effort in FY 2014. Work will continue on this topic into FY 2015 with IDOT presenting the final draft materials to RMAP partner agencies as well as determining the next step on how to discuss & address safety issues as identified by the SHSP plans. As further final regulations and guidance is issued by FHWA/FTA on specific planning tasks for MAP-21 implementation, RMAP will attempt to shift our work activities to respond to those areas, specifically as they relate to the update and development of the RMAP 2040 LRTP.

2. Regional Models of Cooperation: Because of several geographical/transportation facilities that necessitate on-going cooperation between a wide-variety of planning partners:

- Access/location to Chicago/O'Hare Airport & Chicago/Rockford Airport,
- Interstates 39, 43, 88 & 90 connections in the immediate area (IDOT and the Illinois State Toll Highway Authority),
- Number of Class 1 Railroads in the planning and surrounding area,
- Easy access to passenger rail in the area with pending connections to Amtrak and Metra (within 30- 45 minutes), and RMTD implementation

RMAP has a strong working relationship with many organizations in the region even outside of normal working connections with planning partners on the RMAP Technical Committee and Policy Committee. Just over the past year, RMAP has worked with these organizations in the development and/or completion of these planning activities:

- Establishment of the Urbanized Area Boundaries following the release of the Census Urban Areas. Since we share a boundary with the State Line Area Transportation Study (SLATS– Beloit MPO) to the north, we continued to coordinate with SLATS on this and other issues;

- Attendance at regular Technical and Policy Committee meetings of both MPOs (RMAP and SLATS) and meetings of both staffs as the need arises;

- Updating the Functional Classification System for RMAP. Since the RMAP Metropolitan Area Boundary now includes portions of three counties (Boone, Ogle and Winnebago) we worked with each of the county highway departments to ensure cooperation between the urban and rural highway networks to foster a logical highway/street network;

- Updating and expansion of the Travel Demand Model (TDM) and the inclusion of two Regional Economic Modeling Inc. software programs into normal work functions. Currently the TDM modeling area includes all of Winnebago County, Boone County and the SLATS MPO in Winnebago County and just the Rock County portion in Wisconsin. In FY 2014, RMAP received SPR funds to expand the TDM into Ogle County and also to add REMI to interface with the VISUM TDM. A portion of the work includes working with the Wisconsin Department of Transportation (WISDOT) on getting traffic and land use data as WISDOT maintains the TDM for SLATS;

- The current improvements to the Jane Addams Memorial Tollway (I-90) were the result of many years of discussions RMAP has had with the Illinois Tollway Authority. RMAP also has on-going exchange of information with the Tollway's staff on other related issues related to future traffic and land use information to ensure a mutual agreement approach is consistent with good planning processes.

- Recent announcement of adding Amtrak service to the RMAP area. During the past 15 years of planning studies, meetings and negotiations, IDOT will restart passenger rail service in 2015. Again, this required a long-term commitment and cooperation between IDOT, RMAP and other planning partners in the area, especially the railroads.

- The annual Tri-State Alliance event. The mission of the Tri-State Alliance is to convene the region's leaders to address issues that affect commerce so that the quality of life is improved for the region of Northern Illinois, Northeastern Iowa, and Southwestern Wisconsin.

3. Ladders of Opportunity: This PEA is to identify transportation connectivity gaps in access to essential services that might provide Americans more transportation options that are more affordable and reliable. There are several planning projects that RMAP has completed and are currently undertaking that will address this issue to enhance greater access to education and employment opportunities to name a few of the services that the transportation system provides connections with.

- RMAP recently just completed the required Title VI and Environmental Justice Assessment for the Rockford Mass Transit District for the years 2014 to 2017. RMAP will continue to monitor data and other related information over the next several years.

- The RMAP Human Services Transportation Plan (HSTP) exists to assess the needs and concerns of public transit users in the area, develop strategies that will address and remedy these concerns and increase the overall efficiency of transit services provided to the public. While transit improvements benefit public transit users as a whole, particular attention was given to public transit dependent populations including elderly individuals, persons with disabilities and individuals with low incomes in the development of this plan. As part of the HSTP planning process, the RMAP Mobility Subcommittee meets on a regular basis to ensure that issues are fully discussed with other agencies in the region/area that provide transport services to that targeted population.

- RMAP's Limited English Proficiency (LEP) Plan is a required planning document that clarifies the responsibilities of recipients of federal financial assistance from the U.S. Department of Transportation (DOT) and assist in fulfilling our responsibilities to persons with limited ability to speak english. The LEP Plan helps identify reasonable steps to provide language

assistance for LEP persons seeking meaningful access to RMAP's MPO programs as required by Executive Order 13166.

- The VISUM Travel Demand Model (TDM), along with the inclusion of the transit mode split. Included in the expansion of the TDM and interfacing with REMI with the above-mentioned planning project will be the addition of the transit mode split in the TDM. This will allow RMAP and RMTD to have another tool to develop different planning and route scenarios to determine the potential impacts on future routing adjustments/changes.

- One of the objectives of these PEAs is to provide greater access for citizens to reach public transportation by walking and to offer other mode choices that reduces their household expenses on transportation. Over the past several years as a result of the RMAP Bicycle and Pedestrian Plan being completed, several agencies have increased funding for their capital improvements program for additional bicycle and pedestrian facilities. Also, IDOT has two major reconstruction projects underway on West State Street (U.S. Business 20) and South Main Street (IL-2) which will include bikeways, enhance pedestrian and bus facilities.

- With MAP-21 and the allocation of Transportation Alternative funds directly to Transportation Management Areas (TMAs), RMAP will program these funds that will improve accessibility to an area high school and grade school along a RMTD fixed-route corridor (a Principal Arterial Route) that currently lacks bike/ped facilities and a redevelopment project along the Rock River that will connect to other bikeway/pathway facilities in the area.

Socio-Economic Profile

The socio-economic factors that primarily affect transportation are population, households or dwelling units, and employment. The jurisdictions within the Rockford MPA and their respective populations within the census-defined UA are listed in Table 2-3 along with the population increase from 2000-2010. The Rockford MPA has had significant population increase; this is due to population growth and expansion of the Rockford MPA boundaries. Attention to minority and low-income population distribution is important and the locations of those areas are shown in Maps 2-B through 2-F. Population, households and employment are essential inputs to determine regional transportation impacts and future needs.

The Rockford MSA is designated by the U.S. Bureau of the Census and includes all of Winnebago and Boone Counties. As shown in Map 2-A, the Rockford MSA is larger than the Rockford MPA. In comparison, the population of the Rockford MPA is approximately 94% of the MSA in the Year 2010. For forecasting purposes, the MSA data provides a better tool since most forecasts are done on a county basis. The forecasts are then allocated to smaller transportation analysis zones for the purpose of using the transportation model to determine impact and needs on the transportation systems. (See Section 4, Socioeconomic Profile.)

TABLE 2-3

Rockford Metropolitan Planning Area Population by Jurisdiction

Jurisdiction	2000	2010	Change	Percent
Rockford	150,115	152,418	2,303	1.53%
Unincorporated	54,474	50,043	-4,431	-8.13%
Machesney Park	20,759	23,068	2,309	11.12%
Loves Park	20,142	23,706	3,564	17.69%
Roscoe	6,241	10,296	4,055	64.97%
Winnebago	2,958	3,046	88	2.97%
Cherry Valley	2,191	3,180	989	45.14%
New Milford	541	683	142	26.25%
Belvidere	20,860	24,633	3,773	18.09%
Poplar Grove	1,368	4,753	3,385	247.44%
South Beloit	N/A	107	N/A	N/A
Timberlane	234	930	696	297.44%
Total:	**279,883**	**296,863**	**16,980**	**6.07%**

Regional Distribution of Total Population

RMAP MPA

1 Dot = 50 Persons

MAP 2-B

Boone County

Winnebago County

Ogle County

Middle Rd
Manchster Rd.
Prairie Hill Rd.
Rockton Rd.
Hononegah Rd
Roscoe Rd.
Owen Center Rd.
Latham Rd
IL-173
Meridian Rd.
IL-2
Harlem Rd.
Kilburn Ave.
Riverside Blvd.
I-90 / 39
Auburn St.
W. State St.
Alpine Rd.
Mulford Rd.
E. State St.
Springfield Ave.
Kishwaukee
Perryville Rd.
Harrison Ave.
US-20
11th St.
20th St.
Kelley Rd.
Westfield Rd.
Weldon Rd.
Centerville Rd.
Quail Trap Rd.
Beaverton Rd.
IL-76
Caledonia Rd.
Orth Rd.
Spring Creek Rd.
Squaw Prairie Rd
Poplar Grove Rd.
Russellville Rd.
Marengo Rd.
Lawerenceville Rd.
Newburg Rd.
U.S. 20
Shattuck Rd.
Irene Rd.
Bates Rd.
Genoa Rd.
Cherry Valley Rd.
Pearl St.
Short Rd.
E. Water Rd.
E. Lynn Rd.
N. Conger Rd.
N. Kishwaukee Rd.
Edson Rd.
E. Scott Rd.
N. Junction Rd.
I-39
E. Crill Rd.
E. High Rd.
IL-72
E. Ash Rd.
N. Marrill Rd.
N. Meridian Rd.
E. Big Mound Rd.
E. Quarry Rd.

0 1 2 4 6 8 10 12 14 16 Miles

N

Regional Distribution of Black Population

RMAP MPA

1 Dot = 50 Persons

MAP 2-C

Boone County

Winnebago County

Ogle County

Middle Rd
Manchster Rd.
Prairie Hill Rd.
Rockton Rd.
Hononegah Rd
Roscoe Rd.
Owen Center Rd.
Latham Rd
Meridian Rd.
IL-2
IL-173
IL-251
Harlem Rd.
Kilburn Ave.
Riverside Blvd.
Auburn St.
W. State St.
Springfield Ave.
Alpine Rd.
Mulford Rd.
I-90 / 39
E. State St.
Perryville Rd.
Harrison Ave.
Kishwaukee
Centerville Rd.
Weldon Rd.
Westfield Rd.
Kelley Rd.
11th St.
20th St.
US 20
Quail Trap Rd.
Beaverton Rd.
IL-76
Caledonia Rd.
Orth Rd.
Spring Creek Rd.
Poplar Grove Rd.
Russellville Rd.
Squaw Prairie Rd
Marengo Rd.
Lawerenceville Rd.
Newburg Rd.
U.S. 20
Shattuck Rd.
Irene Rd.
Bates Rd.
Genoa Rd.
Cherry Valley Rd.
Pearl St.
Short Rd.
E. Water Rd.
E. Lynn Rd.
N. Conger Rd.
N. Kishwaukee Rd.
Edson Rd.
E. Scott Rd.
E. High Rd.
N. Junction Rd.
I-39
E. Crill Rd.
IL-72
E. Ash Rd.
N. Marrill Rd.
N. Meridian Rd.
E. Big Mound Rd.
E. Quarry Rd.

0 1 2 4 6 8 10 12 14 16 Miles

N

Regional Distribution of Hispanic Population

RMAP MPA

1 Dot = 50 Persons

MAP 2-D

Boone County

Winnebago County

Ogle County

Middle Rd
Manchster Rd
Prairie Hill Rd.
Hononegah Rd
Rockton Rd.
Roscoe Rd.
Owen Center Rd.
Latham Rd
Meridian Rd.
IL-173
IL-251
IL-2
Harlem Rd.
Kilburn Ave.
Riverside Blvd.
I-90 / 39
Auburn St.
W. State St.
Alpine Rd.
Mulford Rd.
E. State St.
Springfield Ave
Kishwaukee
Perryville Rd.
Harrison Ave
US-20
11th St.
20th St.
Centerville Rd.
Weldon Rd.
Westfield Rd.
Kelley Rd.
Quail Trap Rd.
Beaverton Rd.
IL-76
Caledonia Rd.
Orth Rd.
Spring Creek Rd.
Squaw Prairie Rd
Poplar Grove Rd.
Russellville Rd.
Marengo Rd.
Lawerenceville Rd.
Newburg Rd.
U.S. 20
Shattuck Rd.
Irene Rd.
Bates Rd.
Genoa Rd.
Cherry Valley Rd.
Pearl St.
Edson Rd.
E. Crill Rd.
E. Quarry Rd.
E. Big Mound Rd.
E. Scott Rd.
E. High Rd.
N. Junction Rd.
I-39
IL-72
N. Meridian Rd.
N. Marrill Rd.
E. Ash Rd.
IL-2
N. Conger Rd.
N. Kishwaukee Rd.
E. Lynn Rd.
E. Water Rd.
Short Rd.

0 1 2 4 6 8 10 12 14 16 Miles

N

Regional Distribution of Total Minority Population

RMAP MPA

1 Dot = 50 Persons

MAP 2-E

Boone County

Winnebago County

Ogle County

Middle Rd
Manchster Rd
Prairie Hill Rd.
Rockton Rd.
Hononegah Rd
Roscoe Rd.
Owen Center Rd.
Latham Rd
Meridian Rd.
IL-2
IL-173
Harlem Rd.
Kilburn Ave.
Riverside Blvd.
I-90 / 39
Alpine Rd.
Mulford Rd.
Auburn St.
W. State St.
E. State St.
Springfield Ave.
Kishwaukee
Perryville Rd.
Harrison Ave.
US-20
Centerville Rd.
11th St.
20th St.
Kelley Rd.
Westfield Rd.
Weldon Rd.
Short Rd.
E. Water Rd.
E. Lynn Rd.
N. Conger Rd.
N. Kishwaukee Rd.
E. Scott Rd.
E. High Rd.
N. Junction Rd.
I-39
E. Crill Rd.
IL-72
E. Ash Rd.
N. Marrill Rd.
N. Meridian Rd.
E. Big Mound Rd.
E. Quarry Rd.
Edson Rd.
Mulford Rd.
Quail Trap Rd.
Beaverton Rd.
IL-76
Caledonia Rd.
Orth Rd.
Spring Creek Rd.
Squaw Prairie Rd
Poplar Grove Rd.
Russellville Rd.
Marengo Rd.
Lawerenceville Rd.
Newburg Rd.
U.S. 20
Shattuck Rd.
Irene Rd.
Bates Rd.
Genoa Rd.
Cherry Valley Rd.
Pearl St.

0 1 2 4 6 8 10 12 14 16 Miles

N

Regional Distribution of Limited English Proficient (LEP) Population

RMAP MPA

1 Dot = 50 Persons

MAP 2-F

Boone County

Winnebago County

Ogle County

Middle Rd
Manchster Rd.
Prairie Hill Rd.
Rockton Rd.
Hononegah Rd
Roscoe Rd.
Owen Center Rd.
Latham Rd
Meridian Rd.
IL-173
IL-2
Harlem Rd.
Beaverton Rd.
Quail Trap Rd.
IL-76
Caledonia Rd.
Orth Rd.
Poplar Grove Rd.
Russellville Rd.
Riverside Blvd.
Kilburn Ave.
I-90 / 39
Spring Creek Rd.
Squaw Prairie Rd
Marengo Rd.
Lawerenceville Rd.
Newburg Rd.
U.S. 20
Shattuck Rd.
Auburn St.
W. State St.
Alpine Rd.
Mulford Rd.
E. State St.
Springfield Ave
Kishwaukee
Perryville Rd.
Harrison Ave.
US-20
Kelley Rd.
Weldon Rd.
Centerville Rd.
Westfield Rd.
11th St.
20th St.
Irene Rd.
Bates Rd.
Genoa Rd.
Cherry Valley Rd.
Pearl St.
Short Rd.
E. Water Rd.
E. Lynn Rd.
N. Conger Rd.
N. Kishwaukee Rd.
Mulford Rd.
Edson Rd.
E. Scott Rd.
N. Junction Rd.
I-39
E. High Rd.
E. Crill Rd.
IL-72
E. Ash Rd.
N. Marrill Rd.
N. Meridian Rd.
E. Big Mound Rd.
E. Quarry Rd.

0 1 2 4 6 8 10 12 14 16 Miles

N

Regional Distribution of American Indian and Alaskan Native Population

RMAP MPA

1 Dot = 15 Persons

MAP 2-G

Boone County

Winnebago County

Ogle County

Middle Rd
Manchster Rd
Prairie Hill Rd.
Rockton Rd.
Hononegah Rd
Roscoe Rd.
Owen Center Rd.
Latham Rd
Meridian Rd.
IL-173
IL-251
IL-2
Harlem Rd.
Kilburn Ave.
Riverside Blvd.
Auburn St.
W. State St.
Alpine Rd.
Mulford Rd.
I-90 / 39
E. State St.
Springfield Ave
Perryville Rd.
Kishwaukee
Centerville Rd.
Weldon Rd.
Kelley Rd.
Westfield Rd.
US-20
11th St.
20th St.
Quail Trap Rd.
Beaverton Rd.
IL-76
Caledonia Rd.
Orth Rd.
Poplar Grove Rd.
Spring Creek Rd.
Squaw Prairie Rd
Russellville Rd.
Marengo Rd.
Lawerenceville Rd.
Newburg Rd.
U.S. 20
Shattuck Rd.
Irene Rd.
Bates Rd.
Genoa Rd.
Cherry Valley Rd.
Pearl St.
Mulford Rd.
Edson Rd.
E. Crill Rd.
I-39
E. Scott Rd.
E. High Rd.
N. Junction Rd.
IL-72
E. Quarry Rd.
E. Big Mound Rd.
N. Meridian Rd.
N. Marrill Rd.
E. Ash Rd.
IL-2
N. Conger Rd.
E. Water Rd.
E. Lynn Rd.
Short Rd.
N. Kishwaukee Rd.

0 1 2 4 6 8 10 12 14 16 Miles

N

Regional Distribution of Asian Population

RMAP MPA

1 Dot = 50 Persons

MAP 2-H

Middle Rd
Manchster Rd.
Prairie Hill Rd.
Hononegah Rd
Rockton Rd.
Roscoe Rd.
Owen Center Rd.
Latham Rd
Meridian Rd.
IL-173
IL-251
IL-2
Harlem Rd.
Kilburn Ave.
Riverside Blvd.
Auburn St.
W. State St.
Alpine Rd.
Mulford Rd.
I-90 / 39
E. State St.
Springfield Ave.
Perryville Rd.
Kishwaukee
US 20
11th St.
20th St.
Centerville Rd.
Kelley Rd.
Weldon Rd.
Westfield Rd.
Winnebago County
Boone County
Quail Trap Rd.
Beaverton Rd.
IL-76
Caledonia Rd.
Orth Rd.
Poplar Grove Rd.
Russellville Rd.
Spring Creek Rd.
Squaw Prairie Rd
Marengo Rd.
Lawerenceville Rd.
Newburg Rd.
U.S. 20
Shattuck Rd.
Irene Rd.
Bates Rd.
Genoa Rd.
Cherry Valley Rd.
Pearl St.
Mulford Rd.
Edson Rd.
Ogle County
E. Crill Rd.
I-39
E. Scott Rd.
N. Junction Rd.
E. High Rd.
IL-72
E. Quarry Rd.
E. Big Mound Rd.
E. Ash Rd.
N. Marrill Rd.
N. Meridian Rd.
IL-2
Short Rd.
E. Water Rd.
E. Lynn Rd.
N. Kishwaukee Rd.
N. Conger Rd.

0 1 2 4 6 8 10 12 14 16 Miles

N

Regional Distribution of Native Hawaiian and Other Pacific Islander Population

RMAP MPA

1 Dot = 5 Persons

MAP 2-I

Boone County

Winnebago County

Ogle County

Middle Rd
Prairie Hill Rd.
Manchster Rd.
Rockton Rd.
Hononegah Rd.
Roscoe Rd.
Owen Center Rd.
Latham Rd
Meridian Rd.
IL-173
IL-251
IL-2
Harlem Rd.
Quail Trap Rd.
Beaverton Rd.
IL-76
Caledonia Rd.
Orth Rd.
Riverside Blvd.
Kilburn Ave
Auburn St.
W. State St.
Alpine Rd.
Mulford Rd.
I-90 / 39
Spring Creek Rd.
Squaw Prairie Rd
Poplar Grove Rd.
Russellville Rd.
Marengo Rd.
Lawerenceville Rd.
E. State St.
Springfield Ave
Perryville Rd.
Newburg Rd.
U.S. 20
Shattuck Rd.
Kishwaukee
US-20
11th St.
20th St.
Irene Rd.
Genoa Rd.
Bates Rd.
Cherry Valley Rd.
Pearl St.
Kelley Rd.
Westfield Rd.
Weldon Rd.
Centerville Rd.
Short Rd.
E. Water Rd.
E. Lynn Rd.
N. Kishwaukee Rd.
N. Conger Rd.
Edson Rd.
E. Scott Rd.
N. Junction Rd.
I-39
E. Crill Rd.
E. High Rd.
IL-72
E. Ash Rd.
N. Marrill Rd.
N. Meridian Rd.
E. Big Mound Rd.
E. Quarry Rd.

0 1 2 4 6 8 10 12 14 16 Miles

N

Regional Distribution of Two or More Races Population

RMAP MPA

1 Dot = 50 Persons

MAP 2-J

Boone County

Winnebago County

Ogle County

Middle Rd
Manchster Rd
Prairie Hill Rd.
Rockton Rd.
Hononegah Rd
Roscoe Rd.
Owen Center Rd.
Latham Rd
Meridian Rd.
IL-173
IL-251
IL-2
Harlem Rd.
Quail Trap Rd.
Beaverton Rd.
IL-76
Caledonia Rd.
Orth Rd.
Riverside Blvd.
Kilburn Ave
Auburn St.
W. State St.
Alpine Rd.
Mulford Rd.
I-90 / 39
Spring Creek Rd.
Squaw Prairie Rd
Poplar Grove Rd.
Russellville Rd.
Marengo Rd.
Lawerenceville Rd.
Newburg Rd.
E. State St.
Springfield Ave.
Perryville Rd.
U.S. 20
Shattuck Rd.
Irene Rd.
Kelley Rd.
Westfield Rd.
Weldon Rd.
Centerville Rd.
Kishwaukee
11th St.
20th St.
US-20
Bates Rd.
Genoa Rd.
Cherry Valley Rd.
Pearl St.
Short Rd.
IL-2
E. Water Rd.
E. Lynn Rd.
N. Conger Rd.
N. Kishwaukee Rd.
Edson Rd.
E. Scott Rd.
E. High Rd.
N. Junction Rd.
I-39
E. Crill Rd.
IL-72
E. Ash Rd.
N. Marrill Rd.
N. Meridian Rd.
E. Big Mound Rd.
E. Quarry Rd.

0 1 2 4 6 8 10 12 14 16 Miles

N

Regional Distribution of Other Minority Population

RMAP MPA

1 Dot = 50 Persons

MAP 2-K

Boone County

Winnebago County

Ogle County

Middle Rd
Manchester Rd.
Prairie Hill Rd.
Rockton Rd.
Hononegah Rd.
Roscoe Rd.
Owen Center Rd.
Latham Rd
Meridian Rd.
IL-173
IL-2
Harlem Rd.
Kilburn Ave.
Riverside Blvd.
Auburn St.
W. State St.
Alpine Rd.
Mulford Rd.
I-90 / 39
Springfield Ave.
Kishwaukee
Centerville Rd.
11th St.
20th St.
US-20
Harrison Ave.
Perryville Rd.
E. State St.
Quail Trap Rd.
Beaverton Rd.
IL-76
Caledonia Rd.
Orth Rd.
Spring Creek Rd.
Squaw Prairie Rd
Poplar Grove Rd.
Russellville Rd.
Marengo Rd.
Lawerenceville Rd.
Newburg Rd.
U.S. 20
Shattuck Rd.
Irene Rd.
Bates Rd.
Genoa Rd.
Cherry Valley Rd.
Pearl St.
Mulford Rd.
Edson Rd.
E. Crill Rd.
I-39
Kelley Rd.
Westfield Rd.
Weldon Rd.
Short Rd.
E. Water Rd.
E. Lynn Rd.
N. Conger Rd.
N. Kishwaukee Rd.
E. Scott Rd.
E. High Rd.
N. Junction Rd.
IL-72
E. Ash Rd.
N. Marrill Rd.
N. Meridian Rd.
E. Big Mound Rd.
E. Quarry Rd.

0 1 2 4 6 8 10 12 14 16 Miles

N

Percentage of Persons below Poverty Level

RMAP MPA
Counties

Percentage below poverty level

0-15%
16-35%
36-50%
Greater than 50%

MAP 2-L

Boone County
Winnebago County
Ogle County

Middle Rd
Manchster Rd.
Prairie Hill Rd.
Rockton Rd.
Hononegah Rd
Roscoe Rd.
Owen Center Rd.
Latham Rd
Meridian Rd.
IL-173
IL-251
IL-2
Harlem Rd.
Kilburn Ave.
Riverside Blvd.
Auburn St.
W. State St.
Springfield Ave.
Kishwaukee
11th St.
20th St.
Harrison Ave.
US-20
E. State St.
Alpine Rd.
Mulford Rd.
I-90 / 39
Perryville Rd.
Centerville Rd.
Weldon Rd.
Kelley Rd.
Westfield Rd.
Quail Trap Rd.
Beaverton Rd.
IL-76
Caledonia Rd.
Orth Rd.
Poplar Grove Rd.
Russellville Rd.
Spring Creek Rd.
Squaw Prairie Rd
Marengo Rd.
Lawerenceville Rd.
Newburg Rd.
U.S. 20
Shattuck Rd.
Irene Rd.
Genoa Rd.
Bates Rd.
Cherry Valley Rd.
Pearl St.
Mulford Rd.
Edson Rd.
E. Water Rd.
E. Lynn Rd.
Short Rd.
IL-2
N. Kishwaukee Rd.
N. Conger Rd.
E. Scott Rd.
E. High Rd.
N. Junction Rd.
I-39
E. Crill Rd.
IL-72
E. Ash Rd.
N. Marrill Rd.
N. Meridian Rd.
E. Big Mound Rd.
E. Quarry Rd.

0 1 2 4 6 8 10 12 14 16 Miles

N

Public Finance

The LRTP must be based on reasonable financial commitments and constrained based on the available public funding. Four steps are taken in order to fulfill this:

- Projections are made of future funding sources that are expected to be available for transportation uses.
- Estimates are made of the cost of constructing, maintaining and operating the total (existing plus planned) transportation system over the period of the plan.
- Projects are prioritized.
- Only projects that are can meet the financial constraint are listed; this is in accord with federal guidance on financial constraints.

The constrained approach is applied at two levels – Transportation Improvement Plan (TIP) and LRTP. The TIP, which is updated annually, is a much more precise method of applying the financial constraint. As would be expected, projecting funding sources and estimating project costs for a 30-year period is difficult at best. It should also be noted that projects, which cannot be funded with the 30-year forecasted revenues may still be listed in this Plan, but will be programmed more than 30 years from the present.

The projection of future funding sources is provided in various sections of the LRTP, which discuss the transportation mode elements: aviation, bikeways/pedestrian, rail, roadways and transit. Each one of these sections discusses the proposed projects, estimates the associated project costs, prioritizes the projects and determines the projects that can be funded within the 30-year timeframe of the LRTP.

Also important to note regarding funding numbers, particularly for the future, is the rate of potential inflation or deflation that may occur in the time period between the writing of this LRTP and the implementation of such dollars. To ensure that this document is in compliance with Federal standards, as well as to ensure accuracy, future dollars listed in this LRTP are shown in year of expenditure dollars, as provided by the agencies for whom the totals are projected.

Public Participation

Public participation is an integral part of the transportation planning process in the Rockford MPA. Securing input from the public is an important means of obtaining feedback on the transportation system. Obtaining public input, however, is not an easy task. An agency such as RMAP cannot assume that the public will provide feedback. The public needs to be provided with the opportunity to comment on transportation plans and programs. RMAP has prepared a document that outlines the Public Participation Plan.

The preparation of this LRTP provides another opportunity to secure input from the public on the transportation planning and systems in the Rockford MPA. The following public participation activities have been followed in the preparation of this LRTP.

- Main Mailing List– The Rockford MPO maintains a mailing list of more than 150 people who have expressed interest in the transportation planning process. These people were notified that the LRTP would be updated prior to the start of the process. They were also provided notification when the LRTP was in draft format and available for review and comments.
- RMAP Policy, Technical and Mobility Subcommittee Meetings– These are open meetings where the public is encouraged to attend and provide input. The meeting agendas and notices are annotated with the comment that "Opportunities for public comment will be afforded." The agenda and meeting notices are sent to all those on the Rockford MPO mailing list. The mailing list includes community organizations and newspapers.
- Public Notice– Annually, the Rockford MPO publishes a public notice in the Rock River Times announcing the planning activities for the year. On March 26, 2014, the public notice mentioned that this LRTP process was underway and invited the public to provide input on the plan.
- Website– The Rockford MPO has developed a website that provides extensive information about transportation planning activities in the region. The website address is: http://www.rmapil.org/ and the LRTP is posted on the website. There has also been the addition of a webpage dedicated to the LRTP update and provides materials that have been presented to the RMAP Technical Committee.

- Three public information open houses were conducted on the existing LRTP. These open houses were used to discuss the LRTP and solicit comments from the general public.

  -The first grouping of open houses was done in late September of 2014. On September 23, they were held at the Village of Machesney Park Village Hall and the Boone County Administration Building. On September 24, an open house was held at the Rockford Metropolitan Agency for Planning offices.

  -A second grouping of open houses will be conducted in conjunction with the release of the draft 2040 LRTP update. These dates will be listed in the final plan.

  -A third grouping of open houses will be conducted in conjunction with the release of the final 2040 LRTP Plan. These dates will be listed in said final plan.

- Response to Public Input– The Rockford MPO policy is to explicitly respond to all public input received during the planning and program development process. These comments and responses are compiled in Section 13, Public Comments.

Environmental Justice

Environmental justice refers to federal guidance pertaining to non-discrimination in regard to transportation improvements. The intent of the federal guidance and rules are to allow all members of society full participation in any program or activity receiving federal financial assistance. It is also intended to ensure that federal programs, policies and activities do not have an adverse impact on minority and low-income populations.

The Rockford MPO has a long-standing tradition of applying the environmental justice doctrine to the transportation planning process. RMAP provides two documents that describe the efforts to ensure environmental justice is applied to transportation in the Rockford MPA. Their activities can be summarized as follows:

- Determine where minority and low-income populations are located.
- Provide a bus transit system that can serve low-income persons.
- Determine during the planning phase any projects, programs or regulations that affect these populations.
- Support projects with regional significance as opposed to just neighborhood significance.
- Ensure that minority and low-income areas receive a proportionate share of transportation funding based on population.
- Ensure that minority and low-income areas do not receive an inappropriate share of the adverse impacts of transportation projects.
- Make every attempt to involve minority and low-income groups during the public participation process.
- Periodically review and analyze past actions to determine if, in fact, all groups are being treated equitably.

As previously stated, an important part of the environmental justice process involves determining the location of minority and low-income populations. Maps 2-C through 2-E show the locations of minority persons and Map 2-F shows the location of low income persons. Maps also show the routes of the transit system in Section 7, Transit. Those maps help to illustrate that these populations are adequately served by the transit system.

Participant Statistical Areas Program

The 2010 Participant Statistical Areas Program (PSAP) allowed designated participants, following Census Bureau guidelines, to review and suggest modifications to the boundaries for block groups, census tracts, census county divisions, and census designated places for reporting data from the 2010 Census. This process allowed RMAP to assist the Census Bureau in tracking census-defined areas outside the new regulations set for them.

RMAP participated in the PSAP for Winnebago County; however, the portions of RMAP's MSA in the county of Boone were handled by Boone County staff. In Winnebago County, RMAP noted three sets of block groups that fell beneath the recommended population and/or housing totals and would benefit from being conjoined with adjacent block groups. RMAP also noted one block group that exceeded the recommended population and/or housing totals and would benefit from being split into two block groups.

In addition to the above, RMAP noted that a portion of one census tract, tract 003701 specifically, deserved to be broken out into a separate census tract. Because the Chicago-Rockford International Airport (RFD) is an area of no housing or population, it is recommended that its area become its own census tract for better estimation of the densities of housing and population within the area. The surrounding block groups also changed slightly in order to accommodate the breakout of RFD.

Maps detailing RMAP's recommendations to the Census Bureau are available online at http://www.rmapil.org/assets/documents/psap_changes.pdf

SECTION 3
LAND USE

The process of urban growth and transportation are inexorably linked. Roadways are the heart of a city, molding urban form, funneling vital public utilities, and creating a sense of place. Transportation systems are affected by where people live and work. Improvements in the transportation network can speed travel time and encourage new development and economic growth. On the other hand, new development can result in putting more demands on transportation systems, called induced travel, that causes the need for more transportation improvements. Land use, more than any other factor, affects the transportation system. Regional land use patterns shape how the transportation system will be used; the use of an individual site controls how much traffic will be generated in each location, while the position of buildings at a site, their relationship to the surrounding community and the amenities that they provide impact trip-making behavior. Consequently, the transportation system has more impact on the urban form than any other factor.

It is important that the transportation plan recognize the importance of access to significant facilities such as commercial facilites, industrial facilities (see map 3-A), airports, cultural facilities, freight distribution facilities, hospitals, government facilities, parks, retirement homes and schools. Access via public transit is particularly important, and efforts should be continued to provide non-motorized (pedestrian/bicycle) linkages throughout the system as well in order to enhance mobility, protect the environment, and contribute to a better overall quality of life.

Land Use Coordination

Similar to the role of a Long Range Transportation Plan in laying the foundation for a region's future transportation system growth and improvements, many communities maintain comprehensive plans to help guide their future development. Comprehensive plans generally set the framework for the desired outcome of what a community will look like 10-20 years in the future. Typical comprehensive plans contain demographic, housing, education, land use, transportation and other infrastructure, natural resource, and economic development elements designed to align community development strategies. Content will vary from community to community, however an ultimate outcome of the comprehensive planning process is the development of a future land use plan which allocates land for future development by desired use, ensures the adequate provision of essential services, and seeks to minimize conflicting uses. Comprehensive land use plans should be updated on a regular basis to reflect the requirements of a community as it evolves over time.

The transportation improvements in this LRTP are derived from land use projections. These projections are, in turn, used to estimate the number of vehicle trips that will be generated and to design and size the transportation system to accommodate those trips. A survey of the region's existing and future land use plans form the basis of the land use model used to develop the land use projections.

Overview of Land Use Plans

All three counties and the majority of the municipalities in the RMAP MPA have comprehensive land use plans. Some of them may be quite dated in nature, many of them have been updated recently, and a few are currently being revised. Two communities, New Milford and the Village of Winnebago, have no land use plans at all; they negotiate land use development on a case-by-case basis. The following sections provide a brief overview of existing and future land use by jurisdiction.

Boone County

Within the RMAP MPA, higher density urban development within the County is limited to the City of Belvidere. Suburban development is found in the outer limits of Belvidere, Timberlane and Poplar Grove, as well as Candlewick Lake, a large unincorporated private housing development in rural countryside. Caledonia typifies the vision of a small rural farming community. Finally, exurban development, commonly referred to as large lot rural residential estates, is dominant in the US- 20, Beloit Road and County Line triangle.

Regional planning services for Bone County and the City of Belvidere are provided by the Belvidere-Boone County Regional Planning Department. The County's future land use plan calls for controlled growth of all urban and suburban communities in the County. "Community separation areas," undeveloped natural or agricultural areas, between the communities are identified to preserve the unique identity of each community. The City of Loves Park and City of Cherry Valley has annexed into Boone County. This area, as well as the rolling and wooded west-central portion of the County, is anticipated for future exurban development. The remainder, approximately 75% of all undeveloped land, will be the focus of agriculture preservation strategies that continue to preserve the prime farmland and rural character of the County.

City of Belvidere

The City of Belvidere is the urban center of the county. The City has a mixture of residential neighborhoods, with newer suburban neighborhoods along the upper Business 20 bypass and more traditional neighborhoods around the city center. Commercial or mixed-use land uses are predominantly located along the Main Street, N. State Street, US-20/Business 20, and Appleton Road corridors, with more recent "Big-Box" development on US-20 just north of the I-90 interchange and Genoa Road interchange. There are industrial uses, both light and heavy, in all quadrants of the City, with the Chrysler/Fiat factory and related parts manufacturing located between US-20 and I-90. The City is currently in the process of constructing a downtown train station to serve the Amtrak passenger service.

In 2006 Belvidere adopted the Flora Neighborhood Plan which established a development strategy for the land between US 20 and I-90 and new Irene Road interchange. The plans key elements include a high-density mixed use Transit Oriented Development centered around a Tollway Station Transit Center, technology and manufacturing parks, office buildings and retail in this highly visible corridor, projected for a 50 year build-out. Exurban and single family residential is planned to the north of the Belvidere, and continued in the West Hills north of US 20 between Belvidere and the Winnebago County border. Infill development will continue to be encouraged, with a focus on the Downtown Train Station currently in development.

Village of Caledonia

The Village of Caledonia is located along IL-173 in the western part of the county. Caledonia is a characteristic small rural community composed primarily of single family residential neighborhoods with a mix of mainly agriculture related businesses. Caledonia wishes to retain its small town character into the future. Future development will be primarily traditional neighborhood design, mixing single family residential with neighborhood businesses. The IL-173/Caledonia Road intersection is identified for future commercial, office, or institutional development. Infill mixed use development opportunities are identified in the community center adjacent to the Long Prairie Trail; due to the proximity of the Trail the comprehensive plan encourages bike and pedestrian friendly development in this area.

Village of Poplar Grove

Over the past decade the Village of Poplar Grove has transformed from a rural village to a more suburban form, rapidly growing from 1,368 residents in 2000 to 5,023 in 2010. The Village is composed of two distinct segments; the historic Village center is located along IL-173. In 2004 a large residential subdivision was built to the south along IL-76, adjacent to the Poplar Grove Airport. These two areas are separated by a vast expanse of agricultural land. Most of Poplar Grove's commercial activity is located along the IL-173 corridor, in addition to some strip-retail along IL-76 across from Candlewick Lake.

There is a capacity for tremendous population growth in Poplar Grove in the future. Prior to the economic downturn of 2008, the Village aggressively annexed and platted just shy of 4,000 lots in the surrounding farmland. Roughly 60% of these lots remain vacant, but in the future as the economy stabilizes development may begin again. The comprehensive plan calls for larger scale business development at the IL-173/IL-76 intersection, across from the Candlewick Lake entrance on IL-76, and IL-76 just north of the airport. The plan also calls for light industrial along the western segment of IL-173 and the southern segment of I-76.

Village of Timberlane

The Village of Timberlane is a small residential community bordering the Village of Poplar Grove to the east and the Candlewick Lake development to the north. With the exception of a handful of commercial lots the entirety of the Village is composed of single-family homes.
To retain its desired small town character the comprehensive plan recommends only limited non-residential development, such as small retail shops or offices.

Ogle County

The northern part of Ogle County was added to RMAP's MPA in 2014. The addition of this area was triggered in part by the annexation of Rockford into Ogle County in early 2012, as well as an analysis of commuting patterns indicating that the greater Rockford region was an employment destination for many northern residents of the County.

Ogle County's existing land use pattern is predominantly rural. Incorporated municipalities only cover 4.5% of the County, however house over 56% of the County's population. Rochelle is the largest city in the County, however is located south of the RMAP MPA boundary. The City of Byron is the largest municipality located in the Ogle County portion of the MPA boundary. The Villages of Davis Junction, Monroe Center and Stillman Valley typify a more rural community cross-section. The Byron Nuclear Plant located along the Rock River and the Orchard Hills Landfill located on the Winnebago-Ogle County line constitutes the largest industrial uses in the northern section of the County.

Rockford Area Business Park Map - Key

Commercial Parks

Belvidere
5 Sager Corporate Park

Cherry Valley
44 CherryVale North Commercial Park
45 Knox Farms Subdivision
46 Orchard Park
47 Perryville Park -- East
48 Perryville Park -- West
49 Point East Office Park

Loves Park
50 Rock Cut Commercial Park
51 Rock Valley Office Park
52 Windsor Lake Business Park

Machesney Park
53 Aspen Business Center

Rockford
54 Alpine Office Center
55 College Center Office Park
56 Colman Center
57 Guilford Square Office Park
23 Harrison Park
58 I-90 Rockford Business Park
27 Linden Road Business Park
60 Mulford Village Office Park
61 Perry Creek Center
62 Rockford Technology Park
64 Redansa Ridge Office Park
65 Rockford Crossings
66 Southtown Business Park
67 Spring Creek Crossings
68 University Center

Rockton
69 Woodlands of Rockton

Roscoe
70 Prairie Business Center
40 Roscoe Commons

South Beloit
71 Doral Executive Plaza
42 Willowbrook Corporate Park

Industrial Parks

Belvidere/Belvidere Township
1 Belford Industrial Park
2 Belford North Industrial Park
3 Belvidere West Industrial Park
4 Landmark Industrial Park
5 Sager Corporate Park
6 Townhall Industrial Park

Boone County
7 Huntwood Business Park

Loves Park
8 Harlem Village Industrial Park
9 River Lane Industrial Subdivision
10 Rock Valley Business Center
11 Zenith Cutter Business Center
71 Loves Park Corporate Center

Machesney Park
12 Forest Hills Industrial Subdivision
13 Machesney Park Industrial Park
14 Willow Creek Business Park

Pecatonica
15 Pecatonica Industrial Park

Poplar Grove
16 Poplar Grove Industrial Park

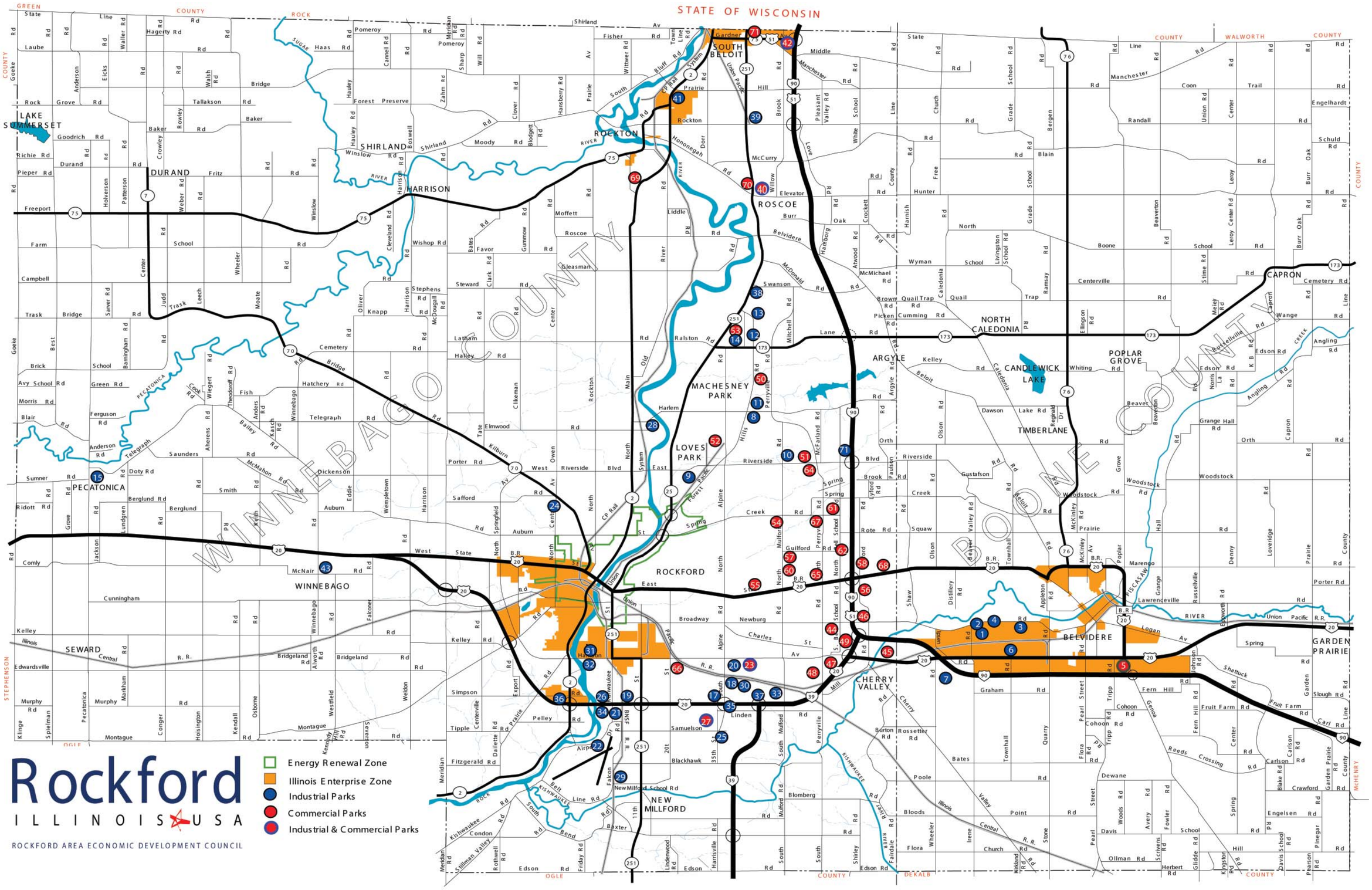
Rockford
17 Alpine Business Park
18 Alpine Industrial Park
19 Camp Grant Industrial Subdivision
20 Eastrock Industrial Park
21 Greater Rockford Industrial Park
22 Greater Rockford Airport Park
23 Harrison Park
24 J.S.O. Dev. Industrial Subdivision
25 Jefferson Tech Industrial Park
26 Kishwaukee Industrial Subdivision
27 Linden Road Business Park
28 Northrock Industrial Park
29 Parkside Industrial Subdivision
30 Pyramid Industrial Park
31 Rock River Valley Industrial Park
32 Sabrooke Industrial Park
33 Sandy Hollow Industrial Park
34 South Bypass Industrial Park
35 Southeast Technical Center
36 Southrock Industrial Park
66 Southtown Business Park
37 Stenstrom Industrial Park

Roscoe/Roscoe Township
38 Erickson Industrial Park
39 Metric Industrial Park
40 Roscoe Commons

South Beloit
41 South Beloit Industrial Park
42 Willowbrook Corporate Park

Winnebago
43 Winnebago Industrial Park

MAP 3-A


STATE OF WISCONSIN
GREEN COUNTY
ROCK COUNTY
WINNEBAGO COUNTY
BOONE COUNTY
WALWORTH COUNTY
STEPHENSON COUNTY
OGLE COUNTY
DEKALB COUNTY
MCHENRY COUNTY
LAKE SUMMERSET
PECATONICA
DURAND
SHIRLAND
HARRISON
ROCKTON
SOUTH BELOIT
ROSCOE
CAPRON
NORTH CALEDONIA
POPLAR GROVE
ARGYLE
CANDLEWICK LAKE
TIMBERLANE
MACHESNEY PARK
LOVES PARK
ROCKFORD
WINNEBAGO
SEWARD
NEW MILLFORD
CHERRY VALLEY
BELVIDERE
GARDEN PRAIRIE
Rockford
ILLINOIS USA
ROCKFORD AREA ECONOMIC DEVELOPMENT COUNCIL
Energy Renewal Zone
Illinois Enterprise Zone
Industrial Parks
Commercial Parks
Industrial & Commercial Parks

Ogle County's comprehensive plan projects that the majority of future residential development will be focused primarily within the municipal limits of the County's communities. Historic population data shows a gradual decline of the population residing in the unincorporated parts of the County and increasing in the municipalities. Similarly, most future commercial and industrial uses will be located within incorporated municipalities. The I-39 corridor will be a major driver of this growth with the RMAP MPA, in addition to I-88 in southern Ogle County.

City of Byron

The City of Byron is the largest municipality in Ogle County within the RMAP MPA. Byron's central business district is located along the IL-2/IL-72 corridor, surrounded by well-established residential neighborhoods. More recent single family home development has occurred northwest of the established central core, along North Tower Road. Recent development trends have resulted in a proliferation of single-family homes in predominantly agricultural areas around the city, and has been identified as a source of future concern. Industrial activity is located around the periphery of the city, while a large quarry is located just north of the City limits. The Byron Nuclear Generating Station is located just south of the City.

The North Tower Road Drainage Basin has been identified as a future growth area. The City is attuned to the needs of promoting infill and redevelopment in response to the greenfield development in outlying areas of the City. Commercial activity will continue to be centered around the downtown core, Blackhawk Drive, and along the riverfront. The future land use plan recommends de-intensifying industrial uses in the Walnut Street/Barker Road area to become more compatible with surrounding residential uses. The Kysor Road industrial area is instead designated for future industrial development, taking advantage of the truck access via IL-2.

Village of Davis Junction

The Village of Davis Junction is a typical rural community featuring a mixture of agriculture and residential land uses. The village experienced significant population growth between 2000 and 2010, growing from 491 residents to 2,373. Neighborhood businesses are clustered around the IL-251 and IL-72 intersection. The corporate limits of the Village extend north along IL-251 to encompass the Orchard Hills Landfill located just on the southern edge of the Ogle and Winnebago County boundary.

Future residential growth is primarily anticipated in the form of infill development within the corporate limits. Long term growth is planned east along IL-72 to reach the I-39 interchange. Due to the high cost of extending infrastructure east towards the interstate this is a very long range vision. Commercial development catering to the traveling public, such as gas stations or restaurant chains, is anticipated at the I-39/IL-72 interchange, as well as retail development aimed at attracting a regional draw.

Village of Monroe Center

Monroe Center is one of the "newest" communities to form in the MPA, incorporated in 2004. It is a typical small rural community comprised of well-established residential neighborhoods and neighborhood businesses, surrounded by agriculture. The Village is located in the northeast corner of the County along the IL-72 corridor, just east of the I-39/IL-72 interchange. The Village is bisected by the Canadian National rail line.

Monroe Center's future land use plan identifies infill and greenfield residential development to the north and east of the existing community. The plan does advocate for concurrent development radiating outward from the Village center in order to prevent leapfrog development. The Village's extraterritorial planning area overlaps with Davis Junction to the west, both identifying commercial development opportunities at the I-39/IL-72 interchange.

Village of Stillman Valley

The Village of Stillman Valley is a small compact rural community bisected by IL-72 as well as the Iowa, Chicago and Eastern Railroad. Between 2000 and 2010 the Village experienced minimal population growth. The village has a small downtown retail corridor and some light agriculture-related industry along the railway. The Village lacks a current comprehensive land use plan; there are currently opportunities for infill residential development within the corporate limits.

Winnebago County

Winnebago County is the 7th most populous county in Illinois, ranking just behind Chicago and the collar counties. The county seat is Rockford, the third largest city in Illinois. Agriculture represents the greatest land use in the County, covering around 60% of the County, while approximately 22% of the land within the County is incorporated. The eastern portion of the County is heavily urban in nature; development, once concentrated around Rockford's downtown core, has progressed steadily eastward towards I-90 and south along I-39. Single-family residential development represents around 13% of the unincorporated land area. Exurban development patterns are common in the northeastern part of the County. The western portion of the County is predominantly agricultural, home to some of the most fertile farmland in the nation.

Winnebago County is currently in the process of developing a Unified Development Ordinance (UDO) to implement its 2030 Land Resource Management Plan. Much of the County's future growth will remain in the eastern portion of the county, taking advantage of the proximity of the two Interstate systems, rail service and airport. The County is working to foster continued development around the Airport, including railroad upgrades, to serve as a catalyst for future economic growth. Additional commercial and industrial development is also planned in the southeast portion of the County, proximate to the I-39/Baxter Road interchange. While market forces will continue to drive residential development primarily along the I-90 corridor, additional long-term residential development is planned along US-20 between the City of Rockford and the Village of Winnebago, northwest of the City of Rockford and along the IL-2 corridor.

Village of Cherry Valley

The Village of Cherry Valley is a suburban community just to the southeast of Rockford. The Village first developed around its main street business district to the southeast of the I-90/Harrison Avenue interchange, which has a very distinct small town feel. The Village later aggressively annexed land to the northwest of the interchange, where the CherryVale Mall and many other commercial and retail businesses are now located. More recently the Village annexed the Forest Preserves along the Kishwaukee River corridor in order to annex the land east of the Baxter Road/I-39 interchange, home of the Rock 39 Industrial Park.
Future residential development in Cherry Valley is expected to be minimal. Most growth will occur in the form of commercial development in greenfields to the northeast of the Village between I-90 and US-20 and west between I-39 and Harrison, as well as light industrial/heavy commercial development near the I-39/Baxter Road interchange.

City of Loves Park

The City of Loves Park is located north of Rockford, adjacent to Machesney Park. The historic center of the City is located along IL-251 between the Rock River and Forest Hills Road. The City has since grown northeast towards I-90. Riverside Boulevard has grown to become the major commercial corridor in the City, in addition to commercial strips along IL-251 and Alpine Road, though the latter two have experience decline. The City has a healthy manufacturing/industrial base, located primarily in the vicinity of the Forest Hills corridor.

Future commercial and industrial development will occur along I-90, taking advantage of the interchanges at Riverside Boulevard and IL-173. Residential development will extend eastwards into Boone County, ranging from higher densities closer to the Interstate decreasing to low-density large lot rural residential developments into Boone County.

Village of Machesney Park

The Village of Machesney Park is nestled between the Rock River to the west and I-90 to the east. At one point in time the IL-251 corridor through Machesney Park was a bustling commercial strip, however in recent times this area experienced sharp decline. The IL-173 corridor has become a regional retail destination, attracting many national big-box retail chains. Light industrial uses are located north of IL-173 along North Alpine and IL-251. The single family detached dwelling units comprise the majority of residential land use. Well established neighborhoods can be found in the south and central portions of the Village. More recent residential development has occurred along the Mitchell Road, Perryville Road and IL-173 corridor. It is anticipated that much of Machesney Park's future growth will be greenfield development along IL-173 eastwards towards the Interstate, north Perryville Road, Mitchell Road, and Forest Hills. Industrial development is planned for the east side of the 173/I-90 interchange, in addition to light industrial growth along the IL-251. Commercial growth will continue along IL-173 between Perryville Road and the interchange. Low density residential is expected north of this commercial area eastwards.

Village of New Milford

The Village of New Milford is located in the southern portion of Winnebago County, bounded between the Chicago Rockford International Airport to the west and Interstate 39 to the east, as well as the Winnebago County Landfill to the south. Development is primarily concentrated along the IL-251 corridor, bisected by the Kishwaukee River. The village is primarily comprised of low density single family residential land uses, with a scattering of commercial and light industrial.

The Village has annexed land along Baxter Road eastward towards the Baxter Road/I-39 interchange, projected for heavy commercial or light industrial uses. Any future residential development within the Village will be minimal.

City of Rockford

The City of Rockford is the largest city in the MSA. Originally concentrated around the historic downtown center along the Rock River, the decision to locate the Jane Addams Memorial Tollway (I-90) to the far to the east of the downtown in the late 1950s had a profound impact on the built form of the city. Development raced eastwards to take advantage of easy access to the interstate, while the west side of the City faced disinvestment and decline.

Rockford is characterized as a core city, comprised by an urban environment with a mix of high density single and multifamily homes. The land use composition of the City is roughly 40% single-family, 28% industrial, 20% multifamily and 12% commercial. Much of the industrial uses are concentrated in the southern portion of the City, from the _railroad down to the airport and along the Rock River. Many of these industrial properties have been abandoned and are currently sitting vacant. The traditional downtown commercial corridors in the City have been struggling as commercial development has extended east towards the Tollway; the East State Street and Perryville Road corridors have seen a proliferation of "big-box" commercial development. Residential development in the northeast portion of the City is relatively new with good quality building stock, while many of the homes in the west side of Rockford is aging renter-occupied stock in need of revitalization.

Rockford is a maturing, landlocked city. An Ultimate Annexation Boundary was adopted by Rockford City Council in 1984 and updated in 1993 as part of a comprehensive package of annexation policies and through growth management studies. Residential and commercial development will continue to increase in the eastern portion of the City along I-90, when it will then approach build-out. The City's comprehensive plan identifies nine core areas in the City for target redevelopment and infill. Investments in the West State Street and South Main Street corridors is expected to serve as a catalyst for the revitalization of many west side neighborhoods; it is hoped that these investments coupled with the growth are the Village of Winnebago will spur more commercial development in the western side of Rockford. The City recently annexed property into Ogle County, just south of the airport to spur economic development and future industrial expansion in this area.

Village of Roscoe

The Village of Roscoe is a rapidly growing suburban community located in northeastern Winnebago County, bordering Rockton, Machesney Park and South Beloit. It is predominantly comprised of middle- and upper income families. Its proximity to large employment markets in the Rockford, Beloit, and Janesville metropolitan areas and strong public school systems has been a catalyst for residential growth, spurring aggressive annexation policies and the rapid conversion of agricultural land to residential subdivisions. The existing land use reflects a concentric growth pattern, centered on the downtown historic business district surrounded by progressively newer residential development expanding outward. The retail core has more recently shifted to the Elevator/Hononegah Road corridor. Industrial land uses are located in the northern portion of the Village along McCurry and Rockton Roads, as well as the southern edge of the Village near Swanson Road and IL-251.

The Village's planning area extends eastwards into Boone County, where most future residential development is planned to occur. Future commercial and/or light industrial development is planned to expand along the Elevator/Hononegah Road corridor, near Swanson and McCurry Roads along IL-251, Rockton and Willowbrook Roads and at the I-90 interchange with Rockton Road.

Village of Winnebago

The Village of Winnebago is located west of the City of Rockford, just south of US-20. Winnebago is transitioning from a small town to more of a suburban form. Single family residences are compact within the Village's corporate limits, characteristic of its small town origin. North Elida Street to the US-20 intersection serves as a major commercial corridor for the Village. Due to an aging sewage treatment plant the Village is currently undergoing a process to connect into the Rock River Water Reclamation District. Once this connection is complete the Village will have the capacity to pursue additional commercial and industrial development, especially along the Elida/US-20 corridor. Future industrial development is also anticipated along Canadian National railroad. Future residential growth is planned for the area south of the Village to the railroad as well as east of town.

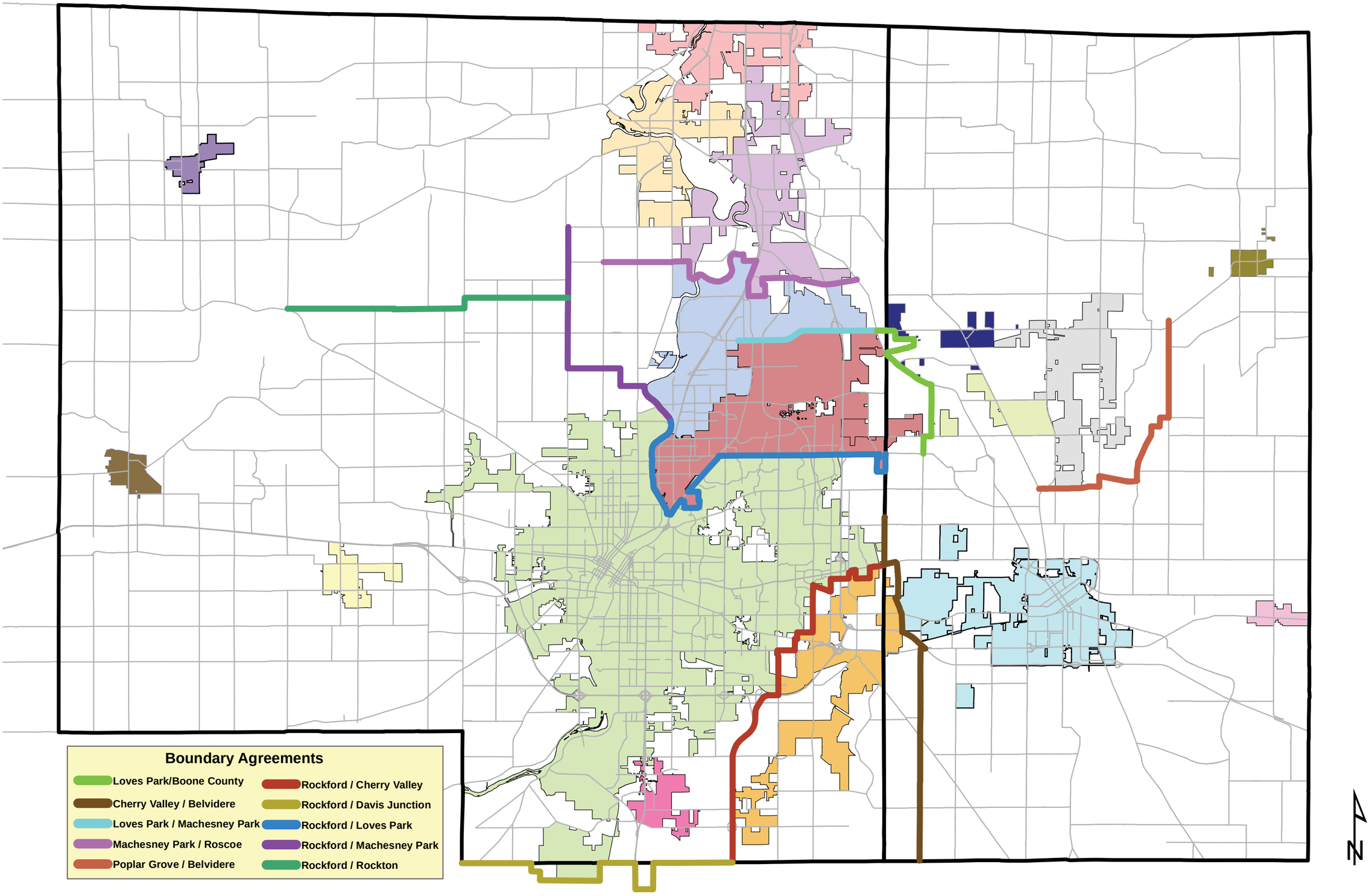
Boundary Agreements

It is important that the counties and municipalities work together on land use plans. Some jurisdictions have overlapping land use planning authority. In Illinois, municipalities have authority to impose their plans in unincorporated areas up to one and one-half miles beyond their corporate limits, known as extraterritorial jurisdiction. This may result in two or more communities overlapping an area with conflicting plans. The potential conflict is generally resolved through boundary agreements. Map 3-B depicts the current status of existing boundary agreements.

Corridor Plans

Corridor plans are the precursor to many transportation investments. The corridor planning process integrates transportation and community planning together into one process. While the contents of each plan will vary depending upon the needs of the corridor, these plans consider multiple modes of transportation, the relationship with adjacent land uses, and the connection to the greater transportation network. These plans take a holistic look at the corridor as a whole, rather than just isolated "problem spots." Following a Context Sensitive Solution (CSS) approach which encourages stakeholder involvement will yield a plan that is responsive to social, economic, and environmental factors- minimizing conflict while maximizing investment.

MAP 3-B


Boundary Agreements
Loves Park/Boone County
Cherry Valley / Belvidere
Loves Park / Machesney Park
Machesney Park / Roscoe
Poplar Grove / Belvidere
Rockford / Cherry Valley
Rockford / Davis Junction
Rockford / Loves Park
Rockford / Machesney Park
Rockford / Rockton
N

RMAP is critical partner in the corridor planning process. RMAP often assists the municipalities in securing the funding needed to initiate a plan, often utilizing IDOT's State Planning and Research (SPR) funds. RMAP also provides data and recommendations throughout the process. Current plans include:

- South Main Street Corridor Revitalization Strategy (2011)- South Main Street through Rockford from Cedar Street terminating at the Chicago Rockford International Airport.
- Riverside Boulevard Corridor Study (2011)- East Riverside Boulevard in Loves Park from the Rock River Bridge to Forest Hills Road.
- Irene Road Interchange Economic Impact Analysis (2010)- The Irene Road/I-90 interchange just west of Belvidere.
- Northeast Urban Planning Area (NUPA)(2010)- Primary focus on Poplar Grove Road corridor and the northeast portion of Boone County
- IL-173 Corridor Plan (2009)- IL-173 through Boone County from the Winnebago County Line to the McHenry County Line
- Kishwaukee Corridor Revitalization Plan (2008)- Kishwaukee Street (IL-251) in Rockford from the Whitman Street interchange terminating at the Chicago Rockford International Airport.
- Envision North Main Street (2007)- North Main Street in Rockford from just south of Auburn Street to just north of Riverside Boulevard.
- Springfield Avenue Corridor Plan (2005)- Springfield Avenue from Central Avenue to the Rock River through the City of Rockford and unincorporated portions of Winnebago County.
- West State Street Corridor Plan (2002)- West State Street from Meridian Road to Rockton Avenue through the City of Rockford and portions of unincorporated Winnebago County.

Additional Considerations

While the extension of transportation investments is often cited as a driver of growth, the availability of sanitary sewer and municipal water also play a key role in the shaping of the urban form. The ability to provide utilities has an impact on both the type and location of new development. Most municipalities in the MPA require sewer and water with new development. Unincorporated parts of each county may allow development on private well and septic systems, however these developments generally are low density or small-scale in keeping with the agricultural or rural nature of these areas.

Facilities Planning Areas

Under the Clean Water Act wastewater treatment districts are required to establish Facilities Planning Areas (FPAs). An FPA is the geographic area expected to be served by a treatment facility based upon the capacity of the treatment facility, the intensity of development forecasted in the area, and the anticipated volume and composition of the waste stream. See Map 3-C for the current FPA boundaries within the Rockford MSA. GIS data for Ogle County will be added when available.

The Rock River Water Reclamation District (RRWRD) is the largest sanitary sewer provider in the MPA. Recognizing the close connection between transportation and sanitary sewer, in 2012 the RRWRD was added as a voting member to the RMAP Technical Committee. RMAP staff also attends bi-monthly coordinating meetings with the RRWRD and other resource agencies in order to integrate planning and implementation processes across the region and gather feedback on development trends.

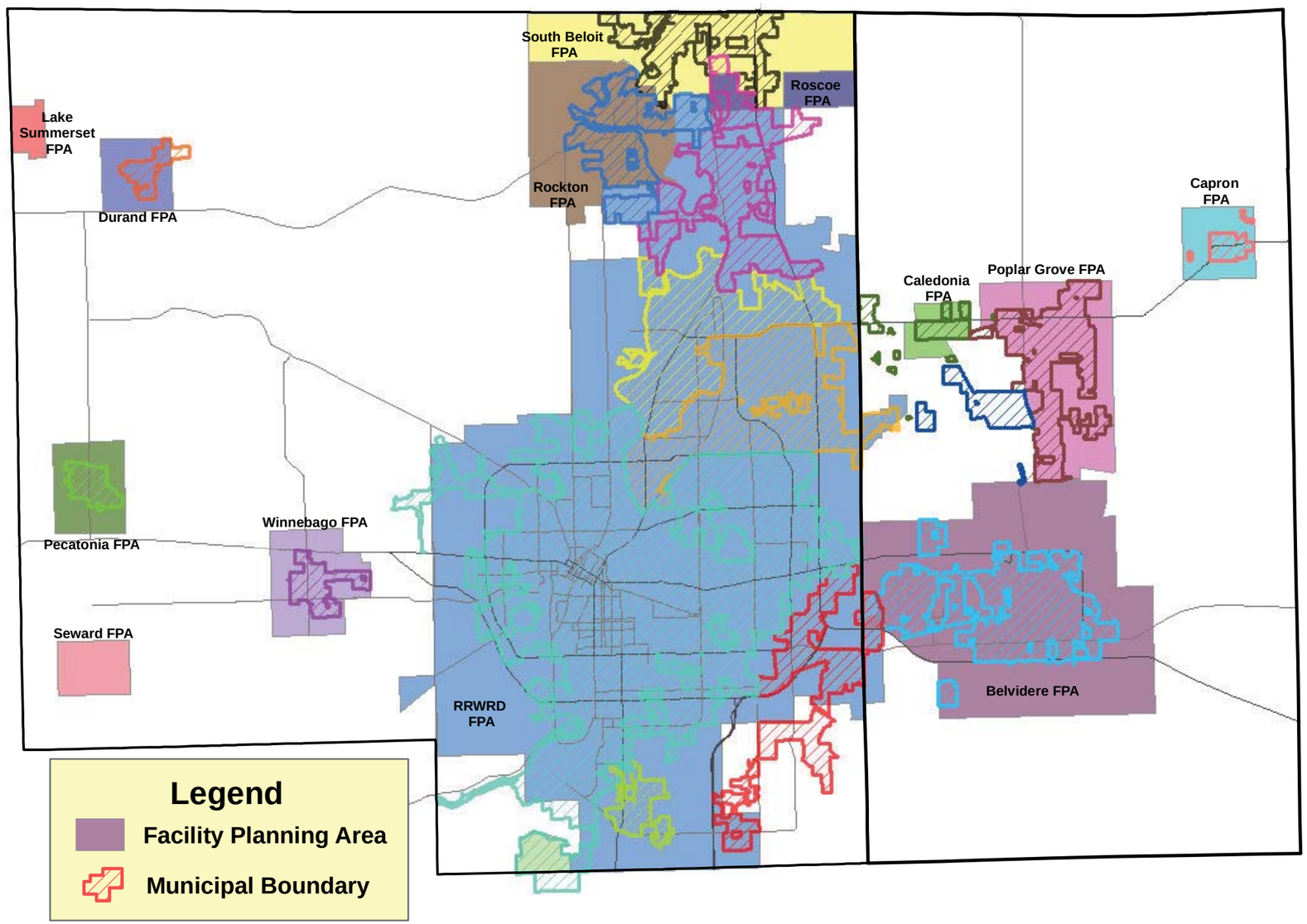
Land Use Recommendations

In order to enhance the region's social, economic, and environmental wellbeing, RMAP advocates for a smart growth approach to development. Smart growth values long-range, regional considerations of sustainability over a short-term focus. Its goals are to achieve a unique sense of community and place; expand the range of transportation, employment, and housing choices; equally distribute the costs and benefits of development; preserve and enhance natural and cultural resources; increase citizens' security and safety; and promote public health.
While "Smart Growth" has emerged as one of the more recent hot topics in planning, it is really rooted in returning to a more traditional planning approach common before the proliferation of the automobile. Smart growth is based upon the following core principles:

1. Mix land uses
2. Take advantage of compact building design
3. Create a range of housing opportunities and choices
4. Create Walkable neighborhoods
5. Foster distinctive, attractive communities with a strong sense of place
6. Preserve open space, farmland, natural beauty, and critical environmental areas
7. Strengthen and direct development towards existing communities
8. Provide a variety of transportation choices
9. Make development decisions predictable, fair, and cost effective
10. Encourage community and stakeholder collaboration in development decisions

MAP 3-C

Rockford Region Facility Planning Areas (FPAs)



Created 12/9/2014

Our Vital Signs: Regional Plan for Sustainable Development

The Regional Plan for Sustainable Development (RPSD) recently completed by RMAP was prefaced on the following principles, in order to lead to cost savings on infrastructure, minimize congestion, increase transit options, and relieve the pressure to increase road capacity at a time when families and business need smarter investment decisions.

- The region shall promote the development of an integrated, multimodal metropolitan transportation system that facilitates the efficient, safe, and economic movement of people and goods.
- The region shall seek a coordinated growth strategy that enhances livability of neighborhoods, balances development pressure with infill development, promotes the agriculture economy, reduces greenhouse gas emissions, introduces walkable landscapes, conserves natural resources, and rejuvenates historical economic centers.
- The region shall focus and prioritize financial and environmental sustainability, foster a healthy business climate that encourages private sector partnerships spurs economic competitiveness and creates jobs, utilizes the strengths of an exceptional local labor pool, develops world-class neighborhoods and maximized the quality of life for the citizens of the region.
- The regional planning framework shall integrate the disparate activities of transportation, land use, education, housing, economic development, human capital development, and human services to amplify the incremental value associated with coordinated planning.

The following strategies were developed in keeping with the Smart Growth principles and incorporating the recommendations from the RPSD. RMAP will support its member agencies in achieving these recommendations and to ensure that the long-term goals of the LRTP are in keeping with these recommendations.

Promote Mixed-Use, Compact Neighborhoods

According to FHWA, while cars are often the most popular form of transportation, people will use other modes if they are readily available. Individuals are receptive to a walking distance of ¼ mile to reach destinations or services. Those living in compact neighborhoods where they can walk and bike to nearby destinations are shown to drive 26% fewer miles per day than those living in less dense areas. Planning for compact neighborhoods can limit the need for automobiles and reduce greenhouse gas emissions. Mixed-use development and pedestrian-friendly streets encourage walking, bicycling and public transportation. Compact urban form increases accessibility, reduces infrastructure costs, preserves vital land resources, and leads to greater social integration.

Mixed-Use Development generally refers to the co-existence of multiple land uses such residential, commercial, and recreational, allowing convenient access between different uses. Mixed-use development was the standard in urban design prior to the boom of the automobile. Mixed-use development is associated with social benefits including improved accessibility to services and urban amenities, increases housing options for diverse household types, and leads to an enhanced feeling of safety by increasing foot traffic on the street. Economically mixed-use often results in higher sales tax receipts as co-location ads more potential customers during more times of the day. Mixed-use reduces the overall demand for travel, shortens average trip length, and reduces the amount of land required for parking uses. Zoning codes that isolate uses are often a barrier to implantation for mixed-use development. Municipalities are encouraged to amend their zoning ordinances to encourage this type of development. Overlay Districts are one option to circumvent this challenge.

Transit Oriented Developments (TOD) are mixed-use, typically high-density neighborhood centers clustered around transit corridor stations. These increasingly popular developments can reduce vehicle miles traveled by maximizing access to transit and nonmotorized options, generate pedestrian activity needed to support retail development, and offer a broad range of housing choices. Affordable housing options are typically included to ensure that working families can take advantage of housing and transportation options that allow them to access employment, education and healthcare while reducing their housing and transportation cost burden. Transportation Oriented Development is typically associated with rail systems; however more locations are starting to embrace TOD around bus systems as well.

The Urban Land Institute recommends the following principles in designing a successful TOD:

- Locate the transit stop at the center of the neighborhood rather than at the periphery. The new station will connect an entire regional transit system to the surrounding community, and its location should reflect the centrality of its role
- Design and position the station to foster the creation of an activity center that surrounds the station on all sides
- Ensure that the design of the station is of high quality and reflects the character of the surrounding community
- Include engaging public spaces, attractive street furniture and public art. Public space is more important in the creation of place; among other things it allows for events such as concerts, markets, exhibits and celebrations-events that bring people and vitality to the area and stimulate economic activity
- Promote pedestrian connections by creating compact blocks, pleasant walkways and comfortable, well-marked and continuous street front experiences. The appeal of the pedestrian environment strengthens the sense of place and supports retails spending
- Create attractive landmarks and gateways to the development
- To ensure round-the-clock activity, incorporate a variety of residential uses

For TODs designed around a local bus system with intermediate service a minimum density of 7 dwelling units/acre, 18 residents/acre, and 20 employees/acre is required. For a local bus system with frequent service a minimum density of 15 dwelling units/acre, 38 residents/acre, and 75 employees/acre is required. For TODs designed around a light rail system a minimum density of 9 dwelling units/acre, 23 residents/acre, and 125+ employees/acre is required. (Urban Land Institute, 2003)

LEED for Neighborhood Development (LEED-ND) builds upon the LEED rating system to certify "green neighborhoods." LEED, short for Leadership in Energy and Environmental Design, was created by the U.S. Green Building Council to develop high standards for environmental sustainability in building design. LEED-ND expands the scope from certifying individual buildings to integrating the principles of smart growth, green building and new urbanism into a holistic approach of designing neighborhoods to create a more sustainable community.

LEED-ND certified plans or built projects are awarded points based upon neighborhood pattern and design criteria including:
Walkable Streets; Biking Facilities; Compact Development; Mixed-Use Neighborhoods; Housing Types and Affordability; Reduced Parking Footprint; Connected and Open Community; Proximity to Transit Facilities; Transportation Demand Management; Access to Civic and Public Space; Access to Recreation Facilities; Tree-Lined and Shaded Streetscapes.

LEED-ND developments are sited in environmentally sound locations, most often infill developments, reduce the need to drive, take up less land yet produce more amenities, and conserve natural resources. While the fees for obtaining official certification are often inhibitive, municipalities are encouraged to incorporate LEED-ND principles into their ordinances and development review processes.

Support Existing Communities and Encourage Coordinated and Orderly Growth

The urban footprint of the metropolitan area of the MSA has quintupled since 1940, while the population of the urban area has only doubled, highlighting the region's sprawling and consumptive land use history. Urban sprawl results in the degradation of our natural resources, fragments high-quality farmland, increases the costs of commuting, poorer public health and increases social stratification. Density is sometimes negatively connoted with crime, blight, and depressed property values, however empirical studies demonstrate that increasing density has many positive benefits for a community, for example as density increases, the costs of most urban services decreases due to an efficiency in distribution networks. RMAP seeks to promote orderly development and growth in appropriate locations across the region in order to minimize sprawl, protect natural resources and make efficient use of public services and infrastructure.

Infill Development focuses on developing or redeveloping vacant and under-used parcels within urban areas that have otherwise been largely developed. The greater Rockford region has a large supply of vacant or abandoned buildings, many of them industrial in origin. As the economy shifted and manufacturing technologies evolved many aging manufacturing facilities have faded into obsolescence. These large tracts of land offer the opportunity to increase density within the city core and revitalize struggling neighborhoods. Infill development can occur in many forms; it may be achieved by repurposing a vacant building, adding vertically onto existing structures, or building from scratch on demolished or vacant sites. This supports greater, more efficient use of land that already is serviced by public facilities. Increased residential infill development should be encouraged near commercial and employment centers.

Growth Management is a set of planning techniques linking proposed development with the planned extension of community improvements and capital needs over a long-range planning horizon. Growth management also seeks to protect prime farmland and natural open spaces, ensure sufficient affordable housing opportunities and preserve historic landmarks. It veers away from a growth/no-growth debate to instead focus on where, when and how new development can best be accommodated. Many growth management techniques are currently being used by the region's municipalities such as zoning and the use of impact fees. The following techniques are a brief overview of additional Growth Management strategies that RMAP recommends for the region.

- Concurrency, otherwise called adequate public facilities, requires that any needed public infrastructure such as roads, sewer, water, and/or schools be in place before a development is approved. Concurrency helps to reduce urban sprawl by limiting development to areas where infrastructure is already in place, concentrating growth in appropriate areas. Concurrency involves coordinating the timing and sequence of development. This maximizes the efficiency of the infrastructure network, which reduces costs to taxpayers and maximizes the investment in infrastructure. Many of the municipalities in the RMAP region have a concurrency or similar ordinance in place; however they are often not strictly enforced.

- Urban Growth Boundary- The Vital Signs RPSD introduced the concept of an Urban Growth Boundary (UGB) for the region. A UGB establishes an area inside the boundary to be used for higher density urban development while restricting the area outside of the UGB for limited low density development and agricultural preservation. A UGB helps guide local zoning and land use decisions, promoting infill and higher density development. While they have proven highly successful across the US, UGBs are often met with opposition and require a strong commitment to regional land use planning to be successful.

- Support farmland protection efforts to preserve prime farmland and direct development towards more appropriate locations. The American Farmland Trusts estimates that in the State of Illinois 65 acres of prime farmland are being converted to other uses every minute; only four other states across the country are losing farmland at such a rate. The American Farmland Trust identifies northeastern Illinois, including Boone County, as some of the most threatened farmland due to development in the nation. During the 2000s Boone County was one of the top four fastest growing counties in the State due to its close proximity to the Chicago metropolitan region, rural lifestyle and relatively inexpensive land prices compared with those closer to Chicago. The three counties that comprise the RMAP MPA contain some of highest quality farmland not just in the Nation, but worldwide. This natural resource provides benefits such as food and fiber, scenic open space, wildlife refuge, and aquifer recharge. The Illinois Department of Agriculture estimates that farming and agriculture-related industries, including food processing, employs over one million people statewide. Given the importance of this resource RMAP recognizes the importance of ensuring that the policies and projects contained in this LRTP have minimal impact on the region's prime farmland.

RMAP will continue to support the efforts of the Boone County Agricultural Conservation Easement and Farmland Protection Commission to preserve farmland in Boone County, and encourage similar efforts in the other counties. The Commission's primary mission is to obtain farmland conservation easements to protect farmland from development for perpetuity. Other farmland protection programs in the region include the Illinois Agricultural Areas program and differential assessments.

Preserve and Protect Environmentally Sensitive Areas from Development

Environmentally sensitive areas, including wetlands, floodplains and special natural communities play a vital role in the region's ecosystem, from removing pollutants from the air and water, providing natural habitat, and providing aesthetic amenities. These are systems that are not easily replicated by human engineering. Environmental sensitive areas tend to be costly to develop, as they may pose natural hazards to development, and are often expensive to modify to a buildable standard. Constructing transportation infrastructure through environmentally sensitive areas greatly increases projects costs and may slow project delivery. RMAP has developed the Greenways Plan and Map to identify these areas and devise a coordinated strategy for their long-term protection. Please see Section 5 Environmental and Green Planning for more information about Greenways.

Future Land Use Needs/Growth Projections

One of the components in the overall transportation planning process starts with developing land-use forecasts of primarily the dwelling units, population and economic variables of the region. The forecasts will be used to evaluate current and planned transportation facilities through the application of the MPO's transportation demand planning modeling (TDM) program. Currently, RMAP is using the PTV VISUM program. These forecasts and the TMD results are representative of many issues that will subsequently be used in developing the Year 2040 Transportation for Tomorrow planning document.

The sources for developing land use projections are based upon the currently adopted land use plans of the different communities and counties in the RMAP MPA and surrounding environs within the three-county area and SLATS MPO. These planning documents are summarized in another section of this LRTP.

During the TDM process, the initial land use projection that is used is derived from the adopted land use plans. Based upon the results from the base-year calibration and the first planning horizon year results, different land use scenarios might be developed and used based upon new projected development projects and/or changes in the transportation systems/networks. With RMAP now just starting the planning process to expand and interface with our REMI software, we could possibly be running different land use/transportation/economic scenarios back and forth to evaluate the transportation system in the RMAP area.

The transportation improvements in the LRTP are derived from inputs from the MPO's planning partners based upon discussions, land use plans from the various jurisdictions in the RMAP MPA and other from information from area and national databases. These forecasts are in the TDM process and are used to estimate the number of trips that will be generated to determine the needed transportation system to accommodate those trips and to maintain an adequate level-of-service. State another way, the area's land use plans provide a starting point for determining the future travel matrices that provide a basis for assessing future transportation demand.

Investment in transportation represents a significant catalyst for economic development. Transportation plans identify the facilities and investments needed to promote viable local and regional economies. The transportation planning process starts with 20-30 year forecasts of socio-economic variables. The forecasts are based on trends in other metropolitan areas similar to RMAP size, regional travel connections to other significant destinations (primarily to the Chicago Metro Area and southern Wisconsin).

County Forecasts

Population, dwelling units and employment forecasts are important factors influencing the transportation plan. RMAP uses two national data sources and another local/regional generated in a specific planning project that was completed in 2004. The forecasts from the "Boone County and Winnebago County Transportation Planning Study," were analyzed along with forecasts by (A) a national econometric firm- Woods & Poole Economics, Inc. and (B) the new Regional Economic Models Inc. (REMI) programs. The forecasts are by county and cover the period through 2040.

The two national data sets forecasts have national, as well as multi-state economic region control totals. The Transportation Planning Study (TPS) forecasts are based on Boone County and Winnebago County and allocated to the TDM Transportation Analysis Zones (TAZ).

Table 3-1 presents the population and household forecasts for Winnebago County by WPE and TPS. The TPS forecasts are inferred from its dwelling unit forecast, using the 2000 vacancy rates and WPE household size. Table 3-2 presents the same forecast for Boone County, and Table 3-3 for Ogle County.

TABLE 3-1

Winnebago County Population and Household Forecasts

Year	Woods & Poole		TPS / TDM		REMI	
	Population	Households	Population	Households	Population	Households
1970	246,370	77,200	N/A	N/A	N/A	N/A
1980	251,180	89,580	N/A	N/A	N/A	N/A
1990	253,720	97,070	N/A	N/A	253,721	N/A
2000	278,970	108,320	278,418	114,404	278,981	N/A
2010	295,150	115,460	295,266	125,965	295,096	N/A
2015	293,020	120,620	N/A	N/A	284,096	N/A
2020	299,870	124,510	N/A	N/A	297,029	N/A
2025	306,400	127,010	N/A	N/A	298,889	N/A
2030	312,280	128,320	N/A	N/A	302,136	N/A
2035	N/A	N/A	N/A	N/A	306,603	N/A
2040	319,580	129,190	334,543	150,695	311,107	N/A

Note: for Households, W/P uses the total Occupied while TPS uses total number of households, which includes all vacant households. In other words, the vacancy rate is about 5.3%.

TABLE 3-2

Boone County Population and Household Forecasts						
Year	Woods & Poole		TPS / TDM		REMI	
	Population	Households	Population	Households	Population	Households
1970	25,480	7,850	N/A	N/A	N/A	N/A
1980	28,770	9,730	N/A	N/A	N/A	N/A
1990	30,980	10,990	N/A	N/A	30,981	N/A
2000	42,050	14,700	41,786	15,414	42,052	N/A
2010	54,150	18,510	54,165	19,970	51,149	N/A
2015	55,150	20,010	N/A	N/A	53,876	N/A
2020	58,440	21,360	N/A	N/A	54,272	N/A
2025	61,820	22,590	N/A	N/A	54,998	N/A
2030	65,240	23,640	N/A	N/A	56,561	N/A
2035	N/A	N/A	N/A	N/A	58,818	N/A
2040	71,570	25,510	84,755	33,500	61,180	N/A

Distribution of County-wide Population Forecasts

RMAP staff distributes the county-wide forecasts to TAZs based upon the Quarterly Census of Employment and Wages data RMAP receives from the Illinois Department of Employment Security (IDES) by the way of a three-way agreement between RMAP – IDOT – IDES, current and proposed adopted land use plans and input from the technical staffs in the MPO and surrounding region, including The Illinois Toll Highway Authority.

A significant portion of the growth in the Rockford MSA in the 1990's occurred in the area between the cities of Rockford and Belvidere. Other growth areas were south of US-20 and north of Rockford, Loves Park, Machesney Park, Village of Roscoe, Village of Rockton and Village of South Beloit up to the Wisconsin boundary. In addition, there were pockets of growth within Rockford. Although the Northeastern Illinois growth pattern continues to be moving outward toward the Rockford MSA, the rate of growth between the Chicago MSA and the Rockford MSA has slowed down, primarily following national trends over the past five years. However, based upon land use projections from W/P, REMI and the rebuilding of the Jane Addams Memorial Tollway, growth will continue to occur.

The Year 2040 growth trends are illustrated on Maps 3-1 and 3-2. RMAP has begun to examine the following growth trends:

- Encouraging redevelopment in the core of Rockford, especially along the Rock River, to take advantage of abandoned or underutilized industrial and commercial land. Many Midwestern cities are taking advantage of adaptive re-use of old buildings and redevelopment of under-utilized land to attract people back to cities. The Rock River is an excellent catalyst for such development.
- Assigning additional development to areas in close proximity to Chicago/Rockford International Airport/RFD. Market forces are creating development opportunities as the airport continues to grow and the urbanized expands south into Ogle County. The Regional Freight Study identified that additional development would generated the proposed transportation improvement to facilitate access to/from this area of southern Winnebago County/Northern Ogle County.

TABLE 3-3

Ogle County Population and Household Forecasts				
	Woods & Poole		REMI	
YEAR	Population	Households	Population	Households
1970	42,800	13,530	N/A	N/A
1980	46450	16,340	N/A	N/A
1990	46,060	17,170	46,059	N/A
2000	51,280	19,350	51,275	N/A
2010	53,450	20,840	53,456	N/A
2015	52,610	21,640	52,683	N/A
2020	53,350	22,130	53,444	N/A
2025	54,010	22,370	54,951	N/A
2030	54,540	2,240	57,545	N/A
2035	N/A	N/A	60,758	N/A
2040	54,790	22,140	63,917	N/A

Employment Trends and Forecasts

Sources of Employment Data

Population and household data have universally accepted definitions. Employment data have varying definitions dependent on the source of data. Furthermore, the more reliable employment data sources do not go below the county level. Accordingly, employment estimates for small geographies, e.g. census block groups, TAZ, townships, municipalities, require factoring and/or adjustment to ensure conformance to county totals, as published by federal and/or state agencies. The most common sources of employment statistics are:

- Bureau of Economic Analysis: The Bureau of Economic Analysis (BEA), U.S. Department of Commerce publishes the most comprehensive source of employment data by place of work. The BEA data include full- and part-time wage and salary workers, the self-employed, private household employees, and miscellaneous workers. The self-employed, who also hold a second salaried job, as well as workers holding two jobs, are counted as two jobs. Miscellaneous employment includes judges and all elected officials, persons working only on commission, such as real estate agents, and students holding part-time jobs at the colleges or universities in which they are enrolled. Due to its comprehensive nature, the source presents the highest number of jobs of any source. For transportation planning, this is the best-suited source. A person holding two jobs, the self-employed and household workers all require work trips to each of their jobs. Transportation studies that rely on less-comprehensive sources of data tend to underestimate the demand for travel. Woods & Poole Economics and REMI use this source as the basis for historic analysis.

- Bureau of Labor Statistics (BLS) Establishment Data: The BLS Establishment Data are collected from the employers and are published by MSA. However, the employment totals are much lower than the BEA data as they exclude agricultural, military, self-employed, household and miscellaneous workers. The exclusion of the self-employed (proprietors) is most significant as a major portion of this employment is in retail and other related services. BLS employment is usually used as control totals by transportation planning agencies like RMAP that using Illinois Department of Employment Security (IDES) data.

- Illinois Department of Employment Security (IDES): This source can provide employment data by work place address and RMAP staff assigns each work place locations to that respective TAZ. However, this source includes only employment covered by the SES programs. The self-employed, household workers, and those paid in cash are not included. Furthermore, the address-specific data are confidential; they are released only to MPOs like RMAP by a written agreement between IDES – IDOT and each MPO in the State of Illinois. RMAP aggregates the data to the TAZ geography, thus protecting the confidentiality of the data for any one single establishment and to apply it in the TDM planning process. RMAP uses this source as the basis for employment estimates by TAZ.

- Woods & Poole Economics, Inc. is an experienced independent firm that specializes in long-term county economic and demographic projections. Users of Woods & Poole data include public utilities, state and local government, consultants, retailers, market research firms and planners. Woods & Poole's database contains more than 900 economic and demographic variables for every state, region, county, and Metropolitan and Micropolitan Area in the U.S. for every year from 1970 to 2040. This comprehensive database is updated annually and includes detailed population data by age, sex, and race; employment and earnings by major industry; personal income by source of income; retail sales by kind of business; and data on the number of households, their size, and their income. All of these variables are projected for each year through 2040.

- Regional Economic Models, Inc. (REMI): The REMI overall model products incorporates aspects of four major modeling approaches covering a wide-range of demographics and economics variables;
  1: Input-Output,
  2: General Equilibrium,
  3: Econometric, and
  4: Economic Geography.

  Topics covered within these four approaches are:
  A: Economic Development,
  B: Energy,
  C: Environment,
  D: Taxation, and
  E: Transportation.

  Each of these methodologies/approaches has distinct advantages as well as limitations when used alone. The overall REMI model, at its core, has the inter-industry relationships found in Input-Output models. As a result, the industry structure of a particular region is captured within the model, as well as transactions between industries/regions of the country. Changes that affect industry sectors that are highly interconnected to the rest of the economy will often have a greater economic impact than those for industries that are not closely linked to the regional economy. REMI has developed four separate software products that each program models specific cogs/elements in the region's geography.

2040 Dwelling Unit Projection by TAZ

Green Co.

Rock Co.

Walworth Co.

Boone Co.

Winnebago Co.

Rock Cut State Park

Stephenson Co.

McHenry Co.

Ogle Co.

DeKalb Co.

Metropolitan Planning Area
Existing Dwelling Units: 129,818
Projected New Dwelling Units: 54,377
2040 Total Dwelling Units: 184,195
1 Dot = 25 Dwelling Units

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Last Updated: 11/7/2014

RMAP, like all MPOs, has very specific planning tasks to address that are restricted to transportation planning activities/factors that are set forth under the authorized federal legislation, commonly referred to as the 3-C transportation planning process. Over the past several years, MPOs have begun to employ software programs in their unified work program linking the demographics, economics, land use and transportation systems/information together. In other words, it has become an integrated process encompassing a comprehensive means to address not only federal emphasizes but also regional and local issues.

RMAP will be using two of the REMI programs TranSight and Metro-PI. These programs will employ a dynamic impact model to forecast and simulate changes in the region's demographics, employment, output, and other economic and demographic variables. These variables are based upon changes in the transportation network, travel patterns and inputs/outputs from the travel demand model (TDM) program. Since RMAP is starting this transportation planning activity and is still in the calibration stage of the TDM and the allocation of the county-wide TranSight data to the Metro-PI TAZ geography, this data is not represented in this iteration of the LRTP, but will be presented in a future update.

County Employment Forecasts

Table 3-4 presents the total employment trends and forecasts for Boone, Ogle and Winnebago Counties, as developed by WPE and REMI.

Employment Distribution within Winnebago and Boone Counties – Trends and Forecasts

Maps that illustrate employment relationships are provided in Maps 4-B in the Socioeconomic Profile Section. The highest concentrations of employment are along I-39, I-90/US-20 (both Business and Bypass) corridors that have interchanges and intersections with our Principal Arterial Highways (East State Street/US Bus 20, Riverside Boulevard, IL-173/West Lane Road, Rockton Road, Baxter Road, and Genoa Road, several of the commercial cores and industrial parks, Chicago – Rockford International Airport (RFD)/Global Trade Park, major health/hospitals facilities and at certain locations along the Rock River (primarily from historical settlements). Due to variations in block group size, some of the very large ones appear to have large concentrations of jobs and many small block groups appear to be sparsely populated with jobs. The density map adjusts for these discrepancies. The density map shows that the highest concentrations of jobs occur along US-20 and IL-251. At the intersection of these two routes is downtown Rockford.

TABLE 3-4

Total Employment Forecasts

Year	Woods & Poole			REMI		
	Winnebago	Ogle	Boone	Winnebago	Ogle	Boone
1970	113,190	78,790	14,430	N/A	N/A	N/A
1980	130,410	18,720	14,430	N/A	N/A	N/A
1990	150,570	20,580	16,780	150,572	20,580	16,773
2000	175,420	25,410	18,890	175,312	25,379	18,860
2010	159,420	23,730	19,450	159,414	23,704	19,455
2015	163,860	23,500	24,240	169,794	24,652	23,695
2020	172,310	24,610	26,060	174,230	25,589	24,162
2025	180,240	25,600	27,840	177,401	25,928	24,449
2030	187,260	26,400	29,460	178,786	26,246	24,784
2035	N/A	N/A	N/A	183,282	26,873	25,578
2040	198,560	27,520	32,370	187,790	27,478	26,379

2040 Employment Projection by TAZ

Green Co.

Rock Co.

Walworth Co.

Boone Co.

Winnebago Co.

Stephenson Co.

Rock Cut State Park

McHenry Co.

Ogle Co.

DeKalb Co.

Metropolitan Planning Area

Existing Employment: 148,793 Jobs

Projected New Jobs: 60,352 Jobs

2040 Total Employment: 209,145 Jobs

1 Dot = 25 Jobs

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W E

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Last Updated: 11/7/2014

In the TPS, most of the projected growth is shown to be along the Jane Addams Memorial Tollway (I-90/I-39) in Winnebago County, along I-90 in Belvidere, especially at the two interchanges at Irene Road and Genoa Road, southwest of Rockford along US-20 By-Pass, and in the area bounded by IL-251, IL-173, I-90, and Swanson Road in the Machesney Park/Roscoe area. Throughout the RMAP MPA employment growth also is shown to be in some sub-areas (for example the tri-area of East Riverside Boulevard/Forest Hills Road/Alpine Road), around the RFD area and the forecasted population changes discussed earlier in this report.

The following observations will be used in showing the location of future employment changes:

- Due to anticipated structured changes in the economy of the Rockford MSA, some areas will experience declines in employment. Some of these areas are recommended for renewal and revitalization to residential areas; particularly those along the Rock River.

- RFD is destined to be a major catalyst for employment growth. Areas that will become especially attractive for growth in the vicinity of the airport are those along US-20, IL-251 to the south of US-20, east and south of the airport.

- I-90/Jane Addams Memorial Tollway in both Boone County and Winnebago County. With recent improvement to this roadway (capacity expansion and current and planned interchanges, which improves access to/from I-90), this corridor will continue to have the market attraction to foster economic development/employment opportunities in the RMAP region.

- I-39 south of Rockford towards Rochelle and I-88/Reagan Memorial Tollway.

- Within Boone County the population forecasts show the predominant growth to the north of Belvidere and along the IL-173 corridor between Caledonia and Capron, in attempts to access the Metra Commuter Rail Station at Harvard. The employment growth in Boone County is concentrated south of Belvidere along the I-90 corridor.

Transportation Demand Modeling (TDM)

RMAP utilizes a computerized transportation model to analyze street and intersection congestion and forecast the need for future roadway improvements. RMAP also performs transportation modeling for SLATS in an effort to coordinate planning activities between the two MPOs and agencies within each of the MPOs. Map 2-16 illustrates the Regional Transportation Demand Modeling Area (TMDA).

The roadway projects listed in Section 8, Roadway, are based on the results of the continuous modeling efforts as a result of the 2010 Census information. As part of the modeling results shown, different land use scenarios and modeling outputs based upon the results from (1) existing, (2) existing-committed and (3) existing-committed-planned highway networks were used to identify future roadway improvements.

The transportation model involves numerous mathematical equations to analyze large amounts of data. The model is a mathematical representation of the transportation process used to forecast where travel will occur and determine what roadways improvements will be needed. Demographic and land use forecasts are a major source of data input for the model.

Forecasted dwelling units, population and employment are tied into future land use to determine how future trips/traffic volumes will be distributed in the MPO and surrounding region area. The modeling area is divided into traffic analysis zones for the purpose of the modeling effort and utilizes trip generation, trip distribution and trip assignment in the modeling process.

TABLE 3-5

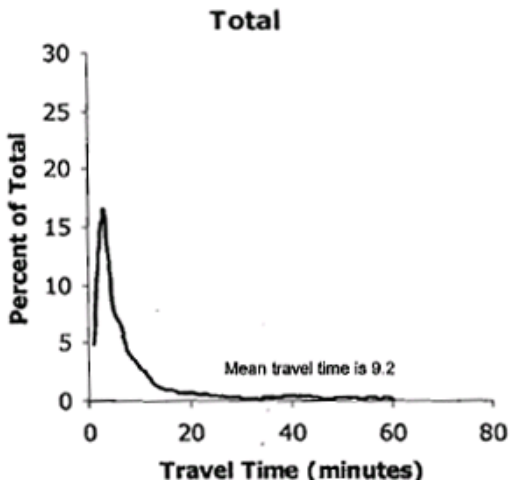


Figure 2-1 – Trip Duration Distribution

Trip generation is a prediction of the number of person trips that are generated by and attracted to each defined zone. Residential land uses "produce" trips, and the non-residential land uses "attract" trips. There are certain variables that are used to forecast the trip production. These include such socioeconomic variables as the number of households, household size, number of automobiles owned, and income. As the number of households, automobiles and income increase, so does the trip production. On the other hand, the type of non-residential land use (e.g. industrial, commercial, office, or education) will attract different numbers of trips.

Trip distribution connects the zones that "produce" with the zones that "attract" trips. In other words, for each trip that originates in a zone, a destination zone is found. The trip distribution part of the model is determined by "attractiveness" between the zones. Most of the trips produced in a given zone will be attracted to a surrounding or nearby zone; some will be attracted to moderately distant zones; and a small number will be attracted to very distant locations. The type of trip also influences attractiveness, that is, work trips are generally longer than non-work trips. The long journeys are relatively few in number and most trips are relatively short (see Table 3-5).
Trip assignment assigns the trips to specific roadway routes and determines the resulting highway volumes. The roadway choice decision is based on the travel times involved in the trips. It is also based on the general assumption that people minimize their travel times and traveling is perceived negatively. Roads have functional classifications: freeways, arterials, collectors and local roadways.

The classification is a function of the travel speed and vehicle capacity of the roadway. The functional classification is also used to determine an impedance function. The impedance function describes the opposition to handle traffic flow. For example, a freeway has much faster travel speeds and can handle a much greater volume of traffic than a collector street. Trips are assigned to the roadway network based on the impedance function of the roadway. In other words, the trips are assigned based on the least time or distance involved in the trip.

In addition to the above trips that begin and end inside the limit of the study area, there are external trips from outside the study area. There are three variations on external trips: external-external, external-internal and internal-external. External-external trips pass through the study area without stopping. Internal-external trips originate in the study area and travel outside the study area. External-internal trips originate outside the study area and travel to the study area. The number of external trips is derived from traffic counts taken on roadways entering the study area. These trips are distributed and assigned to the study area. The external trips that are attracted to or produced in the study area are assigned to zones.

Finally, commercial/freight vehicle travel is included in the model. Commercial vehicles are those other than passenger cars. The present model accounts for commercial vehicle trips by developing adjustment factors based on roadway classification. The adjustment factor assigns a certain percentage of commercial traffic based current freight flow data, highway classification and the planned land use changes.

Included in the overall model update with the REMI integration is the transit mode network will be added to the TDM. RMTD just recently made some routes adjustments to their daily service. With continued and planned growth anticipated over the next twenty-five years, adding the transit mode split is keeping in good planning practices. Also, it is still a long-term goal of the RMAP region to one-day have daily commuter rail service to/from the Chicagoland area. By adding the transit mode to the TDM will provide the technical assistance and application to continuing this planning objective.

One of the functions of the TDM is to simulate current and projected traffic volumes/Levels Of Service (LOS) for the roadways in the RMAP – SLATS MPO areas, as well as the surrounding rural areas of both Boone and Winnebago Counties (and in the near future Ogle County). Using the assign traffic volumes on each of the roadway sections by the capacity of the same segment, a Volume to Capacity (V/C) ratio is determined. When the V/C ratio is over 0.9, that roadway segment could be considered congested, but other factors such as access spacing, signalized spacing and phasing, turn lanes and overall highway geometrics management influence congestion levels also.

TABLE 3-6

Level of Service	# of links	Percentage
A	191	65.90%
B	74	25.50%
C	23	7.90%
D	2	0.70%
E	0	0%
F	0	0%
Total	290	100%

TABLE 3-7

V/C ratio	by miles	% of miles	Model Functional Classification	by miles	% of miles	V/C ratio by Model Functional Classification	1	2	3	4	5	6	7	8	9	10	
higher than 1.00	-	0.00%		241.26	7.67%	higher than 1.00											-
.99 to .90	0.25	0.01%	1 - interstate / Freeway		0.00%	.99 to .90							0.25				0.25
.89 to .80	1.75	0.06%	2 - Expressway	193.24	6.15%	.89 to .80					0.33	0.64	0.78				1.75
.79 to .70	1.50	0.05%	3 - Divided Principal Arterial	203.64	6.48%	.79 to .70				0.59	0.09	0.42	0.10	0.30			1.50
.69 to .60	12.88	0.41%	4 - Undivided Principal Arterial	691.81	22.01%	.69 to .60	1.96		0.08	2.04	0.89	4.01	2.02	1.69	0.19		12.88
.59 t0 .50	43.31	1.38%	5 - Wider Minor Arterial	146.52	4.66%	.59 t0 .50	16.15		3.82	6.15	4.71	3.96	3.82	2.88	1.83		43.32
.49 to .40	141.49	4.50%	6 - Narrower Minor Arterial	786.14	25.01%	.49 to .40	39.40		21.13	11.21	29.36	11.50	16.20	11.07	1.61		141.48
.39 to .30	282.47	8.99%	7 - Collectors	830.18	26.41%	.39 to .30	22.95		48.74	27.23	86.07	26.27	37.66	29.54	4.01		282.47
.29 to .20	469.36	14.93%	8 - Local Collectors	46.45	1.48%	.29 to .20	28.72		56.12	50.21	149.94	27.45	93.40	57.46	6.05		469.35
.19 to .10	585.51	18.63%	9 - Ramps	4.23	0.13%	.19 to .10	10.99		34.18	67.68	188.82	38.58	156.17	84.82	4.28		585.52
lower than .10	1,604.95	51.06%	10 - Centroid Connector			lower than .10	121.10		29.18	38.54	231.60	33.68	475.73	642.42	28.48	4.23	1,604.96
	3,143.47	100.00%		3,143.47	100.00%		241.27	-	193.25	203.65	691.81	146.51	786.13	830.18	46.45	4.23	3,143.48

TABLE 3-8

V/C ratio	by miles	% of miles	Model Functional Classification	by miles	% of miles	V/C ratio by Model Functional Classification	1	2	3	4	5	6	7	8	9	10	
higher than 1.00	1.01	0.03%	1 - interstate / Freeway	241.56	7.16%	higher than 1.00						0.08	0.46	0.28	0.19		1.01
.99 to .90	2.47	0.07%	2 - Expressway	17.34	0.51%	.99 to .90					0.36		1.65	0.03	0.43		2.47
.89 to .80	6.43	0.19%	3 - Divided Principal Arterial	246.30	7.31%	.89 to .80			0.46	0.89	1.95	0.51	1.71	0.33	0.58		6.43
.79 to .70	22.38	0.66%	4 - Undivided Principal Arterial	173.12	5.13%	.79 to .70	3.28		2.92	0.37	7.12	2.04	3.23	2.53	0.89		22.38
.69 to .60	77.97	2.31%	5 - Wider Minor Arterial	783.72	23.25%	.69 to .60	26.70	1.24	4.57	3.84	18.00	4.58	9.87	7.52	1.65		77.97
.59 t0 .50	159.37	4.73%	6 - Narrower Minor Arterial	155.82	4.62%	.59 t0 .50	45.87	4.00	16.96	5.64	38.03	10.05	19.56	14.90	4.36		159.37
.49 to .40	267.15	7.92%	7 - Collectors	821.88	24.38%	.49 to .40	22.51	1.56	38.03	20.44	94.82	16.30	41.20	28.26	4.03		267.15
.39 to .30	381.38	11.31%	8 - Local Collectors	869.90	25.80%	.39 to .30	10.73	4.20	71.83	27.12	118.98	21.19	72.57	50.25	4.51		381.38
.29 to .20	506.52	15.02%	9 - Ramps	57.74	1.71%	.29 to .20	9.44	2.60	43.63	51.67	145.09	30.61	126.54	94.21	2.73		506.52
.19 to .10	612.89	18.18%	10 - Centroid Connector	4.12	0.12%	.19 to .10	2.25		39.12	44.38	172.46	33.65	155.87	159.27	5.72	0.17	612.89
lower than .10	1,333.93	39.56%				lower than .10	120.78	3.74	28.78	18.77	186.91	36.81	389.22	512.32	32.65	3.95	1,333.93
	3,371.50	100.00%		3,371.50	100.00%		241.56	17.34	246.30	173.12	783.72	155.82	821.88	869.90	57.74	4.12	3,371.50

Tables 3-7 and 3-8 , as well as Map 3-F and Map 3-G show the LOS for the base year (2000), and for the projected year of 2040. RMAP is currently updating the base year/calibration as part of the TDM expansion into Ogle County and adding the transit mode split. This process includes the 2010 Census data, recent employment data from the Illinois Department of Employment Security and other pertinent data for model calibration. For the 2040 projections, we are using a combination of data sources, with the principal sources being the adopted land use plans of all the local and county jurisdictions in Boone County, Ogle County, Winnebago County and the SLATS MPO (Rock County, Wisconsin) area.

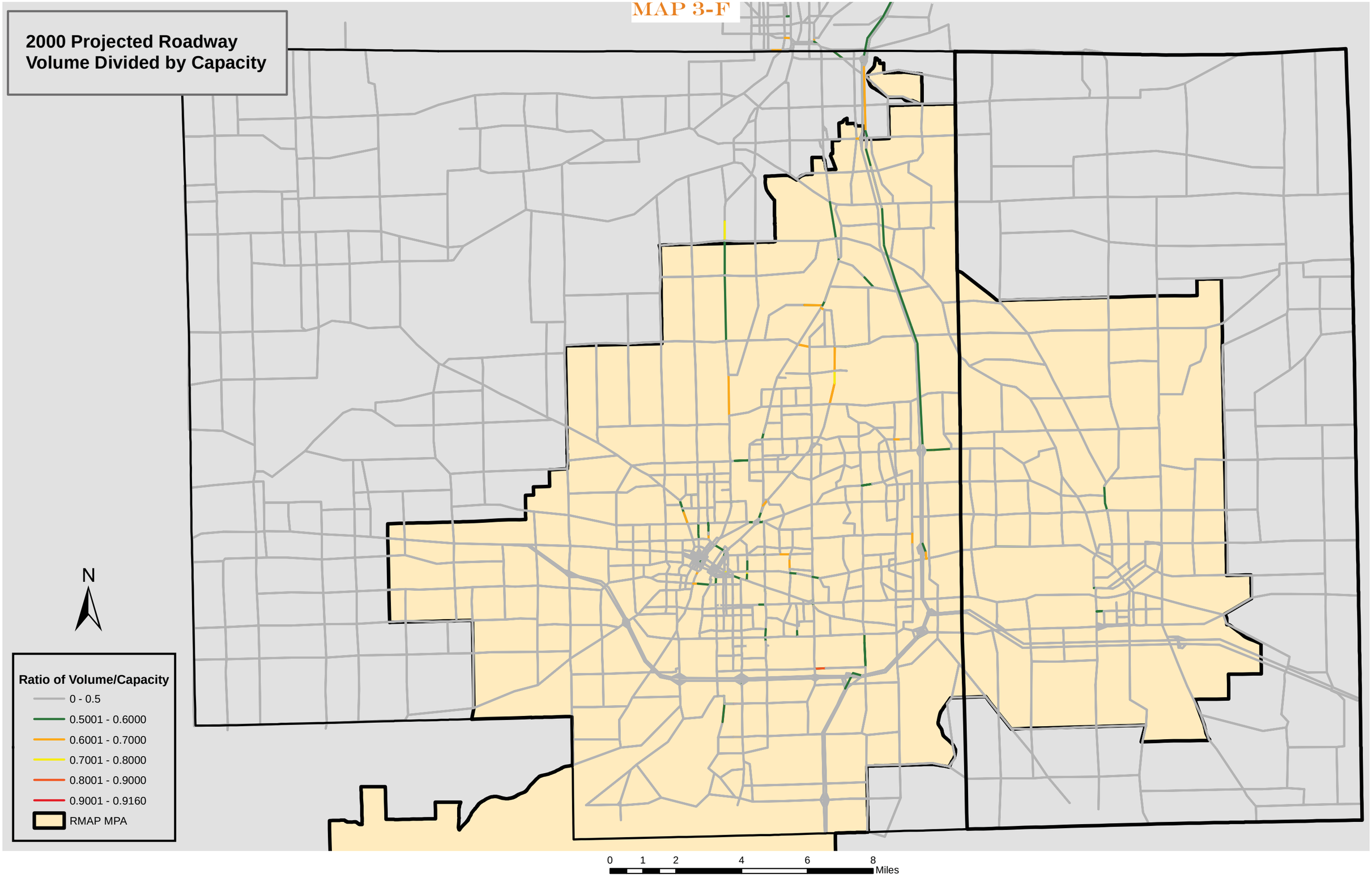
As can be seen in tables 3-7 and 3-8, the percentage of roadways in the RMAP region at a ratio of 0.9 or higher in 2000 was approximately 0.01% or 0.25 (¼) miles of roadway. The change by 2040 will be to approximately 0.10% or 3.48 miles of roadway. RMAP will continue to monitor the traffic volumes on the roadways, the changes in land use and economic development activity in the area and other related information and data. Based upon this continuous review, RMAP will consultant with our planning partners in the RMAP area to consider what options might be available to address that projected congested area and what type of improvements then programmed into the MPO's Transportation Improvement Program.

One of the discussion points in using a TDM is the methods to monitor and evaluate existing system performance (i.e. LOS) during the assignment base-year calibration process. Obviously, one of the web based data sources to use in this activity is IDOT's travel date and interactive data tools on their web site @ http://www.idot.illinois.gov/transportation-system/Network-Overview/highway-system/index.

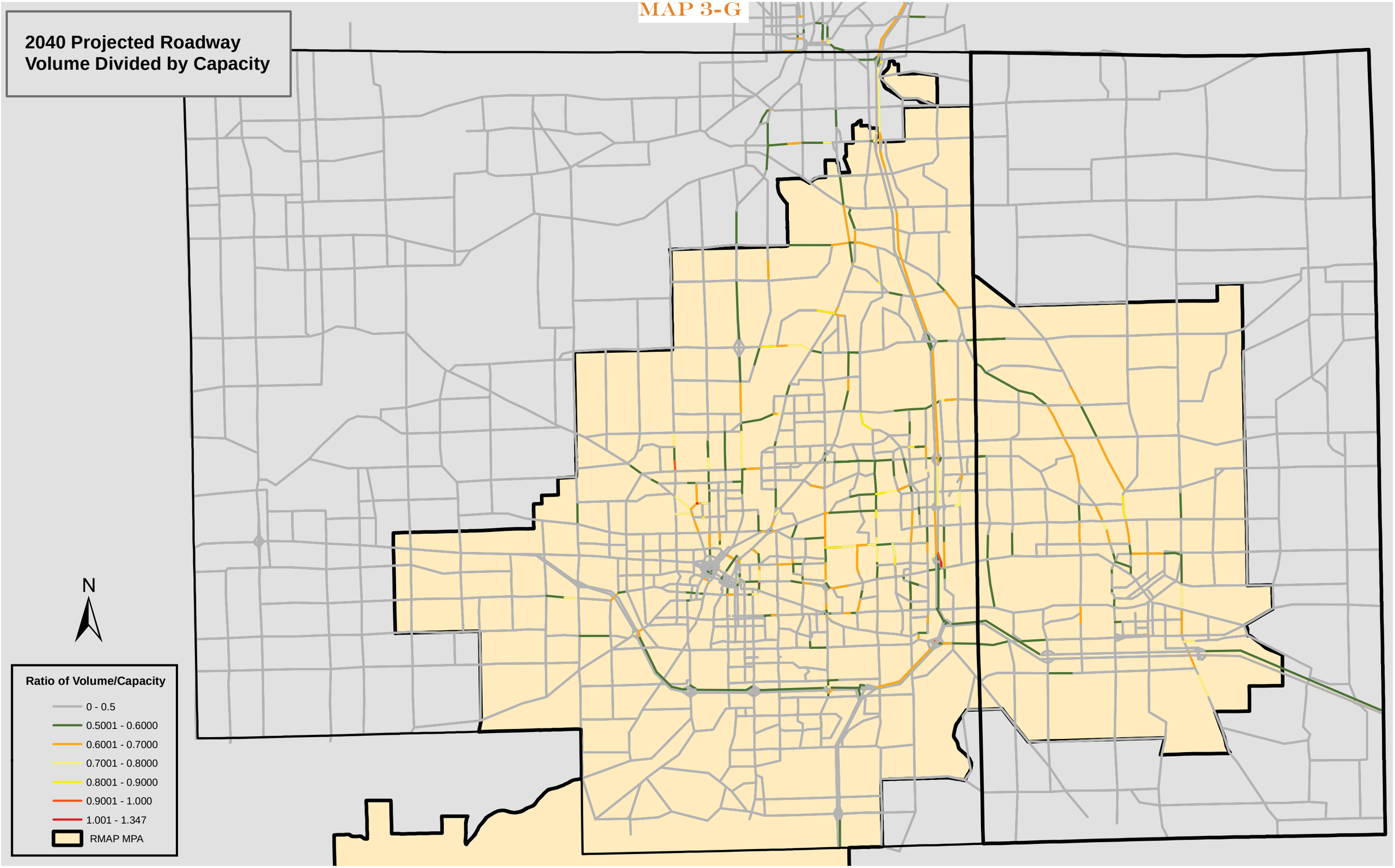
In 2011 and 2012, using the traffic data from IDOT website as a foundation, RMAP did a further analysis of existing traffic conditions by surveying 290 arterial segments to verify the TDM calibration results. The LOS results are listed below in Table 3-6.
An interactive map displaying this traffic data is at: http://ims.wingis.org/RMAP/. Comparing the results of this monitoring effort, only ¾ miles (0.7%) of roadway was LOS D or lower. In other words, the TMD is depicting existing conditions at an extremely high rate of confidence.

MAP 3-F

2000 Projected Roadway Volume Divided by Capacity



2040 Projected Roadway Volume Divided by Capacity



SECTION 4
SOCIOECONOMIC PROFILE

Existing Conditions Overview

The following section contains basic socio-economic data including population, housing, employment, education and more necessary for forming a baseline of conditions that currently affect how the transportation system operates as well as understanding how future demographic changes may influence the transportation system of the next twenty years.

Data from the U.S. Census Bureau was used to compile the information in the "Existing Conditions Overview," unless otherwise noted. A full population count and basic survey is conducted every ten years, most recently performed in 2010. The U.S. Census Bureau also conducts an ongoing survey call the American Community Survey (ACS) which administers a more detailed survey to a small sample of the population each year. The ACS provides planners and policymakers with key data used in transportation planning. Tables 4-1 through 4-4 summarize this data.

Population Characteristics

Population growth has historically varied across the RMAP region. During the economic recession of the 1980s growth slowed to less than 2% for the region. Following the recession Ogle and Winnebago Counties both returned to a more moderate growth rate-slightly exceeding the average growth rate for Illinois, however still lagging behind the National average. During this same time Boone County experience a rapid population increase; between 1970 and 2010 the County's population more than doubled. In 2010 the Rockford MSA had a total population of 349,305 people; with the recent addition of Ogle County to the RMAP planning area the three county total raises to 402,755 people. Winnebago County is ranked the 7th most populated county in Illinois, just behind Cook County and the Collar Counties; Boone County ranks 26th with Ogle County trailing just slightly behind at 28th.

The median age of residents of the three county area currently is 38.6 years old, just slightly higher than the state and national average, as compared to the 2000 median age of 35.9 years old for the region. Children under the age of 18 comprise 25% of the population, while those over the age of 65 comprise 14% of the population; the remaining 61% fall between the working ages of 18 and 65. Table 4-1 shows the age distribution of residents of the MSA. The bulge between ages 50-64 should be carefully noted as it indicates within the next 10 years that there will be a surge in aging population for the region with changing mobility needs.

The majority of residents (83.9%) in the region are White, followed by 9.4% African Americans, 2.3% "Other", 2.2% "Two or More Races," and 2% Asian. Hispanic, which is considered an ethnicity and not reported in race totals, comprises the largest minority population in the region at 11.9%. Winnebago County has the highest percentage of African Americans (12.3%), while Boone County has the highest percentage of Hispanics (20.2%). Map 4-A shows the total 2010 Population in a dot density format.

Housing Characteristics

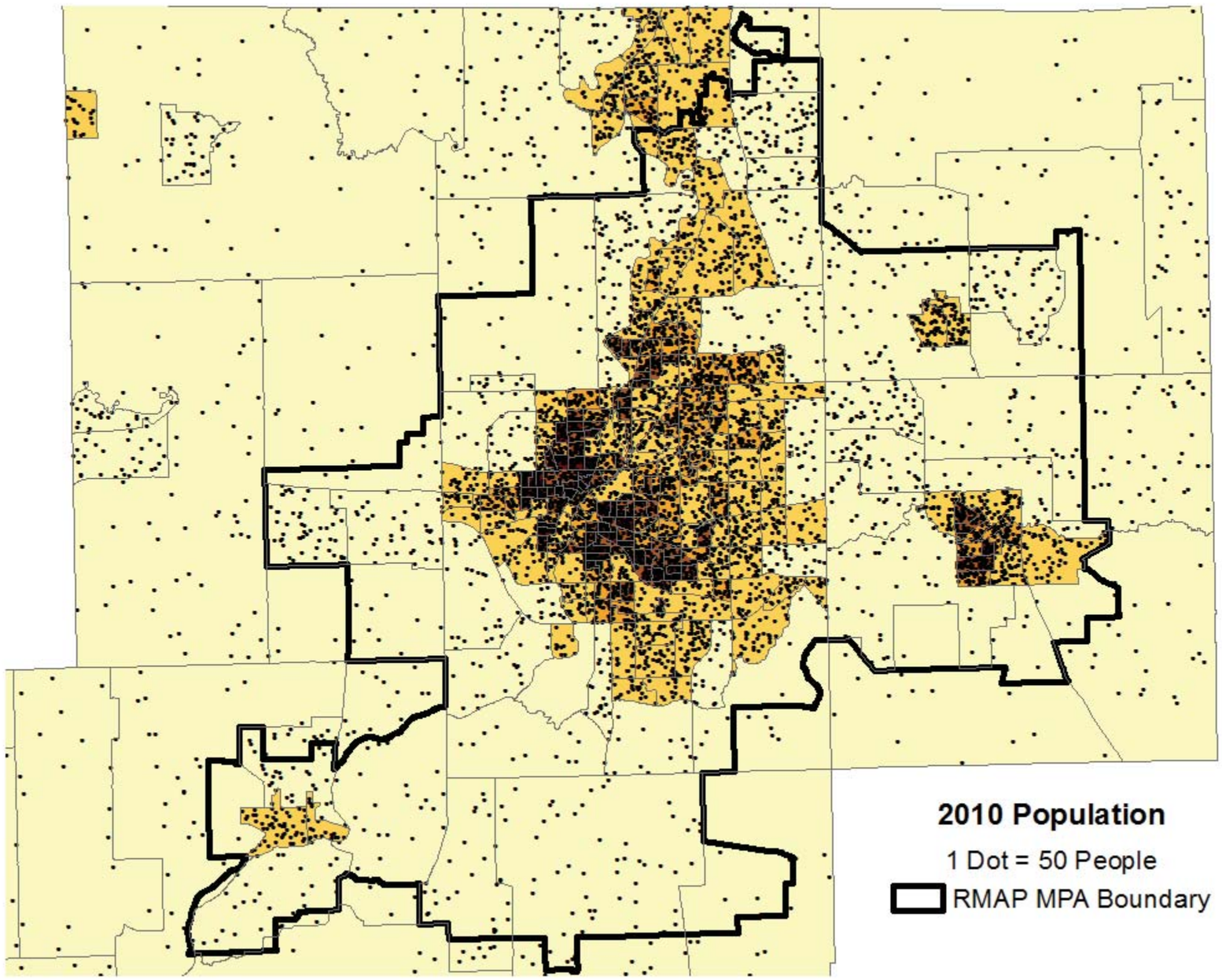
The number of households steadily grew between 1970 and 2010 at a rate outpacing population growth. Boone County experienced the greatest rate of household growth during this time period; however Winnebago County still remains much larger as the population center of the region.

The burst of the housing bubble greatly affected the housing vacancy rate in the MSA. In 2000 the vacancy rate for the MSA was 6%, which climbed to a high of 11% in 2012. This is slightly greater than the average vacancy rate for the state at 10%, however below the national average of 13%. Ogle County has been more stable, with a vacancy rate of 6% in 2000, climbing just slightly to 8% in 2012.

Following the national trend of diminishing household sizes over time, in 1970 the three county area averaged 3.2 persons per household, whereas by 2010 it fell to an average of 2.6 persons per household. The continuation of this trend may have long term land use and development implications, as it means more dwelling units will be needed to accommodate fewer people.

Boone County has a high percentage of owner-occupied housing at 86%, compared to only 67% owner-occupied in Winnebago County. Ogle County falls between the two with 76% of the housing units being owner-occupied. All three counties in the RMAP MPA are behind the statewide average of 90%, yet greater than the national average of 64% owner-occupied units.

MAP 4-A



Income Characteristics

Per capita personal income (PCPI) is a measure of income per person. The PCPI for 2012 in the Rockford MSA is $36,772. At the county level, Winnebago County has the lowest PCPI at $36,717, while Ogle County is the highest at $38,328. At the state level the PCPI for 2012 is $46,009, considerably higher than the national PCPI of $39,181. Since PCPI is represents a mean, it does not accurately represent the income distribution of the region.

Median household income divides the income distribution of households into two equal groups; half the households earn more than the median household income, while half the households earn less than the median income. This is a common measure for the economic wellbeing of an area. The 2012 median household income for the MSA is $48,611; at the county level Boone County has the highest median household income of $58,922, while Winnebago County lags the furthest behind at $46,747. For comparison the 2012 median household income of Illinois is $55,231 and $51,771 for the nation. The MSA lags behind both the state and nation, however offers a relatively lower cost of living.

The MSA is plagued by high rates of poverty. Poverty levels have jumped drastically since 2000. In 2012 almost 13% of families and 17% of individuals living within the MSA are below the poverty level. Winnebago County has been the hardest hit, with people living below poverty increasing from 9.6% in 2000 to 17.1% in 2012. Low cost transportation options become an important factor in helping to create a ladder out of poverty for residents of the region.

Commuting Characteristics

In the Rockford region the vast majority of transportation to work is by a personal automobile; 84% of workers 16 and over in the MSA drive alone to work, while another 9% carpool. Alternative transportation choices, including using public transportation, walking, or biking combined are used as the primary mode of transportation to work by less than 4% of the population. While only a small portion use alternative transportation choices, 7% of the MSA is composed of zero car households. This discrepancy indicates either a portion of the zero car households carpool with others, or are unable to work.

The average commute time to work in the MSA is 24 minutes; the average commute time was higher for Boone County at 32 minutes. For comparison, 16% of Boone County workers have a commute of greater than 60 minutes, whereas Ogle and Winnebago Counties respectively only had 7% and 6% of workers commuting longer than 60 minutes. As will be demonstrated later in the journey to work data, Boone County has a larger segment of its population working in the Chicago metro area resulting in longer commuting times.

Transportation Planning and Regional Economic Development Connection

Travel Demand Modeling

Metropolitan Planning Organizations (MPO) are responsible for a wide-range of planning objectives (developing long-range transportation plans, corridor studies, demographic data and forecasts, financial transportation improvement planning are just a few) that originated from federal law, specifically SAFETEA-LU and MAP-21. When the first-phase of the MPO process began 53 years ago (1962), the federal government gave state and local governments the responsibility to develop a continuing, cooperative and comprehensive (3-C) planning process to examine current and future growth/land use development on the transportation systems for urban areas that have populations over 50,000 people. As the 3-C planning process has continued to evolve over these past five decades into an integrated, all-inclusive planning approach, the transportation planning tools have been expanded that enable federal, state and metropolitan agencies to improved and have more adaptable resources that go into the decision-making process for implementing projects identified in the MPO Long-Range Transportation Plan (LRTP) and Transportation Improvement Program (TIP).

One of the methods/planning approaches that is used to evaluate changes to the regional transportation network is by the use of a travel demand model (TDM). In the past, TMD programs were usually hosted by a state DOT at one location. With the rapid growth in the use of microcomputers and related software program development, TDM have been developed to be used at the MPO level. As a result of these advancements, new emphasizes has been placed upon MPO's to develop regional travel-demand forecast by the Federal Highway Administration and Federal Transit Administration for the following reasons:

- Project-level studies requiring hourly volumes used in geometric design;
- Subarea traffic circulation studies requiring peak-hour traffic movements;
- Feasibility analysis of public transportation investments (e.g., planning ridership estimates of light rail, busway and commuter rail systems);
- Evaluation of the impacts of transportation investments on development levels (that is, the iterative relationship of land use patterns and transportation systems);
- Air quality analysis for both regional conformity analysis; and
- Analysis of travel reduction programs and travel demand management strategies.

TABLE 4-1

Population Characteristics						
Population	**1970**	**1980**	**1990**	**2000**	**2010**	**2012**
Boone County	25,480	28,770	30,980	42,050	54,165	54,141
Winnebago County	246,370	251,720	253,720	278,980	295,140	294,433
Rockford MSA	*271,850*	*280,490*	*284,700*	*321,030*	*349,305*	*348,574*
Ogle County	42,800	46,450	46,060	51,280	53,450	53,378
Age Distribution (2012)	**Under 18**		**18-65**		**65 and Older**	
Boone County	15,255	28.2%	32,283	59.6%	6,576	12.2%
Winnebago County	72,335	24.6%	179,470	61.5%	40,959	13.9%
Rockford MSA	87,590	25.2%	211,753	57.7%	47,294	17.1%
Ogle County	12,879	24.2%	31,799	59.9%	8,478	15.9%
Median Age	**2000**		**2010**		**2012**	
Boone County	34.5		36.8		36.6	
Winnebago County	36.0		37.2		38.4	
Rockford MSA	N/A		N/A		N/A	
Ogle County	37.4		40.7		40.9	
Race	**Boone County**		**Winnebago County**		***Rockford MSA***		**Ogle County**	
White	48,923	90.4%	236,835	80.4%	285,758	82.0%	51,392	96.3%
African American	1,186	2.2%	36,087	12.3%	37,273	10.7%	499	0.9%
American Indian and Alaskan Native	87	0.2%	774	0.3%	861	0.2%	17	0.0%
Asian	802	1.5%	6,865	2.3%	7,667	2.2%	312	0.6%
Native Hawaiian and Other Pacific Islander	0	0.0%	85	0.0%	85	0.0%	0	0.0%
Other	2,185	4.0%	6,616	2.2%	8,801	2.5%	438	0.8%
Two or More Races	958	1.8%	7,171	2.4%	8,129	2.3%	720	1.3%
Ethnicity	**Boone County**		**Winnebago County**		***Rockford MSA***		**Ogle County**	
Hispanic or Latino	10,922	20.2%	32,254	11.0%	43,176	12.4%	4,732	8.9%

Source: U.S. Census Bureau 2000 and 2010, 2012 3-Year ACS, Woods and Poole 2014 Illinois Profile

TABLE 4-2

Housing Characteristics

Households	1970	1980	1990	2000	2010	2012
Boone County	25,480	28,770	30,980	42,050	54,165	54,141
Winnebago County	246,370	251,720	253,720	278,980	295,140	294,433
Rockford MSA	271,850	280,490	284,700	321,030	349,305	348,574
Ogle County	42,800	46,450	46,060	51,280	53,450	53,378

Number of Housing Units	2000				2012			
	Total	Occupied	Vacant	Vacancy Rate	Total	Occupied	Vacant	Vacancy Rate
Boone County	15,414	14,597	817	5%	19,981	17,755	2,226	11%
Winnebago County	114,404	107,980	6,424	6%	125,894	112,594	13,300	11%
Rockford MSA	129,818	122,577	7,241	6%	145,837	130,983	14,854	11%
Ogle County	20,420	19,278	1,142	6%	22,570	20,812	1,758	8%

Persons Per Occupied Unit	2000	2012
Boone County	2.9	3.1
Winnebago County	2.6	2.6
Rockford MSA	2.6	2.7
Ogle County	2.7	2.6

Tenure	Owner Occupied	Renter Occupied	% Owner Occupied
Boone County	15,201	2,554	86%
Winnebago County	75,699	36,895	67%
Rockford MSA	91,442	39,541	70%
Ogle County	15,736	5,076	76%

Year Home Built	Boone County	Winnebago County	Rockford MSA	Ogle County
1939 or Earlier	3,415 (17%)	21,502 (17%)	24,917 (17%)	5,962 (26%)
1940-1949	522 (3%)	8,811 (7%)	9,333 (6%)	1,110 (5%)
1950-1959	1,253 (6%)	18,024 (14%)	19,277 (13%)	2,140 (10%)
1960-1969	2,112 (11%)	18,080 (14%)	20,192 (14%)	2,290 (10%)
1970-1979	2,043 (10%)	18,650 (15%)	20,693 (14%)	3,867 (17%)
1980-1989	1,540 (8%)	11,216 (9%)	12,756 (9%)	1,475 (7%)
1990-1999	4,016 (20%)	15,317 (12%)	19,333 (13%)	3,128 (14%)
2000-2009	4,953 (25%)	14,012 (11%)	18,965 (13%)	2,564 (11%)
2010 or Newer	55 (<1%)	316 (<1%)	371 (<1%)	3 (<1%)

Source: US Census Bureau 2000 and 2012 3-Year ACS

TABLE 4-3

Income Characteristics			
Per Capita Income	**2000**	**2009**	**2012**
Boone County	$28,824	$30,847	$37,069
Winnebago County	$27,792	$32,833	$36,717
Rockford MSA	$27,928	$32,526	$36,772
Ogle County	$26,843	$33,006	$38,328
Median Household Income	**2000**	**2009**	**2012**
Boone County	$52,397	$66,679	$58,922
Winnebago County	$43,886	$49,104	$46,747
Rockford MSA	N/A	$51,443	$48,611
Ogle County	$45,448	$60,373	$55,071
Average Earning Per Job	**2000**	**2009**	**2012**
Boone County	$39,097	$39,332	$45,674
Winnebago County	$35,632	$44,429	$47,342
Rockford MSA	$35,969	$43,901	$47,136
Ogle County	$31,390	$40,629	$45,116
Persons Below Poverty	**2000**	**2009**	**2012**
Boone County	7.0%	10.4%	10.1%
Winnebago County	9.6%	15.9%	17.1%
Rockford MSA	N/A	15.1%	17.1%
Ogle County	7.1%	8.9%	10.0%
Families Below Poverty	**2000**	**2009**	**2012**
Boone County	5.1%	6.7%	10.9%
Winnebago County	6.9%	12.1%	13.3%
Rockford MSA	N/A	11.3%	12.9%
Ogle County	5.3%	6.4%	7.5%

Source: Bureau of Economic Analysis Table CA30 2000-2012, U.S. Census Bureau 2000 Census, U.S. Census Bureau American Community Survey 3-year Estimates: 2007-2009, 2010-2012

TABLE 4-4

Commuting Characteristics				
Means of Transportation to Work	**Boone County**	**Winnebago County**	**Rockford MSA**	**Ogle County**
Drove Alone	84%	85%	84%	82%
Carpool	10%	9%	9%	10%
Public Transportation	<1%	1%	1%	<1%
Walked	1%	1%	1%	3%
Bicycle	<1%	<1%	<1%	<1%
Taxi, Motorcycle, Other	1%	1%	1%	1%
Worked at Home	4%	3%	3%	4%
Time to Work	**Boone County**	**Winnebago County**	**Rockford MSA**	**Ogle County**
Less than 10 Minutes	12%	15%	14%	22%
10-14 Minutes	12%	18%	17%	13%
15-19 Minutes	11%	20%	18%	12%
20-24 Minutes	13%	18%	17%	11%
25-29 Minutes	7%	7%	7%	7%
30-34 Minutes	12%	10%	10%	13%
35-44 Minutes	9%	4%	4%	8%
45-59 Minutes	8%	4%	4%	7%
60 or More Minutes	16%	6%	7%	7%
Average Commute	32 Minutes	22 Minutes	24 Minutes	24 Minutes
Zero Car Households	**2012**			
Boone County	715 (4%)			
Winnebago County	9,091 (8%)			
Rockford MSA	9,806 (7%)			
Ogle County	1,002 (5%)			
Number of Registered Passenger Vehicles	**2007**	**2013**		
Boone County	32,183	33,334		
Winnebago County	182,584	181,943		
Rockford MSA	214,767	215,277		
Ogle County	32,639	32,829		

Sources: U.S. Census Bureau 2012 3-Year ACS, Illinois Secretary of State

For the past 22-years, RMAP has been using TDM for the above-mentioned reasons. When first started, the study area just covered the urban area of the City of Rockford, City of Loves Park, Village of Machesney Park, Village of Cherry Valley and the suburban Winnebago County area surrounding these four communities. Approximately 10-years ago, the study area was expanded to include the entire counties of both Boone and Winnebago and the urban area of Beloit in Rock County, Wisconsin (this includes the entire State Line Area Transportation Study [SLATS] MPO). The objectives of this expansion were as follows:

- To develop an analysis procedure that can determine the traffic impacts of future land development;
- To develop land use and transportation volume forecasts for future years;
- To provide an opportunity to examine land use choices and examine the differing impacts of alternate future land use patterns;
- To examine and plan for future roadway needs based upon changes in land use patterns and scenario planning;
- To determine the transportation costs, impacts to safety and roadway capacity needs associated with growth, with a focus on the study of the northeast portion of Winnebago County and eastern portion of the City of Loves Park; and
- To provide the technical input that will be used to examine these issues for the entire study area through the subsequent development of the metropolitan area long-range transportation plan.

Recently, the RMAP TDM was updated and expanded to include a freight/truck component to it. With the increasing use of the transportation system to move freight to-from-thought the area and the close proximity of the Boone County – Winnebago County area to metro-area of Chicago, the impact of truck traffic on the transportation system is sufficient to justify this upgrade.

Over the next twenty to thirty years, the transportation planning process will continue to develop as the local, state and national economics become more global – international dependent. The decision-making process will be looking for information on how best to program limited financial resources for those improvements that can best address these emerging trends and issues in the global supply chain. The linkage between sociodemographics, land use and transportation systems are no longer separate planning issues. It has become an integrated process. TMD and other related software programs have been develop to give additional material (knowledge) to aid in this process.

Transportation- Economic Impacts Connection

With local and regional economies expanding into global markets and with technological advances to evaluate changes to the transportation network, RMAP has just started this relationship to model the dynamic economic impact of transportation infrastructure investment projects and to forecast the benefits of these improvements.

Regional Economic Models Inc. (REMI) TranSight program (program #1) is a dynamic economic and demographic impact analysis model with the ability to evaluate changes to the region's transportation network out to 2060. It takes outputs from PTV-VISUM modeling data (i.e. vehicle miles traveled, vehicle hours traveled, and trips) and inputs them into the TranSight model. TranSight utilizes the travel data to calculate differences between a no-build scenario and an alternative. The travel data is then converted to economic variables such as changes in gasoline consumption, vehicle maintenance, environmental benefits, and leisure time savings. These variables are then run through REMI's model structure to generate changes in consumption, employment, and economic migration patterns at the regional level.

This model will allow RMAP and the local & state agencies to forecast the impacts of transportation projects within the time horizon of the LRTP. It is a structural model, meaning that it clearly includes cause-and-effect relationships. The baseline forecast represents a "no-build" scenario in which no major projects or policies are enacted. The baseline serves as a basis for comparison when conducting simulations of alternative scenarios. The standard forecast can also be useful for planners and travel demand modelers. The baseline contains highly detailed data on population growth, employment, business output, and other variables that may assist planners in forecasting need for infrastructure. As well as, compare different infrastructure scenarios to one another to determine what infrastructure plan has the best economic and demographic input in the region.

REMI Metro-PI program (program #2) will also be used to identify where growth will occur at a localized level. Metro-PI provides dynamic, comprehensive economic and demographic forecasting for sub-county geographies. Driven by a structural economic model and calibrated with local knowledge and data, Metro-PI generates forecasts at the municipal, census tract, or TAZ level, granting the user unprecedented detail about the localized effects of policy/project changes. It can analyze the effects of regional economic growth and assess the impacts/benefits at a local geographical area.

Another developing issue is the "super-commuter." This is "a person who works in the central county of a given metropolitan area, but lives beyond the boundaries of the metropolitan area, commuting long distance by air, rail, car, bus or a combination of modes." The RMAP planning area is adjacent to one of the ten Megaregions in the USA, Chicago. Based upon a study that was done in 2012 by the Rudin Center for Transportation, the RMAP area has the highest number of "super-commuters" that commute to/from the central county of the Chicago MSA, Cook County. Some of the key findings from this study determined that (1) labor sheds were expanding into adjacent counties beyond the counties within the MSA region and (2) an increase in future long distance commuting patterns and choices than what has been traditionally been used and what is currently documented. In other words, future travel patterns will increase between cities, suburbs, exurbs, and Metropolitan regions (thus Megeregions) requiring wide-ranging linked transportation networks. The impacts of this trend are that these "super-commuters" and Megeregions will alter the local/global economic landscape.

Changing patterns in commuting, freight/commodity flow movements, along with increasing use of information and communications technology is shifting old conventional local economics from past established margins to adopting a strategy that develops and uses new technical theories for trade and growth. This is called the New Economic Geography where spatial structure and dimensions of the economy are being expanded. When transportation costs, economical supply chains and accessibility to inter-regional trade and markets can increase productivity, revenues and development can occur.

Economic Overview of the Rockford Region

Transportation investments represent a significant catalyst for economic development. Transportation plans identify the facilities and investments needed to promote viable local and regional economies. Regional economies rely on the transportation network to get employees to their jobs, transport goods, and form the framework for future economic expansion. The Rockford MPA is a self-contained and balanced economic region, with a strong manufacturing base, an attractive environment, and a skilled labor market. The transportation projects, which enhance these strengths, should be given the highest priority.

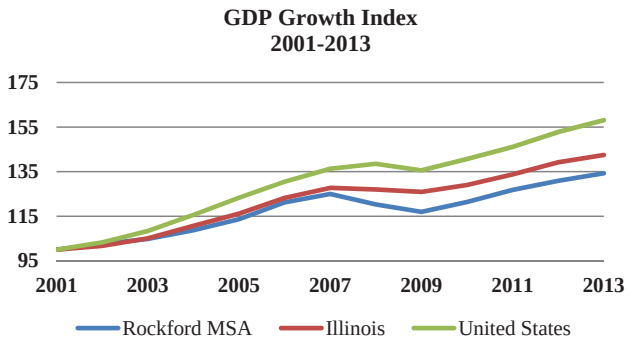
Northwest Cook County and DuPage County are areas that during the past few decades have experienced significant growth but are now approaching full development. With full development comes congestion and constrained facilities; currently, these constraints are exacting their toll. Accordingly, some industries are seeking less congested, nearby areas in which to expand. Examples of such industries are: airfreight, trucking and manufacturing. The Rockford MPA has the potential to attract these industries, further strengthening its economy.

The purpose of this section is to create an economic overview of the region, which will inform the development of a socio-economic forecast for the region. This can help local governments more effectively plan for infrastructure improvements that have the greatest benefit-to-cost ratio so that investments in transportation can help make the regional economy more competitive. More detailed economic development considerations are included widely throughout this LRTP; specifically, Section 11 Airports details the ongoing development of the Chicago-Rockford International Airport (RFD) and Global Trade Park as an important freight hub and economic development catalyst, Section 10 Freight and Urban Goods Movement discusses the recently completed Freight Plan which evaluated supply chain movements key to regional economic development, and Section 7 Transit focuses on better connecting workers to employment opportunities.

Gross Domestic Product

The Gross Domestic Product (GDP) is a measure used to represent the output of the economy. GDP is the total market value of all goods and service produced in the region for final demand in a year. GDP is one of the most common indicators of the strength of a regions economy. Generally speaking, a growth in GDP is an indicator of a healthy economy, signifiying a growth in employment and more money in people's pockets. The MSA's prerecession peak GDP was $12,882 billion in 2007; followed by a short period of decline. The regional GDP has since risen to a high of $13,833 billion as of 2013. However Table 4-5 illustrates that while the region's GDP has been increasing over time, it has consistantly lagged behind the State and National growth rate. Manufacturing represents the greatest economic output by industry, accounting for 33% of the region's total GDP.

TABLE 4-5



Labor Force and Unemployment

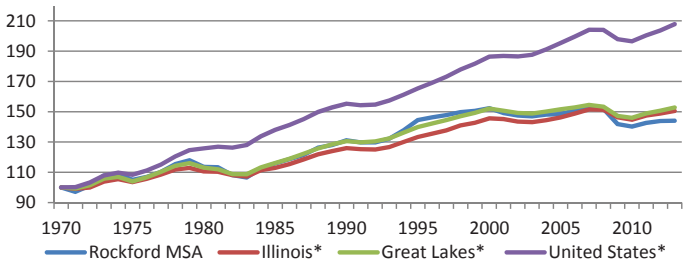
The Rockford MSA has shown periods of labor force loss and recovery since 1980. The region's labor force was at its smallest in the mid-1980s, during a hard hitting recession. The region recovered to a peak of 196,108 jobs in 2007, after which regional employment plummeted by over 18,000 jobs to 178,866 just three years later. According to the Bureau of Economic Analysis (BEA) employment has slowly climbed to 183,765 jobs as of 2013.

In keeping with its industrial heritage, manufacturing comprises the largest employment sector in the Rockford MSA, employing 25% of the labor force in 2013, down slightly from 28% of the labor force in 2001, and as high as 35% during the 1970s and 80s. The healthcare field is the second largest employer, followed by retail trade, accommodation and food services (hospitality), and wholesale trade [Table 4-8]. Table 4-9 lists the top twenty employers in the region.
Several recently announced business expansions will create significant new employment opportunities for the region in future years. In 2012 Woodward Governor announced it would be building a new manufacturing facility and expanding its operations, expecting to create up to 1,000 new manufacturing jobs by 2020. In 2014 the Greater Rockford Airport Authority (GRAA) announced that the Chicago-Rockford International Airport (RFD) will be constructing a Maintenance, Repair, and Overhaul (MRO) facility which is expected to add up to 500 new jobs.

Table 4-6 compares the annual employment growth of the Rockford MSA against the metropolitan portions of Illinois, the Great Lakes Region, and the United States since 1970. The Great Lakes region as a whole (Illinois, Indiana, Michigan, Ohio, and Wisconsin) has historically lagged behind the national average in terms of job creation. The MSA closely mirrors the overall trend of the Great Lakes; however as can be seen from the chart experienced the greatest negative impacts from the 2008 recession and has not yet caught back up with the Great Lakes average.

TABLE 4-6

Total Employment Growth Index
1970-2013



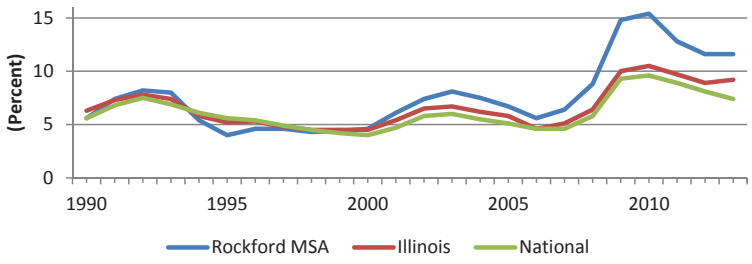
The Bureau of Labor Statistics (BLS) reports unemployment for the labor force ages 16 and over. As shown in Table 4-7 the MSA's unemployment rate has consistently been above the state and national average since 2000. Unemployment peaked in 2010 at a high of 15.4%, however has been on a gradual decline in recent years. In 2013 the unemployment rate for the region was 11.6%. Boone County historically experiences a slightly higher unemployment rate while Ogle County consistently experiences the lowest unemployment rate in the three county region. It should be noted that economists caution that the recent decrease in unemployment is partly due to a decrease in the labor participation rate.

Employment Distribution within Winnebago and Boone Counties

Map 4-B depicts the employment distribution for the RMAP MPA based upon 2011 U.S. Censusdata and Bureau of Economic Analysis Longitudinal Employment Housing Dynamics (LEHD).

TABLE 4-7

Annual Unemployment Rate
1990-2013



MAP 4-B

Employment Distribution for the RMAP MPA (2011)

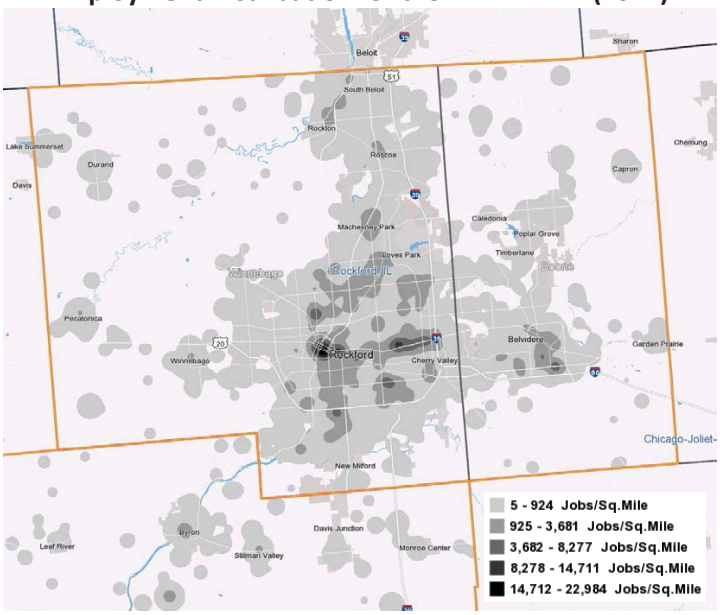


TABLE 4-8

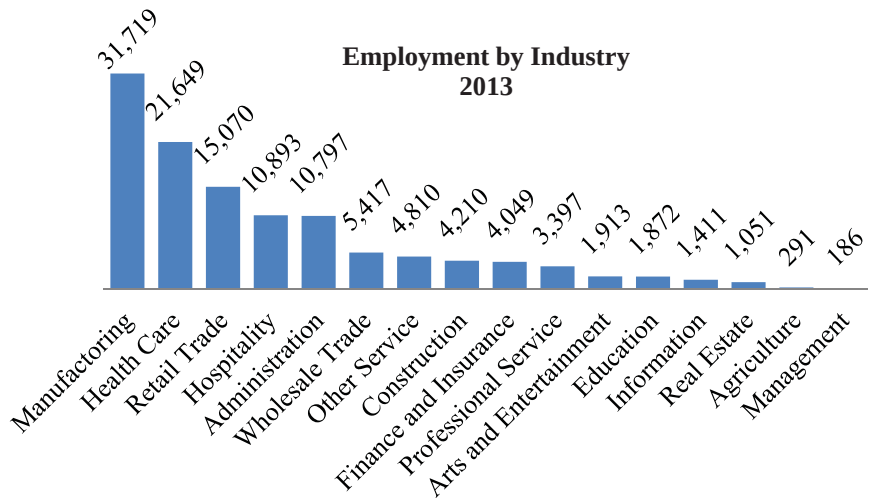


TABLE 4-9

Top 20 Employers in the Rockford MSA

Company	Product/Service	Employees
Chrysler	Automotive	4,500
Rockford Public Schools	Education	3,710
Rockford Health Systems	Healthcare	3,000
Swedish American Health System	Healthcare	2,988
OSF Healthcare	Healthcare	2,800
UTC Aerospace Systems	Aerospace Manufacturing	2,220
Wal-Mart Stores	Retail	1,611
Woodward	Aerospace Manufacturing	1,600
Packaging Coordinators Inc	Pharmaceutical Packaging	1,500
Winnebago County	Government	1,463
City of Rockford	Government	1,122
Harlem Consolidated Schools	Education	1,099
UPS	Parcel Sorting Hub	900
Lowe's	Distribution Center, Retail	900
Belvidere Community Schools	Education	870
Mondelez International	Chewing Gum	850
APAC	Telemarketing	800
Rock Valley College	Education	800
General Mills/Green Giant	Frozen Vegetables/Cereal	692
Taylor Company	Ice Cream Machines	671
Syncreon	Automotive Supplier	626

Source: RAEDC 2014

Commuting Patterns

Analyzing the in- and outflow of workers in a region helps provide an understanding of the dynamics of the regional economy. The Bureau of Economic Analysis (BEA) provides county-to-county worker flow data based upon annual LEHD Origin-Destination Employment Statistics. Based upon the most recently available data from 2011 the Rockford MSA is generally considered to be self-sustaining as 70% of its local labor force resides within the MSA. A job shortage is noted however as there are more employed resident living in the MSA than there are employment opportunities within the MSA- 149,448 employed residents vs 137,477 jobs, a difference of 11,971.

Table 4-11 on the next page represents the employment destination by county for all workers residing in the MSA (outflow). As can be seen, 65% of MSA residents also work in the MSA. Of the 35% of working residents employed outside of the MSA, 30% work in Cook County, in addition to 30% employed in the collar counties surrounding Chicago.

Table 4-12 on the next page represents the place of residence by county for all workers employed in the MSA (inflow). Just over 70% of workers employed in the MSA also reside in the MSA. Whereas in the above outflow table the majority of residents leaving the county for employment commuted to the greater Chicago metropolitan area, only 30% of the outside residence seeking employment within the MSA were from Chicago (Cook County) or the collar counties; rather, many of the workers commuting to the MSA were from the counties directly surrounding the MSA, including Rock (Wisconsin), Ogle, Stephenson, DeKalb, and McHenry Counties.

In sum regarding the overall relationship of worker in- and outflow: 40,013 people are employed in the MSA but reside elsewhere; 97,464 people both live and work in the Rockford MSA; and 51,984 people live MSA but work elsewhere.

Income

According to the Bureau of Economic Analysis (BEA) the 2013 per capita personal income of Boone County was $38,040 and win Winnebago County equaled $37,406, ranking respectively 70th and 74th out of 102 in the State. The per capita personal income in Ogle County equaled $41,695, ranking considerably higher as 45th in the State. The per capita income of the two-county Rockford MSA for 2013 equaled $37,505, ranking 237 out of 381 MSA's across the United States. For comparison, the per capita personal income for Illinois as a whole equaled $46,980, higher than the national average of $44,765. (Table 4-10 at the right)

Educational Attainment

Educational attainment plays a profound role on a region's employment. In the past the Rockford region's strong manufacturing industry proved high wage employment for blue-collar workers, however due to mechanization, outsourcing, and production efficiencies many of these jobs have disappeared. Future economic growth will depend upon increasing the educational attainment within the region and attracting more skilled workers from outside the region. Research has shown that areas with higher than average educational attainment grow faster, generate higher incomes, and are more insulated during tough economic times.

Within the Rockford MSA 87% of the population over the age of 25 has obtained at least a high school diploma, closely in line with the statewide average of 88%. Beyond high school, 23% of population over the age of 25 have received some college as their highest educational attainment, 8% obtained an Associate Degree, 14% received a Bachelor Degree, and 8% received a Master's Degree or higher. Accordingly, 21% of the MSA has received a Bachelor Degree or higher, trailing behind the national average of 29% and the statewide average of 32%.

The region does offer many post-secondary educational opportunities. The City of Rockford is home to Rockford University, a private four-year college, as well as Northern Illinois University's College of Medicine. There is also a community college and technical college within the MSA. The Rockford Public School District, the largest school district in northern Illinois, recently adopted a college and career academy model designed to help graduating students better prepare for either college or to join the workforce in efforts to boost the educational attainment of the region.

TABLE 4-10

2013 Per Capita Personal Income

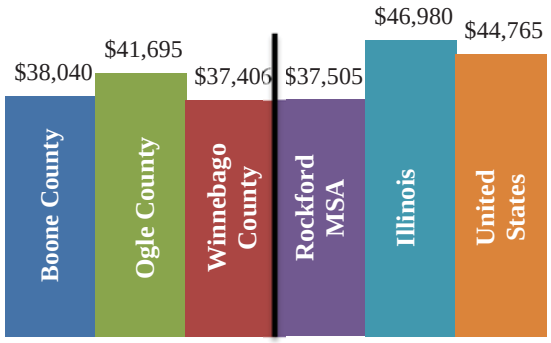


TABLE 4-11

Jobs Counts by Counties Where Workers are Employed - All Jobs

	2011	
	Count	Share
All Counties	149,448	100.0%
Winnebago County, IL	87,276	58.4%
Cook County, IL	15,250	10.2%
Boone County, IL	10,188	6.8%
DuPage County, IL	4,982	3.3%
McHenry County, IL	4,349	2.9%
Kane County, IL	4,085	2.7%
Rock County, WI	3,468	2.3%
Lake County, IL	2,410	1.6%
Ogle County, IL	1,843	1.2%
DeKalb County, IL	1,495	1.0%
All Other Locations	14,102	9.4%

TABLE 4-12

Jobs Counts by Counties Where Workers Live - All Jobs

	2011	
	Count	Share
All Counties	137,477	100.0%
Winnebago County, IL	86,078	62.6%
Boone County, IL	11,386	8.3%
Cook County, IL	5,860	4.3%
Ogle County, IL	4,996	3.6%
Rock County, WI	4,178	3.0%
Stephenson County, IL	3,021	2.2%
McHenry County, IL	2,369	1.7%
DeKalb County, IL	2,125	1.5%
Kane County, IL	2,083	1.5%
DuPage County, IL	1,572	1.1%
All Other Locations	13,809	10.0%

Integrating Regional Economic Development Planning Considerations

There are a number of organizations in the RMAP MPA that have a role in developing economic development strategies for the region, primarily the Rockford Area Economic Develop Council, Growth Dimensions of Belvidere and Boone County, and the Rockford Region Economic Development District. Each of these organizations has a non-voting membership on RMAP's Technical Committee.

The Rockford Area Economic Development Council (RAEDC) was formed in 1980 as a partnership of private and public sector leaders. RAEDC's mission is "helping employers create and retain quality jobs" in sustaining and strengthening the economic health of the Rockford Region. This organization provides economic development assistance facilitation by helping clients conduct site analysis based on their unique requirements, leading them to the right incentive programs and conducting business educational programs to identify and help develop future markets.

Growth Dimensions for Belvidere-Boone County is a public-private corporation for economic development. It coordinates and manages the strategic initiative projects identified in the Belvidere-Boone County Economic Development Strategic Plan. Growth Dimensions for Belvidere Boone County also serves as an advocate with developers to troubleshoot issues that might impact their development plans, and is also the lead liaison for manufacturing companies in Boone County.

The RAEDC, in cooperation with Growth Dimensions of Boone County, released the Strategic Diversification Plan for the Rockford Region in 2012 which identified the strengths and weaknesses of the regional economy and proposed 15 high priority strategies to bolster economic development initiatives. Several strategies and initiatives identified in the plan contained transportation and infrastructure related components, as noted in Table 4-13.

The Rockford Region Economic Development District (RREDD) is a nonprofit agency whose primary role is to do economic development planning, including job creation and growing community wealth. RREDD assists economic development efforts in the Rockford MSA by:

- Engaging area residents, organizations, and governments in regional economic development planning efforts
- Developing, maintaining, and implementing regional plans pertaining to economic development
- Serving as the point of contact for area agencies and organizations preparing to apply for economic development grants
- Providing ongoing technical assistance to area governments and nonprofits
- Aligning economic development goals and priorities and working on economic development initiatives
- Economic development grant/loan research, writing, and administration
- Offering a request for assistance program

One of RREDDs chief missions is to produce a Comprehensive Economic Development Strategy (CEDS) every five years, with an ultimate goal of developing a stronger, more diverse regional economy. While the CEDS' most critical function is to provide a regional economic development framework, it also serves as a required vehicle through which some federal agencies (especially the EDA) evaluate requests for grant assistance. The current CEDS for Boone and Winnebago Counties was developed in 2010. Efforts are presently underway to update this document, which will also add McHenry County into the consideration. The existing transportation-related strategies can also be found in Table 4-13.

Other Regional Initiatives

Tri-State Alliance- The mission of the Tri-State Alliance is to convene the region's leaders to address issues that affect commerce so that the quality of life is improved for the region of Northern Illinois, Northeastern Iowa, and Southwestern Wisconsin. The Alliance is a collaboration of the anchor cities of Dubuque IA, Janesville WI, and Rockford Il and all the border counties and municipalities in between, promoting transportation planning as key to the region's ability to participate in the ever growing global supply chain for goods and services. The Alliance is working on prioritizing transportation improvements for the Tri-State area focusing on 4 lane divided highways, passenger and commuter rail, as well as a regional broadband initiative.

I-39 Logistics Corridor Association- The I-39 Logistics Corridor Association is a economic development organization headquartered in Rockford. It is collaboration between private and public companies, municipalities, and developers with the mission of promoting and marketing the Interstate 39 Corridor as a focal point of logistics activity for the Midwest. This corridor takes advantage of access to seven interstate highway systems, seven rail systems, multiple air hubs, as well as barge terminals connecting directly to the Great Lakes, Mississippi River and Gulf of Mexico. The corridor extends well beyond the Rockford MSA, encompassing over 10,000 square miles spanning from Janesville, WI along I-39 to Bloomington, IL.

TABLE 4-13

Regional Economic Development Plan	Transportation-Related Strategies
Rockford Region Strategic Diversification Plan	• Develop a long-range strategic plan for Chicago-Rockford International Airport (RFD) that sets a visionary, yet realistic agenda for future infrastructure investments and land use/design elements that focuses primarily on leveraging RFD's potential for further development as a major goods movement hub. • Continue to build broad-based regional support for passenger rail connections between Chicago and the Rockford region. • Capitalize on the economic development potential of current and planned roadway improvement projects from IDOT and the Illinois Tollway, particularly the expansion of I-90 between Rockford and Chicago and the re-construction of IL-2 and US-20. • Work closely with local governments, land owners, and real estate professionals to identify and address infrastructure deficiencies along the region's primary transportation corridors and in and around the region's existing/planned industrial parks.
Rockford Region Comprehensive Economic Development Strategy (CEDS)	• Continuing to upgrade/repair existing roadways and bridges. • Improving highway access to the region. • Bolstering existing public transit services. • Bringing commuter and passenger rail service to Belvidere and Rockford, linking the region to wider markets. • Working with the Chicago Rockford International Airport to continue to expand air cargo and passenger service to the region. • Expand utility and transportation links to serve areas where they are needed for job creation. • Create a unified vision of regional growth and development needs by coordinating the planning of all components of infrastructure within the Area.

SECTION 5
CLIMATE CHANGE/GREEN INITIATIVES

Climate change and green initiatives continue to be planning issues on the forefront. Both have been advocated regionally and RMAP continues to further integrate them into the transportation planning process. While this is currently an ongoing effort nationally, the MPO has incorporated the philosophy of coupling green initiatives and transportation planning in previous planning efforts and documents and will continue to do so. Since RMAP last updated its LRTP, progress has been made in green planning initiatives, environmental land use planning, and strategies for a more sustainable approach to transportation planning objectives. Specifically, the Rockford Region Vital Signs Regional Plan for Sustainable Development addresses many of our areas strengths and weaknesses while highlighting opportunities and strategies to allow our community to be more resilient. By making incremental steps today that link transportation and environmental planning strategies we allow ourselves to be a more efficient and competitive regional entity in the future. If the region acts in a proactive rather than a reactive manner we can be at the forefront of green planning practices, thus mitigating the effects of climate change on the Rockford region and strengthening our social, environmental and economic health as a whole.

The below sections detail some of the efforts already undertaken by the MPO as well as describing future goals and projects to better link green initiatives and transportation planning within the Rockford Metropolitan Planning Area. Many of these projects will have influences that reach further than the RMAP Planning Area or Metropolitan Statistical Area.

Linking Transportation And Environmental Planning

A Regional Philosophy/Viewpoint

"History has clearly demonstrated that the quality of life and the sustainability of human settlements is dependent on the stewardship of natural resources."

During the past several decades there has been a growing awareness of the need to have a more thorough discussion and understanding of the relationship between the transportation planning process, the impacts of highway programming and construction and environmental protection. Our knowledge and understanding between the complexities of the natural environment and the built environment is a continuous process. The connection between these two regional planning issues has developed new sets of best practices and many new innovative design standards have been developed as a result of new ways of thinking. In response to this issue, Metropolitan Planning Organizations (MPOs) are developing strategies to include conservation in the area's overall transportation planning process and the development process of the area's long-range transportation plan (LRTP).

RMAP Approach To Linking With NEPA

On February 14, 2007, planning regulations issued jointly by the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) required a more detailed policy approach to concentrate on the significance between biodiversity and other environmental impacts and the proposed transportation projects that are included in the RMAP LRTP. When these regulations were issued, RATS adopted Resolution 2007-7 which identified a framework planning approach for this issue, which is shown below.

RMAP Planning, Coordination and Consulting Plan with Resource Agency

In order to comply with 23 CFR 450, Section 6001 it is important for MPOs to coordinate with State and Federal resource agencies, sharing information and creating a planning process that looks at environmental issues as a regular task item. In most cases the resource agencies can provide plans, maps and databases, often in GIS-ready format. Often information is available from resource agency websites that complements the work of the MPO planner. In particular, the following is available from the respective resource agencies:

1. US Army Corps of Engineers – GIS based mapping of permit activity, mapping of wetland mitigation areas and banks.
2. US Fish and Wildlife – Consultation on Federal endangered species lists and compliance with the Endangered Species Act. Soon to be available GIS coverage's of habitat.
3. US Environmental Protection Agency/IL EPA – Powerful web-based tools that provide a range of environmental conditions and features within MPO areas. Watershed assessment tracking and environmental results. Envirofacts data warehouse for air, water and land. Air data and NEPA compliance.
4. IL Department of Natural Resources – State list of endangered species and statewide conservation plans.
5. IL Historic Preservation Agency – Access to the HAARGIS system that provides detailed information on historic properties and structures from a web-based environment.

6. IL Department of Agriculture – Compliance with the Farmland Preservation Act. Updated soils information on a county by county basis. Land use planning assistance to ensure compact and contiguous development in urban areas, minimizing the conversion of agriculture land to non-agriculture uses. Information available through the regional Soil & Water Conservation Districts.
7. Winnebago Soil & Water Conservation District
8. Rockford Park District
9. Forest Preserves of Winnebago County
10. Boone County Conservation District
11. Belvidere Park District
12. Village of Winnebago Park District
13. Natural Land Institute

MPOs can assist the resource agencies by providing transportation and land use planning data in GIS-ready format for easy and seamless data integration.

Section 6001 of SAFETEA-LU, requires that MPOs LRTP include a fundamentally different discussion of mitigation efforts than are typically contained in the NEPA documents. This new requirement is a more broad-based planning approach for reviewing the "types of potential mitigation activities and potential areas to carry out these activities" than normally done by MPOs. RMAP has and will continue to assist in the planning and preparation of the resource materials that are currently being used by traditional transportation planning agencies responsible for the actual preparation of the NEPA documents. Described later in this section are some specific projects that RMAP is planning, coordinating, or consulting with environmental resource agencies about.

To meet the intent of Section 6001, RMAP voting members, non-voting members and other participating agencies who receive federal funds have and will continue to follow the National Environmental Policy Act (NEPA) process. However, one of the planning approaches that SAFETEA-LU stressed, and MAP-21 continues is for MPOs to shift towards a broader and more strategic involvement with a wide range of agencies, organizations and the public who might not have been traditionally connected with the overall transportation planning process, or understand the role, and/or functions of RMAP. Beginning in 2013 RMAP reached out to a handful of local agencies that traditionally did not have an intimate connection with RMAP and its planning efforts. In order to move to a broader more environmentally inclusive approach to the planning process the following agencies have been added to the RMAP Technical Committee; Boone County Conservation District, Forest Preserves of Winnebago County, Rockford Park District, Rock River Water Reclamation District, and Winnebago County Soil and Water Conservation District. As an organization RMAP will make it a point to work closely with these new Technical Committee members to identify approaches that will cause the least disruption of environmentally sensitive areas in the region while promoting environmental protection with active transportation strategies.

The types of activities that will be considered for mitigating the impacts of transportation projects are those that have been traditionally used. These are wetland replacement, avoidance of habitat fragmentation, preservation of habitat for endangered species, replacement of trees and other types of vegetation, identification and creation of mitigation banks within the watersheds of possible projects, planting native vegetation, buffering existing parks, forest preserves and other parkland from high-impact land use development, working with the land use controls of the local units of government to adopt policies that would avoid environmentally fragile areas and to develop landscaping plans and other amenities that would restore and enhance the ecological value of the land. Another management activity might be the creation of an in-lieu fee program where developers and other users who impact certain environmental areas could contribute to a third-party conservation organization that is attempting to restore, acquire or develop high-value natural areas.

Beginning The Conversation

RMAP shall continue to further integrate the transportation planning process with local and regional environmental organizations; one of the main emphases will be communicating with the newly appointed natural resource agencies to the RMAP Technical Committee. These agencies have the latest data and information on environmental issues and working closely with them will avoid issues in the future. RMAP shall continue to have open and continuous discussions with these agencies and the general public, while consulting the region's transportation plans and programs that might impact the environment. These relationships are very critical to ensure that the transportation planning process follows the 3-C (Continuing, Cooperative and Comprehensive) principles.

Besides the governmental partners listed above, non-governmental organizations and other interest groups and individuals will be included in this process. While these organizations and groups have different responsibilities and information, the sharing and identification of issues will be very valuable in the development of the RMAP LRTP and other planning documents. MPOs are at the "cross-roads" of being able to pull together these different community resources to ensure that issues are known and documented to allow good planning procedures, information, and reports to transpire. While some community organizations might have a no-growth attitude, the reality is that growth will continue to occur in the greater Winnebago County – Boone County area. The

proper planning procedure is to consider the long term consequences of our growth as those actions impact the green infrastructure. As the urbanized area of Rockford and surrounding communities continue to grow, it will require a disciplined planning process to recognize that providing economic growth can be done in a way that will protect and ensure a balance between environmental preservation, conservation, and urban development.

Over the past several decades, there has been sporadic dialogue on how to link the MPO/State responsibility for transportation planning and the Federal review process with NEPA. This issue of making an easy, smooth and seamless merger with NEPA is one of the key guidelines of the MAP-21 planning regulations. This joining of these two steps in the overall process of constructing transportation projects is a critical one because the MPO planning process and NEPA steps are at the early stages of the project development process and if issues and topics are not fully identified and investigated, the implementation of those projects are delayed or are extended to the point that the project cost exceeds the original estimate. If these delays occur, concerns are raised by the public regarding the MPOs/Locals/States/Federal ability to get these projects done in an acceptable time period. In the public informational open houses and other public presentations that RMAP has held, one of the concerns has been repeatedly heard is the length of time it takes to get projects done. One of the reasons is the time that transportation projects are listed in a MPOs 20+years long-range plan, funding cycle and the implementation schedule for each specific project included. Primarily because of the funding cycle and other priorities that local and state governments are facing with regards to revenues, the seamless transition (regarding no time gap) between the transportation planning process and NEPA mostly does not happen.

While SAFETEA-LU stated that mitigation strategies and activities are "intended to be regional in scope, and may not necessarily address potential project level-impact" they should be included in a MPOs long-range plan. One of the principle goals of this discussion on environmental mitigation is to explain how to include much of the MPOs planning products in the NEPA process. Also, since the NEPA process is directly related to specific project-level impacts and the intent in SAFETEA-LU is an overview of the entire metropolitan planning area of an MPO, this discussion/dialogue essentially becomes one of including and involving the agencies in the review process and determining what information they do or might consider in the NEPA process.

In 2011, RMAP completed three planning documents to, among other things, address the planning provisions stemming from SAFETEA-LU (and continued in MAP-21). These provisions require that the Long Range Transportation Plan be developed in consultation with agencies for land use management, natural resource protection, and environmental conservation. SAFETEA-LU Section 6001 required an increase in the consideration of the natural environment in both statewide and metropolitan planning. The key changes were (1) a requirement to consider environmental mitigation activities in state and metropolitan long-range plans and (2) a requirement to consult with resource and land management agencies, and to consider, as part of that consultation, any available conservation plans, maps or resource inventories. In addition, Section 6002 specifically recognized that the purpose and need for a project can include carrying out a goal defined in a transportation plan.

In the June 2012 RMAP Planning Certification Review Final Report, FHWA/FTA stated that RMAP should be commended for "proactively seeking ways for integrating planning and environmental review processes and is exceeding regulatory expectations."FHWA/FTA recommended that (1) close coordination continue among the MPO (RMAP), implementing agencies, and State and Federal representatives and that (2) the proposed environmental screening of projects as described in the GREEN Strategy Action be undertaken.

In late 2013 and early 2014, RMAP staff was an active participate as a member of the Technical Review Panel (TRP) for an Illinois Department of Transportation and Illinois Center for Transportation/University of Illinois at Urbana-Champaign research report on "Incorporation of NEPA into IDOT and the MPO Planning Processes", research report (No. FHWA-ICT-14-013, July 2014). The objectives of this project were to:

1. Provide a comprehensive review of literature of practices integrating NEPA into transportation planning processes in other states;
2. Gather feedback from inter- and intra-departmental staff involved in the IDOT planning process, the MPO planning process, and the NEPA process to evaluate the existing practices of integrating NEPA into transportation planning processes for large highway projects;
3. Evaluate the impact of these practices on the project development process;
4. Identify (based on 1, 2, and 3 above) the key elements/practices that are needed to successfully integrate NEPA into IDOT and MPO planning processes for large-scale highway projects; and

5. Develop a Guidance Document on how to integrate NEPA into IDOT and MPO planning processes for large-scale highway projects and provide recommendations on how to evaluate the integrated process.

RMAP has not started the task of the development of the environmental screening of projects. This is as a result of being involved in this TRP, which includes:

- updating and submitting the 2013 Functional Classification System to IDOT and FHWA for review and approval,
- meeting with all implementing highway agencies to review and update the list of projects that were in the July 2010 adopted LRTP document, and
- addressing other planning issues,

Based on these discussions and the adoption of this 2040 Long Range Transportation Plan, it is anticipated that this work effort will begin soon.

Past & Current Projects Linking Transportation And Environmental Planning

Over the years RMAP has understood the potential benefits associated with integrating transportation planning and environmental planning. This collaboration did not occur overnight but rather it developed as new data and best practices were generated creating an incremental change in the way that transportation planning was thought to interact with other parallel disciplines. The regions forward thinking leadership and continued, organized commitment was essential to the overall development of plans and projects in our region that both linked the positive and negative externalities of development and growth, namely urban sprawl, before the housing recession. RMAP has been very proactive the past few years and has made an extra effort to include an open dialogue with all of the regions environmental groups, organizations and planning departments at the local, regional, nonprofit and volunteer/advocate level. The level of involvement and trust from our organizations environmental constituents is at an all-time high. It is evident in the number of recent projects that RMAP staff has been involved in and currently are working on, below is a list of such projects and programs:

- Boone and Winnebago Regional Greenway Plan – The development of this plan provides a framework to allow local and state organizations, along with private organizations and individuals, an opportunity to participate in the planning effort and have discussions on the relationships between environmental resources and growth management. With the completion of the original greenway plan in 1997 and an updated version in 2004, 2011, and now 2015, this planning process provided a basis for agencies involved with transportation, water quality, stormwater and floodwater management, parklands and forest preserves, and other environmental and conservation programs to address planning coordination. Through this effort interagency consultation has continued to increase.

  In the development of the Regional Greenway Plan, numerous layers of data were included in the GIS-format mapping process. Some of these layers are:
  - Bedrock geology
  - Bedrock topography
  - Streams
  - Fish and Wildlife Service wetlands
  - Floodzones
  - Bedrock aquifers
  - Steep Slopes
  - Public water supplies
  - Surface waters
  - Landcover
  - Digital elevation models
  - Forest resources
  - Archeological sites
  - Cemeteries
  - Federal lands
  - Threatened and endangered species habitat
  - Critical and sensitive areas
  - Priority acquisition properties
  - Natural areas and preserves
  - State fish and wildlife areas
  - Forest Preserves
  - State parks
  - County and local parks, and
  - Privately owned known environmental critical areas (such as property which has been enrolled in Conservation Reserve Program or which has a conservation easement)

  This Greenway Plan has been used extensively by the participating agencies as a tool for planning open space acquisition, protection of natural areas, development of pathways and other transportation systems. It has been an important resource in meeting grant application requirements, especially Illinois Department of Natural Resources (IDNR – C-2000), IDOT Transportation Enhancement Program/Transportation Alternatives Program and Open Space Land Acquisition and Development (OSLAD) program grants. As the Regional Greenway Plan was being developed, the local and state agencies essentially created a consortium to develop a collaborative work-effort that has continued to grow and strengthen.

- FHWA/IDOT's Enhancement Program – Another example of this effort is the regional cooperation on the submissions of enhancement applications. The two principal planning documents that are used in this effort are the RMAP 2040 LRTP and the 2011 Regional Greenway Plan. The majority of projects that have been submitted, awarded and constructed in the RMAP MPA are regional shared-use path facilities. Two major north-south

routes that have been completed in the area are the Rock River Path and the Perryville Path. One of the objectives of the Bicycle/Pedestrian Plan was the identification of existing streets to connect to the area's several shared-use path facilities. Using the traditional transportation system management philosophy of low-cost transportation improvements, this planning approach of using low-volume streets to safely accommodate bicycling would create a mobile and accessible transportation option in the RMAP MPA. The regional cooperation on the submission of these grants by several of the local agencies identified above and the construction of these transportation facilities, the area is now in the position of implementing an on-street bicycle network.

- Winnebago County Natural Resource Inventory As part of the Winnebago County 2030 Land Resource Management Plan, a natural resource inventory was developed for Winnebago County. It was published and released in September 2008. The main project objective was to inventory, categorize and list the types of natural resources whose locations and characteristics should be identified and mapped in a GIS format due to some type of environmental significance. Winnebago County GIS researched information about private or public natural resources that may not have been previously recorded by local, state, federal, or private agencies, but which are still considered great assets of the residents of Winnebago County. This inventory has already been used to help protect and manage these precious assets. The foundation for this work effort is the State of Illinois Natural Area Inventory. This 30-year old inventory identified high-quality remnant natural communities and grades them according to their ecological integrity. As part of the Winnebago County 2030 Land Resource Management Plan, the Winnebago County Geographic Information System (WinGIS) has contracted with a consulting team to:

  (1) create an inventory of scarce natural resources,
  (2) assess the ecologic significance of the natural resources,
  (3) recommend a management strategy to maintain, restore and protect the natural resources and
  (4) provide the inventory and strategy data in an approved GIS format.

  RMAP assisted WinGIS in developing the project overview and purpose of this activity. Also of important note is that this Natural Resource Inventory was very beneficial in the development of the 2011 Greenways Map update project.
- Principles of Balanced Growth – Beginning in January 2002, Winnebago County began a planning initiative "to inform public and private decision-makers in Winnebago County on the concept and benefits of balance growth; to encourage implementation of projects and policies or actions which reflect the principles of balanced growth and to become a model for other counties in Illinois." This project had several objectives, but the overall theme was to educate public officials about the principles and to explain some of the best practices on Balanced Growth. As with all planning tasks, the final report includes a multi-level approach to most of the important issues that challenges urban communities across the United States. The topics that were described included Economic Development, Fiscal Stability, Natural Resources, Agriculture, Open Space, Viable/Livable Communities, Infrastructure and Coordination.

- Rock River Valley "Green Communities" Environmental Vision: Facilitation of Cooperative Conservation – This environmental visioning effort involved many government and other resource agencies to develop a community understanding of the importance of protecting and preserving our natural resources. This process included investigating the physical, ecological and cultural dimensions of the local environment, identifying issues and preferences through surveys and public meetings, creating strategies to address issues and generating an action plan. The goals of this effort was to:

  1. Cultivate and preserve historical and cultural resources,
  2. Protect, preserve and enjoy natural resources and ecosystems,
  3. Link the natural world to hands-on learning and physical activity through recreational and environmental education,
  4. Implement environmentally sound land use strategies and
  5. Develop a system that encompasses all forms of transportation in a safe, interactive manner.

  The action plan that was published by the Rock River Valley Green Communities included ten critical action areas and follow-up issues for the region to consider and incorporate into the area's planning process and documents. The steps to implement the ten issues that were identified in this visioning planning process listed local and regional planning documents like the Greenway and Trails Plan, Park and Open Space Plan and the RMAP LRTP, including a specific reference to have a more detailed planning analysis on bicycling and pedestrian transportation.

- Illinois Department of Natural Resources Ecosystems Program: Ecosystems Partnerships – The purpose of this state-wide effort "is to integrate the interests and participation of local communities and private, public and corporate landowners to enhance and protect watersheds through ecosystem-based management." In the RMAP Metropolitan Planning Area exist four of these ecosystem partnerships:
  - Upper Rock River
  - Kishwaukee River
  - Sugar – Pecatonica Rivers
  - Kishwaukee River Ecosystem Partnership, KREP

  The strategy of these partnerships is to ensure that habitat and other environmentally-sensitive areas are maintained and managed to enhance biological diversity and to establish human, economic and recreational conditions that will be compatible with local and regional interests. Because more than 90% of the state's land area is privately owned, a new approach was initiated to have a cooperative effort to protect, enhance and restore natural resources through private management and public support and encouragement.

- Illinois Wildlife Action Plan – The Illinois Department of Natural Resources (IDNR) has completed a detailed, science-based approach to develop a comprehensive plan to manage public and private lands to conserve the state's wildlife. The planning approach included an inventory of species, but also developed a plan to address the particular needs of wildlife that are declining so that these species populations can be stabilized and then increased. To address the eight congressionally required elements, IDNR's method involved more than 150 federal, state, and local agencies, partnerships, institutions, and nongovernmental organizations. Through a wide-variety of other public events and announcements, an estimated 600 people were consulted throughout the state.

  The fifteen natural land divisions of Illinois, defined by biological and geological characteristics, were used to geographically divide the state into sections to evaluate wildlife and habitat conservation needs. To assess each of these land divisions, thirteen major and minor categories were used in the environmental – ecosystem review. Two of these fifteen land divisions are included in the RMAP Metropolitan Planning Area, the Rock River Hill Country and Northeastern Morainal Natural Divisions.

  Included in the State Wildlife Action Plan is a Green Cities Campaign section. As a result of increasing population growth in several of the 102 counties in Illinois, this plan discussed several action steps for developing areas to foster an understanding of and appreciation for wildlife, habitat, natural communities, ecological processes and disturbance regimes. Knowledge of these issues and related subjects are important for urban residents to support scientifically driven conservation priorities. The steps that were outlined are:
  1. Minimize the adverse effects associated with development on wildlife and habitats.
  2. Integrate wildlife and habitat conservation in developing areas, as possible or appropriate.
  3. Increase water quality education efforts in areas under high development pressure and/or within fragile geographic zones (i.e. karst terrain).
  4. Make natural areas conservation, ecology and environmental education a mandatory part of school curricula.
  5. Fill information gaps and develop conservation actions to address stresses.
  6. Increase access to open lands and waters within and near urban areas for wildlife-related recreation.

- Rockford Region Vital Signs Regional Plan for Sustainable Development (RPSD) – Beginning in early 2011, the Rockford Region has been working to develop our first regional plan for sustainable development. This initiative, called "Rockford Region Vital Signs", is based first and foremost on taking the social, economic, and environmental pulse of the Rockford Region. Once community leaders know the strengths and weaknesses of the region's sustainability and well-being, they can be more strategic in determining what needs to be done to improve the community.

  Three reports in early 2013 aimed to empower community leaders from diverse backgrounds, for the first time in concert, to have a clear picture of the region's interworking parts. The hope is our regions' leaders may then begin a conversation on how to improve the region's sustainability by working together towards a common goal.
  This initiative was funded through the U.S. Department of Housing and Urban Development's (HUD) Partnership for Sustainable Communities. This award to the Rockford Metropolitan Agency for Planning (RMAP) was the result of a local consortium of 30 agencies in Boone and Winnebago Counties agreeing to support and align their strategic plans and long-range visions into a set of common goals and action steps. The local consortium is anchored by RMAP, our regional metropolitan planning organization.

  The Rockford Region is fortunate to have many local environmental initiatives including the US Conference of Mayors Cool Cities program, the Energy Efficiency and Conservation Block Grant

(EECBG) program, the Greater RMAP Environmental Education Network (GREEN), the Winnebago County Green Business Network, the Boone County Farmland Preservation Commission, the Four Rivers Environmental Coalition (FREC), the Kishwaukee River Ecosystem Partnership (KREP), The Boone County Stormwater Management Committee, WINACWA and the HUD-DOT-EPA Sustainable Communities Partnership. The continuation and integration of these environmental efforts, and others, into the Regional Plan for Sustainable Development is a high priority and the allocation of staff resources within the local Consortium is recommended.

According to the results from the RPSD it can be concluded that our region has many positive environmental qualities but also notes that there are areas that still need improvement. Among the areas needing to be further researched and addressed are:

- Winnebago County Stormwater Master Management Plan
- Long Range Groundwater Plan (Drinking Water)
- Air Quality Levels for Ozone
- Accelerated Rates of Farmland Conversion
- River and Steam Water Quality
- Conservation of Wetlands and Other Natural Areas
- Brownfield Remediation
- Bridge Structural Condition Assessments
- Lead Paint Abatement
- Food and Technology Deserts

In contrast the RPSD also notes many positive and forward thinking environmental programs and asset management techniques. In particular the following areas should be recognized for helping to create a positive environmental change in our region:

- Low Levels of Carbon Monoxide and Particulate Matter
- Mapping and Inventory of Environmentally Sensitive Areas
- Nationally Recognized Parks, Greenways and Open Space
- Commitment to Bikeways, Paths and Trails
- Commitment to Inventory and Remediation of Infill Redevelopment Properties
- Commitment to Agricultural and Farmland Preservation
- Initiation of LEED Programs and Professional Certification
- Focus on Transit-Oriented Development
- Commitment to Walkability and Walkable Landscapes
- Long Range Commitment to Waste Management

Stormwater Management and Minimizing the Regions Flood Potential – Both Boone and Winnebago County are situated upon a very diverse and healthy landscape with an abundance of both surface and subsurface water resources. The City of Rockford is bisected by one of Illinois largest rivers; the Rock River is 163 miles long, has a drainage area of 2,272,000 acres, and receives drainage from three other major streams: the Pecatonica River, The Kishwaukee River, and the Sugar River.

Stormwater runoff occurs when precipitation from rain or snowmelt flows over the land surface because it is not able to infiltrate the surface material at an equal rate. The addition of roads, driveways, parking lots, rooftops and other surfaces that prevent water from infiltrating into the ground greatly increases the runoff volume created during storms. This runoff is swiftly carried to our local streams, lakes, wetlands and rivers and can cause flooding and erosion, and wash away important habitat for flora and fauna that live in and around waterways. Stormwater runoff also picks up and carries with it many different pollutants that are found on paved surfaces such as sediment, nitrogen, phosphorus, bacteria, oil and grease, trash, pesticides and metals. It comes as no surprise then that stormwater runoff is the number one cause of stream impairment in urban areas, and Rockford is no different.

To reduce the impacts of runoff on urban streams the Environmental Protection Agency expanded the Clean Water Act in 1987 to require municipalities to obtain permits for discharges of stormwater runoff. As a result, many communities have adopted regulations requiring developers to install stormwater management practices that reduce the rate and/or volume and remove pollutants from runoff generated on their development sites. Until the past 4-5 years the Rockford Region had limited information on stormwater management practices and regulations and no full inclusive plan for the region.

Boone County

Under Illinois State Law 55 ILCS 5/5-1062.2, permission was granted to Madison, St. Clair, Monroe, Kankakee, Grundy, LaSalle, DeKalb, Kendall, and Boone County the authority to allow the management and mitigation of the effects of urbanization on stormwater drainage. This law allowed Boone County to create a Stormwater Management Planning Committee (SMPC) for the purpose of developing a stormwater management plan for presentation to and approval by the County Board, and to direct the plan's implementation and revision. As such Boone County developed a Comprehensive Stormwater Management Plan that was approved by the Boone County SMPC on September 23rd, 2010 and the Boone County Board on December 21st, 2011. The goals and objective of the study are as follows:

- Establishment of county-wide uniform minimum stormwater regulations
- The preservation, protection and restoration of water resources (waterways, floodplains, wetlands, ponds, lakes, groundwater recharge areas and aquifers)
- Promote an awareness and understanding of stormwater management issues by the residents through a public information and education program
- Identify, prioritize and remedy existing areas of concern
- Coordinate the short and long term maintenance of natural waterways, manmade drainage ways and stormwater management facilities located within the County
- Develop a consistent and equitable funding mechanism

The prioritization of the plans recommendations was dependent on a number of factors including the extent of existing problems, the rate of urbanization, and available funding. After the review of all existing data and responses from questionnaires that were distributed to the municipalities, everything indicated that there are not wide spread issues with a lot of flooding and water quality problems in Boone County. There is however, an indication of existing localized water issues in Boone County. In the more urbanized areas of the county, problems are beginning to be felt, particularly in terms of impairment of streams and lakes. These factors suggest that the first priority should be a regulatory program to minimize new problems related to new development and avoid exacerbation of existing problems. However, certain administrative and management recommendations will be necessary to support the regulatory program. While the regulatory program is being implemented, the SMPC should also begin to focus on maintenance and planning needs.

Table 5-1 lists each of the Stormwater Management Plans priorities and ranks them from one to three with one having the highest priority.

In summary, the key principles of this watershed planning methodology are to base recommended actions on identified flooding problems and waterbody impairments and to approach the solution of watershed problems in a holistic, comprehensive fashion.

TABLE 5-1

PLAN RECOMMENDATION	Priority Ranking
Administration and Management Recommendations	
Acquire and Train Staff	1
Form Technical Advisory Committee	1
Provide Technical Support	2
Develop Public Awareness Program	1
Coordinate Professional Education	2
Develop Funding Mechanism	1
Regulatory Recommendations	
Prepare and Adopt Countywide Ordinance	1
Implement Existing & Future Water Shed Plans	1
Prepare Technical Reference Manual	2
Institute Ordinance Enforcement Structure	2
Planning Recommendations	
Perform Countywide Planning Coordination Activities	1
Form Watershed Boards	2
Hydrologic Data Collection	2
Prepare Plans for Remaining Watersheds	3
Maintenance Recommendations	
Develop Maintenance Standards	2
Develop Mechanism to Maintain Natural Drainage System	3
Develop Mechanism to Maintain Stormwater Infrastructure	2

Winnebago County

The Winnebago County Watershed Improvement Plan Steering Committee (WCWIPSC) is a consortium of municipalities in the Buckbee Creek and Madigan Creek watershed, resource agency professionals, environmental advocates, and local residents that established itself in April 2010 to guide the development of strategies to protect and restore Buckbee Creek and Madigan Creek and its tributaries. The origin of the WCWIPSC occurred following a meeting on April 27, 2010, of interested parties invited to discuss storm water issues regarding the Buckbee Creek and Madigan Creek watershed. Approximately two dozen people attended the meeting including the Winnebago County Board Chairman and Board members, the County Engineer and Highway Department staff members, and representatives of the Cherry Valley Township, City of Rockford, Rockford Township, the Illinois Department of Natural Resources, the Kishwaukee River Ecosystem Partnership (KREP), and the Rockford Metropolitan Agency for Planning (RMAP). After a discussion of water quality and stormwater problems and the need to coordinate the studies and planning required to implement solutions to the problems, the County Board Chairman agreed that the Winnebago County Highway Department would be the lead agency responsible for taking steps to formally organize the WCWIPSC and applied for the CWA Section 319 grant for the preparation of a watershed-based plan on behalf of the WCWIPSC.

The project was initiated and funded by the Winnebago County Highway Department with a grant from the Illinois Environmental Protection Agency Section 319 grant program in the spring of 2011. Participating stakeholders contributed staff time to provide information and participate in the watershed planning progress. They include the Village of Cherry Valley, Kishwaukee Ecosystem Partnership (KREP), City of Rockford, Rockford Park District, Winnebago County, Winnebago County Soil and Water Conservation District, and watershed residents.

This watershed-based plan was produced via a comprehensive watershed planning approach that involved input from local residents, municipal officials, municipal employees, and representatives from natural resource agencies. Information obtained from watershed stakeholders and numerous natural resource agencies was then used to assess the overall condition of the watershed including water quality, natural resources, and flood risks. Using this information, a series of recommended management practices aimed at improving the water quality and natural resources conditions of the watershed was developed. Potential funding sources and strategies for the implementation and monitoring of the identified recommended projects were also included in the watershed-based plan.

The History Of Greenways Planning In The Rockford Region

The Greenways Map and Plan is a tool to shape community development by using land conservation to guide growth and preserve the environmental and recreational assets of both Boone and Winnebago Counties. The Greenways Plan and its future revisions will serve as the primary planning document for land acquisition, natural areas preservation, greenway, corridor, and recreational trail development for the region. The Map highlights existing protected green space and potential future green space acquisitions, as well as current and proposed recreational trails and shared-use paths. The Plan is a tool to help communities steer growth and development away from valuable natural resources and towards existing communities and infrastructure in a more sustainable way that is driven by data and research.

RMAP staff has been directly involved in the Greenways planning process since the first map was developed and printed in 1997; it was titled the Boone and Winnebago County Regional Greenways Plan. The first revision of the Greenways map resulted in the 2nd edition being produced in 2004, which had a few important changes that are noteworthy. Most notably was the expansion and increased detail of the critical and sensitive areas layer in the map. This included the most up to date 100 year floodplain and included areas of intermittent streams and seasonal flooding. This then added to the total number or acres that were designated as critical or sensitive in nature. The second largest change was the addition of priority acquisition areas to the map, most of which are also categorized as critical or sensitive areas already. Additionally wetlands, grasslands, and forests where added to the 2004 edition of the Greenways map and plan. It is also worth noting that the 2nd edition uses colors that are more distinguishable than the previous version lending itself to easier interpretation and resulting in a better visual image of the lay of the land.

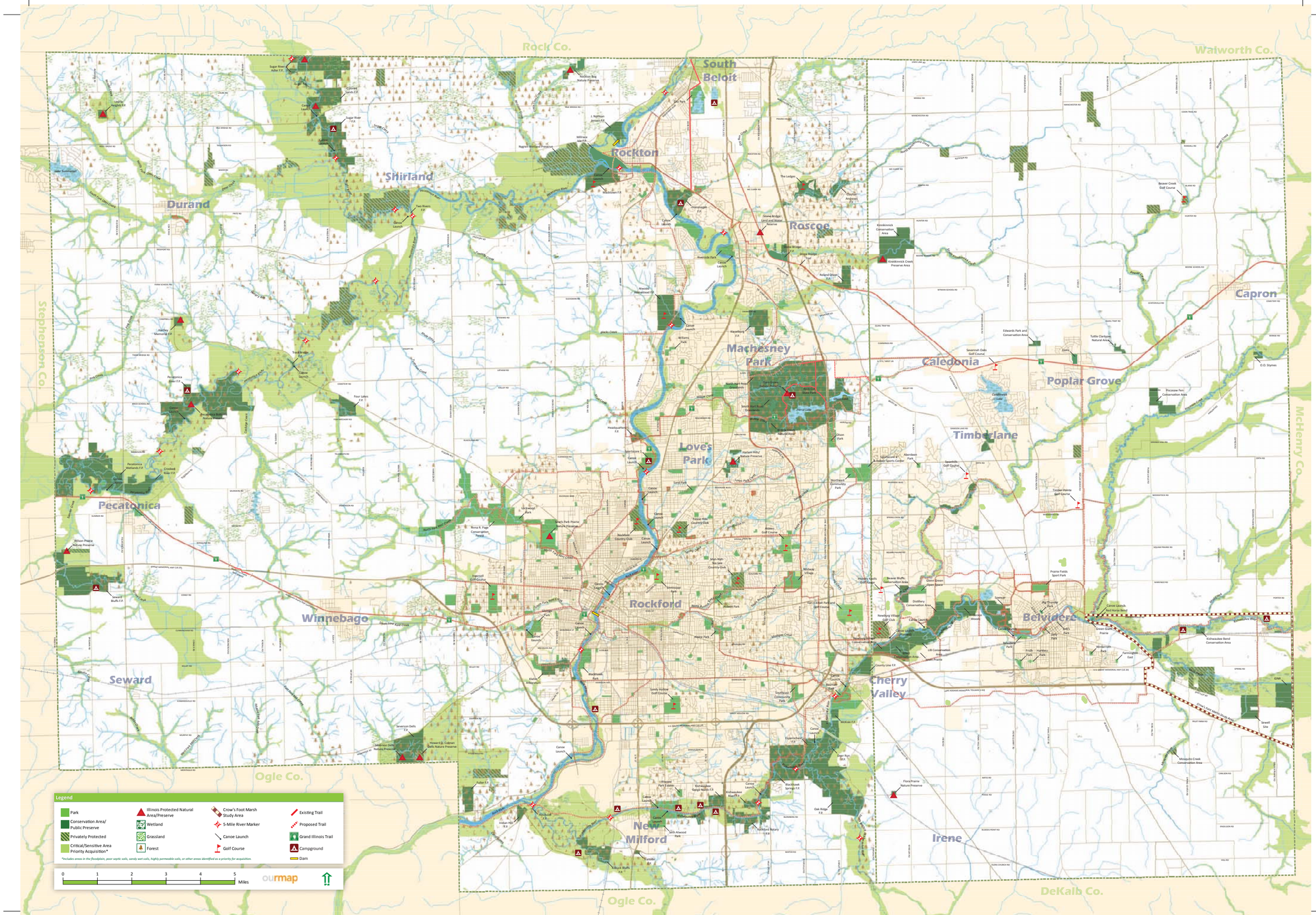
In September of 2008 Winnebago County completed a document titled the Winnebago County Natural Resources Inventory; it compiled a detailed list and map of the Counties natural resources and also created GIS files for newly inventoried sets of data. The project and document was funded through the Winnebago County GIS organization. The GIS files that were created from the field work and research generated from the Winnebago County Natural Resources Inventory where vital to the development of the 2011 Boone and Winnebago Greenways Plan and Map. The 2011 Greenways Map is the 3rd edition of the Map and the most current version. A new edition will be ready for print in 2015. See Map 5-A. The major difference in the 2011 version was the merging of the priority acquisition areas with the critical/sensitive areas thus creating one large shapefile that is more representative of the sensitive environmental areas in our region. The other two important layers that were added to this map version are local roads and the detailed National Hydrology Dataset from the United States Geological Society. It is important to note that the 2011 Greenways Plan and Map was coordinated by RMAP staff but that the actual mapping work, outreach, GIS work, and final designs where all completed by T-Y-LIN, a multi-disciplinary engineering and consulting firm based out of Chicago, Illinois.

Beginning in late 2013 and early 2014 RMAP staff began to meet internally to discuss the revision and update to the 2011 Greenways Plan and Map. Over the next several months staff gathered the files and data that would be needed to complete the 4th edition of the Boone and Winnebago Greenways Plan and Map. Data collection, creation, and organization were necessary because it was decided that the map updating would be completed by RMAP staff. During this time RMAP staff kept the RMAP Technical Committee and Policy Committee up to speed on the progress that was being made. In July of 2014 RMAP staff began meeting with local agencies on a one on one basis to make sure that every interested organization, committee, and that all government entities voices were heard. In total over 12 agencies participated, provided feedback, and made suggestions for the 2015 Boone and Winnebago Greenways Plan.

The 2015 Greenways Plan and Map will be ready for circulation in the summer/fall of 2015. The most noteworthy update to the map is again related to the critical/sensitive areas and priority acquisition sites. The Greenways Update Committee agreed to add the following GIS data to the existing critical/sensitive areas layer: lands with a surface slope greater to or equal 12.5%, updated 2011 floodplain for Boone County, and Fish and Wildlife Wetlands layer. All three of these newly added layers also have a 150 foot buffer added to them to ensure that the resources are properly protected or preserved at the peripheral of the leading edge, thus safeguarding their protection.

The three previous Greenway plans have been used as an important guide to the acquisition and protection of priority natural areas, and in meeting requirements for the Illinois Department of Natural Resources (IDNR) grants and Illinois Clean Energy Community Foundation grants. The Greenways Plan and Map continues to be popular with many individuals and organizations who are interested in locating and utilizing parks, open space, natural areas, and off-street paths and trails. There were 10,000 folded copies of the 2011 Greenways map printed and a few hundred flat unfolded copies as well. There are currently only a few hundred left due to such a high demand. RMAP staff has noted a continued and increased interest in the 4th edition that will be available in the summer of 2015. Therefore, staff has decided to print more copies of the 4th version than that of the last.

MAP 5-A


Rock Co.
Walworth Co.
Stephenson Co.
McHenry Co.
Ogle Co.
DeKalb Co.
South Beloit
Rockton
Shirland
Durand
Roscoe
Machesney Park
Love's Park
Rockford
Loves Park
New Milford
Pecatonica
Winnebago
Seward
Caledonia
Capron
Poplar Grove
Timberlane
Belvidere
Cherry Valley
Irene
Legend
Park
Conservation Area/ Public Preserve
Privately Protected
Critical/Sensitive Area Priority Acquisition*
Illinois Protected Natural Area/Preserve
Wetland
Grassland
Forest
Crow's Foot Marsh Study Area
5-Mile River Marker
Canoe Launch
Golf Course
Existing Trail
Proposed Trail
Grand Illinois Trail
Campground
Dam
*Includes areas in the floodplain, poor septic soils, sandy wet soils, highly permeable soils, or other areas identified as a priority for acquisition.
0 1 2 3 4 5 Miles
ourmap

Climate Change and Extreme Weather Resiliency

There has been a general scientific consensus that the global climate is in the midst of a long-term warming trend, largely attributed to manmade influences. Greenhouse gas emissions (GHGs) are cited as the predominant cause for climate change. In the United States transportation is identified as a leading contributor to GHG emissions, second only to electrical generation.

The terms "climate" and "weather" are often mistakenly used interchangeably. According to National Oceanic and Atmospheric Administration "weather" is the state of the atmosphere at a given time and place, with respect to variables such as temperature, moisture, wind speed and direction, and barometric pressure. Alterately, "climate" is defined as the expected frequency of specific states of the atmosphere and land including variables such as temperature, soil moisture, wind speed and more. Climate encompasses the weather over different periods of time; in essence climate is a range of what is expected in the long run and weather is what actually is observed in any given short-term event.

The Chicago Metropolitan Agency for Planning (CMAP) released a Climate Adaptation Guidebook in 2013 to prepare for climate change in the Chicago region. Based on findings from the National Climate Assessment and regional climate modeling CMAP identified the following expected climate change impacts for northeastern Illinois and widely applicable to the rest of the Midwest:

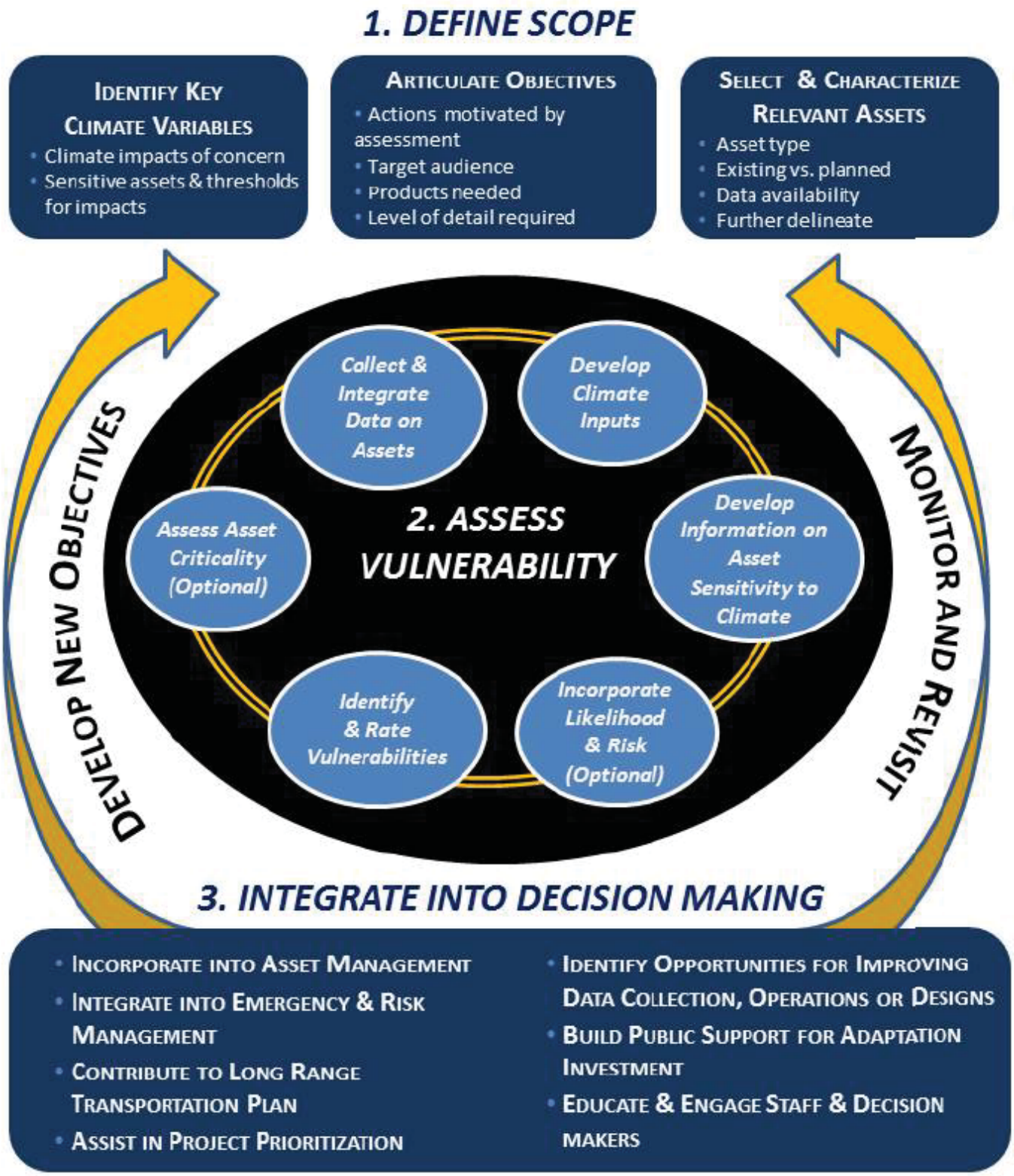
- An increase in annual temperatures by mid-century
- An increase in the number of extremely hot days (100 degrees F or higher), and an increase in seasonal overnight low temperatures
- A decrease in the number of day below freezing
- An increase in the number of freeze-thaw cycles annually
- An increase in precipitation; however the increase is most likely to be seen during winter and spring months rather than evenly distribute throughout the year
- An increase in extreme rainfall events punctuated by periods of drought
- An increase in winter precipitation occurring as rain rather than snow; however individual snowfall events are expected to have a greater snowfall intensity due to higher atmospheric moisture
- A northward shift in Plant Hardiness Zones

It is important to note that these expected impacts vary in intensity and magnitude based upon different emissions scenarios, however the generalized trends remain constant.

These projected impacts have the potential to greatly impact transportation infrastructure. For example, more extreme rainfall events may result in greater bridge scour and erosion, as well as inadequately sized culverts and storm sewers; an increase in freeze-thaw cycles may result in more potholes; extreme heat may cause pavement and rail buckling; and greater seasonal fluctuations will make it more difficult to plan for necessary inputs for routine maintenance such as roadway salt. Transportation systems are designed to withstand a wide range of environmental conditions, however climate change adds additional stressors that may compromise the region's transportation infrastructure and jeopardize the systems safety and reliability.

The Region should continue to seek to reduce GHG emissions as outlined in the air quality/emissions section below to help reduce the occurrence or magnitude of these projected impacts, however it is important for the region to build resiliency into its planning efforts in order to identify and mitigate any potential impacts. FHWA Order 5520, Transportation System Preparedness and Resilience to Climate Change and Extreme Weather, was signed on December 15th, 2014. The Orders states that it is FHWA policy to integrate consideration of climate and extreme weather risks into its planning, operations, policies and programs. Resiliency is defined as the capacity to adapt when exposed to a hazard or systemic change in order to maintain an acceptable level of functionality. Possible mitigation and adaptation techniques include the installation of green infrastructure, street trees to reduce pavement temperature, and modifications to asset management systems. Both Boone and Winnebago Counties have FEMA approved Multi-Hazard Mitigation Plans which identify possible natural disaster risks, including floods, tornados, and extreme winter events, and identifies mitigation efforts for each. The FHWA has created a Climate Change and Extreme Weather Vulnerability Assessment Framework (Table 5-2) to help communities and transportation agencies identify and rate potential vulnerabilities, assess risk, and identify, analyze, and prioritize adaptation options.

TABLE 5-2


1. DEFINE SCOPE
IDENTIFY KEY CLIMATE VARIABLES
• Climate impacts of concern
• Sensitive assets & thresholds for impacts
ARTICULATE OBJECTIVES
• Actions motivated by assessment
• Target audience
• Products needed
• Level of detail required
SELECT & CHARACTERIZE RELEVANT ASSETS
• Asset type
• Existing vs. planned
• Data availability
• Further delineate
DEVELOP NEW OBJECTIVES
MONITOR AND REVISIT
Collect & Integrate Data on Assets
Develop Climate Inputs
Assess Asset Criticality (Optional)
2. ASSESS VULNERABILITY
Develop Information on Asset Sensitivity to Climate
Identify & Rate Vulnerabilities
Incorporate Likelihood & Risk (Optional)
3. INTEGRATE INTO DECISION MAKING
• INCORPORATE INTO ASSET MANAGEMENT
• INTEGRATE INTO EMERGENCY & RISK MANAGEMENT
• CONTRIBUTE TO LONG RANGE TRANSPORTATION PLAN
• ASSIST IN PROJECT PRIORITIZATION
• IDENTIFY OPPORTUNITIES FOR IMPROVING DATA COLLECTION, OPERATIONS OR DESIGNS
• BUILD PUBLIC SUPPORT FOR ADAPTATION INVESTMENT
• EDUCATE & ENGAGE STAFF & DECISION MAKERS

Air Quality

Contained herein are the historical measurements taken for various air pollutants from within the RMAP Metropolitan Planning Area (MPA). The ozone and carbon monoxide data are Eight-Hour Sample Results, and the Particulate Matter data are 24-Hour Sample Results. The data and some of the information present in this document are supplied by the United States' Environmental Protection Agency. For more data or information, please visit www.epa.gov/air/

There are currently three monitors in service in the RMAP region. The first is an ozone monitor at Maple Elementary School, 1405 Maple Avenue, Loves Park IL. The second is a particulate matter monitor at the Health Department, 201 Division Street, Rockford, IL. The last is a carbon monoxide monitor at Rockford City Hall, 425 E. State Street, Rockford, IL. Until 2007, there was a second monitor in the RMAP region for ozone, located at Walker Elementary School, 1500 Post Avenue, Rockford, IL. This monitor was discontinued in 2008.

Ozone

Ground-level ozone is created by chemical reactions between oxides of nitrogen (NO_2) and volatile organic compounds (VOC) in the presence of sunlight. Emissions from industrial facilities and electric utilities, motor vehicle exhaust, gasoline vapors, and chemical solvents are some of the major sources of NO_2 and VOC.

Breathing ozone, a primary component of smog, can trigger a variety of health problems including chest pain, coughing, throat irritation, and congestion. It can worsen bronchitis, emphysema, and asthma. Ground-level ozone also can reduce lung function and inflame the linings of the lungs. Repeated exposure may cause permanent lung damage, scarring lung tissue. Ground-level ozone also damages vegetation and ecosystems. In the United States alone, ozone is responsible for an estimated $500 million in reduced crop production each year.

The Environmental Protection Agency (EPA) standard for ozone is no greater than 0.075 parts per million (ppm) for an 8-hour average concentration. When tabulating results, the worst value is referred to as the "First Maximum", the next the "Second Maximum" and so on. In the timeframe of one year, the Fourth Maximum value is compared to the standard of 0.075 ppm. If the Fourth Maximum is greater than the standard, the region is said to be in violation. Thus, if the "Days > Standard" column in the ozone charts below is 4 or more, that year was in violation of the ozone standard. It is worth noting that the ozone eight-hour standard was strengthened by the EPA in 2008 to its current level. The 2008 standard applies retroactively to monitoring data for prior years.

Recently, the EPA has released a Notice of Proposed Rulemaking (NPRM), Docket ID No. EPA-HQ-OAR-2008-0699, to the Federal Register regarding ozone standards. Among other things, this NPRM indicates that the EPA intends to strengthen the standards for ozone even further. The proposed range for the change is from 0.065 to 0.070 ppm. RMAP was afforded the opportunity to comment on this NPRM, and provided the following comments, modified slightly for formatting and context:

The primary factor in this NPRM that concerns RMAP is the reduction in the 8-hour primary Ozone (O_3) standard from its current levels to within the range of 0.065 parts per million (ppm) to 0.070 ppm. RMAP recognizes the need for the increase in public health protection and awareness of O_3 pollution and effects, and has been an MPO region in conformity with the EPA standards for all measured pollutants in this region since they were released.

Based upon current information, as well as the projected data for the coming year, the RMAP region would remain in conformity should the standard be lowered to 0.070 ppm. However, even with recent major reductions in O_3 quantity, thanks to open-road tolling and other initiatives, a standard any lower than 0.070 ppm would place the RMAP region squarely in nonattainment status. Indeed, selection of a standard under 0.070 ppm would place a vast majority of the existing USDOT/FHWA/FTA Transportation Management Areas (TMAs) and other urbanized areas of the country in nonattainment status. A program that creates a standard that is for all intents and purposes unattainable under current conditions serves no one, nor does a program that effectively blankets all major urbanized areas under the nonattainment category. Furthermore, to lower the standard past 0.070 further burdens the financial requirements of not only the individual communities implementing the measures to bring an area into conformity, but the federal programs that support such efforts. RMAP supports the reduction of the standard for O_3 to 0.070 ppm, but does not support a reduction to any lower value, even 0.065 ppm. To lower the standards any further places an undue burden on areas currently conforming to O_3 standards, particularly since conforming to Air Quality standards does not provide any financial assistance.

In fact, this NPRM brings up another issue that concerns RMAP, the financial assistance made available to nonattainment areas instead of rewarding conforming areas for continued success. At this time, there is no incentive provided by the federal government or any other party to remain in conformity with any air quality standards. While protection of the general public is a valuable and warranted goal, it is difficult

to ignore the fact that nonattainment areas receive money from the federal government to improve their air quality, while conforming areas receive nothing. In fact, the current iteration of the program suggests that becoming a nonattainment area could be a desirable goal, as it allows for significant impacts in funding of programs to mitigate air quality issues.

The RMAP region has long prided itself on conforming to or exceeding current air quality standards, but is troubled by the fact that there is financial incentive to fail at doing so. RMAP believes that finding some method of incentivizing conformity, whether that be through funding or other methods, would be an appropriate step forward in prioritizing moving towards conformity, rather than incentivizing nonconformity. This has additional importance towards economic development, as businesses prefer to site proposed facilities in regions where their emissions are not as highly regulated. Avoiding the need to purchase credits and specific zoning regulations, zones, and overlays, is attractive to many businesses, particularly those with heavy industrial and manufacturing ties. Since regions with heavy reliance or history of industrial and manufacturing businesses are also frequently highly polluted, regions that manage to maintain their attainment status while still promoting these businesses should be given considerations for their efforts in maintaining healthy communities.

Another concern of RMAP is the collection methodology for this data. As a reference point, the RMAP region has a single active O_3 monitor, at Maple Elementary School in Loves Park, which is in Winnebago County. This one monitor is used to determine whether the entire MPO region is in attainment or nonattainment status. However, since RMAP's region includes urbanized areas from Boone, Winnebago and Ogle counties, this determination seems imprecise at best. It is possible that in the future, should the single monitor in Winnebago County indicate that the area is nonattainment, that projects in Boone or Ogle County would be impacted by such a reading, even if their own area were in conformity. It would be impossible to prove whether or not other counties were in conformity without additional monitoring equipment. Indeed, even Winnebago County is large enough, especially with seasonal and changing wind patterns/directions that the reading from Loves Park may not be wholly indicative of places further from the center of that monitor's range, such as Roscoe or Cherry Valley. RMAP would be interested in adding further monitors, both locally and nationally, to better support the accuracy of the data that are already being collected. The overall point that RMAP would like to make is that this is an existing healthy community. Following and implementing the above comments would maintain and enhance this and other urban areas and surrounding environments.

In the graph on the following page that shows ozone sample results, the bars colored red indicate 3-year periods in which the RMAP Region's ozone pollution level exceeded the 0.070 ppm proposed standard, the bars colored yellow meet the 0.070 ppm proposed standard but exceed the 0.065 proposed standard, and the bar colored green meets both proposed standards.

As the table and graph show, the RMAP region's levels of ozone pollution since 2009, when the data from 2008-2006 were applicable, would qualify as 'attainment' under the 0.070 ppm proposed standard. However, under the 0.065 ppm proposal, only in 2011 of the entire monitored history would the region have been in compliance.

The 'Design Value' is the rating of pollution that, in the upcoming year, is the highest value that would maintain the region's compliance with each standard. Any value of pollution higher than the Design Value shown for each possible standard would cause the Region to become a 'Non-Attainment' Region, a designation which has numerous effects, most notably the halting of federal highway and transit funding for projects that cannot demonstrate that they will cause no increase in applicable emissions. This can and does cause significant delays in the planning and implementation of any projects that would use federal monies; as RMAP is the steward of certain federal funds, including Surface Transportation Program- Urban funding, this would have a vast impact on RMAP and its member and partner communities.

The data regarding ozone in the context of the existing standard is very encouraging. There has not been a year in violation of the standard since 1998, based on the three-year averages. However, the impending changes in the ozone standard bear consideration on this topic.

Should the EPA choose to adopt the 0.070 ppm standard for ozone, the RMAP Region's current trends would be acceptable, but just barely. Continued implementation of programs and initiatives such as Open Road Tolling, which dramatically reduced the idle time of vehicles on the expressway, would be a necessity. In the event the EPA selects the stricter 0.065 standard, the RMAP region will face a difficult challenge in maintaining its attainment status, as will much of the State of Illinois and metropolitan areas around the country. While the 2008 data alone would represent a year of acceptable levels of ozone even at the 0.065 standard, the 2008 data was a spectacularly low year for such data, and is not the consistent level of ozone in the RMAP region.

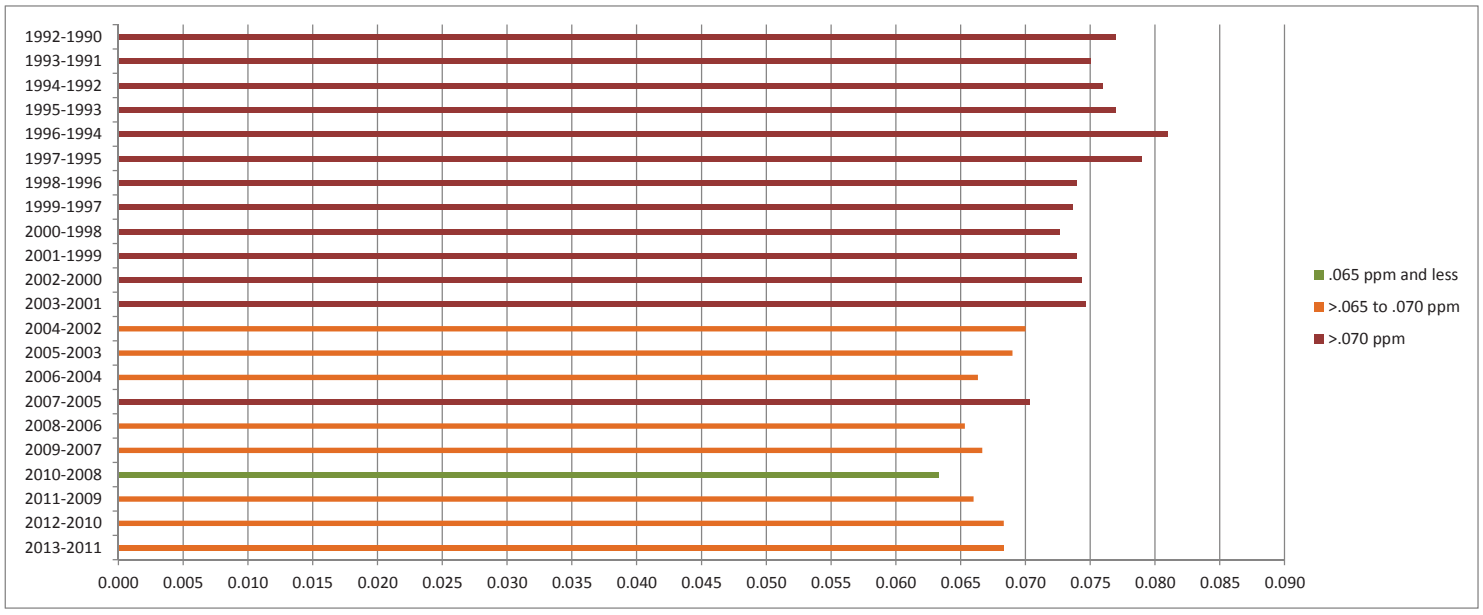
Although the Design Value indicates what is permissible, it is RMAP's and the region's goal to move further towards a healthy environment with fewer pollutants.

TABLE 5-3

Ozone Data for RMAP Region

	1st Max	2nd Max	3rd Max	4th Max
2013	0.065	0.064	0.064	0.063
2012	0.075	0.075	0.074	0.074
2011	0.075	0.07	0.068	0.068
2010	0.066	0.064	0.064	0.063
2009	0.069	0.068	0.067	0.067
2008	0.061	0.061	0.06	0.06
2007	0.077	0.075	0.075	0.073
2006	0.066	0.066	0.064	0.063
2005	0.079	0.079	0.076	0.075
2004	0.072	0.07	0.067	0.061
2003	0.077	0.075	0.074	0.071
2002	0.088	0.086	0.084	0.078
2001	0.081	0.081	0.076	0.075
2000	0.076	0.075	0.075	0.07
1999	0.083	0.079	0.078	0.077
1998	0.077	0.076	0.074	0.071
1997	0.081	0.081	0.073	0.073
1996	0.09	0.084	0.078	0.078
1995	0.096	0.088	0.087	0.086
1994	0.094	0.088	0.08	0.079
1993	0.071	0.069	0.068	0.066
1992	0.088	0.086	0.083	0.083
1991	0.089	0.077	0.077	0.076
1990	0.083	0.074	0.073	0.072
2014 Design Value for 0.075 standard=0.088 ppm				
2014 Design Value for 0.070 standard= 0.073 ppm				
2014 Design Value for 0.065 standard=0.058 ppm				

TABLE 5-4



Carbon Monoxide

Carbon monoxide results from incomplete combustion of fuel and is emitted directly from vehicle tailpipes. Incomplete combustion is most likely to occur at low air-to-fuel ratios in the engine. Nationwide, two-thirds of the carbon monoxide emissions come from transportation sources, with the largest contribution coming from highway motor vehicles. In urban areas, the motor vehicle contribution to carbon monoxide pollution can exceed 90 percent.

The Environmental Protection Agency (EPA) standard for carbon monoxide is no greater than nine parts per million (ppm) for an 8-hour average concentration, and this value is not to be exceeded more than once per year. Thus, if the "Second Maximum" value is greater than 9 ppm, the region is said to be in violation.

It is worth noting that the monitor for carbon monoxide in the RMAP Region has been inactive since 2013, at which time a traffic collision rendered it inoperative. RMAP has made inquiries to the EPA regarding the status of this monitor, and whether it has remained inactive because of the extremely low levels of carbon monoxide in the region or if it has simply not been restored to use, but has yet to receive a response. RMAP will continue to investigate this matter.

As can be seen in the chart, since 2000 the Rockford monitor has shown values of 2.9 or below, less than a third of the standard, with values getting ever lower as time goes on. There is very little concern over the RMAP region losing its attainment status with regard to carbon monoxide, even if the EPA should choose to reduce the standard in the future. This does not mean that the Rockford Region or RMAP should become lax on tracking and eliminating carbon monoxide where possible, but it does show that the existing efforts have been successful in driving down levels of the potentially harmful pollutant.

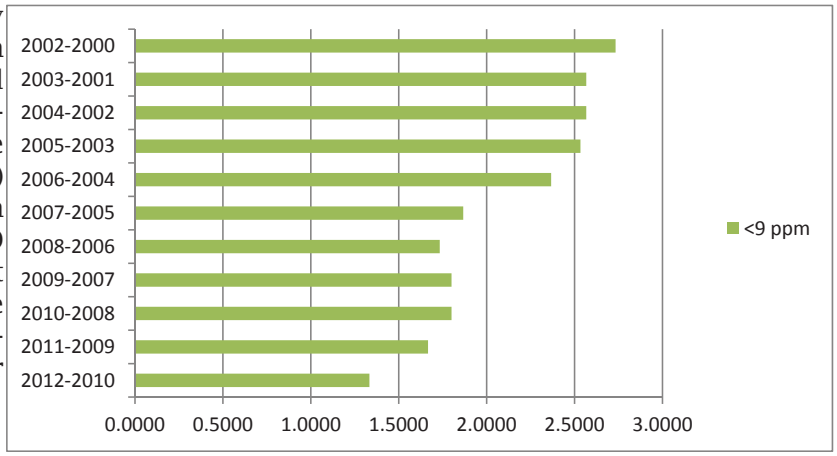
Related to this issue is the amount of congestion that is in the RMAP region. From a statistical relationship, there is a cause and effect impact by higher levels of congestion and higher measurements of carbon monoxide. On the other hand, if the street/highway network had low levels of congestion, then carbon monoxide levels would be low. Over the past several years, RMAP has undertaken some additional planning steps to monitor this situation. The first is the adoption of the Management & Operations Plan (M&O) for the MPO. Another is updating transportation modeling software programs which allows the MPO to better compare existing traffic data with current modeling data. Yet a third factor is improved average daily traffic (ADT), peak-hour traffic, vehicle classification and speed data from IDOT'S website and other counting programs that are being done in the MPA.

TABLE 5-5

CO Data for RMAP Region

	1st Max	2nd Max
2012	1.1	1.1
2011	1.5	1.5
2010	1.4	1.4
2009	2.2	2.1
2008	1.9	1.9
2007	1.4	1.4
2006	1.9	1.9
2005	2.4	2.3
2004	2.9	2.9
2003	2.7	2.4
2002	2.5	2.4
2001	2.9	2.9
2000	2.9	2.9
2013 Design Value=24.4 ppm		

TABLE 5-6



Particulate Matter

Particulate Matter is the term for a mixture of solid particles and liquid droplets found in the air. Some particles, such as dust, dirt, soot, or smoke, are large or dark enough to be seen with the naked eye. Others are so small that they can only be detected using an electron microscope.

These particles can be made up of hundreds of different chemicals. Some particles, known as primary particles are emitted directly from a source, such as construction sites, unpaved roads, agricultural fields (especially during harvest times), smokestacks or fires. Others form in complicated reactions in the atmosphere of chemicals such as sulfur dioxides and nitrogen oxides that are emitted from power plants, industries and automobiles. These particles, known as secondary particles, make up most of the fine particle pollution in the country.

There are two categories of Particulate Matter regulated by the Environmental Protection Agency (EPA), Particulate Matter smaller than 10 micrometers (PM10) and Particulate Matter smaller than 2.5 micrometers (PM2.5). In the Rockford Region, only PM2.5 is measured. The EPA standard for PM2.5 for a 24-hour average concentration is 35 micrograms per cubic meter of air. The 98th percentile of 24-hour values for a year may not exceed this level. Additionally, the annual average concentration may not rise above 15.0 micrograms per cubic meter of air. It bears mention that the standard for PM2.5 was strengthened in 2006 to its current level. The 2006 standard applies retrospectively to monitoring data for prior years.

The data indicates that the levels of PM2.5 in the Rockford region are at acceptable levels, and show continued progress towards lower and lower annual means as well as 98th percentile data. While this data is encouraging, it is in the best interests of the Rockford Region to continue enacting and developing procedures for PM2.5 mitigation and tracking.

TABLE 5-7

PM2.5 Data for RMAP Region

	1st Max	2nd Max	3rd Max	4th Max	98th %	Annual Mean
2013	23.6	19.8	18.9	17.7	19.8	9.30615
2012	44.2	30.6	23	18.8	23	9.25
2011	23.5	23.2	22.4	21.8	22.4	10.17387
2010	42	39.8	24.6	24.3	24.6	9.88774
2009	36.1	27.5	26.2	25.3	26.2	9.50727
2008	46.4	29.5	28.7	26.5	28.7	10.70917
2007	42.4	31.7	30.4	29.1	30.4	12.39806
2006	33.2	27.3	25.9	25.2	27.3	12.22281
2005	49.3	46.5	41.9	36.7	46.5	15.95862
2014 Design Value (98th %)=62.2						
2014 Design Value (Annual Mean)=26.4						

TABLE 5-8

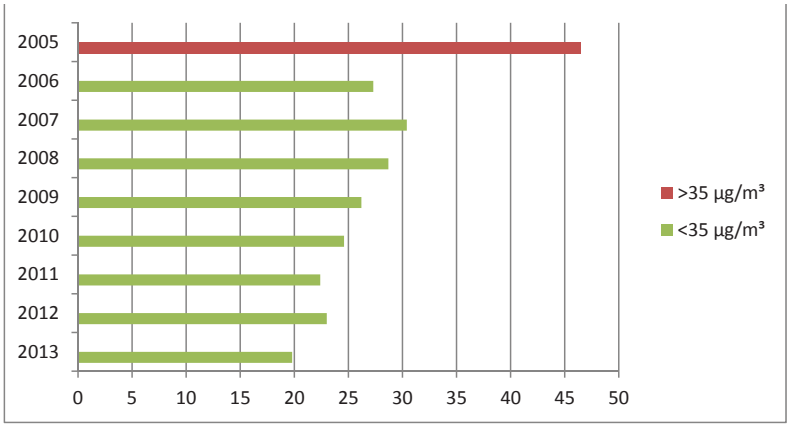
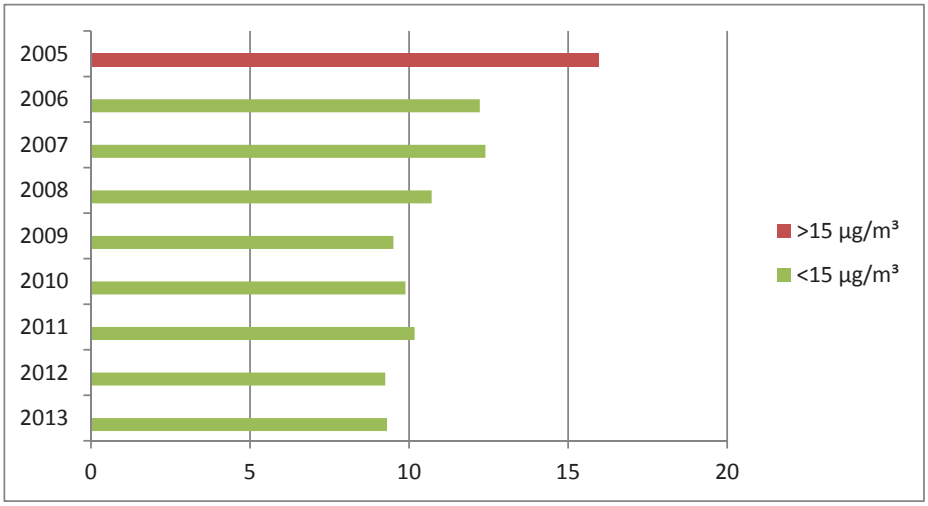


TABLE 5-9



Implications

The monitors' data discussed herein indicates that the existing efforts of RMAP and its partners to mitigate air pollution from the selected sources have been effective. Carbon monoxide, which is well below the maximums allowed by the EPA in the RMAP area, is known to be one of the most common air polluting side-effects of transportation sources; its historically low values and trends toward ever lower levels show the effectiveness of programs thus far undertaken. However, especially regarding ground-level ozone pollution, more steps must be continually taken.

Continuing to support and strengthen requirements for automobiles and factories to cut NO_2 and VOC emissions from vehicles, industrial facilities and electric utilities, as well as reformulation of fuels, commercial products and consumer products such as paints and chemical solvents can help drive the amount of ground-level ozone even further down. Close enforcement of restrictions on emissions from power plants and industries can aid in the reduction of fine particulate matter. Work on not only reformulation of existing fuels but on new cleaner burning fuels or alternative energy sources can bring down ozone, carbon monoxide, and particulate matter numbers. The same can be said for policies encouraging reduction in use of single-occupant vehicles, such as carpools, use of mass transit and alternative modes. The region has made great progress in reducing congestion and spurring shifts in mode of transportation used, but more should still be sought.

Even the habits of single-occupant vehicle owners can be improved through education in energy and fuel-conserving techniques. These range from removing unnecessary weight from vehicles to slowing down, to bundling errands such that vehicles' engines sit for less than an hour between trips. All of these tips and a number of others can save fuel, which reduces the amount of emissions produced by vehicles, thus further cutting the pollutants in the region.

In addition, land use planning can have an effect on pollution levels. Some highly aggressive strategies could include classifying uses based on amounts of these and other pollutants released by the uses, requiring special use permits for uses emitting over a certain amount of pollutants or charging impact fees on a scale dependent on amount of pollutants emitted. Such uses as truck stops, while potentially lucrative, are dangerously high in pollutants because of idling diesel burning engines.

Furthermore, by taking measures in land use plans to cluster uses and reduce sprawl, steps can be made towards cleaner air. The more dense an area's uses, the less travel time is required, taking vehicles off the road for longer periods of time, exponentially reducing the amount of emissions produced by such sources. Even less aggressive strategies, such as limiting the total number of certain types of highly polluting uses or rewarding the use of environmentally-friendly technologies and practices, such as link- ups at truck stop s to prevent idling, can start a community on a road towards healthier air qualities, and overall quality of life.

Other considerations that should factor into this discussion include pollutants that are not monitored in the region or those without national ambient air quality standards (NAAQS) that are of growing concern to the health of people in the region. These include lead, nitrogen dioxide, sulfur dioxide, carbon monoxide and a number of others. While the region is not yet in a position of concern with regard to these pollutants, a proactive approach should be maintained in order to ensure that there is never a reason to have concern over those or any other hazards to residents' health.

RMAP hired a consultant to measure current traffic flow data to measure and determine existing traffic conditions and levels of service. This is one of the objectives in the M&O Plan. Based upon the information from the data that has been collected at this time less than 1% of the arterial and interstate/expressway roadway classifications have a level-of-service of "D or lower". This information indicates that the levels of roadway pollution, particularly from idling vehicles on major thoroughfares, are a factor that is currently in an acceptable state. Roadway congestion and level-of-service are issues that RMAP has and will continue to monitor in the future.

SECTION 6
BIKEWAY/PEDESTRIAN

Most of the municipal land use plans in the Rockford Metropolitan Planning Area (MPA) have a transportation component that promotes the development of bicycle and pedestrian systems and encourages a healthy life-style. Providing for pedestrian and bicycle systems is an important part of the transportation plan. For young, old, low-income and disadvantaged persons, these systems may be their only means of transportation.

Bikeway System

The Region has supported and planned for the development of a bikeway system for many years. The oldest part of this system is the Rock River Recreation Path that was constructed by the Rockford Park District (RPD) in the mid 1970s. Bicycle system planning was initiated with the Regional Bikeway and Pedestrian Plan adopted by the Rockford Area Transportation Study (RATS) on June 27, 1984. The RPD, the Winnebago County Forest Preserve District, Rockford, Loves Park, Machesney Park, Cherry Valley, and Winnebago County also adopted this plan. An extensive bikeway system has also been developed in Boone County through the efforts of the Belvidere/Boone Planning Department and the Boone County Conservation District. Bikeway systems within the Rockford MPA include: Perryville Path, Willow Creek Trail, Mel Anderson Memorial Path, Bauer Bridge Bike Trail, Cherry Valley Path, and Stone Bridge Trail. There are also several bikeway systems that extend beyond the Rockford MPA; the Pecatonica Prairie Path, Hononegah Recreation Path and Long Prairie Trail.

Illinois has been instrumental in promoting the bikeway system in the Rockford MPA, most notably the Grand Illinois Trail. This trail is a 475-mile looped bikeway system that runs through the MPA, east to connect to Chicago's Lakefront Trail, turns southwest through Joliet and goes along the Illinois and Michigan Canal and the Hennepin Canal to the Quad Cities, north along the Mississippi River to Galena and then back to the MPA. Within the Rockford MPA, the Grand Illinois Trail is made up of several shared-use paths that include the Pecatonica Prairie Path, the Rock River Recreation Path, the Bauer Bridge Trail, the Willow Creek Trail, and the Long Prairie Trail. The Grand Illinois Trail has informally connected these paths with on-street routes.

In reviewing the bikeway system, attention is brought to the three-tier system as defined by the American Association of State Highway and Transportation Officials (AASHTO):

- Shared-Use Paths – These facilities are completely separated from motor vehicle traffic lanes. They are designed for the exclusive use of bicycles and pedestrians. These are separate from pedestrian sidewalks, on which bicycle use is discouraged.
- Bicycle Lanes – These are restricted rights-of-way, usually abutting and adjacent to other traffic lanes used by motorists, designated for the exclusive use of bicycles.
- Signed Bicycle Routes and Marked Shared Lanes – These are shared roadways designated only by signs and is some cases a pavement marking, used by both motorists and cyclists. They serve to provide continuity to other bicycle facilities or to indicate to bicyclists, as with bike lanes, that there are certain advantages to using these routes as compared to alternative routes.

On January 20, 2005, the Rockford Metropolitan Planning Organization (MPO) conducted a workshop to encourage public involvement in the bicycle system planning process. This group represented a cross section of bicycle stakeholders from throughout the Rockford MPA. The attendees were requested to review the existing plan, propose new bikeway facilities, or recommend changes to bikeway policy. Any thoughts or ideas in regard to the bikeway system were encouraged. After open discussion, the attendees were asked to rank the planned bikeway system along with new proposed facilities and policies that were discussed. In 2015, the status of these projects has been reviewed and is shown in Table 6-1 on the next page.

As it turns out, connectivity of the existing paths, especially in an east-west manner was highly ranked. In addition, the use of on-street lanes or routes as a method of connectivity was also highly ranked. On-street routes/lanes could provide an important and cost-effective means of connecting the existing bikeway system. However, this issue will need to be addressed by the Rockford MPO Technical and Policy Committees. The use of on-street bikeway facilities would be a major change in the bikeway system in the Rockford MPA.

TABLE 6-1

Results from January 20, 2005 Bicycle/Pedestrian Workshop							2015 Status
Rank	Project Description	Score	Connectivity	On-Street	New	Policy	
1	Connect Charles Street Path to Perryville Path	28	X	X	X		99%
2	Connect Rock Cut Trail to Long Prairie Trail	27	X				
3	Riverside Bike Bridge - Improve Grade Separation on westside	27					
4	Use-shared off-street paths or on-street routes to connect existing paths	27	X	X		X	On-Going
5	Connect Willow Creek Trail to Rock River Path through Machesney Park	25	X	X	X		On-Going
6	Connect Rock River Path to Page Park	22	X				
7	Mill Street/Perryville Connection to existing Kishwaukee River Trail	16	X				
8	Perryville Road/State Street - Increase signal crossing times or add an expanded median island on State Street as a refuge during long crossing.	16					Moved to Argus
9	Provide designated on-street bike route system	13		X		X	On-Going
10	Harrison Street Bike Lane from Mulford Rd to Kishwaukee St.	12		X			On-Going
11	Roads and intersections should be designed using the AASHTO Guide for the Development of Bicycle Facilities / USDOT / IDOT	11				X	On-Going
12	Connect north-south paths (Perryville Path and Rock River Path) with east-west paths	11	X	X			
13	Kishwaukee River Path East	10					
14	Connect downtown bike path on west side of Rock River to the Rock River Trail on the east side	10	X	X			
15	Connect Riverside Bike Bridge to Mel Anderson Trail	10	X	X	X		
16	Spring Brook Path/Mulford Road – add actuated signals at the intersection to permit pedestrians and bikes to cross Mulford Road.	10			X		
17	Connect Midway Village to Perryville Path by way of Guilford Road	10	X	X			
18	Provide regional bikeway system map	10				X	On-Going
19	Continuous Bike Path along both sides of the Rock River	9			X		On-Going

The current stand-alone RMAP Bicycle and Pedestrian Plan (2006) contains an area-wide analysis of bicycle and pedestrian facilities and appeared as an appendix in prior Long Range Transportation Plans, namely the 2035 and 2040 LRTPs. However, a comprehensive evaluation of the bikeway system policy and facilities is warranted. The RMAP Technical and Policy Committees should consider a policy with regard to encouraging on-street bike lanes and routes. If recommended, this would cause a major change in the bikeway system plan. In addition, prioritization of bikeway system improvements would have to be reconsidered with the policy change. Project prioritization should proceed after the issue with on-street bike lanes/routes is resolved. Prioritization of bikeway system improvements is not an easy task. There is not a technology tool similar to a transportation model that can be used to identify system needs. Elected officials should accomplish the prioritization process with input from the public, stakeholders and the RMAP Technical and Policy Committees.

Map 6-1 presents the Proposed Bicycle Facilities Master Plan adopted in the RMAP Bicycle and Pedestrian Plan, while the Boone and Winnebago Greenway Plan Map in Section 5 Environment contains more recent updates and revisions to the system. However, as stated above, RMAP will need to go through a formal process to consider the on-street policy for bicycle lanes and routes as well as the prioritization of projects. Additional bicycle improvement projects have been identified through the RMAP public participation process.

Pedestrian System

The Rockford MPA has an extensive pedestrian system. Most municipalities have required sidewalks to be constructed as part of the land subdivision process. However, some parts of the Rockford MPA were developed under regulations where sidewalks were not required or the municipalities waived the sidewalk requirements. One of the most notable examples of lack of sidewalks is the commercial area along East State Street in the City of Rockford. This area is automobile-oriented and does not allow for safe pedestrian movement. An adequate pedestrian system is especially important for access to bus stops, schools, medical facilities and senior citizen housing.

Providing access to the transit system is an important function of the pedestrian system. In 1992, the Rockford MPO undertook an inventory of the pedestrian system near (within three blocks) of the area's fixed-route bus stops. The inventory found inadequacies in the pedestrian system for disabled persons. These included areas with no sidewalks and sidewalks with deteriorated conditions or slopes that would inhibit wheelchair passage. Along most of the major streets in the older parts of the urbanized area curb cuts (wheelchair ramps) were not available at the intersections. Much has been done to correct these deficiencies. Unfortunately, there was not a quantification of the survey results so the remaining extent of deficiencies is unknown.

Attention to persons with sight disabilities is also of concern. Audible walk signals should be considered at signalized intersections in conjunction with the standard visual walk signals. Braille information can be added to most pedestrian signage, and Braille or audible information can be provided at bus terminals and information kiosks. The Rockford Mass Transit District (RMTD) has already put Braille information on bus stop signs and audible information on buses.

Transportation Alternatives Program

MAP-21 established a new funding category called the "Transportation Alternatives Program" (TAP). The Transportation Alternatives Program was authorized under Section 1122 of MAP-21 (23 U.S.C. 213(b), 101(a)(29)). This single funding source serves to enhance the transportation system and combines funding for Transportation Enhancements, Recreational Trails and Safe Routes to School, all of which were previously funded separately under SAFETEA-LU. Under SAFETY-LU, the Transportation Enhancements/Transportation Alternatives funding category was available by IDOT on a discretionary basis through a competitive selection process for projects within urbanized and non-urbanized areas. MAP-21 has since provided direct allocations to MPOs designated as Transportation Management Areas.

The goal of the Transportation Alternatives Program is to allocate resources to well-planned projects that provide and support alternate modes of transportation, enhance the transportation system through preservation of visual and cultural resources and improve the quality of life for members of the communities. TAP requires communities to coordinate efforts to develop and build safe, valuable and functional projects in a timely manner.

Under TAP, the Rockford Metropolitan Agency for Planning (RMAP) works jointly with IDOT, local governments, interest groups and citizens in enhancing the transportation system and building more livable communities. The Transportation Alternatives Program allows the opportunity for the public to become directly involved in transportation projects. Public participation is encouraged throughout the entire program planning, development and implementation process. Under 23 U.S.C. 213(c)(4)(B), the eligible entities to receive TAP funds are:

- local governments;
- regional transportation authorities;
- transit agencies;
- natural resource or public land agencies;
- school districts, local education agencies, or schools;
- tribal governments; and
- any other local or regional governmental entity with responsibility for oversight of transportation or recreational trails (other than a metropolitan planning organization or a State agency) that the State determines to be eligible, consistent with the goals of subsection (c) of section 213 of title 23.

Although State agencies and MPOs with responsibility for oversight of transportation or recreational trails cannot sponsor a project, they can partner with an eligible project sponsor. It should additionally be noted that nonprofits are not eligible to be a project sponsor but can partner with an eligible project sponsor. In order to be eligible for TAP funding, a project must demonstrate a relationship to surface transportation. The TAP projects must enhance the transportation system either by serving a transportation need or providing a transportation use or benefit.

RMAP TAP Funding

IDOT manages the Illinois Transportation Enhancement Program (ITEP) for small urban and non-urban areas throughout the State of Illinois. MAP-21 requires the State to have a competitive process to allow eligible entities to submit projects for funding; therefore the State may not suballocate the nonurban area funds by population to individual counties, cities, or other local government entities (23 U.S.C. 213(c)(4)(A)).

MAP-21 requires states to allocate TAP funds (STP-U funding source requirements) to urbanized areas with a population greater than 200,000. These areas are referred to as Transportation Management Areas (TMAs) and are represented by a Metropolitan Planning Organization. RMAP is the federally designated MPO for the Rockford Region.

As FY 2013 & FY 2014 were the first years in which a direct allocation was made available to the RMAP Region for local Transportation Alternatives Program project selection, certain requirements pertaining to the application process applied:

- Project sponsor were able to submit an application for TAP funding through IDOT's ITEP as well as an application for the same or a different project through the RMAP TAP program.
- Eligible project sponsors within the RMAP adjusted urbanized area are eligible for the IDOT ITEP funding; however, project sponsors cannot receive funding for the same project from both the IDOT ITEP and RMAP TAP.
- Project sponsors are required to report any TAP funds you have received from any source as soon as possible to RMAP. These funds must be programed into the RMAP TIP.
- TAP funds will provide reimbursement up to 80 percent for preliminary engineering, utility relocations, construction engineering and construction costs; and up to 50 percent for right-of-way and easement acquisition costs. The required 20 percent or 50 percent local match is the responsibility of the project sponsor.
- TAP is a reimbursable program, which requires an interagency/joint funding agreement that details the project scope of work and cost participation. It is not a grant program.

Funds available to the RMAP Region totaled $624,948 for the combined FY 2013 and FY 2014 apportionments. A competitive selection process was conducted amongst the eligible RMAP partner organizations for the funds and a formal application period was held from October 1st, 2013- January 31st, 2014. During that time frame projects submitted for the regionally allocated funding amount shown in Table 6-2.

An RMAP TAP Review Subcommittee was convened to discuss each respective applicant's project and to provide a recommendation to the RMAP Technical and RMAP Policy Committee for award of the regionally allocated TAP funds. During the local selection process, the City of Loves Park & Rockford Park District's project for the Willow Creek Path Extension received full funding requested through the IDOT ITEP program. While each project submitted for the RMAP TAP funds provided notable enhancement to the existing bicycle & pedestrian network only one project was able to receive funding due to the amount of available funding (total amount for projects applied for exceeded $1.7 million). The RMAP TAP Review Subcommittee consisted of the following organizations: Blackhawk Bicycle and Ski Club, Boone County Health Department, League of Illinois Bicyclists (LIB), Rockford Mass Transit District (RMTD), Rock River Water Reclamation District, Rockford Road Runners, and the Winnebago County Health Department.

Factoring connectivity and consistency with the local planning documents and existing bicycle/pedestrian network, addressing documented safety concerns, support of active transportation and incorporation of complete streets, it was recommended by the RMAP TAP Review Subcommittee that the Village of Machesney Park's Alpine Road Shared-Use Path Project receive funding. This will allow the Village of Machesney Park to construct a shared-use path along North Alpine Road between Juniper Lane and Story Book Lane, thereby connecting the nearby Willow Creek path and the Roosevelt Road Path. This project also provides safety improvements directly to the Harlem High School campus, the Harlem Community Center and adjacent neighborhoods.

It is important to note that through discussions with the City of Rockford it is their intention to construct the proposed Downtown Sports Complex Riverwalk as part of the overall facility development. With this in mind, all three projects that were submitted to RMAP for potential funding consideration have been programmed to be constructed through a variety of funding sources, utilizing Transportation Alternatives and other non-transportation alternatives funding.

Should there be additional Transportation Alternatives Program funding available to the RMAP Region via MAP-21 or future federal transportation law, it is encouraged that interested applicants keep the following considerations in mind throughout the development of prospective projects:

- Consistency with regional Bike/Pedestrian Plan, LRTP and Greenways Plan
- Enhances connections to local or regional transportation systems, including public transit
- Connects existing facilities (on-street, shared use) or missing links
- Mitigates or eliminates physical barriers and supports active transportation
- Addresses a documented safety concern or site specific crash problem

TABLE 6-2

AGENCY	PROJECT TITLE
City of Rockford & Rockford Park District	Downtown Sports Complex Riverwalk
Village of Machesney Park	Alpine Road Shared-Use Path ***(Project Selected)***
City of Loves Park & Rockford Park District	Willow Creek Path Extension

These considerations aim to encourage projects that not only enhance the existing bicycle and pedestrian network, but to also ensure that connections are being made to existing links furthering network completeness while additionally providing a safe alternative method to travel throughout the region utilizing non-motorized forms of transportation.

Additional considerations and project scoring criteria can be found on the RMAP website.

Illinois Transportation Enhancement Program

The Illinois Transportation Enhancement Program (ITEP) provides funding for community based projects that expand travel choices and enhance the transportation experience by improving the cultural, historic, aesthetic and environmental aspects of transportation infrastructure. ITEP is designed to promote and develop alternative transportation options, including bike and pedestrian travel, along with streetscape beautification. The federal funds are awarded competitively, and any local or state government with taxing authority is eligible to apply. Local matching funds are required, and work must begin on the projects within three years.

With the passage of the Moving Ahead for Progress in the 21st Century (MAP-21) bill, several changes were required to be made to ITEP. The Transportation Alternatives Program (TAP) authorized under Section 1122 of MAP-21 (23 U.S.C. 213(b), 101(a)(29)) provides funding for programs and projects defined as transportation alternatives. ITEP now falls under the TAP category. More regarding the TAP program, and specifics to the RMAP process used regarding the local allocation of TAP monies, is described above.
Using the Federal Transportation Alternatives Program (TAP) guidelines as defined under MAP-21, the Illinois Department of Transportation (IDOT) accepted project applications for ITEP funding in the following categories/sub-categories:

1. Provision of on-road and off-road facilities for pedestrians, bicycles and other non-motorized forms of transportation.

2. Landscaping and other scenic beautification as a part of the construction of a Federal-Aid highway project under (23 USC § 319 (a)) or in conjunction with a TAP funded project (see Appendix 9 for more information).Note: Landscape/streetscape projects are no longer eligible as a stand-alone project.

3. Conversion and use of abandoned railroad corridors for trails for pedestrians, bicyclists, or other non-motorized transportation users.

4. Community improvement activities including: A) Address storm water management, control, and water pollution prevention or abatement related to highway construction or due to highway runoff, including activities described in sections 133(b)(11), 328(a) and 329 of Title 23; or B) Reduce vehicle-caused wildlife mortality or to restore and maintain connectivity among terrestrial or aquatic habitats.

5. Construction of turnouts, overlooks, and viewing areas.

6. Planning, design, or constructing boulevards and other roadways largely in the right-of-way of former Interstate system routes or other divided highways. This is a new category under MAP-21 and little guidance has been provided regarding restrictions for this category. Until additional federal guidance is available, IDOT will not use this category in ITEP.

With any local or state government within Illinois eligible to apply, IDOT turned to RMAP to provide a preliminary review of the project submittals from agencies within RMAP's planning area prior to the eventual award of funds. RMAP planners met and discussed the following projects, listed in Table 6-3.

The Rockford Park District, City of Loves Park, and Woodward Inc. partnered to develop an extension of the existing Willow Creek Trail as part of the master development plan for the new Woodward Rock Cut Campus currently under construction. Rockford Park District sought ITEP funds to assist Rockford Park District with the construction of a pedestrian path bridge connecting the existing path to a new shared-use path and trailhead in collaboration with the City of Loves Park and Woodward. The City of Loves Park sought ITEP funds to compliment the Rockford Park District application. Plans are to construct a trailhead and pedestrian paths on land donated by Woodward to provide connection to the existing shared-use Willow Creek Trail. These two projects were awarded by ITEP the full levels requested: $261,990 and $240,130 respectively.

TABLE 6-3

Agency	Project Title	Funding Requested
Rockford Park District	Willow Creek Trail Extension	$261,990
City of Loves Park	Willow Creek Extension	$240,130
City of Rockford	Rails to Trails over the Rock	$740,000
Winnebago County	Perryville Bike Path Extension	$1,747,300

The City of Rockford project develops a "Rails-to-Trails" shared-use path across a former railroad bridge spanning the Rock River. The improvement connects an existing shared-use path located in Davis Festival Park (W. side of river) to a new path being developed as part of the Morgan Street Bridge (E. side of river). This project encourages and promotes alternative forms of transportation that connects high concentrated employment centers with surrounding neighborhoods. This project was awarded by ITEP the full level requested: $740,000.

The Winnebago County project would complete an existing bike path route along Perryville Road which currently begins at Argus Drive, in southeast Rockford, and currently terminates at Hart Road; this link is approximately 6.6 miles long. The proposed project would add another 4.0 miles to the current path and provide a major north/south route connecting the Village of Roscoe, the Village of Machesney Park, the City of Loves Park and the southeast corner of the City of Rockford. This project did not receive ITEP funding during the 2014 cycle.

In all, the ITEP projects that were reviewed by RMAP secured a total of $1,026,120. Two other projects in Winnebago County that IDOT did not request RMAP to review were also awarded funds by the ITEP program. They are listed in Table 6-4.

The Sumner Park District project will provide trailhead access by means of an ADA compliant bike path for the general public wishing to access the Pecatonica Prairie Path. This project was awarded $213,500 by ITEP.

The Village of Rockton project in the SLATS Planning Area is a 10-foot path along E. Rockton Road connecting two existing paths (Dorr Road and Stone Bridge Trail) to a developing commercial area (Wal-Mart, Farm & Fleet, AutoZone, clinic and various restaurants with others in the planning phase). Currently pedestrians and bicycles have to use gravel shoulders along a 2-lane, 45 MPH road to access this area. This project will provide safer access for pedestrians to the commercial area and the existing paths. This project was awarded $240,130 by ITEP.

In total, projects in Winnebago County secured a total of $1,479,750 from the ITEP program in 2014. For more information regarding the ITEP program, projects that have received awards in the past, details on future submissions, please visit www.idot.illinois.gov.

TABLE 6-4

Agency	Project Title	Funding Awarded
Sumner Park District	Pecatonica Creekside Park Facility	$213,500
Village of Rockton	E. Rockton Rd. Pedestrian/Bike Facility	$240,130

Illinois Statewide Bicycle Plan

In April 2012, the Illinois Department of Transportation (IDOT) launched the state's first multi-modal transportation improvement program: Transforming Transportation for Tomorrow. The multi- year initiative created an integrated model of planning and programming that would allow Illinois to develop a modern transportation system that works for all users. It also advanced a 21st century vision that all modes be integrated, coordinated, planned and built with the idea that present and future travel options are user focused, economically supportive, ecologically sensitive, and information centric. This vision was embedded in the IDOT 2012 Long Range Transportation Plan, a document that created the State's pathway to a multi- modal future. In 2014, the Illinois Department of Transportation released its Illinois Bicycle Transportation Plan.

The outreach process demonstrated IDOT's commitment to stakeholder input and collaboration. Input was gathered from various stakeholder groups throughout the State. They included the following groups: IDOT Steering Committee Members, Targeted IDOT Division Stakeholders, The Federal Highway Administration, IDOT District Office Representatives, Advisory Group Representatives, Metropolitan Planning Organizations, City and County Transportation Professionals, Other Targeted Stakeholders, and the General Public.

Numerous opportunities to provide input occurred through a range of venues. More than 4,000 members of the general public contributed to the Plan's recommendations. IDOT received input from across the state and from diverse system users. In-person participation consisted of open public meetings and interviews. Eighteen meetings were held in nine locations throughout the State. Afternoon meetings were attended by the region's transportation professionals and evening meetings were for the general public. In addition, an online meeting was conducted to offer opportunities for those unable to attend the in-person meetings. A newly created project website served as a general information hub and repository where users could access a calendar of events, background information and regular updates. An online seminar was hosted through this website. Across Illinois, 3,500 individuals joined an email distribution list to receive updates throughout the process, and approximately 4,000 people completed online surveys. The data from this effort was used to generate heat maps and other visualizations that showed desired connections and identified barriers

Many respondents indicated the following: Local bikeway networks are limited and/or somewhat inter-connected, Traffic safety is the biggest barrier to bicycling, Infrastructure improvements including separated and visible bicycle facilities such as protected bike lanes, bike lanes, paved shoulders and green pavement would improve bicycling conditions, Wayfinding signage would help bicycling conditions.

The full plan, available at www.IllinoisBikePlan.com, is divided into three sections that cover the following topics:

- Section 1 provides a snapshot of existing policies, regulations and design guidelines in Illinois, and presents examples from other states. The intent is to identify strengths and areas of possible improvement to support the development of this Plan.
- Section 2 explains how the Plan fits into the Department's long-range vision of Transforming Transportation for Tomorrow and into the Goals of the Statewide Long Range Transportation Plan.
- Section 3 presents the Plan's action items and performance measurements. This section also presents the statewide bikeways inventory information and planning-level recommendations on future corridors. There are technical documents that support the recommendations and provide additional detail to support Department staff and other State stakeholders in implementation, available online.

The implementation of the plan's performance measures will rely on consistent coordination and collaboration with stakeholders. One arena of coordination is the integration of the plan into multimodal planning initiatives as well as long range planning that is performed by Metropolitan Planning Organizations and the rural development organizations. The plan makes a number of recommendations for change originating both from within IDOT and statewide stakeholders. The action plan identifies the appropriate next steps to ensure that IDOTs bike planning efforts remain responsive, flexible and viable in the future.

Walkability

Walkability is the cornerstone and key to an urban area's efficient ground transportation. Every single trip that we take must begin and end with walking some distance even if very small. Walking remains the cheapest form of transportation for all people world-wide; and a walkable community provides the most affordable and socially equitable transportation system that any community can plan, design, build and maintain. Walkable communities are more livable built environments and lead to whole, happy, healthy lives for the people who live in them while also attracting and keeping jobs in the area.

Walkability studies have shown more walkable neighborhoods are traditionally better-off economically, have lower crime rates, and have lower transit costs. Yet they also traditionally have higher housing costs indicating demand. The higher quality of life afforded within a functioning walkable neighborhood means non-drivers (seniors, youth, and those without a car) can get around and be more socially active. These places, referred to as "third places", often serve as hotspots for connecting residents with one another. The most walkable neighborhoods in the community, those that make commercial and residential areas easily accessible to one another, are those experiencing decline. Many of these neighborhoods have the highest levels of poverty. These neighborhoods have historical infrastructure amenable to walking and have high concentrations of people most needing community resources.

Walk Score is a national index that was developed to help assess how walkable a place is to live or work in. Measuring walkability for a region has become increasingly important as not everyone has access or desires to have a car. Many prefer a quality of life without one. In addition, walking is a critical component of health and we are seeing the average daily amount people walk decline at a substantial rate across the nation. The national Walk Score is a number between 0 and 100 and measures the walkability of any address. However, because very few communities have a digital map of sidewalks or parcels, this national index can be flawed at times. As a result, RMAP partnered with WinGIS to develop a more accurate Walk Score for the region. The goal of this walkability analysis was to come up with a way to score the Vital Signs "Districts" within Winnebago and Boone counties on how easy or difficult it is to walk to destinations.

There were nine destinations taken into consideration: grocery stores, restaurants, general retail, coffee shops, banks, parks, schools, book stores, and entertainment. Step 1 was to calculate the distance between each parcel and each of these destinations. Steps 2 through 4 included an analysis of the amount of sidewalk within each district, number of major road intersections per district, and finally average size of the commercials parcels within a district. The availability of sidewalks affected the final score more than any other measured factor because for walking purposes it is the most critical. Districts were given a penalty depending on the number of pedestrian non-friendly intersections that were present in the area.

The last factor was the size of the commercial parcels within the district. The size of the parcel could discourage walking if it where such a large obstacle that walking around it or traversing it were the only option and added substantial time to your trip. Many commercial properties can also pose a health risk to those pedestrians in the area.

As seen in Map 6-A there is a high concentration of walkable neighborhoods in south central and north central Rockford. Several other districts in Belvidere, Loves Park and eastern Rockford also scored fairly highly.

Healthy Communities

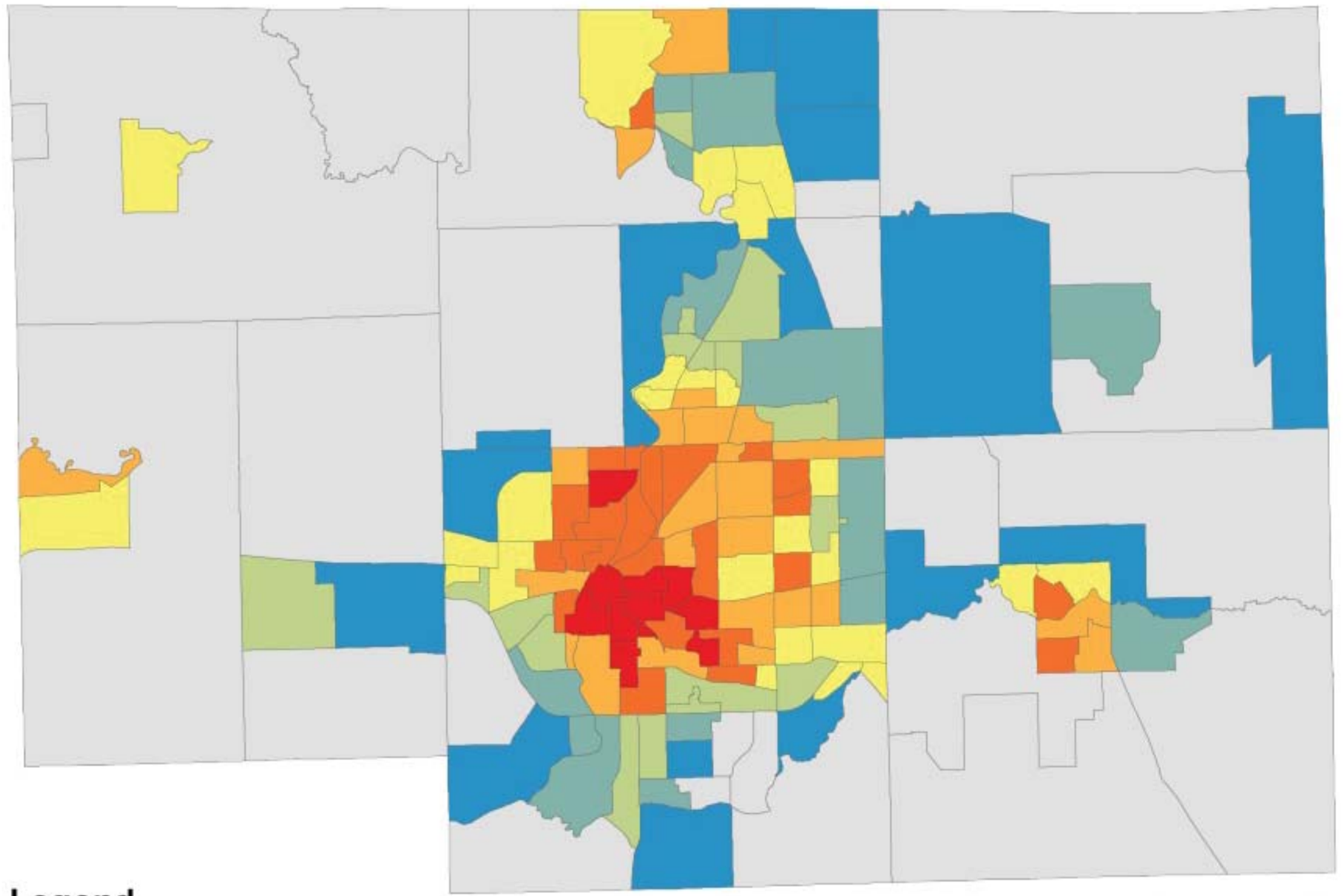
Public health experts are promoting active transportation as a means of responding to issues regarding health. Recognizing the dangers of the obesity epidemic spreading across the nation, public health experts have responded by promoting healthier lifestyles including walking and bicycling programs. Experts have shown that as little as a half hour of moderate activity like walking and biking can promote long term health, yet only one quarter of the United States population achieves this initiative. Walking and bicycling can be viable transportation alternatives for short-distance trips. Community fitness as a whole can be improved with the inclusion of pedestrian and bicycle networks within villages and cities.

The availability of bicycle and pedestrian amenities also provides users benefits such as an opportunity to closer connect with nature, relaxation, enjoyment, and a boost in civic and community pride which can improve mental health as well.

Walking and bicycling not only help individual and community health, but the activities also help to reduce environmental deficiencies, including air and water pollution. Motorized vehicles emit particulates into the air that are linked to increases of asthma and other respiratory illnesses within communities. By reducing the total amount of vehicle travel, pedestrian and bicycle facilities can help to reduce particulate matter released from motorized vehicles. According to the 2010 United States Census, fewer than 2% of individuals within Winnebago and Boone counties commute to work on foot and/or bicycle.

MAP 6-A

RMAP WALK SCORE FOR REGION



Legend

Final Score (Out of 100)

0-10 | 11-20 | 21-30 | 31-40 | 41-50 | 51-60 | 61-70 | 71-83

Source: WINGIS, RMAP, NETS Database
Date: 2013

As part of the 2011 update to the Regional Greenways Plan, RMAP convened a GREEN Strategy Action Plan Workshop for health, education, and transportation professionals in the region in order to synthesize the various initiatives underway to promote community health through greater access to public green space, health facilities, and increased mobility for individuals that encourage bicycling and walking, as well access to public transit, as a healthy transportation alternative. The objectives of the workshop were to:

- Create a synergy between healthcare, education, and planning efforts in the region
- Raise awareness about how the healthcare and education communities can benefit from supporting regional greenway, environmental and sustainability planning
- Showcase how healthcare and educational institutions can support and promote active and healthy living by participating in the regional and neighborhood planning processes.

At the conclusion of the Workshop, participants ranked a series of strategic action strategies which were incorporated into the Greenways Planning Process as well as the 2011 Healthy Community Study completed by the Rockford Health Council.

In 2012 a "We Choose Health" grant was awarded to a partnership of organizations in Boone and Winnebago Counties to support public health efforts to reduce chronic diseases, promote healthier lifestyles, and reduce health disparities. RMAP provided technical assistance in identifying strategies to boost active transportation in the community. Outcomes of the program included the installation of bike racks in areas of high need and the implementation of several Walking School Bus routes to help children from high poverty schools get to school safer.

Ultimately, providing a complete and balanced transportation system improves and enhances transportation choices, providing key health benefits and improving the quality of life in the Rockford region.

Bikeway/Pedestrian Recommendations

RMAP has a long history of working to improve the pedestrian and bikeway system in the MPA. The following policies have been encouraged by the MPO over the years:

- All new developments of half-acre per lot densities or greater to have a pedestrian system, preferably sidewalks on both sides of the street.
- Programs to add and repair sidewalks.
- Sidewalk and street connections that meet the Americans with Disabilities Act standards.
- Corridor studies that promote pedestrian sidewalks and bicycle paths.
- The overall development and implementation of the Regional Bikeway and Pedestrian Plan.

The roadway section of this LRTP outlines a Complete Streets approach which promotes the inclusion of bike and pedestrian facilities to accommodate all users of the transportation network. The adoption of a Complete Streets approach is crucial to realizing the above policies.

The positive results of past planning efforts and policies are evident throughout the MPA. However, it has been more than 20 years since the original Regional Bikeway and Pedestrian Plan was adopted. A comprehensive update to the pedestrian/bicycle system plan is in order. A thorough and comprehensive evaluation of the current status of the Region, the necessary plans for the future, and the policies and actions needed to attain those plans would be a useful process for the communities in the MPA to undertake.

There has been a high level of interest from the bicycle community to connect the bicycle system through the use of on-street means. This would require a shift in policy that is not within the bounds of this LRTP. Should this policy be found acceptable, it would take some additional planning and engineering effort to determine how to best implement it. Additional workshops would be useful in prioritizing bicycle and pedestrian system improvements. This stakeholder involvement process can provide an excellent forum for feedback on the bikeway system. The comprehensive update should also address the pedestrian system within the Rockford MPA. This process should include elements within the public workshops that focus on the pedestrian system.

As part of the continuous transportation planning process, RMAP is tentatively scheduled to update the 2008 MPO Bicycle–Pedestrian Plan in Fiscal Year 2016. Since that time, numerous bikeways have been completed in the region and new national planning and engineering standards have been issued that provide for a safer and bicycle-friendly environment for both motorists and cyclists.

SECTION 7
TRANSIT

Rockford Mass Transit District

The Rockford Mass Transit District is dedicated to providing safe, efficient, affordable, dependable and accessible transportation to the resident of Rockford and the surrounding area. For over four decades, RMTD has provided federally-subsidized, coordinated, fixed-route transit services for the Rockford Urbanized Area. The bulk of this service area is comprised within the City of Rockford, as well as service to the City of Loves Park and Village of Machesney Park in Winnebago County, and more recently to the City of Belvidere in Boone County. RMTD also provides origin-to-destination paratransit service for persons with disabilities such that their disability limits their ability to ride the fixed route.

The RMTD fixed route service area encompasses roughly 155 square miles, with a potential service population of just over 260,000 people as based upon the 2010 Decennial Census. Given the long distances to bus routes in the more remote parts of the service area, the actual service population effectively served by fixed-route buses is considerable smaller.

RMTD operates buses on 17 fixed routes on normal weekdays and Saturdays. Most of these routes have one hour headways between buses with a few having 45-minute or half-hour headways. The service begins between 5:00 and 6:00 am and extends to roughly 11:00 pm. Map 7-A on the next page shows this service.

Night and Sunday fixed routes are abbreviated versions of the weekday routes with buses running on one-hour headways. Night and Sunday fixed route service is not provided to Loves Park or Machesney Park, however paratransit service is extended until 10:00 pm in Loves Park and Machesney Park. Map 7-B shows this service.

RMTD currently maintains a fleet of 41 full-sized fixed route buses and 33 demand response vehicles. At peak hours, approximately 29 fixed route buses and 19 demand response vehicles are in service. RMTD also operates a “trolley-bus” during the summer months. All RMTD vehicles are accessible to persons with disabilities.

A three-person board appointed by Rockford oversees RMTD. The board is empowered through a charter under the laws of the State of Illinois. RMTD is funded through a combination of federal, State and local subsidies or contractual payments as explained in Section 3, Public Funding.

The RMTD annual ridership for the past ten years is shown in Table 7-1. RMTD conducted a route and schedule analysis between 2012-2013 which examined the current route structure and its effectiveness to move and connect riders with employment centers and regionally significant services. As a result of this analysis, RMTD implemented changes within its fixed route system on December 9th, 2013. As a result, a fluctuation in ridership occurred as riders became acclimated to the route changes. The RMTD Route System maps located within this LRTP reflects the most current routes. The RMTD fare structure is represented in Table 7-2.

Demand response service has steadily increased since the original development of the RMAP 2040 LRTP. Reportedly, some of the non-profit service providers have been providing less service and encouraging people to use the RMTD demand response service. RMTD will address this increase with newer and larger demand response vehicles. Potential funding sources for vehicle procurement include, but are not limited to, FTA 5307, FTA 5310 & FTA 5339.

The numbers in Table 7-1 do not include the demand response service provided in the urbanized area of Boone County which includes the City of Belvidere. Boone County has an Intergovernmental Agreement (IGA) with RMTD to provide the service. This service was bid out by RMTD.

It should also be noted that RMAP has an Intergovernmental Agreement with the Stateline Mass Transit District (SMTD) and Stateline Area Transportation Study (SLATS) regarding service in the Rockton, Roscoe and South Beloit area. Ridership numbers for this service is included in the RMTD totals in Table 7-1.

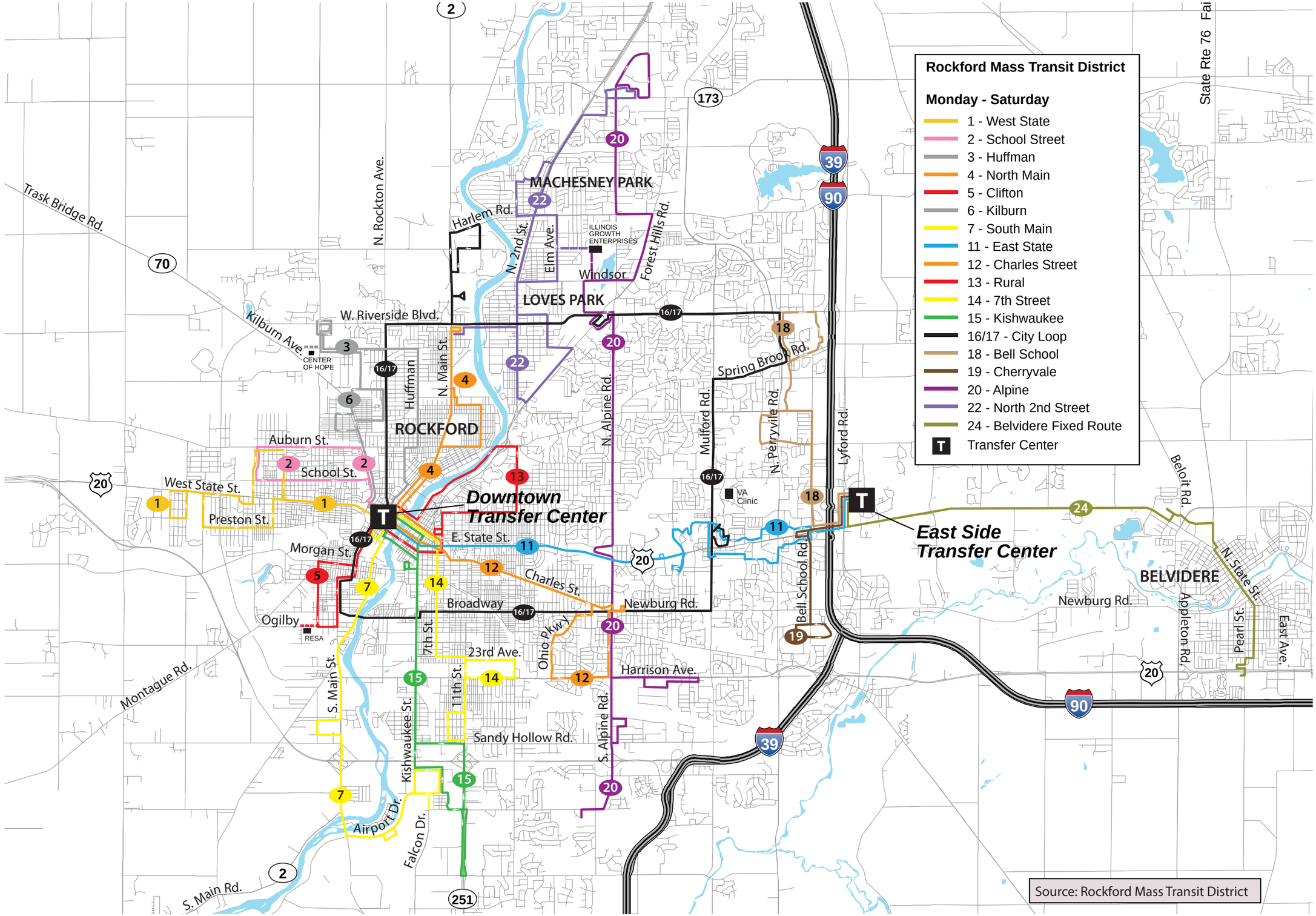
Currently, regional population growth does not seem to have a significant impact on RMTD bus ridership. This can be attributed to new growth occurring on

TABLE 7-1

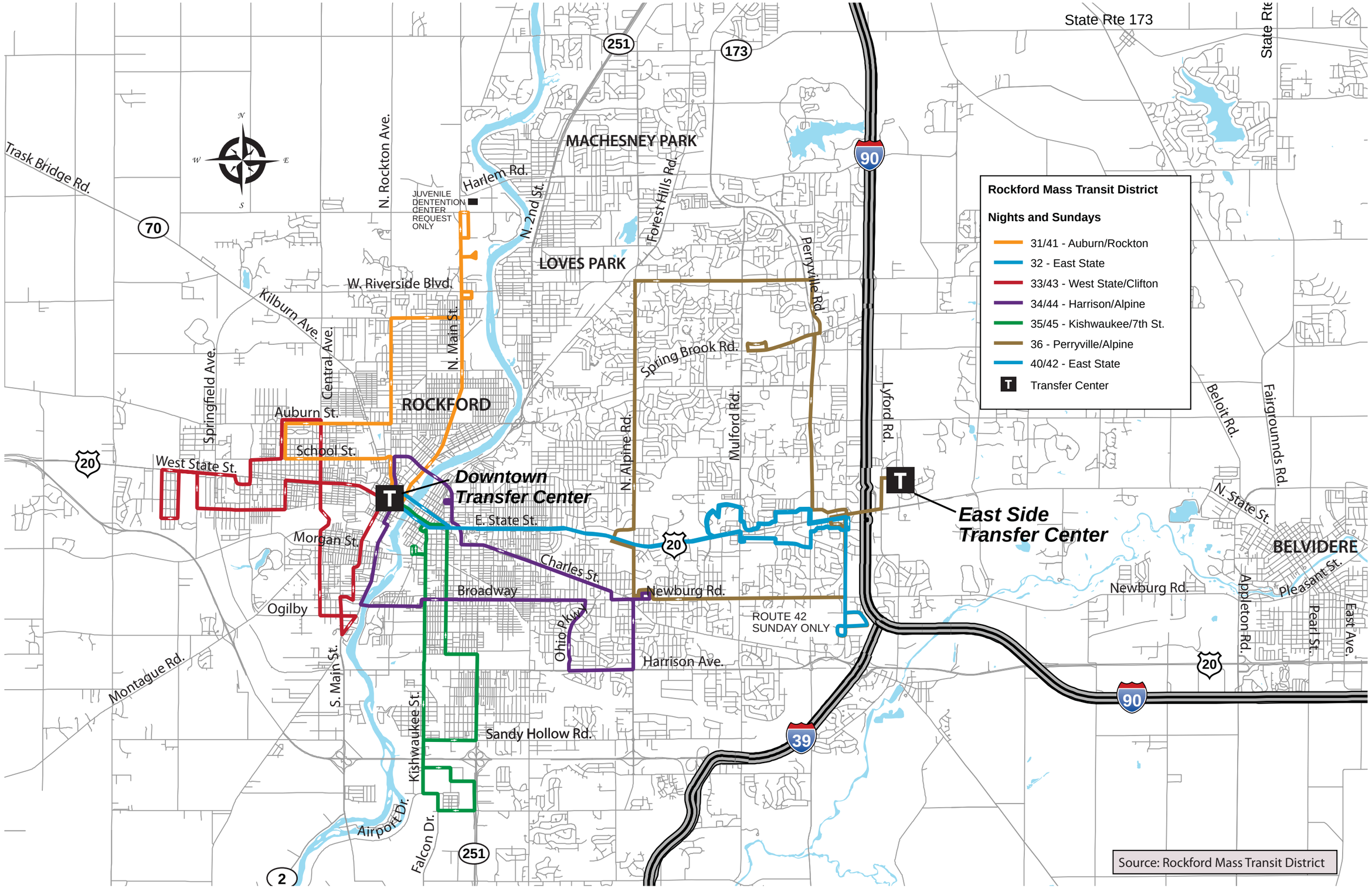
Rockford Mass Transit District Ridership

Year	Fixed Route	Demand Response
2004	1,296,876	100,331
2005	1,269,156	94,833
2006	1,396,425	77,478
2007	1,498,190	76,670
2008	1,654,386	91,508
2009	1,748,003	98,031
2010	1,522,714	78,119
2011	1,651,190	76,408
2012	1,777,969	89,487
2013	1,812,105	90,795
2014	1,783,978	97,485

MAP 7-A


Rockford Mass Transit District
Monday - Saturday
1 - West State
2 - School Street
3 - Huffman
4 - North Main
5 - Clifton
6 - Kilburn
7 - South Main
11 - East State
12 - Charles Street
13 - Rural
14 - 7th Street
15 - Kishwaukee
16/17 - City Loop
18 - Bell School
19 - Cherryvale
20 - Alpine
22 - North 2nd Street
24 - Belvidere Fixed Route
T Transfer Center
Downtown Transfer Center
East Side Transfer Center
ROCKFORD
MACHESNEY PARK
LOVES PARK
BELVIDERE
Windsor
Harlem Rd.
Trask Bridge Rd.
N. Rockton Ave.
N. 2nd St.
Elm Ave.
Forest Hills Rd.
ILLINOIS GROWTH ENTERPRISES
W. Riverside Blvd.
Kilburn Ave.
CENTER OF HOPE
Huffman
N. Main St.
N. Alpine Rd.
Spring Brook Rd.
Mulford Rd.
N. Perryville Rd.
Lyford Rd.
Auburn St.
School St.
West State St.
Preston St.
E. State St.
Morgan St.
Charles St.
Broadway
Newburg Rd.
Ogilby
RESA
7th St.
23rd Ave.
11th St.
Ohio Pkwy
Harrison Ave.
Sandy Hollow Rd.
S. Alpine Rd.
Bell School Rd.
VA Clinic
Beloit Rd.
N. State St.
Appleton Rd.
Pearl St.
East Ave.
State Rte 76
Montague Rd.
S. Main St.
Kishwaukee St.
Airport Dr.
Falcon Dr.
S. Main Rd.
Source: Rockford Mass Transit District

MAP 7-B


Rockford Mass Transit District
Nights and Sundays
31/41 - Auburn/Rockton
32 - East State
33/43 - West State/Clifton
34/44 - Harrison/Alpine
35/45 - Kishwaukee/7th St.
36 - Perryville/Alpine
40/42 - East State
Transfer Center
Downtown Transfer Center
East Side Transfer Center
ROUTE 42 SUNDAY ONLY
JUVENILE DENTENTION CENTER REQUEST ONLY
ROCKFORD
MACHESNEY PARK
LOVES PARK
BELVIDERE
State Rte 173
Trask Bridge Rd.
Kilburn Ave.
N. Rockton Ave.
Harlem Rd.
N. 2nd St.
Forest Hills Rd.
Perryville Rd.
W. Riverside Blvd.
N. Main St.
Central Ave.
Springfield Ave.
Auburn St.
School St.
West State St.
Morgan St.
Ogilby
Montague Rd.
S. Main St.
Kishwaukee St.
Sandy Hollow Rd.
Airport Dr.
Falcon Dr.
Spring Brook Rd.
N. Alpine Rd.
Mulford Rd.
Lyford Rd.
Charles St.
Broadway
Ohio Pkwy
Harrison Ave.
Newburg Rd.
E. State St.
N. State St.
Beloit Rd.
Fairgrounds Rd.
Appleton Rd.
Pleasant St.
Pearl St.
East Ave.
70
251
173
90
20
39
2
Source: Rockford Mass Transit District

the urban edge outside of the service routes of the RMTD. It is expected that the RMTD ridership levels will maintain the present levels with minor fluctuations in the near term future.

Elsewhere in this LRTP there is discussion encouraging growth in the urban core areas (i.e. Downtown Rockford, Downtown Belvidere, etc.). Promotion and implementation of infill, mixed-use and Transit Oriented Development (TOD) within the urban cores could cause RMTD ridership to increase overtime due to situating housing and employment in relative proximity to one another. While the full effects of this shift in development philosophy may take some time to be fully realized within the urbanized built environment, there has been growing support behind public transportation as an essential mode of transportation and its linkages to land development within urbanized cores. When the LRTP is updated in five years, that update can be used to determine if the aforementioned redevelopment practices are beginning to transform urban cores within the RMAP planning area. In the interim, it must be the goal of local RMAP partner organizations to encourage development that capitalizes on close proximity to fixed transit routes so as to fully utilize this transportation asset.

The bus service provided by the RMTD is an important means of transportation for minorities and low-income individuals. Maps 2-C through 2-E and Maps 7-C through 7-E illustrate the location of the RMTD routes in relation to minority population, individuals with low-income and households without vehicles. The maps show that these populations are well served by the RMTD bus routes.

All fixed-route buses used by RMTD are wheelchair accessible as required by the Americans with Disabilities Act (ADA) of 1990. Efforts to aid persons with disabilities (and the general public) in how to read transit schedules and use of the transit system are conducted on a regular basis.

Origin-Destination (paratransit/demand response) service is provided in accordance with ADA of 1990 guidelines in the RMTD service area. To note, RMTD origin-destination service surpasses the ¾-mile corridor requirement from the fixed route system. This service is provided for pre-certified persons with disabilities that limit their ability to use the fixed route service and who meet criteria established by the U.S. Department of Transportation under the ADA. Service is provided daily in Rockford and six days a week in Loves Park and Machesney Park. Hours of operation for origin-destination paratransit service are the same as those of fixed route service. Hours of operation are listed in Table 7-3.

Peak times of the day for origin-destination paratransit service generally occur at 7:00am as well as 2:00pm. This is a result of regular origin-destination service and subscription service that is provided to group centers. Ridership service for origin-destination service can be categorized into three different groups. Demand service is defined as service that is used within service hours, any day for various tasks that are needed (doctor's visits, trips to the grocery store, etc.). Subscription service is defined as service that provides the same trip to the same place at the same time (i.e. Barbara Olson Center of Hope, Dialysis Services, etc). Seasonal ridership is limited to the period of November 1 through April 1. This service is provided to individuals who have limited mobility in the winter months as well as for those who are temperature sensitive (latter condition must be verified by a health care professional). Also, the fare charged for RMTD paratransit service is $3.00 per ride.

RMTD monitors the demand response needs and services provided in the metropolitan area, both public and private. RMTD has the responsibility of improving coordination among demand response service providers, identifying unmet needs and maintaining and improving demand response service in the MPA. Private agency providers of demand response service that have also been recipients of Federal & State funds include Lifescape Community Services, Barbara Olson Center of Hope, Rock River Training Corporation, Booker Washington Community Center and Wesley Willows.

RMTD is also the Regional Maintenance Center for publicly funded origin-destination paratransit vehicles operating throughout the North Central Illinois Area. The Rockford Mass Transit District also serves as a voting member of the RMAP Mobility Subcommittee, RMAP Technical Committee and RMAP Policy Committee.

TABLE 7-2

FARE CATEGORY	
CASH FARE	
Adult Single Ride	$1.50
Student*	$0.75
Children under 5	FREE
Disabled	$0.75
Disabled enrolled in the Benefit Access Program	FREE
Seniors over 65	FREE
Transfers	FREE
Zone Fare to Cherry Valley	$0.25
TICKET FARES	
Adult 10 Ride	$15.00
Student	$7.50
Disabled	$7.50
Full Fare Single Ride	$1.50
Half Fare Single Ride	$0.75
PASSES	
30 Day Unlimited Ride	$55.00
7 Day Unlimited Ride	$16.00

TABLE 7-3

RMTD Demand Response Hours of Operation

Day of the Week	Hours
Monday-Friday	5:45am-11:15pm
Saturday	6:00 am-6:15pm
Sunday	9:15am-5:15pm

MAP 7-C

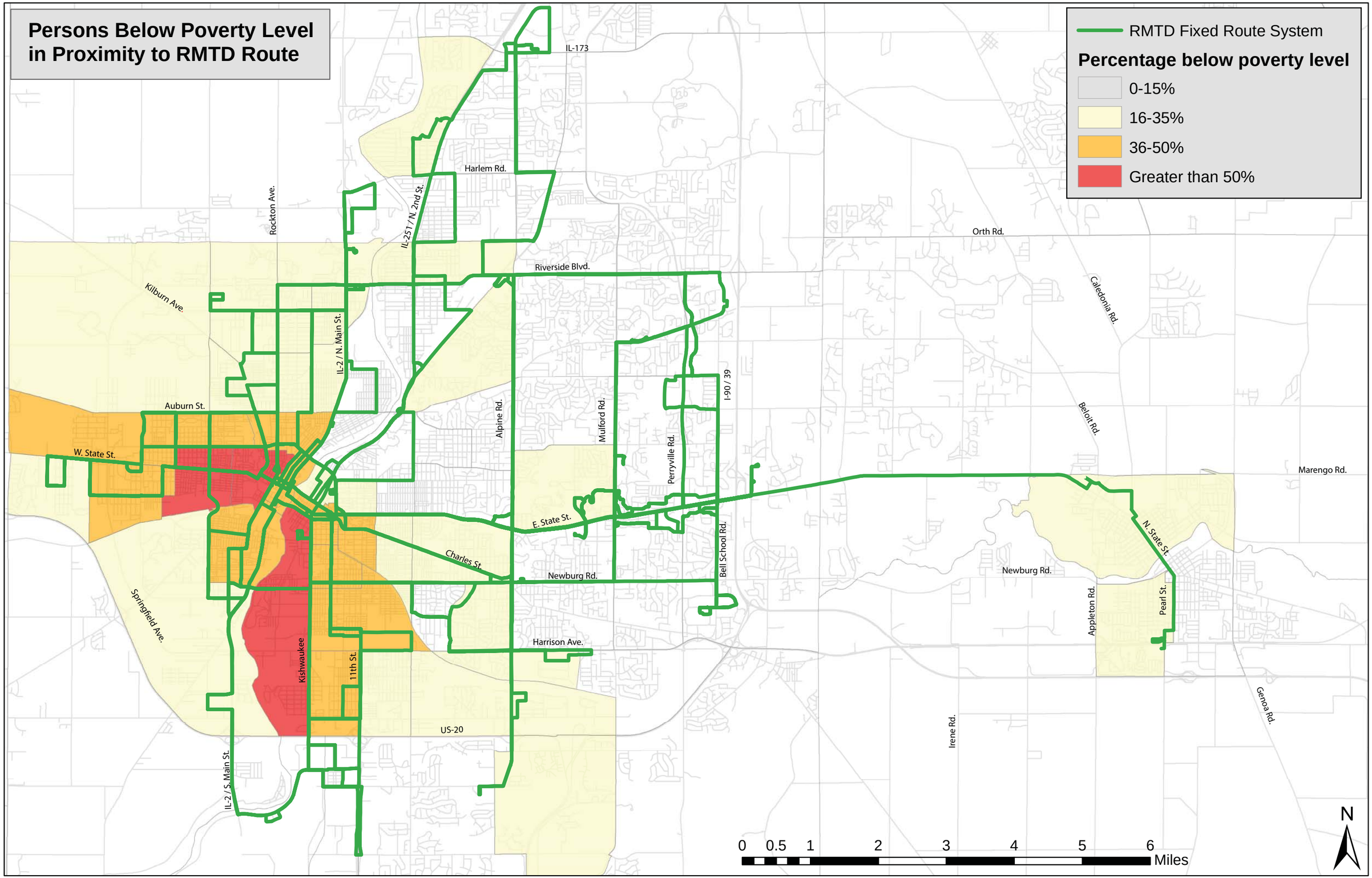
RMTD Fixed Route System in relation to Minority Population

RMTD Fixed Route System
1 Dot = 50
Minority_TOTAL

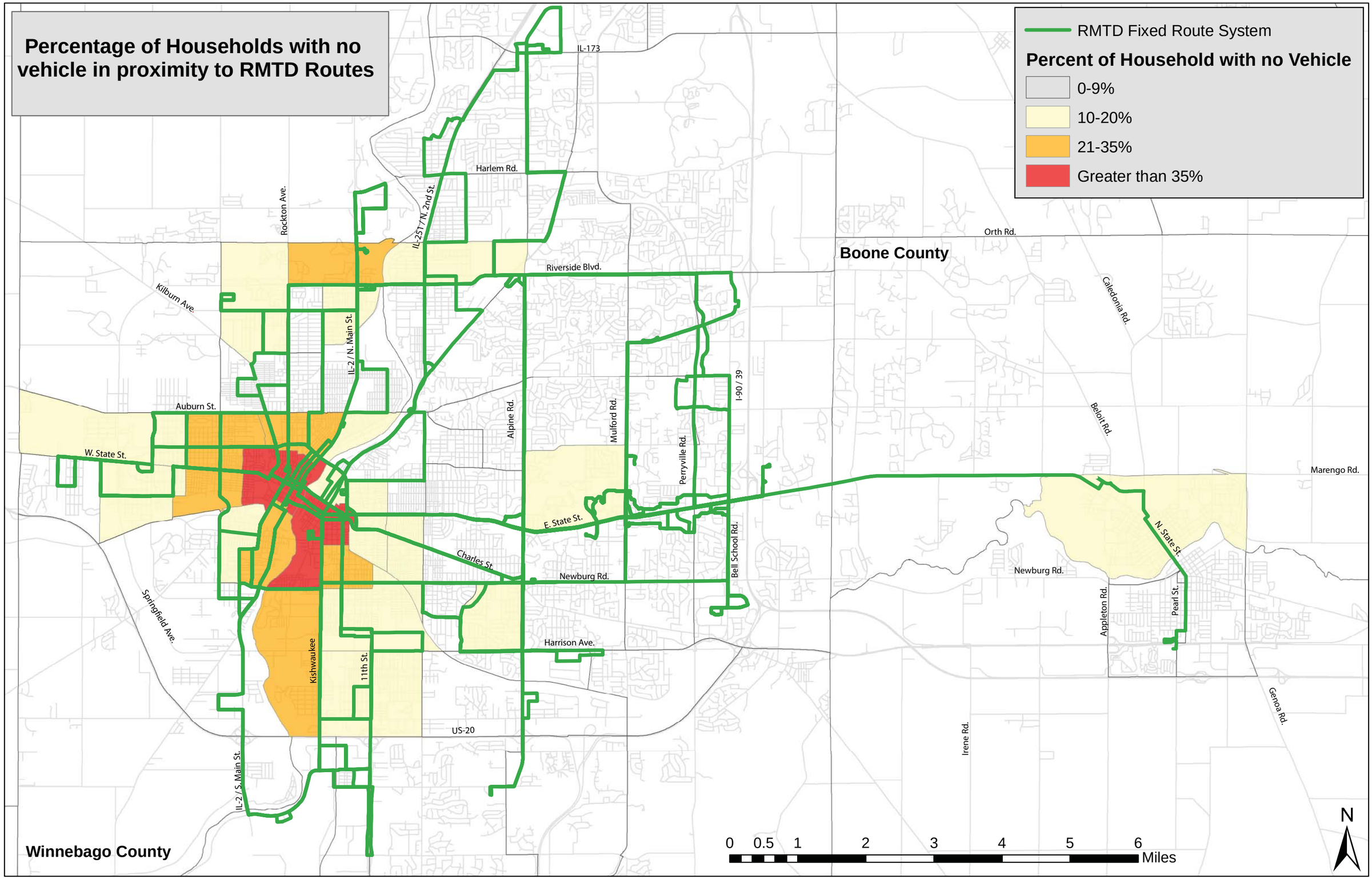
0 0.5 1 2 3 4 5 6 Miles

N

MAP 7-D


Persons Below Poverty Level in Proximity to RMTD Route
RMTD Fixed Route System
Percentage below poverty level
0-15%
16-35%
36-50%
Greater than 50%
IL-173
Harlem Rd.
Rockton Ave.
IL-251 / N. 2nd St.
Riverside Blvd.
Kilburn Ave.
IL-2 / N. Main St.
Auburn St.
W. State St.
Alpine Rd.
Mulford Rd.
Perryville Rd.
I-90 / 39
Bell School Rd.
E. State St.
Charles St.
Newburg Rd.
Springfield Ave.
Kishwaukee
11th St.
Harrison Ave.
US-20
IL-2 / S. Main St.
Orth Rd.
Caledonia Rd.
Beloit Rd.
Marengo Rd.
N. State St.
Appleton Rd.
Pearl St.
Irene Rd.
Genoa Rd.
0 0.5 1 2 3 4 5 6
Miles
N

MAP 7-E


Percentage of Households with no vehicle in proximity to RMTD Routes
RMTD Fixed Route System
Percent of Household with no Vehicle
0-9%
10-20%
21-35%
Greater than 35%
Boone County
Winnebago County
IL-173
Harlem Rd.
Rockton Ave.
IL-251 / N. 2nd St.
Orth Rd.
Riverside Blvd.
Kilburn Ave
IL-2 / N. Main St.
Caledonia Rd.
Auburn St.
Alpine Rd.
Mulford Rd.
I-90 / 39
Beloit Rd.
W. State St.
Perryville Rd.
Marengo Rd.
E. State St.
N. State St.
Bell School Rd.
Charles St.
Newburg Rd.
Springfield Ave.
Appleton Rd.
Pearl St.
Harrison Ave.
Kishwaukee
11th St.
Genoa Rd.
US-20
Irene Rd.
IL-2 / S. Main St.
0 0.5 1 2 3 4 5 6
Miles
N

Rockford Mass Transit District Capital Improvement Plans

RMTD completed construction on a new facility in July 2008 to house their origin-destination paratransit vehicles and related equipment. This building, located adjacent to the RMTD Administrative Building, provides storage and maintenance facilities for the origin-destination fleet and enhances the RMTD role in regional maintenance. This facility also includes a body shop and paint booth for repair of all RMTD vehicles. While the building only stores paratransit vehicles at this time, it is a goal to have the second story of the center finished to house the paratransit operations office of RMTD. Finishing of the second story of the Paratransit Facility is dictated by the availability of capital funding.

Since the initial release of the RMAP 2040 LRTP, RMTD has established a secondary bus/route transfer center on Rockford's east side located at 725 North Lyford Road. The RMTD East Side Transfer Center began operations on May 22nd, 2012. The purpose of this facility is to increase operating flexibility to the employment and commerce centers along the East State Street commerce corridor, position the RMTD to provide fixed route transit to Belvidere, and accommodate transfer connections with BCCA flexible services and intercity through routes. Although the majority of RMTD's patrons and/or transit dependent persons continue to reside in west and central Rockford, significant numbers of retail and commercial facilities are located on Rockford's east side. The shift of employment and commerce to the far east side of the urban area has been occurring for the last two decades. Presently, this shift appears to have reached the threshold level where restructuring at least some of the routes and schedules around an east-side transfer point should be better for the majority of transit dependent persons. As part of this effort, RMTD has determined the need and feasibility of expanding fixed route transit services eastward to Belvidere and the possibility of providing more convenient links and transfer opportunities with the privately operated intercity bus companies that make stops on Rockford's east side. This ESTC work was partially funded via a FTA "5309"grant awarded to RMTD for this purpose as part of the FY 2002 Federal apportionments. It should also be noted that American Recovery and Reinvestment Act of 2009 (ARRA) funding was also used for the creation of this center. Additionally, RMTD is currently in the process of the second phase of the ESTC project. This includes the completion of a storage garage for fixed route/bus rapid transit (BRT) vehicles and construction of a pedestrian/shared-use path linking the transfer center to nearby development.

Given the RMTD growth into Loves Park, Machesney Park, Roscoe and South Beloit and their proximities to I-90, it is thought that the I-90 corridor could be used in the future to tie these areas into the East Side Transfer Center which would allow for additional intra-region travel options. Connections to destinations outside of the Rockford MSA are provided at the RMTD ESTC by intercity bus service operated through Illinois Trailways.

RMTD will additionally need to make significant renovation to the existing bus transfer facility (520 Mulberry Street) in downtown Rockford during the life of this LRTP. The improvements will include, but is not limited to, a redesign of the facility so buses do not have to back out of stalls, upgrades to the fixed route bus storage and maintenance garage and improved interior (including additional ADA features) so as to provide better amenities to RMTD riders, patrons and employees. During the writing of this LRTP, RMTD was awarded funding from the Illinois Jobs Now and Downstate Transit Improvement Fund Capital Program which will be applied to upgrades needed at the Downtown Transfer Center. Additional upgrades to the Downtown Transfer Center will need to occur during the course of this LRTP.

The life of the RMTD fixed route buses is approximately 12 years. It is expected that the buses will have to be replaced twice during the course of this 30-year LRTP. The demand response vehicles will be replaced with vehicles that have a life expectancy of approximately eight years. Some of the demand response fleet would be replaced with super medium duty vehicles that have a life expectancy of 10 years. For planning purposes, it is expected that the demand response vehicles will have to be replaced three times during the course of the LRTP. Table 7-4 illustrates the capital needs of the RMTD over the life of the LRTP.

TABLE 7-4

Capital Type	Units	Total Cost
RMTD Fixed Route Bus	84	47,906,456
PT BUS	44	3,842,048
PT SMD	8	929,473

Also, to improve multimodal connectivity, RMTD has made accommodations for bicycles on buses through the addition of bicycles racks on all of their fixed route buses. This capital improvement to the RMTD fixed route fleet assists in promoting alternative modes of transportation in the Rockford region by allowing individuals who may not have access to a personal vehicle, or who choose not to use a personal vehicle, to use the bus system and a bicycle to reach their destination. As discussed in a separate section of the LRTP, the RMAP Bicycle and Pedestrian Plan offers information as to bicycle routes in the region which would help those individuals who wish to use these alternative forms of transportation navigate the area instead of using a personal vehicle. This capital asset also helps to promote more environmentally consciousness modes of transportation as well as forms of active transportation.

RMTD will continue to explore the purchase of alternative fuel vehicles. RMTD applied for a joint TIGGER grant (2009) through IDOT and was awarded funding for two Hybrid Paratransit buses. These hybrid vehicles replaced two of the current vehicles in the RMTD paratransit fleet. RMTD has also committed to purchasing fixed route vehicles that are fueled by compressed natural gas (CNG) in 2019. In 2019, RMTD is scheduled to replace nearly half of its existing fixed route fleet and have determined that the District will seriously evaluate the values of CNG vs Diesel. Should the RMTD purchase CNG vehicles, it will be necessary to either modify the existing facility or construct a new facility to house both the CNG fueling stations and CNG vehicle fleet. This is due to City of Rockford code regulations for CNG. However it should also be noted that if significant CNG replacement does not occur to the forecasted extent, increased vehicle storage capacity is still needed for the existing traditional fixed route fleet through garage/maintenance area expansion.

In addition, RMTD will continue to monitor and place bus shelters accordingly in the service area. Map 7-F displays location of bus shelters throughout the RMTD system.

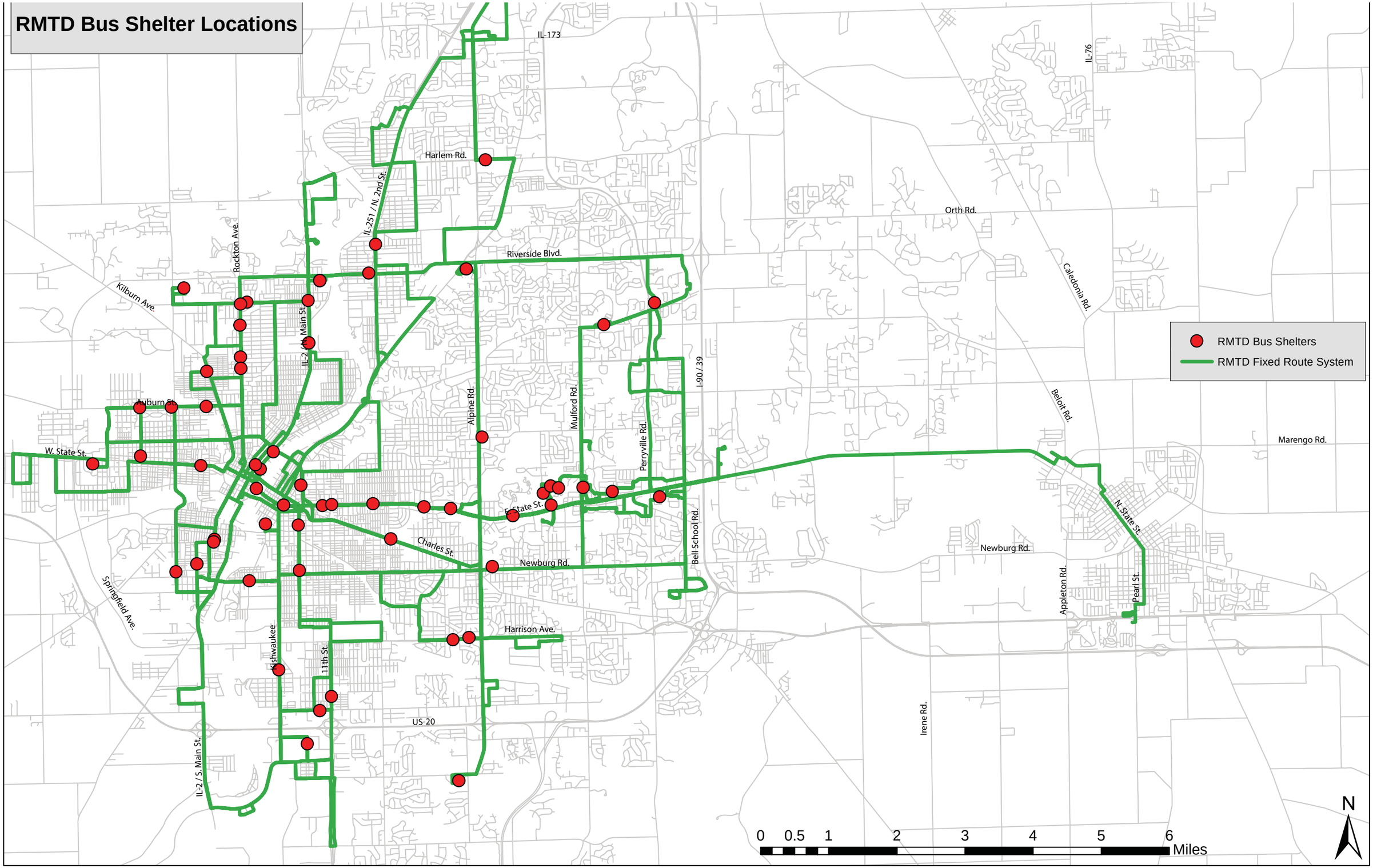
RMTD Route Studies

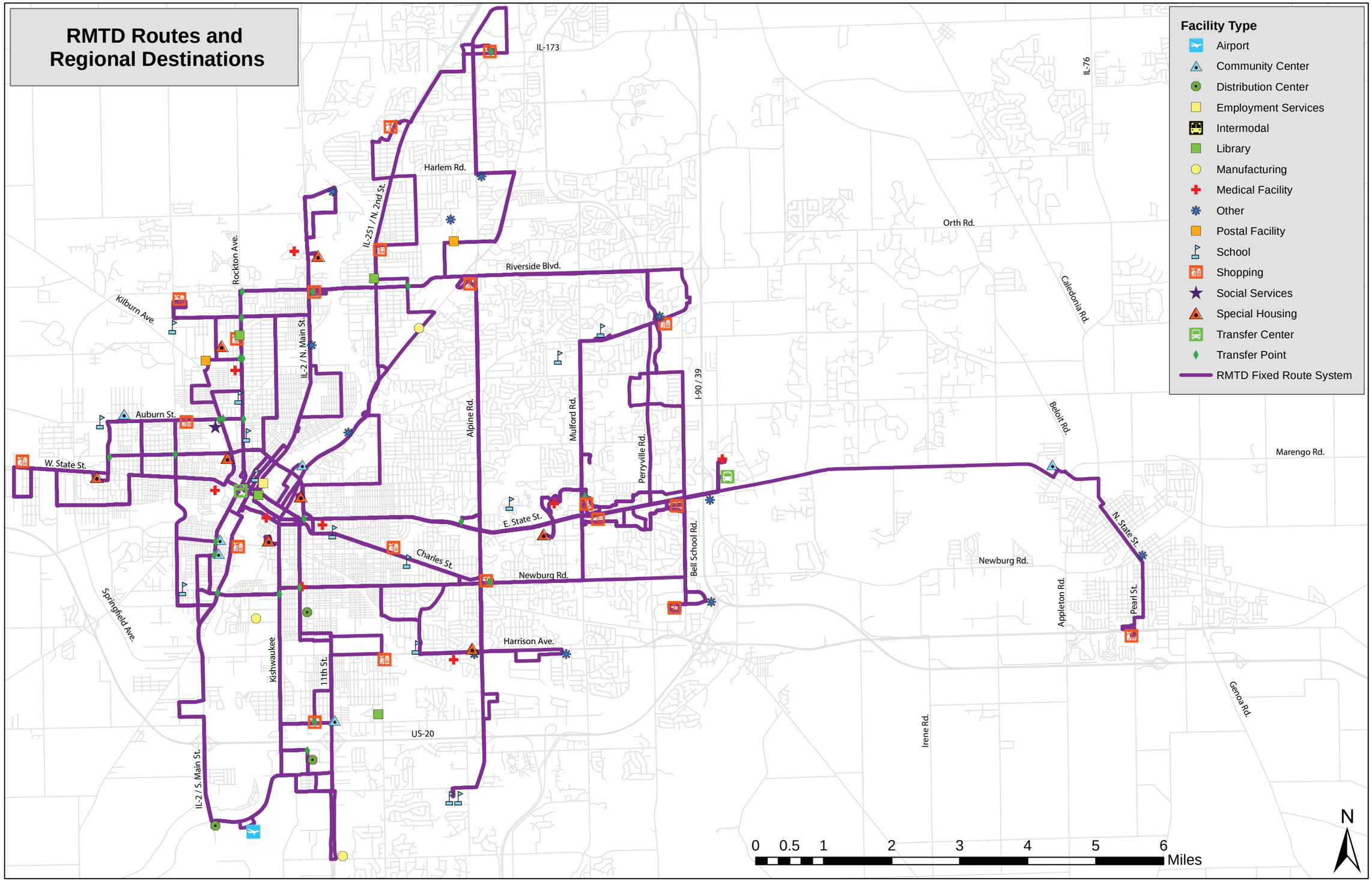
The RMTD Route Study (2011-2013) was designed to review the effectiveness of the current route structures, the tying in of the East Side Transfer Center into the route system, potential fixed route service into Belvidere, review of the current bus stop locations and recommended changes. The study provides ride volumes, examines fare structure for fixed routes and zone fares, effective ways to provide feeder service from paratransit to fixed route/neighborhood service, recommends a CAD/AVL system that allows the collection of data and allows RMTD to determine where buses should be, where the buses run and how to get the best productivity from the buses.

RMTD will explore adding services to the Belvidere/Boone County and the SMTD service areas. In addition, RMTD will also determine the feasibility of adding services to current areas in the western and southern parts of the urbanized area as well as service to areas that may potentially be added through future censuses.

Route studies and analysis occur on an “as-needed” basis and will be conducted periodically throughout the life-span of this LRTP. Map 7-G displays the current RMTD fixed route system in relationship to regional destinations and services.

RMTD Bus Shelter Locations




RMTD Routes and Regional Destinations
Facility Type
Airport
Community Center
Distribution Center
Employment Services
Intermodal
Library
Manufacturing
Medical Facility
Other
Postal Facility
School
Shopping
Social Services
Special Housing
Transfer Center
Transfer Point
RMTD Fixed Route System
IL-173
Harlem Rd.
IL-251 / N. 2nd St.
Rockton Ave.
Riverside Blvd.
Kilburn Ave.
IL-2 / N. Main St.
Auburn St.
W. State St.
Alpine Rd.
Mulford Rd.
Perryville Rd.
I-90 / 39
Orth Rd.
IL-76
Caledonia Rd.
Beloit Rd.
Marengo Rd.
E. State St.
Charles St.
Newburg Rd.
Bell School Rd.
N. State St.
Appleton Rd.
Pearl St.
Springfield Ave.
Kishwaukee
11th St.
Harrison Ave.
US-20
IL-2 / S. Main St.
Irene Rd.
Genoa Rd.
0 0.5 1 2 3 4 5 6
Miles
N

Belvidere/Boone Demand Response Service

Boone County offers public transportation service, equipped with wheel-chair lifts, to all residents of Boone County regardless of age. Priority is given to the medical and nutritional needs of older persons and persons with disabilities. Origin to destination services are provided on a demand-response basis. The service is provided Monday through Friday between 8:00 AM-4:30 PM. Reservations are required at least one day in advance. Boone County provides a fleet of eight paratransit vehicles (which are utilized by BCCA) that are fully accessible for demand response service in Boone County. The cost of service for BCCA transportation (per trip) is shown in Table 7-5.

Boone County and BCCA have an agreement for BCCA to provide demand–response service to rural Boone County. Additionally, Boone County has an InterGovernmental Agreement (IGA) with RMTD to provide service in the urban area.

A large part of Boone County, including Belvidere, was classified as "urbanized" beginning with the year 2000 U.S. Census. The Census Defined Urbanized Area of Boone County has since grown as of the 2010 Census. This had an impact on federal and state funding sources (urban and rural) for demand response service and how the funds are disbursed. Through conversation between Boone County, BCCA and RMTD, was decided that for the short term Boone County would best be served by the existing BCCA demand response service. Agreements between RMTD, Boone County and BCCA have been instrumental in service provision. In 2009, the process involved RMTD advertising a bid to provide service to the urbanized portion of Boone County. Upon the review of submittals, BCCA was awarded the bid to provide service and an operations agreement was drafted between RMTD and Boone County. The most current agreement extends through June 30th, 2016 (with optional one-year extension).

TABLE 7-5

Fare Category	Fare Amount
Cash Fare (per trip)	
Children under 12	$1.00
Adult Single (under 60 years)	$2.00
Adult Single (over 60 years)	Donations accepted

As part of the Intergovernmental agreement, the following apply (this list is not comprehensive, for further details please refer to the full Intergovernmental Agreement):

1. The County (County of Boone) desires to procure Demand Response mass transportation services from RMTD on the terms and conditions stated herein (referring to the Intergovernmental Agreement)

2. RMTD desires to provide Demand Response services directly or through subcontracts with other service providers to County on the terms and conditions stated herein (referring to the Intergovernmental Agreement)

3. During the terms of this Agreement, RMTD directly or through a third party agreement shall provide general public demand response services to eligible individuals on those dates designated by the County

4. The term of this agreement shall be from July 1, 2014 through June 30, 2016

5. The County (County of Boone) agrees to furnish the necessary rolling stock capital to provide all required service under this agreement.

A Memorandum of Understanding for Transportation Planning between RMAP, RMTD, Boone County, BCCA and the City of Belvidere was previously developed and subsequently adopted by the RMAP Policy Committee on May 28th, 2009. This document outlines the planning responsibilities of each respective organization. The objectives of the Memorandum of Understanding for Cooperative Transportation Planning are to formalize the current cooperative efforts between RMAP, RMTD, and BCCA for the production and execution of the Unified (Planning) Work Program (UWP), the Long-Range Transportation Plan (LRTP), the Transportation Improvement Program (TIP), and the ongoing transportation planning process in general; and to Comply with the requirements of Federal Transportation Law (previously SAFETEA-LU and currently MAP-21).

BCCA still receives federal and state funding to provide demand response service to the non-urbanized parts of Boone County. BCCA will continue to provide these services. Conversations are currently taking place with regard to the Downstate Operating Assistance Program (DOAP) funds received by Boone County and how this funding can be best utilized to provide public transit services to Boone County.

Additional Regional Public Transit Initiatives

Stateline Mass Transit District

In addition to the public transit services that are provided by the BCCA and the RMTD, the below section offers a brief history of the Stateline Mass Transit District which operates in the Northern portion of Winnebago County, IL.

A transit feasibility study was completed for Roscoe and Rockton, IL in December of 2003 and concluded that these communities could be served by developing a combination of local demand response service that would link with a limited bus stop service connecting Beloit to Rockford. The concept to have Roscoe and Rockton join with South Beloit to create a Mass Transit District was also developed.

A second study was initiated in February 2007 that examined the necessary steps to establish a transit service in the area of North Central Winnebago County which would include Rockton, Roscoe and South Beloit. This service would be provided through a newly formed Stateline Mass Transit District (SMTD). Rockton, Roscoe and South Beloit would be the founding members. Other municipalities could be provided service through contracting with SMTD.

Through the above mentioned efforts, service provided by the SMTD began in February 2008 in the form of a demand response transit system that operates Monday through Friday (6:00am-10:00pm) with limited hours of operation on Saturday (8:00am-6:00pm) and Sunday (8:30am-4:30pm). Service is provided with seven demand response vehicles and areas serviced through this new mass transit district include the Village of Rockton, Rockton Township, the Village of Roscoe and the City of South Beloit. The Stateline Mass Transit District contracts with RMTD to provide the demand response service.

Individuals who wish to utilize this service must first register with the SMTD and schedule a ride at least 24 hours in advance. Also, trips must originate in the SMTD service area (locations as described in the above paragraph).

The SMTD service connects with RMTD fixed route service at Target store on IL-173 and with the Beloit Transit System (BTS) at their transfer center. Medical trips are also provided into both RMTD and BTS service areas. The fare for service is $3.00 per person. Seniors, persons with disabilities and students have a discounted fare of $1.50.

Lee-Ogle Transit System

With regard to public transit services in Ogle County, the Lee-Ogle Transit System (LOTS) operates a demand-response, curb-to-curb service Monday through Friday from 6:00am to 6:00pm. Extended hours may be made available but requires permission from the director. LOTS requires a 24 hour advance notice prior to scheduling a ride within the town of origin and 48 hours for outside the town of origin. Fares for LOTS are $2.00 for the general public and $1.00 for individuals 60 years of age or older, persons with disabilities, or ages 5 years and younger. Fares for travel outside of the town of origin have an additional fee of $0.35 per mile. Funding for this service is provided through the FTA section 5311 program.

Free rides for Senior Citizens and Persons with Disabilities

Since the original drafting of the RMAP 2040 Long Range Transportation Plan in 2010, changes have occurred to the free rides for seniors and persons with disabilities program (Illinois Senate Bill 1920). Prior to 2011, senior citizens of any income could apply for the free rides program with any public transit entity within the State of Illinois. However, income restrictions were placed on this program in 2011 with individuals having to qualify for the Illinois Circuit Breaker/Benefits Access Program first in order to receive the free ride permit. The free rides for individuals with disabilities did not change as the requirement for eligibility within the state circuit breaker program had initially been a requirement since 2008. Under the current program requirements, senior citizens and individuals with disabilities must be enrolled in the Illinois Circuit Breaker/Benefits Access Program in order to qualify for the free rides program.
In addition to the statewide requirements, transit districts throughout the state have required that individuals register and receive identification cards. It is also important to mention that the free ride program for seniors (age 65 and over) and individuals with disabilities only applies for trips on fixed route transit and does not include rides on paratransit origin-destination service.

It is of value to note these initiatives because of their impacts on the accessibility to public transportation for those groups who may not normally take public transit due to limitations. With these programs in place, senior citizens and persons with disabilities who may not have normally ridden fixed route public transit are provided an incentive to do so. Locally, RMTD tracks the number of riders who use this program. It is anticipated that this program will continue to proceed unless otherwise rescinded by the State of Illinois. RMTD still allows all seniors, regardless of income, to ride free on their fixed route system.

More information regarding the above mentioned programs can be found on the State of Illinois website https://www.illinois.gov/aging/BenefitsAccess/Pages/default.aspx or by calling 312-814-2630. For more information regarding the implementation of these programs by the local transit agency, please contact the Rockford Mass Transit District (RMTD) at 815-961-9000.

Coordination and Human Services Transportation Planning

The purpose of the RMAP Coordinated Public Transit-Human Services Transportation Plan (RMAP-HSTP) is to assess the needs and concerns of public transit users in the area, develop strategies that will address and remedy these concerns and increase the overall efficiency of transit services provided to the public. While transit improvements benefit public transit users as a whole, particular attention will be given to public transit dependent populations including elderly individuals, persons with disabilities and individuals with low incomes.

Assessment of the needs of public transit dependent populations has been determined through numerous methods, which include:

- Working with and gathering information from the RMAP Mobility Subcommittee to determine transportation needs of transit dependent populations
- Communication with various human service and transportation providers in the area to determine if there are transportation related issues for their clients
- Working with the Rockford Mass Transit District to determine their scope of service as well as to identify any improvements that could be implemented to better service the targeted populations
- Facilitation of public open house sessions to allow the public to directly state their concerns to providers and planning agencies that are developing the HSTP

This coordination process benefits those who rely on public transportation as well as brings the RMAP in compliance with regulations stipulated previously by the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) transportation law and the current Moving Ahead for Progress in the 21st Century (MAP-21) transportation law. The HSTP is also a prerequisite to receiving and utilizing any Federal Transit Administration funding under the Section 5310 (Enhanced Mobility of Seniors and Individuals with Disabilities) program which also includes projects eligible for New Freedom (formerly FTA 5317 program). Job Access and Reverse Commute (JARC – formerly FTA 5316) type projects are currently eligible through the FTA 5307 program as a result of MAP-21 funding consolidations. For JARC type projects, it is encouraged that projects are derived from a locally coordinated process but it is not required as are projects applying for FTA 5310 funds.

To promote communication and coordination between public transit and human services providers as well as public participation, RMAP developed a Mobility Subcommittee. The RMAP Mobility Subcommittee originated from the Getting to Work in Greater Rockford (GTW) organization, which was part of the larger statewide Work, Welfare and Families coalition. The RMAP Mobility Subcommittee consists of human services and transportation agencies, governmental entities, workforce investment organizations, public and private transit providers, assisted living facilities and ambulance providers. The GTW organization began in 2005 and has met to discuss transportation options for transit dependent populations and is continuing to do so as the new RMAP Mobility Subcommittee. To note, new organizations can be added to the Mobility Subcommittee through the process outlined in the RMAP Cooperative Agreement (2014).

The duties of the Mobility Subcommittee are to facilitate public participation and involvement to identify transportation needs, identify and work with resource agencies to develop strategies addressing the transportation needs of public transit dependent populations. The Mobility Subcommittee also advocates for enhancements, expansion and new services that improve the wellbeing of public transportation dependent populations.

While the initial charge of the Mobility Subcommittee is to assist and provide information directed at the Coordinated Public Transit-Human Services Transportation Plan (HSTP), the subcommittee will also assist in exploring other possible transportation services and mode choices to adjacent areas to RMAP as well as address and act upon associated issues as identified by the RMAP Technical and Policy Committees. The Mobility Subcommittee meets the second Tuesday of each month at 10:00am at the RMTD East Side Transfer Center (ESTC) in Rockford, IL (725 N. Lyford Road) and all meetings of the Mobility Subcommittee are open to the public for comment and participation. Special meetings of the Mobility Subcommittee are permissible and occur on an as needed basis. Prior to RMAP Mobility Subcommittee meetings, agendas are distributed to members on the RMAP mailing list, posted on the RMAP website and are sent to local media outlets.

It is important to note that the organizations involved in the Mobility Subcommittee have daily contact with individuals from public transit dependent populations. This interaction is essential because it informs the organizations of transportation needs that transit dependent individuals face. Thus, by having these

organizations partake in the Mobility Subcommittee, transit dependent population's concerns are represented and stated at Mobility Subcommittee meetings. Through this element, improvements in transportation services will better keep in mind the concerns of citizens who use public transportation on a consistent basis. Map 7-H displays areas of potential transit improvement based on the Mobility Subcommittee's recommendations.

HSTP Related Funding Sources

Federal "5307" Subsidies to RMTD:
The SAFETEA-LU Job Access and Reverse Commute (JARC) program (formerly section 5316) was repealed by MAP-21; however, job access and reverse commute projects are eligible under the current Section 5307 program (beginning with FY13). A job access and reverse commute project is defined as, " a transportation project to finance planning, capital and operating costs that support the development and maintenance of transportation services designed to transport welfare recipients and eligible low-income individuals to and from jobs and activities related to their employment, including transportation projects that facilitate the provision of public transportation services from urbanized areas and rural areas to suburban employment locations."

JARC type projects must be for the "development and maintenance" of transportation services designed to transport welfare recipients and eligible low-income individuals to and from jobs and employment-related activities. FTA defines "development of transportation services" to mean new projects that were not in service on October 1, 2012. New JARC projects may include the expansion or extension of an existing service, so long as the new service was designed to support the target population consistent with the definition above.

Starting with FY13, any projects or project elements that were eligible under the section 5316 Job Access and Reverse Commute program, authorized by SAFETEA-LU, will remain eligible under 5307, so long as they can be classified as development or maintenance, as described above and comply with the MAP-21 definition of a job access and reverse commute project.

The split for JARC type projects is 80% federal, 20% local for capital projects; or 50% federal, 50% local for operational projects.

Of the 5307 funding that RMTD receives, up to 75% of the apportioned amount may be used for operating assistance.

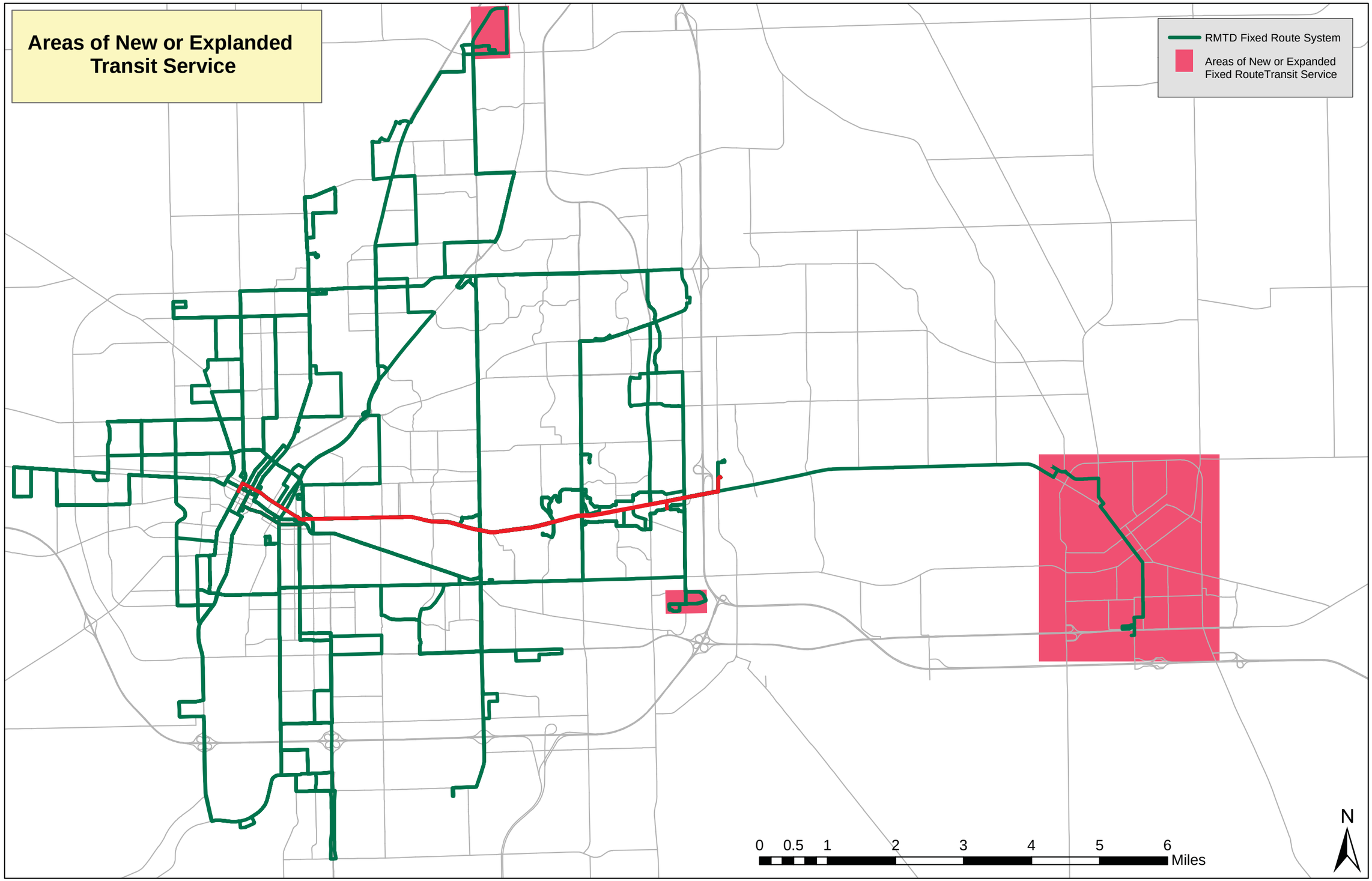
Federal "5310" Subsidies to RMTD

Under the previous transportation legislation, SAFETEA-LU, the FTA "5310" funding source occasionally contributed to the overall transit services provided by RMTD. FTA "5310" funds are available to public or private not-for-profit agencies serving those persons who, for reasons of age or disability, cannot be adequately served by regular transit. Although not as assured as "5307" funding, over the years, the RMAP area has received numerous awards of "5310" funding and IDOT generally attempts to allocate "5310" funds to replace vehicles that were originally purchased through the "5310" program. Therefore, "5310" projects are listed in this TIP. As part of the process to award "5310" funding, MPO's will review each applicant's submittal to determine that the projects applied for are derived from a "locally coordinated human services transportation plan" as stipulated by SAFETEA-LU. While the MPO did not formally score any of the applications for vehicles under the SAFETEA-LU funding, the MPO screened applications for HSTP compliance and transmitted the applications to the Illinois Department of Transportation (IDOT). This funding was by no means certain, but there was a reasonable chance that a significant portion of the requests would be granted.

With the passage of MAP-21, the section 5310 funds are now referred to as The Enhanced Mobility of Seniors and Individuals with Disabilities Program and provides formula funding to States and Designated Recipient of large UZAs (UZAs with populations of 200,000 or more) to improve mobility of seniors and individuals with disabilities.

MAP-21 expands the eligibility of the funds to be used for operating, in additional to capital, for transportation services that address the needs of seniors and individuals with disabilities. Not less than 55 percent of the funds available for this program must be used for projects planned, designed, and carried out to meet the special needs of seniors and individuals with disabilities when public transportation is insufficient, inappropriate (or unavailable), typically carried out by non-profit agencies. The 55 percent is a floor. Recipients may use more or all of their section 5310 funds for these types of projects. Remaining funds may be used for: public transportation projects that improve access to fixed-route service and decrease reliance by individuals with disabilities on complimentary paratransit; or alternatives to public transportation that assist seniors and individuals with disabilities. The expanded eligibility provisions are a result of the consolidation of the section 5317 New Freedom Program, which was repealed by MAP-21, with the section 5310 program. The acquisition of public transportation services remains an eligible capital expense under this section. New Freedom type projects must be derived from a Human Services Transportation Plan.

MAP 7-H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Areas of New or Expanded Fixed RouteTransit Service
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The split is 80% federal, 20% local for capital projects; or 50% federal, 50% local for operational projects.

HSTP results within the Rockford Metropolitan Planning Area

Since the adoption of the RMAP HSTP (January 24, 2008 version), several of the transit needs and gaps identified in the plan have been discussed between RMAP staff, the public and the RMAP Mobility Subcommittee. RMAP has a policy of an always open comment period for all of their planning documents. While the identification of transit needs/gaps for individuals with disabilities, elderly individuals and individuals with low income is an ongoing and evolving process, there have been progressive steps taken within the Metropolitan Planning Area to address some of the concerns that these individuals face. Namely, Job Access and Reverse Commute (JARC) and New Freedom funds have been utilized to provide service in the following ways:

As stated in the RMAP HSTP, there was an identified need to provide a service route to CherryVale Mall, which is a source of employment for individuals throughout the region. Through discussion of this need as well as its selection from an issued call for projects, this project was selected by the RMAP Mobility Subcommittee as a program to be pursued and JARC funding was used to begin this route in May of 2007. As a route to this employment center was first established in 2007, it still required funding to keep the route running as well as to continue to build ridership and increase awareness of the available route. In May 2009, when the available JARC funding ceased for this project, RMTD implemented a zone fare to help pay for the continued service to the Cherry Valley area. Passengers being picked up or dropped off in that area must pay an additional zone fare of twenty-five cents.

A need to extend transit service hours to the Burden Loop area near IL-173 in Machesney Park was also an expressed concern from the RMAP Mobility Subcommittee. Similar to the previous example above, this area is also a source for employment. RMTD was able to use JARC funding to provide extended day service to this destination.

In 2011 RMTD began fixed route service to the City of Belvidere in Boone County through the utilization of Job Access and Reverse Commute funds (formerly FTA 5316/JARC) programmed through the MPO HSTP planning process. The urbanized population of the Belvidere/Boone County RMTD service area is 32,000 persons. The addition of this route marks the first time of a fixed public transit route connecting the City of Belvidere to the City of Rockford.

JARC funding has also been used to assist in the establishment of the Rock River Training Corporation's Commuter Connection rideshare website. The purpose of this project is to improve transportation options for job seekers and workers who reside in Boone and Winnebago Counties by providing a centralized resource for establishing and coordinating van pools, car pools and ride share matching options for commuters.

New Freedom funds have been allocated to provide a demand response service that will assist individuals with mobility limitations who are able to use fixed route service, but who are unable to reach fixed route service. This program provides greater mobility options for individuals who are able to use fixed route service, but may not be able to necessarily reach it due to their mobility limitations . Additionally, New Freedom dollars have been utilized for the provision of same day RMTD paratransit services. Lastly, New Freedom and JARC funds have been utilized to also provide additional bus shelters along the RMTD fixed route system.

Intercity Private Bus Service

Illinois Trailways and the Van Galder Bus Company provide fixed-route intercity bus service to the Rockford Metropolitan Planning Area (MPA). Illinois Trailways provides service from the RMTD East Side Transfer Center twice daily with one bus departing in the morning (8:15am) toward Iowa and one bus departing in the evening (6:15pm) towards Chicago.

The Van Galder Bus Company, which is owned by Coach USA, provides regularly scheduled daily service to the MPA and Chicago O'Hare International Airport (ORD), Midway International Airport (MDW) and the Amtrak/Metra Union Station in downtown Chicago. The Van Galder Bus Terminal is at 7559 Walton Street on the east side of Rockford near East State Street and I-90. Stops are also made at the nearby Best Western Clock Tower Inn on East State Street. The Van Galder Terminal is accessible via the RMTD bus system.

17 buses travel between Rockford and ORD. The bus service is available leaving Rockford between 3:30 AM-7:00 PM and leaving ORD between 6:00 AM-10:30 PM.

Eight buses a day travel between Rockford and MDW service. These buses also connect to Janesville, Wisconsin. Service is available leaving Rockford between 4:10 AM-6:20 PM, and leaving MDW between 6:30 AM-9:45 PM.

Nine buses a day travel between Rockford and Chicago Union Station at Jackson and Canal. These buses also connect to the University of Wisconsin Memorial Union in Madison. Service is available leaving Rockford between 4:10 AM-6:20 PM, and leaving Chicago between 10:30 AM-10:15 PM.

Proposed Commuter Rail Transportation

The Northern Illinois Commuter Transportation Initiative (NICTI) was formed several years ago to explore the feasibility of extending commuter rail service from Chicago. Commuter rail is a type of rail passenger service used for urban public transit that operates over existing railroad tracks on the same rights-of-way used by freight trains and long distance passenger trains. NICTI was a non-profit organization made up of various government and private sector representatives from throughout the MPA. A study completed in October 2004 investigated the feasibility of extending Metra commuter rail service to the MPA. RMTD and RMAP secured the FTA funding to undertake the feasibility study.

During the course of its Alternatives Analysis process, NICTI also designated the Rockford Mass Transit District as the preferred governing body for this commuter rail system. While the RMTD would be the administrative head of the system, the idea of local operation of the system was not considered for the foreseeable future.

For further information regarding Amtrak, Commuter Rail, NICTI, and the Alternatives Analysis process please refer to Chapter 9 of this document.

Future Considerations for Public Transit

In looking at the future of public transit in the region, various factors must be taken into consideration to enhance and assist the functionality and accessibility of transit options in the RMAP metropolitan planning area. Planning decisions within the region must take public transit into consideration when carrying out their respective objectives. For example, land use and economic development decisions should recognize the location of available fixed public transit routes, and as best as possible, align development/infill redevelopment objectives as to fully utilize this resource. This would be beneficial for a multitude of reasons which include; providing access to transit services for those individuals who may not own a personal use vehicle; reduce the number of single occupancy vehicles on roadways (which would subsequently assist in relieving congestion) increasing ridership and promoting green initiatives, etc. This would assist in the efficiency of the available transit route system by keeping development near existing routes and would alleviate pressure of restructuring routes and to service areas or sites which may be far from the established route. This methodology would provide increased accessible transportation for transit riders.

As the Regional Public Transit provider for the RMAP metropolitan planning area, RMTD will be assessing the possibility of creating a Belvidere transfer center. While the feasibility is being developed, this initiative would be important in providing additional fixed route service between the Rockford/Belvidere area. Currently, RMTD has a contract with Boone County to provide demand-response service in the Belvidere area and there is one fixed transit route provided through JARC funding. This future station would help to connect with the existing Downtown Rockford transfer center as well as the East Side Transfer.

In addition, local municipalities which are provided service through the Rockford Mass Transit District should continue to consult the transit agency when conducting work or studies which may impact transit service**.** Through this cooperative measure, improvements to the infrastructure will be more comprehensive by the consideration of public transit elements within both the planning and implementation process.

Capital Funding Forecast

Rockford Mass Transit District (RMTD):

Table 7-8 shows the capital funding sources for the RMTD for the period 2010-2040. The table was reexamined in 2015 and forecasts for revenues and expenditures were developed for the timeframe of between 2010-2040 utilizing actual budget numbers from 2010-2014 and projected budget data from 2015-2040. As with the original table, categories included are Section 5307 funding, Section 5309 funding, State match and Local match. Data detailing revenues and expenditures present categories by fiscal years in five year increments**.** It is also important to note that inflation is taken into consideration for this revised forecast.

In developing this forecast, a 3% increase in apportionment was taken into consideration. This percentage was derived from examining past increases and applying the average to future fiscal years. Between 2010-2040, it is forecasted that RMTD is to receive approximately $376 million in capital funding and is forecasted to expend approximately $127 million (Table 7-8 and Table 7-9). It is appropriate to note that with changes to FTA funding sources from MAP-21 direct allocations of FTA 5339 funds (formerly 5309 program) have been provided to TMA regions for FY 2013 and FY 2014. The certainty of future allocations of these funds is currently undetermined due to the fact that continuing resolutions have up to this point extended MAP-21 legislation until May 2015.

As a result, the FTA 5307 funding category has been primary source of the projections provided for the capital revenue/expenditures within this section of the LRTP. It should be obvious that capital funding is highly dependent on the federal and state governments. Still, this provides a valid number and methodology for financial planning purposes. However, given that it is a forecast, it is important to recognize the importance of updating the LRTP every five years.

Operation Funding

Tables 7-10 and 7-11 display the operating revenues and expenditures for the RMTD between 2010 and 2040. During this time period it is forecasted that RMTD will approximately have operational revenues of $705 million and also have and operational expenditure of $761 million. As with the capital revenues and expenditure with RMTD, it must be kept in mind that operational funding is highly dependent on state governments. However, this forecast provides a valid number for financial planning purposes. Federal funding sources may be increased; lessened or new programs may be added. IDOT is the most important source of operating funds. Loves Park, Machesney Park and Rockford continue to be supportive of the RMTD. Therefore, it is important to update the Long-Range Transportation Plan every five years as federally required.

BOONE COUNTY COUNCIL ON AGING (BCCA):

BCCA Revenues and Expenditures

Tables illustrating revenues and expenditures by the BCCA are included. Table 7-6 shows funding sources for the BCCA for the period 2010 to 2040. This table represents revenues during the fiscal year as opposed to expenditures. Revenue sources include fares, local match, state funds, federal funds (i.e. Section 5311) and other. It is also important to note that inflation is taken into consideration for this forecast.

In developing this forecast, an annual 3% increase in revenues was taken into consideration. This percentage was derived from examining past increases and applying the average to future fiscal years. Over period from 2010-2040, BCCA is forecasted to receive $20.3 million in revenue.

Table 7-7 illustrating the BCCA expenditures for the 30-year planning will be added prior to the final LRTP document.

TABLE 7-6

Boone County Council on Aging Revenues (2010-2040)

Year	Full Adult Fare	Special Transit Fares	Local	State	Federal	Other	Total
2010-2015	164,759	11,872	26,604	1,641,124	544,491	163,433	2,552,282
2016-2020	157,534	1,632	38,301	1,743,900	503,984	140,969	2,586,320
2021-2025	182,625	1,892	44,401	2,021,659	584,255	163,422	2,998,254
2026-2030	211,712	2,194	51,473	2,343,656	677,312	189,451	3,475,798
2031-2035	245,433	2,543	59,671	2,716,940	785,190	219,626	4,029,403
2036-2040	284,524	2,948	69,175	3,149,678	910,251	254,606	4,671,182
Total	1,246,587	23,080	289,626	13,616,957	4,005,483	1,131,507	20,313,239

TABLE 7-7

Boone County Council on Aging Expenditures (2010-2040)

Year	Salaries/Wages	Benefits	Services	Other	Indirect Costs	Total
2010-2015	1,355,032	130,036	400,459	198,074	368,702	2,452,303
2016-2020	1,330,890	135,905	399,703	202,276	368,725	2,437,498
2021-2025	1,542,866	157,551	463,365	234,493	427,453	2,825,729
2026-2030	1,788,605	182,645	537,167	271,842	495,535	3,275,794
2031-2035	2,073,483	211,736	622,724	315,139	574,461	3,797,543
2036-2040	2,403,735	245,460	721,908	365,333	665,957	4,402,393
Total	10,494,612	1,063,333	3,145,325	1,587,158	2,900,833	19,191,261

TABLE 7-8

Rockford Mass Transit District Capital Revenues (2010-2040)

Year	Federal	Carry over	Subtotal	IDOT	Municipal	Total
2010-2015	17,483,770	14,807,503	32,291,273	1,348,294	1,934,965	35,574,532
2016-2020	16,952,071	20,528,100	37,480,171	3,810,967	1,969,105	43,260,242
2021-2025	19,652,096	5,276,182	24,928,278	1,253,735	2,016,844	28,198,857
2026-2030	22,782,165	52,244,672	75,026,838	3,014,210	2,067,773	80,108,821
2031-2035	26,410,774	54,754,524	81,165,298	2,485,311	2,119,986	85,770,595
2036-2040	30,617,325	69,562,956	100,180,282	1,157,417	2,341,776	103,679,475
Total:	**133,898,201**	**217,173,938**	**351,072,139**	**13,069,933**	**12,450,450**	**376,592,522**

TABLE 7-9

Rockford Mass Transit Capital Expenditures (2010-2040)

Year	Federal			IDOT	Municipal	Total
	Sec. 5309/5339	Sec. 5307	Other FTA			
2010-2015	0	13,436,100	0	1,348,294	1,934,965	16,719,359
2016-2020	0	23,120,287	0	3,810,967	1,969,105	28,900,358
2021-2025	0	13,082,316	0	1,253,735	2,016,844	16,352,895
2026-2030	0	20,327,933	0	3,014,210	2,067,773	25,409,916
2031-2035	0	18,421,188	0	2,485,311	2,119,986	23,026,486
2036-2040	0	13,996,773	0	1,157,417	2,341,776	17,495,967
Total:	**0**	**102,384,597**	**0**	**13,069,933**	**12,450,450**	**127,904,980**

TABLE 7-10

Rockford Mass Transit District Operating Revenues (2010-2040)

Year	Farebox	Paratransit	Complementary ADA	Federal	State	Municipal	Other	Total
2010-2015	6,891,000	1,580,000	1,321,000	3,527,139	58,155,077	14,248,280	3,882,621	89,605,117
2016-2020	7,094,326	2,703,675	1,301,300	6,575,119	57,080,740	11,157,086	2,434,498	88,346,744
2021-2025	7,456,204	2,912,625	1,326,229	6,741,149	68,472,748	12,934,115	2,818,269	102,661,339
2026-2030	7,836,547	3,137,725	1,359,718	6,911,376	82,260,177	15,066,184	3,263,166	119,834,893
2031-2035	8,236,291	3,380,222	1,394,052	7,085,893	98,962,706	17,382,367	3,778,919	140,220,450
2036-2040	8,656,426	3,641,461	1,429,254	7,264,820	119,215,054	20,150,924	4,376,820	164,734,758
Total	**46,170,794**	**17,355,708**	**8,131,552**	**38,105,496**	**484,146,502**	**90,938,956**	**20,554,293**	**705,403,301**

TABLE 7-11

Rockford Mass Transit District Operating Expenditures (2010-2040)

Year	Personnel	Contractual	Insurance	Supplies	Other	Total
2010-2015	65,016,020	3,816,270	3,706,210	13,019,629	4,183,439	90,016,568
2016-2020	66,553,720	5,679,021	3,145,857	11,537,887	1,714,011	90,226,022
2021-2025	80,972,776	6,386,076	4,015,002	12,738,755	1,987,010	108,135,958
2026-2030	98,515,762	7,185,200	5,124,272	14,064,617	2,303,491	129,792,284
2031-2035	119,859,483	8,088,904	6,540,017	15,528,473	2,670,377	156,004,237
2036-2040	145,827,394	9,111,504	8,346,902	17,144,691	3,095,699	187,759,595
Total	**576,745,155**	**40,266,975**	**30,878,260**	**84,034,052**	**15,954,027**	**761,934,664**

SECTION 8
ROADWAYS

Roadways are the primary means of travel within the Rockford Metropolitan Planning Area (MPA). This section will review the existing roadway system, track the amount spent on improving and maintaining the system during the last 5 years, explain roadway concepts, and describe the future roadway improvements.

Roadway Functional Classification

For planning purposes, roadways are classified according to function. The public highway network provides two basic and often conflicting functions:
1) access to property and 2) travel mobility. Each road provides varying levels of access and mobility, depending on its intended service. The overall objective of the Functional Classification System, when viewed in its entirety, is to yield an optimum balance between its access and mobility functions. The Functional Classification update process is undertaken every ten years as a comprehensive update of the entire system. This process aligns with the census bureau's delineation of the Census Defined Urbanized Area. Since the last update to the Functional Classification System in the Rockford Region the system has been reorganized and some of the classification names have changed. To download a comprehensive regional network map, please visit http://www.rmapil.org/assets/documents/functional_classification_map.pdf. Below is the up to date Functional Classification roadway types listed in order from largest traffic volumes to the least:

- Interstate – Interstates are the highest classification of Arterials and were designed and constructed with mobility and long-distance travel in mind. These roadways are designed for high-speed and/or high-volume traffic. The Interstate System provides a superior network of limited access, divided highways offering high levels of mobility while linking major urban areas of the United States. They are controlled access (I-90, I-39 and US-20 Bypass) and are part of the National Highway System.

- Freeway & Expressway – Roadways in the classification category look very similar to Interstates. In some areas Freeway and Expressway are used interchangeably but the characteristics are the same; they have directional travel lanes and are usually separated by some type of physical barrier, and their access and egress points are limited to on and off ramp locations or there are a very limited number of at-grade intersections. Like Interstates, these roadways are designed and constructed to maximize their mobility and adjacent last uses are not directly served by them.

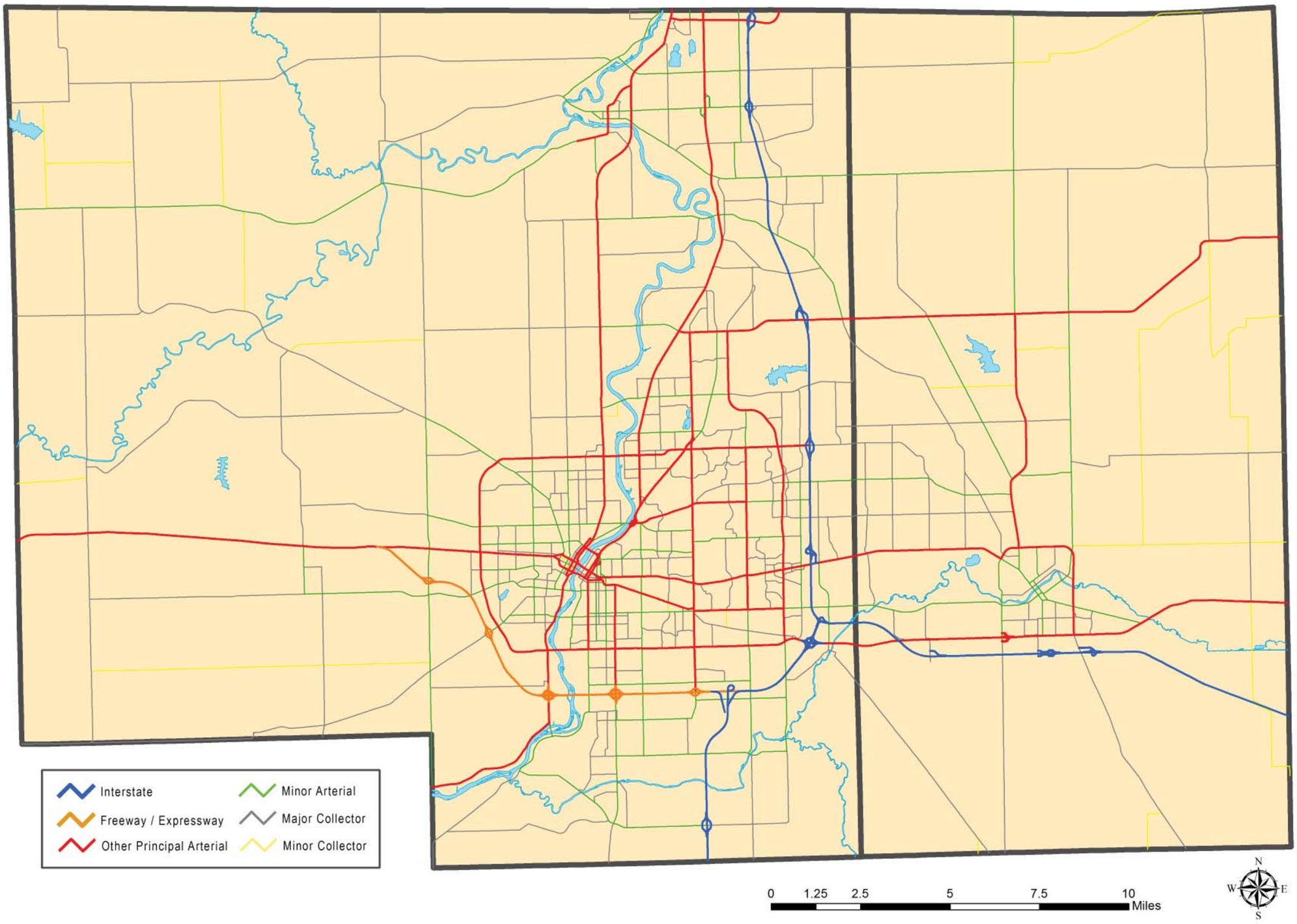
- Other Principal Arterial – Limited access highways (parts of Mulford Road and East State Street), to semi-limited access roadways that carry high volumes of traffic (Alpine Road and North Second Street). They are typically used for long trips within the Region (intra-regional) and are part of statewide or nationwide networks. The intersections are always signalized or grade-separated.

- Minor Arterial – These roadways also provide for high-speed and/or high-volume traffic, but are typically under local jurisdiction (Forest Hills, Spring Creek and Rockton Roads). Minor arterials often form boundaries between recognized "neighborhoods" and collect traffic from collector streets. Also, arterials are usually given movement preference over lower-level streets (crossing traffic will yield or stop, or is grade-separated). Minor Arterials provide more land access than Principal Arterials without penetrating identifiable neighborhoods.

- Major Collectors – These roadways are designed for moderate-speed and traffic volume than arterials. They collect the traffic from the neighborhoods and direct it to the nearest arterials (or disperse the traffic from the arterials into the neighborhoods), usually over a distance greater than three-quarters of a mile. Access to collectors is not as strictly controlled as with arterials (i.e., driveway cuts can be allowed from every property) but often access is directed to the local streets. They serve both land access and traffic circulation in higher density residential and commercial/industrial areas. Therefore, they penetrate residential neighborhoods, often for significant distances.

- Minor Collectors – These roadways have operating characteristics of lower speeds than Major Collectors and also fewer signalized intersections. They distribute and channel trips between Local Roads and Minor Arterials, usually over a distance of less than three-quarters of a mile. Minor Collectors penetrate residential neighborhoods of varying densities, but often for only a short distance before connecting to a more major roadway classification. They serve both land access and traffic circulation in lower density residential and commercial/industrial area.

MAP 8-A


Interstate
Freeway / Expressway
Other Principal Arterial
Minor Arterial
Major Collector
Minor Collector
0
1.25
2.5
5
7.5
10
Miles
N
W
E
S

- Local Streets – These include all the roadways not covered in one of the classes above. They allow direct access to homes, businesses, and to adjacent lands. Through-traffic is generally discouraged from using these streets, although such traffic does use them when arterials and collectors become congested or blocked. To minimize construction and maintenance costs, local streets are designed with less concern for connectivity from street to street, narrower geometrics, and other lesser standards. The lesser standards could be reduced further except for the requirements of emergency vehicles. Traffic control devices (stop signs) are sometimes used to discourage through traffic, but this is not advisable as a rule.

Functional Classification Process

The Federal Highway Administration, FHWA, defines Functional Classification as the process by which streets and highways are grouped into classes, or systems, according to the character of service they are intended to provide. Basic to this process is the recognition that individual roads and streets do not serve travel independently in any major way. Rather, most travel involves movement through a network of roads. It becomes necessary then to determine how this travel can be channelized within the network in a logical and efficient manner. Functional Classification defines the nature of this channelization process by defining the part that any particular road or street should play in serving the flow of trips through a highway network.

The Functional Classification process is generally undertaken every ten years as a comprehensive update of the entire system aligning with the U.S. Census Bureau's delineation of the Census Defined Urban Area. The most recent update to the system in our region was started in 2013 and completed by RMAP staff in 2014. RMAP was responsible for working with each local jurisdiction to coordinate and compile a listing of the Functional Classification System of the region. Once the information was collected and analyzed internally it was then brought before RMAP's Technical Committee for recommendation and RMAP's Policy Committee for adoption. Additionally, the information and maps were also presented to the City of Rockford Planning and Development Committee for their input and recommendations for the Rockford system. RMAP also coordinated with the Ogle County Planning Department and Stateline Transportation Study, SLATS, to assure that the Functional Classification system was consistent and had logical termini across jurisdictional boundaries.

RMAP Resolution 2014-2 states that the RMAP Policy Committee officially adopted the Functional Classification System as submitted to the committee on 1/30/2014. The Geographical Information System, GIS, file and updated list was submitted to IDOT and after a few adjustments by IDOT with RMAP concurrence the final Functional Classification list was forwarded on to the Federal Highway Administration (FHWA) for approval. Effective 5/28/2014 the 2014 Functional Classification System was approved as submitted to FHWA by IDOT staff in Springfield Illinois. These changes have resulted in an increase of .65 miles of Freeway and Expressway, 14.49 miles of Other Principal Arterial, 12.24 miles of Major Collector, and 6.68 miles of Minor Collector for the Rockford area. These changes have also resulted in a decrease of 16.59 miles of Minor Arterial and 17.47 miles of Local Roads for the Rockford area.

Functionally Classified roads are eligible to use Federal funding from the Surface Transportation Program-Urban, STP-U, allocation (approximately $2 Million is allocated to the Region annually). The amount of STP-U funds that are allocated to the Region are fixed and does not fluctuate based on the number of Functionally Classified road miles but rather is dependent on the Region's population as calculated by the U.S. Census Bureau every 10 years.

Map 8-A shows the currently existing system of principal arterial, minor arterial and collector roadways in the MPA. The roadways fit into the classification system as described above. All recent updates, modifications and changes to the 2014 Functional Classification system were coordinated by RMAP staff for both Boone and Winnebago County. Ogle County Planning was also a part of the Functional Classification process and RMAP shall use that data for economic modeling and forecasting scenarios for development in the region.

Roadway Standards

Spacing

This Plan follows traditional system design standards for arterial roadway (principal or minor) spacing. Consequently, they are usually spaced at roughly one-mile intervals. Arterials are usually located on the section lines (Public Land Survey System).

Collector roadways are also spaced at one-mile intervals, i.e., roughly ½ mile from and equidistant between each arterial. Physical features, property lines, cultural features and developer demands sometimes make it necessary to deviate from this rule. In some instances, additional collectors are designated and required. This can occur where arterials have been spaced more than a mile apart, where a single continuous collector is not possible, where traffic generation is expected to be heavy or where the nearby arterials have strict access limitations.

Local streets are spaced to provide access to all existing lots, or lots which may be potentially created through the subdivision process. In some areas that were developed many years ago, collector streets were not defined or were poorly defined or spaced. In these areas, streets that were originally designed as local streets are often functioning as collectors. Where such streets have good connectivity with the overall system, these streets are designated as collectors in the Plan. When making improvements to these streets in the future, they will be designed to accommodate the heavier traffic to the extent possible while minimizing adverse impacts to adjacent properties.

Responsibilities

The construction of arterial roadways is generally the responsibility of government. Typically, the full cost of both right-of-way (ROW) acquisition and construction of arterials is borne by the local, state or federal governments. However, in some instances private developers are asked to bear a share of these costs. This is appropriate where the development is a high traffic generator and/or where the development will benefit greatly from some enhancement of the arterial facility. Costs for extra ROW, extra turn or deceleration lanes, special signalization and frontage or local roads are examples of costs that developers might be asked to bear in conjunction with arterial improvements.

The ROW and costs of collector roadways are generally borne by private sector developers, although, sometimes local government will participate. Examples include unusually expensive bridge structures or connections to the collector arterial system not necessary to the development but beneficial to the overall transportation system.

Right-of-Way and Construction Standards

ROW and construction standards for the various road types are based on local subdivision regulations and applicable state and federal standards. In most cases, local and collector streets are built on 60-70 feet of ROW with 25-35 feet of pavement. Arterial roadways are considerably wider, depending upon expected traffic volumes and speeds, the degree of access limitations and other factors. Construction standards also vary depending on expected traffic weights and volumes, topographic, soil and drainage conditions, and differing governmental requirements.

RMAP promotes the identification and preservation of ROW as needed for roadway projects. The determination of future ROW needs and the preservation or advanced acquisition of ROW has been an ongoing activity for many years. State and county governments are most active in this role and this is common practice for arterial roadways. ROW for collector roadways is acquired through the land subdivision/development process.

System Connectivity

This plan stresses the connectivity of arterial and collector roadways both within the Region itself and the connectivity of these roadways to state and national systems. Early in the development history of roadway systems in the Rockford area, many major roadways were developed with offset intersections or on grid systems that are canted with respect to the Public Land Survey System grid. The plan continues to propose numerous improvements designed to eliminate intersection offsets, especially on the arterial system, and projects that minimize the confusion and traffic flow interruptions caused by the canted grids. This plan also continues to propose collector layouts with as much roadway continuity and connectivity as possible. This plan stresses the elimination of collector offsets, for the sake of reducing intersection congestion, safety and traffic flow problems.

RMAP also promotes street name connectivity. Multiple names on continuous streets are a problem related to road connectivity within the Rockford area. One of the most glaring examples is the Fairview Avenue collector. Although continuous over three miles, this street has five names: Chelsea Avenue at the north end, Fairview Boulevard north of State Street, Fairview Avenue south of State Street, Peter Avenue south of Seventh Avenue and 31st Street south of Charles Street. Throughout the Rockford area, there are dozens of multiple-named streets.

A major concern of RMAP is the connectivity of local streets within neighborhood subdivisions. In the past, these streets were allowed to end in cul-de-sacs. This creates a greater need for multiple collector level streets which also means that there are more entrances and exits to these subdivisions off of arterial roadways. This greatly slows down traffic and decreases the optimal design flow of the roadway. RMAP advocates to its member jurisdictions to eliminate the excessive use of these types of design features in the subdivision platting process. Local streets should maintain a maximum level of connectivity not only for Level Of Service, but also for safety concerns such as fire and ambulance service. Cul-de-sacs make it extremely difficult for emergency services to both access the neighborhood and maneuver the streets once within.

Recently the One-Way Pair system that dominates many urban cores has drawn fire from those trying to find their way to goods and service located in these areas. The complaint stems from the difficulty in finding and accessing business. One-Way Pairs were used to move high amounts of traffic in, out, and through an area efficiently but do not necessarily focus on retaining those passengers for retail purposes. Mainly designed for large trucks servicing manufacturing businesses within the region, major one-way pairs are possibly becoming obsolete due to less truck and car traffic moving through dense urban cores. There is now a shift in ideologies to turn these pairs into two-way traffic once again. This is especially true of Downtown Rockford with the opening of the Main Street pedestrian mall. This would give two-way access to businesses along this corridor without having to loop around the entirety of Downtown. Studies are currently underway that will determine the feasibility of converting the Church/Wyman/Main Street system while the others are slated for review in the near future.

Life-Cycle Costs

Life cycle costing is the process of identifying and quantifying all costs associated with a structure over its useful life. An examination of life-cycle costs can have two benefits. First, when evaluating proposed new structures, it provides a more complete estimate of the total costs and allows more valid comparisons of alternatives. A project which is inexpensive to build but is expensive to maintain or has a short life span may be less cost-effective than a project that is more expensive to build but less expensive to maintain or has a longer life span. Second, life cycle costing can be a useful aid for forecasting and programming future funding needs for the maintenance of existing structures. Either way, funding resources can be better conserved.

Truck Routes

Throughout the Rockford MPA, a subsystem of roadways has been designated for truck routes. The purpose of this system has been to limit truck traffic to those roadways that are geometrically designed and properly constructed to accommodate large heavy vehicles hauling freight (see Map !UPDATE REFERENCE!) In addition, the noise and vibration created by such vehicles is undesirable in residential areas.

In 2010, a new law was passed by the State of Illinois changing the way truck routes are designed and marked. This new law mandates that all truck routes are to be designed to allow for a carrying capacity of 80,000 Lbs. In addition to this, all roads are now considered truck routes unless marked by signage. This is a new challenge to local municipalities since truck routes were previously marked and deviation from those routes could only be made to access specific delivery locations. Local municipalities are currently contemplating how to comply with this legislation. In the meanwhile all major bridge replacements and road construction/reconstruction projects within the region will be designed to the new standards.

National Highway System

The National Highway System consists of roadways important to the nation's economy, defense, and mobility. The National Highway System (NHS) includes the following subsystems of roadways (note that a specific highway route may be on more than one subsystem):

- Interstate : The Eisenhower Interstate System of highways retains its separate identity within the NHS.

- Other Principal Arterials: These are highways in rural and urban areas which provide access between an arterial and a major port, airport, public transportation facility, or small map of the NHS in the U.S. Access a PDF version of the entire NHS by clicking on this imageother intermodal transportation facility.

- Strategic Highway Network(STRAHNET): This is a network of highways which are important to the United States' strategic defense policy and which provide defense access, continuity and emergency capabilities for defense purposes.

- Major Strategic Highway Network Connectors: These are highways which provide access between major military installations and highways which are part of the Strategic Highway Network.

- Intermodal Connectors: These highways provide access between major intermodal facilities and the other four subsystems making up the National Highway System. A listing of all official NHS Intermodal Connectors is available here

The National Highway System (NHS) includes the Interstate Highway System as well as other roads important to the nation's economy, defense, and mobility. The NHS was developed by the Department of Transportation (DOT) in cooperation with the states, local officials, and metropolitan planning organizations (MPOs).

For more information, see Map 8-B.

National Highway System: Rockford, IL

MAP 8-B

U.S. Department of Transportation
Federal Highway Administration

- Eisenhower Interstate System
- Other NHS Routes
- Non-Interstate STRAHNET Route
- STRAHNET Connector
- Intermodal Connector
- Intermodal/STRAHNET Connector
- Unbuilt NHS Routes
- MAP-21 NHS Principal Arterials
- Census Urbanized Areas
- Department of Defense
- Water
- Airport
- Intercity Bus Terminal
- Ferry Terminal
- Truck/Pipeline Terminal
- Multipurpose Passenger Facility
- Port Terminal
- Truck/Rail Facility
- AMTRAK Station
- Public Transit Station

0 2 4
Miles
0 3.5 7
Kilometers

FHWA: March 25, 2015

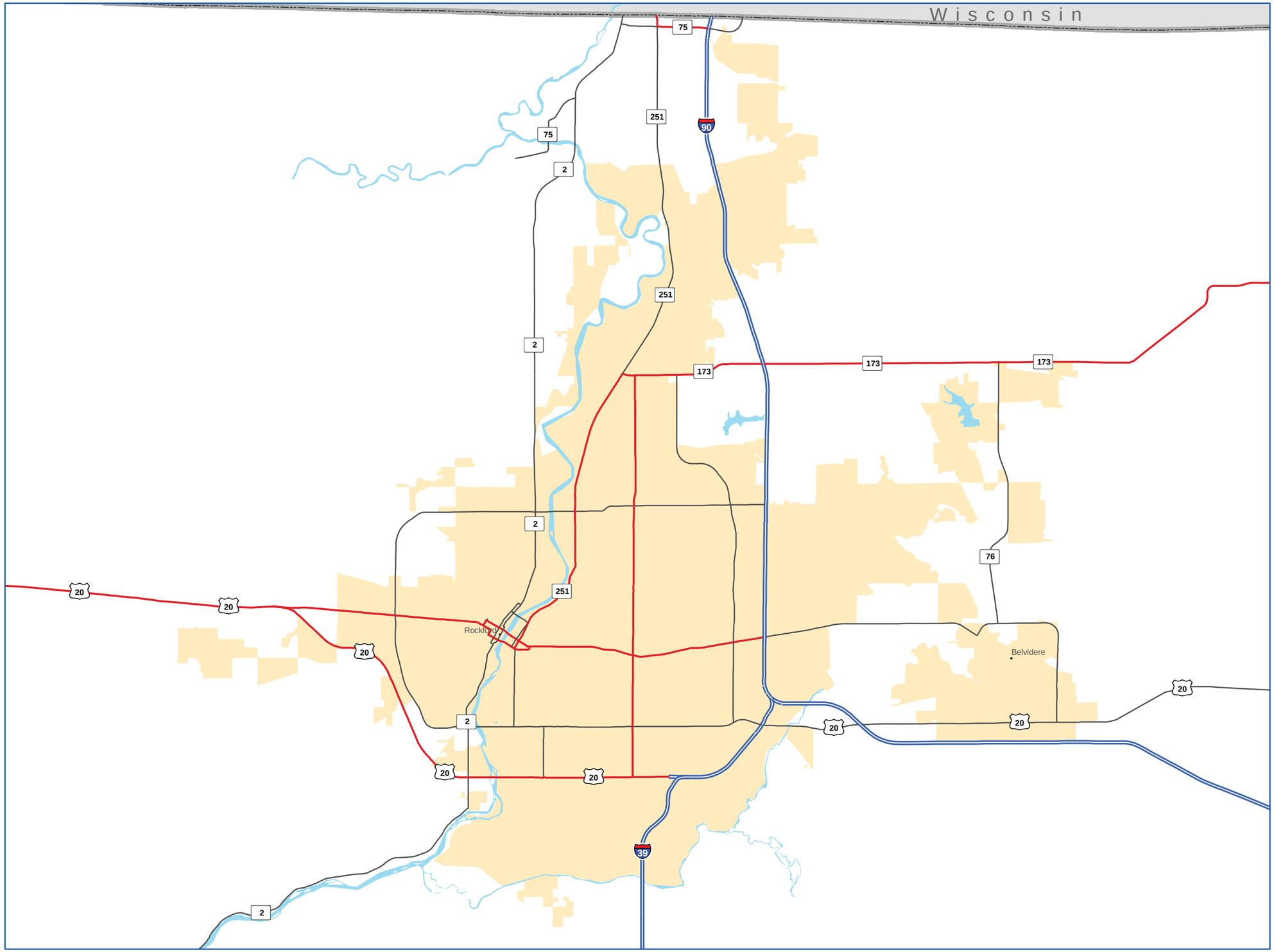


TABLE 8-1

Public Responsibility — Private Responsibility

P3 Options					
New Build Facilities	Private Contract Fee Services	Design Build	Design Build Operate Maintain	Design Build Finance	Design Build Finance Operate Maintain Concession
Existing Facilities	O & M Concession				Long Term Lease Concession

Strategic Regional Arterials

Strategic Regional Arterials (SRA's) are a network of highways designed to accommodate long distance regional traffic, to compliment a regions major transit and highway facilities, and to supplement the freeway system. IDOT's SRA concept was originally developed for Northeastern Illinois and is presented in the Strategic Regional Arterial Design Concept Report published by IDOT named "Operation Green Light". However, this concept could apply to other cities and regions throughout the State of Illinois.

Many of IDOT's current or existing arterials could be incorporated into an SRA system. SRA's may have widely varying characteristics. Existing rights-of-way, roadway features, land use, and access differ from route to route, and also may change from one segment of a route to another. The Bureau of Design and Environment Manual published by IDOT provides guidance in Chapter 46 for the planning and design of strategic regional arterials including specific design criteria and techniques encountered on SRA routes, which should be applied throughout the entirety of the system. The SRA system is designed to:

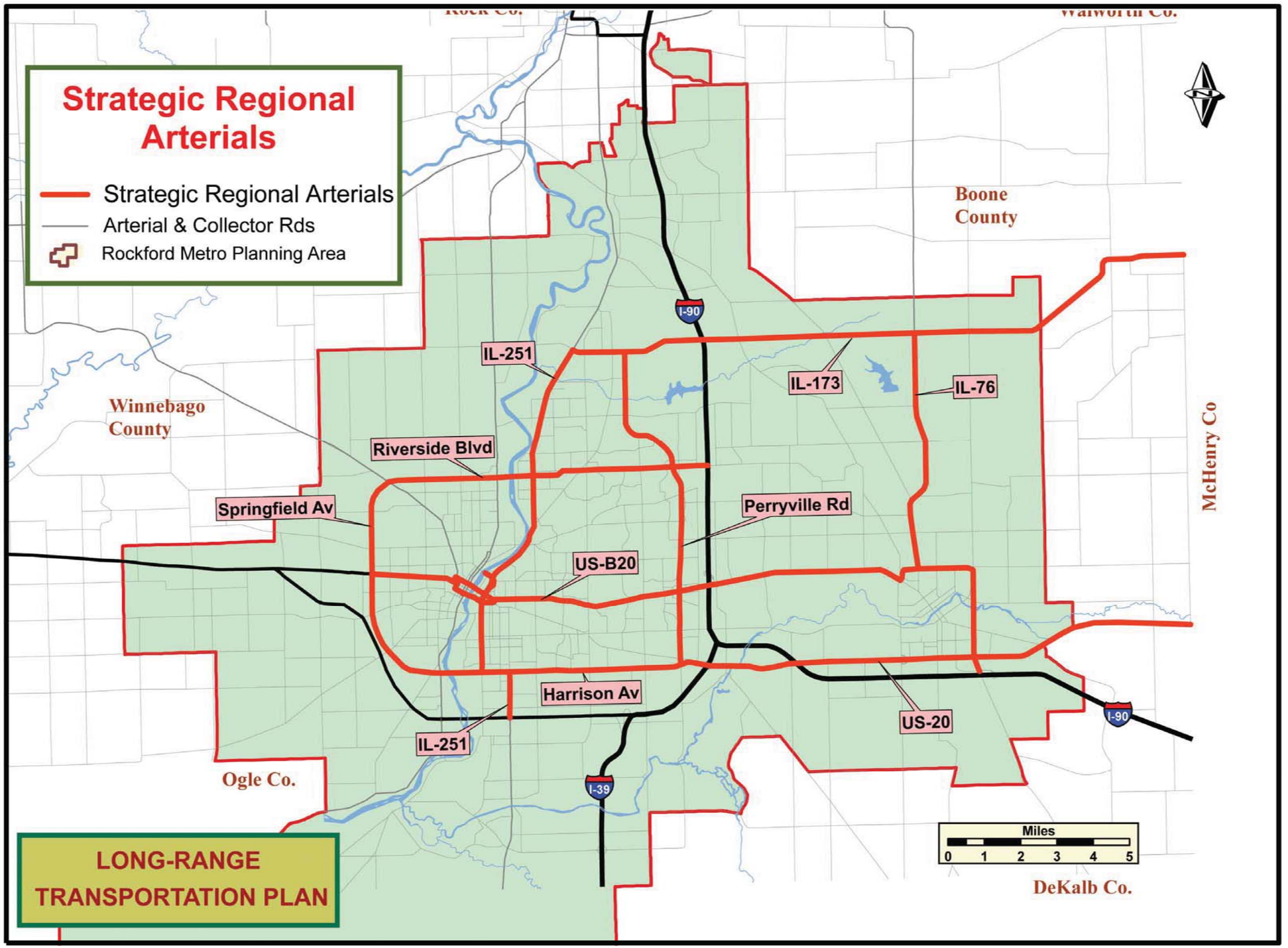
- Improve regional mobility by providing a comprehensive network of arterial routes designed to carry significant volumes of long distance traffic across a region,
- Complement a region's major transit and highway facilities by providing access for regional trips on these facilities, and
- Supplement the regional freeway system.

SRA systems were originally developed for exclusive use by IDOT District 1. However, RMAP has developed a system that capitalizes on the intent of SRA systems but to a lesser level in scale. See Map 8-B. The "Ring Road" is the Rockford Region's adaptation of the Chicago SRA System. This ring is comprised of Harrison Avenue, Springfield Avenue, Riverside Boulevard, and Perryville Road. State Street and Spring Creek Road bisect the ring thus giving it interior access routes. These facilities are under the jurisdiction of many different municipalities because they cover substantial distances as they circumnavigate the region.

These SRA's are designed similar to that of Chicago's system, with limited access, large lane widths, shoulders with ample ROW, and with higher speeds. They are first and foremost a passenger and freight mover. Many industrial businesses have located along this system to take advantage of mobility to and from major routes in the region: US-20, IL-2, IL-251, and I-90/39. It is important to keep the functionality of this roadway system at a maximum Level of Service (LOS) so that it remains the most efficient way to navigate long distances within the Urban Area.

Currently there are sections of the regions SRA network that are substandard and are either being reconstructed or studied further to return the facility to functional and acceptable levels. For example Riverside Boulevard had two bridges replaced in 2012, Perryville Road had three intersection signals upgraded in 2012, and Perryville Road also had a bridge replaced and construction engineering done in 2014. Harrison Avenue, which was selected by RMAP to receive STP-Urban funds, will be starting reconstruction in FY2015 from 20th Street to 9th Street for a total cost of $31,000,000. With the proper maintenance and upgrades our regions SRA networks can attract and retain business opportunities along these travel corridors for many years to come.

If in the future urban growth necessitates the expansion of the Rockford SRA system, additional roadways that can link to the current system and can serve these newly developed areas will have to be considered for inclusion into the system. At this time RMAP is satisfied with the current system and no additional linkages need to be added. If in the future linkages are added additional funding sources will need to be


Strategic Regional Arterials
Strategic Regional Arterials
Arterial & Collector Rds
Rockford Metro Planning Area
Rock Co.
Walworth Co.
Boone County
Winnebago County
McHenry Co
Ogle Co.
DeKalb Co.
I-90
IL-251
IL-173
IL-76
Riverside Blvd
Springfield Av
Perryville Rd
US-B20
Harrison Av
US-20
I-39
Miles
0 1 2 3 4 5
LONG-RANGE TRANSPORTATION PLAN

identified to ensure that the expansion of the SRA system does not subtract from the maintenance of the existing system which is required to be kept in a state of good repair.

Public-Private Partnerships

The region has a wealth of physical infrastructure, and maintaining it can be costly. Investments to achieve a state-of-good-repair of existing assets can extend the useful life of infrastructure and reduce lifecycle costs. Just as businesses invest in their physical assets, governments must invest in transportation infrastructure strategically and willfully. As a region, we must recognize that one of the most negative effects of sprawl is that it necessitates an ongoing need for new roads and other infrastructure to serve fewer residents in a given geographic space. Utilizing strategies such as infill development on underused or vacant parcels within the urban areas will decrease the need to build outside of the existing infrastructure and as a result, lessen the strain existing limited funding sources for maintenance.

Additionally, exploring a framework of how to develop a mix of funding streams that maximizes federal and state investment to leverage public/private partnerships could assist in the materialization of region wide infrastructure projects. Private sector partnerships are a new concept in transportation, and legislative changes are necessary to modify the culture of infrastructure development. Traditionally, transportation projects have only engaged the private sector in construction aspects of projects, and to some extent the design and maintenance of projects. The Regional Plan for Sustainable Development supports the idea of engaging the private sector in the areas of operation, maintenance and finance. Through the creation of these partnerships, select transportation investments could be prioritized for public/private funding which promote financial and environmental sustainability and would be infrastructure improvements . This process will also foster a healthy business climate that encourages private sector partnerships with local governments, spurs economic competitiveness and job creation and will utilize the strengths of the local labor pool.

Best Practices

Public-private partnerships (P3s) are contractual agreements formed between a public agency and a private sector entity that allow for greater private sector participation in the delivery and financing of transportation projects. Risks, rewards and resources are shared between government and private sector stakeholders engaged in this cooperative endeavor. Below is a graphic from the Federal Highway Administration (FHWA) that shows the different options of Public-Private Partnerships for transportation related projects.

In order to assist with the development and implementation of P3 for transportation projects, the FHWA's Office of Innovative Program Delivery is producing a P3 toolkit comprising of tools and guidance documents to assist in educating public sector policy-makers, legislative and executive staff, and transportation professionals. The P3 Toolkit will address Federal requirements related to P3s and four key phases in P3 implementation:

1. Legislation and policy;
2. Planning and Evaluation;
3. Procurement; and
4. Monitoring and Oversight.

Expanding the private sector role allows public agencies to tap private sector technical, management and financial resources in new ways to achieve public agency objectives. These objectives include greater cost and schedule certainty, supplementing in-house staff, innovative technology applications, access to specialized expertise, or access to private capital.

The private partner can expand its business opportunities in return for assuming the new or expanded responsibilities and risks. Some of the primary reasons for public agencies to enter into public-private partnerships include:

- Accelerating the implementation of high priority projects by packaging and procuring services in new ways
- Turning to the private sector to provide specialized management capacity for large and complex projects
- Transferring risk to the private sector
- Encouraging the use of new technologies and innovations developed by private entities
- Drawing on private sector expertise in accessing and organizing the widest range of private sector financial resources
- Providing access to private equity and commercial financing that would not otherwise be available to public sector project sponsors
- Encouraging private entrepreneurial development, and operation of highways and/or related assets

In further developing the capacity to include P3's in regional transportation planning projects, resources from the FHWA P3 toolbox should be used. These tools serve as a reference for decision-makers and practitioners seeking to understand P3s as a financing alternative for major capital projects and provides insight as to the concepts, inputs, key assumptions and outputs from evaluations of risk, financial feasibility and "value for money" analyses. Further information regarding FHWA's Public Private Partnership Toolkit can be accessed at http://www.fhwa.dot.gov/ipd/p3/index.htm

Working partnerships are an essential component to planning and implementation of transportation projects. RMAP has strong standing relationships with the Illinois Department of Transportation (IDOT), Federal Highway Administration (FHWA), Federal Transit Administration (FTA) and the Illinois Tollway Authority. Additionally, RMAP has been actively involved in the Tri-State Alliance. Through these partnerships numerous transportation investments have been made throughout the region providing a better network to move people and drive economic development. Recently, the Illinois Tollway Authority has made significant investment in the Rockford Region through its "Move Illinois: The Illinois Tollway Driving the Future" program. As part of their robust capital program, the Illinois Tollway Authority started the Rebuilding and Widening Project in 2013 on the Jane Addams Memorial Tollway between I-39 in Rockford and Randall Road. Construction has taken place between Rockford and Elgin. Within the Rockford Region, this improvement added a new lane to provide three lanes in each direction and the eastern segment of the project (Randall Road to the Kennedy Express Way) will add a new lane to provide four lanes in each direction. Coinciding with the rebuilding/widening project is the reconstruction of numerous mainline and local bridges to accommodate the new and widened tollway and the rebuilding of the Business U.S. Route 20/State Street Interchange.

The Rockford Region has also been actively involved with the Tri-State Alliance; a partnership organization that spans Northern Illinois, Northeastern Iowa and Southwestern Wisconsin. The mission of the Tri-State Alliance is to gather regional leaders to explore and address issues that affect commerce so that the quality of life is improved and that economic development is advanced in the Tri-State region with anchor cities being Rockford, IL; Janesville, WI; and Dubuque, IA. It is the goal of the Tri-State Alliance to work together to build a unified plan for:

- 4 lane divided highways
- Passenger and commuter rail
- Broadband infrastructure
- Rivers

Local agencies involved in this collaborative initiative include the Rockford Chamber of Commerce, Belvidere Area Chamber of Commerce, Growth Dimensions – Belvidere/Boone County, Rockford Area Economic Development Council and the Rockford Metropolitan Agency for Planning.

As a result of the successful nature of existing collaborative efforts within the Rockford Region, these partnerships should be held as an example of progress which will attract entities outside of the MSA to participate in future endeavors. As the Region strengthens networks both within and outside of the MSA, business, jobs, new residents and investment will be attracted to the area.

Strategic Highway Safety Plan

A Strategic Highway Safety Plan (SHSP) is a major component and requirement of the Highway Safety Improvement Program (HSIP) (23 U.S.C. § 148). It is a statewide-coordinated safety plan that provides a comprehensive framework for reducing highway fatalities and serious injuries on all public roads. An SHSP identifies a State's key safety needs and guides investment decisions towards strategies and countermeasure with the most potential to save lives and prevent injuries. SHSPs were first required under SAFETEA-LU, which established the HSIP as a core federal program. The Moving Ahead for Progress in the 21st Century Act (MAP-21) continues the HSIP as a core Federal-aid program and the requirement for States to develop, implement, evaluate and update an SHSP that identifies and analyzes highway safety problems and opportunities on all public roads.

A SHSP is developed by the State Department of Transportation in a cooperative process with Local, State, Federal, Tribal and private sector safety stakeholders. It is a data-driven, multi-year comprehensive plan that establishes statewide goals, objectives, and key emphasis areas and integrates the four E's of highway safety – engineering, education, enforcement and emergency medical services (EMS). The SHSP allows highway safety programs and partners in the State to work together in an effort to align goals, leverage resources and collectively address the State's safety challenges. (http://safety.fhwa.dot.gov/hsip/shsp/)

Local Application:

The IDOT Bureau of Safety Engineering began the process of updating the Statewide Strategic Highway Safety Plan and as well as developing County specific Strategic Highway Safety Plans in 2012. The development of County documents was incorporated as part of the overall Illinois statewide highway safety planning process with the goal of achieving zero fatalities on roadways in Illinois.

IDOT additionally requested MPO involvement during this process. While only Winnebago County was initially identified in the Statewide priority list for county specific plan development, RMAP requested that Boone County be included in the SHSP County Plan development process as well. IDOT concurred and began to develop an individual plan specific to Boone County, thus providing insight that would encompass the RMAP region.

To begin discussions and build awareness on the local level, IDOT Bureau of Safety Engineering, IDOT District 2, Boone County, Winnebago County and RMAP coordinated workshops to discuss this initiative. These various workshops convened elected officials, planners, members of the engineering, law enforce-

ment, education and emergency medical services (4E's), public mass transit agencies and the Illinois Tollway Authority. Current highway safety measures and programs pertaining to each respective agency were discussed as well as potential countermeasures that could be developed to further enhance existing safety initiatives.

The creation of the respective SHSPs for Boone County and Winnebago County has been a cooperative effort with IDOT collecting and presenting the various types of accident data (both through analysis of the information and maps depicted location) as well as affording local planning and implementation organizations the opportunity of provide feedback during the development process. Through this collaborative effort, both IDOT and local planning/implementation agencies have begun to explore methods in which to better coordinate data so as to clearly identify and develop effective roadway safety improvement/measures.

Next steps in this initiative include:

- Development of local implementation plans that utilize the information presented within the county specific plans
- Creation of an IDOT Safety Portal which will allow planning and implementation agencies to view accident related data to discern trends/analysis (access to this portal will be granted by IDOT)
- Potential development of a RMAP Safety Subcommittee to review HSIP projects and discuss countermeasures that will assist in promoting roadway safety and the reduction of accidents.

Conversations regarding roadway safety initiatives and accident countermeasures stemming from data presented in the SHSPs are ongoing and will continue to be incorporated into the transportation planning process within the RMAP Metropolitan Planning Area.

It should be additionally noted that IDOT has been working with the United States Road Assessment Program (usRAP) to further opportunities to increase the overall safety of the roadway network within Illinois. The usRAP process includes collecting crash information, listing of potential countermeasures, denotes where there is an opportunity to increase safety measures, and cost savings attributed to the implementation of potential countermeasures. This data will be used in coordination with the findings from the county specific SHSP to steer the development of programs and roadway projects aimed at improving roadway safety.

RMAP will work with IDOT and local agencies to coordinate information and further strategies while local partner organizations with implementation authority will have the responsibility to realize programs/projects. RMAP and its partner organizations will integrate a multi-stakeholder process to improve the attributes of roads, users, and vehicles to reduce traffic related deaths and life-altering injuries in the Rockford region and support the goals of the statewide Illinois SHSP.

PERFORMANCE MEASURES AND MAP-21:

During the development of this update to the RMAP 2040 LRTP update, final rule regarding performance measurement for the roadway safety was still pending release from USDOT/FHWA. The Notice of Proposed Rulemaking lists the categories in which State DOT and MPOs will be responsible for developing safety performance measures to assess performance.

The categories are the following:

1. Number of Fatalities
2. Fatalities per Vehicle Miles Traveled (rate)
3. Number of Serious Injuries
4. Serious Injuries per Vehicle Miles Traveled (rate)

Data analysis will be conducted using five-year rolling averages from sources such as the Fatality Analysis Reporting System and the Highway Performance Management System. Additionally, data provided through the county specific SHSPs for the RMAP Region will also be essential as these measures are further defined. RMAP is dedicated to work with Federal, State and local implementation partners to increase roadway safety throughout the Rockford Region.

Complete Streets

Complete streets are designed and operated to enable safe access for all users. They are safe, comfortable, and convenient. Pedestrians, bicyclists, motorists, and public transportation users of all ages and abilities are able to safely move along and across a complete street, ensuring no user is "left behind."

There is no one design prescription for complete streets. Elements that may be found on a complete street include: sidewalks, bike lanes (or wide paved shoulders), special bus lanes, comfortable and accessible public transportation stops, frequent crossing opportunities, median islands, accessible pedestrian signals, curb extensions, and more. A complete street in a rural area will look quite different from a complete street in a highly urban area. But both are designed to balance safety and convenience for everyone using the road.
Following the proliferation of the personal automobile, American roadways were designed to move as many vehicles as quickly as possible between destinations, without much consideration of the context of the surrounding land uses. It is now readily apparent that this auto-focused design has failed to meet the needs of an increasingly growing segment of the traveling public. For some people owning an automobile

is simply cost prohibitive; a growing number of the nation's aging population is facing decreased mobility; some want safer opportunities for their children to walk or bike to school; some want greener, more sustainable options. In 2005 the National Complete Streets Coalition was formed in order to promote low cost retrofit options for existing roadways and to ensure that all new roadways are designed to provide safe access for all users.

Recognizing this need, in 2007, the State of Illinois adopted a "Complete Street Law" (Public Act 95-0665). This new law provides the framework for Illinois municipalities, counties and metropolitan areas to establish new policies and standards to incorporate transportation facilities for all types of users into their planning, programming and implementation documents, so that pedestrians, bicyclists, motorists, and public transportation users of all ages and abilities are able to safely move along and across a complete street. In March 2010, US-DOT reinforced this position by stating that "every transportation agency, including DOT, has the responsibility to improve conditions and opportunities for walking and bicycling and to integrate walking and bicycling into their transportation systems."

Benefits of Complete Streets

- Foster Strong Communities
  Complete streets play an important role in livable communities, where all people regardless of age, ability or mode of transportation feel safe and welcome on the roadways. A safe walking and bicycling environment is an essential part of improving public transportation and creating friendly, walkable communities.

- Encourage Walking and Bicycling for Health
  The National Institutes of Medicine recommends fighting childhood obesity by establishing ordinances to encourage construction of sidewalks, bikeways, and other places for physical activity. A recent study funded by the National Institutes of Health found those who lived in walkable neighborhoods got 30 to 45 minutes more exercise each week than those living in low-walkable areas. Residents of walkable communities were also less likely to be overweight or obese.

- Improve Safety
  A Federal Highways Administration safety review found that streets designed with sidewalks, raised medians, better bus stop placement, traffic-calming measures, and treatments for disabled travelers improve pedestrian safety. Some features, such as medians, improve safety for all users: they enable pedestrians to cross busy roads in two stages, reduce left-turning motorist crashes to zero, and improve bicycle safety.

- Climate Change and Oil Dependence
  The potential to reduce carbon emissions by shifting trips to lower-carbon modes is undeniable. The 2001 National Household Transportation Survey found 50% of all trips in metropolitan areas are three miles or less and 28% of all metropolitan trips are one mile or less: distances easy to walk, bike, or use a bus or train. Yet 65% of the shortest trips are now made by automobile, in part because of incomplete streets that make it dangerous or unpleasant for other modes of travel. Complete streets would help convert many of these short automobile trips to multi-modal travel. Simply increasing bicycling from 1% to 1.5% of all trips in the U.S. would save 462 million gallons of gasoline each year. Using transit has already helped the United States save 1.5 billion gallons of fuel each year since the early 1990s, which is nearly 36 million barrels of oil.

Types of Complete Streets Policies

As of 2013 over 610 jurisdictions in the nation have adopted a Complete Streets policies. Just like the treatments themselves, Complete Streets policies can come in many forms with varying degrees of enforceability. Following are the most common types of policies:

A Resolution of Support is issued by a governing or policy body. Resolutions are non-binding official statements of support for Complete Streets. These resolutions do not require any action, so they are often a critical first step in gathering support to furthering Complete Streets initiatives in the future. This type of policy can be enacted at the municipal, county, MPO or state level.

An Ordinance legally requires the needs of all users to be addressed in transportation projects, and updates city code to reflect this accordingly. They are legally binding and enforceable by law. Ordinances may be passed by all implementing agencies, including municipalities and counties.

Updating Design Guidelines/Manuals to incorporate Complete Streets principles is the most effective means for ensuring Complete Streets become widely implemented construction and maintenance standards. Updates of this nature may be a lengthy process. In 2010 IDOT's Bureau of Design and Environment revised its design manual to incorporate complete streets standards and treatments. Local municipalities may work in consultation with IDOT to develop local design guidelines to integrate Complete Streets treatments into local project development.

Suggested Components of Complete Streets Policies

According to the National Complete Streets Coalition the following are 10 components that should be included in an ideal Complete Streets Policy:

- A vision for how and why the community wants to complete its streets
- Specifies that "all users" includes pedestrians, bicyclists and transit passengers of all ages and abilities, as well as trucks, buses and automobiles.
- Encourages street connectivity and aims to create a comprehensive, integrated, connected network for all modes.
- Is adoptable by all agencies to cover all roads.
- Applies to both new and retrofit projects, including design, maintenance, and operations for the entire right-of-way.
- Makes any exceptions specific and sets a clear procedure that requires high-level approval of exceptions.
- Directs the use of the latest and best design standards while recognizing the need for flexibility in balancing user needs.
- Directs that Complete Streets solutions will complement the context of the community.
- Establishes performance standards with measurable outcomes
- Includes specific next steps for implementation of the policy.

Statements such as considerations "shall" or "must" are stronger than "will be considered"; applies to all phases such as routine maintenance, rather than just new construction. The health of the network more important than one or two "good" complete streets. At the MPO level suggested wording includes that projects receiving money passing through the agency are expected to follow a Complete Streets approach.

Next Steps in Implementing a Complete Streets Policy

RMAP has long embraced the Complete Street concept and has made an effort throughout this LRTP and other planning documents to include the consideration of all users in the planning process. The Vital Signs RPSD included a goal for the region to develop and implement a regional Complete Streets policy in order to increase the amount of transportation choices.

According to FHWA, although street design standards usually are the purview of the State DOT and local governments, an MPO can assist those agencies through education and technical assistance to incorporate design elements that accommodate all users. An MPO can take a leadership role to establish regional policies that encourage complete streets design through a variety of programs and processes, and give funding preference to projects that reflect complete streets principles. Each MPO needs to decide if and how it will promote complete streets within its region, but its approaches can be creative and tailored to local circumstances.

Across the nation 31 MPOs have recognized policies that meet the suggestions of the National Complete Streets Coalition. RMAP will review these policies to help develop and formally adopt a Complete Streets policy at the MPO level, and will continue to encourage and assist the local municipalities and counties to develop and implement their own policies.

Future Improvements

This section discusses the proposed roadway system improvements over the 30-year time frame of this Long Range Transportation Plan. It is difficult to determine the exact year when these improvements will be made because such programming is dependent upon innumerable factors, including the pace and direction of community growth; the availability of funding; the state of the overall economy; and too many to list here. The need for these improvements will be comprehensively tested with the traffic simulation model, and the economic modelling software (for more on the Regional Economic Modeling Initiative or REMI, please see Section 4. The proposed roadway improvements are considered viable financially with respect to the projections of future revenue of this plan.

Project Categorizing and Cost Estimating

For cost-estimating purposes, the proposed roadway improvements were divided into categories as described below. Unit costs were developed for the various categories based on past similar projects and the professional judgment of the construction cost estimators and engineers in the Rockford Public Works Department. All project costs are provided in Year 2014 dollars.

- Capacity Expansion Projects – Capacity expansion projects are broadly defined in this LRTP to include any project that significantly increases the vehicular traffic carrying capacity of the system. These are projects that deserve special mention because they are more than maintenance, simple reconstruction, and/or minor geometric improvement projects (see Table Funding Sources for Roadway Improvements). While some of these projects add lanes miles and may tend to increase the use of single occupancy vehicles, they are nonetheless, essential to the continued development of a sound and efficient transportation system for the Rockford MPA. The projects that will add new lanes are considered the only viable alternative to increases in traffic likely to occur in the next 30 years. These projects will be subject to additional scrutiny as they approach pre-engineering stages. Several of the projects are necessary simply to provide an adequate basic road network in areas that are transitioning from agricultural to urban. Others are major intersection improvements that will improve connections and/or reduce major traffic conflict points in the existing system.
- New Interchanges – Six new interchanges are planned in the Rockford MPA in the next 30 years. These interchanges will significantly add to the capacity of the system. Three of these interchanges will improve access to the Interstate highway system at key locations in the MPA. The three other interchanges will have significant congestion mitigation and safety enhancement effects without adding significant lane miles.
- New Signalization Projects – With the projected changes in land use and the increase in vehicle trips, existing and/or new intersections will warrant traffic signals. Recent history indicates the MPA is averaging more than one new traffic signal a year.
- Right-of-Way Projects – Projects involving the purchase or reservation of land for future expansion projects.
- Signal Modernizations – The nature and, again, the expense of these improvements warrant a separate category. Existing traffic signals and/or timers will need to be upgraded to reflect the new technology and changes occurring in traffic signals. New timers and signals can improve traffic movement and safety. Over the 30-year planning period, all of the existing traffic signals will be replaced once.
- Existing Road Projects – Maintenance and improvements to roads or links that are being are being upgraded to handle more traffic or improve the roadways' ability to accommodate the existing traffic. Examples include roadways where existing lanes are being widened and roadways that are being raised in hierarchy from local to collector or collector to arterial. This category is further subdivided into Principal Arterial, Minor Arterial and Collector Road projects.
- River/Creek Crossing Projects – New and major reconstruction bridge projects. These are divided between Boone and Winnebago Counties.
- Railroad Crossings Projects – Mostly reconstructions, divided into Boone and Winnebago Counties.
- Enhancement Projects/Transportation Alternatives – Projects funded with their own special category of Surface Transportation Program funds and used for non-traditional transportation projects (bike and pedestrian facilities) or projects that enhance the aesthetics of a transportation facility or reduce the adverse impacts of such facilities.

Most of the proposed improvements have been carried over from past RMAP efforts. The selection is based on:

- Past and current professional judgment of the planners, engineers and transportation consultants who have conducted numerous technical studies over several decades.
- Past and currently adopted transportation plans that have repeatedly been subjected to review and comment by the general public, public officials, and professional transportation planners.
- The recent judgment of the RMAP Technical and Policy Committee, the RMAP Planning staff, the planning and engineering staff of the many com-

munities in the Rockford MPA and the input from the general public received during the transportation planning process.

To a great extent, the need for these projects has been verified with the RMAP computerized traffic simulation model. Moreover, additional testing of these proposed improvements will be conducted as the projects precede into the preliminary engineering stage, are selected for inclusion into the annual lead agency's Capital Improvement Program, and included in the annual RMAP Transportation Improvement Program (TIP).

In mature urban areas such as the Rockford MPA, the bulk of the system of highways and bridges has existed for many years. As such, most transportation improvements and project funding are aimed at maintaining the existing transportation network. Nevertheless, to keep pace with growth, development and increases in travel, a significant amount of funding must also be directed at: (a) adding new links or segments, (b) widening or expanding some of the existing links, (c) constructing major intersection improvements or adding new interchanges, and (d) other measures which add traffic capacity to the existing system. Most of the proposed improvements have been carried over from past RMAP efforts. The selection is based on:

- Past and current professional judgment of the planners, engineers and transportation consultants who have conducted numerous technical studies over several decades.
- Past and currently adopted transportation plans that have repeatedly been subjected to review and comment by the general public, public officials, and professional transportation planners.
- The judgment of the RMAP Technical and Policy Committee, the RMAP Planning staff, the planning and engineering staff of the many communities in the Rockford MPA and the input from the general public received during the transportation planning process.

Please note that this list is in no way intended to be comprehensive nor compulsory; these projects are the major improvements most likely to occur regarding roadways. These projects are of varying degrees of scale and cost, but all contribute in some manner to a regionally significant improvement to the roadway network. Most of the proposed roadway improvements fall into the categories described below. Unit costs were developed for the various categories based on past similar projects and the professional judgment of the construction cost estimators and engineers in the departments that would serve as the lead agencies for each individual project. All project costs are provided in year of expenditure dollars, which suggests that there may be some amount of cost variance should local projections and actual inflation or deflation rates vary significantly.

Table 8-2 illustrates the funds that were expended from various public funding sources that have been used for roadway improvements in the past five years. At the end of the table, the numbers have been adjusted to Year 2014. For example, $1 in 2010 had the buying power of $1.08 in 2014. Therefore, the Year 2010 funds were multiplied by 1.08 to convert to Year 2014. This table shows that the average annual public funding for roadway improvements was $41,398,650.30. The numbers in Table 8-2 were provided to RMAP by its partner agencies, the Counties of Boone and Winnebago, the Cities of Rockford, Loves Park, and Belvidere, and the Villages of Machesney Park and Roscoe. The County of Ogle has recently been incorporated into the RMAP MPA, however due to the limited nature of the roadways within the RMAP MPA, at this time, Ogle County's funding sources are not represented in this table for clarity purposes.

The revenue projections are provided in Year 2014 dollars. Likewise, the expedinture estimates are based on Year 2014 dollars. Adjustments for inflation and increased funding are taken into account in this fashion. It is assumed that the cost of goods due to inflation and the increased funding levels will balance each other out. Table 8-3 illustrates what types of projects on which these funds were used over the 5 year period. It should be noted from this table that a vast majority of the funds go towards preservation of the existing transportation system.

The average annual expenditure number ($41.4 million) is used to forecast funding for the roadway system. Over the 25-year period of this LRTP, $1.035 billion will be available for roadway improvements.

TABLE 8-2

Roadway Funding 5 Year Annual Average

	2010	2011	2012	2013	2014	Average
			FEDERAL			
ARRA	$2,035,689.39	$1,000.00	$70,000.00	$580,000.00	$0.00	*$537,337.88*
BRP	$45,000.00	$1,125,000.00	$955,000.00	$0.00	$0.00	*$425,000.00*
DCEO	$901,610.23	$3,540,793.01	$205,829.33	$4,700,821.69	$397,317.47	*$1,949,274.35*
EDA	$0.00	$0.00	$0.00	$419,686.73	$544,506.81	*$192,838.71*
HBP	$235,000.00	$80,000.00	$1,030,000.00	$477,746.90	$0.00	*$364,549.38*
HSIP	$0.00	$221,807.29	$128,842.59	$0.00	$0.00	*$70,129.98*
IEMA	$1,580,779.00	$1,975,975.74	$0.00	$0.00	$0.00	*$711,350.95*
MAJOR BRIDGE	$175,000.00	$0.00	$2,585,000.00	$0.00	$0.00	*$552,000.00*
OTHER FEDERAL	$603,029.33	$0.00	$0.00	$0.00	$497,592.63	*$220,124.39*
STP-R	$0.00	$0.00	$0.00	$1,216,000.00	$1,440,000.00	*$531,200.00*
STP-State	$0.00	$0.00	$119,000.00	$0.00	$0.00	*$23,800.00*
STP-U	$1,215,000.00	$37,850.42	$3,098,499.21	$811,561.52	$2,560,919.15	*$1,544,766.06*
FEDERAL TOTAL	**$6,791,107.95**	**$6,982,426.46**	**$8,192,171.13**	**$8,205,816.84**	**$5,440,336.06**	***$ 7,122,371.69***
			STATE			
EDP	$0.00	$168,000.00	$0.00	$0.00	$272,099.31	*$88,019.86*
IDOT	$2,938,137.34	$3,897,856.86	$3,924,574.55	$2,743,612.89	$2,208,525.78	*$3,142,541.48*
IL JOBS NOW!	$0.00	$102,192.00	$102,192.00	$102,192.00	$204,621.00	*$102,239.40*
ITEP	$0.00	$0.00	$2,370,000.00	$3,090,000.00	$0.00	*$1,092,000.00*
MBF & ICC	$41,456.72	$0.00	$1,184.21	$0.00	$0.00	*$8,528.19*
EECBG	$0.00	$569,000.00	$0.00	$0.00	$0.00	*$113,800.00*
TARP	$0.00	$70,000.00	$490,000.00	$0.00	$285,650.00	*$169,130.00*
STATE TOTAL	**$2,979,594.06**	**$4,807,048.86**	**$6,887,950.76**	**$5,935,804.89**	**$2,970,896.09**	***$ 4,716,258.93***
			LOCAL			
GENERAL FUNDS	$2,608,805.00	$2,541,604.25	$1,283,591.24	$4,650,775.97	$2,524,359.58	*$2,721,827.21*
GOB	$1,401,967.56	$646,464.34	-$5,000.00	$0.00	$0.00	*$408,686.38*
MFT	$6,942,269.14	$3,540,825.38	$4,630,124.35	$5,277,585.41	$3,514,450.87	*$4,781,051.03*
OTHER LOCAL	$2,801,030.53	$1,894,799.90	$5,246,682.01	$5,202,680.44	$5,618,025.37	*$4,152,643.65*
SALES/UTILITY TAX	$13,297,810.84	$14,425,149.64	$13,933,567.81	$19,336,203.37	$18,759,993.36	*$15,950,545.00*
TIF	$0.00	$0.00	$0.00	$203,257.15	$654,037.04	*$171,458.84*
LOCAL TOTAL	**$27,051,883.06**	**$23,048,843.51**	**$25,088,965.41**	**$34,670,502.34**	**$31,070,866.22**	***$ 28,186,212.11***
			TOTALS			
SUM TOTAL	$36,822,585.07	$34,838,318.83	$40,169,087.30	$48,812,124.07	$39,482,098.37	*$40,024,842.73*
Inflation	$1.08	$1.05	$1.03	$1.02	$1.00	
ADJUSTED TOTAL	**$39,768,391.88**	**$36,580,234.77**	**$41,374,159.92**	**$49,788,366.55**	**$39,482,098.37**	***$41,398,650.30***

FORECAST FOR 25-YEAR PLANNING TIME HORIZON: ***$1,034,966,257.44***

TABLE 8-3

Roadway Expenditures by Project Type: 5 Yr. Average

Work Type	Amount	Percent
Bridge	$4,913,979.03	12.28%
Drainage	$249,350.77	0.62%
Engineering	$3,295,023.02	8.23%
Enhancement	$1,358,754.56	3.39%
Intersection Improvement	$2,467,333.16	6.16%
Land Acquisition	$156,554.52	0.39%
New Construction	$1,681,702.07	4.20%
Other	$930,675.28	2.33%
Reconstruction	$7,821,711.66	19.54%
Rehabilitation	$367,032.36	0.92%
Resurfacing	$9,108,146.46	22.76%
Safety	$103,067.16	0.26%
Utility	$7,571,512.68	18.92%
Total	*$40,024,842.73*	100.00%
Inflated Total	**$41,398,650.30**	
25 Year Forecasted Total	***$1,034,966,257.44***	

Making funding estimates for next year, let alone the next 25 years, is a difficult task. There are unforeseen factors that can cause these sources to change. Near term forecasts are typically more accurate than long-term forecasts. Past funding levels may not be a good predicator of future funds. Indeed, the political landscape surrounding MAP-21 and its reinstatement or replacement is far from certain at this time. The changing nature of funding helps to explain the need to update the LRTP every five years. Still, using the sum total of the average expenditures over the last five years is considered the most believable tool for forecasting.

The funding projection is based on the average annual sum total of all funding over the last five years. The average annual sum total is used as opposed to forecasting the individual funding sources, since funding of individual sources is sporadic from year to year. A review of Table 8-2 will reveal that there are very few line items that show a consistent year-to-year trend. In addition, especially as regards federal sources, funding that is ample may become non-existent at some point in the future. Likewise, other funding sources not currently available may develop in the future. By averaging all the funding sources, it is assumed that the funds which will increase/decline and disappear/appear will balance one another out. The last five years are used in making the average as opposed to a longer period because recent trends are considered a better predictor of future funding levels.

Funding projections can be based on past averages or trends. With this LRTP it was decided to forecast based on the sum total average. Using a trend analysis would show much higher funding amounts in later years, leading to an overestimation of the available funding. Thus, it was decided to avert this potential misstep and use the sum total average in making the future projection.

To note, RMAP has not historically reviewed and made forecast of roadway system operation and maintenance costs, primarily due to the complexity of undertaking such an effort. There are varied and numberous things to be considered with the operation and maintenance costs, including:

- Highway patrol and related law enforcement
- Accident investigation and management
- Traffic data collection and analysis
- Street sweeping
- Pothole repair
- Striping and lane marking
- Signal maintenance and timing
- Roadway signing
- Sidewalk and alley repair
- Maintenance and administration
- Storm sewer and detention pond construction/maintenance
- Snow removal
- Mowing and weed control
- Trash and debris pickup and disposal

Undertaking a review of all these costs and performing a forecast of future funding needs is beyond the scope and capabilities of this LRTP.

Table 8-4 shows the list of proposed roadway improvements over the next 25 years. Table 8-5 shows the cost of these improvements, and adds to them the cost of other factors, including upgrading of traffic signals and maintenance of the existing system of Functionally Classified roads. As can be seen, the cost to the region over the next 25 year period is a substantial one, but a necessary one in order to not only maintain the roadways as they currently stand, but to expand them in order to meet with the growth, demand, and economic development that will occur in that same timeframe. The total cost to the Region for the projects in Table 8-4 plus the maintenance of existing facilities, new signalization projects, and the acquisition of right-of-way, is estimated at $2.969 billion

It should be noted that the total carried over from Table 8-4 as Capacity Expansion in Table 8-5 omits several of the project costs. Projects from Ogle County, due to the previously noted complications preventing the inclusion of Ogle County's overall funding from previous tables, have been redacted from the funding total to maintain balance and consistency within this LRTP. Similarly, projects from Table 8-4 that are listed in the description as underway or in some state of completion have been redacted, as those funds have already been allocated, and in some cases, disbursed. Though the projects were deemed crucial enough by local partners to remain in Table 8-4 until their final completion, it would be incorrect to list their costs towards the future.

TABLE 8-4

#	Project Area	Limits	Improvement	$ (Millions)	Funding	Justification
1	20th Street Viaduct	20th Street & Railroad Viaduct	New Construction	$20.00	F/S/L	The 20th Street viaduct has been a major pinch point for both local and industrial/commercial traffic on the City's south side. The project creates a new railroad bridge structure sending the railroad over the roadway, improves the existing alignment, and makes necessary improvements to the approaches.
2	6th Street	1st to 23rd Ave	Reconstruct/Repair	$10.00	F/S/L	Conversion to 2-way operation.
3	6th Street	Whitman to 1st	Reconstruct/Repair	$4.00	F/S/L	Conversion to 2-way operation.
4	9th St	Charles St to Harrison Ave	Reconstruct/Repair	$15.00	F/S/L	Conversion to 2-way operation.
5	Airport Dr	Kishwaukee St to Beltline Rd	Reconstruct & widen to 4 lanes	$4.40	F/S/L	Current two-lane rural roadway inadequate for truck and vehicular traffic of airport and surrounding growing industrial complex
6	All World Way	off Willowbrook Rd. North of Rockton Rd.	New Construction	$0.90	L/S	Encourage economic development in the area and provide infrastructure/utilities needed for industrial development
7	Alpine Rd - N. section	Riverside Blvd to Spring Creek Rd	Reconstruct	$21.30	F/S	Signal timing and other Congestion Management System approaches are inadequate to handle forecasted traffic in this critical section of the National Highway System.
8	Alpine Rd - S. section	Newburg Rd to US-20 (Bypass)	Reconstruct & intersection improvement (at Harrison-Newburg/Broadway)	$30.00	F/S	Signal timing and other CMS approaches inadequate to handle forecasted traffic in this critical section of the NHS
9	Alpine Rd Bridge	@ Keith North Branch	Reconstruction	$2.00	F/S/L	Reconstruction to triple box culvert with raised road profile
10	Alpine Rd Bridge	@ Keith South Branch	Reconstruction	$1.50	F/S/L	Reconstruction to triple box culvert with raised road profile
11	Alpine Road Bridge	Over Forest Hills Road	Rehabilitate Bridge	$1.80	F/L	Repair deteriorated bridge to maintain accomodation of heavy traffic volumes
12	Argyle Rd	Riverside to Harlem Rd	Reconstruct & widen	$8.50	F/S/L	Widen to three lanes with full improvements. Work with township on improvements
13	Auburn St	Springfield to Rockton	Reconstruct 4 lane section	$7.50	L	Reconstruct 4 lane concrete section
14	Barker Road and Short Road	Byron to Kennedy Hill Road	Reconstruction	$3.00	L	Increased traffic and upgraded functional classification
15	Bauer Pkwy- Elmwood Crossover	IL-2 to Elmwood Rd.	New Construction	$1.60	L	Corrects a short offset of an existing and future arterial, necessary for system continuity/connectivity and to accommodate urbanization in the area.
16	Baxter Road	Lindenwood to Mulford	Intersection Improvement and Widening	$4.90	S/L	Accommodate growth and encourage economic growth
17	Bell School Rd	Mill to Argus	Reconstruct & widen to 4 lanes	$5.00	F/S	Basic rural to urban conversion necessary to accommodate land use changes
18	Bell School Rd	Spring Creek to Old Creek	Reconstruct & widen to 4 lanes	$8.50	F/S	Basic rural to urban conversion necessary to accommodate land use changes
19	Bell School Rd	Riverside to Harlem Rd	Reconstruct & widen	$15.00	F/S/L	Reconstruct and widen
20	Beltline Rd	Kishwaukee Rd to Falcon Rd	New construction	$6.50	F/S/L	This road will have to be rebuilt in conjunction with the new Runway 7R/25L at RFD
21	Belvidere Rd.	IL-251 to Willowbrook	Widen to 3 and 4 lane sections	$4.70	F/L	Accommodate anticipated growth in traffic volume
22	Broadway/15th/UP Railroad Crossing	5th Street - Kishwaukee	New Construction	$8.50	F/S/L	Construct new crossover that connects Broadway to 15th Avenue east of Kishwaukee. Development will allow Broadway direct access to 15th Avenue-Rock River Bridge.
23	Charles St Bridge	Hunter - 20th St	Reconstruct 3 box culverts	$13.00	F/S/L	Reconstruct 3 box culverts and associated pavement
24	Church Street Redevelopment	Cedar to John Street	Change Road to 2 Way Travel	$2.00	S/L	Conversion to 2-way operation
25	Clifford Avenue	Between Hollis and Garden Plain	Bridge Replacement	$1.50	L	Bridge Replacement
26	East and Riverside	Intersection	Intersection Improvement	$3.00	F/S/L	Add left turn lanes for Riverside traffic
27	East Side Arterial	Lyford to Spring Creek	New construction	$4.74	F/S/L	Accommodate growth, encourage economic development and access to I-90/I-39
28	East Side Arterial	North of Orth Road to Harlem Road	New construction	$5.93	F/S/L	Accommodate growth, encourage economic development and access to I-90/I-39
29	East Side Arterial	Spring Creek Rd/I-90 interchange	New construction	$40.00	F/S	Accommodate future growth, provide connection to Lyford Ave, Bridge Construction
30	East Side Arterial	Spring Creek to Riverside	New construction	$4.74	F/S/L	Accommodate growth, encourage economic development and access to I-90/I-39
31	Elida St.	US 20 Bypass to Cunningham Ave.	Reconstruction and Resurfacing	$2.00	F/S/L	Increased traffic volume and deteriorating road surface
32	Forest Hills and River Lane	Intersection	Intersection Improvement	$0.40	F/S/L	Restripe to provide left turn lanes to reduce rear=end crashes
33	Forest Hills and River Lane	Intersection	Intersection Improvement	$3.00	F/S/L	Turn lanes needed for vehicles on Forest Hills. Improvements for pedestrian movement.
34	Graham Road Extension	Stone Quarry Road to Genoa Road	New Construction	$3.00	L	Provide east to west collector for development south of I-90
35	Grand Avenue	East - Walker	Reconstruction	$1.00	L	Reconstruction of 2 - lane local road
36	Harlem and Argyle	Intersection	Intersection Improvement	$3.00	F/S/L	4 point intersection between Harlem and Argyle Roads
37	Harlem Rd/Dawson Lake Rd Connection	Argyle Rd to Beloit Rd	New construction	$2.90	L	Necessary for system continuity and to accommodate suburban development in an area that used to be predominantly rural and agricultural
38	I-39	I-90 to Baxter Rd	Reconstruct & widen to 6 lanes	$273.50	F/S	Critical area south of the junction of three interstates, no other alternative feasible
39	I-90/I-39	Rockton Rd to Wisconsin State Line	Reconstruct & widen	$48.00	F/S	Widen to 6 lanes and bridge replacement (98% construction completed)
40	IL Rte 76 Extension	Caledonia Road to Townhall Road	New Construction	$33.60	F/S/L	Provide connection between IL Rte 76 and Townhall Rd. extension feeding into the new interchange at I-90 and Irene Rd.
41	IL-173	IL-251 to Beloit Rd	Reconstruct & widen to 4 lanes	$41.00	F/S	Necessary to accommodate thru and local traffic on this NHS-link in this developed/developing segment; turn lanes to be added for access and safety (Portion from IL 251 to Alpine is completed; Portion from Alpine to Beloit Rd. is 47% completed)
42	IL-2	Byron to Beltline Road	Reconstruction	$66.00	F/S/L	Increased traffic and safety concerns due to high volume of accidents
43	IL-2/N. Main St	Latham Rd. to Rockton Bypass	Reconstruct & widen to 4 lanes	$25.50	F/S	No alternative is adequate to handle local and thru traffic increases in the corridor

TABLE 8-4

#	Project Area	Limits	Improvement	$ (Millions)	Funding	Justification
44	IL-251/2nd St - 3rd 6th, 9th St and Longwood Reconfiguration	Whitman St Intg to Walnut Av	Reconstruct w/ crossover	$20.00	F/S/L	Interchange elimination
45	IL-251/Harrison Av	Kishwaukee St to 9th St	Reconstruct & widen to 5 lanes	$7.70	F/S	Center turn lane needed to safely accommodate multiple access points
46	IL-76	City of Belvidere north to Caledonia Road	Widen to four lanes	$9.00	S/L	Widen 2.75 mile stretch from two lane highway to a four lane highway.
47	IL-76	U.S. Bus 20 to IL-173	Reconstruct and widen to 4 lanes	$44.60	F / S	New interchange at I-90/I-173 may change future demands on this roadway
48	Irene Road	US 20 south to Graham Road	New three lane road	$1.80	S/L	Construct new three lane road to handle 80,000 pound vehicles for length of one mile.
49	Jefferson St Bridge	Madison St to Wyman St	Bridge Replacement	$40.00	F/S/L	Full reconstruction of substructure, superstructure and bridge approaches
50	Kishwaukee and Meridian Road	Intersection	Intersection Improvements	$1.00	F/S/L	Safety Improvements needed to improve a high accident intersection
51	Latham Rd./Ralston Rd.	IL-2 to IL-251	Reconstruction & widening including bridge over Rock River	$17.60	F/L	Widening required for accomomdation of anticipated growth in traffic on an important link between IL-2 and IL-251 because of the bridge over the Rock River. Ralston Rd. is an extension of IL-173. This project includes the bridge as we the railroad crossing.
52	Lindenwood and Kilbuck Road		Upgrade to designated truck route	$6.00	F/S/L	Needed improvements due to increased traffic to landfill
53	Longwood/9th St	Whitman to Charles St	Reconstruct/Repair	$4.00	F/S/L	Conversion to 2-way operation.
54	Loves Park Drive	East - Walker	Reconstruction	$1.00	L	Reconstruction of 2 - lane local road
55	Lyford Road	E. State Street - Spring Creek	Reconstruct & Widen to 3 Lanes	$6.00	L	Reconstruct rural road into modern three-lane cross section.
56	Madison Street Extension	Walnut to College	New Construction	$4.80	L	Develop a new east-west collector that will provide important connection to U.S. Business 20 (Walnut St.) and Morgar College Street.
57	Main St.	Elevator to McDonald	Reconstruct and Widen	$4.60	L	Widening for increased traffic, installation of storm sewer, curb & gutter and sidewalks.
58	Main Street Redevelopment	Park to John Street	Change Road to 2 Way Travel	$1.00	S/L	Conversion to 2-way operation
59	McNair Rd.	Elida St. to Falconer Rd.	Full Reconstruction	$2.50	F/S/L	Increased traffic volume and deteriorating road surface
60	Merrill Avenue	East - Walker	Reconstruction	$1.00	L	Reconstruction of 2 - lane local road
61	Mill Road	Hedge Road to IL-72	Reconstruction	$1.50	L	Increased residential traffic requires pavement upgrade
62	Morreim Blvd.	Irene Rd. to Town Hall Rd.	New Construction	$2.30	F/S/L	Collector route that will serve the industrial area and provide access to I-90 and US 20.
63	Mulford Rd.	Harrison Ave. to Sandy Hollow Rd.	Widen to 4 lanes	$9.00	F/S/L	Complete Missing Link in Truck Route System, necessary for system continuity and efficient urban freight managemen
64	Mulford Rd.	Harrison Ave. to Sandy Hollow Rd.	Construct grade separations at railroads	$6.00	F/S/L	Elimination of hazardous at-grade crosing and improve traffic flow
65	N. Forest Hills	From IL-173 to IL-251	Intersection Improvement at 251, 3 Lane Section, Bidirectional Turn Lane	$3.50	S/L	Increased traffic and overall expansion project.
66	N. Second and River Lane	Intersection	Intersection Improvement	$3.00	F/S/L	Improve Intersection for vehicle and pedestrian travel
67	N. Second Street	Forest Hills Rd to Windsor Rd	Reconstruction	$10.00	F/S/L	Reconstruction. Work with IDOT on access, engineering and design plans
68	Newburg Road	S. Appleton to Irene Road	Reconstruct & Widen	$12.00	F/S/L	Promote economic development of the area and expand industrial development.
69	Nimtz Rd	Perryville Rd to McFarland Rd	Reconstruct & widen	$3.50	F/S/L	Widen to three lanes with full improvements
70	Orth Rd	Interstate Blvd to East Side Arterial (Co. Hwy 5)	New construction & reconstruction	$1.40	L	Basic rural to urban conversion necessary to accommodate land use changes
71	Orth Road Extenstion	Poplar Grove Road to Denny Road	New Construction	$7.20	F/S/L	Provide mid-county east to west collector
72	Perryville Rd.	Bridge over UP Railroad	Replace Bridge	$2.20	F/L	Replacement of a functionally deficient bridge. A 2-lane bridge is needed to accommodate the planned widening of Perryville Rd.
73	Perryville Rd.	Harrison Ave to Riverside Blvd.	Widen to 6 lanes	$21.50	F/L	Perryville Rd has seen a great deal of commercial development and increase in traffic. The widening is necessary to accommodate the additional traffic volumes
74	Perryville Rd.	Intersection at Spring Creek Rd.	Add lanes and update signals	$3.00	F/L	Reduce congestion, improve traffic flow. Anticipate energy savings and reduction of crashes
75	Poplar Grove Rd. & Marengo Rd.	Intersection	Intersection Improvement	$1.00	F/S/L	Increase safety of intersection with history of multiple accidents
76	Poplar Grove Road Bridge	Kishwaukee River	Bridge	$2.00	S/L	Structure has deteriorated and need to be widened and have rec. path added
77	Riverside Blvd Corridor	Between Forest Hills Rd. and I-90	Widen to 6 lanes	$13.80	F/L	Improve access, accommodate growth of traffic volumes and promote a efficient flow of traffic
78	Riverside Blvd.	Material Ave. to Sage Dr./Renhart	Roadway widening, add lane	$14.80	F/S/L	Intersection Improvements and Frontage Rd. System in addition to roadway widening to meet increased demand
79	Riverside Blvd.	Rock River - Material	Widen to 4 lanes	$25.00	L	Widen to accommodate traffic with full improvements
80	Rock Cut Pass	From Perryville Road to IL-173	Reconstruct & Widen, 3 Lanes with dedicated turn lanes	$6.00	L	Provides a direct connection to IL-173/Swanson Road.
81	Rockton Avenue	Embury - Elmwood	Reconstruct & Widen to 3 Lanes	$6.00	L	Reconstruct two-lane collector to three-lane to serve expanding development and school district complex.
82	Roscoe Rd.	Old River Rd. to IL-251	Reconstruction and widen including bridge over Rock River	$18.30	F/L	Widening required to accommodate projected growth in traffic on an important link between IL-2 and IL-251. Considerable residential development has occurred along Ralston Rd. and more is expected.
83	Roscoe Rd./Old River	IL-2 to IL-75	Resurface and improve shoulders	$2.50	F/S/L	Accommodate truck traffic and improve riding surface

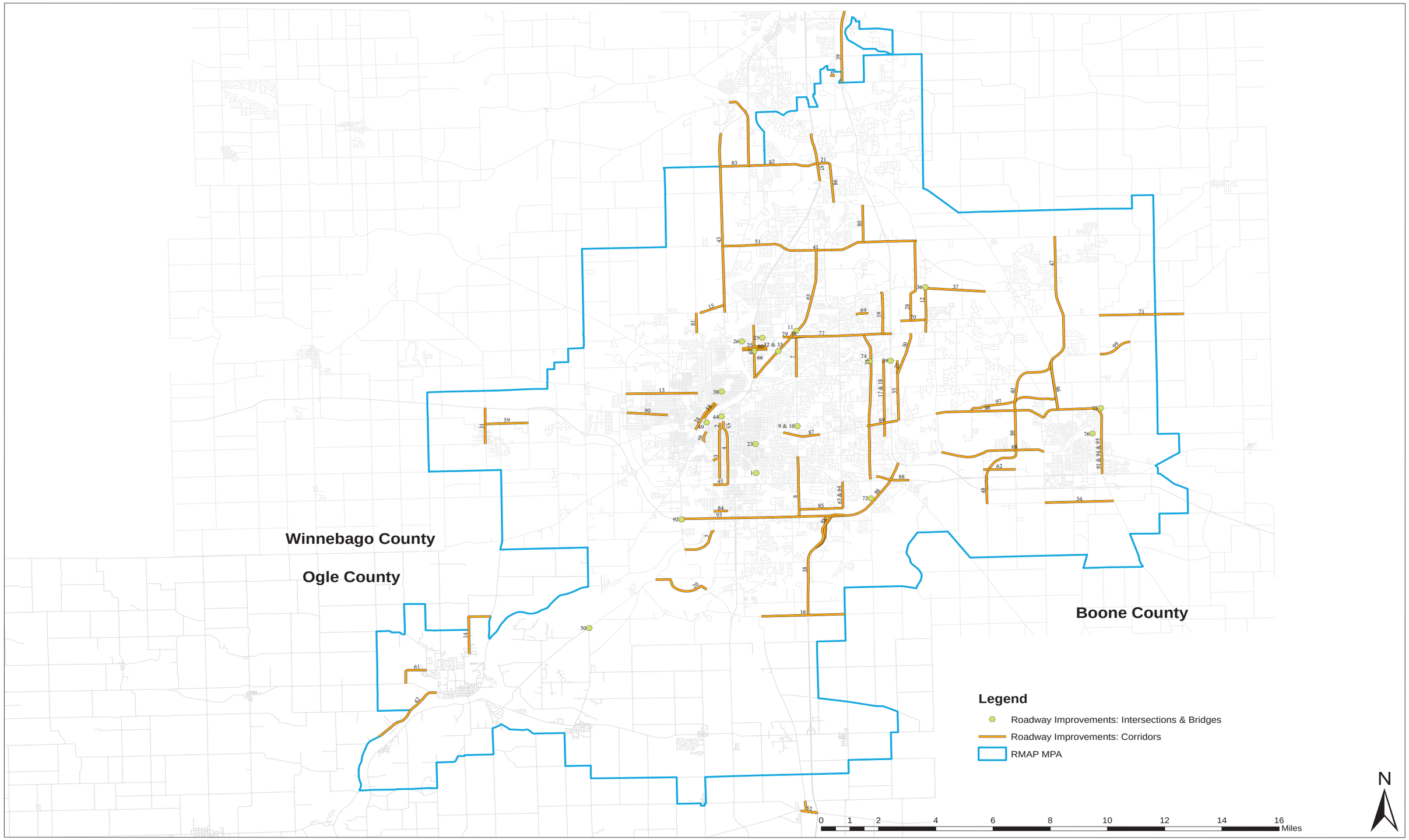
TABLE 8-4

#	Project Area	Limits	Improvement	$ (Millions)	Funding	Justification
85	Sandy Hollow Rd	Alpine Rd to Mulford Rd	Reconstruct & widen to 3 lanes	$5.60	F/L	Missing link in truck route system, necessary for system continuity/ to accommodate freight movement
86	Town Hall & Irene Rd.	IL 76 to I-90	New Construction	$12.00	F/S/L	Basic rural to urban conversion to accommodate land use changes from agricultural to urban.
87	US Bus 20	W. of Alpine to New Towne Dr.	New construction	$30.30	F/S/L	Interchange only alternative to accommodate traffic at congested/hazardous intersection; signal timing and less extensive geometric improvement inadequate.
88	US-20 (Bypass)	I-39 to I-90	Reconstruct, Widen, Interchange	$169.00	F/S/L	Increase capacity by adding lanes and new interchange at Harrison
89	US Bus 20/E. State St	W. of Perryville Rd. to Lyford Rd.	Reconstruct & widen to 6 lanes	$13.50	F/S	Widen short narrow link in this highly developed corridor where most of roadway is already 6-lanes; project will also improve safety and access to I-90
90	US Bus 20/W. State St	Independence to Springfield	Reconstruct & Widen to 5 lanes	$23.20	F/S/L	Increase capacity by removing parking, eliminating some intersections, adding turn lanes and other CMS strategies.
91	US Bus 20/W. State St	State St. to US 20 in Belvidere	Reconstruct & Widen to 5 lanes	$36.00	F/S/L	Increase capacity by removing parking, eliminating some intersections, adding turn lanes and other CMS strategies. 87% of construction is complete
92	US Bypass 20	@ ILL 2	Interchange Reconstruction	$17.30	F/S	Interchange reconstruction and bridge replacement
93	US-20 (Bypass)	IL-2 to I-39	Reconstruct & widen to 6 lanes	$55.00	F/S	Only alternative on this link in the interstate/NHS; necessary to accommodate regional thru traffic and local traffic
94	US-20 Business	Appleton to US-20	Reconstruct & widen to 4 lanes	$35.50	F/S/L	Reduce congestion and construction a consistent cross section to improve safety and traffic flow.
95	US-20 Business	IL-76 to US-20	Reconstruction and widening to 4 lanes	$45.00	S/L	Widen the two and three lane portion of the highway to four lanes and reconstruct bridge over Kishwaukee River
96	US-20 Business	Shaw Rd. to N. of State St. in Belvidere	Reconstruct & widen to 4 lanes	$57.00	F/S	Need to accommodate increases in intercity travel and changes from agricultural to urban in this corridor between Rockford and Belvidere
97	West Hills Blvd.	Distillery Rd. to IL 76	New Construction	$3.60	L	Link West Hills neighborhood to existing city, provides more pedestrian and alternative transportation opportunities than Bus. 20 corridor.
98	Willow Brook Rd.	Swanson Rd to Belvidere Rd	New construction	$4.70	L	This Plan also recognizes and reaffirms the Corridor Access Plan developed for the stretch of Perryville Road between Riverside Boulevard and Newburg Road.
99	Woodstock Road	Poplar Grove Rd to Grange Hall Rd	New construction	$2.40	F/S/L	Correct an offset to provide better continuity and connection

TABLE 8-5

Description	Type	Units	Costs in Millions		
			Unit Cost	Subtotal	Total
Capacity Expansion Projects (from Table 8-4)				1,421.11	
New Signalization Projects	Each	25.00	0.20	5.00	
Right-of-Way Acquisition	Sum	1.00	10.00	10.00	
Capacity Expansion					1,436.11
Maintaining Existing Facilities					
Signal Modernizations	Each	400.00	0.20	80.00	
Existing Road Projects					
Other Principal Arterials	Mile	161.00	3.50	563.50	
Major Arterials	Mile	189.00	2.50	472.50	
Major Collectors	Mile	292.00	1.00	292.00	
Minor Collectors	Mile	17.50	1.00	17.50	
River/Creek Crossing Projects					
Winnebago County- Major Bridge	Each	19.00	2.90	55.10	
Winnebago County- Other Bridge	Each	91.00	0.20	18.20	
Boone County- Major Bridge	Each	6.00	2.90	17.40	
Boone County- Other Bridge	Each	21.00	0.20	4.20	
Railroad Crossing Projects					
Winnebago County	Each	64.00	0.15	9.60	
Boone County	Each	16.00	0.15	2.40	
Maintaining Existing Facilities					1,532.40
TOTALS					2,968.51

MAP 8-D


Winnebago County
Ogle County
Boone County
Legend
Roadway Improvements: Intersections & Bridges
Roadway Improvements: Corridors
RMAP MPA
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Miles
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Technology

New and developing technologies have increidble impacts in the field of transportation that apply to many related fields as well. For the purposes of this Long-Range Transportation Plan, the discussion regarding technology will be limited to those with direct impacts on the transportation sector. Though there are indirect impacts from many technologies outside the transportation field, for example solar technologies impacting land use development patterns, they are beyond the scope and ability of this Long Range Transportation Plan. While not all of the technologies discussed below will relate to the roadway itself, they do relate to the vehicles and users on the roadway, and are thus situated herein.

Hybrid and Electric Vehicles

Particularly as relates to air quality and the emissions released from vehicles, hybrid and electric vehicle technology is a current and growing technology that has valuable implications. Hybrid electric vehicles (HEVs), plug-in hybrid electric vehicles (PHEVs), and all-electric vehicles (EVs), also called electric drive vehicles collectively, use electricity either as their primary fuel or to improve the efficiency of conventional vehicle designs. HEVs are primarily powered by an internal combustion engine that runs on conventional or alternative fuel and an electric motor that uses energy stored in a battery. The battery is charged through regenerative braking and by the internal combustion engine and is not plugged in to charge. PHEVs are powered by an internal combustion engine that can run on conventional or alternative fuel and an electric motor that uses energy stored in a battery. The vehicle can be plugged into an electric power source to charge the battery. EVs use a battery to store the electric energy that powers the motor. EV batteries are charged by plugging the vehicle into an electric power source.

The upshot of these technologies is a lower reliance on fossil fuels, an overall higher mileage per gallon of gas used, and less harmful pollutants released into the air. The more common and lower-cost these vehicles and the associated technologies become to implement, the more overall health benefits will be reaped, as the level of pollutants decrease. As discussed earlier in this green and environmental section, the impacts of such toxins as ozone, carbon dioxide and particulate matter can have a dramatic impact on the lives of not only those with asthma and other at-risk populations, but entire communities.

There are some hurdles and challenges for these types of vehicles, however. Their inital release has been at higher price points compared to fossil-fuel-reliant counterparts, which has tended to dissuade users from adopting them widely. Also, the infrastructure for these vehicles, particularly in the RMAP Region, is not as fully developed as it needs to be for widespread usage. Vehicle charging stations have not been heavily invested in, making longer or extended trips a difficult prospect at this time with such vehicles. As of this writing, there is no comprehensive map or database showing the public where electric vehicle charging stations exist. RMAP intends to investigate this matter, and will determine whether or not such a map or database can be produced. Other challenges include resistance to change and general unawareness of the technologies as options. These problems, as exist for most innovations, can only be solved by time, exposure, and increased marketing. That marketing can be anything from advertising campaigns, to support of such products and practices in local ordinances, codes, and plans such as this one.

Vehicular and Roadway Communications

Ranging from vehicles communicating with one another, to roadway officials informing drivers, communication is a powerful tool. As a cooperative approach, vehicular communication systems can be more effective in avoiding accidents and traffic congestions than if each vehicle tries to solve these problems individually. Vehicular communications is usually developed as a part of intelligent transportation systems (ITS).

Although the main advantage of vehicular networks is safety improvements, there are several other benefits. These networks can help in avoiding congestion and finding better routes by processing real time data. This in return saves both time and fuel and has significant economic advantages.

V2V (short for vehicle to vehicle) is an automobile technology designed to allow automobiles to “talk” to each other. Vehicles who discover an imminent danger such as an obstacle inform others. Electronic sensors in each car can detect abrupt changes in path or speed and send an appropriate message to neighbors. Vehicles can notify close vehicles of the direction they are taking so the drivers can make better decisions. In more advanced systems, at intersections the system can decide which vehicle has the right to pass first and alert all the drivers. Some of the immediate applications include warnings on entering intersections, warnings on departing highways, obstacle discovery, sudden stop warnings, accident reporting, and lane change warnings.

All of the above V2V communications allow for increased safety in one of two ways:

- Alert messages are sent to the driver of a vehicle who may then take appropriate steps to alter course or take immediate action, or;

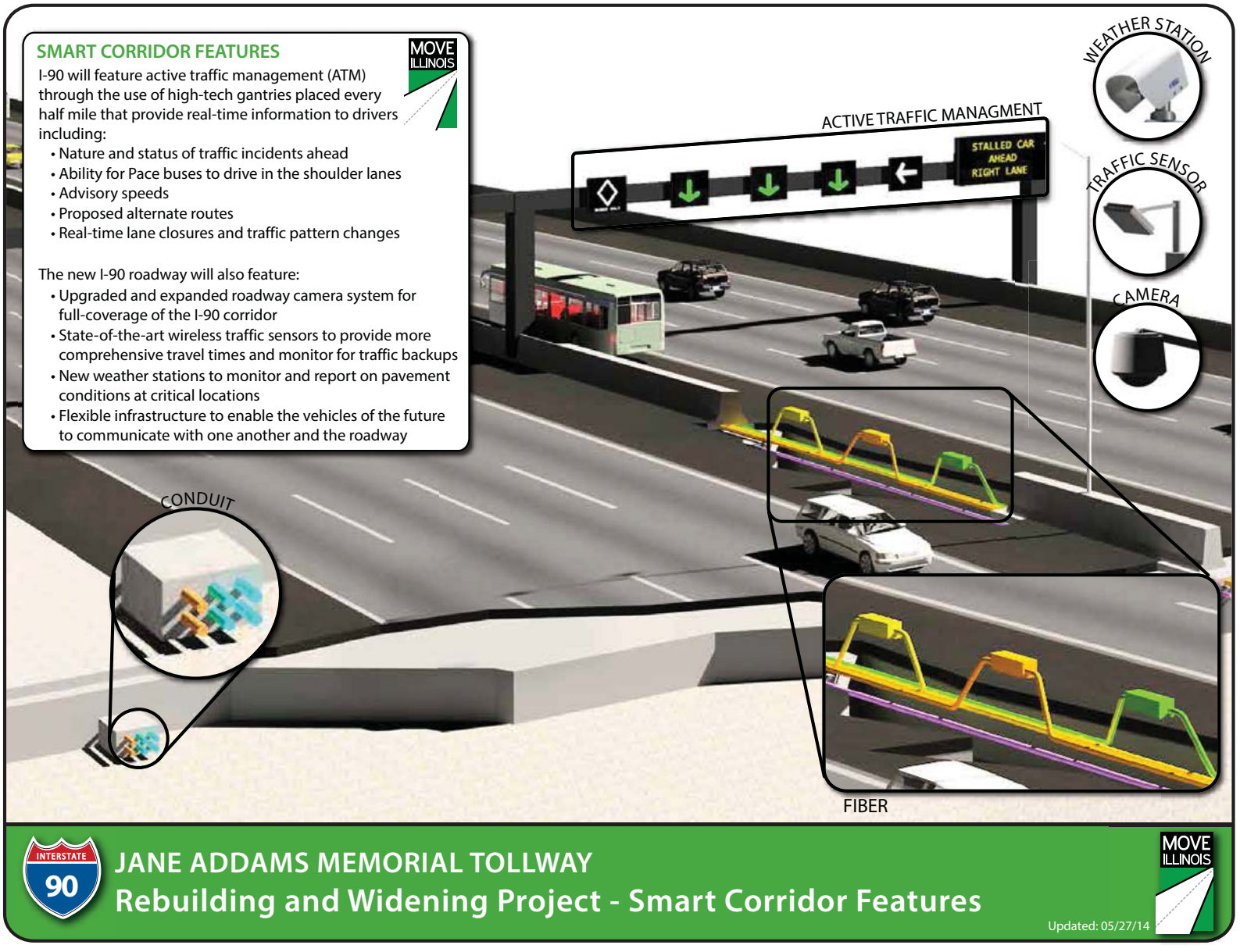
- Automatic systems can engage to prevent dangerous conditions, such as if a vehicle detects another vehicle stopping in front of it, brakes can be engaged before the driver would be able to.

Other types of communications revolve around the roadway officials and operators informing drivers of conditions around them. From alerting travelers to traffic collisions ahead to modifying speed limits in bad weather or heavy congestion, the ability to take information from a macro-level and distill it down to what a roadway user needs to know can keep users informed, aware, and safer than ever before. Some of these technologies, such as digital message signs, are more easily implemented by such agencies as the Illinois State Toll Highway Authority (ISTHA), with limited access roadways and long stretches of single-jurisdictional roads at their disposal, many of the hurdles for these technologies are avoided or minimized in those cases. Shown below and on the following page are a fact sheet and graphic discussing Active Traffic Management techniques being implemented by the ISHTA. However, smaller agencies have the capability to implement these ideas as well.

Some of the uses of these Active Traffic Management technques include:

- Variable speed limits/advisory speeds
- Adaptable traffic lights
- Automated traffic intersection control
- Accommodating ambulances, fire trucks, police cars, and buses
- Lane closure notifications
- Proposed alternate routes
- Weather advisories

These options all revolve around the same concept: more information to drivers is better. Armed with the knowledge of what is occuring on the road around and ahead of them, drivers can make better decisions not only about their own trips, but in relationship to the safety of everyone on the roadway as well. This should lead to overall fewer unnecessary movements and hasty decisions, leading to less congestion, and fewer collisions and other dangerous incidents.



JANE ADDAMS MEMORIAL TOLLWAY REBUILDING AND WIDENING PROJECT

A Smart, State-of-the-Art, 21st Century Corridor

The new Jane Addams Memorial Tollway (I-90) will incorporate the latest technologies available, including high-tech gantries placed every half mile between Barrington Road to the Kennedy Expressway, making the roadway safer and more efficient for the benefit of Tollway customers.

- **Active Traffic Management (ATM)**
  ATM will provide real-time information to drivers including nature and status of traffic incidents ahead, ability for Pace buses to drive in the shoulder lanes, advisory speeds, posted alternate routes and real-time lane closures and traffic pattern changes.
- **Upgraded and Expanded Camera System**
  Roadway cameras along I-90 will be upgraded from analog to digital high-definition, enhancing our ability to pan and zoom in and out to better respond to roadway incidents. The number of cameras is also being increased to provide coverage along the full length of the I-90 corridor from O'Hare to Rockford.
- **State-of-the-Art Wireless Traffic Sensors**
  New traffic sensors will be added to provide more comprehensive travel time information. Sensors will also be added to ramps along the corridor, enabling the Tollway to monitor them for potential backups. These systems will be available for integration with local communities to allow communication with local traffic signal systems.
- **Upgraded Digital Message Signs**
  In addition to replacing our current full-width, monochrome digital message signs with higher-resolution, full-color graphic-capable models, the new I-90 will feature smaller, four-color digital message signs to enhance communications with drivers at interim points throughout the corridor.
- **New Weather Stations**
  Weather stations along the I-90 corridor will be upgraded to state-of-the-art technology capable of providing pavement monitoring and weather conditions at critical locations, including bridges on the system, to monitor and report on icing conditions.

FLEXIBILITY FOR THE FUTURE

The new I-90 will include flexible infrastructure to enable the Tollway to add new "smart" features as needed or as they become available in the years to come.

- **Vehicle-to-Infrastructure Communication**
  While still years away, this feature could allow our infrastructure to communicate with cars over a wireless network, exchanging data about each vehicle's speed, location and direction of travel and providing feedback to drivers to react to developing situations. The roadway will include infrastructure elements that will accommodate the equipment needed to communicate with vehicles in the future.

Updated 03/21/14

For more information,
visit www.illinoistollway.com or call 1-800-TOLL-FYI

Other Technologies and Applications

Electronic tolling is an example of a technology that has already helped the RMAP region, and has the potential to be utilized to an even fuller extent. Electronic payment results in convenient payments and avoiding congestions caused by toll collection and makes pricing more manageable. Additionally, techniques like congestion pricing can be implemented using this technology, that would be impossible or impractical otherwise.

Congestion pricing refers to the practice of varying tolls based upon the amount of traffic on a roadway. Most commonly seen on limited access roadways, the idea is that lanes can be tolled based upon their flow speed. The faster the lane travels in relationship to the congestion in the other lanes, the higher the price of the toll. In this manner, those who wish to pay a higher fee to avoid congestion entirely may do so, and those who do not can continue to use the roadway as it stands. The balancing act of these prices is a difficult one; tolls that are so high that too few use the lanes actually add to congestion by effectively eliminating a lane, and tolls that are too low change nothing about the functionality of the road for the better. But when implemented effectively, these systems allow for a fairer, more choice-oriented tolling process that gives drivers the ability to select their own preference.

Other uses for some of the technologies in development and in current use are not for the average driver, but for local agencies and policymakers. Vehicle miles traveled (VMT) software has the ability to track how far a vehicle has traveled, and more. Though there are plenty of hurdles for such technology to be widely implemented, not the least of which being privacy concerns, there is the possibility for such tools to be used to more accurately and fairly implement a method of taxation or fee to fund highway maintenance and construction.

With other tools, electronic enforcement of speed limits, traffic signals, and other law enforcement techniques have become more common, and can reliably enforce laws while maintaining low overhead costs with greater overall consistency. The ability to assist emergency vehicles, particularly fire vehicles and ambulances, in traversing crowded intersections can also save time and lives.

Other vehicular technologies are being implemented that are related to reducing human error and fallability. Parking a vehicle, engaging cruise control, lane keeping assistance, roadsign recognition and more features within a vehicle are continuously being iterated upon to assist drivers and keep them safe. Other systems such as global positioning software (GPS) and emergency services at the push of a button, such as “OnStar” and other similar services, have begun to move from luxuries towards becoming industry standards. These services becoming more common takes some of the guesswork out of both travelling and providing service to travellers. GPS systems allow drivers to focus on the task of driving rather than worrying about their routes. Push-button emergency services also rely on GPS to track vehicles that require assistance, removing the time it takes for a driver or passenger to inform the provider of their location, possibly saving lives.

Even further delving into in-vehicle technologies, some more recent trends and developments are worth noting for their potential negative effect on roadways. Such features as USB connections for handheld devices, on-board video players, and digital heads-up-displays can add to the amount of things distracting drivers. Add to this the overwhelming prevalence of cellular phones and the rising prominance of handheld tablet computers, smartphones, and other devices that are potential distractions, and even tools that are designed to free up the driver’s attention, such as GPS systems, have the potential to add to the distraction if they are used improperly, carelessly, or at the wrong times. Drivers need to exercise caution and discretion in utilizing any functions of their vehicle or personal accessories not directly related to driving safely. On January 1, 2014, the State of Illinois enacted statewide legislation banning the use of all hand-held devices while driving. This shows the State’s commitment to take the necessary steps to further roadway safety beyond what is possible in such measures as the Strategic Highway Safety Plan, discussed in an earlier part of this Roadway Section.

SECTION 9
RAIL

Rail transportation, both freight and passenger, provides the region with the most promising opportunities for economic development, job creation, and return on investment. Freight and passenger rail transportation in the region is intricately linked and must be planned together. Much planning work has been devoted to rail transportation since the 2035 LRTP was completed in 2005. This section describes those work products, projects and investment options that capture the benefits of the Rockford region's industrial legacy and transportation geography.

The regional partners have made a considerable effort to plan, invest and construct significant components of the transportation system, paying particular attention to the key economic drivers at RFD and the Chrysler Assembly facility.

Both public and private sectors have made recent commitments to the development of rail transportation, highlighted by:

- The modernization and widening of the Jane Addams Tollway from I-39 to I-294 as part of the $12 billion ISTHA capital program, including a new full interchange at Irene Road.

- The 2103 construction and opening of the Morgan Street Bridge facility linking the IL-251 and IL-2 corridors, the Rock River and the downtown passenger rail projects. The project also includes the removal and modernization of the railroad diamond just south of the Joseph Behr industrial facility (known as Rockford Junction). The planning for these rail improvements was a high priority of the 2003 Rail Consolidation Study produced by the City of Rockford and RMAP.

- The acquisition by the Canadian Pacific (CP) Railroad of the Dakota, Minnesota & Eastern Railroad (DM & E) and the subsidiary holding of the Iowa, Chicago & Eastern (IC & E) Railroad.

- Legislation approved by the Illinois General Assembly in 2007 to create the Winnebago County Rail Authority under the auspices of the airport board at the Greater Rockford Airport (RFD).

- Approval of a 2009 Capital Program by the Illinois General Assembly that allocates significant funding to rail infrastructure upgrades, with $223 million targeted for the restoration of inter-city service Chicago to Rockford.

- Significant private investment by the four railroad companies that serve the Rockford region, Canadian Pacific (CP), Canadian National (CN), Union Pacific (UP) and Illinois Railway (IR). All four railroads have agreed to cooperate in a rail consolidation program that enhances key rail components, and eliminates redundant and non-critical rail assets.

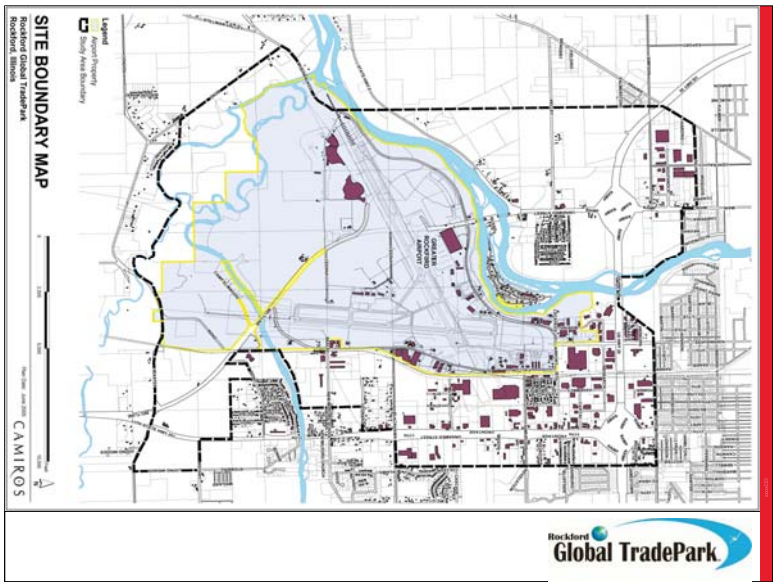
- The explosive growth in air cargo and freight activity at RFD and the prominence of RFD to regional economic development. The Rockford Global TradePark, which surrounds RFD, brings together a multitude of economic development tools such as Foreign Trade Zone #176, US Customs Port of Entry and, three economic recovery TIF districts. See Map 9-A.

- The purchase of the Belvidere Assembly Plant by the Fiat Corporation from Daimler-Chrysler that will help to capitalize on the over $400 million dollar investment made by Chrysler prior to the current economic downturn.

- Direct foreign investment by companies such as Wanxiang America Corporation (see http://www.areadevelopment.com/newsitems/3-25-2009/illinois-rockford-wanxiang-solar-panels.shtml) have been targeted for the Rockford Global TradePark.

- Large regional distribution centers, such as the Lowe's Distribution center in Rockford (see http://www.rrstar.com/homepage/x1910578202) are strategically positioned to take advantage of the transportation investments and the resultant benefits to the supply chain for their $80 million home hardware inventory.

MAP 9-A



- The implementation of regional comprehensive land use plans that call for transit-oriented development around passenger rail service as a prominent component of a regional economic development strategy. The proposed improvements are key drivers to the future sustainability and livability of the region.

- The Rockford Global TradePark's track record of success as the region's premier public-private partnership (P3). Public investment in infrastructure to date has been concentrated on core needs (sewer, water, roads) and development assistance for projects in the air cargo and roadway trucking industry. Current plans target the rail portion of the freight industry as the next business cluster ready to be developed.

Successful integration of freight and passenger rail transportation investments with land use and housing can:

- Save infrastructure cost, both initial cost and life-cycle cost
- Reduce congestion, improve mobility and increase access to transportation choices and important destinations
- Reduce household spending on transportation, which now consumes roughly 20% of a household budget (as much as 40% for low income residents)
- Significantly assist in the revitalizing and character of town centers or urban cores by promoting mixed use, mixed income development
- Have a profound impact on development patterns which can and should lead to more sustainable communities
- Improve the efficiency of goods movement
- Elevate the supply and location of affordable housing available to all persons
- Promote transit-oriented development and location-efficient development near job centers and public transportation centers

Existing Rail Assets

The Union Pacific Railroad
Previously known as the Chicago & Galena Union Railroad and the Chicago & Northwestern Railroad, the Union Pacific trackage in the region (known as the Belvidere Subdivision) consists of a single track between the West Chicago Yard at milepost 30.5 to the end of the line at milepost 93.5 just west of downtown Rockford. The Belvidere Subdivision has the following stations:

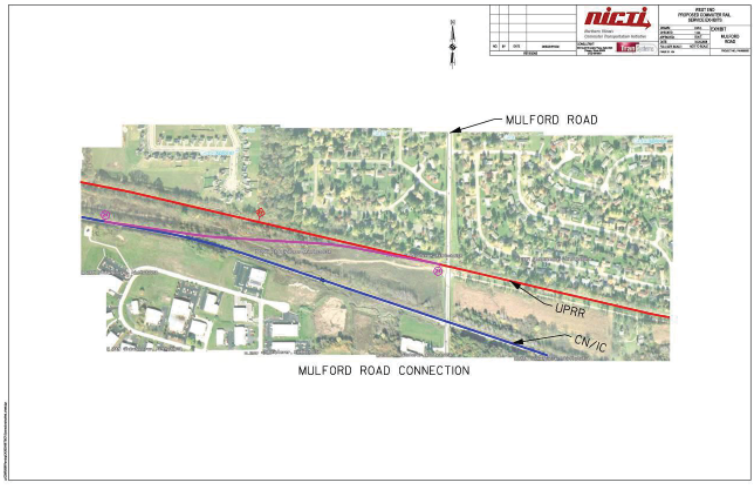
Stations Milepost

West Chicago Yard 30.5
Elgin Junction 41.0
West Elgin 41.8
Gilberts 50.8
Huntley 55.5
Union 62.7
Marengo 66.1
Garden Prairie 72.1
Belvidere 80.5
Rockford 92.4
End of Track 93.5

The UP also operates a short spur (known as the Kenosha-Davenport or K-D spur) along the east side of the Rock River between downtown Rockford and Windsor Road in Loves Park. Most of the existing UP customers west of the Belvidere Yard are located along the K-D spur.

A section of the UP trackage is located directly adjacent and parallel to CN trackage in the southeast quadrant of Rockford, starting at approximately Mulford Road and continuing westerly to approximately 9th Street. The original rail consolidation plan envisioned that the entirety of the Belvidere Subdivision west of Mulford Road would be retired from future operations in favor of another use, but the $223 million Amtrak improvement will now keep the entire Belvidere Subdivision trackage in operations. The rail consolidation plan also envisioned a crossover to the CN Freeport Subdivision. That plan will have to be revisited if, and when, passenger rail service can be restored to Freeport, Galena and Dubuque. At that time the crossover at Mulford Road may be needed, and is depicted graphically in Map 9-B.

MAP 9-B



The upgrade of the UP corridor into downtown Rockford potentially has significant benefits to the roadway system. Grade separated crossings at 20th Street, Broadway, 9th Street, Kishwaukee Street, 2nd Street and 1st Street could be modified or improved. The current viaduct that exists at 20th Street restricts roadway travel to a single direction at a time with traffic signals at each end alternately controlling northbound and southbound 20th Street traffic. The viaducts at Broadway and 9th Street are narrow and require roadway depressions to allow limited commercial traffic to use these arterial corridors. The bridge at 1st Street is a timber structure with a timber riding surface for vehicles on 1st Street.

The crossover connection at Mulford Road could also provide for UP freight traffic crossing the Rock River to be able to use the CN Rock River Bridge crossing, as the Illinois Railway (IR) and the Canadian Pacific (CP) do today.
The K-D spur, which currently allows a Rockford Park District trolley operation for leisure trips along the Rock River, could include streetcars or other urban circulator applications in the future.

The Canadian National Railroad

Previously known as the Illinois Central Railroad and the Chicago, Central & Pacific Railroad, the Canadian National trackage in the region (known as the Freeport Subdivision) consists of a single track between Munger Junction at milepost 35.7 and Freeport at milepost 115.6 . The Freeport Subdivision has the following stations:

Stations Milepost

Munger Junction 35.7
Coleman 39.0
Plato Center 46.8
Burlington 53.0
Genoa 61.4
Hart 62.6
Colvin Park 67.0
Irene 73.7
Perryville 79.1
Buckbee 84.6
Rockford 86.6
Seward 100.1
East Junction 115.1
Freeport 115.6

The CN operates the only east-west through rail line in the region and handles significant rail freight volume. The CN's yard facility is west of the South Main rail yards in the vicinity of Corbin Street, and therefore, has few elements of rail consolidation associated with it except the changes at Rockford Junction that were constructed along with the Morgan Street Bridge. The CN provides the rail assets that allow the other pieces of the rail consolidation program to happen. The CN's Rock River Bridge is a facility that is capable of being double-tracked, and therefore provides the best opportunity to serve freight traffic crossing the Rock River. There is ample opportunity to grow freight business in the Rockford region from the CN, especially since the CN's purchase of the EJ & E Railroad in Chicagoland cemented their ability to be a freight leader in the Midwest and in North America.

In 2009 the City of Rockford negotiated an agreement with the CN for 5.5 acres of land surrounding the old Illinois Central passenger terminal at South Main Street. This agreement would have allowed for the full development of a passenger station, but that is currently not being pursued as the passenger corridor has switched to the UP as described above.

The Canadian Pacific Railroad

Previously known as the Chicago, Milwaukee, St. Paul & Pacific, the Soo Line, the Milwaukee Road, the Iowa Chicago & Eastern and the Dakota, Minnesota & Eastern, the Canadian Pacific trackage in the region consists of two distinct pieces; (a) an east-west corridor between Chicago and Davis Junction, IL and thence west to Savanna, and (b) a north-south corridor between Janesville, WI and Rockford. The east-west corridor is referred to in this report as the IC & E. The north-south corridor is referred to in this report as the DM & E. The IC & E segment is known as the Davenport Subdivision and has the following stations:

Stations Milepost

Big Timber Road 39.8
Randall Road 40.3
Pingree Grove 41.9
Hampshire 50.9
Genoa 57.9
Davis Junction 79.9
Adeline 101.3
Kittredge 118.5
Plum 136.1
Savanna 138.3

The Illinois Railway (IR) provides trackage rights to the CP that allows freight traffic to connect between the IC & E segment and the DM & E segment. The rail consolidation pieces described above as part of the Morgan Street Bridge project also benefit the CP. The CP/IR combination provides a premier opportunity to the CP as a 2nd entry to Chicago and provides connections for freight to and from Kansas City. (http://rmapil.org/assets/documents/tiger_grant_application.pdf). Because the CP/IR corridor travels through the Rockford Global TradePark and RFD economic development opportunities in freight are enhanced. The Rail Planning and Engineering Study that was completed in 2009 provides significant detail on the cost and benefits of transportation investment related to this rail corridor.

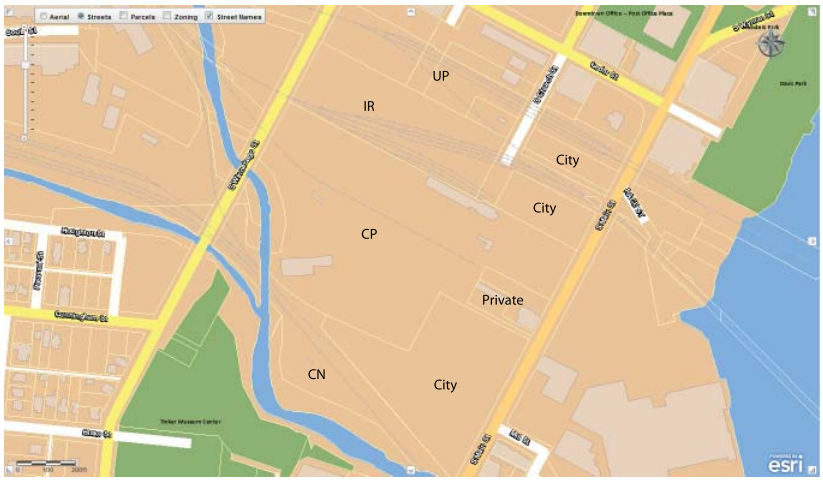
The relocation of the CP assets from the downtown rail yards to a modern facility is an ongoing planning process. In February of 2015 RMAP will release a rail terminal study that focuses on the Gensler–Wolfenberger tracts just south of RFD as the premier location for rail related industrial development as well as a suitable site for a replacement rail yard facility. (See section in this chapter on the Great Lakes Basin Belt Railroad).

The Illinois Railway, Inc.

The Illinois Railway, a subsidiary of Omnitrax, commenced operations on May 1, 2005 after purchasing the Illinois Railnet from owner North American Railnet. Illinois Railway operates four separate ex-BNSF lines in Northern Illinois. The Rockford Line has the following stations:

Stations Milepost
Flagg Center 0.2
Kings 4.8
Davis Junction 11.7
Camp Grant (RFD) 18.5
Rockford 23.5

MAP 9-C



MAP 9-D

The IR station at Flagg Center provides an interchange with the BNSF Railroad. The IR station at Davis Junction provides interchange with the CP and initiates the trackage rights agreement with the CP to connect the IC & E portion and the DM & E portion. The Camp Grant station at RFD, and the surrounding environs, provides the opportunity to introduce a modern rail facility that can be used to supplement, and hopefully replace, the legacy rail yards in downtown Rockford. This concept is shown graphically on Table 9-C, and complements the recent economic development projects in downtown Rockford, as shown on Table 9-D.

Analysis of Logistics and Industry Linkage in the Rockford MSA

The Rockford region is located strategically with respect to regional and national markets. The City of Rockford is 136 miles from Bloomington-Normal; 89 miles from Chicago; 75 miles from Madison; 89 miles from Milwaukee; 295 miles from St. Louis; and 123 miles from the Quad Cities. To take full advantage of this location requires a multimodal transportation system. The Rockford region has a good basic network of highways as well as multiple rail lines, a successful airport, public transit, and a growing system of pathways.

According to the recently completed CEDS (http://www.rmapil.org/assets/documents/ceds.pdf), the ten industries listed below seem especially well suited for targeting in the Rockford MSA. This conclusion is based on the results of a regional SWOT analysis, a Targeted Industry Cluster Study by Carter-Burgess in 2006, studying existing plans from the region, and the results of the focus groups conducted with key industries for the Rockford region. There are multiple reasons for concluding that these ten industries represent the region's best opportunity for developing a stronger economy in the near future. The Rockford region lies in the heart of the Midwest. Its central time zone location allows companies to reach its customers from coast to coast during normal business

hours. The 45 institutions of higher learning within a 75-mile radius of Rockford provide a skilled and readily available work force. The Rockford region's low cost of living and competitive wage rates benefit both employers and employees.

Industries Targeted

- Aerospace Production, Research, & Development
- Logistics
- Industrial Machine Manufacturing
- Metals Manufacturing
- Customer Service Centers
- Chemical Manufacturing
- Food Processing and Ag-Tech
- On and Off Road Transportation Equipment Manufacturing
- Green Industries and Alternative Energy
- Health Care

The Rockford MSA is uniquely situated in terms of geography in relation to its history of industrial and transportation investment. The regional strengths for existing and future industries include its central US location with proximity to Canada, Mexico and the points in the US between the Appalachians and the Rockies. The region exists along the major highway, air and rail networks that exist within the Midwest, and connections to points beyond. The residents and public authorities have endeavored to sustain the region's existing quality of life metrics. The most crucial area of concern is poor and inadequate rail infrastructure. Many RMAP-funded planning documents have been devoted to rail infrastrucrure and it remains a high regional priority.

The US has shifted toward distribution, order fulfillment and value added manufacturing, representative of an integration of diverse functions. As a direct result, innovations in supply chain management and logistics can only be enabled through infrastructure capacity and adaptability improvements. Rockford area industries, from furniture through automotive to hydraulic and aeronautical sectors, have long recognized that several stages of manufacturing add incremental value to goods, and these stages take place over varying distances. Labor intensive and concentrated manufacturing industries have been replaced by value added companies whose contributions take place through transportation. Retailers are linking on-line and in-store businesses through shared transportation networks and the multiple avenues afforded by transportation networks linked to information technology. Supplier staging, every two hours with a 99% reliability, become adaptable investment models for the Rockford region.

US transportation infrastructure has not kept pace with the vast increases in shipping and changing industry structure with its inherent operational adaptability, including freight rail. Today and in the future, supply chains are strategic with logistics as a tactical element for future survival. Supply chains are nested, with diverse lengths and transportation functions. As the industrial sector changes, distribution surpasses warehousing, timing and cost management lead to logistics built upon the supply chains that operate across the multiple transportation modes available. Industry continually evaluates its supply chains and logistics operations over the available and proposed infrastructure networks and capacity.

3PLs continue to expand their role to optimize freight modes, carrier loading schedules, warehouse management, while optimizing facility design, customs clearance, and outsourcing business functions. Each type of industrial facility, industrial site and building must be adaptable for building near transportation modes, for their continued general use, special use, and single use functions. Industrial space is less specialized on the outset fostering a greater opportunity in distribution and transportation. The facility to transportation connection leads to a demand for increased tradability among industrial properties. Therefore transportation infrastructure enables municipalities and the public sector to shape/guide growth and industrial participation. Adaptable industrial real estate enables this greater customization if connected to transportation infrastructure. Globalization trends and advances in supply chain management have moved industrial real estate to be part of a larger system. New business models, time value, schedule, production and distribution models, together with the transportation system interface, are more important to business and employment decisions in the competitive global marketplace.

Power generation is the number one customer of rail transportation firms—by a wide margin. In 2001, it represented 25 percent of intermediate (business) spending on rail transportation, or three times higher than the next-nearest industry, motor vehicle parts manufacturing. Power generation firms in this county consume goods such as oil, natural gas, coal, petroleum, and wind turbines. These firms spend most of their transportation dollars on pipeline and rail transportation.

Truck transportation firms are customers of rail transportation firms. This relationship is part of the region's intermodal linkages and network resources. The food production industry is also a key customer of rail transportation firms. The top twelve industries for rail transportation firms include candy (non-chocolate confectionary) manufacturers; cookie, cracker, and pasta manufacturers; snack food manufacturers; and dog and cat food manufacturers. The MSA is host to more than 30 food processing companies with over 2,500 employees. Paint and coating manufacturers are also a key customer of this industry. The Rockford MSA includes 119 trucking companies, 28

trucking operations, and 5 warehouses with a combined workforce of over 8,500 employees. There are 325,000 candidate employees within 30 miles of the MSA core.

Supply-demand ratio levels in the area are generally lower than those at the state level indicating less economic industry integration in the region compared with the state benchmark. This is not surprising considering the State of Illinois is considered well-integrated in these sectors. It does point out that further economic integration may be possible necessitating adequate transportation, especially in rail. The economic integration and closer supply chains would likely increase the efficiency of the goods movement system and decrease the costs to shippers and consumers, and may foreshadow a growth in local employment. Warehousing & Storage is also a growth industry for the region.

The Aerospace Research and Development (R&D) Industry sector serves as a major employer in the region, with complementary supply chains and shared use of transportation infrastructure. The human resource side of the Rockford MSA indicates opportunities for training and R&D collaboration. In the area there are two major Tier I aerospace supply companies, eighty Tier II and III companies, with a total of 6,000 employees. There are more than 4,000 engineers in the Rockford MSA, with over 500 in the aerospace sector alone.

Legislation was introduced in the Spring 2007 Session of the Illinois General Assembly to authorize the Greater Rockford Airport Authority (governing board of RFD) to establish a Rail Authority. The legislation, which ended up as House Bill 4, was adopted in October 2007. Under existing Illinois statute, the Transportation Cooperation Act of 1971, a path is provided to have the Rail Authority established by having units of local government execute an interagency agreement. This airport authority governing board adopted a resolution unanimously on June 26, 2008 to create the Authority and name an Executive Director. The Winnebago County Rail Authority fosters the growth of rail transportation aligned with industrial development. The Rail Authority's roles and responsibilities continue to evolve in response to regional challenges and opportunities. The Rail Authority's management platform guides investment and operations to link area industries with Class I railroads consistent with the practices for the state of the industry in Illinois. The Winnebago County Rail Authority reflects the commitment of the regional community to support transportation and industrial development. The Authority shares a bonding capacity linked through the existing powers of RFD.

Freight Rail Asset Consolidation

Each of the four railroad companies operating in the region have a role in the consolidation of redundant rail assets, the elimination of legacy rail facilities that are not designed for modern operation, the assembly of land that can lead to urban core redevelopment of blighted rail properties, and the creation of new, modern rail facilities that directly serve the key economic drivers of the region (RFD and the Chrysler Assembly Plant). In addition the rail consolidation program has significant safety benefits and allows the adaptive reuse of rail assets along the Rock River. The regional railroad ownership maps are shown in Table 9-E and 9-F.

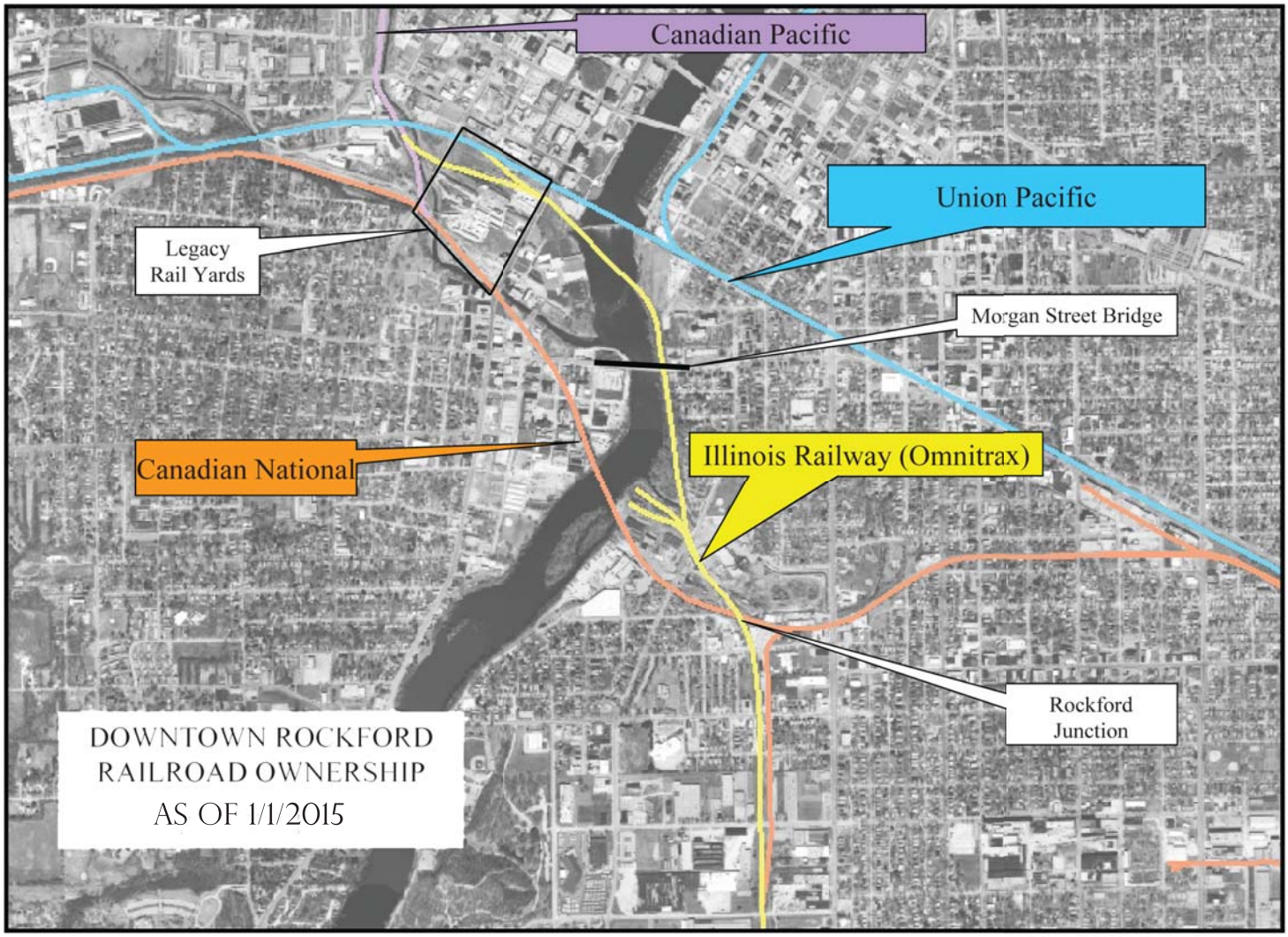
The Morgan Street Bridge project was the first large-scale project to include rail consolidation components. The railroad diamond at Rockford Junction (just south of the Joseph Behr facility) was removed and replaced with a modern connection using powered switches. This allowed for the CN Railroad to provide a Rock River crossing for both the IR and CP, allowing the adaptive reuse of the IR's Rock River Bridge to a bike & pedestrian facility. Specifically, these are the components of rail consolidation completed as part of the Morgan Street Bridge project:

- The Illinois Railway (IR) tracks, which run along the east bank of the Rock River and are grade-separated from Morgan Street, will no longer be used for rail operations. The IR traffic will use the Canadian National (CN) Bridge over the Rock River and then switch over to the Canadian Pacific (CP) to access their yard facility in the South Main Street railyards.

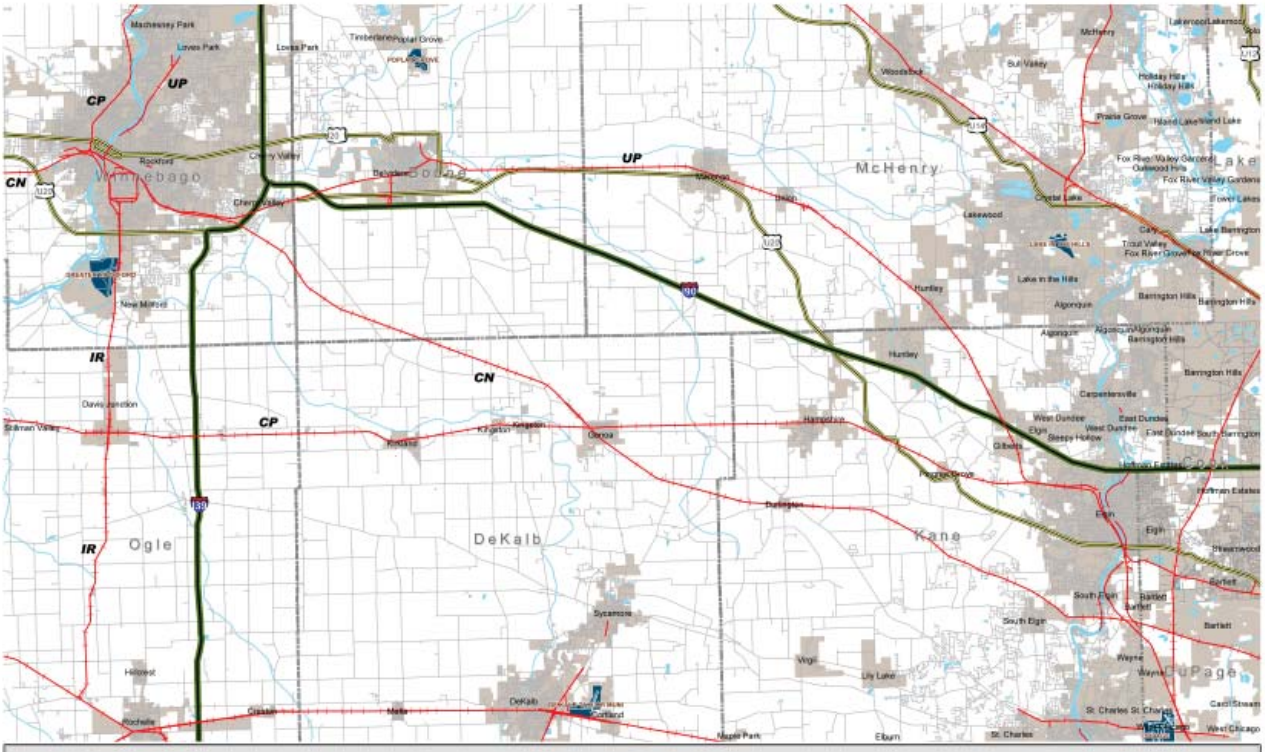
- The IR Bridge over the Rock River will be retired and transferred to the jurisdiction of the City of Rockford. The City received an ITEP grant to transform this river crossing for use by bicycles and pedestrians. It could also provide a viewing area for a whitewater park should that facility implementation move forward.

- The at-grade rail-to-rail crossing of the CN and IR at Rockford Junction, just south of Behr Metals, will be removed. This represents a significant safety benefit to the railroads. New turnouts and connections will be built to allow the IR to switch over to the CN thus allowing them to continue across the Rock River to the legacy rail yards along South Main Street.

MAP 9-E



MAP 9-F



Regional Rail Ownership Map

- The CN spur that goes south from Rockford Junction (approximately Buckbee Street) to serve the Gunite Foundry facility (approximately Peoples Avenue) no longer remains in service. Each of the CN rail-highway crossings in the section were removed. The IR provides trackage rights to the CN to allow them to serve their customers in the Kishwaukee Street corridor. This removed the duplicate rail-highway crossings at Buckbee Street, 15th Avenue, 16th Avenue, and 18th Avenue. The existing IR rail-highway crossings at Buckbee Street, 15th Avenue, 16th Avenue, 18th Avenue, and Blackhawk Park Avenue were upgraded as they were in need of significant repair.

- Permanent relocation of the IR allowed the design and construction of a safer and more sustainable river bridge on Morgan Street. Bridge piers were moved out of the Rock River eliminating the high velocity scour problems of the old bridge. The 23'-0" railroad vertical clearance requirement over the IR was no longer necessary resulting in a flatter and safer roadway profile on Morgan Street. In addition the constructability of the new Morgan Street Bridge was enhanced and reduced issues and potential conflicts with ComEd 69kV electric power transmission lines.

- The at-grade IR crossing of South Main Street could be eliminated in the future if additional connections and trackage rights agreements can be crafted that allows the IR to connect to the UP west of Corbin Street, most likely in the vicinity of Central Avenue and the City Yards. Additional detail is available in the 2003 Rail Consolidation Plan. The existing at-grade double-track crossing of the IR on South Main Street is in need of significant repair.

The Great Lakes Basin Belt Railroad (GLBBR)

Daniel Burnham, the Chicago Architect who produced the "Plan of Chicago" said "Make No Little Plans". Since 2011, Frank Patton, a Chicago area entrepreneur, had a vision of creating a railroad to parallel the planned Illiana Expressway Toll Road that was designed to relieve congestion and add capacity in the Chicago region. The plan evolved into the creation of the Great Lakes Basin Railroad to build a toll railroad to connect 5 Class One Railroads, 3 shortline railroads, the Port of Chicago, and the Port of Indiana. The Great Lakes Basin Railroad is designed to move non-Chicago freight out of the city to increase train and shipment velocity and create capacity for Chicago's freight railroads existing facilities and connections. RMAP and Frank Patton established a working relation in 2014.

Chicago's rail traffic growth projections show an 80% increase in shipment volume from 2010 to 2040. Chicago does not have the railroad capacity to handle this. Chicago's inner city railroads are land locked to add more mainline capacity and very few areas to expand terminals. Moving non Chicago freight out of the city will add capacity and improve flows of Chicago core city freight. In addition, with the safety concerns of moving Crude by Rail and other hazardous material out of Chicago to the GLBBR provides a big safety improvement that Chicago cannot afford to build on their own.

The Great Lakes Basin Railroad takes a layered approach to building a rail route and the services it can provide to the Class 1 railroads and potential customers in its distribution zone. The proposed construction will total 275 miles of new railroad with 263 miles of double main track with enough right of way to expand to four main lines, and the remaining 12 miles with one main line and passing sidings with real estate to expand to two main line spurs as volume requires.

1. Since discussions have been held with prospective customers at the six Class 1 railroads it has become evident that the design provide a complete by-pass around Chicago for all of the connections available on the route to provide flexibility in routing and connections for interchange.

2. Procure real estate for the right of way to build the two main tracks with enough width to layer in a third main track or sidings as future capacity is needed. Procure real estate to build a rail logistics terminal to support the toll railroad users, build out industrial spurs for new on-line customers, interchange tracks, and connections for the Class 1 railroads and shortlines.

3. Provide crew change point(s) and mechanical inspections for Class 1 Railroads as required.

4. Provide terminal and switching services for local rail traffic.

5. Provide terminal and intermodal services to the South Suburban Airport.

6. Provide open market access to rail customers doing carload and intermodal movements.

7. Provide daily shuttle service on required frequency to connect service to the Port of Chicago, Port of Indiana, and Kingsbury to make railroad connections at interchange points or at the rail logistics terminals.

8. Provide connecting service to the Illinois River and Mississippi River with Class 1 and shortline partners.

9. The route is designed to by-pass any populated areas by at least two miles to provide a safety barrier in case of service interruption. This also allows for the location of industry along the corridor providing a new "outer logistics ring" for the Chicago Region. Safety buffers to consist of industry or farmland between the rail route and any population centers.

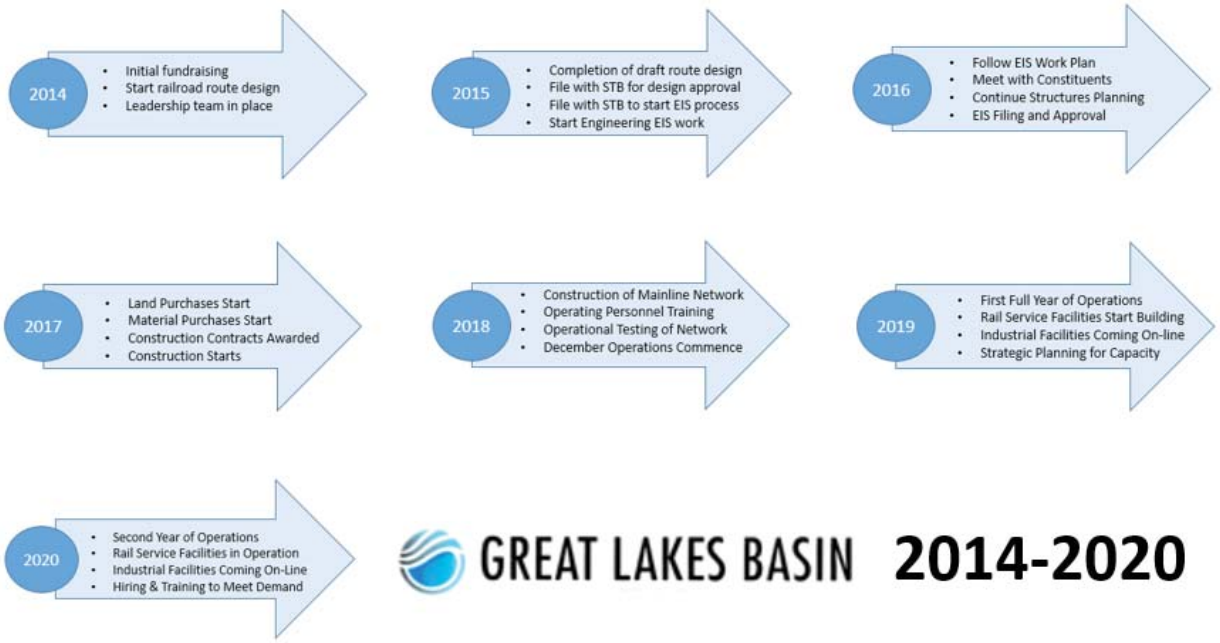
In addition to this layered approach the GLBBR main track speed limit will be 70 mph with high speed crossovers at 50 mph and high speed connection switches and leads for access on and of the Class 1 railroad connections and the on-line GLBBR terminals and industrial leads. Feeding traffic at higher speeds with well-designed connections adds capacity to the railroad and adds value to the operation through increased velocity allowing GLBBR to charge a premium.

The rapid construction of the GLBBR for the two main tracks and connections will be prioritized by adopting the latest rapid infrastructure building methods. The project will include extra fiber optic capacity to be able to sell the data capacity and routing as part of the GLBBR marketing plan. Right of way may be made available to electric utilities, pipelines, water lines, advertising, mobile telephone, and any other appropriate technologies.

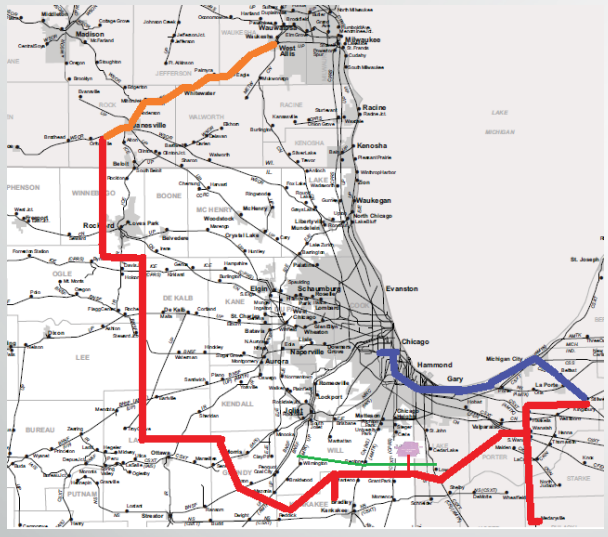
There are two main selling points to the Class 1 railroad customers for the GLBBR, improved velocity and safety. The GLBBR will improve through shipment times in this corridor from 24 to 48 hours down to 8 hours. The rail shipments will be riding on a railroad built to exceed the specifications of Class 5 track, which will allow freight speed up to 80 mph. Safety of rail shipments is of the utmost importance to the construction and operation of the GLBBR. There will be an abundance of fly-overs of road crossings of the railroad reducing exposure to grade crossing accidents with resulting train delays, casualties, and associated costs. The railroad will have train operations governed by Positive Train Control, wayside digital and video mechanical defect detectors, modern signal control systems, and security camera systems. The GLBBR will provide track inspections, both visually and digitally, that exceed Federal Railroad Administration requirements for frequency of inspections, and will provide training sessions with all local first responder agencies, regional, state, and federal agencies involved in rail safety. The GLBBR route is ideal to move Crude by Rail and other hazardous material not destined for the Chicago Terminal.

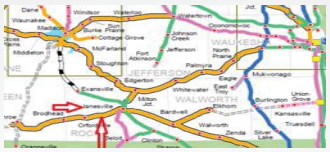
Local discussion with the GLBBR , spearheaded by the Winnebago County Rail Authority and RMAP, have led to a desire to have additional segments of the GLBBR planned as part of the Surface Transportation Board process to create the railroad. Beyond the east-west segment of the GLBBR described above, two new segments have emerged. The second segment under consideration would extend the GLBBR northward to Rochelle (at Steward Junction), thence northward to Davis Junction, and thence west and north to the Chicago Rockford International Airport (RFD). The third segment would extend the GLBBR north from RFD to a point near Orfordville, WI where it would connect to the Wisconsin Southern Railroad, continuing on to Milwaukee. The addition of segments 2 and 3 effective create a complete belt from Lake Michigan and the Port of Milwaukee to Lake Michigan and the Port of Indiana, with connections back to the Chicago Terminal via the Chicago South Shore & South Bend Railroad. Map 9-G on the next page shows the overview of the GLBBR route.

TABLE 9-1



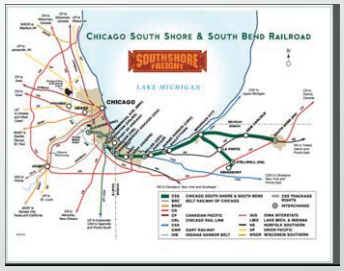
Great Lakes Basin Belt RR Corridor and Points of Connection





Wisconsin Southern

Great Lakes Basin Belt Railroad



Chicago South Shore South Bend

South Suburban Airport

Illiana Expressway

GLBBR - Orfordville WI to South Davis Jct IL	41
GLBBR - North-South Davis Jct to Mazon	92
GLBBR - East-West Mazon, IL to CSSB Railroad	115
GLBBR - Old Monon to Medarville	25
GLBBR - Spurs Kankakee and Coal City	12
Total Mileage to Build	285

GREAT LAKES BASIN
International Trade Illinois, Indiana, Kentucky

AECOM

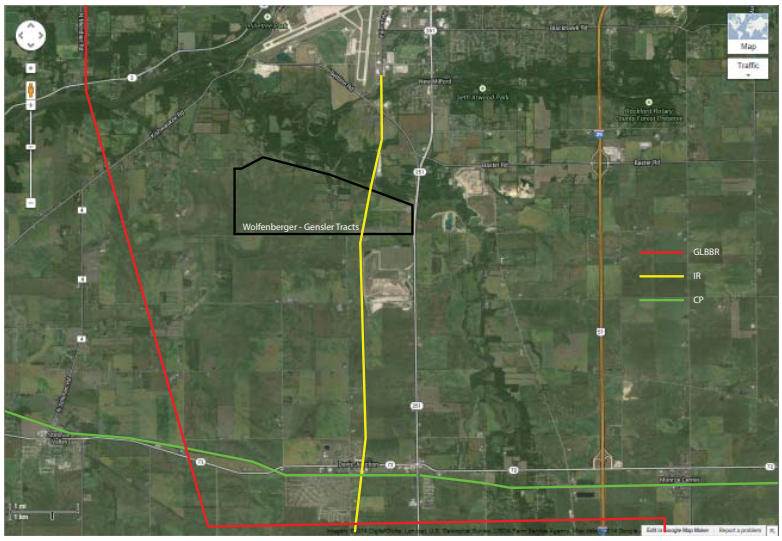
Of particular interest to the GLBBR is the concept of the relocation of the downtown railyards along South Main Street to property in the vicinity of RFD. This relocation concept has been planned via the 2003 Railroad Consolidation Study as well as the 2009 County Rail Authority Planning & Engineering Study. The GLBBR and RMAP researched the possibility of creating a modern rail terminal adjacent to RFD that could (a) provide a logical termini for the GLBBR, (b) provide for the downtown railyard relocation, (c) provide connections to other railroads, and (d) provide a rail-served industrial park to generate rail shipments and create economic development for the region. The Gensler – Wolfenberger tracts of land, annexed to the City of Rockford several years ago and zoned for industrial development, meet the requirements above. RMAP contracted with Fehr Graham Engineering & Environmental to provide planning and engineering services related to the Gensler- Wolfenberger tracts of land near RFD for a rail terminal design that includes accompanying industrial development. Maps 9-H, 9-I and 9-J provide graphics that detail where the terminal could be placed, its orientation, as well as a possible industrial park design that prioritizes rail access. Should the regional stakeholders decide to pursue railroad-related infrastructure grants in the future, such as the TIGER program, the Fehr Graham design work will provide necessary information that will make stronger applications.

Passenger Rail

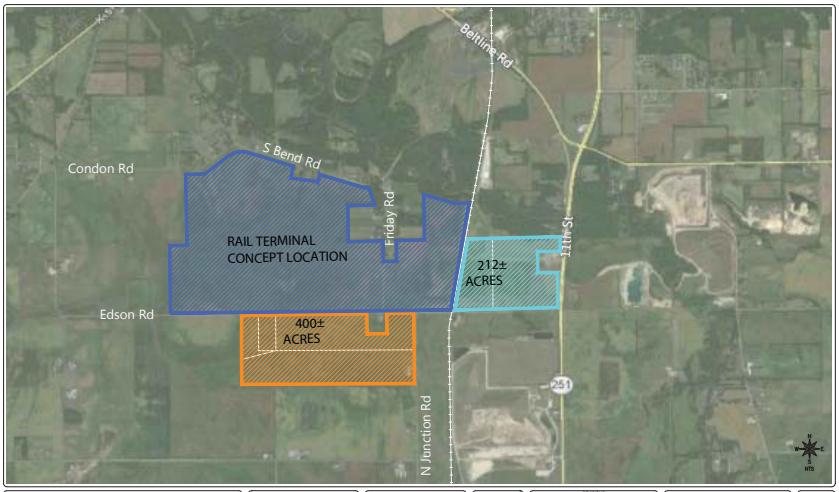
Easily the most discussed topic of RMAP's ongoing work plan, passenger rail provides tremendous opportunity for the region to have a significant impact on local, regional and statewide trends in transportation-related infrastructure quality, safety, congestion, access, affordability, greenhouse gas emissions reduction and air quality. Successful integration of passenger rail transportation with land use and housing can:

- Save infrastructure cost, both initial cost and life-cycle cost
- Reduce congestion, improve mobility and increase access to transportation choices and important destinations
- Reduce household spending on transportation, which now consumes roughly 20% of a household budget (as much as 40% for low income residents) Significantly assist in the revitalizing and character of town centers or urban cores by promoting mixed use, mixed income development
- Strategically prioritize improvements that respond to the growing demand for public transportation
- Have a profound impact on development patterns which can and should lead to more sustainable communities
- Improve the efficiency of goods movement

MAP 9-H



MAP 9-I



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ILLINOIS DESIGN FIRM NO. 184-003525
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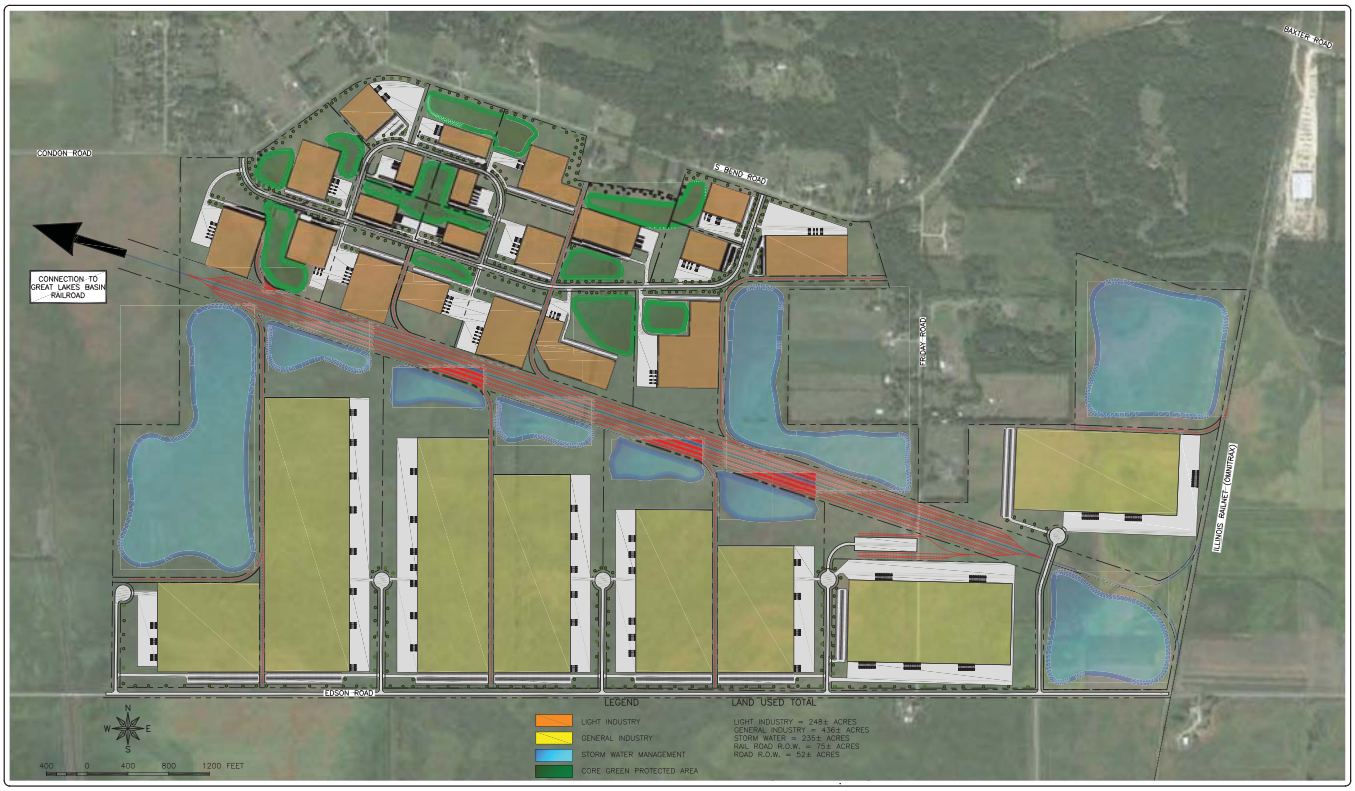
OWNER/DEVELOPER: RMAP, 313 NORTH MAIN STREET, ROCKFORD, IL 61101
PROJECT AND LOCATION: RMAP, ROCKFORD, IL 61101
DRAWN BY: TJL | APPROVED BY: NJC | DATE: 11/18/14 | SCALE: 1"=400'
REVISIONS: REV. NO. | DESCRIPTION | DATE
DRAWING: RMAP, RAIL TERMINAL CONCEPT LOCATION
JOB NUMBER: 14-655
SHEET NUMBER: 1 of 1

MAP 9-J



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REVISIONS: REV. NO. | DESCRIPTION | DATE
DRAWING: RMAP, RAIL YARD – CONCEPT 1
JOB NUMBER: 14-655
SHEET NUMBER: 1 of 1

- Provide equal and equitable access to essential community and human service destinations for all individuals at all income levels

- Elevate the supply and location of affordable housing available to all persons

- Promote transit-oriented development and location-efficient development near job centers and public transportation centers

Regional planning for passenger rail includes inter-city passenger rail, commuter rail, high speed rail and urban circulators. Each of these travel modes is discussed below. Inter-city and commuter rail transportation are intricately linked in the Rockford region and much planning work has been devoted to it, led by the work of the Northern Illinois Commuter Transportation Initiative (NICTI). High speed rail planning is intricately linked to work through the State of Illinois and the Midwest and provides a premier opportunity to connect RFD to O'Hare Airport. The high speed rail efforts are led by the State of Illinois (IDOT), Midwest High Speed Rail Association (MWHSR) and the Midwest Regional Rail Initiative (MWRRI).

The following chronology lays the groundwork for the discussion in this section. The chronology is presented graphically in Table 9-2.

Passenger Rail Chronology

September 30, 1981: Amtrak service on the Blackhawk route ends.

June 1989: IDOT publishes a report to the General Assembly from a rail task force titled "Potential for Upgrade and Expansion of Rail Passenger Service in Illinois". Service to the Rockford region is deemed by the task force to be a low priority due to ridership concerns.

December 1993: The Greater Rockford Airport Authority releases a high speed rail study linking the Rockford airport (RFD) with O'Hare airport. The study includes the location and design of a downtown passenger rail terminal.

November 1999: Boone County & the City of Belvidere approve a new Comprehensive Plan that has passenger rail as a major focal point of downtown development and the Flora Neighborhood Plan for transit-oriented development near the Irene Road interchange with Interstate 90 (the Jane Addams Tollway).

July 2002: Belvidere Mayor Fred Brereton & Rockford Mayor Doug Scott gather over 50 elected officials from the region to advocate for passenger rail.

September 2002: US Senator Richard Durbin & US Congressman Donald Manzullo provide a $200,000 earmark of transit dollars to fund a commuter rail feasibility study. The Northern Illinois Commuter Rail Initiative (NICRI) is created.

September 2003: The City of Rockford and RATS (now RMAP) release a comprehensive Rail Consolidation Study that details strategies for future freight rail investments for the four rail companies serving the region.

November 2004: NICRI releases the final report on commuter rail feasibility. The report overwhelmingly demonstrates the need and sustainability of commuter rail for the region.

Jan-Dec 2005: 35 agencies representing local governments, chambers of commerce and economic development agencies pass resolutions of support for the continued funding and development of commuter rail in northern Illinois. A letter containing the agency support package is sent to the US Congressional delegation from Illinois.

March 2006: US Senator Richard Durbin & US Congressman Donald Manzullo provide a $3 million earmark for a formal Alternatives Analysis in the Federal Transit Administration's (FTA) New Starts program. The steering group is changed to the Northern Illinois Commuter Transportation Initiative (NICTI) to reflect the New Starts guidance.
May 2006: The Blackhawk Area Rail Coalition (BARC) is formed to advocate for the restoration of inter-city passenger rail service between Chicago, IL and Dubuque, IA.BARC membership reaches 17,000 members by the summer of 2009. Janet Fisher co-chairs the group.

August 2006: Many local government agencies pass resolutions supporting the effort to restore passenger rail service to the Rockford region.

March 2007: Illinois DOT releases an Amtrak Feasibility Study for inter-city passenger rail service Chicago to Dubuque.3 route alignments are considered. Route A through Belvidere and Route C through Genoa are the best performing routes, although Genoa is not included as a station stop along Route C.

April 2007: Representative Jack Franks sends a letter to the US Congressional delegation from Illinois advocating for the return of passenger rail service to northern Illinois specifically using the Route A alignment through Belvidere, Marengo and Huntley.

TABLE 9-2

June 1989 — *The Illinois Department of Transportation releases a comprehensive study of passenger rail and the potential for restoration and expansion of service to the Illinois General Assembly. Restoration of service to Rockford, Galena and Dubuque is considered "unpromising" unless the State of Iowa can be convinced to extend to Cedar Rapids or other university destinations.*

December 1993 — *The Rockford Airport (RFD) releases a High Speed Rail study connecting the Greater Rockford Airport with O'Hare Airport. The study includes location and design of a downtown passenger rail terminal.*

November 1998 — *Canadian National Railway Company announces the intent to purchase the Illinois Central Railroad.*

September 2002 — *US Senator Richard Durbin & US Congressman Donald Manzullo provide a $200,000 earmark of transit dollars to fund a commuter rail feasibility study. The Northern Illinois Commuter Rail Initiative (NICRI) is created.*

September 2003 — *The City of Rockford releases a comprehensive Rail Consolidation Study that details strategies for future freight rail investments for the four rail companies serving the region.*

July 2005 — *Rockford MPO releases a new 2005-2035 Long Range Transportation Plan (LRTP). The LRTP contains a comprehensive analysis of regional economic development linked to transportation. Air cargo, logistics, intermodal facilities & rail freight improvements are cornerstones of the new transportation plan.*

May 2006 — *The Blackhawk Area Rail Coalition (BARC) is formed to advocate for the restoration of inter-city passenger rail service between Chicago, IL and Dubuque, IA. BARC membership reaches 17,000 members by the summer of 2009. Janet Fisher (aka 'the crazy train lady') co-chairs the group.*

May 2007 — *The Winnebago County Rail Authority is created by the Illinois General Assembly.*

May 2008 — *NICTI and RMAP select the Union Pacific Belvidere Subdivision route (CRB) as the Locally Preferred Alternative. Amtrak and IDOT are asked to co-locate inter-city passenger service and commuter service in the same rail corridor to match the regional planning consensus. Regional leaders call for co-location as the most prudent expenditure of public funds.*

February 2009 — *President Obama & the US Congress approve the American Recovery & Reinvestment Act (ARRA). Significant dollars are programmed for the upgrade of rail assets to promote economic recovery and job creation.*

April 2009 — *The Northwest Illinois Blackhawk Express Rail Coalition is formed. In a two-month campaign through the Chambers of Commerce over 11,000 individual signatures and 500 individual businesses sign petitions supporting the restoration of passenger rail service. The campaign is aimed at state legislators as they consider a new capital bill.*

July 2009 — *The IL General Assembly approves a $31 billion Capital Program. Substantial funds are committed for the upgrade of rail assets.*

November 2010 — *The Illinois Department of Transportation releases the final planning document for the Chicago to Dubuque service. The results are used to begin negotiations with the Canadian National (CN) for an infrastructure route evaluation and cost estimate.*

Fall 2012 — *The Illinois Department of Transportation and the CN Railroad begin negotiations of a final agreement to support the corridor upgrades. The process is expected to be lengthy as the parties have considerable differences of opinion as to the final cost.*

Spring 2013 — *The City of Rockford and the Rockford Mass Transit District announce the initiation of the design of the Rockford Region Multi-Modal Transportation Center. The design stage is expected to take 10-12 months.*

Spring 2014 — *The City of Rockford and the Rockford Mass Transit District anticipate letting bids for the construction of the RRMMTC. Substantial completion is expected to take one(1) construction season.*

1989 — TIMELINE FOR RAIL PLANNING, INVESTMENTS AND MAJOR MILESTONES IN THE ROCKFORD REGION PASSENGER RAIL STORY — 2016

March 1991 — *Foreign Trade Zone #176 approved at RFD.*

September 1995 — *RFD receives US Customs Port of Entry status.*

July 2002 — *Belvidere Mayor Fred Brereton & Rockford Mayor Doug Scott gather over 50 elected officials from the region to advocate for passenger rail.*

November 1999 — *Boone County & the City of Belvidere approve a new Comprehensive Plan that has passenger rail as a major focal point of downtown development and the Flora Neighborhood Plan for transit-oriented development near Interstate 90 (the Jane Addams Memorial Tollway).*

November 2004 — *NICRI releases the final report on commuter rail feasibility. The report overwhelmingly demonstrates the need and sustainability of commuter rail for the region.*

March 2006 — *US Senator Richard Durbin & US Congressman Donald Manzullo provide a $3 million earmark for a formal Alternatives Analysis in the Federal Transit Administration's (FTA) New Starts program. The steering group is changed to the Northern Illinois Commuter Transportation Initiative (NICTI) to reflect the New Starts guidance.*

June 2007 — *Illinois DOT releases an Amtrak Feasibility Study for new inter-city passenger rail service between Chicago and Dubuque.*

April 2008 — *The Tri-State Alliance is formed and holds its first regional summit in Freeport, IL. Regional leaders from Iowa, Illinois and Wisconsin meet to advocate for inter-city passenger rail (Chicago to Dubuque) and several major surface transportation projects.*

October 2008 — *The Canadian Pacific Railroad acquires the assets of the DM & E and IC & E railroads. The acquisition has the potential to use existing rail assets in the Rockford region as an intermodal facility along a 2nd CP transcontinental route through Chicago.*

2008-2010 — *The economic downturn starts and local manufacturing companies are hit particularly hard, especially in the auto industry. Boone & Winnebago County are ranked 1st and 2nd in unemployment and economic distress.*

May 2009 — *The Rockford Area Economic Development Council, Growth Dimensions and Northern Illinois University complete a Comprehensive Economic Development Strategy (CEDS) and begin the process of securing Economic Development District (EDD) status. Rail (both passenger and freight) are critical priorities in the CEDS Plan.*

September 2009 — *The Illinois Department of Transportation completes the Environmental Assessment documentation. The Tier 1 EA report is finished in time to use as part of a submittal for an HSIPR Track 2 application. The application does not receive an award from the USDOT.*

January 2012 — *The Canadian National Railroad begins an infrastructure study to determine the scope, schedule and budget for the Chicago to Dubuque corridor upgrades. The study is based on an FRA Class 4 design (79 MPH) and includes trackwork, signals, sidings, layover facilities and rail-highway crossings.*

Fall 2013 — *The Canadian National Railroad is anticipated to begin construction of the corridor upgrades. The project is anticipated to take two (2) full construction seasons.*

Fall 2015 / Spring 2016 — *The start of revenue service on the Blackhawk line is anticipated.*

May 2007: The Winnebago County Rail Authority is created via legislation approved by the Illinois General Assembly.

June 2007: Illinois DOT releases a revised Amtrak Feasibility Study.4 routes are analyzed. Genoa is added as a station stop on Route C. Route C receives favorable consideration because of a lower capital cost and only one railroad company is involved (CN). The analysis is based on existing freight rail timetable speeds.

July 2007: RMAP Chairman Linda Vaughn sends a letter to Representative Julie Hamos advocating passenger rail investments in northern Illinois and offers support to statewide elected officials considering a capital program in Illinois.

May 2008: NICTI and RMAP select the Union Pacific Belvidere Subdivision route (CR6) as the Locally Preferred Alternative. Amtrak and IDOT are asked to co-locate inter-city passenger service (via Route A) and commuter service in the same rail corridor to match the regional planning consensus. Regional leaders call for co-location as the most prudent expenditure of public funds.

May 2008: Senator Durbin and Congressman Manzullo meet in downtown Rockford with local elected officials to discuss the idea of co-locating passenger rail services. A briefing paper is presented which details the salient facts pertaining to investments in commuter and inter-city rail.

July 2008: Representative Jack Franks sends a latter to Senator Richard Durbin advocating for Route A as the most prudent expenditure of public funds for restoration of passenger rail service in northern Illinois.

September 2008: The Rockford MPO (RMAP) approves Resolution 2008-11 officially amending the long range transportation plan for the region to include Route A as the "Locally Preferred Alternative" for commuter rail service and recommends that all passenger rail services co-locate in the Route A corridor to maximize the benefit to the citizens of the region.

October 2008: The Canadian Pacific Railroad acquires the assets of the DM & E and the IC & E railroads. The acquisition has the potential to use existing rail trackage in the Rockford region as an intermodal facility along a second transcontinental route through Chicago.

December 2008: RMAP Chairman Fred Brereton, Mayor of Belvidere, sends a letter to Senator Richard Durbin which includes a comprehensive list of projects developed by regional consensus of over 40 public agencies that can be used for the likely "economic stimulus" program. Passenger rail is designated as the #1 regional priority.

Jan-March 2009: Northern Illinois officials meet with IDOT – Bureau of Railroads and Amtrak to discuss and compare engineering cost estimates for the NICTI and Amtrak passenger rail projects. A summary sheet is prepared by NICTI which shows that proposed Route A and Route C capital cost estimates are the same order of magnitude. These revised capital costs reflect a difference of opinion of the superior nature of Route C, as was detailed in the revised Amtrak Feasibility Study.

February 2009: RMAP Chairman Fred Brereton, Mayor of Belvidere, sends a letter to Governor Patrick Quinn expressing support for passenger rail investments in northern Illinois, and specifying the Union Pacific corridor as the preferred passenger rail corridor.

February 2009: President Obama and the US Congress approve the American Recovery & Reinvestment Act (ARRA). Significant dollars are allocated for the upgrade of rail assets to promote economic recovery and job creation.

April 2009: Rockford Mayor Larry Morrissey sends a letter to Congressman Manzullo detailing the regional support for passenger rail investments and requests that funding for preliminary engineering and land acquisition be considered as a "Member-Designated Surface Transportation High Priority Project".

April 2009: US Congressman Don Manzullo (IL) and Bruce Braley (IA) send a letter to US Secretary of Transportation Ray LaHood requesting that the Chicago to Dubuque corridor be considered for Recovery Act funding.

April 2009: Belvidere Mayor Fred Brereton sends letters to the Congressional delegation for northern Illinois requesting that they support a High Priority Project designation for passenger rail in northern Illinois.

April 2009: The Northern Illinois Blackhawk Express Rail Coalition is formed. In a two-month campaign via the Chambers of Commerce over 11,000 individual signatures and 500 businesses sign petitions supporting the restoration of passenger rail service. The campaign is aimed at state legislators as they consider a new capital bill.

May 2009: Rockford region leaders travel to Washington DC and speak to Senator Durbin, Congressman Manzullo and FRA Administrator Joe Szabo on the regional consensus of Route A (Metra-UP-CN). The leaders sign a letter to Governor Patrick Quinn asking for an update to the State Rail Plan to reflect the regional consensus.

May 2009: Several regional local governments pass resolutions indicating a unified voice from Winnebago, Boone and McHenry counties for Route A as the passenger rail corridor which maximizes the benefits to the northern Illinois region.

May 2009: The Rockford Area Economic Development Council, Growth Dimensions of Belvidere-Boone County, and Northern Illinois University complete a Comprehensive Economic Development Strategy (CEDS) and begin the process of securing Economic Development District (EDD) status. Passenger and freight rail are critical priorities in the CEDS plan.

July 2009: The IL General Assembly approves a $31 billion Capital Program, called Illinois Jobs Now! Substantial funds are committed for the upgrade of rail assets in several corridors.

July 2009: Representative Chuck Jefferson and the Rockford Chamber of Commerce hold a press conference to announce the Blackhawk Express Rail Coalition is in support of restoring inter-city passenger rail service that includes a Belvidere stop. The coalition collects more than 14,000 signatures by the 3rd month of the campaign.

July 2009: The RMAP Policy Committee sends a letter to Governor Quinn detailing the importance of passenger rail as a cornerstone of the Comprehensive Economic Development Strategy for the Rockford region and a complementary investment to the Chrysler-Fiat Assembly Plant in Belvidere.

September 2009: The statewide elected officials from northern Illinois send a letter to Governor Quinn requesting that IDOT select Route A as the preferred route for restored Amtrak service Chicago to Dubuque. It is noted that the elected officials that represent both Belvidere and Genoa (Senator Burzynski and Representative Wait) have committed their advocacy to the Belvidere route (Route A).

September 2009: The Illinois Department of Transportation completes the Environmental Assessment documentation (Tier 1) for the Chicago to Dubuque corridor. The report is finished in time to use as art of a submittal for an HSIPR Track 2 application. The application does not receive an award from the USDOT.

October 2009: RMAP staff prepare a "fact sheet" for proposed Amtrak service Chicago to Dubuque in response to IDOT's concern that they had received some letters and petitions of opposition from rail advocates in Genoa and DeKalb. A meeting was held in Genoa City Hall to discuss the differing viewpoints. No consensus was obtained.

November 2009: IDOT and their rail consultants host a meeting to explain that Route C has been selected for submittal for Recovery Act funds for the restoration of inter-city passenger rail service Chicago to Dubuque. Discussion centers on the eventuality of not receiving Recovery Act funds and utilizing Illinois Capital program dollars. The Recovery Act application for the HSIPR Track 2 program is not funded by the USDOT.

January 2010: Governor Pat Quinn announces the award of $60 million in state capital funds to establish passenger rail service from Chicago to Dubuque and Chicago to Quad Cities. Surprisingly the route segment between Chicago and Rockford is announced as Amtrak Route A through Belvidere. The announcement generates considerable discussion among transportation officials.

Spring 2010: The Illinois Department of Transportation hires URS Corporation to study the costs and benefits of the two competing rail corridors for the restoration of Amtrak service (Route A vs, Route C). The study is intended to update the original Amtrak Feasibility Study of 2007.

September 2010: RMAP, on behalf of the regional rail partners, submits an application for $71.4 million for the first round of the TIGER program, part of the Recovery Act. Approximately $20 million of the request is to support the entry into revenue service of passenger rail. The TIGER grant request is not funded by the USDOT.

November 2010: The URS Study, titled "Review and Update of Chicago-Rockford-Dubuque Feasibility Study" is released. The results favor Route C through Genoa, and the study is used to begin negotiations with the Canadian National Railroad (CN) for an infrastructure route evaluation and cost estimate. The study surprisingly ignores existing rail timetable information and does not evaluate costs for 79-MPH passenger rail (FRA Class IV) which had been agreed to as the minimum acceptable service level.

December 2010: IDOT announces that $26.2 million will be allocated to Route C to restore passenger rail service (vs. $62.3 million for Route A). The funding comes from the State Capital Program passed in 2009.

January 2012: IDOT and the CN begin negotiations for a final agreement to support the corridor upgrades. The process is expected to be lengthy as the parties have considerable differences of opinion as to the final cost.

Spring 2013: The City of Rockford and RMTD announce the initiation of the design for a multi-modal transportation center that is expected to take 10-12 months.

April 2014: Governor Pat Quinn announces that IDOT has suspended negotiations with the CN railroad and has reached an agreement with the Union Pacific (UP) railroad to restore passenger rail service between Rockford and Chicago along Route A. See the release on the next page for more information. A total of $223 million is announced for a project that will restore passenger service to 1-train per day in 2015 and 2-trains per day in 2016. The corridor improvements include full FRA Class IV standards (79-MPH) as well as the federally-mandated Positive Train Control (PTC) technology. A press conference is held in downtown Rockford to announce the decision which includes the CEO of the UP Railroad. The press conference is held days after the Rockford City Council announces a $50+ million project to build a downtown hotel and conference center complex directly adjacent to the UP railroad bridge over the Rock River, an adaptive reuse of the former Amerock building.

November 2014: The City of Rockford and RMTD hold the first public meeting as part of the design process for the passenger rail station in downtown Rockford. The meeting gathers citizen and interested party input through the use of a visual preference survey. The project is anticipated to have a minimum of platform and canopy constructed by late 2015 in time for the 1-train per day service (example graphic at right); and is anticipated to have the full multi-modal station constructed by late 2016 in time for the 2-trains per day service. See Pages 163-164 for details.

New Starts/Small Starts

The Federal Transit Administration's discretionary New Starts program is the federal government's primary financial resource for supporting locally planned, implemented, and operated major transit capital investments. The New Starts program funds new and extensions to existing fixed guideway transit systems in every area of the country. These projects include commuter rail, light rail, heavy rail, bus rapid transit, streetcars, and ferries. Pages 155-162, from Reconnecting America, provide a review of transit technology that can be funded from New Starts. SAFETEA-LU, MAP-21 and subsequent federal transportation bills have authorized billions in total funding for the New Starts program. This includes funding for more than 330 projects for proposed, pending, and existing Full Funding Grant Agreements (FFGA). FFGAs are multi-year contractual agreements between the FTA and project sponsors that formally define the project scope, cost and schedule. They also establish the maximum level of federal financial assistance and outline the terms and conditions of federal financial participation. Future assistance from the FTA's New Starts program for the Rockford region is highly unlikely. Federal guidance has been slow to materialize since President Obama mandated changes to the New Starts program in 2010, and the FTA Region V office in Chicago has not been able to give guidance to NICTI to get beyond the environmental documentation phase. These new mandates might have been favorable to the NICTI project but competition in New Starts is extremely high, the program is oversubscribed, and the NICTI project does not fit neatly into the New Starts funding boxes. But given the fact that the State of Illinois allocated $223 million of non-federal dollars for restoration of inter-city Amtrak service in 2014, the need for New Start dollars has virtually been eliminated. It is possible that FTA New Start funding could be beneficial for rolling stock (train sets).

The NICTI Alternatives Analysis

The Northern Illinois Commuter Transportation Initiative, NICTI, was created as a subcommittee of the MPO to steer and guide the passenger rail vision for the region. Originally called the Northern Illinois Commuter Rail Initiative, NICRI, the name was changed to reflect the importance of looking at all alternatives, modes and routes. NICTI created the following timeline for the work on the Alternatives Analysis. To arrive at the Draft Environmental stage NICTI and its project management team created the following guidance documents, available from the RMAP website, www.rmapil.org.

- Feasibility Study, November 2004
- Public Involvement Plan, August 2006
- Purpose & Need, January 2007
- Initial Alternatives, January 2007
- Evaluation Methodology, January 2007
- First Level Screening, February 2007
- Development of Detailed Alternatives, May 2007
- Final Draft Detailed Alternatives Report, March 2008
- Second Level Screening Report, April 2008
- LPA Briefing Paper, May 2008
- NICTI Survey (conducted by U of I), March 2009
- Final Draft Environmental Assessment, March 2009
- Draft Environmental Impact Statement, October 2011

OFFICE OF THE GOVERNOR
PAT QUINN

For Immediate Release
Thursday, April 10, 2014

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Governor Quinn Announces $223 Million to Restore Chicago to Rockford Amtrak Service

Route Through Elgin, Huntley and Belvidere Will Begin in 2015 and Create Hundreds of Jobs

ROCKFORD – Governor Pat Quinn today announced a $223 million state capital investment that will create hundreds of jobs and restart Amtrak service between Rockford and Chicago beginning in 2015. The return of passenger rail to Rockford for the first time since 1981 will begin with one round trip daily between Chicago's Union Station and a temporary station located in Rockford. Service will be expanded the following year and will eventually continue west to Dubuque, Iowa. The projects are part of Governor Quinn's agenda to create jobs and build a 21st century infrastructure that will drive Illinois' economy forward.

"Next year, rail service between Rockford and Chicago will finally be a reality," Governor Quinn said. "This funding and a new route are the final pieces of the puzzle to restart this critical rail service, which has been dormant for more than three decades. This is just the beginning – reliable, intercity passenger rail will create jobs and drive economic development in these cities, the region and the state for years to come."

Today's announcement is possible because following two years of negotiations, the state of Illinois has decided to switch to a new route, utilizing tracks owned by Metra and the Union Pacific Railroad. The new northern route was selected following lengthy negotiations with the Canadian National Railway, whose tracks were originally chosen for the service. Switching to the new tracks will ensure that service begins in 2015, and isn't held up by continued delays.

"Today's announcement is truly a team effort involving IDOT, Amtrak, the Union Pacific Railroad, the City of Rockford and many others," Illinois Department of Transportation (IDOT) Secretary Ann L. Schneider said. "I am especially proud that we are working together to build a multi-modal system of transportation that benefits residents and improves the quality of life throughout Illinois."

"I want to thank Governor Quinn and his staff for their persistence and determination to restore Amtrak service to the city of Rockford," Rockford Mayor Larry Morrissey said. "I know it wasn't easy, but nothing worthwhile and sustainable ever is. Working with the state of Illinois, the city of Rockford and its partners are transforming our city, and I am so happy to work with our state partners to make it happen, because it couldn't happen without their support."

-MORE-

The new route will use Metra's Milwaukee District-West Line and connect to the Union Pacific Railroad near Big Timber Road in Elgin. The Rockford station will be temporarily located at 703 Seventh Street on the east side of the Rock River, while IDOT and the city continue to develop a permanent Main Street station on the river's west side. Governor Quinn and U.S. Senator Dick Durbin dedicated $3 million in state and federal funding in 2012 in develop this new, multi-modal station. Stops also are being planned for Elgin, Huntley and Belvidere.

"We are excited regarding the economic potential created by routing the train through Belvidere and thank Governor Quinn for making this a priority," Belvidere Mayor Mike Chamberlain said. "I would also like to again recognize former Mayor Brereton, Dave Taylor, Steve Ernst and the entire NICTI group for their tremendous efforts to create a transportation vision for Northern Illinois. This vision has become reality. Hurrah!"

"It is essential for the economic development and the ultimate financial well being of all communities to have quality transportation," Elgin Mayor David Kaptain said. "I thank Governor Quinn and the state of Illinois for providing our region with improvements to I-90, high-speed rail and bus rapid transit between Elgin and Rockford that will bring us all unprecedented opportunities for growth."

The $223 million in track, signaling and safety improvements are funded primarily through Governor Quinn's *Illinois Jobs Now!* capital program. Preliminary improvements to the Union Pacific tracks will accommodate Amtrak trains at 59 mph by the end of next year. Final improvements are planned to be completed in 2016, at which point speeds will increase to 79 mph and a second Chicago-Rockford round trip will be added. The state will continue to work with the Canadian National Railroad to extend this corridor to its ultimate destination of Dubuque, Iowa, stopping in Freeport and Galena.

At Governor Quinn's direction, Illinois has become a leader in the expansion of transit and passenger rail to create jobs, reduce congestion on state highways, improve air quality, expand travel options and promote economic development. Since taking office, the Governor has committed a total of $3.85 billion in state funding to transit and rail projects, including more than $500 million for high-speed rail from Chicago to St. Louis and new Amtrak service to the Quad Cities, creating or supporting 25,000 construction jobs. This investment has helped the state acquire close to $2 billion in federal funding for passenger rail projects statewide.

Also, under Secretary Schneider, IDOT has led the multi-state effort to utilize $268 million in federal funds to purchase new Amtrak locomotives and railcars, some of which will be used along the Rockford corridor.

Governor Quinn's six-year, $31 billion *Illinois Jobs Now!* is the largest construction program in Illinois history, supporting an estimated 439,000 construction jobs. The program includes $14.5 billion for transportation through 2015. To date, IDOT has awarded nearly 6,200 transportation projects worth more than $15 billion, creating and supporting 190,000 jobs.

###

Transit Technologies Worksheet

A Review of Transit Technology Specifications

1. Heavy Rail Transit
2. Commuter Rail Transit
3. Light Rail Transit
4. Modern Streetcar
5. Heritage Trolley
6. Dedicated Lane BRT
7. Express Bus

Photo credits from left to right

1. answers.com
2. newrecruit.com
3. lightrail.com
4. APTA Heritagetrolley.org
5. APTA Heritagetrolley.org
6. sfcta.org
7. thetransitcoalition.us
8. infilldenver.com

Heavy Rail Transit

Definition:
The term heavy rail refers to a mode of transportation that is defined less by its vehicle weight than by its complexity and operational rigidity. Heavy rail systems typically consist of steel-wheeled, electric powered vehicles operating in trains of two or more cars on a fully grade-separated right-of-way. (FTA)

Example Cities:
Washington DC (Metro)
San Francisco (BART)
New York (MTA)
Boston (MBTA)
Chicago (CTA)

Projected Costs per Mile
$50-$250 Million

High System Cost:
$558 Million (Estimated)
San Francisco Central Subway

Low System Costs:
$73.12 Million (Estimated)
Chicago Blue Line Rebuild

Service Type:
Regional, Urban

Operating Speed:
50-80 MPH

Station Type:
Station, Platform

Distance Between Stations:
Urban Core >1 mile
Periphery 1-5 miles

Service Frequency:
5-10 Minutes (Peak)

Alignment:
Separate Right of Way

Right of Way Width:
25-33 Feet

Turning Radius:
330 Feet

Vehicle Length:
40-70 Feet per car
Up to 10 car trains

Typical Power Source:
Electric

FRA Compliant: (Able to run on tracks with freight trains)
No

Photo: New York City Subway
From: Answers.com

Commuter Rail Transit

Definition:
Commuter Rail is an electric or diesel propelled railway for urban passenger train service consisting of local short distance travel operating between a central city and adjacent suburbs.

Example Cities:
Boston (MBTA)
New Jersey (NJT)
New York (Long Island RR)
Dallas – Fort Worth (TRE)
San Jose – San Francisco (CalTrain)

Projected Costs per Mile
$3-$25 Million*

High System Cost:
$16.57 (Estimated)
Chicago Southwest Corridor Commuter Rail

Low System Costs:
$1.2 Million
Nashville

Service Type:
Regional, Intraurban

Operating Speed:
30-60 MPH

Station Type:
Station, Platform

Distance Between Stations:
2-5 Miles

Service Frequency:
20-30 Minutes

Alignment:
Generally built on existing tracks at grade street crossings

Right of Way Width:
37+ Feet

Turning Radius:
140-460 Feet

Vehicle Length:
150-500 Feet
Engine and Coaches

Typical Power Source:
Diesel

FRA Compliant:
Yes

Photo: Caltrain, San Fransisco Peninsula
From: newrecruit.com
Stephen DesRoches

Light Rail Transit

Definition:
The term light rail refers more to this mode's relative simplicity and operational flexibility than to actual vehicle weight or cost. With an overhead power supply, light rail systems can operate in mixed traffic and widely ranging alignment configurations. (FTA)

Example Cities:
Denver
Minneapolis
Dallas
Houston
Salt Lake City

Projected Costs per Mile
$20-$60 Million ($56)^

High System Cost:
$65 Million
Los Angeles Gold Line (2003)

Low System Costs:
$34 Million
Houston (2004)

Service Type:
Regional, Urban

Operating Speed:
20-60 MPH

Station Type:
Sidewalk Sign, Station, Platform

Distance Between Stations:
~1 Mile

Service Frequency:
5-30 Minutes

Alignment:
Aligned center or side of street corridor on separate right of way

Right of Way Width:
19-33 Feet (Double Track)
11-13 Feet (Single Track)

Turning Radius:
50-100 Feet

Vehicle Length:
50-80 Feet per car and up to 4 car trains

Typical Power Source:
Electric

FRA Compliant:
No

^ This includes estimates and figures for Complete Systems in Final Design, Under Construction, or completed after 2003 that do not include tunneling <http://www.lightrail.com/LRTSystems.htm>

Photo: Hudson Bergen LRT
From: transitpicsgallery.com

Modern Streetcar

Definition:
The U.S. term streetcar is generic to most forms of common carrier rail transit that runs or has run on streets, providing a local service and picking up and discharging passengers at any street corner, unless otherwise marked.

Example Cities:
Portland
Seattle (Design Phase)
Washington DC (Under Construction)

Projected Costs per Mile
$10-$25 Million

High System Cost:
$23.7 Million
Portland

Low System Costs:
*

Service Type:
Urban Circulator

Operating Speed:
8-12 MPH

Station Type:
Sidewalk Sign, Station, Platform

Distance Between Stations:
0.25 Miles

Service Frequency:
8-15 Minutes

Alignment:
In Street with traffic, no grade separation

Right of Way Width:
19-24 (Double Track)
11-13 (Single Track)

Turning Radius:
40-80 Feet

Vehicle Length:
35-60 Feet

Typical Power Source:
Electric

FRA Compliant:
No

* Modern Streetcar and Light Rail systems are often lumped in with road and utility reconstruction increasing the costs. Low cost systems are viable however there are no examples at the moment

Photo: Portland Streetcar
From: railwaypreservation.com

Heritage Trolley

Definition:
The terms Heritage Trolley and Vintage Trolley are used to describe modern use of trolleys of a design dating from roughly 1900 to 1950. The terms can be used to refer either to a replica car that more or less accurately reproduces a trolley from the first half of the 20th century, or to an original preserved car restored to accurate or nearly accurate standards. (APTA)

Example Cities:
New Orleans
Memphis
Little Rock
Kenosha
Galveston

Projected Costs per Mile
$2-$12 Million

High System Cost:
$12 Million
Charlotte

Low System Costs:
$2.5 Million
Kenosha, Wi

Service Type:
Urban Circulator

Operating Speed:
8-12 MPH

Station Type:
Sidewalk Sign, Station, Platform

Distance Between Stations:
0.25 Miles

Service Frequency:
8-15 Minutes

Alignment:
In Street with traffic, no grade separation

Right of Way Width:
19-24 (Double Track)
11-13 (Single Track)

Turning Radius:
40-50 Feet

Vehicle Length:
35-50 Feet

Typical Power Source:
Electric

FRA Compliant:
No

Photo: San Francisco F Line
From: APTA Heritagetrolley.org

Dedicated Lane BRT

Definition:
Bus rapid transit (BRT) is a relatively new umbrella term for urban mass transportation services utilizing buses to perform premium services on existing roadways or dedicated rights-of-way.

Example Cities:
Boston
Pittsburgh
Cleveland
Eugene

Projected Costs per Mile
$4-$40 Million

High System Cost:
$55 Million
Pittsburgh West Busway

Low System Costs:
$6.25 Million
Los Angeles San Bernadino Freeway HOV Busway

Service Type:
Regional, Urban

Operating Speed:
8-12 MPH

Station Type:
Sidewalk Sign, Station, Platform

Distance Between Stations:
0.25-2 Miles

Service Frequency:
8-20 Minutes

Alignment:
HOV lanes or separated right of way in median or on curb

Right of Way Width:
12 (Pittsburg Single)
28 (Pittsburg Double)

Turning Radius:
40-70 Feet

Vehicle Length:
30 -50 Feet

Typical Power Source:
Diesel, Electric

FRA Compliant:
N/A

Photo: Proposed Van Ness BRT
From: sfcta.org

Express Bus

Definition:
An Express bus is a bus service that is intended to run faster than normal bus lines. These buses usually run between the downtown sections of cities and the more residential Suburbs or Outer Boroughs.

Example Cities:
Any City with a Bus System

Projected Costs per Mile
$1-$2 Million

Service Type:
Regional, Urban

Operating Speed:
15-19 MPH

Station Type:
Sidewalk Sign, Platform

Distance Between Stations:
Limited stops along normal bus routes

Service Frequency:
10-20 Minutes

Alignment:
In Street with traffic

Right of Way Width:
Street Width

Turning Radius:
33-46 Feet

Vehicle Length:
30-50 Feet

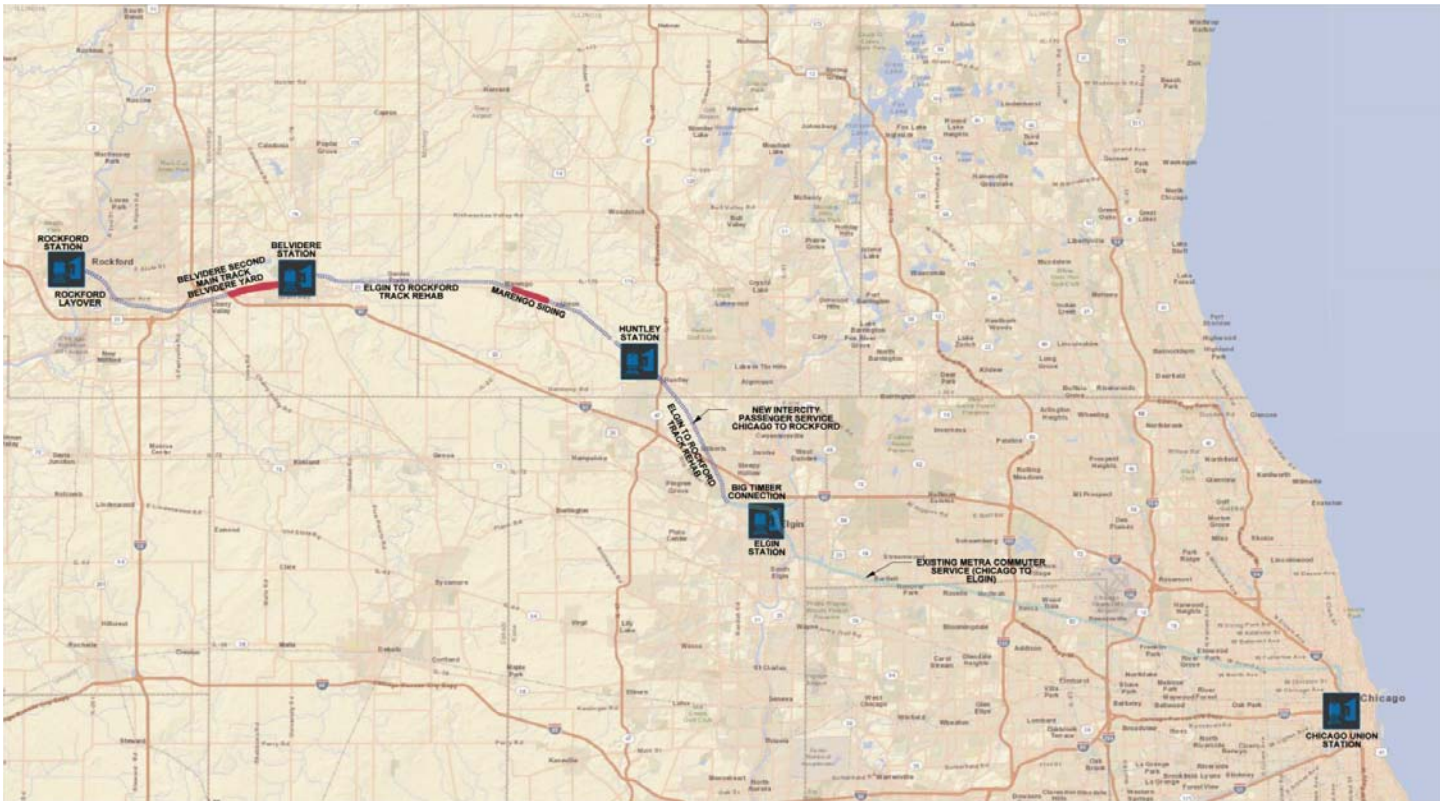
Typical Power Source:
Diesel

FRA Compliant:
N/A

Photo: Maple Grove Minnesota Express Bus
From: www.ci.maple-grove.mn.us/administration/transit

ILLINOIS PASSENGER RAIL
CHICAGO TO DUBUQUE

Project Map



Illinois Department of Transportation

ILLINOIS PASSENGER RAIL

Project Schedule

Illinois Department of Transportation

The purpose of the Elgin to Rockford Alternatives Analysis is to address the current and projected growth of Rockford region and its effect on development and travel patterns in northwestern Illinois. The NICTI planning documents introduce, explain, and substantiate the benefits that can be derived and the problem(s) that can be solved by the Locally Preferred Alternative (LPA). The Purpose and Need Report serves as the basis from which alternatives believed capable of achieving the project's purpose were defined and evaluated. The Elgin to Rockford Alternatives Analysis is implemented in a manner that recognizes and focuses on optimizing changes in development and travel patterns that have occurred over the preceding decades between the two major population and business centers in the study area. The Alternatives Analysis identified, evaluated, and recommended transportation improvements that accomplish this goal by improving connectivity between activity centers while avoiding or minimizing adverse community and environmental impacts. In March of 2012 the Rudin Center for Transportation, New York University, published a paper on the emergence of the "Super-Commuter". The research analyzed super-commuting, defined as a person who lives in a different metropolitan area than they work, for the major metropolitan areas of the US. Page 164 summarizes the data from the Chicago metropolitan area, highlighting the Rockford area as the highest summer-commuting region in Illinois, nearly double the next highest region. The emergence of the super-commuter would provide additional justification for commuter transportation, and would increase commuter rail scoring in New Starts or Small Starts.

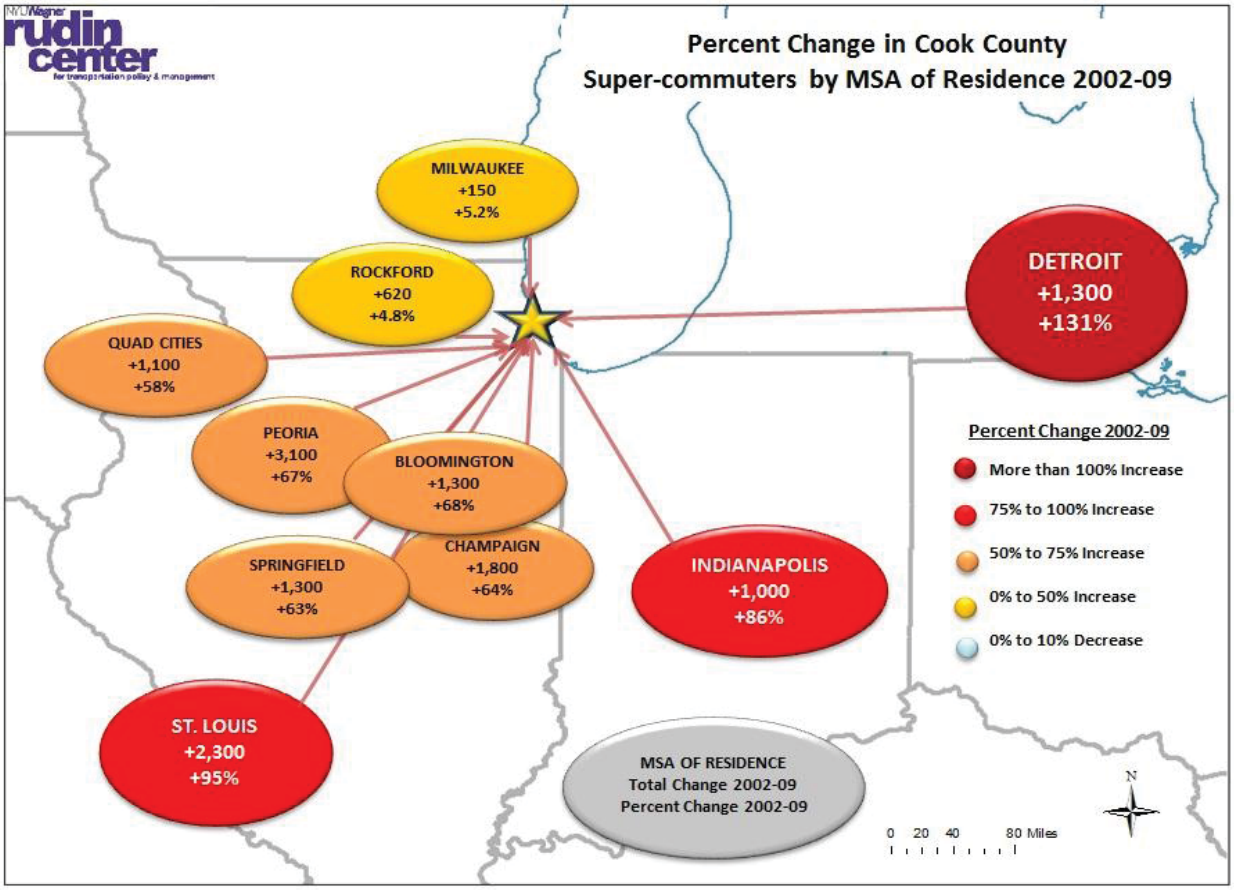
CHICAGO

Cook County
Center of Chicago-Naperville-Michigan City CSA

41.6% ***growth in super-commuters 2002-09***
0.8% ***growth in primary jobs 2002-09***
99,000 ***super-commuters***
4.4% ***of workforce***
29,100 ***total increase in super-commuters***
20% ***more likely to be 29 years or younger than average worker***
26% ***less likely to earn more than $40,000/year than average worker***

TOP 10 SOURCES OF COOK COUNTY'S SUPER-COMMUTING WORKFORCE

Metropolitan Area of Residence for Non-local Cook County Worker	2009 Total Super-commuters	Percent Change 2002-09
1) Rockford, IL	13,700	+4.8%
2) Peoria, IL	7,700	+66.7%
3) St. Louis, MO-IL	4,675	+94.8%
4) Champaign, IL	4,660	+64.2%
5) Springfield, IL	3,340	+63.4%
6) Bloomington, IL	3,290	+67.5%
7) Milwaukee, WI	3,100	+5.2%
8) Quad Cities, IA-IL	3,000	+57.5%
9) Detroit, MI	2,300	+131%
10) Indianapolis, IN	2,100	+85.8%



11

The Locally Preferred Alternative (LPA)

A formal component of the FTA's New Starts process, the LPA for the Rockford region is designated as alternative CR6 and uses the UP Belvidere Subdivision. The LPA was formally approved and amended into the LRTP in September 2008 through RMAP Resolution 2008-11. The CR6 corridor connects the region to the existing Metra station at Elgin Big Timber. The LPA includes commuter stops at Downtown Rockford, Alpine Road, Tollway Station Point, Downtown Belvidere, Marengo and Huntley. The LPA documentation suggests that co-location of commuter and intercity service would be the most prudent expenditure of public funds, and suggests the Rockford, Alpine Road, Belvidere and Bensenville Stations be designed (or redesigned) as dual commuter/intercity stations. There are many benefits to be realized now that commuter and intercity service are to co-locate on the UP track alignment including:

- Benefits to intercity service would be improved speed, frequency, ridership and reliability.
- The commuter service would benefit from capital cost savings.
- Both the intercity and commuter service would see reduced operating costs.

Metra has done some preliminary analysis of extending their Milwaukee District-West service beyond Big Timber to Huntley and Marengo. While this is not currently under active consideration, the prospect of a partnership between NICTI, Amtrak and Metra could be beneficial for both the Chicagoland and Rockford regions. Additionally, it is possible that a 3rd party contractual operator of passenger rail service provide an incremental approach to passenger rail, as described below:

Step 1- The first step in the incremental approach to providing passenger rail options is the restoration of inter-city passenger rail (Amtrak) in the Chicago – Dubuque corridor. The overall project area lies along the300-kilometer (180-mile) Chicago – Dubuque rail corridor, which extends in a northwest direction across the State of Illinois between Chicago, Illinois, and Dubuque, Iowa. The intercity service will utilize the Metra/Canadian Pacific Elgin Subdivision between Chicago Union Station and Big Timber Road station in Elgin, IL. This first segment is the same segment as the Metra Milwaukee District/West Line. The second segment will utilize the Union Pacific Belvidere Subdivision between Elgin, IL and the downtown Rockford. A connector track will be built between the CP Elgin Subdivision and the UP Belvidere Subdivision. The third segment will utilize the Canadian National Freeport Subdivision between Rockford and Dubuque, IA. A connector track could be built between the UP Belvidere Subdivision and the CN Freeport Subdivision (a) near Mulford Road on the east side of Rockford or (b) near Central Avenue on the west side of Rockford. The initial service will consist of one (1) round trip per day in 2015, with the eastbound trip departing Dubuque in the early morning and arriving in Chicago by late morning, and the westbound trip departing Chicago in the early evening and arriving in Dubuque before midnight. In 2016 the frequency will increase to two (2) daily round trips. At the time of this writing the daily arrival & departure schedules for the restored Amtrak service has not been published.

Step 2 – The second step in the incremental passenger rail vision is commuter rail service. Commuter rail service would be established between Rockford and Elgin to connect with existing Metra commuter operations at Big Timber Road station as described in the LPA medium (mid-level) build-out. The initial commuter rail service would consist of 12 daily trains (6 eastbound + 6 westbound trains) with 3 eastbound + 3 westbound trips in the AM and 3 eastbound + 3 westbound trips in the PM. The train set is planned to include 4 passenger cars and would operate in push/pull mode.8 of the AM & PM trips would be between Rockford and Big Timber and 4 of the AM & PM trips would be between Rockford and Bensenville. Stations would be provided at Bensenville, Medinah, Elgin Big Timer, Huntley, downtown Belvidere, Alpine Road and downtown Rockford. Trips could utilize a cross platform transfer at Big Timber, Medinah or Bensenville if additional Metra destinations were desired. Feeder bus service could be provided at the endpoints. These feeder buses would serve the Woodfield area from Medinah station, the O'Hare area from Bensenville station and the Rockford CBD and RFD from the downtown Rockford station. A sample schedule is shown in Table 9-3 on the next page. The schedule was created to reflect Metra information current as of October 2014 and the most recent NICTI data.

Step 3a – The third step in the incremental approach to passenger service would be to expand commuter service to full build-out. Full build-out of the LPA would add the Tollway Station Point stop, feeder bus service in the Flora Neighborhood surrounding the Irene Road & US 20 area (including the Fiat-Chrysler facility), and possibly add the Marengo station. A mid-day round trip might also be added depending on the frequency of intercity service at that point in time. Parking lots might also be expanded at existing stations depending on ridership. The Step 3 process could also include the implementation of passenger service between downtown Rockford and RFD as well as between Rockford and Madison, WI.

Step 3b – An alternative Step 3 implementation could utilize a 3rd party transit operator as a public-private partnership (P3). There has been increasing interest from the USDOT, IL DOT, and transit providers to bring the private sector into passenger transport operations. RMAP has had initial discussions on the costs and benefits of a P3 approach, including the

TABLE 9-3

COMBINED TRAIN SCHEDULES, METRA / NICTI / AMTRAK
October 1, 2014

ROCKFORD TO CHICAGO - MONDAY through FRIDAY

Stations	2200	2202	2204	2206	2208	2210	2212	100	2214	2216	2218	2220	102	2222	2224	104	2226	2228	AMK	2230	2232	2234	Station Milepost
	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	
Downtown Rockford LV								5:26					6:01			6:34			7:36				92.4
Alpine Rd								5:36					6:11			6:44			7:46				86.9
Downtown Belvidere								5:51					6:26			6:59			8:19				80.5
Marengo								6:04					6:39			7:12			|				66.1
Huntley								6:15					6:50			7:23			|				55.5
Big Timber Rd	-	-	5:27	5:45	-	6:12	-	6:32	-	6:51	-	-	7:05	7:24	-	7:38	-	8:36	|	9:36	10:22	11:22	39.8
Elgin	4:17	4:52	5:33	5:51	6:08	6:18	-	|	-	6:57	-	-		7:31	-		7:48	8:42	|	9:42	10:28	11:28	36.6
National St	4:19	4:54	5:35	5:53	6:10	6:20	-	|	-	6:59	-	-		7:33	-		7:50	8:44	|	9:44	10:30	11:30	36.0
Bartlett	4:26	5:02	5:43	6:01	|	6:30	-	|	-	7:08	7:13	-		7:42	-		7:59	8:52	|	9:52	10:38	11:38	30.1
Hanover Park	4:30	5:05	5:47	6:04	|	6:34	-	|	6:57	7:12	-	-		7:46	-		8:03	8:55	|	9:55	10:41	11:41	28.4
Schaumburg	4:34	5:09	5:51	6:08	V	6:38	-	|	7:02	7:16	7:21	-		7:50	-		8:07	8:59	|	9:59	10:45	11:45	26.5
Roselle	4:39	5:14	5:56	6:13	6:26	6:44	6:54	V	7:08	|	|	7:37		|	-		8:12	9:04	|	10:04	10:50	11:50	23.9
Medinah	4:41	5:16	5:58	6:15	6:28	-	6:57	7:08	7:11	|	|	7:40		|	-		8:15	9:06	|	10:06	10:52	11:52	23.0
Itasca	4:45	5:20	6:02	6:19	|	6:50	|	|	7:15	|	V	7:43		|	-		8:19	9:10	|	10:10	10:56	11:56	21.0
Wood Dale	4:49	5:23	6:06	6:23	|	6:55	|	V	7:18	|	7:30	7:47		|	-		8:23	9:14	V	10:14	11:00	12:00	19.1
Bensenville	4:53	5:27	6:10	6:27	|	6:59	V	7:17	7:22	|	|	7:51		|	-		8:27	9:18	9:55	10:18	11:04	12:04	17.2
Manheim	-	5:32	|	6:33	V	-	7:09		-	V	V	-		V	-			8:31	-	|	-	-	-	14.0
Franklin Park	4:59	5:34	|	6:35	6:42	7:05	7:12		7:28	7:32	7:38	7:57		8:05	8:10		8:34	9:24	|	10:24	11:10	12:10	13.2
River Grove	5:02	5:38	|	|	6:46	|	7:16		|	|	7:43	|		|	8:14		|	9:28	|	10:28	11:13	12:13	11.4
Elmwood Park	5:04	5:41	|	|	6:49	|	7:19		|	|	7:46	|		|	8:17		|	9:31	|	10:31	11:16	12:16	10.2
Mont Clare	5:06	5:43	|	|	6:51	|	7:21		|	|	7:48	|		|	8:19		|	9:33	|	10:33	11:18	12:18	9.5
Mars	-	5:45	|	|	6:53	|	7:23		|	|	7:50	|		|	8:21		|	-	|	-	-	-	9.1
Galewood	5:08	5:47	|	|	6:55	|	7:25		|	|	7:52	|		|	8:23		|	9:35	|	10:35	11:20	12:20	8.6
Hanson Park	|	5:49	|	|	6:57	|	7:28		|	|	7:54	|		|	8:26		|	-	|	|	-	|	7.7
Grand/Cicero	V	5:51	V	V	6:59	V	7:30		V	V	7:56	V		V	8:28		V	9:38	|	V	11:23	V	6.5
Western Ave	5:18	6:00	6:30	6:51	7:07	7:22	7:40		7:45	7:48	8:05	8:11		8:21	8:36		8:48	9:46	V	10:45	11:31	12"30	2.9
Chicago Union Station AR	5:30	6:13	6:42	7:03	7:20	7:36	7:53		7:57	8:02	8:18	8:23		8:35	8:49		9:00	10:02	10:25	10:58	11:43	12:43	0.0

CHICAGO TO ROCKFORD - MONDAY through FRIDAY

Stations	2221	2223	2225	2227	107	2229	2231	2233	109	2235	2237	2239	111	2241	2243	2245	AMK	2247	2249	2251	2253	2255	Station Milepost
	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	
Chicago Union Station LV	2:30	3:30	4:05	4:20		4:30	4:50	4:55		5:05	5:17	5:23		5:27	5:46	6:10	6:15	6:40	7:40	8:40	9:40	10:40	0.0
Western Ave	2:39	3:39	4:14	4:29		4:39	|	5:04		5:14	5:26	5:32		5:36	5:55	6:19	|	6:49	7:49	8:49	9:49	10:49	2.9
Grand/Cicero	2:45	3:45	4:21	|		4:46	|	|		|	|	|		5:43	|	6:26	|	|	|	8:56	|	|	6.5
Hanson Park	-	-	4:24	|		4:49	|	|		|	|	|		5:46	|	6:29	|	V	V	-	V	V	7.7
Galewood	2:49	3:49	4:26	|		4:52	|	|		|	|	|		5:48	|	6:31	|	6:59	7:59	9:00	9:58	10:58	8.6
Mars	-	3:51	4:28	|		4:54	|	|		V	|	|		5:50	|	6:33	|	-	-	-	-	-	9.1
Mont Clare	2:51	3:53	4:30	|		4:56	|	|		5:25	|	|		5:52	|	6:35	|	7:02	8:02	9:02	10:00	11:00	9.5
Elmwood Park	2:53	3:55	4:32	|		4:58	|	|		5:27	|	|		5:54	|	6:37	|	7:04	8:04	9:04	10:02	11:02	10.2
River Grove	2:55	3:58	4:34	V		5:01	V	V		5:30	|	|		5:57	V	6:41	|	7:07	8:07	9:06	10:04	11:04	11.4
Franklin Park	2:59	4:02	4:40	4:44		5:07	5:13	5:19		5:34	|	|		6:00	6:12	6:45	|	7:11	8:11	9:10	10:08	11:08	13.3
Manheim	-	-	-	4:46		-	|	-		5:36	|	V		|	-	-	V	-	-	-	-	-	14.0
Bensenville	3:04	4:08	-	4:51		-	|	5:24		|	|	5:51	6:11	V	6:19	6:50	6:55	7:17	8:17	9:15	10:13	11:13	17.2
Wood Dale	3:08	4:12	-	4:55		-	|	5:28		|	|	5:55	|	6:09	6:23	6:54	|	7:21	8:21	9:19	10:17	11:17	19.1
Itasca	3:12	4:15	-	5:00		-	|	5:31		|	|	5:59	V	|	6:27	6:58	|	7:25	8:25	9:23	10:21	11:21	21.0
Medinah	3:16	4:19	-	5:04		-	V	5:35		V	|	6:03	6:20	|	6:31	7:02	|	7:29	8:29	9:27	10:25	11:25	23.0
Roselle	3:18	4:22	-	5:07		-	5:27	5:38		5:48	V	6:08	|	|	6:34	7:05	|	7:31	8:31	9:29	10:27	11:27	23.9
Schaumburg	3:23	4:28	-	5:13		-	5:32	5:44		|	5:59	|	|	|	6:39	7:10	|	7:37	8:37	9:34	10:32	11:32	26.5
Hanover Park	3:27	4:33	-	5:17		-	5:36	5:48		|	6:05	|	|	V	6:43	7:14	|	7:40	8:41	9:38	10:36	11:36	28.4
Bartlett	3:30	4:37	-	5:21		-	5:40	5:52		V	6:09	|	|	6:25	6:47	7:18	|	7:44	8:45	9:41	10:39	11:39	30.1
National St	3:39	4:46	-	5:30		-	5:49	6:02		6:06	6:18	V	|	-	6:56	7:27	|	7:52	8:53	9:50	10:48	11:48	36.0
Elgin	3:41	4:48	-	5:32		-	5:51	-		6:13	6:20	6:30	V	-	6:58	7:31	|	7:54	8:55	9:52	10:50	11:50	36.6
Big Timber Rd	3:50	4:58	-	5:43	5:46	-	6:01	-	6:16	-	6:29	6:39	6:46	-	7:07	-	|	8:04	9:03	10:01	10:59	11:59	39.8
Huntley					5:59				6:29				6:59				|						55.5
Marengo					6:09				6:39				7:09				V						66.1
Downtown Belvidere					6:22				6:52				7:22				8:17						80.5
Alpine Rd					6:38				7:08				7:38				8:42						86.9
Downtown Rockford AR					6:50				7:20				7:50				8:52						92.4

SCHEDULE KEY

2221	METRA MILWAUKEE DISTRICT / WEST LINE, EFFECTIVE APRIL 13, 2014
107	NICTI LPA RESOLUTION 2008-8, MAY 29, 2008
AMK	AMTRAK FEASIBILITY REPORT, REVISED JUNE 22, 2007

ourmap
Rockford Metropolitan Agency For Planning

opportunity to access the TIFIA (Transportation Infrastructure Finance Innovation Act) program or the RRIF (Railroad Rehabilitation & Improvement Financing) program. The initial discussions highlighted the importance of O'Hare airport as a passenger rail destination, both for travelers as well as employees. The large-scale transportation improvements in Chicagoland (O'Hare Western Access, Elgin-O'Hare extension, 2nd phase of the Jane Addams modernization, the O'Hare rental car facility project (CONRAC), the O'Hare Express project providing high speed trains between the Loop and O'Hare, the Metra Star Line and CrossRail Chicago) could provide significant impetus for a P3 project in the Rockford region. See Map 9-K through 9-Q.

Step 4 – The fourth step in the incremental vision would be to upgrade intercity and commuter service to 110 MPH (FRA Class VI). Based on current FRA standards this would be the maximum speed allowed in a "non-sealed" corridor. Sealed corridors would include removal of all at-grade crossings, both rail-highway and rail-rail and most likely would include electrification common to a true high speed rail corridor. The would be in line with the CrossRail Chicago program, as detailed in Maps 9-K and 9-L

Step 5 – The fifth step in the incremental vision for passenger rail would be to implement true high speed rail (HSR), although this step could occur sooner depending on national priorities and funding. True high speed rail would include electrified trains operating up to speeds of 220 MPH in a sealed corridor. The sealed corridor would not allow freight trains to operate on the same set of dedicated HSR tracks. The shorter distance HSR trains at or below 100 miles, common for distances similar to Rockford to Chicago, are characterized as regional high speed trains. More information can be found at www.midwesthsr.org. The proposed Midwest high speed rail network is shown in Map 9-M. It is likely that much of the true HSR alignment between O'Hare airport and Rockford would be provided within the Jane Addams Tollway right-of-way, but the following HSR alternates have been studied:

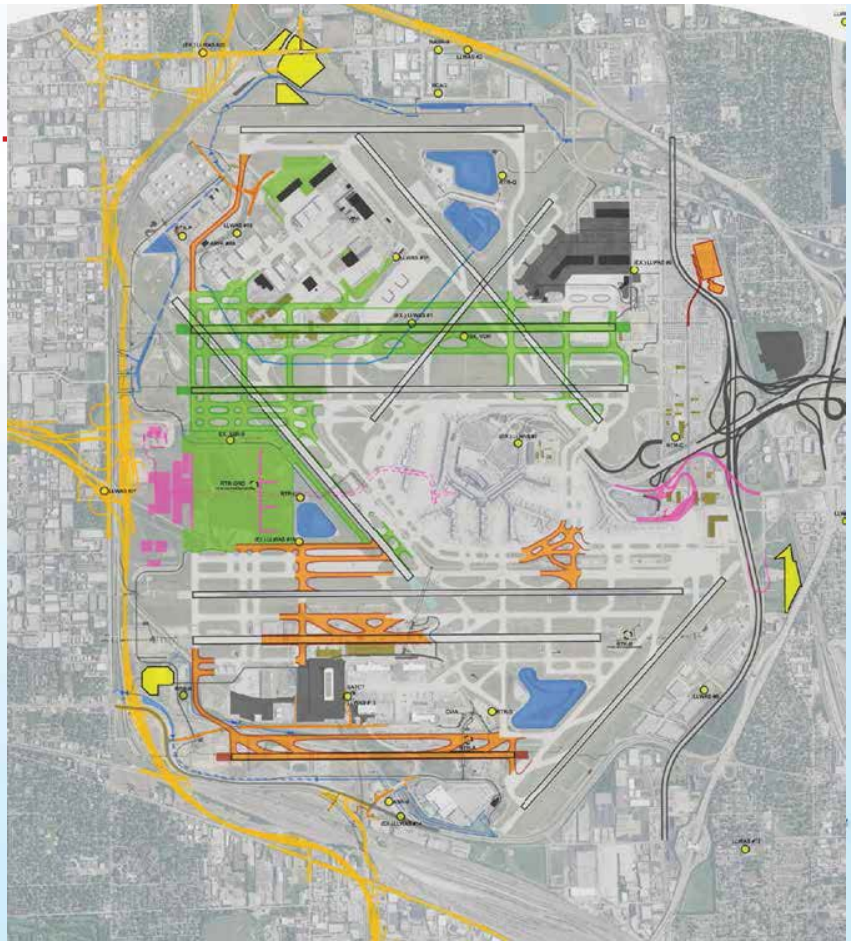
- Use of the Belvidere Subdivision to the extent feasible. It is assumed that this would involve constructing a second track alongside the existing UP track, installation of electrification, and smoothing of curves. With a waiver allowing non-FRA-compliant bullet trains to operate over grade crossings, service to Rockford could continue over the Belvidere Subdivision, operating at up to 110 mph, where curvature and grade crossing improvements allow. Operation through Belvidere itself could be particularly problematic due to the extensive curvature and numerous grade crossings in this segment. Thus, it is assumed that operation through Belvidere would only remain as an interim phase. The segment on the Belvidere Subdivision could continue to be shared with the limited freight operation on the route, with either with temporal separation or separate tracks.

- With further easing of curves and full separation of crossings, the portion east of Belvidere could accommodate 220 mph operation. A Belvidere bypass would be constructed, bringing the route closer to the Tollway. This might be a second phase.

- Bypassing the Belvidere Subdivision altogether, staying with a Tollway alignment to a point beyond Belvidere, but with provisions for stations close to the bypassed communities. This alternative would also use the entry into Rockford via the UP alignment.

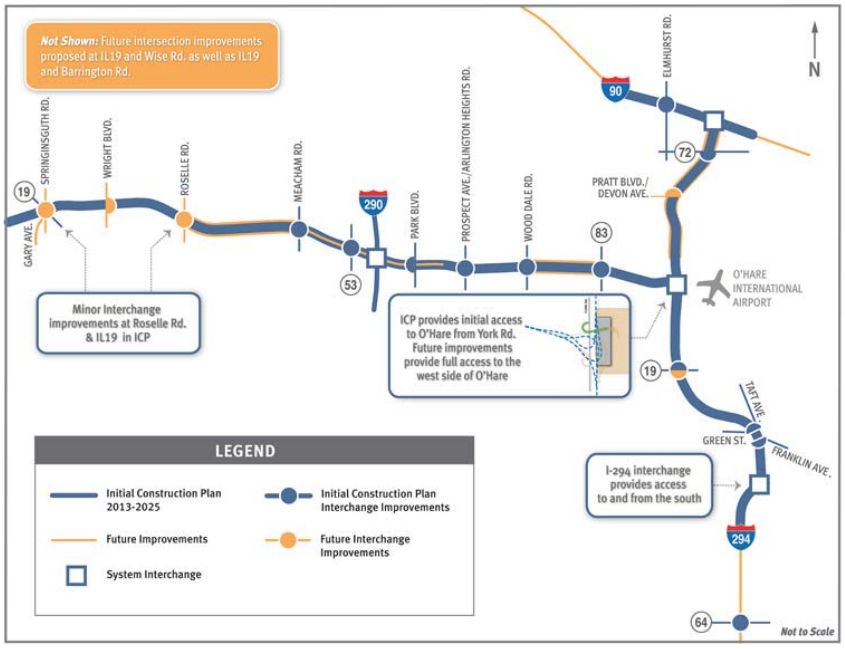
- Serve RFD prior to traveling to downtown Rockford. This would require a new right-of-way for a significant portion of the route. The existing freight traffic on the CP could not co-exist with high speed operation. It is critical that state rail plans are updated to reflect high speed rail planning for the region as it matures. In particular it is critical that the MWRRI plan being updated to reflect the proposed plans.

MAP 9-K



MAP 9-L

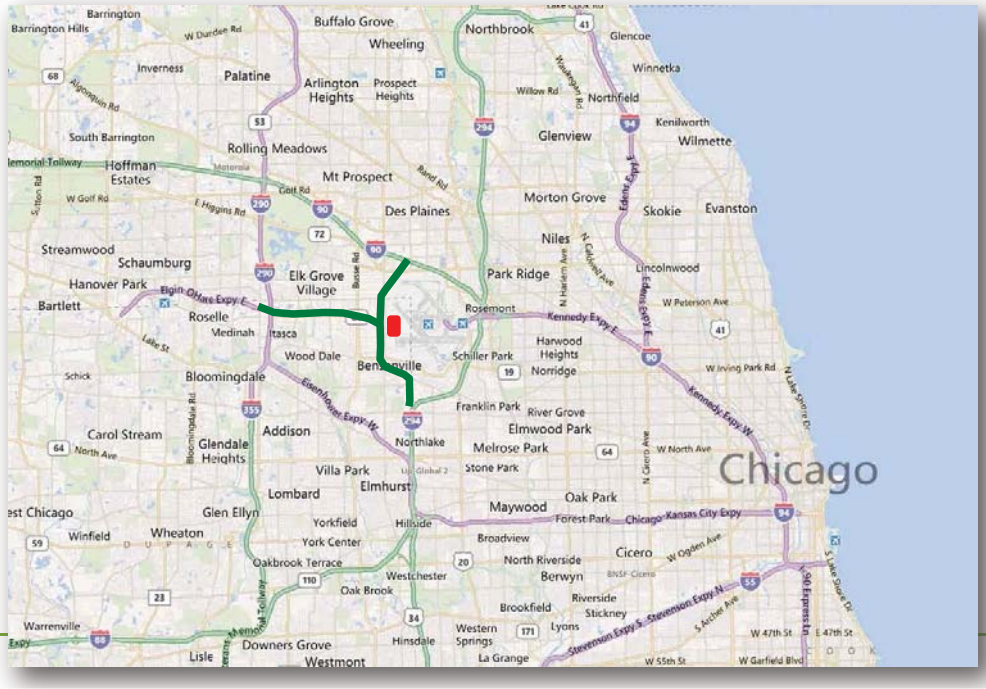
Elgin-O'Hare West Bypass (EO-WB)



- Two Segments
  - EO: IL 53 to O'Hare (10 miles)
  - WB: I-90 to I-294 (6 miles)
- 16 New Interchanges at Full Build-out
- $3.4 Billion Cost
- Construction Plan
  - EO: 2013-2018
  - WB: 2018-2025
- ROW Reserved for Future Transit

MAP 9-M

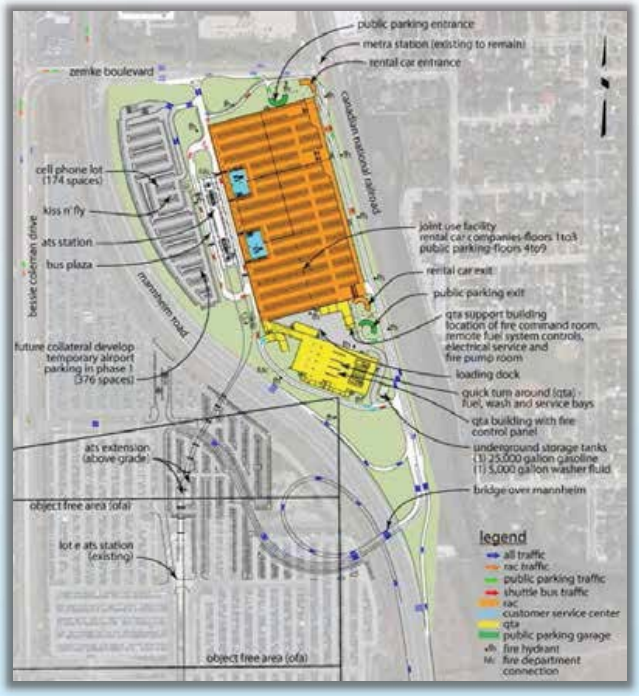
Connections to Regional Network

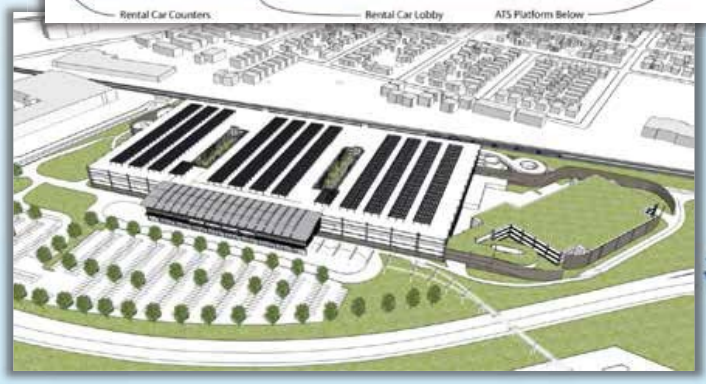


MAP 9-N

FUTURE MILESTONES

- ***Consolidated Rental, Car Facility and ATS Extension**: New facility scheduled to open 4th Quarter 2016.*





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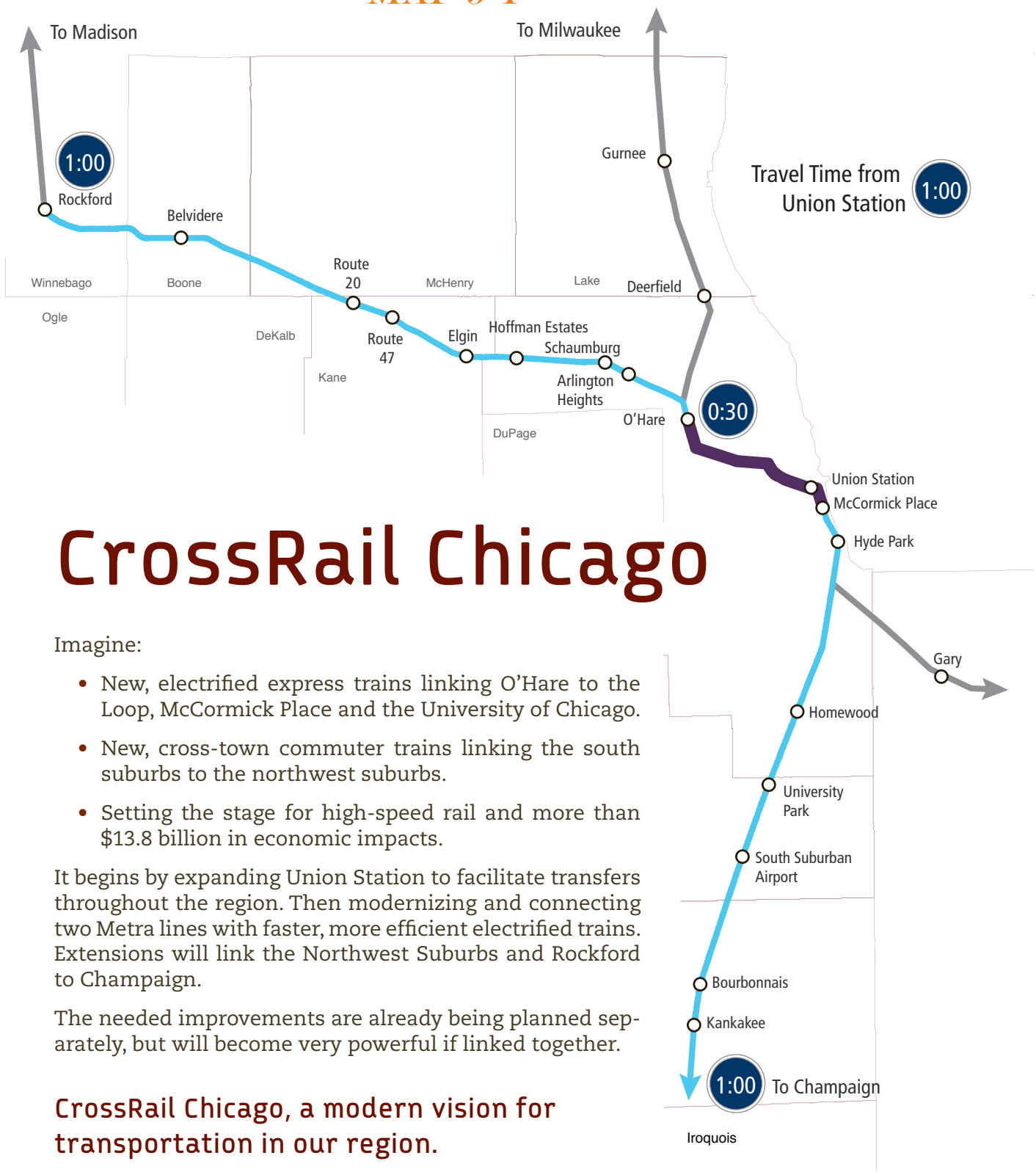
Proposed Metra STAR Line



CrossRail Chicago

Imagine:

- New, electrified express trains linking O'Hare to the Loop, McCormick Place and the University of Chicago.
- New, cross-town commuter trains linking the south suburbs to the northwest suburbs.
- Setting the stage for high-speed rail and more than $13.8 billion in economic impacts.

It begins by expanding Union Station to facilitate transfers throughout the region. Then modernizing and connecting two Metra lines with faster, more efficient electrified trains. Extensions will link the Northwest Suburbs and Rockford to Champaign.

The needed improvements are already being planned separately, but will become very powerful if linked together.

CrossRail Chicago, a modern vision for transportation in our region.

CrossRailChicago.org

Midwest High Speed Rail Association
Reinventing Travel. Reinventing the Midwest.
4765 N Lincoln Ave. Chicago, IL 60625 | 773.334.6758
MidwestHSR.org

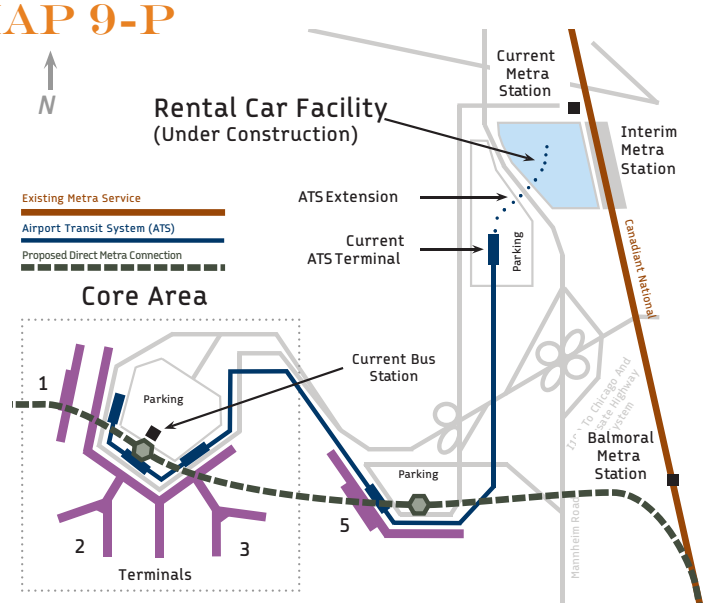
International Connections

Cities and communities throughout the Midwest recognize that access to international markets through O'Hare is essential to their economic futures. CrossRail Chicago will link the Loop to O'Hare, with express trains from Union Station speeding Amtrak and Metra riders to the airport, greatly improving connections to international markets.

An Upgraded Transit Hub at O'Hare International Airport

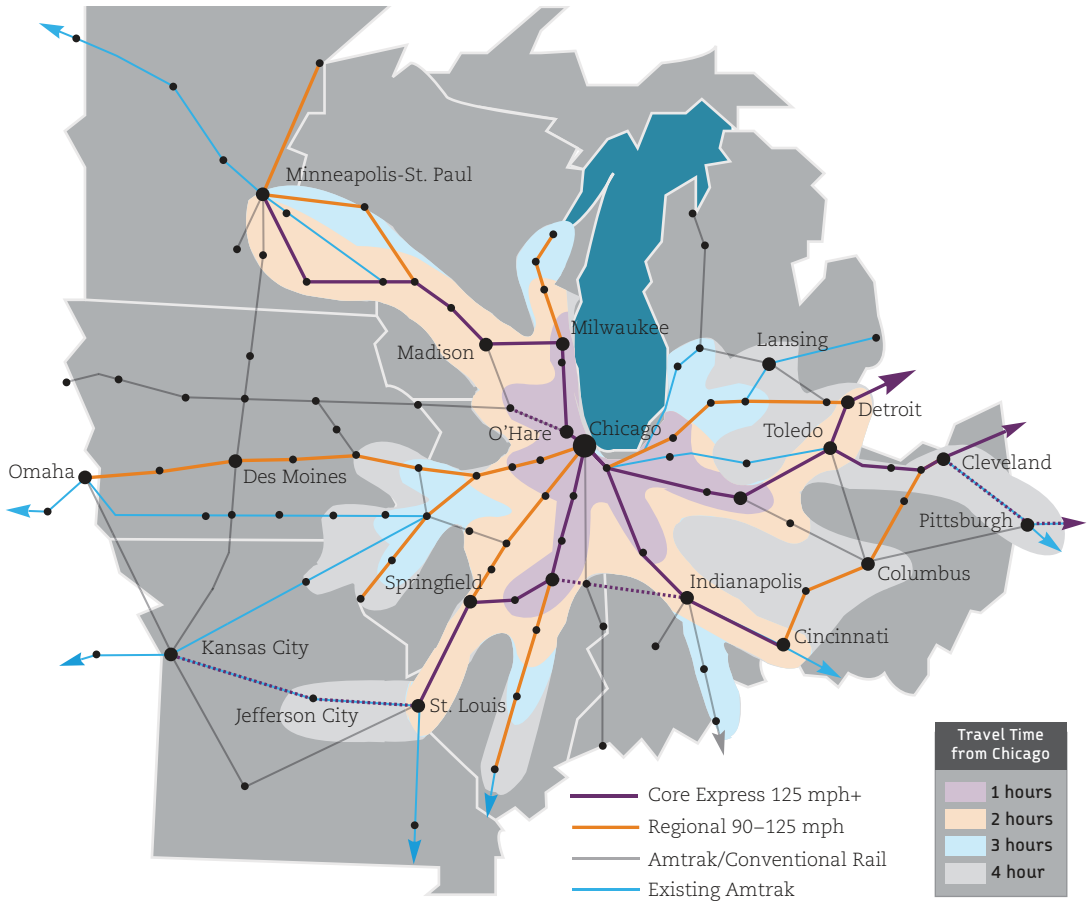
CrossRail Chicago creates the volume of transit passengers needed to bring about a much needed transformation of the O'Hare-area transit hub.

MAP 9-P

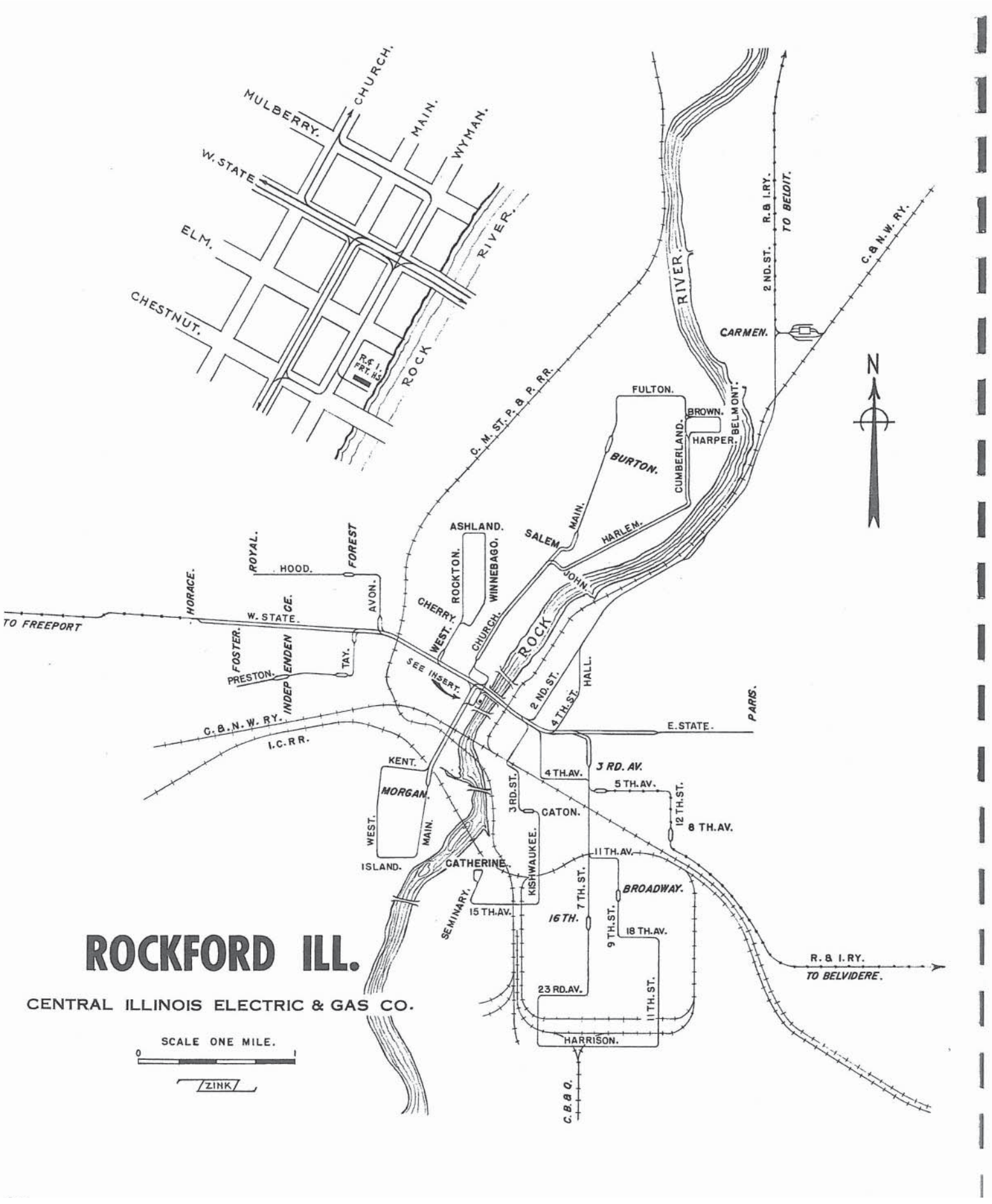


An Economic Engine for the Region

A new study by the Economic Development Research Group estimates that a true high-speed rail network linking Chicago to eight major cities would generate an additional $13.8 billion annually in business sales for the Chicago Metropolitan Region. CrossRail Chicago provides the foundation for this network.



Midwest High Speed Rail Association


MULBERRY.
CHURCH.
MAIN.
WYMAN.
W. STATE.
ELM.
CHESTNUT.
ROCK RIVER.
R.R. & I. FRT. HS.
C. M. ST. P. & P. RR.
RIVER.
2 ND. ST. R. & I. RY. TO BELOIT.
C. & N. W. RY.
CARMEN.
N
FULTON.
BROWN.
HARPER.
BELMONT.
CUMBERLAND.
BURTON.
MAIN.
HARLEM.
SALEM
ASHLAND.
ROCKTON.
WINNEBAGO.
CHERRY.
WEST.
CHURCH.
JOHN.
ROCK
ROYAL.
FOREST
HOOD.
AVON.
HORACE.
TO FREEPORT
W. STATE.
CE.
FOSTER.
PRESTON.
INDEPENDENCE.
TAY.
SEE INSERT.
2 ND. ST.
4 TH. ST.
HALL.
PARIS.
E. STATE.
C. B. N. W. RY.
I. C. R. R.
KENT.
MORGAN.
WEST.
MAIN.
ISLAND.
CATHERINE.
3 RD. ST.
CATON.
4 TH. AV.
3 RD. AV.
5 TH. AV.
12 TH. ST.
8 TH. AV.
11 TH. AV.
KISHWAUKEE.
7 TH. ST.
BROADWAY.
SEMINARY.
15 TH. AV.
16 TH.
9 TH. ST.
18 TH. AV.
R. & I. RY. TO BELVIDERE.
23 RD. AV.
11 TH. ST.
HARRISON.
C. B. & Q.
ROCKFORD ILL.
CENTRAL ILLINOIS ELECTRIC & GAS CO.
SCALE ONE MILE.
0
1
ZINK

Urban Circulators

One of the newer concepts in transit planning is urban circulators, including streetcars and trolleys both in fixed guideway and rubber tired implementations. A "back to the future" transit option in the Rockford region, streetcars and trolleys operated in the urban core of the region for many years at the turn of the 20th century.

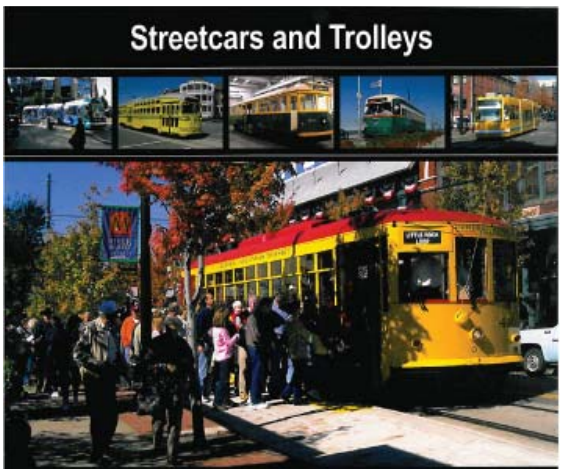
Urban circulators provide a convenient and popular transit option that can link intercity and commuter transit stops with travel destinations that are not within walking distance. They also provide an excellent opportunity to adaptively reuse freight rail corridors that are made available as a result of rail asset consolidation. This concept ties nicely to the rail consolidation program described earlier in this chapter. The UP mainline corridor from Alpine Road to Central Avenue and the K-D Spur from Windsor Road to downtown Rockford are corridors with high potential for streetcars. Additionally the IR corridor from the S. Main Street rail yards to RFD could potentially provide streetcar transit for air passengers looking to connect at RFD.

Expansion of the trolley service from RMTD, using a rubber-tired fleet, could provide circulation to desirable destinations for passengers departing at the intercity/commuter passenger stations at downtown Belvidere, Alpine Road and downtown Rockford. A hybrid system of both streetcars and trolleys could provide a low cost alternative to traditional fixed-route bus service. Additional planning work is suggested in the next several years.

Streetcars and trolleys shaped American cities more than a century ago and today this adaptable and user-friendly urban transportation technology is assisting in the redevelopment of older cities and the rebirth of existing neighborhoods. The versatility of these transit options is bolstered by the ability to blend into existing rights-of-way, flowing with traffic in normal travel lanes. These options are capable of being enhanced with transit signal priority, real-time "next car" signs, advanced fare collection and other technologies to improve passenger information. Success is not determined by the technology itself, but how the implementation interfaces with the community and its development. Moreover the implementation of these modern transit options is environmentally friendly and can contribute significantly to the air quality of downtown environments and the region. The figures at the right provide examples of these options.

Diesel Multiple Units (DMUs)

There has been interest within NICTI to explore cheaper and more sustainable technology in commuter transportation when compared to the existing rolling stock that Metra uses (locomotives and bi-level cars). The leading technology has been Diesel Multiple Units, or DMUs. This efficient technology allows flexible train lengths and seating capacity while providing superior fuel consumption. DMU rolling stock is being produced at the Nippon Sharyo plant in Rochelle, IL just south of the Rockford region. Based on a 2010 contract to supply DMUs to the Sonoma-Marin Area Rail Transit group a DMU pair (sometimes referred to as a "married pair") is estimated to cost between $7-9 million. This price range would provide significant saving over traditional commuter rolling stock units.The following pages provide information from the Nippon Sharyo DMU catalog.



New Generation Diesel Multiple Unit

Features of our DMU

Efficient

- Flexible train length optimizes seating capacity and fuel consumption
- Minimal infrastructure requirements speed up time to start-up
- Diesel Power Module configuration simplifies maintenance

Flexible

- Unrestricted operation on the general railroad system, with train length in multiples of 2 or 3 cars

Accessible

- Fully ADA compliant

Safe

- Meets or exceeds all U.S. passenger rail safety requirements

Comfort

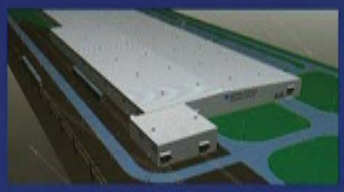
- Smooth and quiet operation for work, rest or play

Green

- Low-impact, green technology
- Each two-car train removes more than 100 automobiles from the road

Quick

- Smooth rapid acceleration
- Standard is 79 mph, option - 90 mph



Built and operating in America
For more than a quarter century - On Time, On Budget

Train Configuration and Data (Standard DMU)

Technical Data

Carbody	Stainless steel w/LAHT end underframe
Cab front exterior	FRP over stainless steel
Clearance outline diagram	Amtrak 1355, Rev. E, w/o 3rd rail clearance
Tare weight (ready to run)	148,000 lbs
Length	85'-0"
Width	10'-0" (floor), 10'-6" (below beltrail)
Height	13'-0" (structure), 14'-6" (top of roof shroud)
Coupler height (maximum)	34½"
Coupler type	AAR Type H or Fully Automatic
Floor height	51"
Door arrangement	Quarter-Point, high level boarding, threshold heights 48" – 51"
Seating capacity (commuter seats)[1]	79 seats (with toilet) or 74 seats + 2 wheelchairs; 85 (without toilet) or 80 seats + 2 wheelchairs
Truck type	Bolsterless, fabricated construction with air suspension
Minimum curvature	250' R. (23º), No. 8 Crossover w/ 12'-2" centers
Truck dimensions	59'-6" centers, 8'-6" wheelbase, 36" wrought steel wheels
Speed	79 mph (standard), 90 mph (maximum)
Fuel tank	400 U.S. gal. (approx.), fabricated steel, FRA underfloor-compliant
Power configuration	Diesel Power Module with auxiliary generator
Engine	567 kW (760 HP), EPA Tier 4 Final-compliant
Transmission	Hydro-Mechanical with Retarder
Auxiliary power	Aux. generator (variable output), APS provides 480 VAC 3Φ, 120 VAC, 72 VDC, 24 VDC
Brake system	Electro-pneumatic controlled, blended friction brake with retarder & engine brake
Acceleration[1,2]	0 – 20 mph: 1.27 mphps, or; 0 – 50 mph: 0.73 mphps, or; 0 – 79 mph: 0.40 mphps
Deceleration [3]	2.5 mphps, speed tapered above 60 mph (Service brake) 3.0 mphps, speed tapered above 50 mph (Emergency brake)

[1] Varies according to arrangement [2] Load compensated from AW0 to AW2 [3] Load compensated from AW0 to AW3

NIPPON SHARYO

SUMITOMO CORPORATION OF AMERICA

ROLLING STOCK

Nippon Sharyo won a 2010 contract to supply 18 DMUs to the Sonoma-Marin Area Rail Transit (SMART) group in California. The value of that contract was $58.8 million. Based on that contract a single DMU is estimated to cost roughly $3.5 million. Each DMU can carry 50-75 passengers. In a typical DMU solution there are a minimum of two cars paired together, as shown below. A DMU pair is estimated to cost $7-8 million.

Seat

Bar Counter

ADA Space

Bicycle Storage

Interior

A DMU solution would also be very attractive in a P3 transit option as described above in Step 3b of the incremental vision for passenger rail in the Rockford region. DMU rolling stock could be added as demand increases without having to buy locomotives or power units. It is also possible that the DMU technology could be used for urban circulators in a fixed guideway implementation.

RMAP Rail Documentation

The following documents are available from RMAP, either in print form or via the website. Please contact an RMAP staff person for more details:

NICTI/NICRI Documents
- Feasibility Study, November 2004
- Public Involvement Plan, August 2006
- Project Management Plan, August 2006
- Purpose & Need, January 2007
- Initial Alternatives, January 2007
- Evaluation Methodology, January 2007
- First Level Screening, February 2007
- Development of Detailed Alternatives, May 2007
- Final Draft Detailed Alternatives Report, March 2008
- Second Level Screening Report, April 2008
- LPA Briefing Paper, May 2008
- NICTI Survey (conducted by U of I), March 2009
- Final Draft Environmental Assessment, March 2009
- Rockford Express Bus Service to Chicago Area, May 2011
- Draft Environmental Impact Statement, October 2011

AMTRAK Documents
- Potential for Upgrade and Expansion of Rail Passenger Service in Illinois, Report to General Assembly, June 1989
- Feasibility Report on Proposed Amtrak Service Chicago-Rockford-Galena-Dubuque, March 2007
- Feasibility Report on Proposed Amtrak Service Chicago-Rockford-Galena-Dubuque, Revised June 22, 2007
- Illinois Intercity Passenger Rail Environmental Assessment, IDOT, September 30, 2009
- High Speed Intercity Passenger Rail Program, Track 2 Application, IDOT, October 2, 2009
- Rockford Amtrak Station, TIGER II Application, IDOT, August 2010
- Review and Update of Chicago-Rockford-Dubuque Feasibility Study, URS Corporation, November 15, 2010

COMMUTER RAIL Documents
- Commuter Rail Feasibility Study, Marengo Extension, Metra, February 24, 2010
- State of the System, Metra, Draft March 30, 2012

HIGH SPEED RAIL Documents
- Chicago to St. Louis 220 mph High Speed Rail, Volume 1, Infrastructure & Cost, October 2009
- Chicago to St. Louis 220 mph High Speed Rail, Volume 2, Ridership & benefits, October 2009
- Chicago to St. Louis 220 mph High Speed Rail, Volume 3, Rockford to O'Hare Segment, October 2010
- The Economic Impacts of High-Speed Rail on Cities and their Metropolitan Areas, US Conference of Mayors

FREIGHT RAIL Documents
- Rockford Railroad Consolidation Study, Wilbur Smith Associates, September 2003
- TIGER Discretionary Grant Application, RMAP TIGER I, September 14, 2009
- Winnebago County Rail Authority Rail Planning and Engineering Study, AECOM, December 2009
- Rockford Petition to the Illinois Commerce Commission, Order T10-0041, June 2, 2010
- Executive Summary for Great Lakes Basin Belt Railroad, November 1, 2014
- Railroad Terminal Concept Plan, Fehr Graham Engineering & Environmental, February-March 2015

OTHER Documents
- Jane Addams memorial Tollway, Transit Value Planning Study, Illinois Tollway, August 2011
- The Emergence of the "Super-Commuter", Rudin Center for Transportation, February 2012

SECTION 10
FREIGHT AND URBAN GOODS MOVEMENT

As stated in the 2013 Freight Facts and Figures from the Federal Highway Administration and Bureau of Transportation Statistics, "the Nation's 118.7 million households, 7.4 million business establishments, and 89,004 governmental units are part of an economy that demands efficient movement of freight." During the time period between 1990 and 2011, "the population of the United States of America grew by 25 percent, the gross domestic product (GDP) grew by 68 percent, while household income remaining the same (inflation adjusted). Foreign trade grew faster than the overall economy, doubling in real value over the same period, reflecting unprecedented global interconnectivity."

Freight travels over an extensive well-established network of highway, bridges, railroads, airways/airports, pipelines and waterways. Table 10-1 shows miles of Infrastructure by Transportation Mode for 1990, 2000 and 2011.

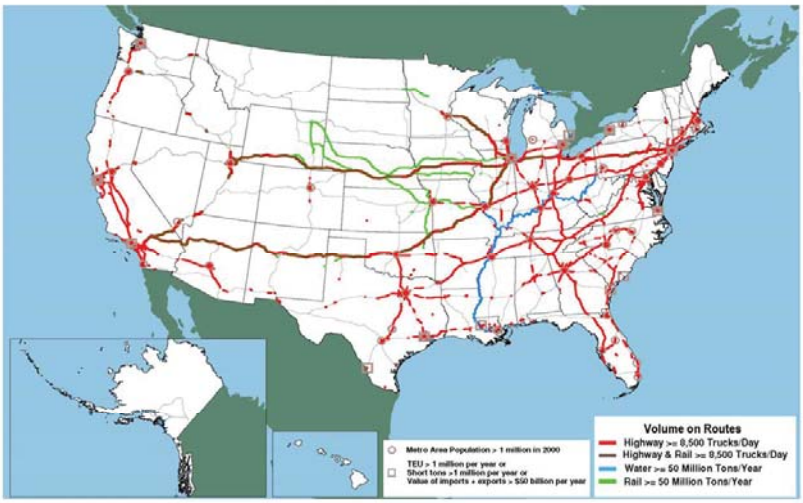
Having the freight infrastructure in place to transport freight materials, goods and services over our national transportation systems is one of the principal components of having a strong economy. Not only do the various systems provide employment opportunities, but more importantly the movement of shipping those materials in an efficient matter for retailers, manufacturers, miners, farmers, energy companies and many other businesses has a substantial impact on the USA overall economy.

In reviewing national material on freight transportation and the geographic location of the northern Illinois region on the national and international movement and routes of freight, the RMAP region is at a critical crossroads regarding the freight transportation in regional planning. As shown on Map 10-A the northern Illinois rail and highway system is a transport and converging point and hub for the major movement of freight goods across the USA. To further understand the numerous issues involved in freight transportation, a review and analysis was undertaken in 2009 to 2012 by RMAP to develop a comprehensive plan and identified the major links and components to address the projected increases in freight transportation but also, to recognize and link the transportation – economical connection that freight is and what would attract and foster investment to the RMAP region.

Over the past several years, RMAP has completed several planning documents to assess current conditions on the region's freight infrastructure. The overall objective of these planning efforts was to examine the freight transport chains/supply-chains that occur along multi-modal corridors that the movement of goods was being done efficiently between terminals and hubs/points of destinations. Included in this analysis were any physical obstacles obstructing access to the quality and efficiency of interoperability and inter-connectivity of rail, air, and road transport.

MAP 10-A

Components of Major Freight Corridors



Note: Highway & Rail is additional highway mileage with daily truck payload equivalents based on annual average daily truck traffic plus average daily intermodal service on parallel railroads. Average daily intermodal service is the annual tonnage moved by container-on-flatcar and trailer-on-flatcar service divided by 365 days per year and 16 tons per average truck payload.
Source: U.S. Department of Transportation, Federal Highway Administration, Office of Freight Management and Operations, 2008.

TABLE 10-1

Transport System	1990	2000	2011	Change: 1990-2011
National Highway System	3,866,926	3,951,101	3,929,425	1.62%
Railroads	175,909	170,512	138,576	-21.22%
Inland Waterways	13,342	13,342	13,342	0%
Pipelines	1,479,047	1,554,316	1,752,336	17.80%
·Oil	208,752	176,996	178,809	-14.34%
·Gas	1,270,295	1,377,320	1,563,527	23.08%

Listed below are the main planning documents related to freight that RMAP has completed:

1. **Rockford Railroad Consolidation Study, September 2003** – this study was done to develop a balanced program of elements for intermodal transportation in Rockford and the Rock River Valley that meet the industry's freight service needs, the operating requirements of the freight transportation provides, and the City of Rockford's land use and transportation goals. Since maintenance of the rail infrastructure is primarily the responsibility of the private rail carrier, this study identified alternatives where if certain combinations of accepted elements were done, benefits could occur to the railroads, the users of the rail service and the public.

2. **Winnebago County Rail Authority Rail Engineering and Planning Study, December 2009** – this study was done to examine the conditions and role for the facilities in the aligned air, rail and roadway freight transportation infrastructure adjacent to the Chicago/Rockford International Airport (RFD).

3. **RMAP Rockford Regional Freight Study, November 2012** – this study focused on the quality and efficiency for the movement of goods to the Rockford region and to identify freight movement factors that would promote the strategies and investments to promote and provide for a sound transportation system to the economic vitality of the area. As part of this planning effort, the RMAP Travel Demand Model (TDM) was upgraded and expanded to include a separate trip table for trucks and other type of commercial vehicles.

4. **RMAP Railroad Terminal Concept Plan, March 2015** – this study explored the feasibility of constructing a rail terminal facility and freight services around an area adjacent to RFD and the surrounding rail and highway networks. Assessment also included the feasibility of utilizing the existing transportation/utility infrastructure, the connected improvements to develop a terminal facility and any environmental, economic and social issues that impact the opportunity to develop this area.

As with these four planning efforts, the Regional Freight Study that was presented to the RMAP Policy Committee at their November 29, 2012, meeting was a multi-purpose comprehensive planning document for the regional planning area. Listed below are the study's major findings/highlights:

Project Background and Purpose

- Make recommendations to invest in a series of projects to operatively improve the northern Illinois freight network
- Recommend supply chain enhancements critical to maintain current, as well as attract future industrial development for the RMAP study area
- Locational advantages and resources remain despite recent economic distress
- Transportation investment will lead to industrial supply chain attraction and operability, as well as multiplier effects for the regional economy
  Transportation Modes
- Assets connect land use to transportation networks, often integrating modes to support industrial supply chains
- Networks connect regions through corridors: Kansas City, Chicago, the Illinois River Valley to St. Louis (I-39/55), Twin Cities, Milwaukee/Green Bay
- Capitalize on opportunities that arise across the RMAP area with other projects, eg., OmniTRAX rail line convergence with the Canadian National due to the Morgan Street Bridge replacement
- Track growing and emerging corridors, such as I-35, I-65 and I-69, for area industries connections to global markets and suppliers

Role of the Private Sector

- Attract major shippers that can take advantage of the regions location and transportation operations
- Sustain freight forwarder interest and awareness of the region
- Targeted Industries will typically display the key attributes of innovation and technology, particularly for innovation in the mechanical, hydraulic and control systems
- Industry sectors favorably situated within the Rockford MSA, or could be attracted, include aerospace production and research & development, warehouse/distribution centers, industrial machinery manufacturing, metals manufacturing, chemicals and plastics manufacturing, food processing, transportation equipment manufacturing, as well as green technology and alternative energy development and production
- Maintain focus on supply chain integration where regional connections and cohesion are important, the successful logistics centers continually demonstrate the alignment
- Freight rail infrastructure upgrades will combine with private investment to create a rail-to-high-

way intermodal or transload facility that all railroads serving industries in the Rockford region can utilize
- Economic linkages among area industries can be tracked over time to monitor connections, as well as compare the RMAP study area to regional peers

Management & Coordination

- The Rockford Global Trade Park, which surrounds RFD, brings together a multitude of economic development tools such as Foreign Trade Zone #176, US Customs Port of Entry, three economic recovery TIF districts and a planning area of over 6,600 acres in support for industrial and commercial projects
- Leverage the Illinois' State Freight Plan to incorporate RMAP's freight plans & programs as the post-TIGER, MAP-21 transportation programs unfold
- Air Authority, Passenger Rail Authority and freight linkages between those two systems, examine areas of overlap and complementary purposes
- Track US freight flows over the next three years
- Track and monitor freight flow changes
- Winnebago and Boone County planning activities in relation to land use
- Jurisdictions for different modes, within governing agencies
- Logistics industry infrastructure is most effective when it is linked with a coordinated, broadly engaged planning effort that involves partnerships between public and privates stakeholders and the community.
- The mitigation of traffic/congestion impacts, as they may arise on local and regional transportation networks, is an important planning factor with significant economic and community benefit.

Freight movement factors

- Industry's decision factors are shaped by on-time reliability, cost, transit time (damage, security, flexibility, frequency)
- Tollway improvements and technology has helped, as well as the connections to other interstates and railroads
- Technology: GPS and trucking, WISDOT, IDOT for I 39, Tollway highway performance monitoring
- Signalization and local truck routes/continuity
- Build origin-destination and through traffic tables via the RMAP TDM
- Illinois as a state is considered well-integrated in many industry sectors. However, it could be an indication that further economic integration may be possible which would likely increase the efficiency of the goods movement system and decrease the costs to shippers and consumers, and may foreshadow a growth in local employment.
- The top twelve overall industry purchasers of rail transportation in the area includes: candy manufacturers; cookie, cracker, and pasta manufacturers; snack food manufacturers; and dog and cat food manufacturers. Paint and coating manufacturers are also a key customer of the rail transportation industry

Policy and Program Recommendations

- Consensus of Stakeholders is imperative going forward, scarce public sector dollars will flow to an area where broad public support already exists, across multiple levels of government and jurisdictions
- The private sector will also invest where conflicts and uncertainty are minimized
- Industry decisions – supply chains, freight flow and the global marketplace all interact
- Transportation investments will aid in industry attraction by providing improved access and adaptability for industrial operations
- Sustain initiatives through adaptation and strategic alignment
- Sustain RFD as a catalyst for industrial growth and development, enhance linkage to other modes of transportation
- Hospitals, health care providers, the U.S. Postal Service, directory and mailing list vendors, wholesalers, and restaurants were among the largest customers of air transportation in both years – public and sector consensus behind the airport
- Utilize the RMAP Freight Study as the foundation for each of the region's investment and economic development programs, e.g., the RMAP TIP

One of the major notes from this study is that Multiple Mode/Transportation Centers, known as Intermodal Facilities, are located and thrive where (1) a market corridor exists that captures industrial supply chains and (2) an operational advantage arises from the location, attractive to industry and freight transportation firms. The prime examples of these two points are the:

- Jane Addams Memorial Tollway Corridor (I-90) in Boone County and Winnebago County
- U.S. 20 Corridor starting in Belvidere and extending past Rockford towards the Village of Winnebago and The Village of Pecatonica
- Interstate 39 Corridor, essentially from the City of Rochelle (I-88) in Ogle County until it merges with I-90

To provide access to and from these highways and interchanges is extremely important. Having well established connections to the existing and planned terminals and hubs/points of destinations in the Rockford regional area will continue and provide for economic development opportunities but also maintain a focus on supply chains.

A prime example of this emphasis to provide efficient routes in our transportation system and to provide the needed connections on supply chains to the area's businesses is the Primary Freight Network (PFN). In November 2013, the Federal Highway Administration published the draft initial designation of the Highway PFN. At the time, the comment period was extended to February 15, 2014. During this time period, RMAP submit two sets of comments to the docket #FHWA-2013-0050 for essentially the inclusion of the (1) Chicago/Rockford International Airport (RFD) and (2) a segment of U.S. 20 from Interstate 39 to Illinois State Route 2 to be added/included in the PFN. Commonly referred to as the "first and last mile," a comprehensive and complete network must connect to the destinations and generators "Hubs" of freight facilities to meet current and projected needs of all modes of transportation. Inclusion of these two facilities would meet some of the objectives of the Regional Freight Study.

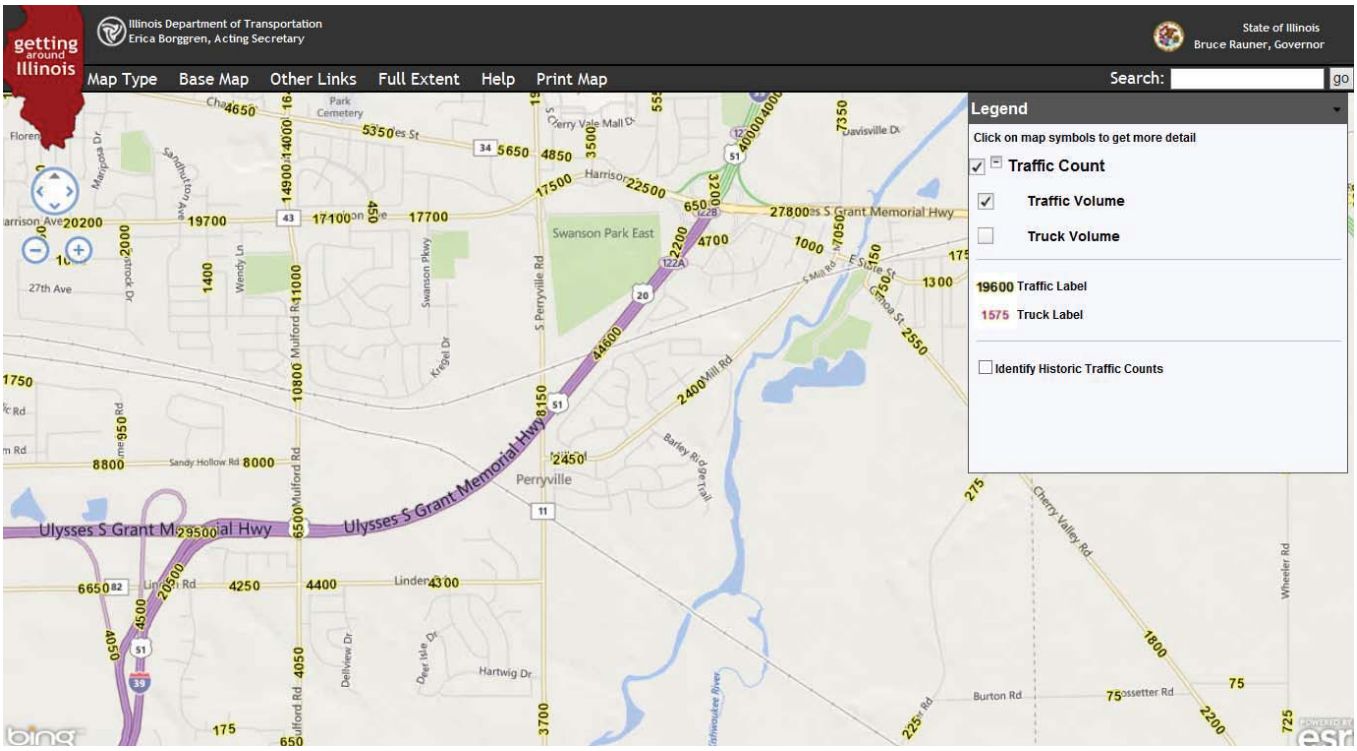
In reviewing the past, current and projected freight transport material, one of the major planning issues facing the RMAP area in the future is the continued increase of truck traffic on primarily the National Highway System routes/Primary Freight Network (PFN). In other words, CONGESTION, that the increase truck traffic will possible have on the PFN.

The following maps from FHWA Freight Analysis Framework illustrate this issue. To further explain this concern, below is a conversion table of different shipping containers and what the passenger car equivalents (PCE) are:

One Barge = 14.4 Rail Cars = 57.60 Trucks =173 Passenger Cars

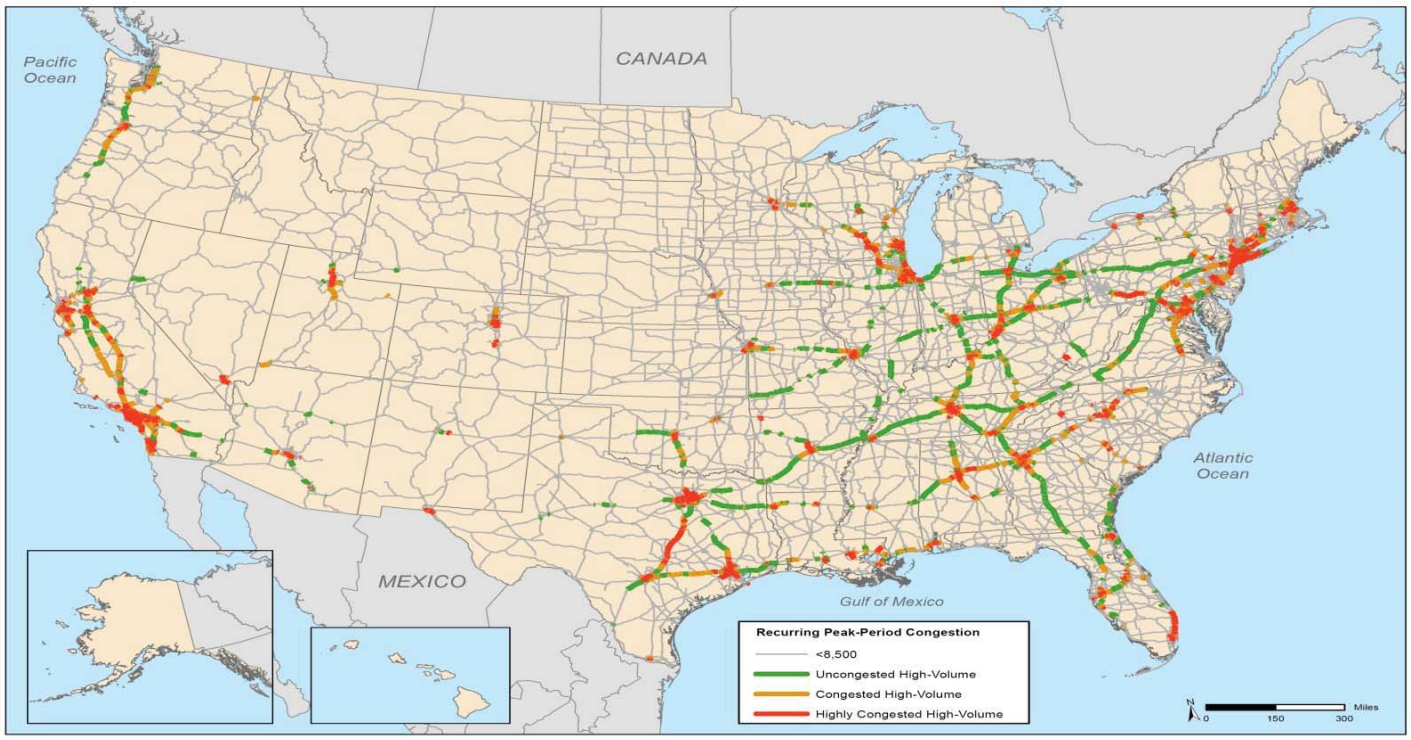
For example, in 2013 the average daily traffic on Interstate 39, U.S. 51 and U.S. 20 (Bypass 20) between the interchanges of I-39 south and I-90 (Jane Addams Memorial Tollway) was 44,600, with 29.04% trucks. However, by converting trucks into passenger cars (PCE) and then calculating the increase would yield 70,500 vehicles. If the truck percentage would be 40% in 2040 and if the vehicles count would stay the same as in 2013 at 31,350, and then projected traffic would be 52,750. Therefore, by converting the projected trucks into PCE the traffic would be 94,950 vehicles.

MAP 10-B



MAP 10-C

Peak-Period Congestion on High-Volume Truck Portions of the NHS: 2011



Notes: High-volume truck portions of the National Highway System carry more than 8,500 trucks per day, including freight-hauling long-distance trucks, freight hauling local trucks, and other trucks with six or more tires. Highly congested segments are stop-and-go conditions with volume/service flow ratios greater than 0.95. Congested segments have reduced traffic speeds with volume/service flow ratios between 0.75 and 0.95. The volume/service flow ratio is estimated using the procedures outlined in the HPMS Field Manual, Appendix N. NHS mileage as of 2011, prior to MAP-21 system expansion.
Source: U.S. Department of Transportation, Federal Highway Administration, Office of Freight Management and Operations, *Freight Analysis Framework*, version 3.4, 2013.

MAP 10-D

Peak-Period Congestion on High-Volume Truck Portions of the NHS: 2040

Notes: High-volume truck portions of the National Highway System carry more than 8,500 trucks per day, including freight-hauling long-distance trucks, freight hauling local trucks, and other trucks with six or more tires. Highly congested segments are stop-and-go conditions with volume/service flow ratios greater than 0.95. Congested segments have reduced traffic speeds with volume/service flow ratios between 0.75 and 0.95. The volume/service flow ratio is estimated using the procedures outlined in the HPMS Field Manual, Appendix N. NHS mileage as of 2011, prior to MAP-21 system expansion.
Source: U.S. Department of Transportation, Federal Highway Administration, Office of Freight Management and Operations, *Freight Analysis Framework*, version 3.4, 2013.

Legislation was introduced in the Spring 2007 Session of the Illinois General Assembly to authorize the Greater Rockford Airport Authority (governing board of RFD) to establish a Rail Authority. The legislation, which ended up as House Bill 4, was adopted in October 2007. Under existing Illinois statute, the Transportation Cooperation Act of 1971, a pathis provided to have the Rail Authority established by having units of local government execute an interagency agreement. The Bill as adopted authorizes the Airport Authority to issue its property tax based, general obligation bond for rail purposes. However, the Bill was amended to omit any explicit authority for the Rail Authority to construct, acquire, operate, or contract for operation of rail facilities. The Act also specifically prohibits the Rail Authority from itself acting as a rail carrier. This airport authority governing board adopted a resolution unanimously on June 26, 2008 to create the Authority and name an Executive Director.

The Winnebago County Rail Authority is an organization fostering the growth of rail transportation alignment with industrial development. The Rail Authority's roles and responsibilities continue to evolve in response to regional challenges and opportunities. The Rail Authority's management platform guides investment and operations to link area industries with Class I railroads consistent with the practices for the state of the industry in Illinois. The Winnebago County Rail Authority reflects the commitment of the regional community to support transportation and industrial development. The Authority shares a bonding capacity linked through the existing powers of RFD

SECTION 11
AIRPORT

There are three airports located in the Rockford Metropolitan Planning Area (MPA), the Chicago-Rockford International Airport (RFD), as well as two smaller local airports: Poplar Grove and Cottonwood. In addition, there are three airports located within two-hours driving time from the Rockford MPA that serve the residents of the MPA.

RFD is a commercial passenger and cargo airport that serves the Rockford MPA, as well as Northern Illinois. It is located in the southern part of Rockford. RFD is municipally-owned and operated by the Greater Rockford Airport Authority (GRAA). The GRAA is led by a Board of Commissioners with seven members appointed as listed below. Commissioners are appointed for a term of five years.

- Mayor of Rockford- three members
- Winnebago County Board Chairman- two members
- Mayor of Loves Park- one member
- Village President of Machesney Park- one member

RFD has two runways that allow instrument landings and is a major airport that provides cargo, commercial, general aviation, and maintenance services. Airport facilities include:

- Runway 7/25 (10,000 ft. x 150 ft.) Category III Instrument Landing System
- Runway 1/19 (8,200 ft. x 150 ft.) Category I Instrument Landing System
- Cargo ramps capable of accommodating current cargo aircraft including 747-8.
- 24/7 FAA staffed Air Traffic Control Tower
- Uncongested airspace environment
- Interstate highway access including I-39, I-90, I-88

The Chicago Rockford International Airport (RFD) is located 68 miles northwest of Chicago and encompasses over 3,000 acres. RFD is home to 30 industrial tenants and the largest regional parcel-sorting facility in the UPS system- the only facility of its type that handles coast-to-coast cargo. The airport has progressively evolved from a general aviation facility to a dynamic commercial service airport.

RFD is an international airport capable of landing aircraft in Category III conditions. These state-of-the-art facilities, when coupled with runway lengths of 10,000 ft. and 8,200 ft., allow RFD to land any jet aircraft operating in the world today- even under the most adverse conditions.

RFD is also a United States Customs Port of Entry, home to 30 industrial tenants and the Authority is grantee for Foreign Trade Zone (FTZ) #176. The diverse activities at RFD cause it to have a greater economic impact on the region it serves than any other commercial service airport in the State of Illinois, excluding the City of Chicago's system of airports. An FTZ is a specially designated area, in or adjacent to a U.S. Customs Port of Entry, which is considered to be outside the Customs Territory of the U.S. All cargo entering the country from foreign soil is subject to inspection and clearance by U.S. customs, as well as payment of duty. One major exception to this is a Foreign-Trade Zone (FTZ). Within this designated area, foreign and domestic merchandise may be stored, repackaged, manipulated, manufactured, destroyed or otherwise altered or changed and re-exported without the usual formal customs entry procedures and payment of duties and taxes. By taking advantage of RFD's FTZ status, businesses can save money on international cargo shipments or manufacturing/distribution.

Millions of dollars have been invested in infrastructure improvements and facilities at RFD. A majority of dollars spent on these projects were funded through local, state, and federal grants. The completion of these projects has allowed RFD to be in the position to accommodate the tremendous growth in passenger and cargo services. Investments made prior to 2010, which were reflected in the previous LRTP, include: RFD Parking Expansion, Beltline Road Expansion, Terminal Enhancements, Hangar Development, Addition of Snow Removal Equipment Building, Addition of International Arrival Gate, Remodel/Expansion of Fire Station #7, and a New UPS Sorting Facility.

Since 2010 approximately $60 million has been invested by RFD in the following improvements:

- ARFF building modernization and equipment acquisition
- Reconstruction of Taxiways J & L (strengthening and geometric improvements to accommodate widebody operations)
- Phased Reconstruction of Runway 1/19
- Improvement to Taxiway F to accommodate 747 -800 operations
- Airport Perimeter and Security Fence Upgrades
- Terminal Modernization and Expansion - Phase 1 (Construction to start Spring/Summer 2015)
- Terminal Parking Lot Expansion
- Rock Valley College Sitework and Utilities
- Reconstruct Airport Drive and Falcon Road (in partnership with the City of Rockford,
- Winnebago County, IDOT and EDA)

The current plans for expansion and modification of the RFD facilities can be seen on the following two pages. Among them include the rehabilitation of several taxiways, the improvement and creation of new facilities to handle cargo and maintenance needs. Additionally, several large reconstruction and rehabilitation projects have been completed or planned regarding the major roadways leading to and around

MAP 11-A

LEGEND

EXISTING	FUTURE	DESCRIPTION
		AIRPORT PROPERTY LINE
		RIGHT OF WAY (R.O.W.)
		FAR PART 77 SURFACE
		RUNWAY PROTECTION ZONE (R.P.Z.)
		AIRFIELD PAVEMENT
N/A		PAVEMENT/BUILDING REMOVAL
		AIRPORT BUILDINGS
		HOUSES AND OUTBUILDINGS
		AVIGATION EASEMENT
		BUILDING RESTRICTION LINE (B.R.L.)
		RUNWAY AND TAXIWAY SAFETY AREA (R.S.A.)
		OBJECT FREE AREA (O.F.A.)
		RUNWAY VISIBILITY ZONE (R.V.Z.)
		AIRCRAFT PARKING LIMITS (A.P.L.)
		ILS-GLIDE SLOPE ANTENNA & CRITICAL AREA
		ILS-LOCALIZER ANTENNA & CRITICAL AREA
		AIRPORT REFERENCE POINT (A.R.P.)
		RUNWAY END IDENTIFIER LIGHT (REIL)
		VISUAL DECENT APPROACH INDICATOR (VADI)
		THRESHOLD LIGHTS
		AIRPORT ROTATING BEACON
		WIND CONE
		WIND CONE AND SEGMENTED CIRCLE
		ASOS
	N/A	USGS MONUMENT
		RUNWAY VISUAL RANGE
920	N/A	GROUND CONTOURS
	N/A	LAKES PONDS OR RIVERS

GENERAL NOTES

1.) BASE MAP WAS DEVELOPED USING 1996 AERIAL MAPPING, "AS-BUILT" CONSTRUCTION DRAWINGS, AND PREVIOUS AIRPORT LAYOUT PLAN.

2.) EXISTING CONDITIONS WERE EVALUATED USING FAA ADVISORY CIRCULAR 150/5300-13, CHANGE 7.

3.) THE BUILDING RESTRICTION LINE ENCOMPASSES THE RUNWAY PROTECTION ZONE, THE RUNWAY OBJECT FREE AREA, THE RUNWAY VISIBILITY ZONE, NAVAID CRITICAL AREAS, AND AIRPORT AREAS WITH LESS THAN 35 FOOT CLEARANCE UNDER THE FAR PART 77 SURFACES.

4.) APPROACH SURFACES HAVE BEEN SHOWN TO SUPERSEDE RUNWAY PROTECTION ZONES WHERE THEIR DIMENSIONS ARE THE SAME.

5.) NO OFZ OBJECT PENETRATIONS.

6.) NO FUTURE THRESHOLD SITING SURFACE OBJECT PENETRATIONS.

7.) BELTLINE ROAD TO BE RELOCATED UPON CONSTRUCTION OF FUTURE RUNWAY 7R/25L.

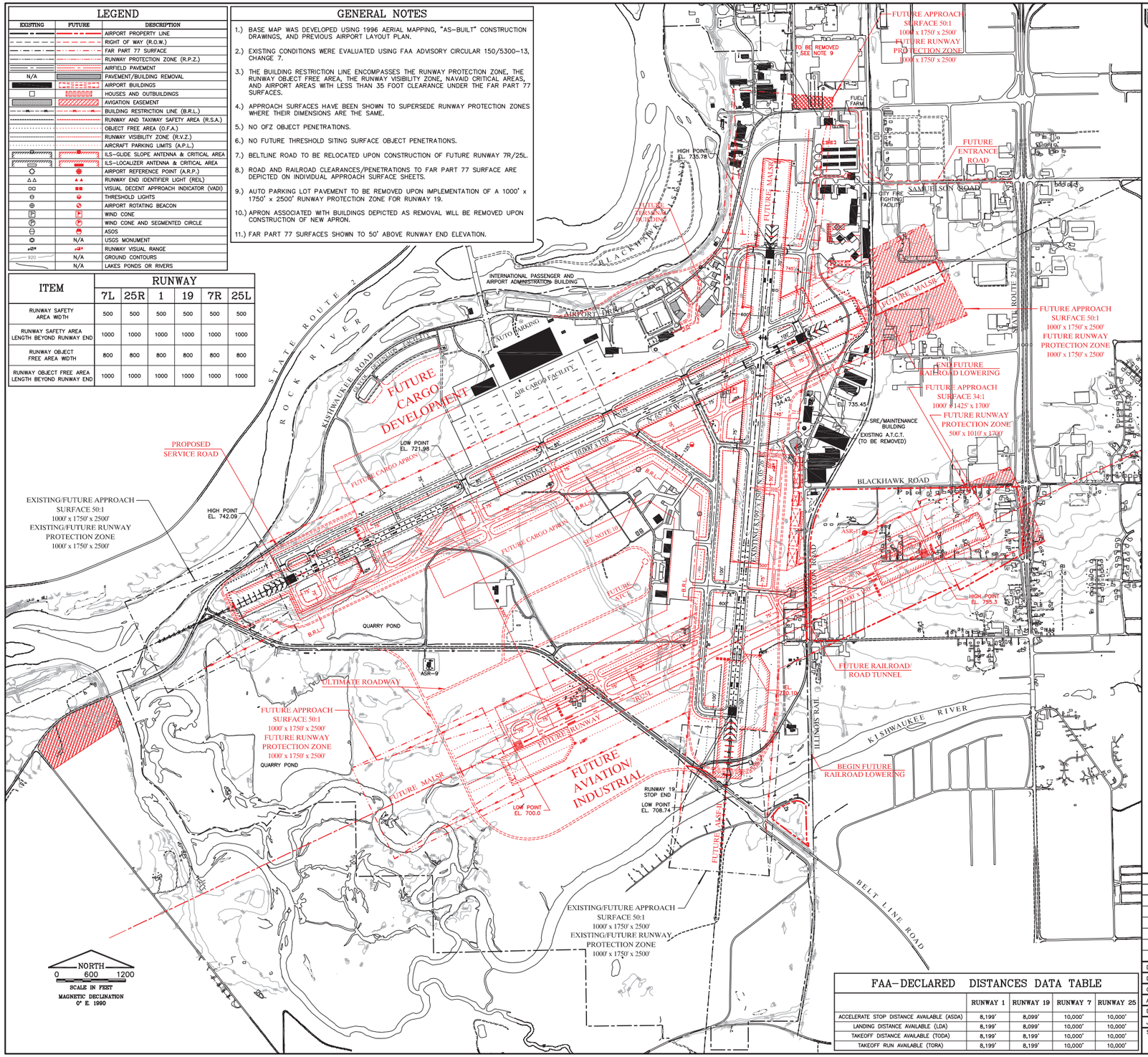
8.) ROAD AND RAILROAD CLEARANCES/PENETRATIONS TO FAR PART 77 SURFACE ARE DEPICTED ON INDIVIDUAL APPROACH SURFACE SHEETS.

9.) AUTO PARKING LOT PAVEMENT TO BE REMOVED UPON IMPLEMENTATION OF A 1000' x 1750' x 2500' RUNWAY PROTECTION ZONE FOR RUNWAY 19.

10.) APRON ASSOCIATED WITH BUILDINGS DEPICTED AS REMOVAL WILL BE REMOVED UPON CONSTRUCTION OF NEW APRON.

11.) FAR PART 77 SURFACES SHOWN TO 50' ABOVE RUNWAY END ELEVATION.

ITEM	RUNWAY					
	7L	25R	1	19	7R	25L
RUNWAY SAFETY AREA WIDTH	500	500	500	500	500	500
RUNWAY SAFETY AREA LENGTH BEYOND RUNWAY END	1000	1000	1000	1000	1000	1000
RUNWAY OBJECT FREE AREA WIDTH	800	800	800	800	800	800
RUNWAY OBJECT FREE AREA LENGTH BEYOND RUNWAY END	1000	1000	1000	1000	1000	1000



FAA-DECLARED DISTANCES DATA TABLE

	RUNWAY 1	RUNWAY 19	RUNWAY 7	RUNWAY 25
ACCELERATE STOP DISTANCE AVAILABLE (ASDA)	8,199'	8,099'	10,000'	10,000'
LANDING DISTANCE AVAILABLE (LDA)	8,199'	8,099'	10,000'	10,000'
TAKEOFF DISTANCE AVAILABLE (TODA)	8,199'	8,199'	10,000'	10,000'
TAKEOFF RUN AVAILABLE (TORA)	8,199'	8,199'	10,000'	10,000'

CMT
CRAWFORD, MURPHY & TILLY, INC.
CONSULTING ENGINEERS
LICENSE NUMBER: 184-000613
Springfield, Illinois
Aurora, Illinois
Rockford, Illinois
Peoria, Illinois
St. Louis, Missouri

ROCKFORD
RFD
CHICAGO/ROCKFORD INTERNATIONAL AIRPORT

FUTURE AIRPORT LAYOUT PLAN SHEET

Path: K:\RockfordAp\9825802
Path: \ALP\
File: ALP2A.dwg
Xref Dwg: BASE.dwg
Xref Dwg:
Layouts: Apl1a
Data Tables: N/A
Date: 9/8/99 8:56 AM

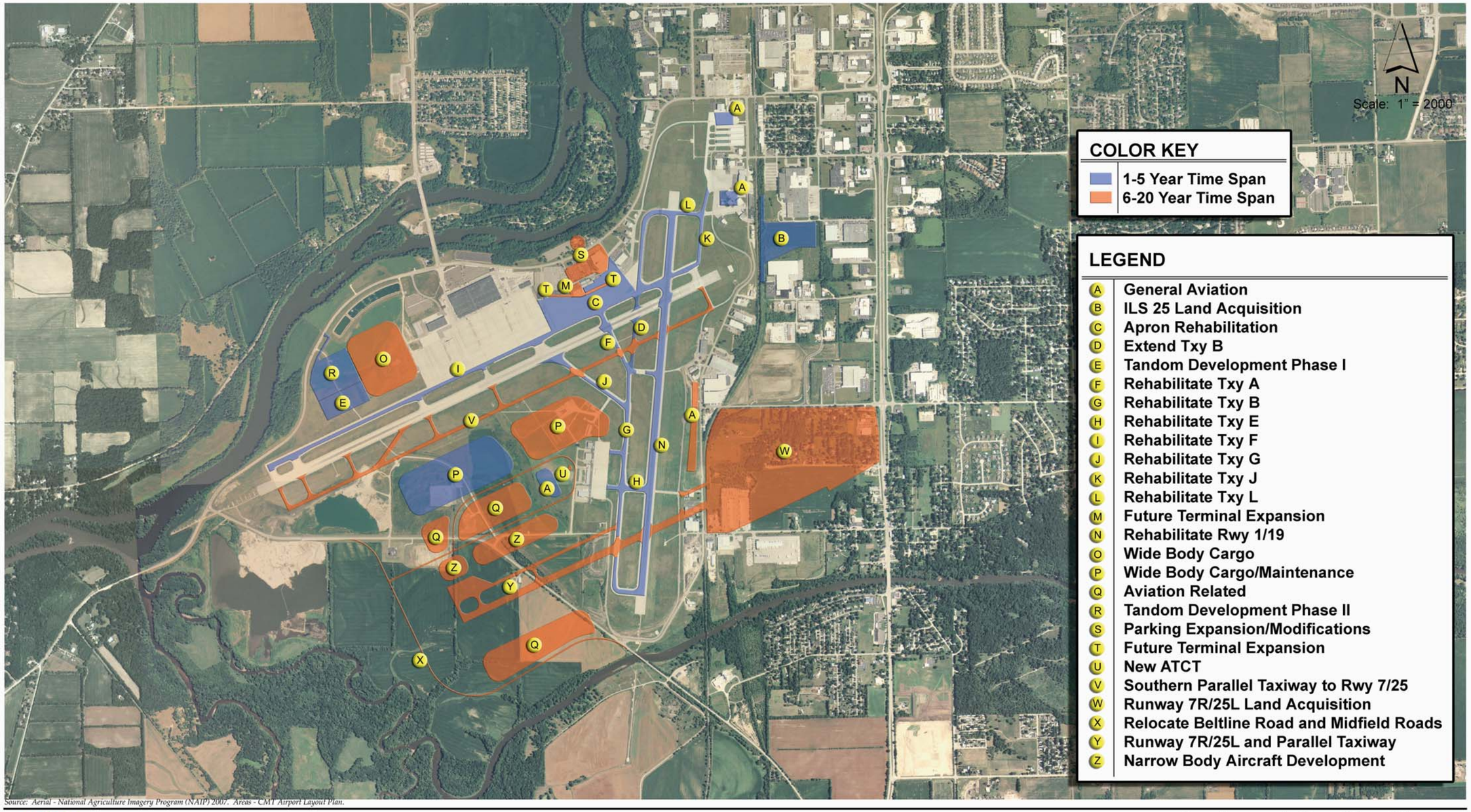
0 1 2
THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).

REVISIONS

NO.	BY	DATE

DESIGN BY:	BMH/LJS
DRAWN BY:	MRW/BWN
CHECKED BY:	BMH/DRG/LJS
APPROVED BY:	BMH
DATE:	5/31/2006
JOB No:	98258-02
SHEET	3 OF 17

MAP 11-B



Source: Aerial - National Agriculture Imagery Program (NAIP) 2007. Areas - CMT Airport Layout Plan.

Implementation Plan Phasing

Exhibit 6-1

the airport. Falcon Road, Airport Drive, Beltline Road, Midfield Road are a few of the notable names the improvement of which has made and will make the access to RFD significantly easier. Until recently, some of these access points were incredibly difficult to traverse, owing to roadway condition and in some cases, insufficient capacity.

In addition to what is shown on the preceding maps, the establishment of the mid-field development area at RFD as a strategic development area is consistent with the key findings of the Airport's Master Plan as well as a study conducted by City of Rockford in the mid 2000's. The City's engaged a team of real estate, planning, engineering and land-use professionals to evaluate the area surrounding the airport. The resulting study identified the airport region as a strategic growth area in the City.

The airport's current Master Plan identifies the airport's mid-field area which is bounded by Runway 7/25 to the north, Runway 1/19 to the east and the future parallel runway 7R/25L to the south for further development of air cargo facilities; construction of maintenance, repair and overhaul (MRO) facilities; aviation education; relocation of the existing air traffic control tower; relocation of the airport aircraft rescue and firefighting facility (ARFF); and other aviation oriented development compatible with the future uses.

Through the airport's strategic marketing efforts to increase international air cargo operations at the airport, the airport found that many carriers lacked adequate facilities to conduct MRO operations. Additionally, only Miami International Airport (MIA) currently had an MRO hangar that could accommodate the 747-8. The airport initiated dialogue with Wood Dale, IL based AAR Corporation, one the largest nationwide and third largest global MRO provider globally to establish a new MRO facility at RFD. Over a two year period, the airport worked closely with AAR and various stakeholders to formulate a development agreement. As a result of this effort, on August 18, 2014 in partnership with the State of Illinois, Winnebago County and the City of Rockford, GRAA announced that an agreement had been reached with AAR to build a new 200,000 SF facility at this location. The facility is scheduled to be completed in the first quarter of 2016 and within the first two years employ 500.

In 2012, the Illinois Department of Transportation engaged CDM Smith to conduct an analysis of the economic benefit of Illinois' system of airports. This study found that RFD had a total economic impact of just under $1 Billion. With the additional jobs created by the MRO facility, the economic impact of the airport conservatively estimated to grow by 25%.

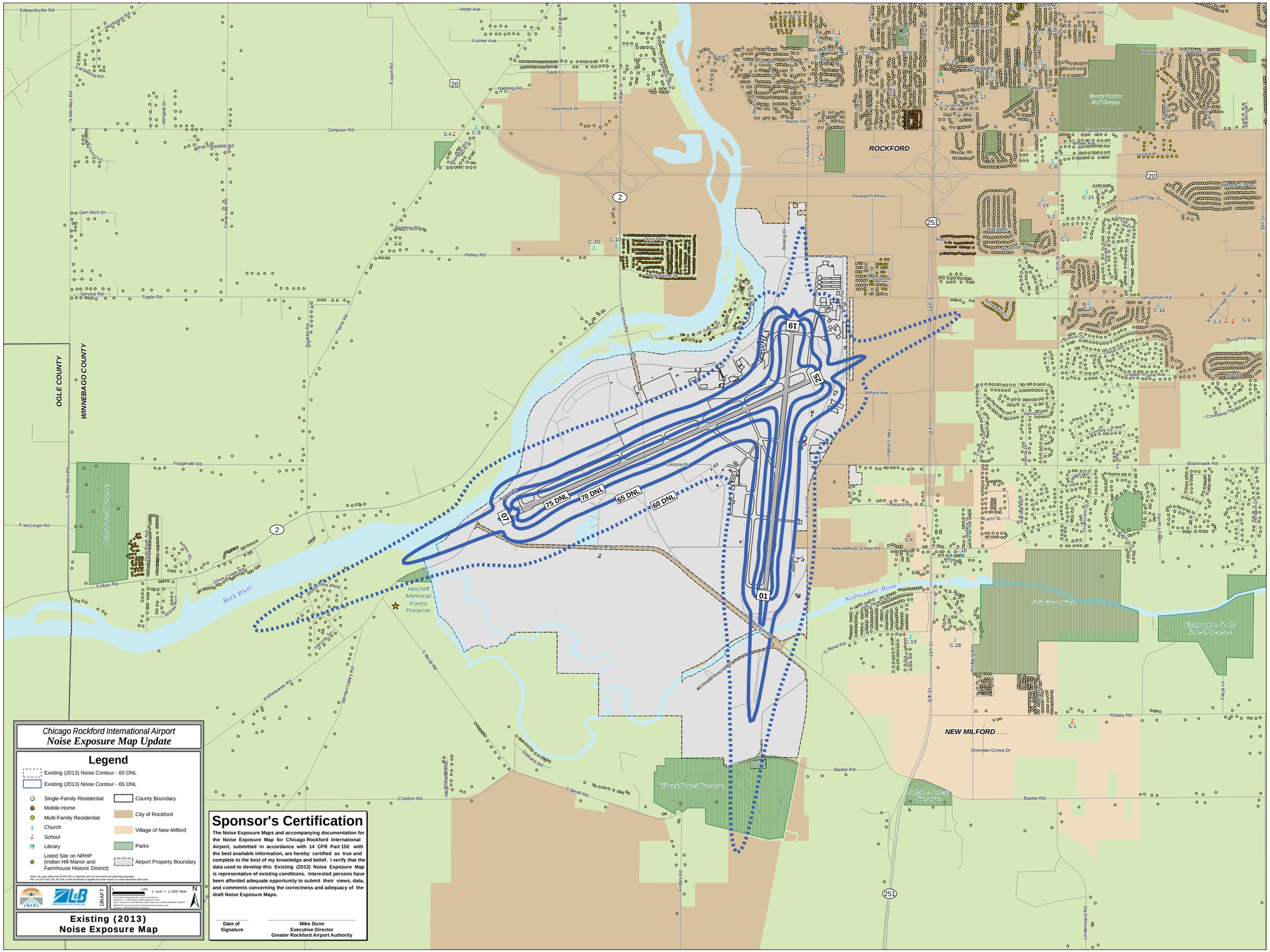
Noise Exposure Map Update and Part 150 Noise Compatibility Study

A Federal Aviation Administration (FAR) Part 150: Noise Exposure Maps (NEMs) and a Noise Compatibility Program (NCP) is a voluntary noise exposure and land use compatibility study prepared by an airport to identify existing noise exposure, identify future noise exposure levels, to evaluate various alternatives and to make recommendations as to viable noise abatement and mitigation measures where they are needed. The NEMs provide information on the existing and five-year future expected boundaries of significant levels of annual average noise exposure surrounding an airport to all interested parties.

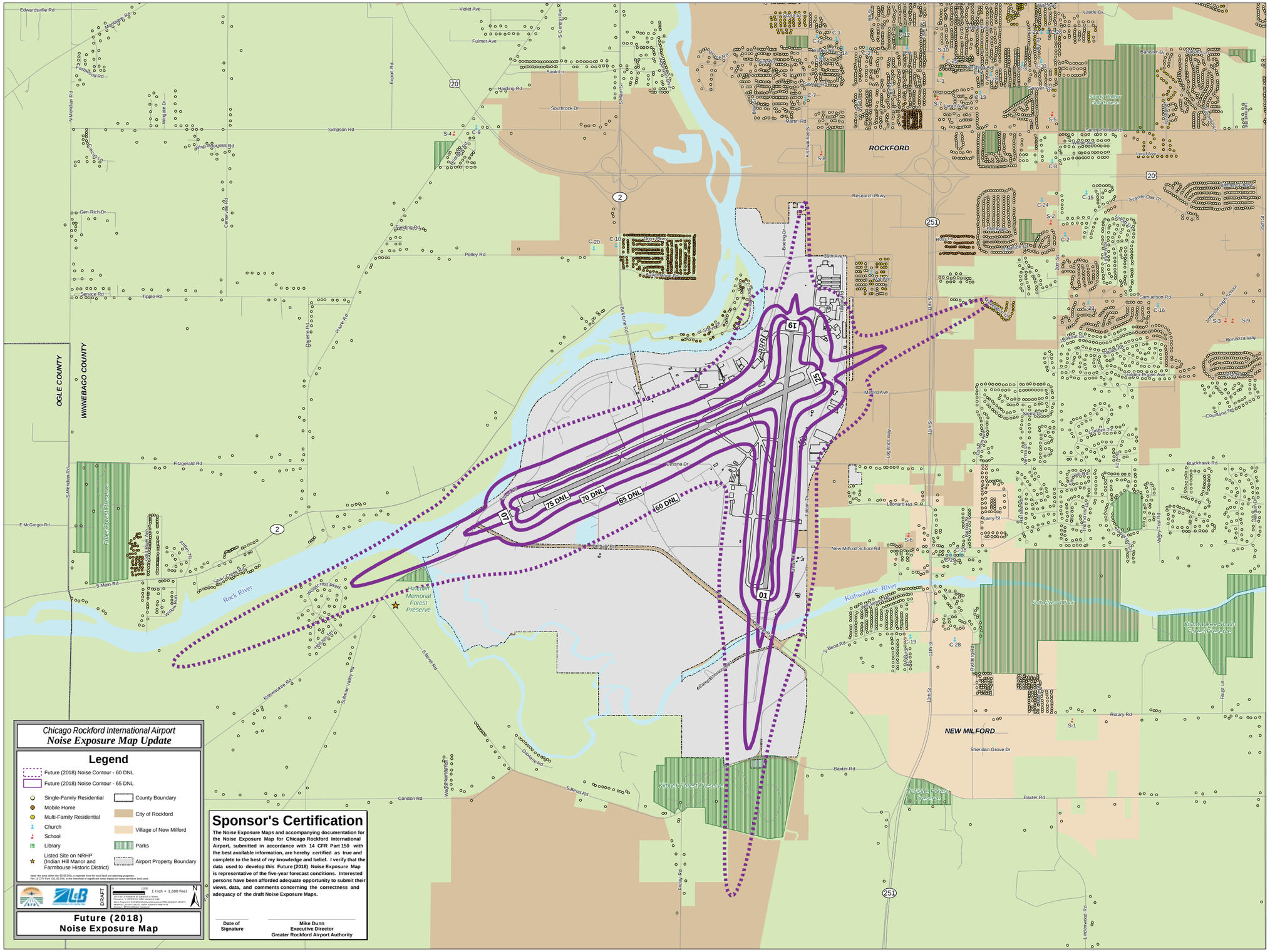
Today airports face many significant and challenging issues. Among those issues is the effect that noise generated by aircraft can have on the communities surrounding an airport. Over the past several decades, as communities and cities around airports have grown and air travel expanded, aircraft noise has begun surfacing as a regional concern in many communities. Therefore, airport noise compatibility planning is mostly focused on reducing existing non-compatible land uses around airports while also preventing the introduction of additional non-compliance land uses through cooperative efforts between those involved, especially a regions planning and zoning agencies.

The Greater Rockford Airport Authority has a history of noise compatibility planning at RFD. The process was initiated with the completion of a Part 150 NCP in 1990. The Noise Compatibility Program was subsequently updated in 1994 and again on May 8, 2003. Beginning in September of 2012 RMAP staff was involved in the most current update to the Noise Exposure Maps for RFD. Effective January 22, 2014, and applicable January 13, 2014, the Federal Aviation Administration (FAA) announced its determination that the updated noise exposure maps submitted by the Greater Rockford Airport Authority for the Chicago Rockford International Airport are in compliance with the applicable requirements. See Maps 11-C and 11-D for current and future noise exposure level maps.

MAP 11-C


ROCKFORD
NEW MILFORD
OGLE COUNTY
WINNEBAGO COUNTY
Rock River
Kishwaukee River
Hinchliff Memorial Forest Preserve
Kishwaukee Forest Preserve
Kishwaukee South Forest Preserve
South Forest Park
Sandy Hollow Golf Course
Rockford Airport Authority Property
Chicago Rockford International Airport
Noise Exposure Map Update
Legend
Existing (2013) Noise Contour - 60 DNL
Existing (2013) Noise Contour - 65 DNL
Single-Family Residential
Mobile Home
Multi-Family Residential
Church
School
Library
Listed Site on NRHP (Indian Hill Manor and Farmhouse Historic District)
County Boundary
City of Rockford
Village of New Milford
Parks
Airport Property Boundary
DRAFT
1 Inch = 1,000 Feet
Existing (2013)
Noise Exposure Map
Sponsor's Certification
The Noise Exposure Maps and accompanying documentation for the Noise Exposure Map for Chicago Rockford International Airport, submitted in accordance with 14 CFR Part 150 with the best available information, are hereby certified as true and complete to the best of my knowledge and belief. I verify that the data used to develop this Existing (2013) Noise Exposure Map is representative of existing conditions. Interested persons have been afforded adequate opportunity to submit their views, data, and comments concerning the correctness and adequacy of the draft Noise Exposure Maps.
Date of Signature
Mike Dunn
Executive Director
Greater Rockford Airport Authority

MAP 11-D


ROCKFORD
NEW MILFORD
OGLE COUNTY
WINNEBAGO COUNTY
75 DNL
70 DNL
65 DNL
60 DNL
Chicago Rockford International Airport
Noise Exposure Map Update
Legend
Future (2018) Noise Contour - 60 DNL
Future (2018) Noise Contour - 65 DNL
Single-Family Residential
Mobile Home
Multi-Family Residential
Church
School
Library
Listed Site on NRHP (Indian Hill Manor and Farmhouse Historic District)
County Boundary
City of Rockford
Village of New Milford
Parks
Airport Property Boundary
DRAFT
1 inch = 1,000 Feet
Future (2018) Noise Exposure Map
Sponsor's Certification
The Noise Exposure Maps and accompanying documentation for the Noise Exposure Map for Chicago Rockford International Airport, submitted in accordance with 14 CFR Part 150 with the best available information, are hereby certified as true and complete to the best of my knowledge and belief. I verify that the data used to develop this Future (2018) Noise Exposure Map is representative of the five-year forecast conditions. Interested persons have been afforded adequate opportunity to submit their views, data, and comments concerning the correctness and adequacy of the draft Noise Exposure Maps.
Date of Signature
Mike Dunn
Executive Director
Greater Rockford Airport Authority

RFD is a major hub for cargo, consistently ranking in the top 30 for landed cargo weight of all airports in the United States. A significant amount of that cargo weight is related to the United Parcel Service hub that operates out of RFD. The Chicago Rockford International Airport has invested heavily in infrastructure to increase cargo capabilities. Phase one of a four phase cargo development program has been completed and is currently capable of supporting two 747-8 operations. When completed the facility will be able to accommodate 10 B747-8 aircraft directly adjacent to the air cargo facilities.

The cargo data are shown below. Unsurprisingly, the cargo weight dropped precipitously at the same time the nationwide economy was severely at a downswing. With 2009 and 2010 having the worst declines, RFD and UPS were not immune to the Great Recession. The rate of decline has since significantly slowed, but has lagged somewhat behind other airports in recovery, fallen from its peak of 18th in the nation in 2007 to 26th in 2013. With continued renovations and improvements, it is hoped that cargo data for 2014 and beyond will resume the growth that was anticipated prior to the economic troubles.

Enplanements at RFD are not as highly ranked nationally as cargo, but are a significant and growing facet of the operations. Currently, RFD offers flights to: Orlando/Sanford, Las Vegas, Clearwater/St. Pete, Fort Myers, and Phoenix/Mesa. There is also seasonal service to Cancun, Punta Cana, and Puerto Vallarta. Depending on the season, up to 31 passenger flights depart from RFD each week.

Until the economic downturn in the late 2000's, the continued expansion of available destinations and increased trips to those destinations had RFD climbing the list of most enplanements, as the data show below. Like the cargo side, the enplanements slowed down dramatically starting in 2009, but recovered much faster. Growth has already resumed for the enplanement data, showing that the people who use RFD for their aviation options have continued to see the value and appeal of the services provided locally.

TABLE 11-1

RFD Cargo Data

Year	Rank	Landed Weight (lbs.)	% Change
2005	25	1,392,559,040	
2006	22	1,391,634,140	-0.07%
2007	18	1,474,574,465	5.96%
2008	19	1,419,957,532	-3.70%
2009	21	1,128,804,190	-20.50%
2010	24	917,260,300	-18.74%
2011	26	888,721,860	-3.11%
2012	27	822,206,730	-7.48%
2013	26	792,674,210	-3.59%

TABLE 11-2

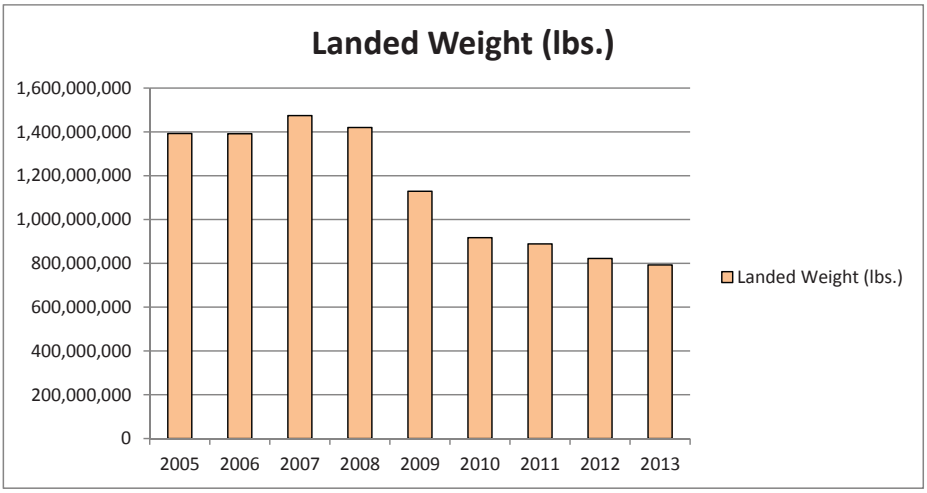


TABLE 11-3

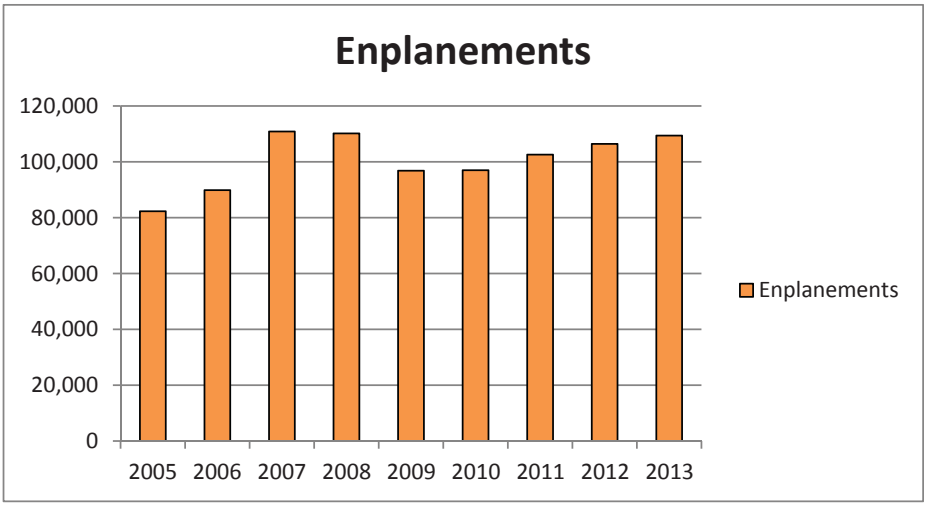


TABLE 11-4

RFD Enplanement Data

Year	Rank	Enplanements	% Change
2005	226	82,282	
2006	220	89,842	9.19%
2007	215	110,835	23.37%
2008	214	110,151	-0.62%
2009	220	96,812	-12.11%
2010	222	96,974	0.17%
2011	220	102,559	5.76%
2012	215	106,412	3.76%
2013	223	109,384	2.79%

SECTION 12
PERFORMANCE MEASURES

The Moving Ahead for Progress in the 21st Century (MAP-21) Act placed increased emphasis on performance management within the Federal-aid highway program and transit programs requiring use of performance-based approaches in statewide, metropolitan and non-metropolitan transportation planning. The intent of this performance-based approach is to provide a means for more efficient investment of Federal transportation funds, enhance transparency and improve the decision making process.

MAP -21 defines a set of National Goals for the Federal-aid Highway Program (23 USC Section 150(b)) which serve as an important basis for developing goals that are integrated into the transportation planning of States, MPOs, transit agencies and other partners. The set of National Goals are listed in Table 12-1.

Performance based planning and programming integrates performance management concepts into the existing federally-required transportation planning process and involves the use of data to support long-term and short-range investment decision making. While incorporating this new requirement into the transportation planning process, RMAP will further coordinate the Long-Range Transportation Plan, Transportation Improvement Program, Congestion Management Program and other federally required documents. Data generated on the Federal, State and Local levels will be utilized to realize the performance measure requirement and this information will be assembled through coordinated and collaborative efforts among RMAP and all of its Regional Partners. The following sections provide considerations that must be kept in mind throughout the performance measures development process.

TABLE 12-1

Performance Measurement Category	Purpose of Performance Measure
Safety	To achieve a significant reduction in traffic fatalities and serious injuries on all public roads.
Infrastructure condition	To maintain the highway infrastructure asset system in a state of good repair.
Congestion reduction	To achieve a significant reduction in congestion on the NHS.
System reliability	To improve the efficiency of the surface transportation system.
Freight movement and economic vitality	To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.
Environmental sustainability	To enhance the performance of the transportation system while protecting and enhancing the natural environment.
Reduced project delivery delays	To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices.

Performance Measure Concepts and Definitions

The following key terms explain the components related to the development of performance measures in the transportation planning process.

- A goal is a broad statement that describes a desired end state.
  -For example: A safe transportation system.

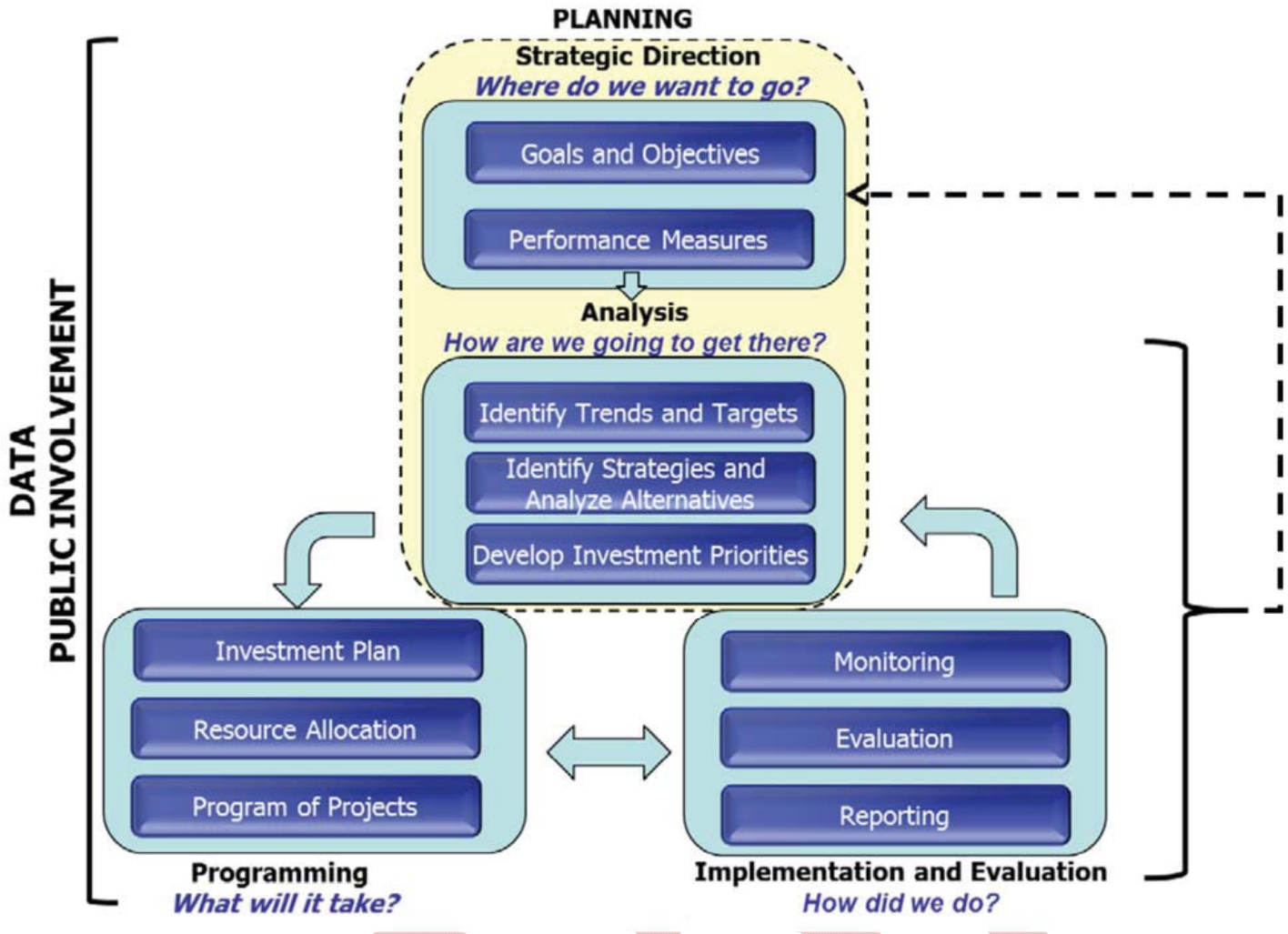
- An objective is a specific, measurable statement that supports achievement of a goal. A good objective should include or lead to development of a performance measure that can be tracked over time and is used to assess different investment or policy alternatives.
  -For example: Reduce highway fatalities.

- A performance measure is a metric used to assess progress toward meeting an objective. Performance measures can be used in strategy analysis to compare different investment or policy alternatives and can be used to track actual performance over time.
  -Examples: Number of highway fatalities, fatality rate per vehicle mile traveled

- A target is a specific level of performance that is desired to be achieved within a certain timeframe. A target can be used as a basis for comparing progress over time to a desired outcome or for making decisions on investments.
  -Examples: Reduce fatalities by 5% by 2015. Reduce serious (fatal/incapacitating injury) intersection crashes by 10% by 2015. This would represent an annual reduction of serious and fatal crashes compared to the previous year.

4-Step Planning Approach:

TABLE 12-2



Source: FHWA Performance Based Planning and Programming Guidebook (September 2013)

In September 2013, the Federal Highway Administration released the "Performance Based Planning and Programming Guidebook" which details methodologies useful in the development of Performance Measures for the transportation planning field. As shown above, one methodology is to approach the process with four questions in mind. This process will assist in determining what the local regional goals are, specify objectives promoting actions to attain those goals, determine what resources and coordination must be present to implement those objectives, and evaluate overall progress towards meeting those desired goals. The following text further elaborates on what each step of the above diagram entails:

1. Strategic Direction (Where do we want to go?): Performance Based Planning & Programming (PBPP) is based on a strategic direction, which is used to shape decisions about policies and investments. In the transportation planning process, strategic direction is based upon a vision for the future, as articulated by the public and stakeholders. This vision often encompasses broad community factors such as quality of life, economic vitality, and environmental quality. PBPP includes:

- Goals and Objectives: Stemming from a state or region's vision, goals address key desired outcomes, and supporting objectives (specific, measurable statements that support achievement of goals) play a key role in shaping planning priorities.
- Performance Measures: Performance measures support objectives and serve as a basis for comparing alternative improvement strategies (investment and policy approaches) and for tracking performance over time.

2. Planning Analysis (How are we going to get there?): Driven by data on performance, along with public involvement and policy considerations, agencies conduct analysis in order to develop investment and policy priorities:

- Identify Trends and Targets – Preferred trends (direction of results) or targets (specific levels of performance desired to be achieved within a certain timeframe) are established for each measure to provide a basis for comparing alternative packages of strategies and measuring actual progress. This step relies upon baseline data on past trends, tools to forecast future performance, and information on possible strategies, available funding, and other constraints.

- Identify Strategies and Analyze Alternatives: Performance measures are used to assess strategies and to prioritize options. Scenario analysis may be used to assess alternative packages of strategies, to consider alternative funding levels, or to explore what level of funding would be required to achieve a certain level of performance.

- Develop Investment Priorities- This step builds on strategy analyses, and involves prioritizing strategies and investments and making tradeoffs between different goal areas with a system-level understanding of the level and mix of investments in a given area, for inclusion in the LRTP and related supporting plans. This step requires prioritizing what performance outcomes are most important. This process of prioritization should account for performance outcomes using analytical methods, as well as policy priorities, and concerns such as equity, environmental justice, and other considerations.

3. Programming (What will it take?): Programming involves selecting specific investments to include in an agency capital plan and/or in a STIP or TIP. In a PBPP approach, programming decisions are made based on their ability to support attainment of performance targets or contribute to desired trends, and account for a range of factors.

- Investment Plan – In order to connect the LRTP, which has an outlook of at least 20 years, to selection of projects in a TIP/STIP, some areas develop a mid-range (e.g., 10 year) investment plan or investment program. The investment plan may essentially be incorporated into the LRTP for an MPO, or may involve a set of investment plans for a State DOT or transit agency, addressing different modes, districts, or program areas.

- Resource Allocation/Program of Projects – Project prioritization or selection criteria are used to identify specific investments or strategies for a capital plan or TIP/STIP. Projects included in the TIP/STIP are selected on the basis of expected performance, and show a clear link to meeting performance objectives.

4. Implementation and Evaluation (How did we do?): These activities occur throughout implementation on an on-going basis, and include:

- Monitoring: Gathering information on actual conditions.
- Evaluation: Conducting analysis to understand to what extent implemented strategies have been effective
- Reporting: Communicating information about system performance and the effectiveness of plans and programs to policymakers, stakeholders and the public.

RMAP will utilize the above methodology (or derivative thereof) to identify performance measures appropriate to the region.

To ensure momentum with this initiative, MAP-21 requires that MPOs establish performance measure targets no later than 180 days after the State DOT establishes their targets. Coordination with the State DOT in the development of MPO targets is also required. As a result, the Illinois Department of Transportation has formed a statewide technical advisory group to ensure that there is statewide collaboration in the development of performance measures and that data sets are available and accessible by MPOs statewide. The overall goal of the Technical Advisory Group is to provide recommendations to IDOT for the implementation of an effective and efficient statewide performance management system. RMAP has been involved in this statewide initiative since its inception and will continue to participate in the process.

It should also be noted that the option exists for MPOs to agree to support the State DOT targets instead of developing individual targets specific to the MPO planning area. At the time of the writing of this LRTP, issuance of Final Rule Making for each of the performance measure categories is pending. Further discussion on which path RMAP will take regarding setting individual targets or agreeing to support the IDOT targets will be explored. In the interim, RMAP will monitor the existing transportation network and determine data needed to establish base line trends, etc.

SECTION 13
PUBLIC COMMENT

Shown on the succeeding pages are the announcements for the open house and public engagement sessions held by RMAP to discuss the 2040 Long Range Transportation Plan Update. RMAP took in comments at those events regarding updating the LRTP via the current process. Comments will be incorporated into the document as technical corrections and/or responses contained within this section. This will be present within the final draft version of the Long Range Transportation Plan.

This LRTP will eventually be presented for approval to the RMAP Policy Committee. At the time that it is approved via resolution, said resolution will be incorporated into this section as well.

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Rockford Metropolitan Agency For Planning

FOR IMMEDIATE RELEASE:
September 16th, 2014

CONTACT INFORMATION:
Jon Paul Diipla, jonpaul.diipla@rockfordil.gov

Public Open House
RMAP 2040 Long Range Transportation Plan

A public informational open house will be held at three area locations to obtain comment on the existing **Year 2040 Long-Range Transportation Plan (LRTP) for the Rockford Metropolitan Agency for Planning (RMAP).** The plan covers anticipated transportation needs in the Rockford Metropolitan Planning Area for the next 30 years. The plan is a cooperative effort of RMAP, public transportation providers, local governments and the Illinois Department of Transportation. Information regarding the current plan is available on the RMAP website www.rmapil.org

This long range transportation plan is updated every five years. The last time the LRTP was updated and adopted by the RMAP Policy Committee was July 29, 2010. It is tentatively scheduled for adoption by the RMAP Policy Committee at their July 30th, 2015 meeting. RMAP would like to receive remarks on the current document as well as comments on future transportation needs within the RMAP MPO and the surrounding region. Public feedback from these sessions will assist in the drafting of the RMAP 2040 Long Range Transportation Plan update.

Local, state and federal governments have the responsibility for constructing, operating/implementing and maintaining most of the transportation systems in the Rockford Metropolitan Planning Area. This LRTP was developed in the interest of promoting, developing and maintaining a safe and efficient transportation system that will meet the needs of the area's citizens, businesses and industries through the year 2040. The LRTP considers a wide range of citizen, community and technical input as well as the views, priorities and plans expressed in numerous previous plans and documents developed as part the RMAP planning process over the last 50 years. This LRTP reflects the goals, priorities and guidance originating from Federal law, specifically the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), the Transportation Efficiency Act for the 21st Century (TEA-21), the Safe, Accountable, Flexible, Efficient Transportation Equity Act- A Legacy for Users (SAFETEA-LU) and the Moving Ahead for Progress in the 21st Century Act (MAP-21).

The overall goal of the plan is to promote a safe and efficient transportation system for people and goods that provide a balanced multi-modal system that minimizes costs and impacts to the taxpayer, society and the environment. The plan addresses the growth projected for the area's airports, the area's bicycle and pedestrian

facilities, rail service to the region, public transportation issues, maintaining and improving the area's highway system and public funding issues.

The format of these open houses is to allow an informal discussion between the public and RMAP staff. The times and locations are as follows:

DATES

September 23, 2014 – Tuesday 11:00 AM to 2:00 PM Village of Machesney Park 300 Roosevelt Rd Machesney Park, IL 61115	September 23, 2014 – Tuesday 4:00 PM to 7:00 PM Boone County Administration Bldg. 1212 Logan Ave Belvidere, IL, 61008	September 24, 2014 – Wednesday 11:00 AM to 5:00 PM Regional Center for Planning & Design 315 N. Main St Rockford, IL 61101

PURPOSE:

View Graphic Displays, Discuss Study Goals and Objectives,
Ask Questions and Obtain Public Comments and Input

Note: Persons who require special accommodations under the Americans with Disabilities Act or persons who require translation service (free of charge) should contact RMAP at 815-964-7627 at least two days before the need for such services or accommodations.

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2040 TRANSPORTATION TOMORROW
A Long Range Transportation Plan for the Rockford Region

PUBLIC INFORMATION OPEN HOUSE

ROCKFORD METROPOLITAN AGENCY FOR PLANNING (RMAP)
LONG-RANGE TRANSPORTATION PLAN

A public informational open house will be held at three area locations to present the **Draft Year 2040 Long-Range Transportation Plan (LRTP) update for the Rockford Metropolitan Agency for Planning (RMAP).** The plan covers anticipated transportation needs in the Rockford Metropolitan Planning Area for the next 30 years. The plan is a co-operative effort of RMAP, local governments and the Illinois Department of Transportation. Information regarding the plan is available on the RMAP website www.rmapil.org. The Long Range Transportation Plan is updated every five years. The last time the LRTP was updated and adopted by the RMAP Policy Committee was July 29, 2010. This updated version of the LRTP is tentatively scheduled for adoption at the RMAP Policy Committee on July 30, 2015 at 1:15 P.M., at Rockford City Hall, 425 East State Street, Rockford, IL.

Local, state and federal governments have the responsibility for constructing, operating and maintaining most of the transportation systems in the Rockford Metropolitan Planning Area. This LRTP was developed in the interest of promoting, developing and maintaining a safe and efficient transportation system that will meet the needs of the area's citizens, businesses and industries through the Year 2040. This LRTP considered a wide range of citizen, community and technical input as well as the views, priorities and strategies expressed in previous plans and documents developed as part of the RMAP planning process over the last 40 years. This LRTP reflects the goals, priorities and guidance originating from Federal law, especially the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), the Transportation Efficiency Act for the 21st Century (TEA-21), the Safe, Accountable, Flexible, Efficient Transportation Equity Act- A Legacy for Users (SAFETEA-LU), and the Moving Ahead for Progress in the 21st Century Act (MAP-21).

As a complement to the LRTP and the Rockford Regional Freight Study, a sub-area transportation hub analysis has been completed in the vicinity of the Chicago – Rockford International Airport (RFD). This site study evaluated possible rail connections from existing transportation facilities in the area but also the feasibility of utilizing other utility infrastructure. A draft report has been prepared that shows some conceptual plans for this sub-area to develop an intermodal industrial zone.

The overall goal of the plan is to promote a safe and efficient transportation system for people and goods that provide a balanced multi-modal system that minimizes costs and impacts to the taxpayer, society and the environment. The plan addresses the growth projected for the area's airports, the area's bicycle and pedestrian facilities, rail service to the region, public transportation issues, maintaining and improving the area's highway system and public funding issues.

The format of these open houses allows for an informal discussion between the public and RMAP staff.
The times are indicated below.

DATES

Feb 24, 2015 – Tuesday 10:00 AM to 1:00 PM Loves Park City Hall 100 Heart Blvd. 61111 Loves Park, IL	Feb 24, 2015 – Tuesday 3:00 PM to 6:00 PM Roscoe Village Hall 10631 Main Street, 61073 Roscoe, IL	Feb 25, 2015 – Wednesday 2:00 PM to 6:00 PM Regional Center for Planning & Design 315 N. Main Street, 61101 Rockford, IL

PURPOSE:
View Graphic Displays, Discuss Study Goals and Objectives, Ask Questions and Obtain Public Comments and Input

our future, our goals, our map 313 North Main Street, Rockford, IL 61101 direct 779.348.RMAP fax 815.967.6913 web rmapil.org

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Rockford Metropolitan Agency For Planning

TRANSPORTATION 2040 TOMORROW

A Long Range Transportation Plan for the Rockford Region

PUBLIC INFORMATION OPEN HOUSE AND ENGAGEMENT SESSIONS

ROCKFORD METROPOLITAN AGENCY FOR PLANNING (RMAP)

Long Range Transportation Plan (LRTP)

Public informational open house and engagement sessions will be held at various area locations to present the updated draft of the **Transportation for Tomorrow: A Long-Range Transportation Plan for the Rockford Region**. The plan, which is developed by the Rockford Metropolitan Agency for Planning (RMAP), covers anticipated transportation needs in the Rockford Metropolitan Planning Area for the next 30 years. The plan is a co-operative effort of RMAP, local governments and the Illinois Department of Transportation. Information regarding the plan is available on the RMAP website www.rmapil.org. The Long Range Transportation Plan (LRTP) is updated every five years. The last time the LRTP was updated and adopted by the RMAP Policy Committee was July 29, 2010. The updated LRTP is tentatively scheduled for adoption by the RMAP Policy Committee at their July 30th, 2015 meeting. RMAP would like to receive remarks on the current draft document as well as comments on future transportation needs within the RMAP planning area and surrounding region. Public feedback from these sessions will assist in drafting the final version of the RMAP Long Range Transportation Plan update.

Local, state and federal governments have the responsibility for constructing, operating and maintaining most of the transportation systems in the Rockford Metropolitan Planning Area. This LRTP was developed in the interest of promoting, developing and maintaining a safe and efficient transportation system that will meet the needs of the area's citizens, businesses and industries through the Year 2040. This LRTP considered a wide range of citizen, community and technical input as well as the views, priorities and strategies expressed in previous plans and documents developed as part of the RMAP planning process over the last 50 years. This LRTP reflects the goals, priorities and guidance originating from Federal law, especially the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), the Transportation Efficiency Act for the 21st Century (TEA-21), the Safe, Accountable, Flexible, Efficient Transportation Equity Act- A Legacy for Users (SAFETEA-LU), and the Moving Ahead for Progress in the 21st Century Act (MAP-21).

The overall goal of the plan is to promote a safe and efficient transportation system for people and goods that provide a balanced multi-modal system that minimizes costs and impacts to the taxpayer, society and the environment. The plan addresses the growth projected for the area's airports, the area's bicycle and pedestrian facilities, rail service to the region, public transportation issues, maintaining and improving the area's highway system and public funding issues.

The formal public comment period for the second draft of the Long Range Transportation Plan update will be from May 14th, 2015 until June 12th, 2015. However, public comments regarding the RMAP LRTP and all other RMAP documents are welcome at any time. The format of these open houses and engagement sessions allows for both formal presentation and informal discussion between the public and RMAP staff. The times are indicated below.

May 14, 2015 - Thursday Next Rockford 7:30am - 9:00am Regional Center for Planning & Design 315 N. Main St. Rockford, IL 61101	May 14, 2015 - Thursday IDOT Infrastructure Listening Tour 3:00pm - 6:00pm Regional Center for Planning & Design 315 N. Main St. Rockford, IL 61101	May 19, 2015 - Tuesday Belvidere/Boone County Regional Planning Commission 5:00pm - 7:00pm Belvidere City Hall 401 Whitney Blvd. Belvidere, IL 61008	May 21, 2015 - Thursday Rockford Metropolitan Agency for Planning 9:30am -11:30am Regional Center for Planning & Design 315 N. Main St. Rockford, IL 61101
May 21, 2015 - Thursday 3:00pm -6:00pm Rockford Mass Transit District Eastside Transfer Center 725 N. Lyford Rd. Rockford, IL 61107	May 22, 2015 - Friday 3:30pm -6:00pm Rockford City Market Intersection of Water St. and Market St. Downtown Rockford, IL	May 27, 2015 - Wednesday 7:30am -9:00am Growth Dimensions Belvidere Township Offices 8200 Fairgrounds Rd. Belvidere, IL 61008	June 9, 2015 - Tuesday 4:00pm -5:00pm Rockford Park District Webbs Norman Center 401 S. Main St. Rockford, IL 61101

PURPOSE:

View Graphic Displays, Discuss Study Goals and Objectives, Ask Questions and Obtain Public Comments and Input

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