Long Range Transportation Plans

ICOG Staff Training
February 16, 2017

Note

- Links to plans and guidance document available on Planning Resource Guide (http://www.iowadot.gov/systems_planning/planning_resource_guide.html)

Long Range Transportation Plan (LRTP)

MPO/RPA LRTP Guidelines
LRTP financial planning tips
MPO LRTP flowchart
Paint the picture analogy
RPA LRTP flowchart

LRTP Best Practice Examples - coming soon

Metropolitan Planning Organization (MPO) LRTPs

Ames
Cedar Rapids
Davenport
Des Moines
Dubuque
Iowa City
Omaha - Council Bluffs
Sioux City
Waterloo

Regional Planning Affiliation (RPA) LRTPs

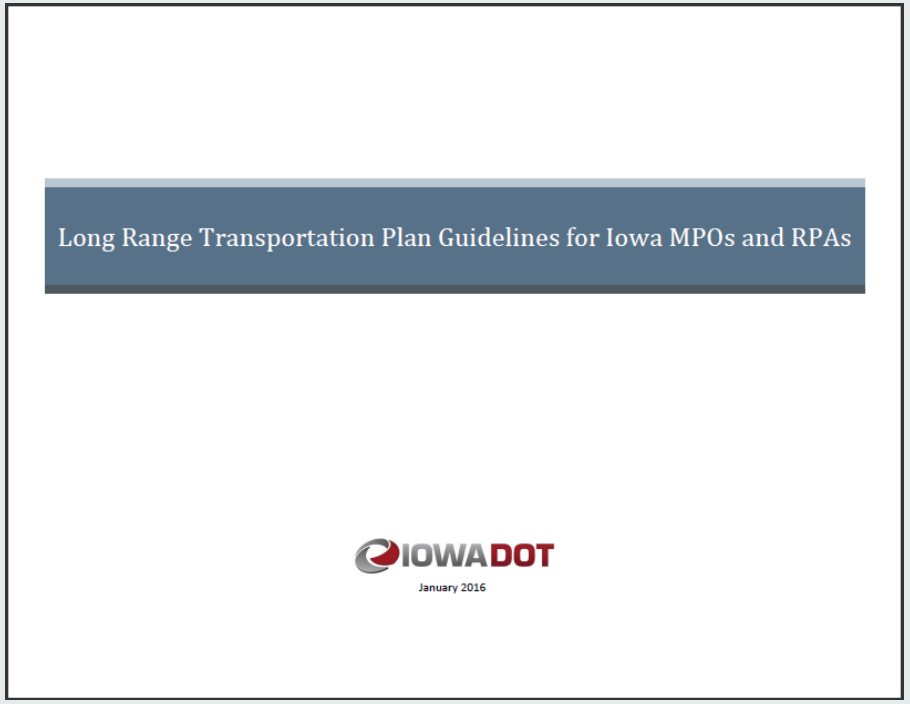
RPA 1
RPA 2
RPA 3
RPA 4
RPA 5
RPA 6
RPA 7
RPA 8
RPA 9
RPA 10
RPA 11
RPA 12
RPA 13
RPA 14
RPA 15
RPA 16
RPA 17
RPA 18

Long Range Transportation Plan (LRTP)

- Critical element of the transportation planning process
  - Plays an important role in outlining the existing status and future needs of an area's transportation system
  - Helps set the direction of planning efforts and programming investments for the MPO or RPA
  - Stakeholder involvement and public input is critical during LRTP development, as it helps guide the priorities and projects that will be submitted for federal funding at the MPO/RPA level
- 5-year update cycle
- Minimum 20-year planning horizon
- Federally required element for MPOs
- Iowa DOT required element for RPAs

What's required

- Requirements for MPOs outlined in 23 CFR 450.324; States in 23 CFR 450.216
- Iowa DOT has created guidance document for both MPOs and RPAs based on these requirements
- Available on Planning Resource Guide



What's required (cont.)

- Currently in transition period between different federal reauthorization bill requirements
  - Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) requirements still applicable
  - Plans will be required to meet regulations based on the Moving Ahead for Progress in the 21st Century (MAP-21) Act and Fixing America's Surface Transportation (FAST) Act after **May 27, 2018**
    - Performance management requirements – currently focusing on implementation of required state and MPO activities; may extend to RPAs in future
- Iowa DOT LRTP guidelines will be updated accordingly

Plan the planning process

- Critical to start early, develop a schedule, and continually review and adjust throughout the planning process
- Recommend developing plan timeline between two and three years before due date
  - Detailed schedule (monthly or weekly) at the task and/or component level
  - Identify staff responsible for tasks, and whether any outside resources (such as consultants) will be required
  - Items that will require feedback from the public or stakeholders
- Early coordination meeting between RPA/MPO staff, Systems Planning, District Planner, and federal partners

Plan the planning process (cont.)

- Input from two main groups, the public and stakeholders, is critical during the LRTP planning process
- At a minimum, MPOs and RPAs must follow the guidelines for public input outlined in their Public Participation Plan (PPP) and requirements noted in LRTP guidelines
  - The beginning of the LRTP update process is an ideal time for an agency to review and update the PPP to ensure that the PPP and public input activities for the LRTP align
- Consultation with environmental resource agencies should also be planned early

Example time and task schedule (Iowa DOT)

Iowa Department of Transportation

October 2008

Regional Planning Affiliation (RPA) Long-Range Transportation Plan - A Typical Time and Task Schedule

MONTHS

	Tasks	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Months Involving Work
Evaluation and review of existing long-range transportation plan	Initial evaluation of existing plan, review plan accomplishments, and look at the challenges that arose and prevented/slowed down progress on plan implementation	X																																2
	Finalize outline and create sub-committees (freight, transit, rail, etc.)	X																																2
	Establish initial set of goals and objectives		X																															2
Coordination efforts	Coordinate with and data collection from DNR, DED, Bureau of Indian Affairs, Corps of Engineers, and other appropriate agencies	X	X	X					X	X						X							X	X									X	4
	Hold public informational open houses with each member city and the general public	X							X							X								X									X	5
	Collaborate with surrounding RPAs concerning major traffic generators, commuting patterns, socioeconomic data, modal usage trends, etc.				X						X							X										X						4
Socioeconomic	Data collection, forecasting, and analyses-population (REMI model is one source), age cohorts, employment, dwelling units, land use zoning, minorities, disabled, low income, etc.		X	X	X	X	X	X	X																									8

Example sequential review schedule (RPA 4)

Table I.1 Long Range Transportation Plan Meeting and Review Schedule

TASK	MEETING DATES
Review Schedule and Plan Outline	May 2013
Chapter 1: Introduction **Chapter 2**: Plan Goals and Objectives	September 2013
Chapter 3: Regional Background and Trends **Chapter 4**: Existing Regional Transportation System	November 2013
Chapter 5: Planning and the Environment **Chapter 6**: Future Regional Transportation Threats, Solutions, and Alternatives	March 2014
Chapter 7: Financial Summary and Conclusion	June 2014
Review Draft Plan	August 2014
Public Comment Period/ Public Open House	October 2014
Final Approval	November 2014

Public and stakeholder input

- Various input methods, which may be applicable at different parts of the planning process
  - Traditional meetings
  - Workshops/charrettes
  - Online tools like surveys, crowdsourcing, interactive mapping, etc.
  - Focus groups/steering committee
- Targeting stakeholders may have more success than extensive general public efforts
- Integrate public input into the body of the plan – while detailed survey results or lists of comments can be in an appendix, make sure public input is discussed and referenced in the plan body
- Tie public input from early in the development process to how it helped shape the plan or aligned with the direction of the plan
- FHWA public involvement resources: https://www.fhwa.dot.gov/planning/public_involvement/

Public and stakeholder input

- Example efforts
  - Individual county-level meetings with county engineer, other relevant staff (such as CCB), and applicable city staff
  - Targeted questionnaires for different types of stakeholders, such as county/city staff, airport managers, transit agencies, railroad companies, major freight generators, bicycle groups, etc.
  - Use a broad mailing early in the process to a comprehensive list of possible stakeholders; ask for them to respond if they'd like to be notified/involved throughout the process

Example overview of planning process and stakeholder involvement (RPA 1)

Chapter One: Regional Planning Process and Stakeholders

The RPA 1 Long Range Transportation Plan 2035 is a full update to the region's "*20 Year Transportation Development Plan 2000-2020*" completed in 1999. The planning process was completed through the following steps:

1. Formation of sub-committees from the Technical and Enhancement Committees to act as steering team for the planning process
2. Data and information collection (demographic, economic, social, historical, environmental) to guide informed decision-making and identify key trends
3. Inventory and SWOT (Strengths, Weaknesses, Opportunities, Threats) Analysis of regional transportation system
4. Review of existing plans for consistency (city and county comprehensive plans, hazard mitigation plans, airport plans, transportation plans…)
5. Identification of the region's critical issues
6. Development of strategies to address issues
7. Proposals for short and long-term projects and policies
8. Public engagement and feedback
9. Final document approval

Stakeholders were engaged at each step:

1. Steering Team: Technical committee members brought engineering expertise and Enhancement Committee members brought conservation, recreation and economic development expertise to the process
2. Data and information collection: Required consultation with national, state, regional and local agencies responsible for land use management, natural resources, environmental protection, conservation, and historic preservation within the 5-county area
3. Inventory and SWOT Analysis: Required consultation with stakeholders from all modes of transportation:
   - Engineers
   - Airport managers
   - Terminal operators
   - Ferry commission
   - City and county administrations
   - Transit and other public transportation providers
   - Scenic Byways groups and administrators
   - Safe Routes to School Community Coalitions and Liaison
   - Conservation directors and trail committees
   - Watershed groups
4. Existing plans: Plan developers and owners (cities, counties and special interest groups)

5. Critical Issues: Stakeholders from all transportation modes, economic development and human service agencies
6. Strategy Development: All RPA 1 transportation committees
7. Project Proposals: All RPA 1 transportation committees
8. Public engagement: All RPA 1 residents
9. Final approval: RPA 1 Policy Board

Following final approval, the Long Range Transportation Plan will guide the region's implementation of the goals and objectives outlined in the plan. The plan is a living document and updates and changes may be required as trends and existing conditions change. The plan will continue to be available to the public as a resource and for review online at www.uerpc.org/transportation.html.

Example stakeholder input forms (RPA 17)

CVTPA – Long Range Transportation Planning

September 20, 2011

Follow-Up Work

Name: Corey Bishop
County: Appanoose County

1. List the Largest employers of your county & their location.
   Barker Company – Industrial Park
   Walla Manufacturing – Industrial Park
   School District – various sites
   C.I.C machinery – industrial Park
   Curwood Products – industrial Park
   Ideal Ready Mix – south side town
   SSG – Agricultural Products.
   L & W Quarry – L & Quarry
2. List the large freight traffic generators (e.g. grain elevators, grain processors, electric generation plants, large factories, large warehouses, ethanol plants, etc).
   SSG, Smith Farland grain – all types of grain hauling, fertilizer delivery, agricultural products
   L & W Quarries – Limestone gravel & rock products
   Ideal Ready Mix – south side town: – concrete
   Freight – Trucks.
   School System buses –
   Grain trucks from various farms
   – Metal salvage yard - Do not know name.
3. Any Planned projects overlayed on environmentally-sensitive areas: [e.g. wetlands, threatened and endangered species, protected areas, archeological/historical/ cultural sites, etc]?
   not that I am aware of.

CVTPA – Long Range Transportation Planning

September 20, 2011

Strength & Weakness by Mode

Name: TODDE W. FOLKERTS
County: LUCAS

1. Highways: US Highways 34 + 65 (Needs Resurfaced entirely length of Lucas Co)
   Iowa Highway 14 (Needs Resurfaced From Williamson to Corydon)
   County Highway S23, S45, S66, H20, H30, H32, + H50
   (S45 & H20 needs Resurfaced)
2. Railways:
   UNION PACIFIC
   BNSF
   Amtrak
3. Public Transportation Options:
   10/15 Transit
   Regular routes from small towns (Derby, Williamson, Lucas + Russell)
   for Elderly to Chariton. ~~for~~ who Need Groceries and Senior Citizen Center Visits
4. Aviation Facilities:
   Chariton Airport
   needs Jet Fuel Depot
5. Trails
   Cinder Path
   City Lake Trails
   Red HAW Trails
   } Connect all three together and eventually to Rathbun Lake trails

Plan structure

- Need to make early decision on how LRTP will be structured
- Three main types of documents, though any structure is allowable so long as it includes required elements
  - **Modal** – generally provides an area overview of socioeconomic data, then provides a separate chapter or section for each mode, focusing on its current status and future needs
  - **Strengths/weakness/opportunities/threats and variations** – tend to focus on various characteristics of the transportation system in a systematic order, reviewing the current status, strengths, and weaknesses of all modes, followed by future needs, opportunities, and threats for all modes
  - **Combined LRTP/Comprehensive Economic Development Strategy** – RPAs can explore this option, which further develops the transportation section of the CEDS to include all LRTP-required items and results in one combined CEDS/LRTP for the region

Plan structure – example outlines

Modal structure

1. Introduction and Goals
2. Public Input
3. Community Overview
4. Roads and Highways
5. Passenger Transportation
6. Non-motorized Transportation
7. Freight, Rail, Air, and Pipeline Transportation
8. Safety and Security
9. Operations
10. Environmental Analysis
11. Financial Constraint

SWOT structure

1. Planning Process and Stakeholders
2. Plan Goal and Objectives
3. Background and Trends
4. Existing System Strengths and Weaknesses
5. Planning and the Environment
6. Future Opportunities and Threats
7. Key Needs and Issues
8. Alternatives
9. Short-Term Action Plan
10. Long-Range Plan
11. Funding the Plan
12. Public Involvement Process and Results
13. Future Planning Activities

Example modal strengths and weaknesses (RPA 1)

Active Transportation Strengths

- Abundant natural resources provide scenic setting for trail system
- Existing trails attract many visitors to the region and provide residents with a higher quality of life
- Existing trails offer varying terrain for users at any level of ability
- Most existing trails offer real commuter opportunities
- Trails align with Scenic Byways and water trails
- Trails provide connectivity to the RPA's recreational resources such as parks and campgrounds
- Have developed strong partnerships to support and promote a healthier lifestyle
- Strong Safe Routes to School non-infrastructure programming

Active Transportation Challenges

- Routine and long term maintenance will become a challenge as assets begin to age
- Insufficient resources to develop trail connectivity across the region
- Some trails should have been built wider and as use increases may cause crowding
- Engaging in complete streets concept discussions
- Developing welcomed messaging regarding the benefits of active transportation, from economics to health and wellness
- Educating the public about funding sources for trails, many are "dedicated" and do not compete with the funding the region receives for other transportation infrastructure
- Continued funding to support Safe Routes to School non-infrastructure and infrastructure projects in local communities

Public Transportation Strengths

- Strong vehicle maintenance program
- Dedicated, caring staff
- Focus on innovation and system improvements
- Focus on development of community partnerships
- Strong safety & staff training program

Public Transportation Challenges

- Aging fleet which increases maintenance expenses
- Shop and main office located in separate towns which causes logistical challenges at times
- Office space and layout not conducive to transit operations and limits staff growth potential
- Lack of funding limits growth of new services & ability to make system improvements
- Community perception problem "only for disabled, elderly & low-income"
- Taxi services are not available in other larger communities

Example threats, opportunities, alternatives (followed by discussion of each item) (RPA 4)

Table VI.1: Transportation Threats, Solutions, and Alternatives

Transportation Threats
Age of infrastructure
Aging population
Decrease in population
Decrease in funding and buying power
Pavement and bridges were not designed to carry weight loads that they do
Increased rail traffic
Weather
Transportation Solutions (Opportunities)
Expanding Highway 20
Regional Airports
Development of Trails
Railroads
Tourism opportunities
Improvements on infrastructure and surrounding infrastructure will bring development
Carpooling
The expansion of expressway bypass outside of Le Mars
State Funding Legislation
Transportation Alternatives
Bridge replacement alternatives
Automated Vehicles
Rumble strips
Better effort to improve locations of utility line
Bill miles to drivers for wear and tear on the roads

Example discussion of alternatives (RPA 3)

C. Transportation Alternatives

The following transportation alternatives are represented as the possibilities and opportunities whose could be implemented with additional resources. Some of these ideas have been implemented within the region, but are included as alternatives to show the options that are being utilized in the region. These ideas are not every opportunity that are through out the region, but were decided upon in the planning process to be the greatest opportunities with regards to the transportation system in Region III.

1. Alternate Construction Materials

Using alternate construction materials are an option when cutting costs or trying to be more environmentally friendly. Many of the materials that are used in transportation construction are expensive and are not biodegradable. Traditional materials used in construction are soil, stone aggregates, sand, bitumen and cement. The cost of these products is continuing to rise and engineers are seeking new materials to help cut construct projects and be cost effective. An example of an alternate construction material is industrial waste materials. This and other construction materials are alternates to the traditional construction materials being used.

2. Improvement of New Road Design

Utilizing computers and other technology is making design for new road construction easier. Much of the new technology is very user friendly, and makes road design more effective and streamlined. Most of the data being used to design roads is online, and using technology to integrate data and design between cities, counties and the State is the way of the future.

3. Bridge Replacement Alternatives

Since bridges are both expensive and time consuming to replace, engineers have looked at other options to replace bridges that are in disrepair. Box culverts are an option that is being used as an alternate to traditional bridge replacement. Using box culverts over traditional cast-in-place bridges lowers overall project costs and reduces the project time. Another option is to construct bridges on the side of the site of the current bridge and move it into place of the previous bridge. These options can be both time and cost effective.

4. Recycling Pavement

Recycling pavement can significantly cut down on costs. One way to recycle pavement is to turn it into gravel. This gravel can then be reused on another road. Several counties make their own gravel out of recycled pavement and it has helped those counties cut down on gravel cost because they make their own as opposed to having to purchase it. Another method of recycling pavement is through hot mix. Recycled hot mix is produced from processing the pavement into small grains and mixing it with new asphalt. The process of heating the surface of the pavement helps break it up and reuse the pavement.

5. Rumble Strips on Center Lines

With aging population in Region III, there have been new safety ideas put in place to help keep all drivers safe and alert. A new way to help keep drivers safe is to put rumble strips on the center lines of two-lane highways. This will help keep drivers alert and hopefully help them from crossing the center line.

Example summary of planning considerations (provided for several areas) (RPA 6)

IMPORTANT ECONOMY AND WORKFORCE CONSIDERATIONS

- ✓ Total employment in Region 6 was nearly 40,000 workers in 2010. Half of workers are employed in Marshall County with less than 10,000 people employed in each of the remaining counties in region.
- ✓ The largest employment sector in the region is government, which includes public education and health institutions, and the second largest sector is manufacturing. The other major employment sectors in the region are trade and education and health services.
- ✓ The industry sectors with the least employed workers are information, natural resources, and transportation.
- ✓ The major private employers in the region are located in Marshall and Poweshiek County, which are the only counties in the region with population growth in the most recent decade.
- ✓ Most industry sectors experienced a decrease in employment, but certain industries increased employment by 5% or more. Most notable are the professional and business services sector and the agriculture, natural resources, and mining sector.
- ✓ The other major industry sector that experienced growth in total employment is the manufacturing sector, but the increase was just five jobs.
- ✓ In 2010, Over 95% of employers in the region had less than 50 workers, and there are eight employers in the region that had 500 or more workers. The eight largest employers in the region supported over 21% of the jobs in the region. Employers with less than 50 workers support 45.5% of jobs in the region.
- ✓ Unemployment ranges from as lows as 4.9% in Poweshiek County and as high as 6.3% in Marshall County in 2012. Poweshiek County is the only county in the region with an unemployment rate lower than the state of Iowa.
- ✓ From 2009 to 2010, 1.39%, or a total of 553 jobs were lost in region. The industry sector with the greatest percentage loss from 2009 to 2010 was transportation and utilities, and the industries with highest losses in absolute numbers are the trade sector and the government sector.
- ✓ The two industry sectors that are projected to grow the most in terms of percentage include the professional, scientific, and technical services sector and the social assistance sector.
- ✓ The two industries that are projected to grow the most in terms of total employment include the nursing and residential care facilities sector and the educational services sector.
- ✓ Based on local information, there will likely be growth in the number of jobs in the region. Several large employers are currently or planning to expand.

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Goals and objectives

- Planning is a process, not the plan document itself
  - The plan document is a very important product, but is not the way to judge success in planning
  - The success of any planning process can only be judged by its results: the tangible actions, changes, and benefits that result from the plan
- Aim to fully develop goals and objectives, along with any performance measures and targets, in the LRTP
  - Perhaps the most meaningful way to translate the LRTP development process and document into a guiding influence for the transportation planning and programming process
  - Goals and objectives should reflect the true priorities of the MPO or RPA, and should not be a generic list of idealistic statements
  - Goals and objectives should carry through to the discussion of priorities, project selection, and fiscal constraint

Goals and objectives (cont.)

- A **goal** is a broad statement that describes a desired end state.
  - *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.
  - *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 miles 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 toward a desired outcome or for making decisions on investments.
  - *Example: Reduce fatalities by 5% by 2015, which will save more than 150 lives.*

Source: FHWA [Performance-Based Planning and Programming Guidebook]

Example of goal, objective, implementation structure (RPA 4)

A. Goal: Mobility

Develop, maintain and enhance the most effective and efficient transportation system for the movement of people and freight in Region IV.

1. Objectives

- Maximize the useful life of existing elements of the transportation system by constant and prompt condition surveillance and maintenance.
- Undertake and utilize the results of continuing applied research into pavement behavior, performance and cost effectiveness particularly as it relates to the impact of weather, very heavy loadings from specialized farm machinery, and developing wind energy. Research results can be procured via state and national research entities specializing in rural pavement issues. Iowa State University is a prime example.
- Minimize and/or eliminate localized congestion wherever it exists.
- Develop transportation investment decisions, which maximize the full benefits of the system while considering the full costs, such as life cycle.
- Preserve corridors for future transportation system development. Use rail to trail programs to preserve what's left of dormant rail transportation corridors like the Milwaukee Railroad corridor.
- Plan for the use and preservation of alternative modes like rail, barge, pedestrian, and bicycle where applicable.

2. Implementation

- Use advanced pavement monitoring equipment to assess roadway pavement conditions on a regular basis.
- Do cost/benefit analysis of investment alternatives to determine the most useful and efficient options.
- Encourage the creation of bicycle facilities, sidewalks, trails, greenways and other non motorized facilities in areas where appropriate.
- Develop a transportation plan giving priority consideration to transportation system improvements preventing crashes, injuries, and minimizing losses.
- Ensure that problem intersections with congestion are adequately engineered to minimize delay. Signal timing, intersection geometry and lane storage are key issues to be evaluated.
- Increase information available to the public on transportation choices and issues regarding maintenance.

Example of goals and objectives, with specific actions to address them later in plan (RPA 2)

VISION STATEMENT:

SEEK TO MAINTAIN AND ENHANCE EXISTING AND FUTURE TRANSPORTATION SYSTEMS FOR THE SAFE AND EFFICIENT MOVEMENT OF GOODS AND PEOPLE IN THE MOST COST EFFECTIVE MANNER WITHIN THE REGION AND STATE.

In order to accomplish this vision stated above, the following Goals and Objectives have been developed:

GOALS AND OBJECTIVES:

1. ***Identify essential roads, bridges and corridors that will have the greatest community and economic development impact on the Region 2 area.***
   a. Focus funding to maintain essential existing systems.
   b. Identify potential future systems and ways of financing those systems.

2. ***Prioritize funding for transportation systems.***
   a. Maintain and increase reliable funding sources for transportation improvements such as the state road use tax, federal and local resources.
   b. Keep informed of current and new funding sources.
   c. Utilize innovative funding sources such as Tax Increment Financing (TIF).

3. ***Provide for the safety of transportation system users.***
   a. Utilize technology and data to identify unsafe elements of the transportation system.
   b. Investigate new techniques and technologies to improve safety for the movement of people and goods.
   c. Work with railroad companies to improve safety for at grades crossings through improvements such as grade separation, gates, lights, or other strategies as appropriate.
   d. Encourage projects that address safety issues for all modes.

4. ***Maintain and enhance the movement of product and people.***
   a. Encourage coordination between cities and counties within the region.
   b. Encourage projects that improve transportation links to other regions or states.
   c. Maintain and improve efficient connectors between major generators.

6. ***Improve major transportation elements designated for economic development areas.***
   a. Work with cities, counties and economic development professionals to identify suitable areas for future development that can be served by the existing transportation system.
   b. Utilize local, state and federal resources to fund improvements.

1-9

HIGHWAYS and BRIDGES and SAFETY and SECURITY

As a complete network, preservation, reconstruction, bridge replacement and rehabilitation, and safety improvements are a higher priority than capacity building and new facility construction. Maintain the existing regional highway network, initiating improvements at the federal, state, county and city level as needed.

- Utilize available funding in the most cost effective and efficient manner possible.
- Share a regional view when it comes to project selection and programming.
- Utilize federal funding for priority areas.
- Cooperation amongst various agencies when responding to incidents
- Continued use of the NI-MDST as an avenue for information sharing and dissemination should be a priority.
- Share successful strategies with peers
- Utilize data and communication to improve safety.
- Incorporating cost-effective safety improvements into reconstruction and rehabilitation projects when feasible.
- Promote safety initiatives such as "Zero Fatalities"

TRANSIT

As RPA 2 has a very active TAG that has developed very specific goals and action plans that will likely be long term for the RPA 2 PTP, the section of the PTP is included here in its entirety as well as specific short term projects as identified in the Transit Element of the RPA 2 FY 2016-FY2019 TIP. Transit Goals and Actions to address those Goals are as follows:

- Provide Quality Public Transit Operation through Region 2 Transit by providing safe, dependable, and efficient public transit services for all citizens within its service area in a manner that will help them maintain and improve their quality of life.
- Upgrade and Maintain Region 2 Transit Fleet (SEE FY2016-FY2019 TIP) by replacing approximately 12 to 14 vehicles per year.
- Expand the Region 2 Transit Fleet to meet demands of clients by annually requesting STP funds to purchase expansion vehicles.
- Centralize and Coordinate Dispatch Capabilities.
- Upgrade and Maintain the North Iowa Joint Use Transit Facility
- Upgrade and Maintain Mason City Transit Fleet by replacing approximately 2 vehicles per year depending upon the availability of federal grant funds and local matching funds.
- Increase Awareness of Public Transit by promoting and marketing the public transit systems and communicating the positive aspects to users, employers and providers.
- Affordable Passenger Transit Service and Funding by educating financial partners about the need for adequate funding for passenger transit Service
- Retain and Recruit Quality Drivers
- Provide Additional After Hours Service by evaluating the needs for expanded service and locations
- Increase Availability of Services by looking at additional services such as an Express Route.
- Increase transportation access for employment opportunities in the region by continuing the NICE service and expanding where applicable.
- Increase Passenger Transportation Coordination

7-4

Data and information

- Translate raw data into useful information and analysis
  - There is a hierarchy or pyramid of planning data – strive to translate data and information into knowledge and wisdom/intelligence, and also be sure to relate data to transportation implications
  - For example, data regarding the area's socioeconomic conditions should be related to transportation planning implications, such as areas more likely to need alternate modes of transportation due to limited vehicles per household, increased elderly population, or lower incomes

	Definition	Example
Data	Raw material for planning.	Inventory of all the bridges in a region of Iowa.
Information	Data that have been filtered and/or organized in some way so that they can be more easily understood.	A table of the 50 bridges in a region that are in the worst condition.
Knowledge	Integration of multiple information sources.	A map that shows the 10 bridges in a region that are in poor condition and that also carry more than 1,000 vehicles per day.
Wisdom/ Intelligence	Careful evaluation of planning data.	The three bridges in the region that are in such poor shape that they must be replaced in the next few years to avoid a significant economic impact.

Additional examples from RPA Plans

- Use the right combination of graphs, charts, maps, and text to convey information
- Think about trends – historical, forecast
- Combine inventory information with data – examples:
  - Map airports by classification and number of operations
  - Combine AADTT on highways with industrial land uses and/or major freight generators
  - Combine transit routes with attributes like population density, age, poverty, etc.
- Are there local plans for the issue/mode/element? Statewide plans? If not specific projects, discuss general planning issues.

Example socioeconomic information (RPA 1)

The overall decline expected in population over the next 30 years will impact various age groups differently. Chart 5 illustrates the projected change in percent of population by age group calculated exponentially from 1980. These projections indicate that the population, while shrinking overall, is also expected to grow older, with approximately 57% of the population projected to be over the age of 44 by 2040. The transportation needs of older populations may require adjustments to the current infrastructure. This may include larger, brighter signage, more visible pavement markings and additional public transportation options. The availability of sufficient and affordable transportation allows older people to live more independently in their communities and can also help to prevent loneliness and social isolation within this vulnerable population.

Chart 5: Regional Population Change and Projections by Age Group, 1980-2040

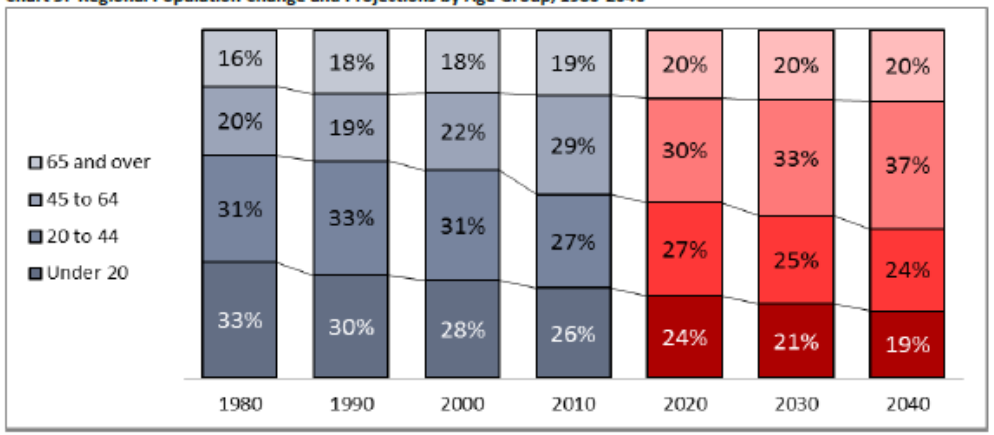
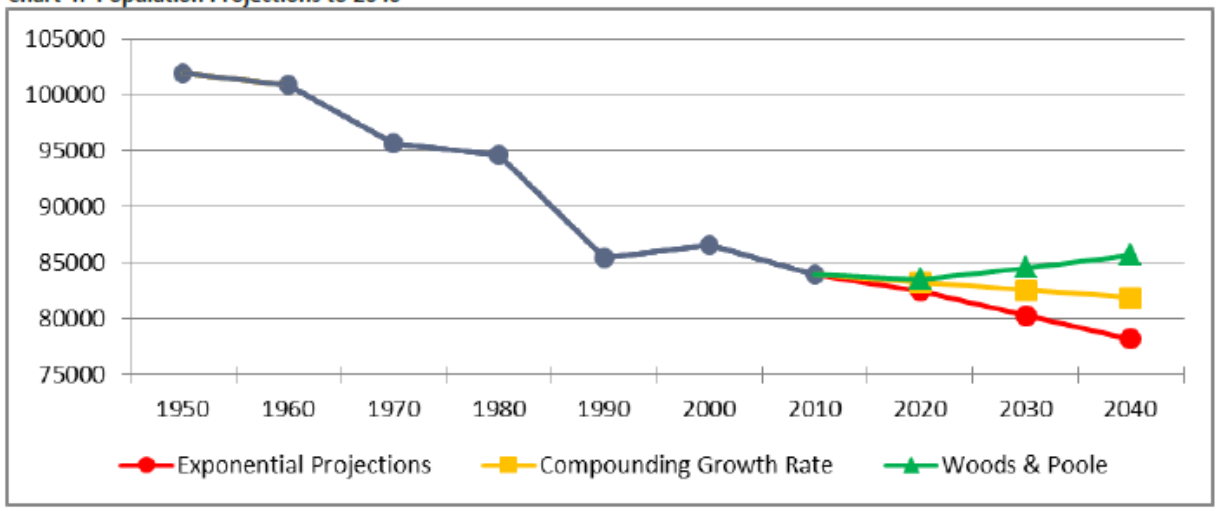


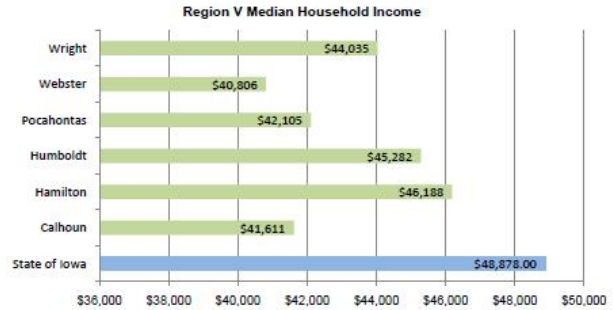
Chart 4: Population Projections to 2040



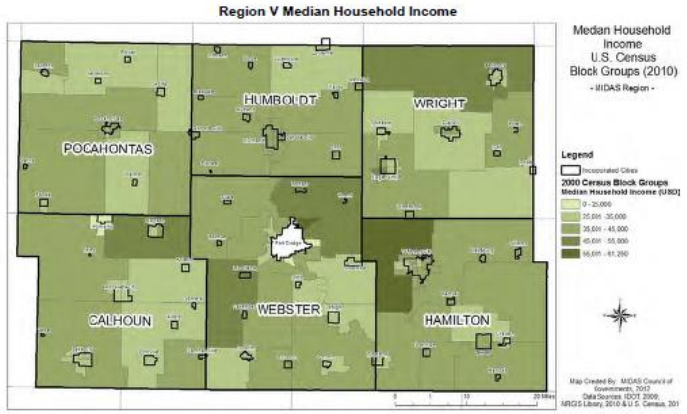
Example socioeconomic information (RPA 5; RPA 8)

Income

The median household income in all counties of the region is less than that of the State of Iowa. The average region median household income is 12.7% lower than the State of Iowa median income. This indicates that the spending power in the region is less than that of the State. It should be noted that the largest county in the region has the lowest median income in the region.



Source: U.S. Census Bureau, 2006-2010 American Community Survey



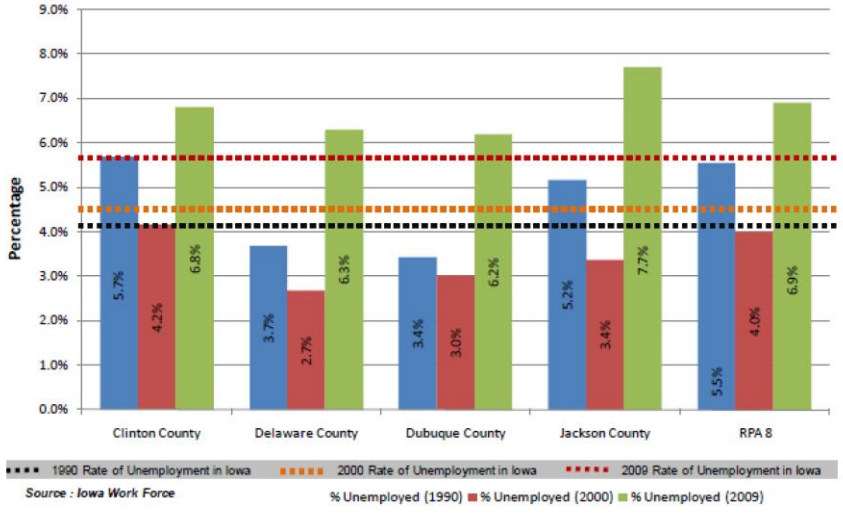
RPA 8 Unemployment Status

According to the 1990 census data, the RPA member with the highest unemployment was City of Maquoketa with an unemployment rate of 8.3 percent. This was 4.8 percent higher that the state's average during the same time period. Over all the RPA 8 had an unemployment rate of 5.5 percent which was 1 percent higher than state average. In general RPA 8 members had unemployment rates at or above the state average.

In 2000 the RPA member with the highest unemployment was City of Clinton with an unemployment rate of 6.0 percent. This was only 1.8 percent higher than the state's average during the same time period. Over all, the RPA 8 had an unemployment rate of 4.0 percent which was 0.2 percent less than state average. Most of RPA 8 members had lower unemployment rate when compared to state average.

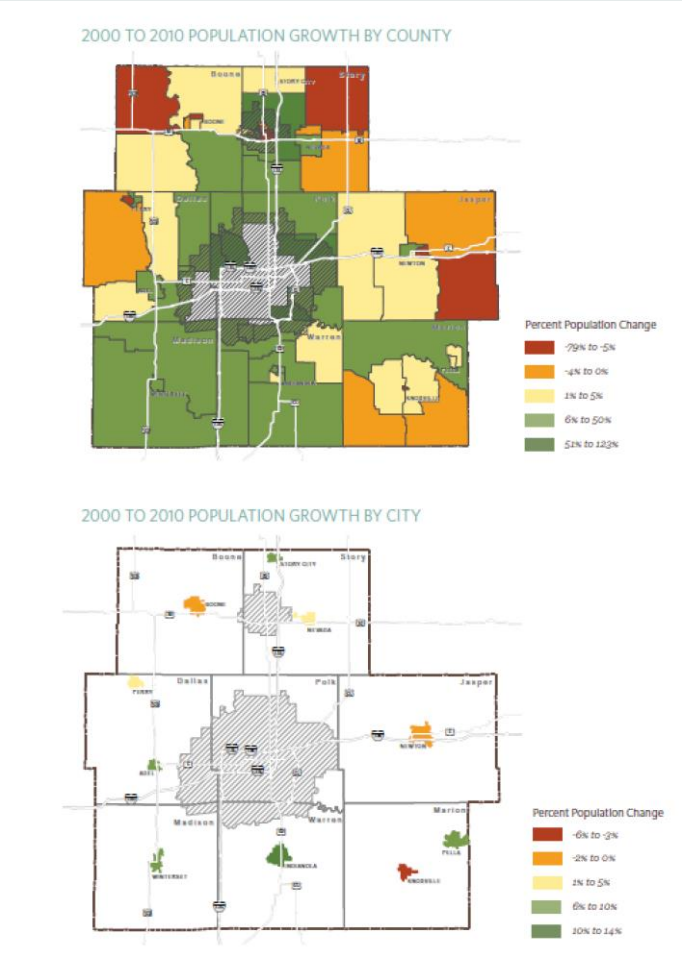
The unemployment rates for Census 1990 and Census 2000 of the members in the RPA 8 Region are compared to the state in Figure 2f. All of the members in the RPA 8 region had a decrease in unemployment from 1990 to 2000. City of Maquoketa showed the most significant decrease from 8.5 percent to 4.6 percent. Nearly a 46 percent reduction in only ten years.

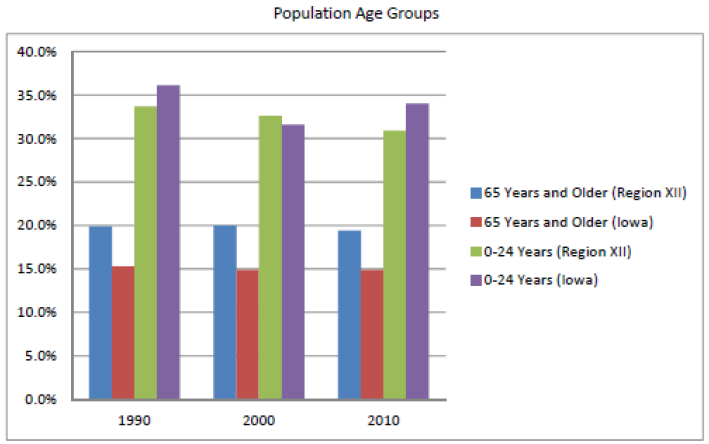
Fig 2f Unemployment Rates



Source : Iowa Work Force

Example socioeconomic data (RPA 11; RPA 12)



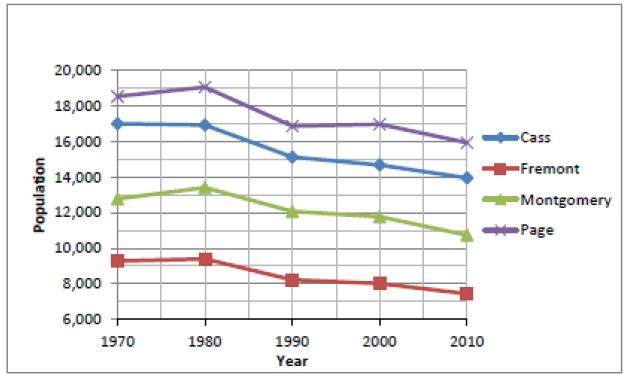


Source: US Census Bureau

The region as a whole has a significantly higher percentage of the population over the age of 65 compared to the State of Iowa. This could create a strain on resources as older populations tend to have a higher demand for transit services, access to medical help, and they leave the workforce and create gaps a younger population will need to fill. Unfortunately, the 0-24 year age group is on the decline in the region. Many high school graduates leave the area for higher education and end up living and working in larger metropolitan areas. Also, families tend to have fewer children than in the past. This is significant because as the labor force population declines, employers will be required to draw a labor force from a wider area, including outside the six-county region. The increased "labor-shed" will increase the use on the existing transportation network. As use increases so will maintenance costs, costs that are passed on to the declining regional population base.

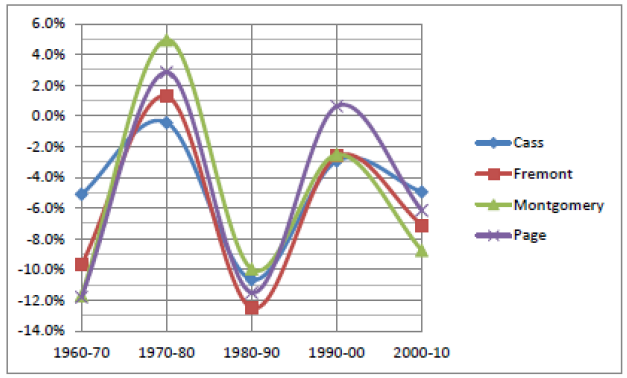
Example socioeconomic data (RPA 13; RPA 14)

Figure 2: Chart – Census Total Population Trends by County



Source: US Census Bureau

Figure 3: Chart – Population Growth Rate by County



Source: US Census Bureau

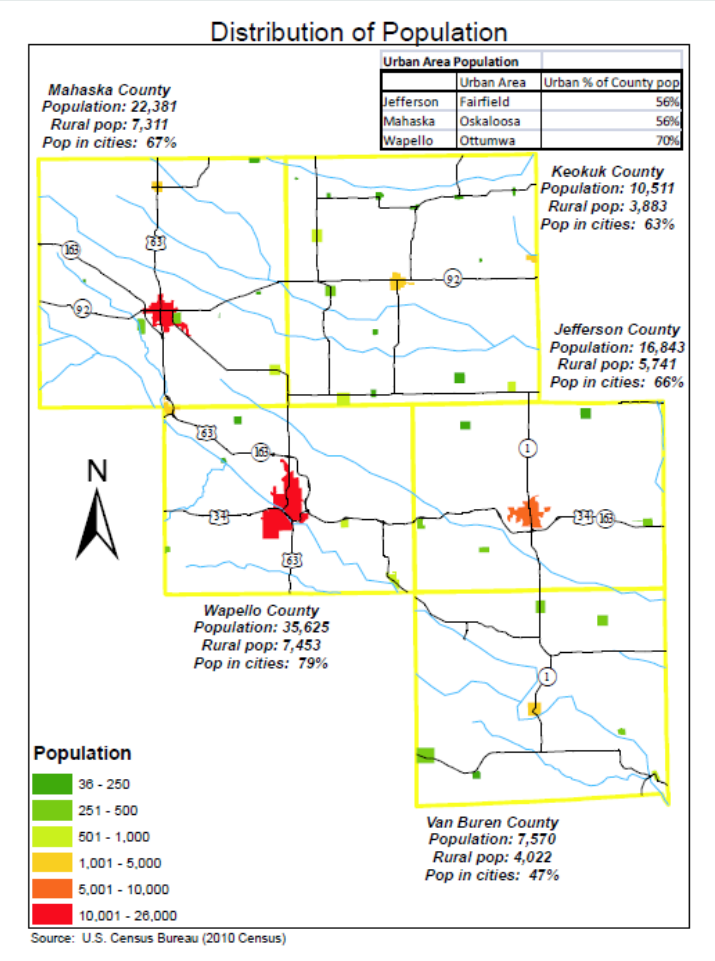
TABLE 2: Population Trends of Larger Cities in the Region

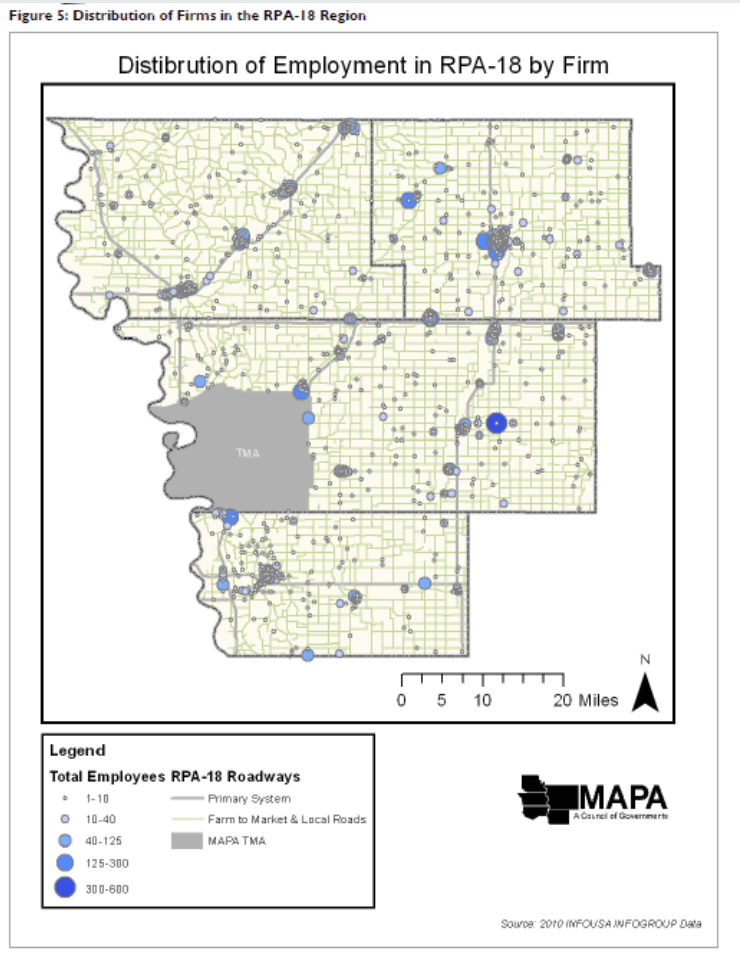
City	1970	1980	1990	2000	2010	% change 70-80	% change 80-90	% change 90-00	% change 00-10
Afton	823	985	953	917	845	19.68%	-3.25%	-3.78%	-7.85%
Bedford	1,733	1,692	1,528	1,620	1,440	-2.37%	-9.69%	6.02%	-12.50%
Corning	2,095	1,939	1,806	1,783	1,635	-7.45%	-6.86%	-1.27%	-8.30%
Creston	8,234	8,429	7,911	7,597	7,834	2.37%	-6.15%	-3.97%	3.12%
Greenfield	2,212	2,243	2,074	2,129	1,982	1.40%	-7.53%	2.65%	-6.90%
Lenox	1,215	1,338	1,303	1,401	1,407	10.12%	-2.62%	7.52%	0.43%
Mount Ayr	1,762	1,938	1,796	1,822	1,691	9.99%	-7.33%	1.45%	-7.19%
Stuart*	1,354	1,650	1,522	1,712	1,648	21.86%	-7.76%	12.48%	-3.74%
TOTAL	19,428	20,214	18,893	18,981	18,482	4.05%	-6.54%	0.47%	-5.37%

Source: 1970 through 2010: US Bureau of the Census; decennial census.

** Stuart is located in RPA 12 but is included for its significance as an employment center on the border of RPA 14.*

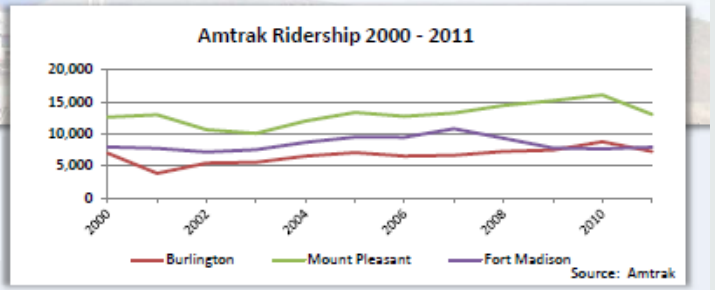
Example socioeconomic data (RPA 15; RPA 18)



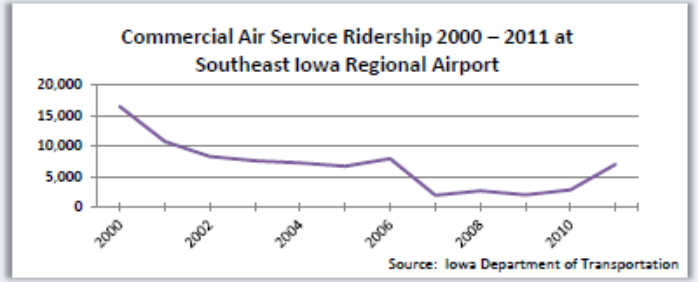


Example passenger trend data (RPA 16)

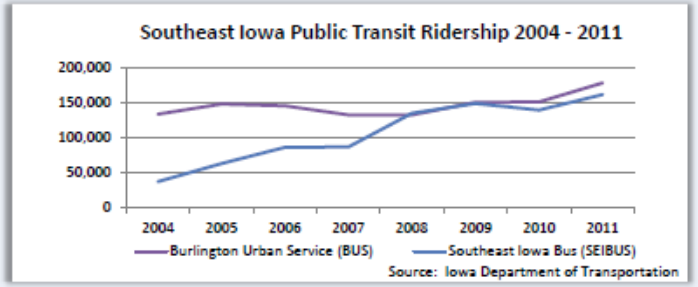
Nationwide Amtrak has seen significant increases in ridership over the pas 10 years. While nationally ridership has increased so much, it has been relatively stable in Southeast Iowa. Ridership with all three stations remaining relatively stable.



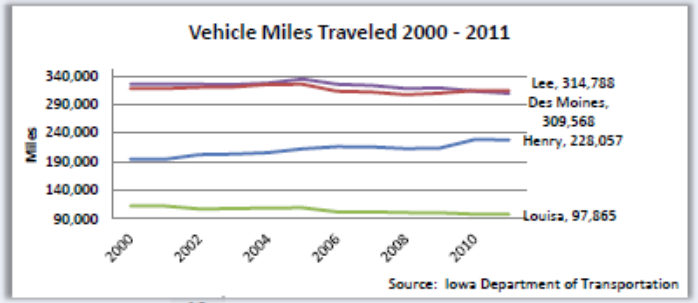
Commercial air service at the Southeast Iowa Regional Airports has changed significantly since 2000, with several changes in air carriers and destinations. A new carrier started in 2010 that provides flights to Chicago and St. Louis, providing nearly double the ridership as the previous 5 years.



Public transit ridership has seen significant increases in ridership. SEIBUS has experienced nearly five times the ridership since 2004. BUS has been relatively stable, but has experienced a significant increase e the past few years due to some new opportunities in the community.

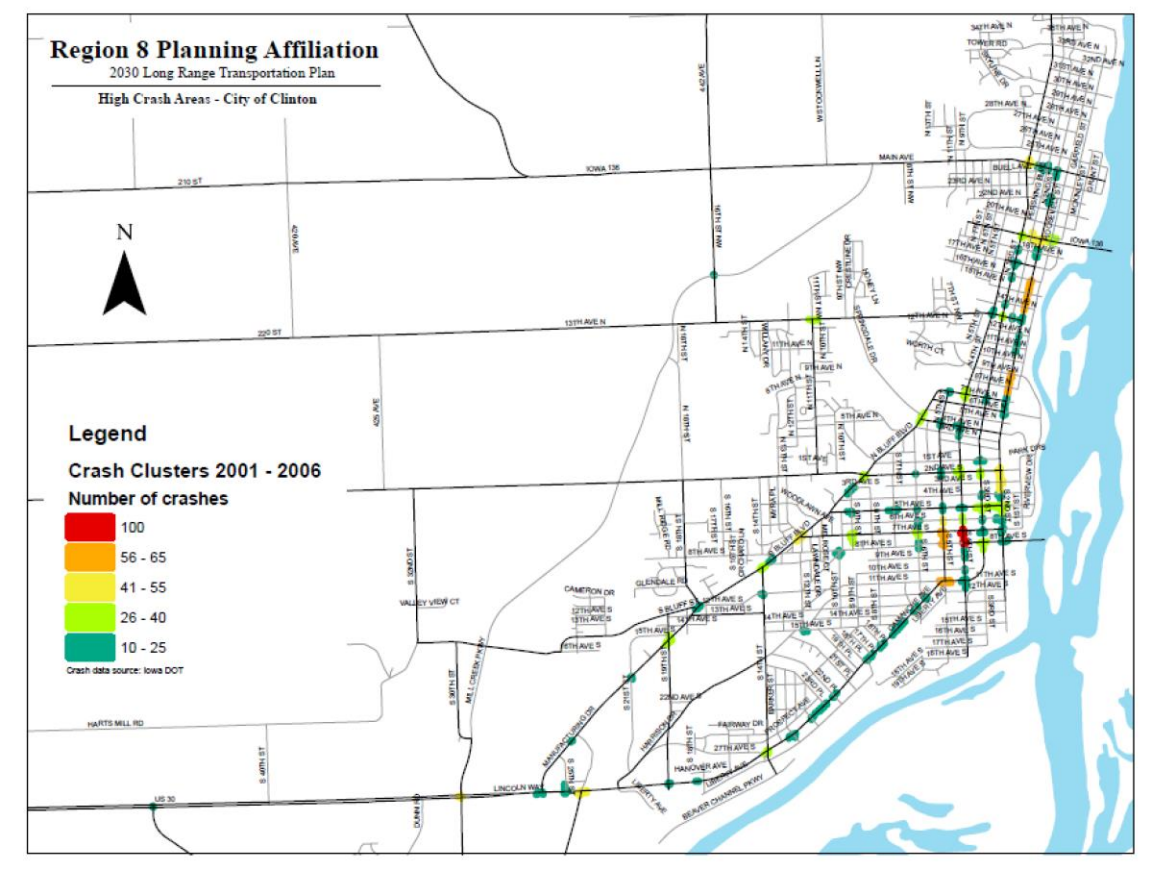


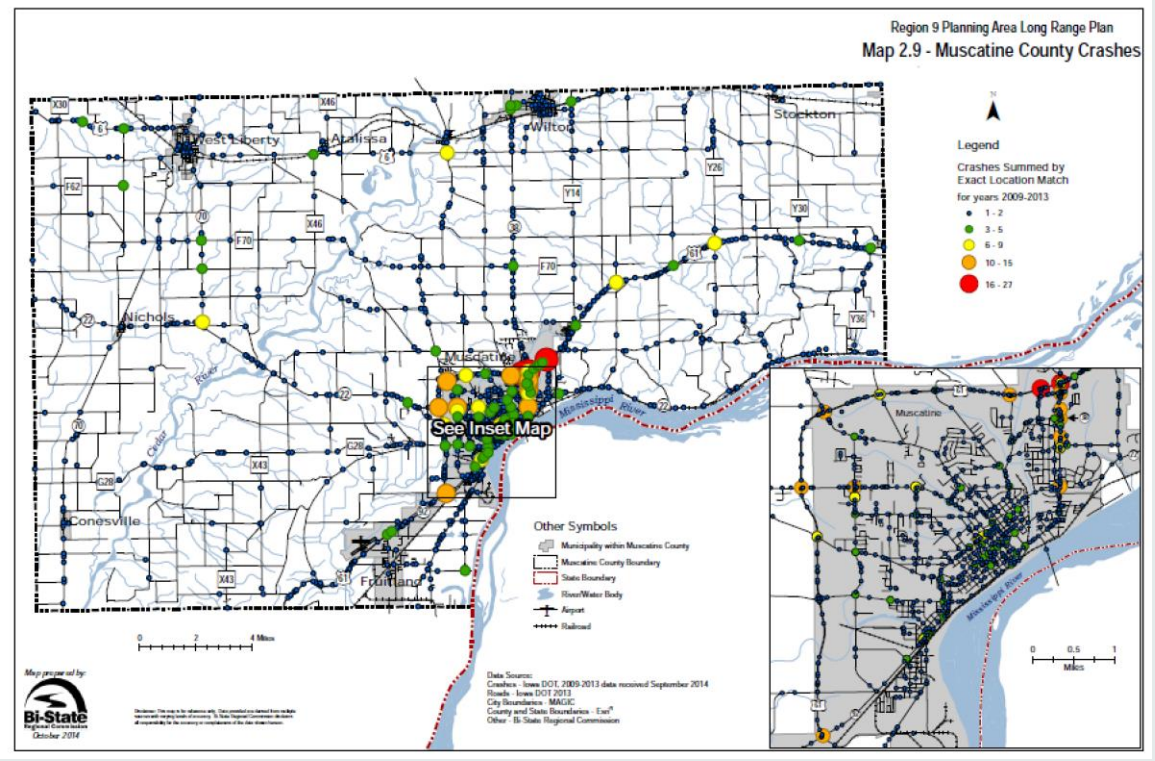
The chart to the right shows total vehicle miles traveled by county. All counties have decreased besides Henry County, which has steadily increased over time. This shift could be due to decreases in population or people choosing other modes to travel.



16

Example safety information (RPA 8; RPA 9)





Example bridge information (RPA 7; RPA 12)

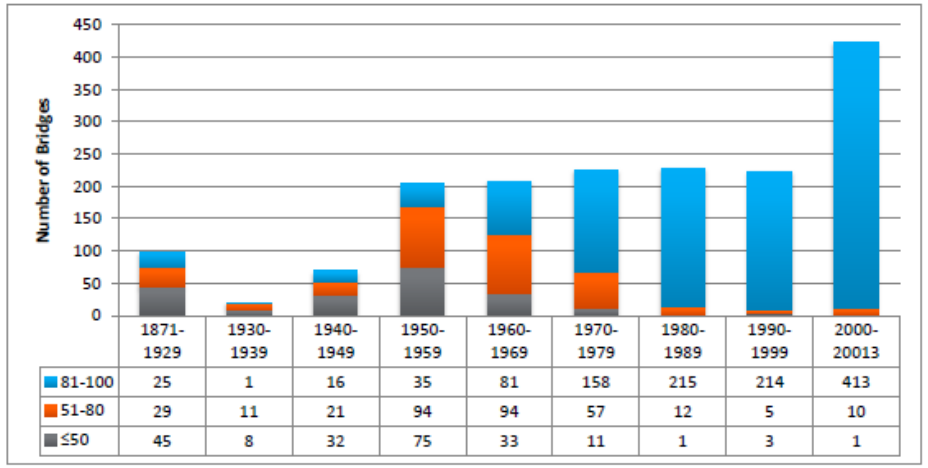
Table 3.4 – Bridge Sufficiency Ratings by County, 2013

County	Total Number of Bridges	Sufficiency Rating 81-100 (% of total)	Sufficiency Rating 51-80 (% of total)	Sufficiency Rating ≤ 50 (% of total)	Avg. Sufficiency Rating
Black Hawk*	243	72.4	23.5	4.1	87.2
Bremer	267	68.9	13.9	17.2	79.9
Buchanan	314	66.2	19.4	14.3	80.0
Butler	288	62.2	19.8	18.1	78.0
Chickasaw	311	74.0	19.0	7.1	85.6
Grundy	277	66.1	22.4	11.6	83.3
Total/Avg.	**1,700**	**68.2**	**19.6**	**12.2**	**82.3**

Source: Iowa DOT Geographic Information Management System

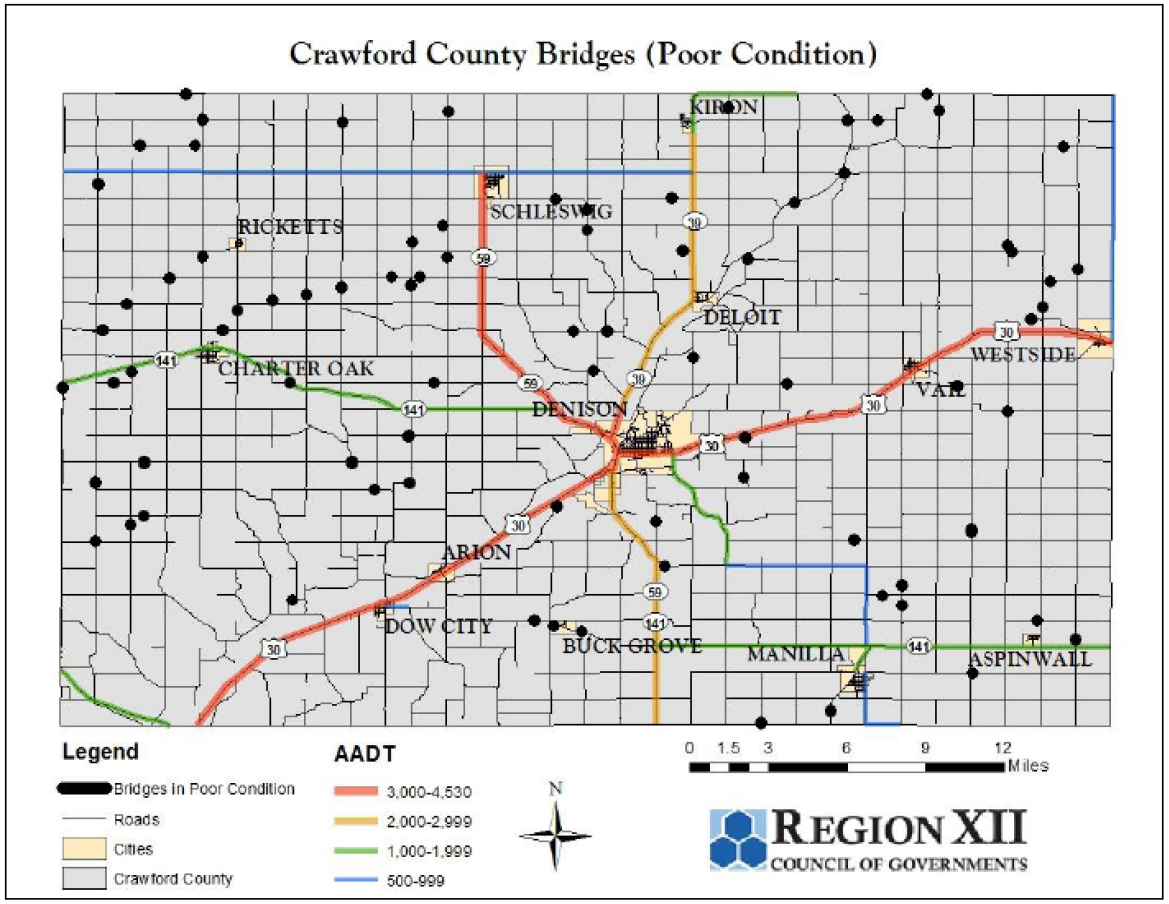
**Total excludes bridges within the MPO boundary*

Figure 3.5 – Bridge Sufficiency Ratings by Year Built

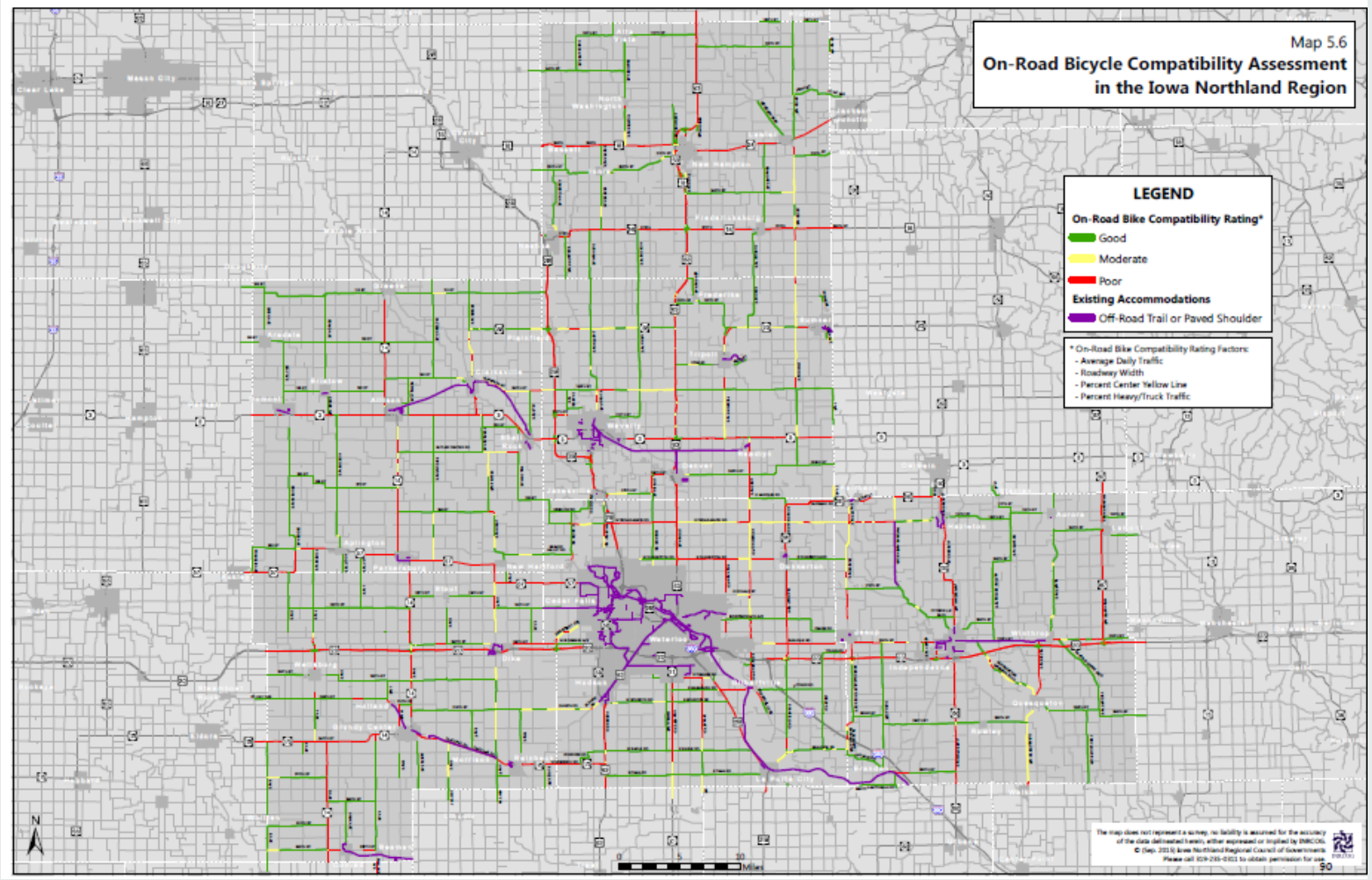


	1871-1929	1930-1939	1940-1949	1950-1959	1960-1969	1970-1979	1980-1989	1990-1999	2000-20013
81-100	25	1	16	35	81	158	215	214	413
51-80	29	11	21	94	94	57	12	5	10
≤50	45	8	32	75	33	11	1	3	1

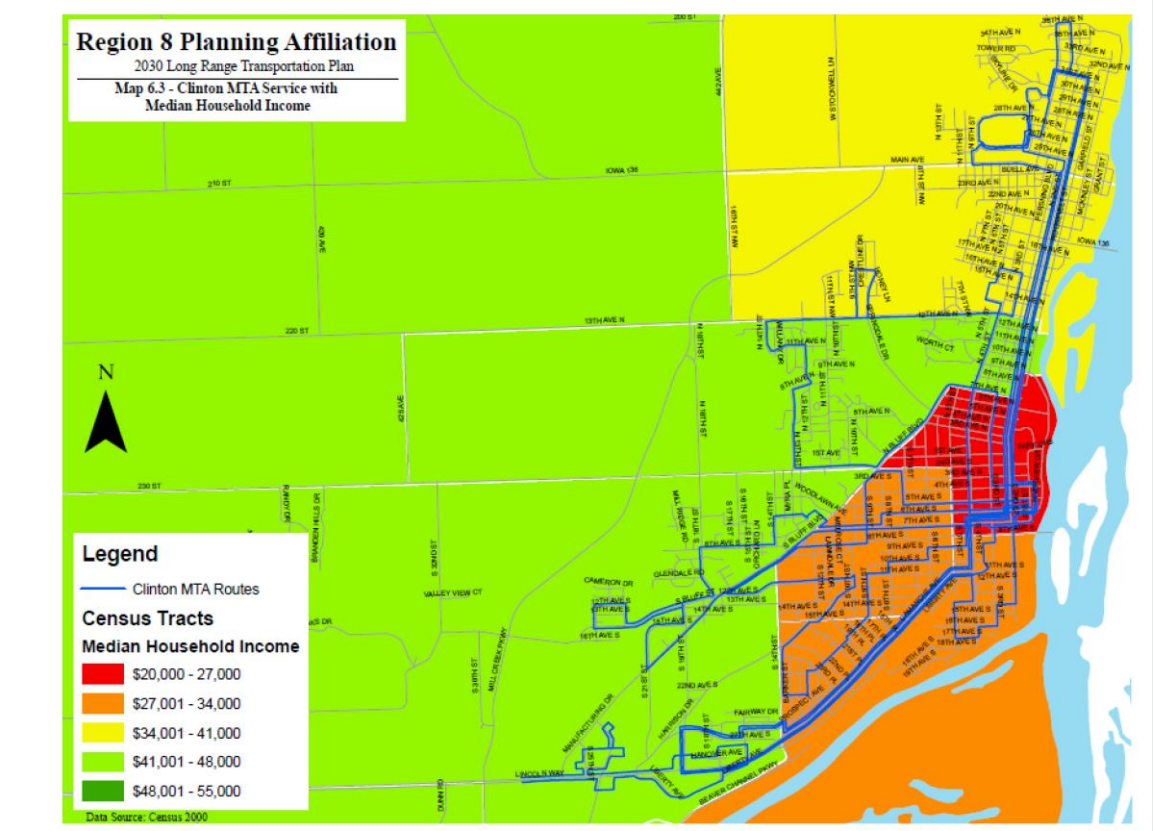
Source: Iowa DOT Geographic Information Management System

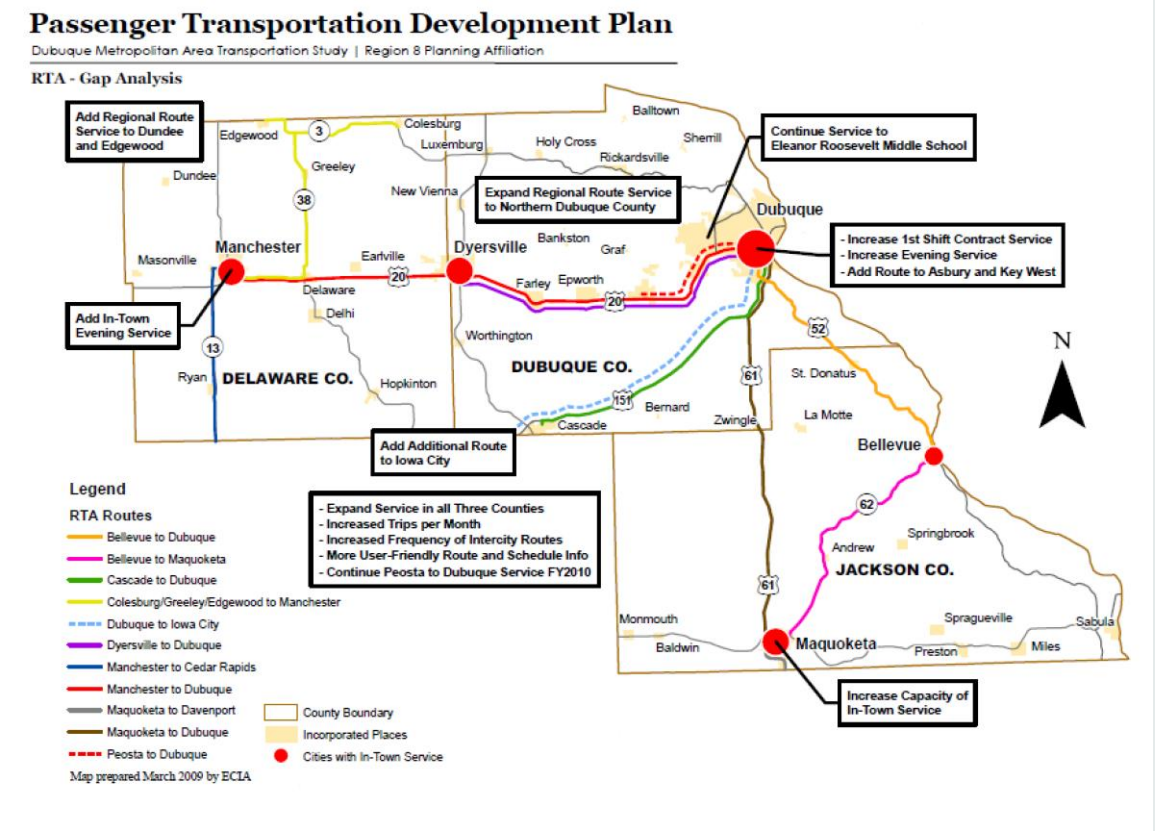


Example bicycle information (RPA 7)

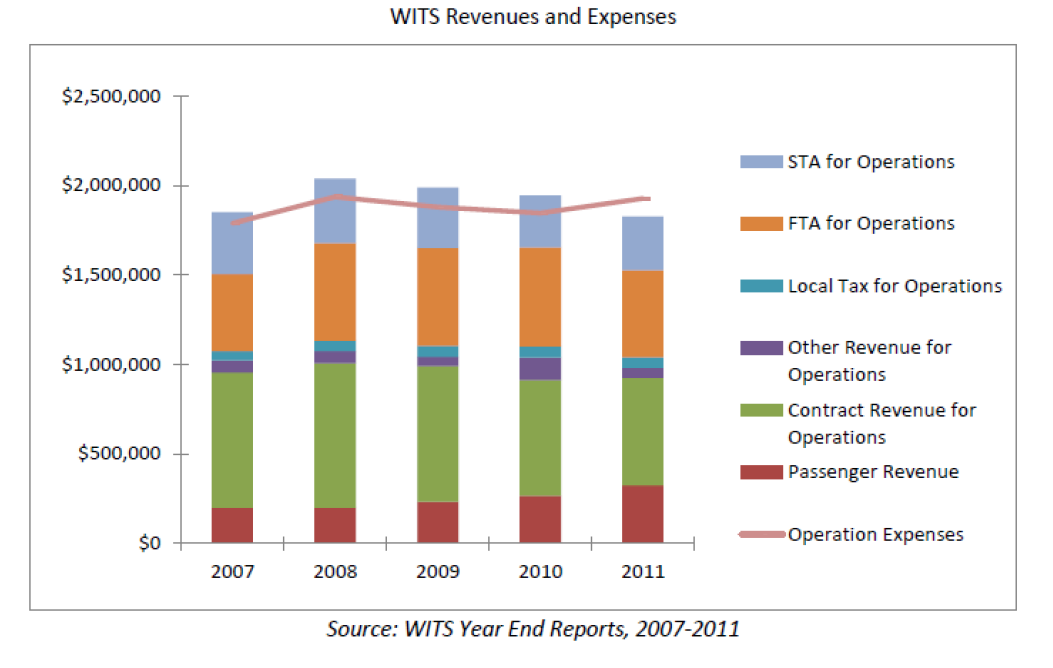


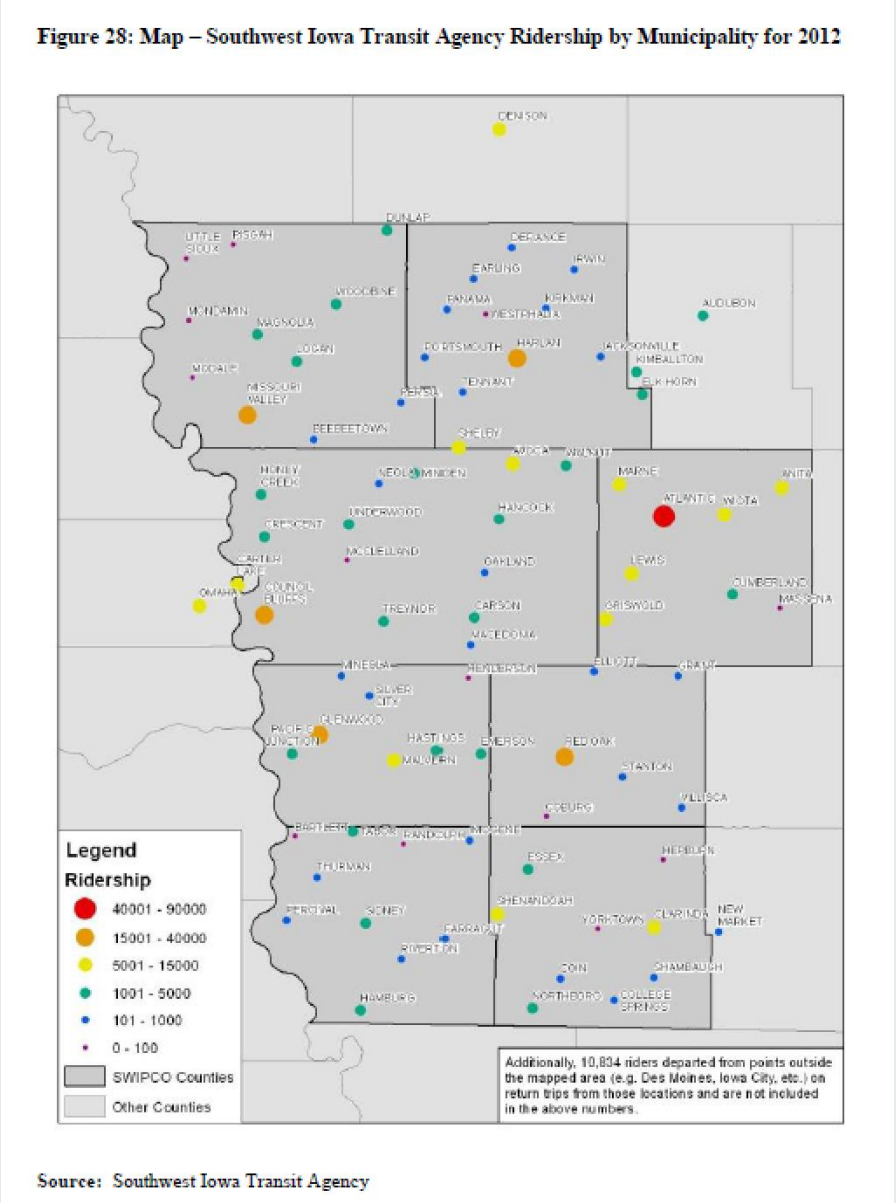
Example transit information (RPA 8)



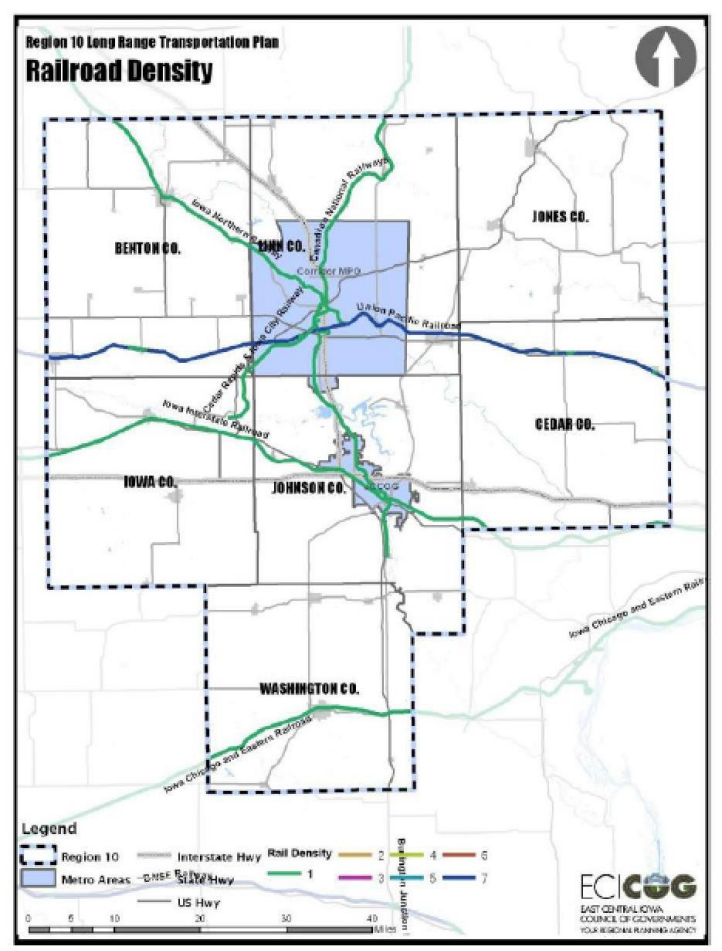


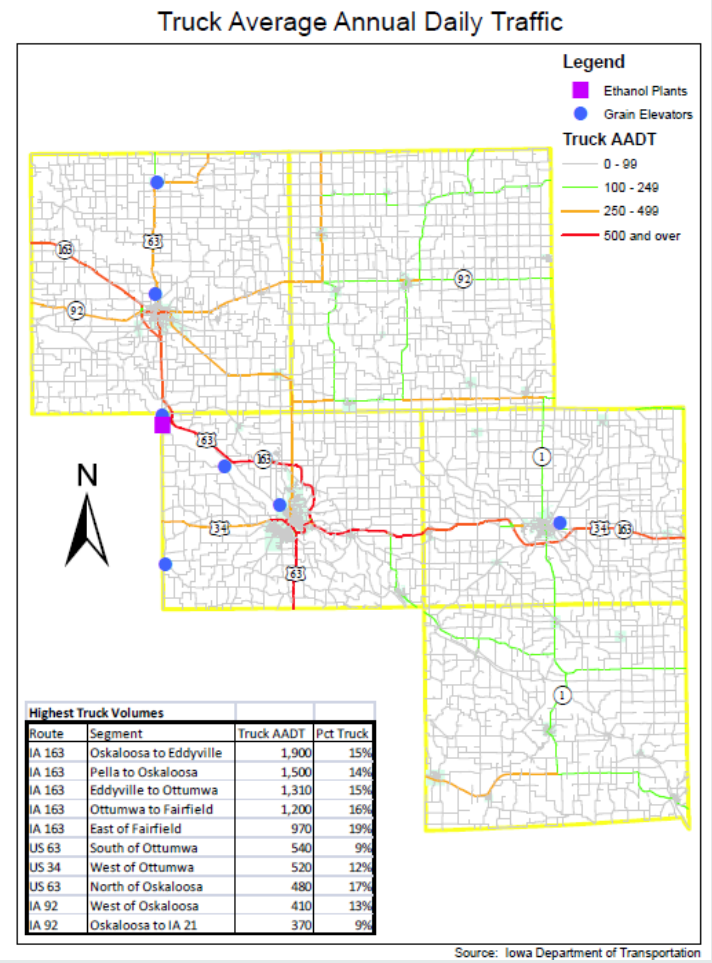
Example transit information (RPA 12; RPA 13)



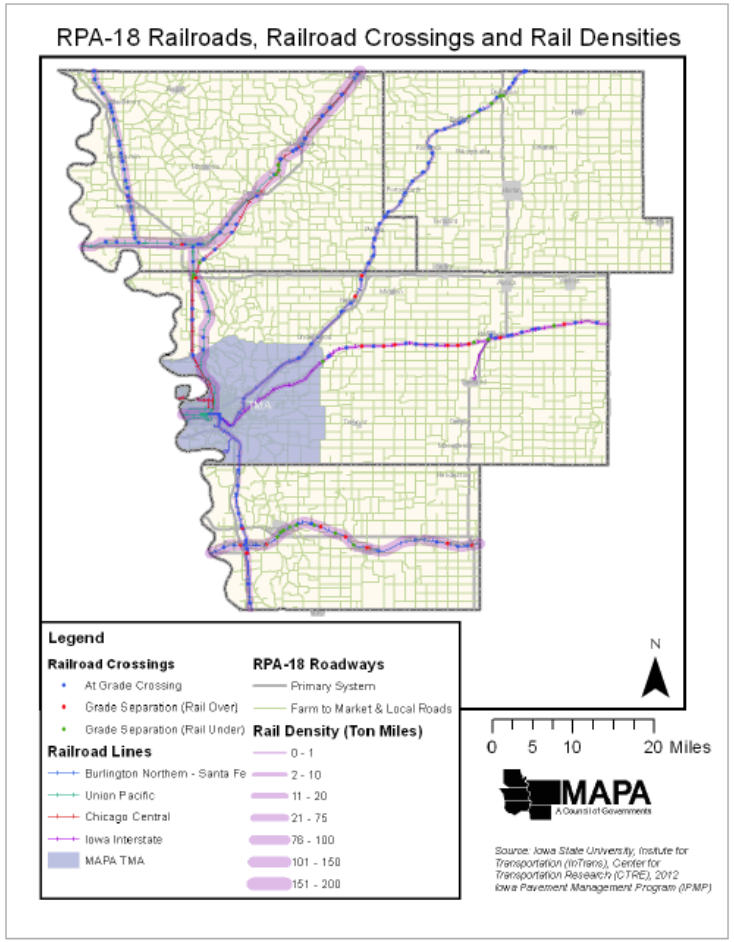


Example freight information (RPA 10; RPA 15; RPA 18)

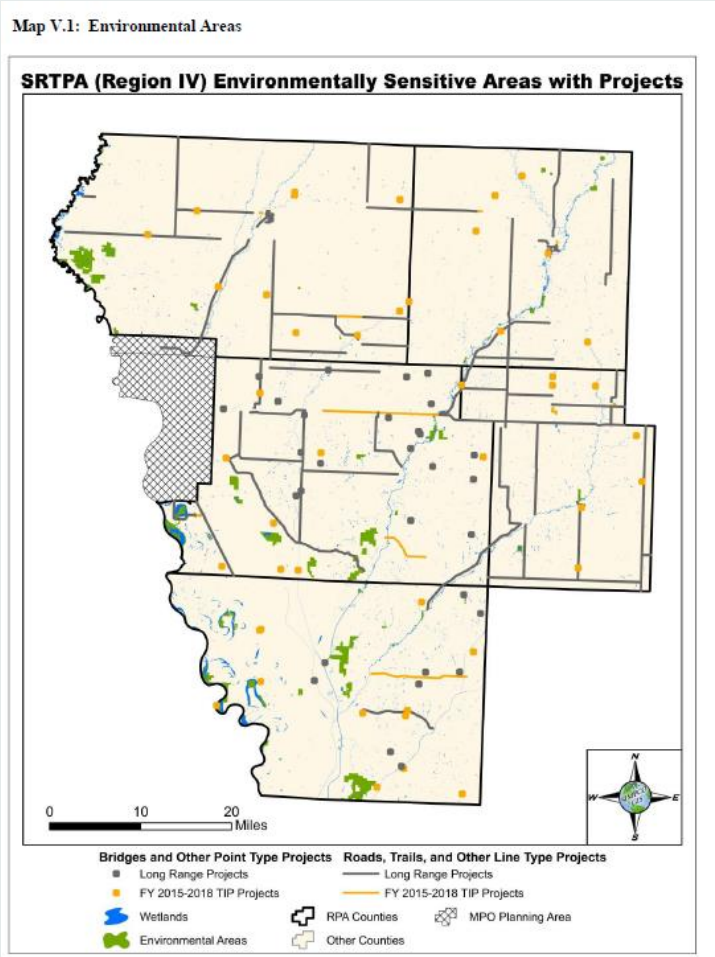


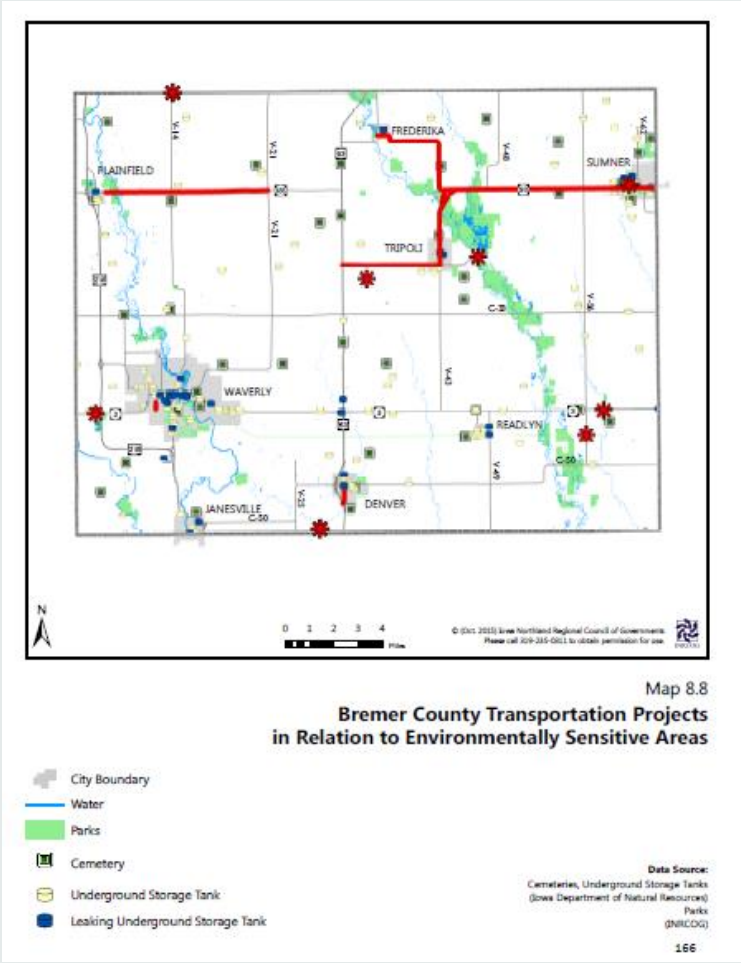


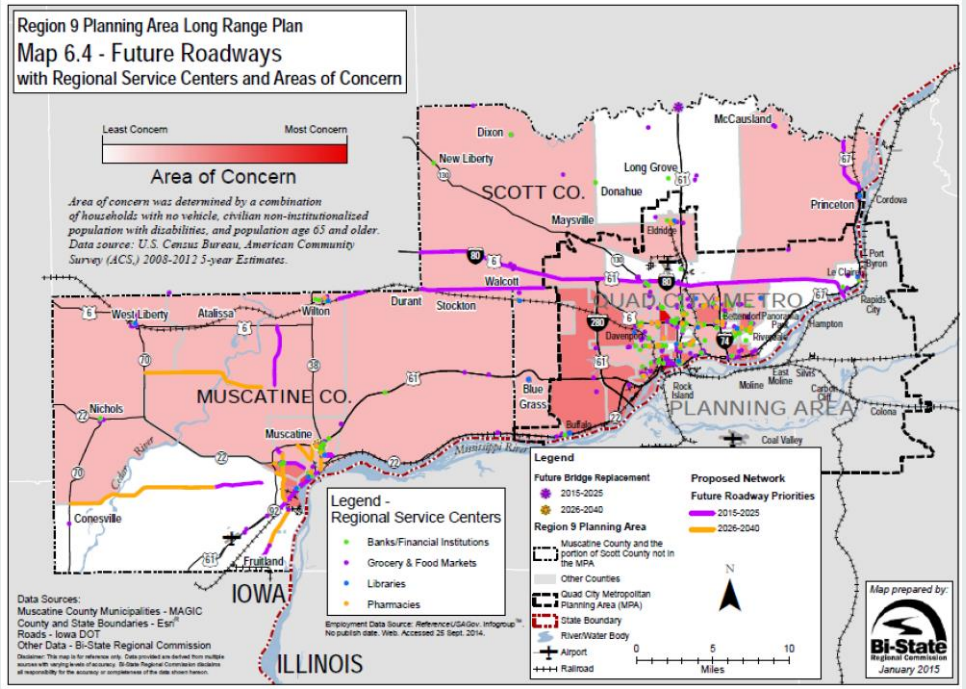
Route	Segment	Truck AADT	Pct Truck
IA 163	Oskaloosa to Eddyville	1,900	15%
IA 163	Pella to Oskaloosa	1,500	14%
IA 163	Eddyville to Ottumwa	1,310	15%
IA 163	Ottumwa to Fairfield	1,200	16%
IA 163	East of Fairfield	970	19%
US 63	South of Ottumwa	540	9%
US 34	West of Ottumwa	520	12%
US 63	North of Oskaloosa	480	17%
IA 92	West of Oskaloosa	410	13%
IA 92	Oskaloosa to IA 21	370	9%



Example comparison of environmental information and projects (RPA 4; RPA 7; RPA 9)

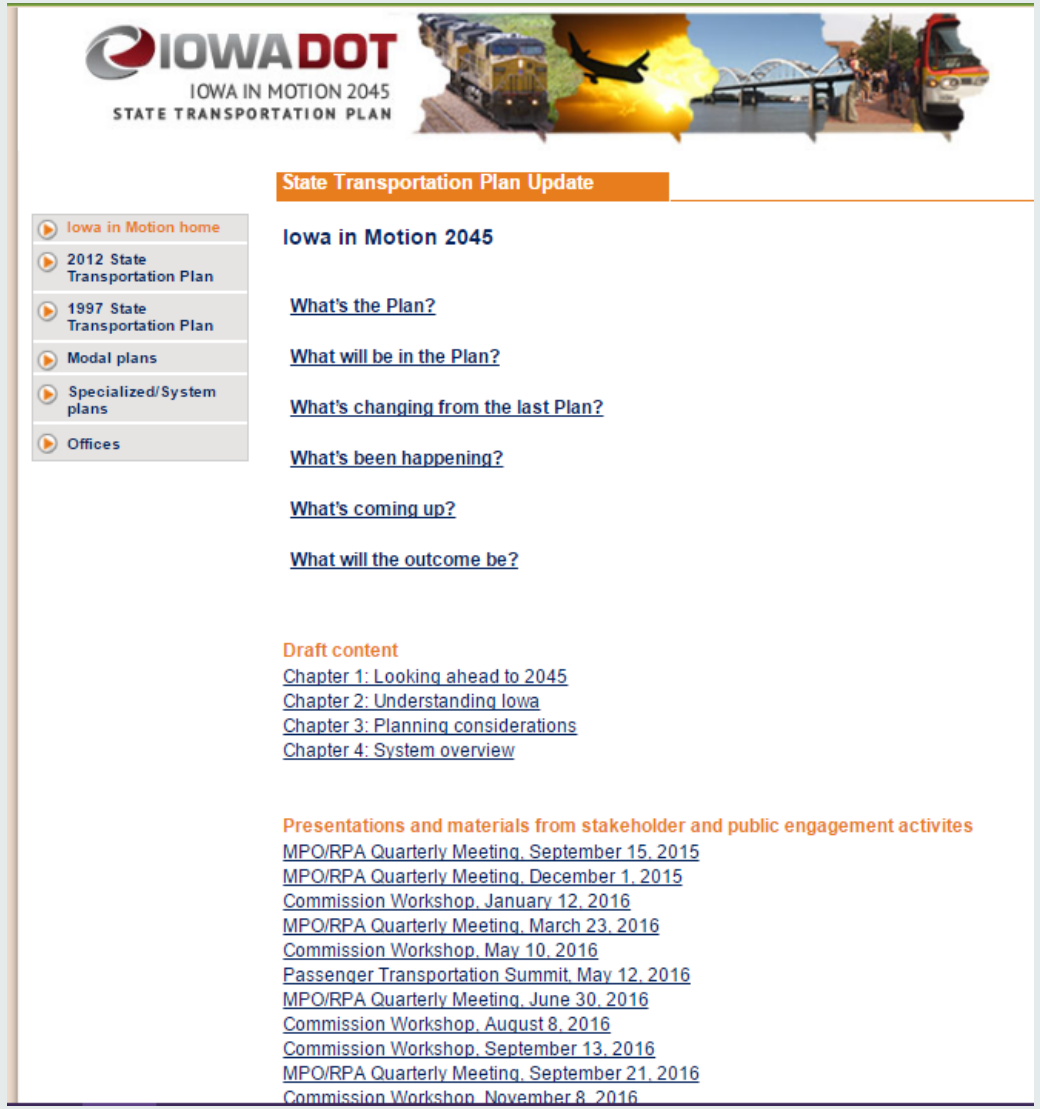






Iowa DOT State Transportation Plan

- http://www.iowadot.gov/iowainmotion/index.html
- Status
  - Final review and edits of full draft
  - Comment period starting next week
  - Slated for adoption in May
- Action Plan
  - Needs analysis for each mode
  - Detailed highway needs analysis
  - Strategies across planning areas



Iowa DOT GIS resources

- www.iowadot.gov/gis/default.htm

Thank you

- Questions/comments/discussion
- Contact information

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515-239-1210