



APPENDIX 1: FEDERAL REQUIREMENTS

REQUIREMENTS



The table below provides the code of federal regulations (CFR) language related to state transportation plans. This CFR language was included in the [Statewide and Nonmetropolitan Transportation Planning; Metropolitan Transportation Planning rule](#) issued by the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) on May 27, 2016. The rule has a 2-year phase-in, meaning that state transportation plans adopted or amended after May 27, 2018 will need to be in compliance with these regulations.

Iowa in Motion 2045 has been developed during the timeframe of 2015-2017. It follows the CFR requirements that have been in effect during that time, but includes some of the new elements and requirements of this rule.

23 CFR 450.216 Development and content of the long-range statewide transportation plan	Plan references and notes
<p>(a) The State shall develop a long-range statewide transportation plan, with a minimum 20-year forecast period at the time of adoption, that provides for the development and implementation of the multimodal transportation system for the State. The long-range statewide transportation plan shall consider and include, as applicable, elements and connections between public transportation, non-motorized modes, rail, commercial motor vehicle, waterway, and aviation facilities, particularly with respect to intercity travel.</p>	<p>The state transportation plan (Plan) is a multimodal planning document with a horizon year of 2045.</p>
<p>(b) The long-range statewide transportation plan should include capital, operations and management strategies, investments, procedures, and other measures to ensure the preservation and most efficient use of the existing transportation system including consideration of the role that intercity buses may play in reducing congestion, pollution, and energy consumption in a cost-effective manner and strategies and investments that preserve and enhance intercity bus systems, including systems that are privately owned and operated. The long-range statewide transportation plan may consider projects and strategies that address areas or corridors where current or projected congestion threatens the efficient functioning of key elements of the State's transportation system.</p>	<p>Strategies related to these areas are discussed in Chapter 5, Sections 5.2 and 5.3, and Chapter 6.</p>
<p>(c) The long-range statewide transportation plan shall reference, summarize, or contain any applicable short-range planning studies; strategic planning and/or policy studies; transportation needs studies; management systems reports; emergency relief and disaster preparedness plans; and any statements of policies, goals, and objectives on issues (e.g., transportation, safety, economic development, social and environmental effects, or energy), as appropriate, that were relevant to the development of the long-range statewide transportation plan.</p>	<p>Referencing of other plans, reports, and studies is discussed in Chapter 1, Section 1.3. Related planning efforts are also discussed throughout Chapters 3, 4, and 5.</p>

23 CFR 450.216 Development and content of the long-range statewide transportation plan	Plan references and notes
<p>(d) The long-range statewide transportation plan should integrate the priorities, goals, countermeasures, strategies, or projects contained in the HSIP, including the SHSP, required under 23 U.S.C. 148, the Public Transportation Agency Safety Plan required under 49 U.S.C. 5329(d), or an Interim Agency Safety Plan in accordance with 49 CFR part 659, as in effect until completion of the Public Transportation Agency Safety Plan.</p>	<p>Safety planning efforts, including the SHSP and modal safety, are discussed in Chapter 3, Section 3.8. Associated strategies are included in Chapter 5, Section 5.3.</p>
<p>(e) The long-range statewide transportation plan should include a security element that incorporates or summarizes the priorities, goals, or projects set forth in other transit safety and security planning and review processes, plans, and programs, as appropriate.</p>	<p>Security planning efforts are discussed in Chapter 3, Section 3.9. Associated strategies are included in Chapter 5, Section 5.3.</p>
<p>(f) The statewide transportation plan shall include:</p> <p>(1) A description of the performance measures and performance targets used in assessing the performance of the transportation system in accordance with §450.206(c); and</p> <p>(2) A system performance report and subsequent updates evaluating the condition and performance of the transportation system with respect to the performance targets described in §450.206(c), including progress achieved by the MPO(s) in meeting the performance targets in comparison with system performance recorded in previous reports.</p>	<p>Performance measures and deadlines associated with target setting are discussed in Chapter 7, Section 7.3.</p>
<p>(g) Within each metropolitan area of the State, the State shall develop the long-range statewide transportation plan in cooperation with the affected MPOs.</p>	<p>Cooperation with Iowa’s metropolitan planning organizations (MPOs) is discussed in Chapter 1, Section 1.3.</p>
<p>(h) For nonmetropolitan areas, the State shall develop the long-range statewide transportation plan in cooperation with affected nonmetropolitan local officials with responsibility for transportation or, if applicable, through RTPOs described in §450.210(d) using the State’s cooperative process(es) established under §450.210(b).</p>	<p>Cooperation with Iowa’s regional planning affiliations (RPAs) is discussed in Chapter 1, Section 1.3.</p>
<p>(i) For each area of the State under the jurisdiction of an Indian Tribal government, the State shall develop the long-range statewide transportation plan in consultation with the Tribal government and the Secretary of the Interior consistent with §450.210(c).</p>	<p>Consultation with tribal governments is discussed in Chapter 1, Section 1.3.</p>

23 CFR 450.216 Development and content of the long-range statewide transportation plan	Plan references and notes
<p>(j) The State shall develop the long-range statewide transportation plan, as appropriate, in consultation with State, Tribal, and local agencies responsible for land use management, natural resources, environmental protection, conservation, and historic preservation. This consultation shall involve comparison of transportation plans to State and Tribal conservation plans or maps, if available, and comparison of transportation plans to inventories of natural or historic resources, if available.</p>	<p>Consultation with resource agencies is discussed in Chapter 1, Section 1.3.</p>
<p>(k) A long-range statewide transportation plan shall include a discussion of potential environmental mitigation activities and potential areas to carry out these activities, including activities that may have the greatest potential to restore and maintain the environmental functions affected by the long-range statewide transportation plan. The discussion may focus on policies, programs, or strategies, rather than at the project level. The State shall develop the discussion in consultation with applicable Federal, State, regional, local and Tribal land management, wildlife, and regulatory agencies. The State may establish reasonable timeframes for performing this consultation.</p>	<p>Consultation with resource agencies is discussed in Chapter 1, Section 1.3. Environmental planning is discussed in Chapter 3, Section 3.4.</p>
<p>(l) In developing and updating the long-range statewide transportation plan, the State shall provide:</p> <p>(1) To nonmetropolitan local elected officials, or, if applicable, through RTPOs described in §450.210(d), an opportunity to participate in accordance with §450.216(h); and</p> <p>(2) To individuals, affected public agencies, representatives of public transportation employees, public ports, freight shippers, private providers of transportation (including intercity bus operators, employer-based cash-out program, shuttle program, or telework program), representatives of users of public transportation, representatives of users of pedestrian walkways and bicycle transportation facilities, representatives of the disabled, providers of freight transportation services, and other interested parties with a reasonable opportunity to comment on the proposed long-range statewide transportation plan. In carrying out these requirements, the State shall use the public involvement process described under §450.210(a).</p>	<p>Public input efforts are discussed in Chapter 1, Section 1.3.</p>

23 CFR 450.216 Development and content of the long-range statewide transportation plan	Plan references and notes
<p>(m) The long-range statewide transportation plan may include a financial plan that demonstrates how the adopted long-range statewide transportation plan can be implemented, indicates resources from public and private sources that are reasonably expected to be made available to carry out the plan, and recommends any additional financing strategies for needed projects and programs. In addition, for illustrative purposes, the financial plan may include additional projects that the State would include in the adopted long-range statewide transportation plan if additional resources beyond those identified in the financial plan were to become available. The financial plan may include an assessment of the appropriateness of innovative finance techniques (for example, tolling, pricing, bonding, public-private partnerships, or other strategies) as revenue sources.</p> <p>(n) The State is not required to select any project from the illustrative list of additional projects included in the financial plan described in paragraph (m) of this section.</p>	<p>Historical and forecasted costs and revenues are discussed at a modal level in Chapter 6.</p>
<p>(o) The State shall publish or otherwise make available the long-range statewide transportation plan for public review, including (to the maximum extent practicable) in electronically accessible formats and means, such as the World Wide Web, as described in §450.210(a).</p>	<p>The project website, http://www.iowadot.gov/iowainmotion/index.html, has included draft content throughout plan development and will also house the final Plan.</p>
<p>(p) The State shall continually evaluate, revise, and periodically update the long-range statewide transportation plan, as appropriate, using the procedures in this section for development and establishment of the long-range statewide transportation plan.</p>	<p>Iowa is currently on a 5-year update cycle for its state transportation plan. The Plan will be revisited and revised as necessary.</p>
<p>(q) The State shall provide copies of any new or amended long-range statewide transportation plan documents to the FHWA and the FTA for informational purposes.</p>	<p>Final copies of the Plan will be provided to FHWA and FTA.</p>

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●●○ APPENDIX 2: PUBLIC INPUT SURVEY RESULTS

Select one

- Fantastic
- Good
- Average
- Poor
- Very poor!!

Yes No

Write a comment...

Finish

First public input survey

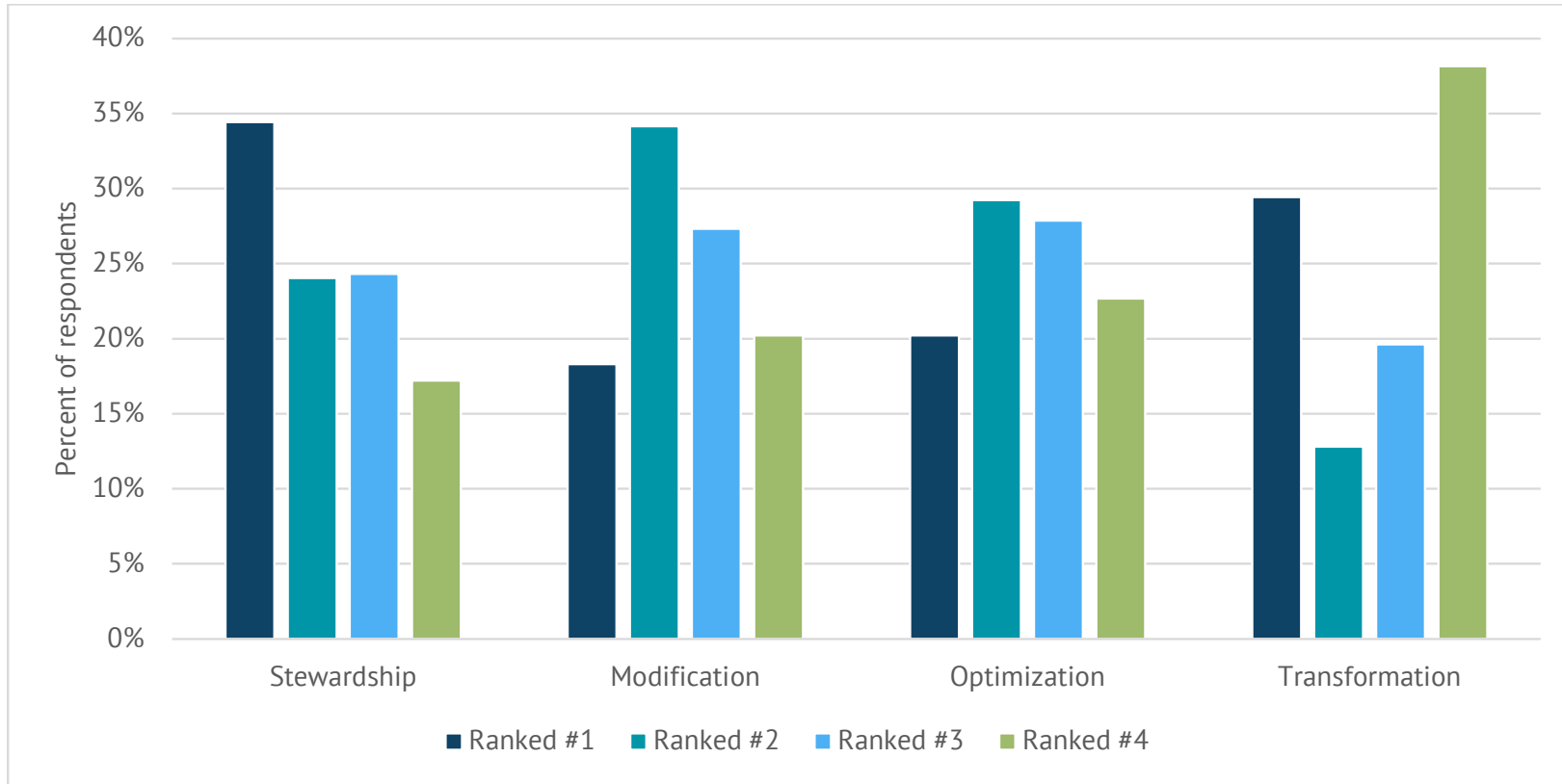
The first public input survey for the state transportation plan (Plan) was conducted in February, 2016. A total of 520 people provided data through the survey. Results are summarized here, and were used to inform the vision, investment areas, and action plan.

Investment areas exercise

Respondents were asked to prioritize four draft investment areas by ordering from 1 (highest priority) to 4 (lowest priority), and were also asked to provide comments or suggest additional investment areas. The following table and chart provide the draft investment areas, average rankings, and a breakdown of the rankings by investment area.

Investment area	Description	Average priority ranking
Stewardship	Maintaining a state of good repair: Much of the existing multimodal system will likely need to be managed and maintained similarly to how it is today. This includes applying asset management techniques to keep the system in adequate condition, and making safety enhancements as needed.	2.24
Modification	Right-sizing the system: Right-sizing means building the multimodal system of the future, not rebuilding the system of today. This will require significant investment in stewardship, some focused capacity expansion as resources allow, and perhaps some system contraction.	2.49
Optimization	Improving system efficiency and resiliency: Improving efficiency and resiliency means optimizing the current multimodal system, not just adding pavement. This includes using data to monitor the system, improving response when managing incidents, and enhancing communication with system users.	2.53
Transformation	Increasing mobility and travel choices: Providing a multimodal system that accommodates everyone includes investments beyond the typical highway system that enhance other modes (public transit, bicycle, pedestrian, air, rail), and investments aimed at decreasing single-occupant vehicles.	2.66

Rankings by investment area



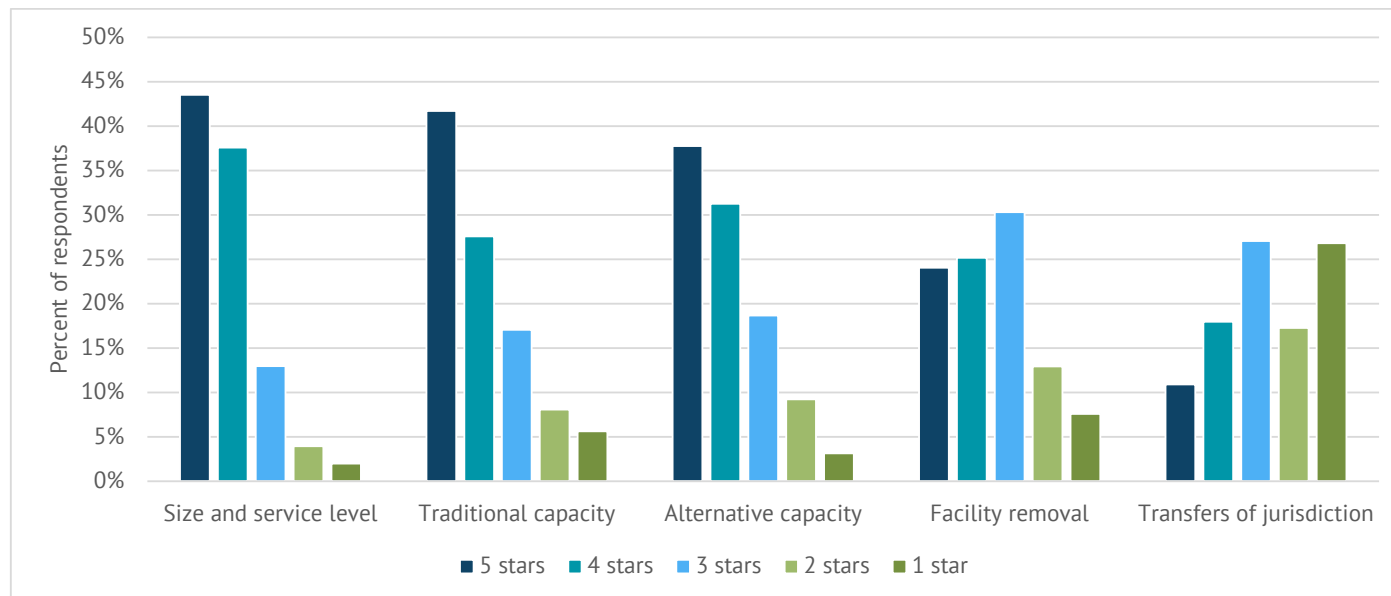
Strategies exercise

Respondents were asked to evaluate five draft strategies for each investment area (modification, stewardship, optimization, and transformation) by ranking them with 1 (low) to 5 (high) stars, and were also asked to provide comments or suggest additional strategies. The following sections provide the draft strategies, average rankings, and a breakdown of the rankings by strategy.

Modification strategies

Draft strategy	Average ranking
Size and service level: Ensure the system size and service level is appropriate and consider modifications to assets where appropriate.	4.17
Traditional capacity: Consider traditional capacity improvements (adding lanes) on critical routes that are projected to be at or near capacity.	3.92
Alternative capacity: Consider alternative capacity improvements, such as other modes or travel options, dedicated lanes, 2-lane enhancements, etc.	3.91
Facility removal: Consider facility or asset abandonment or removal where appropriate.	3.45
Transfers of jurisdiction: Consider transferring ownership of road segments in a strategic manner where appropriate and beneficial to the overall system.	2.69

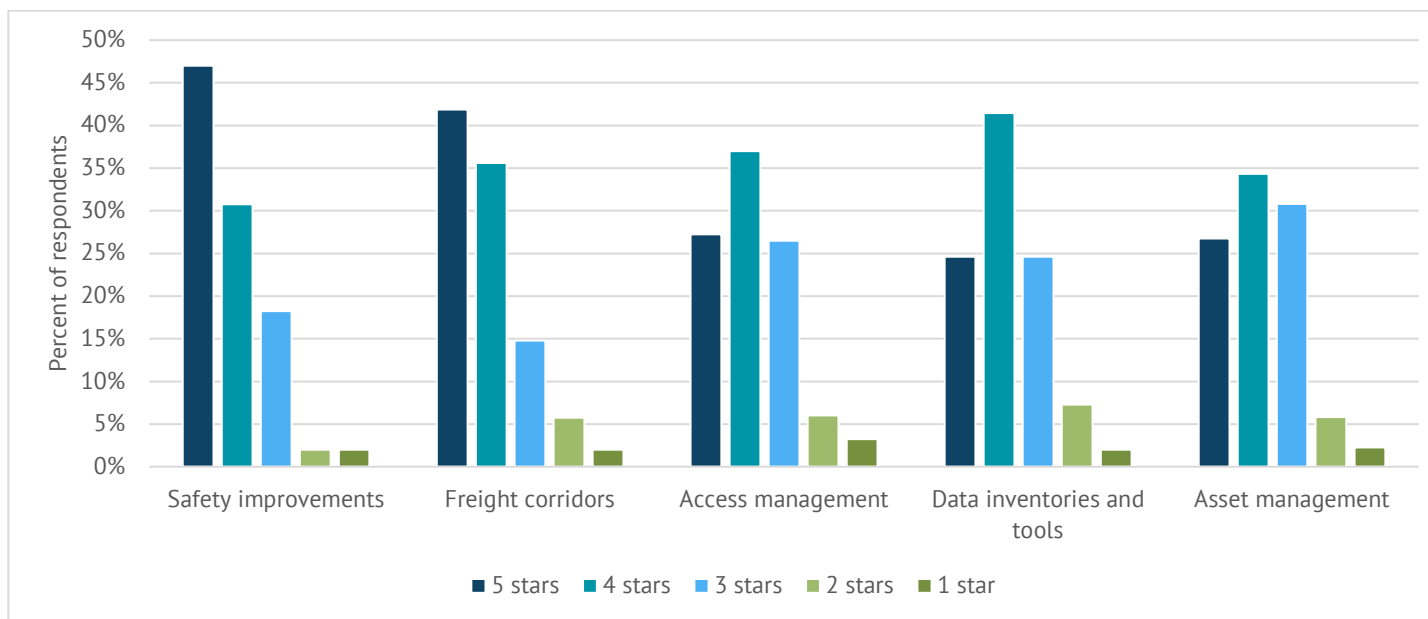
Rankings by strategy



Stewardship strategies

Draft strategy	Average ranking
Safety improvements: Apply targeted safety improvements to reduce the likelihood of crashes.	4.19
Freight corridors: Use strategic route planning for freight corridors and ensure there is appropriate infrastructure for increased freight traffic.	4.10
Access management: Utilize access management techniques to ensure system accesses are only added or modified where appropriate.	3.79
Data inventories and tools: Develop and utilize asset data inventories and analysis/prioritization tools to evaluate the system's condition.	3.79
Asset management: Utilize transportation asset management strategies to achieve desired system condition and avoid worst-first style approaches.	3.78

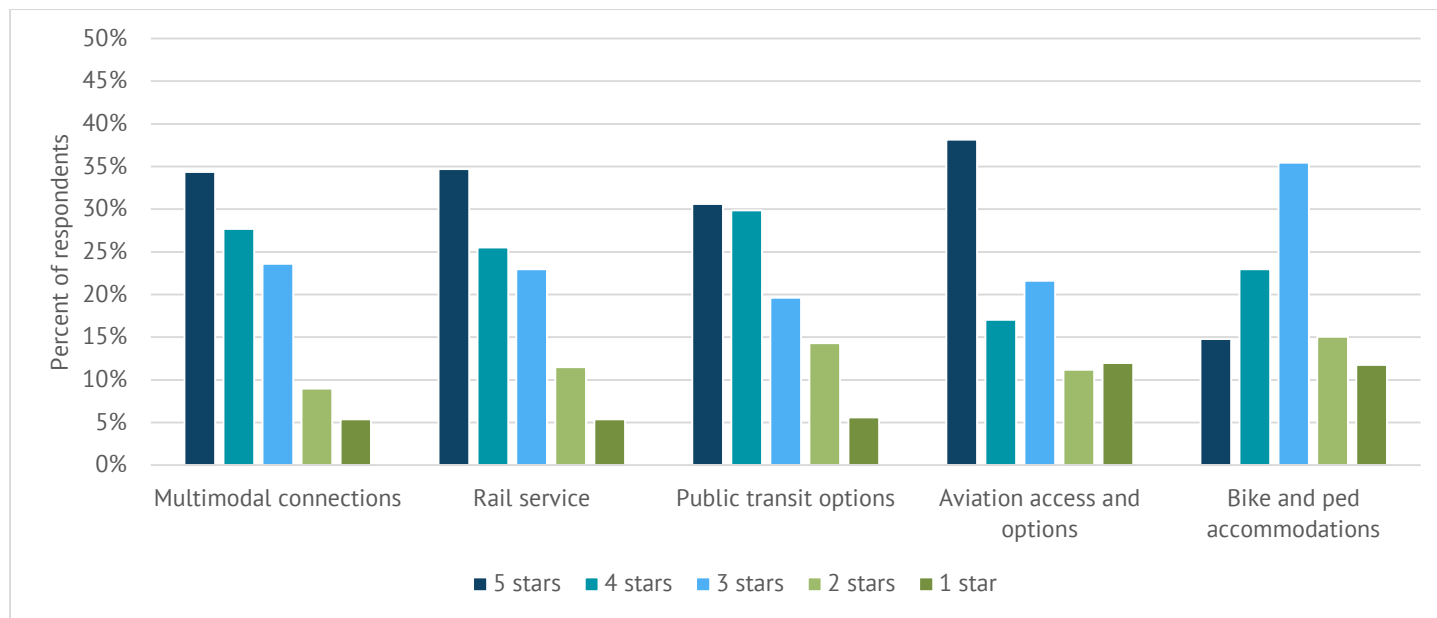
Rankings by strategy



Transformation strategies

Draft strategy	Average ranking
Multimodal connections: Support the creation of multimodal connections for freight and passenger traffic.	3.77
Rail service: Work with rail companies to ensure they are able to meet future freight and passenger needs.	3.73
Public transit options: Support the state's public transit systems and the development of interregional/commuter transit and ridesharing options.	3.66
Aviation access and options: Ensure there is adequate access to airports and support options such as more specialized, charter service at smaller airports.	3.58
Bike and ped accommodations: Support the provision of bicycle and pedestrian accommodations that are appropriate to their context.	3.14

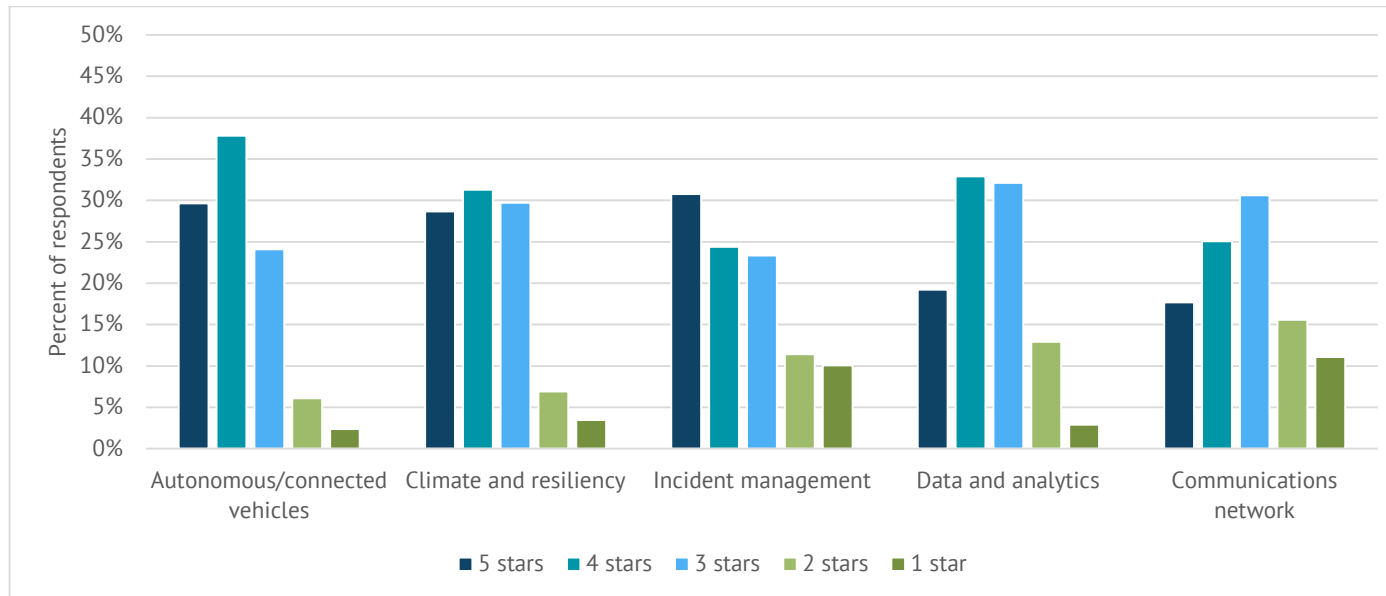
Rankings by strategy



Optimization strategies

Draft strategy	Average ranking
Autonomous/connected vehicles: Adapt planning and project development practices based on self-driving and connected vehicle advancements.	3.86
Climate and resiliency: Integrate climate change adaptation and resiliency efforts into the planning process, and utilize weather information systems.	3.75
Incident management: Support improved incident management, including response time, efficient traffic control, and clearance time for incidents.	3.54
Data and analytics: Utilize traveler/vehicle information to better understand traffic dynamics and improve system planning and management efforts.	3.53
Communications network: Enhance the reliability of the system through efforts to improve and fully utilize the communications and monitoring network.	3.23

Rankings by strategy



General questions

Three general survey questions asked respondents to identify what the Iowa DOT is doing now that it should continue or enhance; what the Iowa DOT is doing now that it should discontinue; and what the Iowa DOT needs to start doing that it is not doing already. General takeaways from the responses to these questions included the following.

- The dominant theme among responses was interest in maintaining an appropriately sized system that meets the needs of all users and grows when and where it is necessary.
- It was preferred the Iowa DOT focus on maintaining the current system and ensuring expansion is only done when there is significant need.
- There was interest in increasing the efficiency of the department and increasing communication between the Iowa DOT and the public and stakeholder groups.
- There was interest in the Iowa DOT ensuring the appropriate materials are used and the right repairs are done the first time for projects to reduce costs associated with future improvements and ensure the system lasts longer.
- Support was expressed for alternative modes of transportation as a way to reduce the need to increase capacity and ensure everyone has the ability to travel within the state.

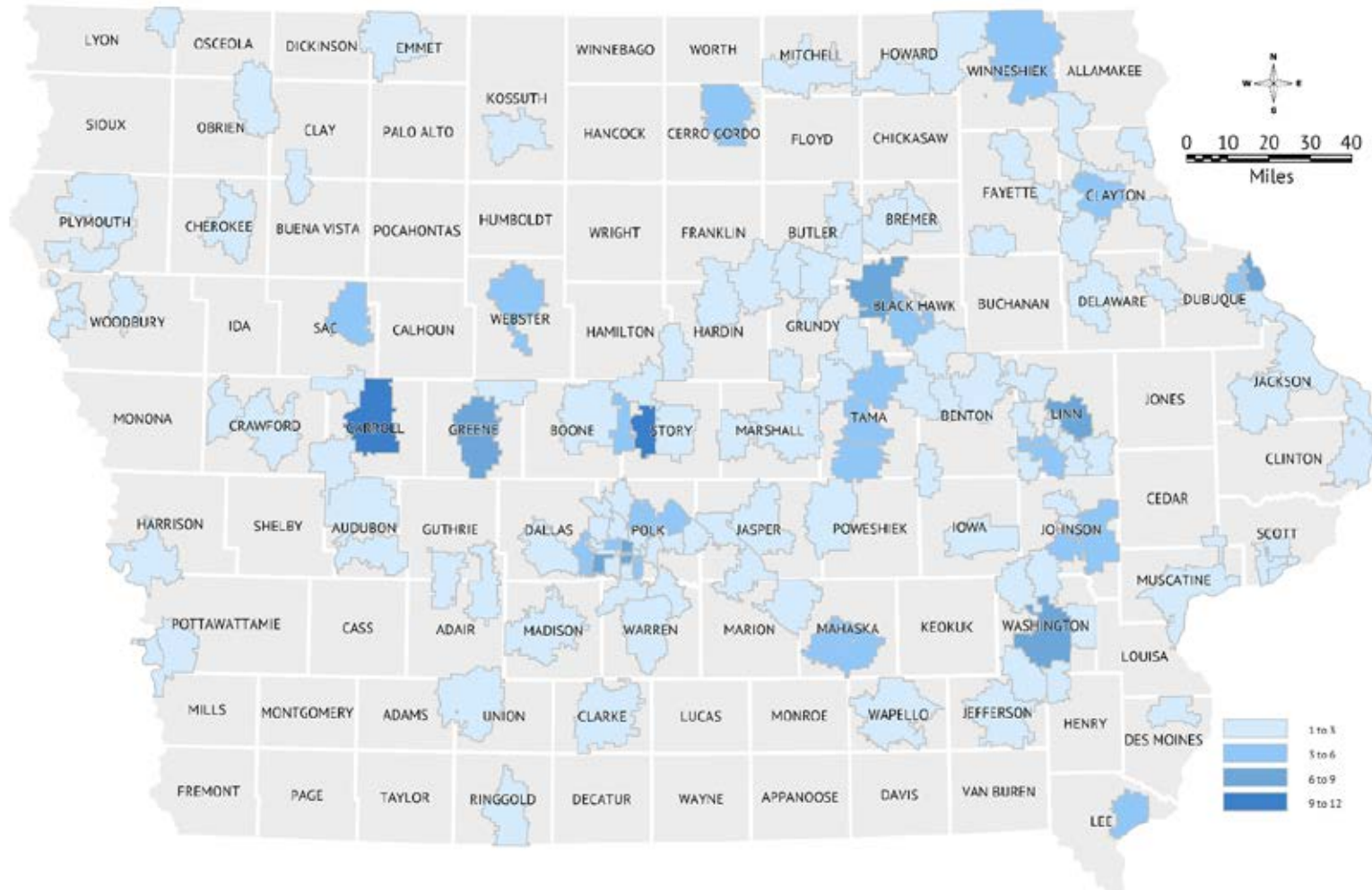


Demographic information

Gender and age of respondents

Male	Female	24 or under	25-34	35-44	45-54	55-64	65-74	75-84	85 or over
66.7%	33.3%	2.5%	27.6%	20.6%	23.4%	19.2%	5.6%	1.1%	0.0%

Number of respondents by zip code

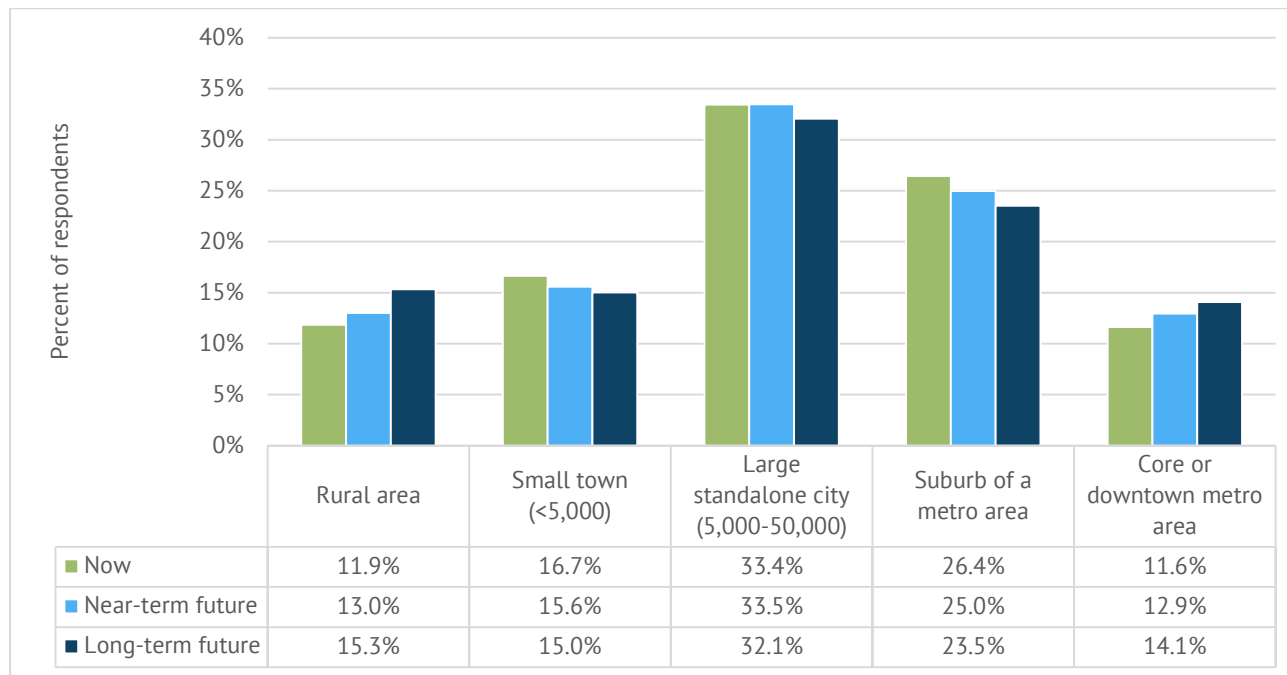


Second public input survey

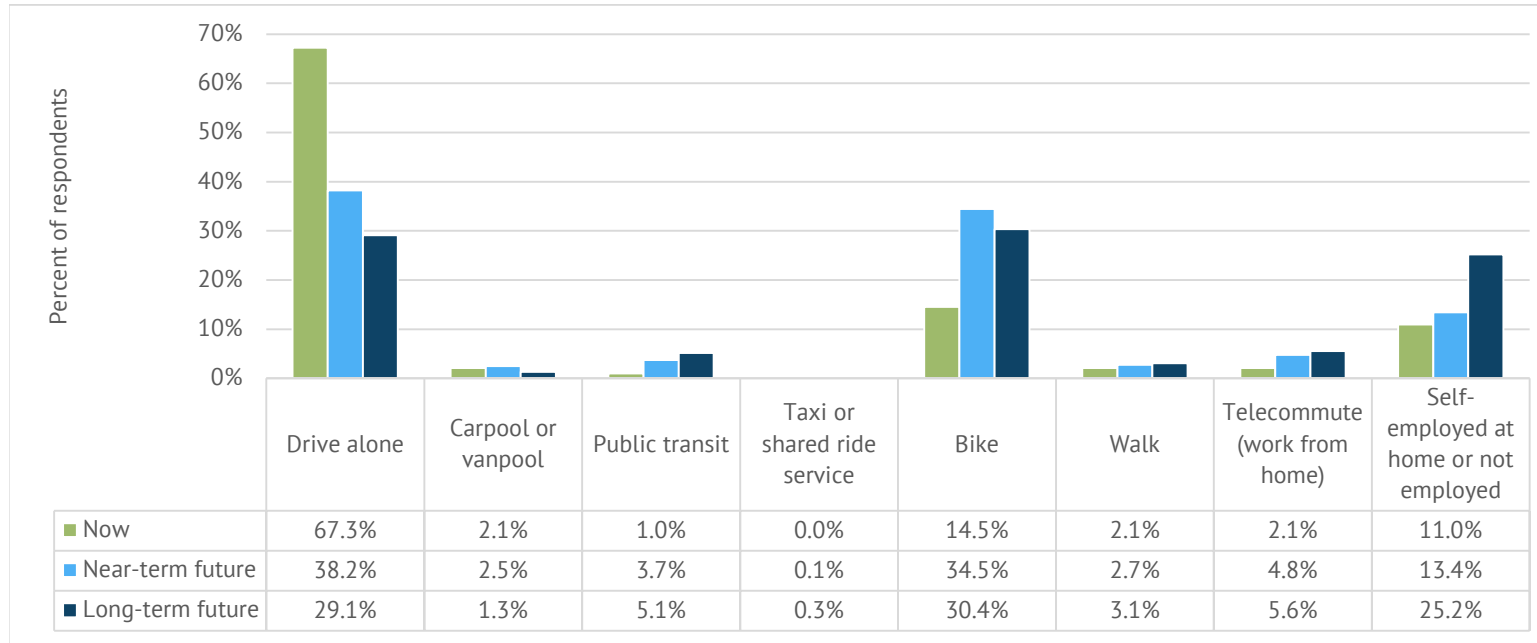
The second public input survey for the Plan was conducted in August and September, 2016. A total of 1,646 people provided data through the survey. Results are summarized here, and were used to inform the strategies in the action plan. Questions fell under the general topic areas of current and future preferences, highly automated vehicles, highway improvement alternatives, and funding.

Topic area: Current and future preferences

1. Which of these best describes where you live now, and where you would prefer to live in the future?



2. Which of these best describes how you typically travel to work, and how would you prefer to travel to work in the future?

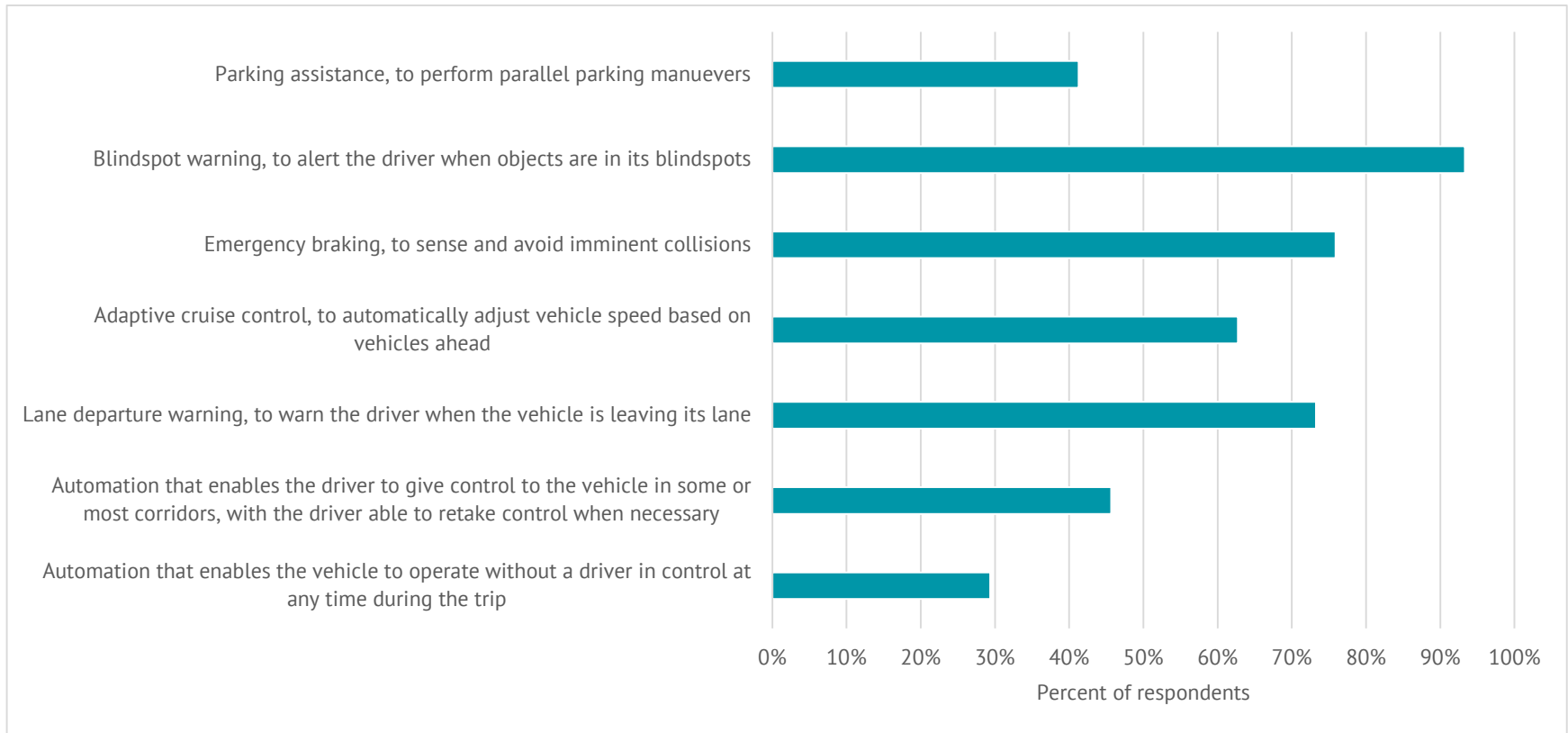


3. How often do you use each of the following modes of transportation to get somewhere?

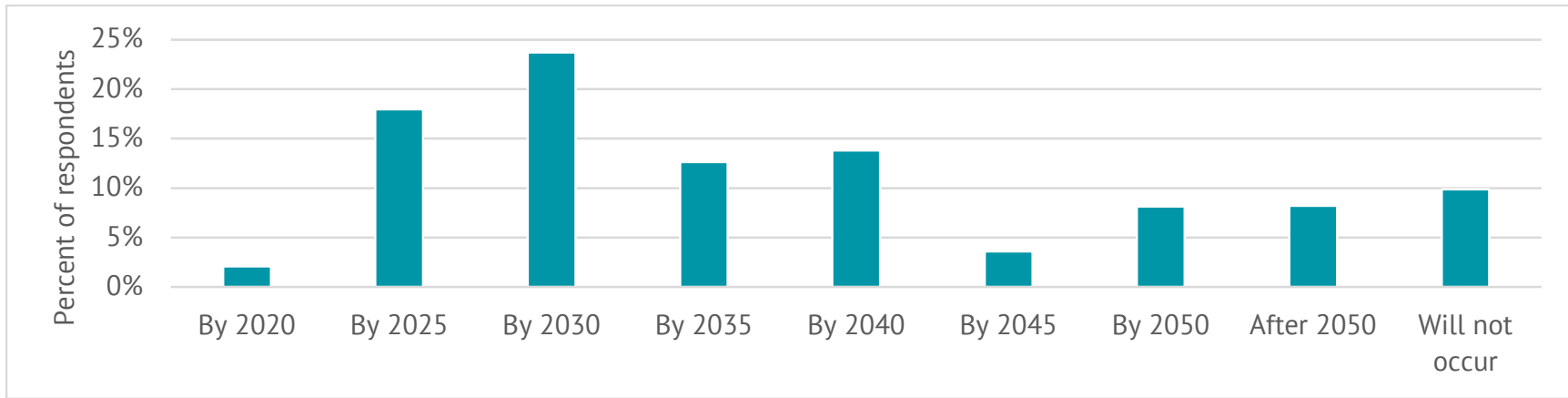
	Daily	Weekly	Monthly	Semi-annually	Rarely	Never
Ride a bicycle	22.7%	35.1%	11.0%	4.1%	11.7%	15.4%
Walk	31.1%	27.8%	11.8%	2.8%	18.0%	8.5%
Ride the bus	1.3%	1.7%	3.7%	3.8%	19.2%	70.4%
Use an intercity bus (Jefferson Lines, Megabus, etc.)	0.0%	0.1%	0.1%	2.5%	11.4%	85.8%
Fly	0.1%	0.6%	7.5%	44.6%	36.9%	10.3%
Use Amtrak	0.1%	0.1%	0.1%	3.6%	22.5%	73.7%
Drive own vehicle	82.2%	14.9%	1.3%	0.2%	0.1%	1.3%
Ride with others	4.6%	32.5%	22.7%	6.5%	25.8%	7.9%
Use a transportation network company (Uber, Lyft, etc.)	0.1%	1.3%	9.7%	8.9%	19.6%	60.4%

Topic area: Highly automated vehicles

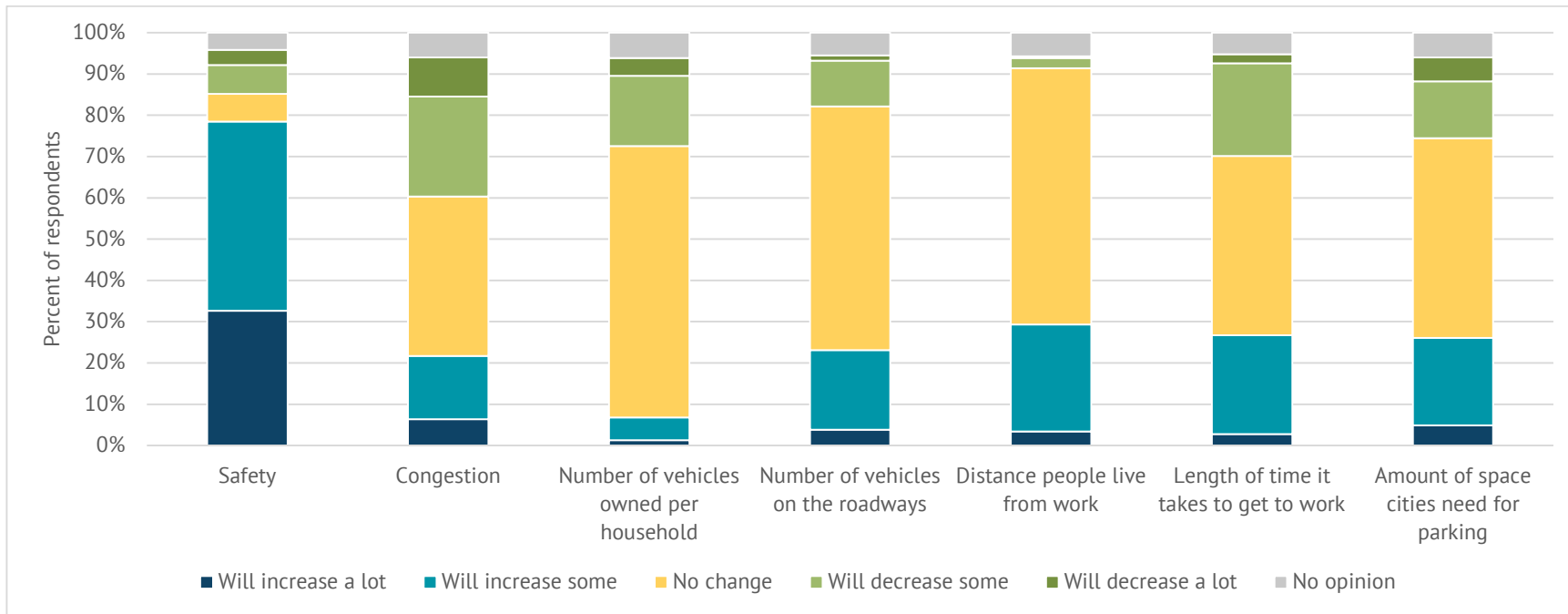
4. Highly automated vehicles are being developed, and some automated features are available in vehicles now. Improved safety is a major potential benefit of these vehicles, along with other potential effects. Which of these automated features would you be interested in having in your vehicle? Select all that apply.



5. Do you think highly automated vehicles will account for the majority of the cars on the road someday? If so, when do you think this will occur?

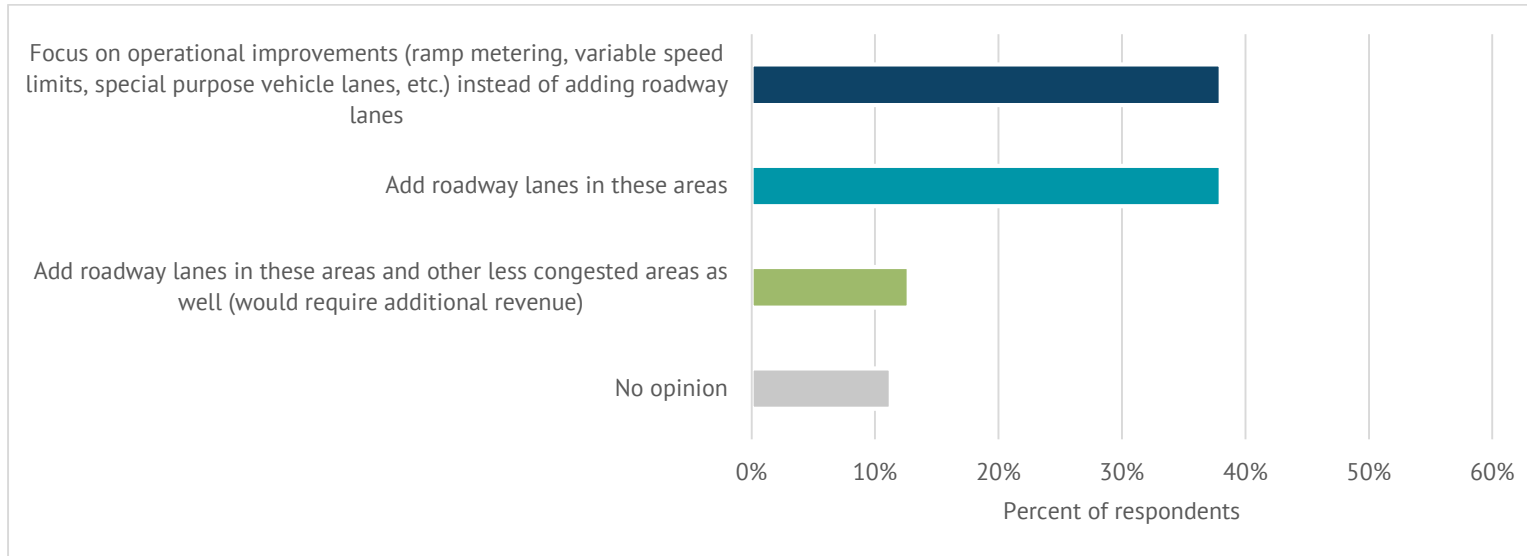


6. If highly automated vehicles become common, what do you think their impacts would be in each of these areas?

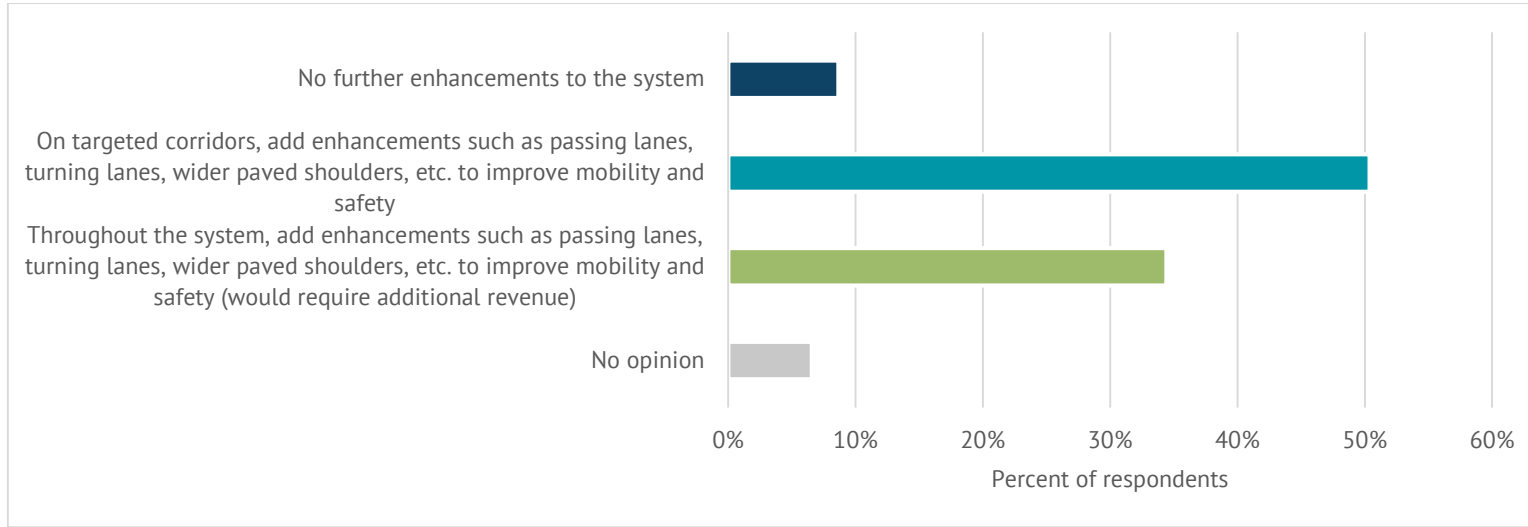


Topic area: Highway improvement alternatives

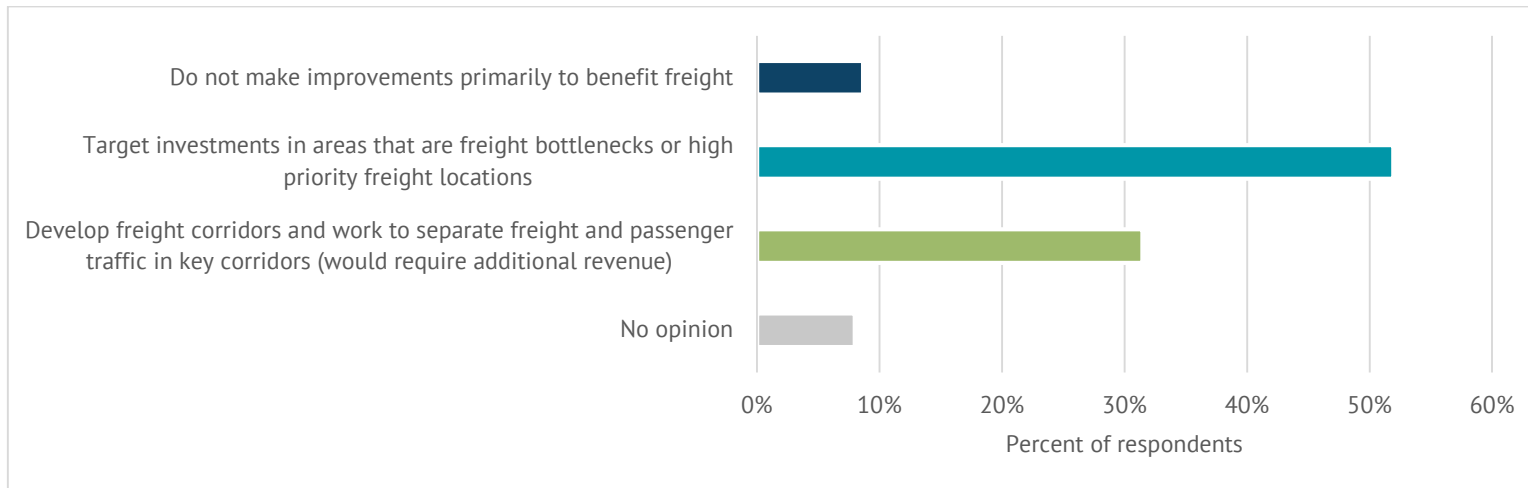
7. In areas where we have or expect to have significant traffic congestion (such as urban areas and three rural interstate corridors (I-35 from Des Moines to Ames, I-80 from Des Moines to Davenport, and I-380 from Iowa City to Cedar Rapids)), which approach would you favor most?



8. For roads where we do not expect significant congestion, in addition to stewardship (aiming to keep roads in a state of good repair), which approach would you favor most?

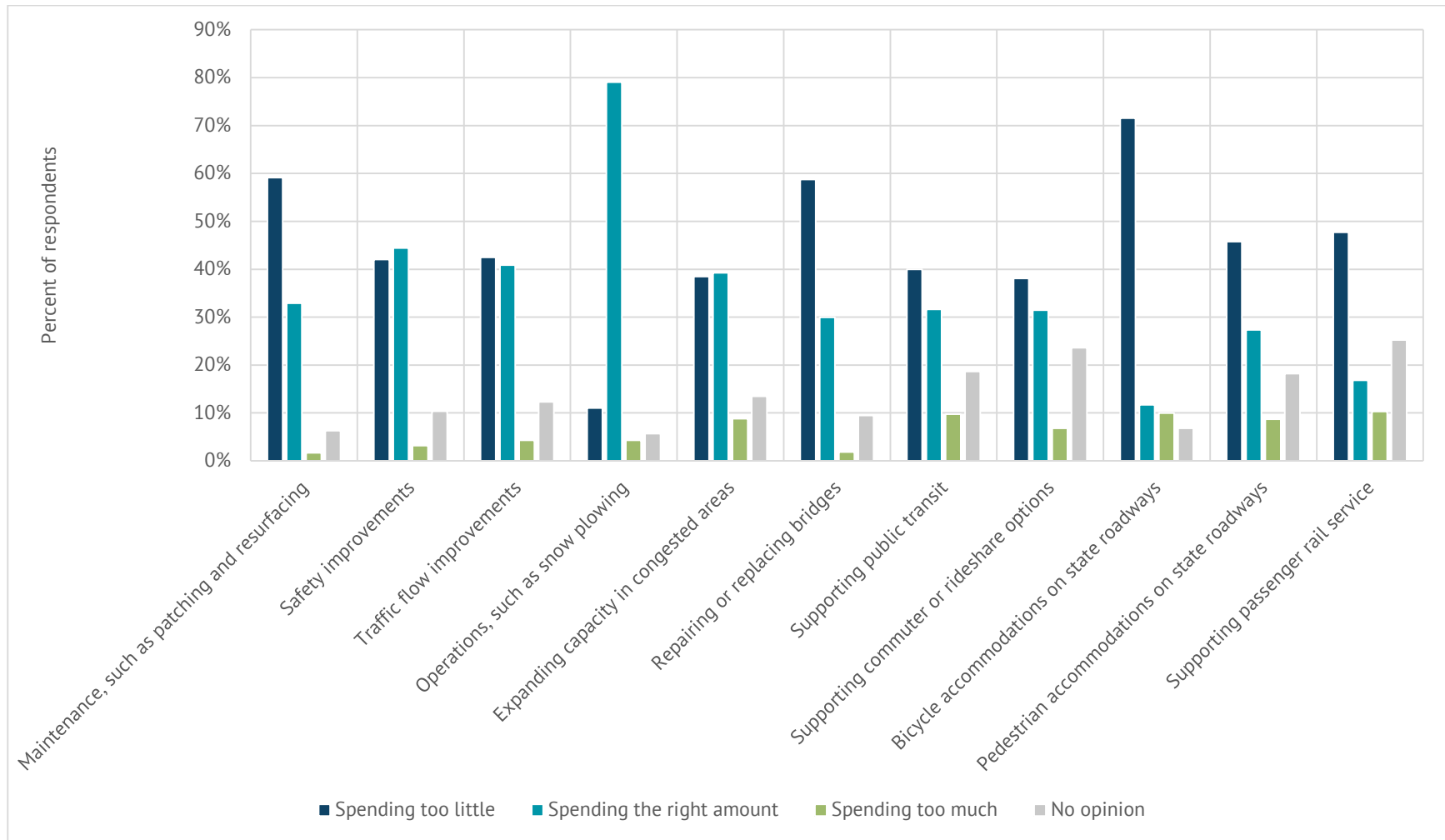


9. Freight movements will continue to increase in the future. What approach to freight-related highway improvements would you favor most?



Topic area: Funding

10. Based on how you feel the state transportation system operates today, are we spending too much, too little, or the right amount of funding on the system in each of these areas?

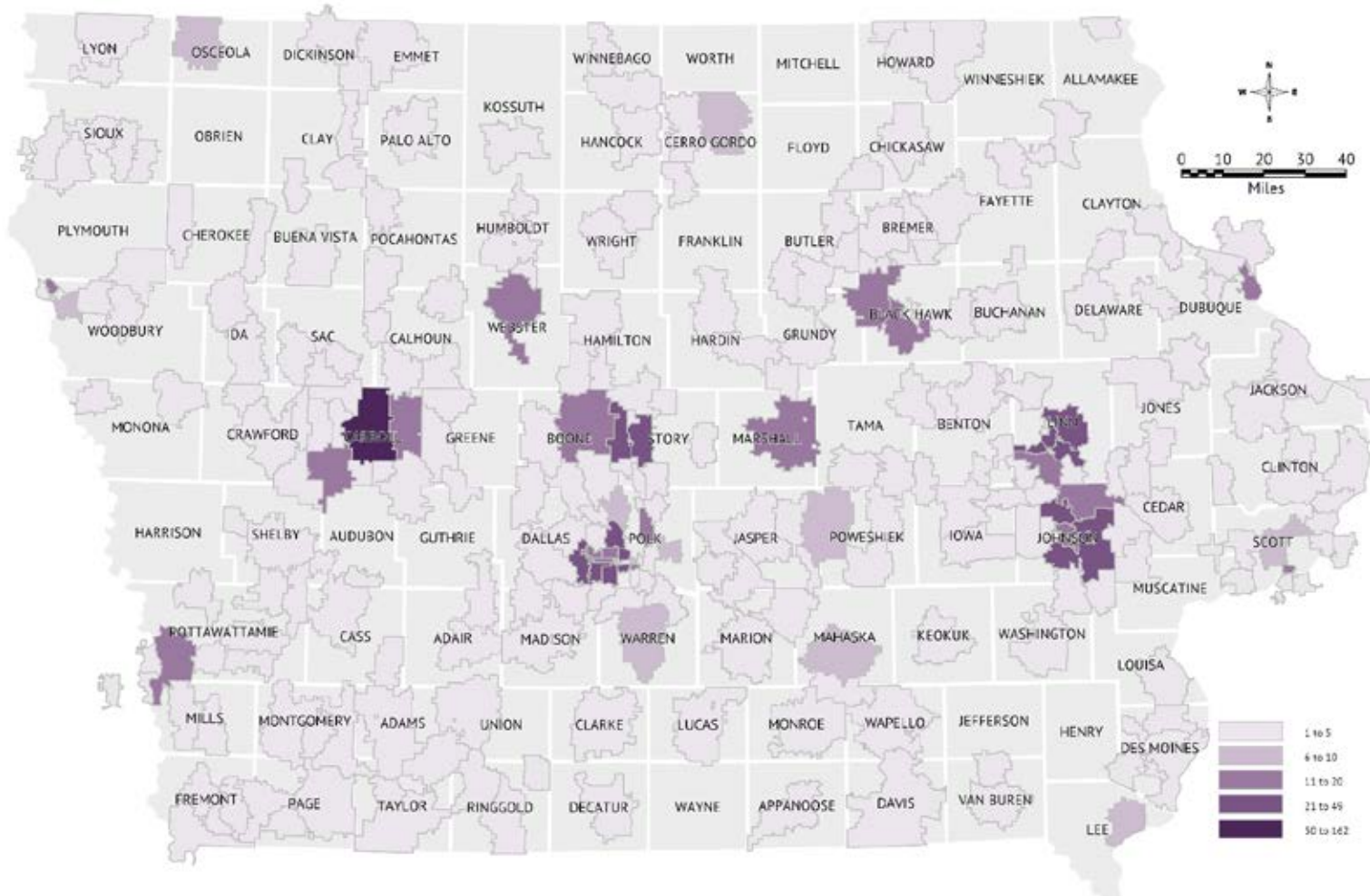


Demographic information

Gender and age of respondents

Male	Female	24 or under	25-34	35-44	45-54	55-64	65-74	75-84	85 or over
66.4%	33.6%	2.3%	15.6%	19.6%	24.6%	26.9%	9.3%	1.7%	0.1%

Number of respondents by zip code



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●●● **APPENDIX 3:
REVENUE GENERATING MECHANISMS**



The following tables were included as part of the 2016 Road Use Tax Fund (RUTF) Study.¹

Existing revenue sources

Type of Financing	Description/Mechanism	Estimated Amount Generated	Advantages	Disadvantages	Collected from out-of-state drivers?
Fuel Tax (452A.3)	<p>Cents per gallon tax on motor fuels, including some alternative fuels.</p> <p>Current rate (as of July 1, 2016): not including the one cent per gallon fee for underground storage tanks.</p> <ul style="list-style-type: none"> Gasoline: 30.7 cents per gallon Ethanol-blended gasoline: 29.0 cents per gallon Diesel (B10 and lower): 32.5 cents per gallon Diesel (B11 and higher): 29.5 cents per gallon <p>The fuel tax is the only significant current source of RUTF revenue that is applied to out-of-state drivers as well as Iowans. The Iowa DOT has estimated that 35 percent of large truck travel in Iowa is from out-of-state trucks and 15 percent of passenger car/small truck travel in Iowa is from out-of-state drivers. In total, approximately 13 percent of RUTF revenue is estimated to be paid by out-of-state drivers primarily due to fuel tax payments.</p>		<ul style="list-style-type: none"> Collection and administration process already in place. Generally proportional to system usage. Generates revenue from out-of-state drivers. Paid by all users of the highway system. 	<ul style="list-style-type: none"> Increased fuel efficiency results in lower revenue. Higher fuel prices lead to reduced driving and reduced fuel tax collections. Fees are fixed and do not adjust for inflation. 	<ul style="list-style-type: none"> Yes (see description)
	<p>Mechanism: Add automatic annual adjustment to fuel tax rates based on an inflation index such as the Consumer Price Index or Iowa's Construction Cost Index</p> <p>Amount of additional revenue generated is dependent on rate of inflation.</p>	<ul style="list-style-type: none"> Variable. A three percent adjustment would generate \$19.5 million per year. 	<ul style="list-style-type: none"> Automatically addresses loss of buying power. 	<ul style="list-style-type: none"> Could result in significant revenue variations as fuel price changes. Makes forecasting for programming difficult. 	
Fee for New Registration (321.105A)	<p>Five percent fee that is imposed on the sale of new and used motor vehicles and trailers</p>		<ul style="list-style-type: none"> Collection and administration process already in place. Provides revenue source based on ability to pay. Proportional to cost of vehicle. 	<ul style="list-style-type: none"> Not proportional to system usage. May discourage sales of motor vehicles. Fluctuates with economic cycles. 	<ul style="list-style-type: none"> No
	<p>Mechanism: Increase to six percent.</p>	<ul style="list-style-type: none"> Approximately \$70 million per year 	<ul style="list-style-type: none"> Brings fee in line with state sales tax rate. 		

1. <http://publications.iowa.gov/23228>

Existing revenue sources (cont.)

Type of Financing	Description/Mechanism	Estimated Amount Generated	Advantages	Disadvantages	Collected from out-of-state drivers?
Driver's License Fee (321.191)	A fee charged for the privilege to operate a motor vehicle. \$4 per year (non-commercial) \$8 per year (commercial)		<ul style="list-style-type: none"> Collection and administration process already in place. Does not fluctuate with economic cycles. 	<ul style="list-style-type: none"> Not proportional to system usage. 	<ul style="list-style-type: none"> No
	Mechanism: Double driver's license fee	<ul style="list-style-type: none"> Approximately \$13 million per year on average 			
Registration Fees	Fees charged to register and license vehicles and trailers Fees vary according to the weight and value of the vehicle.		<ul style="list-style-type: none"> Collection and administration process already in place. 	<ul style="list-style-type: none"> Not proportional to system usage. Higher administrative and enforcement costs. Encourages retention of older vehicles. 	<ul style="list-style-type: none"> Only commercial vehicles that pay a prorated fee based on travel within Iowa.





Potential revenue sources

Type of Financing	Description	Advantages	Disadvantages	Collected from out-of-state drivers?
Local Option Vehicle Tax	<p>A vehicle registration fee approved and levied at the local level in addition to vehicle registration fees levied by the state.</p> <p>Amount collected would vary based on the registration fee amount and jurisdictions in which the tax was applied.</p>	<ul style="list-style-type: none"> Enabling legislation already in place. Revenue generated locally and available for local transportation priorities. 	<ul style="list-style-type: none"> Not proportional to system usage. 	<ul style="list-style-type: none"> No
Sales Tax	<p>Assess sales tax on fuel purchases.</p> <p>A one percent sales tax on fuel would generate approximately \$57 million per year based on 2015 fuel usage and prices.</p>	<ul style="list-style-type: none"> Provides a mechanism to apply local option sales tax on the purchase of fuel. Requires less frequent legislative action on fuel tax because revenues will increase as the price of fuel increases. 	<ul style="list-style-type: none"> Requires enabling legislation. Administration and collection system would need to be developed. Because tax is tied to the price of fuel, the amount of tax could change significantly if fuel prices experience large fluctuations. 	<ul style="list-style-type: none"> Yes
Severance Tax on Ethanol	<p>A tax collected by the state either based on a percent of value or a volume-based fee on resources extracted from the earth. Typically charged to producer or first purchaser. To minimize the impact on Iowa drivers, the added cost of the severance tax could be offset with a reduction in fuel tax rate on ethanol-blended fuel.</p> <p>Potential revenue is dependent on rate set and volume produced. Assuming the fuel tax rate is lowered for ethanol-blended fuels to offset the addition of a severance tax, an estimate can be developed. Based on 2015 data, a severance tax of one cent per gallon would have generated \$42 million.</p>	<ul style="list-style-type: none"> Creates opportunity to generate revenue from sources outside of Iowa. Compensates for roadway deterioration resulting from usage of system for the production of ethanol. 	<ul style="list-style-type: none"> Requires enabling legislation. Administration and collection system would need to be developed. Potential regulatory issues. Could put the producer at competitive disadvantage. 	<ul style="list-style-type: none"> Yes
Per-Mile Tax	<p>Tax based on the vehicle miles traveled within a state.</p> <p>Based on the vehicle miles traveled in Iowa in 2015, a one cent per-mile fee would generate \$331 million per year.</p>	<ul style="list-style-type: none"> Direct measure of actual costs incurred. Highly related to needs for capacity and system preservation because as travel and revenue increases, the need for capacity and preservation improvements increase. May be graduated based on vehicle size, weight, emissions or other characteristics. 	<ul style="list-style-type: none"> Requires enabling legislation. Administration and collection system would need to be developed. Potentially high administrative, compliance and infrastructure costs. Technology needs to mature. Privacy concerns. 	<ul style="list-style-type: none"> Yes
Transportation Improvement District	<p>Geographic areas are defined and tax imposed within the area to fund transportation improvements with voter approval.</p> <p>Revenue potential varies.</p>	<ul style="list-style-type: none"> Satisfies urgent infrastructure needs, which exceed available finances. Encourages state, local and private-sector partnerships. Users of the system decide to implement. 	<ul style="list-style-type: none"> Requires enabling legislation. Administration and collection system would need to be developed. May be seen as an equity issue. 	<ul style="list-style-type: none"> Yes, if out-of-state driver makes taxable purchases within geographic area.

Potential revenue sources (cont.)

Type of Financing	Description	Advantages	Disadvantages	Collected from out-of-state drivers?
Tolling	<p>Implementing fees to travel on road segments.</p> <p>Revenue potential varies based on length of tolled segment and toll rate, but a typical rate is seven cents per mile.</p>	<ul style="list-style-type: none"> • Specific road segments/corridors generate their own revenue. 	<ul style="list-style-type: none"> • Requires enabling legislation. • Expensive to initiate due to needed capital investment. • Ongoing administrative costs. • Requires sufficient traffic levels to generate enough revenue to pay for the costs of tolling, along with the maintenance and construction cost; Iowa may not have any reasonable corridors meeting requirements. • Public resistance may lead to adjustments in travel patterns to avoid tolls. • There are federal restrictions in some cases. 	<ul style="list-style-type: none"> • Yes
Development Impact Fees	<p>A fee charged to developers for off-site infrastructure needs that arise as a result of new development.</p>	<ul style="list-style-type: none"> • Additional source of funding to off-set increased needs due to new development. • Places the cost of improvement on the development that caused the need. 	<ul style="list-style-type: none"> • Typically a local jurisdiction fee and is difficult to apply statewide. • Potential negative impact on future development. • Can be difficult to establish and administer. • Can be an equity issue when costs are passed on to homeowners in the case of a housing development. 	<ul style="list-style-type: none"> • No
Bonds for Primary Road System Improvements	<p>A written promise to repay borrowed money at a fixed rate on a fixed schedule. Can be limited to very specific situations, such as projects that exceed a certain dollar threshold, projects that cannot easily be phased over time (border bridges) and/or projects that can reasonably generate sufficient revenue (tolls) to service their own bond debts.</p> <p>Revenue potential varies.</p>	<ul style="list-style-type: none"> • Allows earlier and faster construction of some facilities. • Satisfies urgent infrastructure need, which exceeds available finances. • Avoids inflationary construction costs. 	<ul style="list-style-type: none"> • Requires enabling legislation. • Requires state or community to extend payments for long periods of time. • Does not generate new money. • May cost more over time due to bond interest. • Requires existing annual resources be used for debt service rather than new needs. • May have a negative impact on statewide transportation decision-making. • Poses staffing issues for government road agencies and road consultants/contractors due to significantly changing annual project expenditure levels and cyclical nature. 	<ul style="list-style-type: none"> • Depends on funding mechanism that funds bond repayments.

Potential revenue sources (cont.)

Type of Financing	Description	Advantages	Disadvantages	Collected from out-of-state drivers?
Public-Private Partnerships (PPPs)	<p>Contractual agreements formed between a public agency and private sector entity that allow private participation in the delivery of transportation projects in one or more of the following areas: project design, construction, finance, operations, and maintenance. Can either be user-fee based (tolls) or non-user-fee based. The non-user-fee based types of PPPs are most viable in Iowa and include design-build and design-build-finance.</p> <p>Revenue potential varies.</p>	<ul style="list-style-type: none"> Expedited completion compared to conventional delivery methods. Avoids inflationary construction costs. Delivery of new technology developed by private entities. Purchase of private resources and personnel instead of using constrained public resources. 	<ul style="list-style-type: none"> Requires enabling legislation. May be less efficient. If user-fee based, could lead to higher tolling than under a public-only project. May limit ability for in-state contractors to participate in construction depending on type of project. 	<ul style="list-style-type: none"> Depends on mechanism implemented by private owner but would likely generate funding from out-of-state drivers
	<p>Mechanism: Privatization of infrastructure.</p> <p>Typically involves the long-term leasing of toll roads to private sector for up-front payment.</p> <p>Revenue potential varies.</p>	<ul style="list-style-type: none"> Influx of one-time capital. Shifts responsibility to contractor. 	<ul style="list-style-type: none"> Requires enabling legislation. Administrative process needed to let, execute, contract, and monitor performance. Requires high-usage corridor to be marketable; Iowa may not have any candidates. Built-in toll increases. Potentially higher tolls to make project profitable. These tolls may result in system inefficiencies as traffic utilizes non-toll roads in lieu of using toll roads. Requires very long-term decision that removes flexibility. Very limited ability for in-state contractors to participate in construction. 	<ul style="list-style-type: none"> Depends on funding mechanism implemented by private owner but would likely generate funding from out-of-state drivers.
	<p>Mechanism: Enable design-build contracting.</p> <p>Design-build involves contractual agreements whereby a single bid is accepted for both the design and construction of a project. A variation of this is the design-build-operate-maintain contract whereby a private contractor is also responsible for operation and future maintenance. 45 states have statutory or administrative provisions that authorize design-build fully or with certain limitations.</p>	<ul style="list-style-type: none"> Intended to accelerate construction schedule since some activities can occur simultaneously. Intended to allow construction to begin sooner Reduces administrative burden by having one contract and point-of-contact. Can result in reduced construction costs. 	<ul style="list-style-type: none"> Requires enabling legislation. May impact ability of in-state contractors to participate in construction. Not appropriate for all types of projects. Potential for cost overruns if scope of work is not properly defined up front. 	<ul style="list-style-type: none"> N/A

Potential revenue sources (cont.)

Type of Financing	Description	Advantages	Disadvantages	Collected from out-of-state drivers?
Container Tax	<p>Fee imposed on containers moving through a designated geographic area.</p> <p>Revenue potential varies based on chosen rate and transportation modes to which the container tax would be applied.</p>	<ul style="list-style-type: none"> Creates opportunity to generate revenue on shipments passing through the state. 	<ul style="list-style-type: none"> Requires enabling legislation. Does little to promote efficiency Ongoing administrative costs. 	<ul style="list-style-type: none"> Yes
Imported Oil Tax	<p>A tax charged on imported oil based on either the volume or value of the imported oil.</p> <p>Revenue potential varies.</p>	<ul style="list-style-type: none"> Could help promote U.S. energy production. 	<ul style="list-style-type: none"> Requires enabling legislation. Imported oil can be used for purposes other than transportation. Could result in larger free trade issues. 	<ul style="list-style-type: none"> Yes
Tire Tax on Light Duty Vehicles	<p>A tax on light-duty vehicle tires. Could be applied to both new vehicle tires and replacement tires.</p> <p>Revenue potential varies.</p>	<ul style="list-style-type: none"> Sustainable source of funds. Under normal circumstance, a strong link exists between tire wear and system usage. 	<ul style="list-style-type: none"> Requires enabling legislation. Would not generate significant revenues. May have safety ramifications by discouraging the replacement of worn tires. 	<ul style="list-style-type: none"> Yes
Alternative Fuel/ High Fuel Efficiency Vehicle Tax	<p>A tax or additional registration fee charged on alternatively fueled vehicles, plug-in hybrids, and/or high-fuel efficiency vehicles. Replaces lost fuel tax revenues associated with the use of these vehicles.</p> <p>A \$150 fee charged on electric vehicles and plug-in hybrid vehicles would generate approximately \$175,000 based on 2016 vehicle registration data.</p>	<ul style="list-style-type: none"> Ensures that electric vehicles and high fuel efficiency vehicles pay towards operations and maintenance of the highway system. 	<ul style="list-style-type: none"> Requires enabling legislation. Potentially discourages the use of emerging efficient vehicle technologies. 	<ul style="list-style-type: none"> No
Interstate Logo Sign Fees	<p>Annual fee charged for logo signs paid for by businesses advertising their location off an interstate interchange.</p> <p>A 100 percent increase in annual fees, from \$230 to \$460, would generate approximately \$700,000 in additional funds.</p>	<ul style="list-style-type: none"> Would be easily implemented. 	<ul style="list-style-type: none"> Would require enabling legislation for funds to be placed in the road use tax fund. No link to highway use. Signs are intended to be a service to drivers rather than a source of revenue 	<ul style="list-style-type: none"> No
Agriculture Bushel Tax	<p>A tax charged on each bushel of agriculture based products.</p> <p>Based on estimated 2015 production levels and on-farm grain usage, a \$0.01 a bushel tax would generate approximately \$30,000,000.</p>	<ul style="list-style-type: none"> Creates new source of sustainable revenues. If products are shipped by road, a strong link exists between agriculture production and system usage. 	<ul style="list-style-type: none"> Requires enabling legislation. Revenues would fluctuate based on production levels. Administration and collection system would need to be implemented. 	<ul style="list-style-type: none"> No