21st Century Infrastructure Commission Report

Michigan Department of Transportation
Kirk Steudle, Director

Michigan Department of Transportation
21st Century Infrastructure Commission

- Created by executive order in March, 2016
- Report formally released December 5, 2016
- 27 commissioners representing infrastructure assets including energy, communications, water, sewer, & transportation
  - Met monthly
  - Held 6 listening sessions statewide
  - Hosted a website seeking public input
  - Created asset-focused subcommittees & technical advisory committees that met twice a month or more
Prompted by Recent Events

- Water contamination in city of Flint threatens health & safety of residents
- Property damage from flooding is increasing
- 25 billion gallons of untreated sewage were released into lakes & rivers annually between 2013–2014
- Nearly 25% of beaches experienced closures in 2015
- 39% of roads in poor condition
- 27% of bridges are structurally deficient or functionally obsolete
- 12% of state’s households lack access to advanced broadband service
- Planned power plant retirements in U.P. posed challenges to balancing reliability & affordability
Guiding Principles

- Create infrastructure systems that enhance quality of life, enable economic growth, & provide a strong foundations for vibrant communities
- Promote coordination, cooperation, & communication among agencies & across assets
- Build a culture of strategic investment through asset management
- Design infrastructure systems that are adaptable, flexible, & resilient
- Leverage a variety of public & private investment & financing resources
- Encourage meaningful public engagement
- Prioritize environmental quality & sustainability
- Embrace emerging technologies, visionary planning principles, & innovative approaches
Outcomes

- Economic prosperity
- A healthy environment
- Reliable, high-quality service
- Value for investment
Asset Management Recommendations

• Establish regional infrastructure pilot
  – To be accomplished by executive order
  – Ideally Michigan Prosperity Region
  – Leverage & expand efforts of TAMC
  – Develop comprehensive database for all assets in region
  – Identify data system, data gaps & data elements needed
  – Coordinate with private sector
  – To be used as prototype for statewide database
Asset Management Recommendations

- Establish Michigan Infrastructure Council (MIC)
  - Legislative action will be needed
  - Members appointed by Governor & Legislature, with staggered terms
  - Use information from pilot to develop statewide database
  - Develop long-term infrastructure investment strategy for State
  - Design, oversee & coordinate incentives, funding & financing opportunities, focusing on & rewarding improved coordination among assets
Communications Recommendations

- Make Michigan a Smarter State
- Improve Broadband Access & Adoption
- Establish the Michigan Consortium on Advanced Networks
- Secure Michigan’s Digital Infrastructure
Energy Recommendations

- Resource Adequacy
- Cleaner Energy Sources
- Electric Reliability
- Natural Gas Safety
- Information Security
- Business Attraction & Economic Development
Water Recommendations

• **Ensuring Public & Environmental Health:** Invest in replacement of aging water, sewer, & stormwater infrastructure.

• **Water Asset Management:** Perform regular assessments & maintenance of drinking water, sewer, stormwater, & dam infrastructure systems.

• **21st Century Water Infrastructure**

• **Fiscally Sustainable Pricing Models**

• **Green Infrastructure**

• **Onsite Well & Septic Systems**
Transportation Recommendations

• Road & Bridge Condition – MIC to work with Legislature to identify sufficient & sustainable funding sources

• Bridges & Culverts
  – Design stream crossings for future watershed conditions
  – Use new bridge materials to reduce life-cycle costs
  – Encourage locals to inspect culverts greater than 5’ in diameter
  – MDOT to undertake a culvert inspection pilot project in one county to assess costs of culvert inspection

• Seasonal Weight Restrictions
  – MDOT to work with local agencies to improve regional consistency
  – MDOT & locals work together to prioritize development of all-season roads
Transportation Recommendations

• Transit, Passenger & Freight Rail
  – Identify alternative sources of transit funding or increase CTF funding
  – Transit agencies should make greater use of technology
  – MDOT to work with private sector to continue to develop the DIFT
  – Update State Rail & Freight Plans

• Soo Locks – Urge the federal government to fund construction of a new large lock

• Port Authority Landside Improvements – need legislation that allows port authorities to form partnerships for the purpose of improving adjacent land infrastructure

• Port Maintenance
  – Encourage Congress to fully fund dredging needs
  – Work with Great Lakes Governors & Premiers Maritime Task Force to identify Great Lakes dredging needs
  – MDOT should work with local agencies to improve “last mile” land infrastructure connecting ports to highway networks
Transportation Recommendations

- Aviation – Update Michigan Aviation System Plan
- Intelligent Vehicle Technology
  - Pass legislation – done!
  - Continue working with private sector on implementation
  - Continue to promote Michigan as global leader
  - Sustain robust partnerships
  - MIC should create Emerging Technologies Group to coordinate with infrastructure improvements
- Signalized Intersection Technology – Encourage local agencies to improve signal timing to address congestion
**Transportation Recommendations**

- **Nonmotorized Transportation** – MDOT to work with local agencies & DNR to encourage nonmotorized on-road connectivity & trail development
- **Right-sizing infrastructure across all modes to meet future needs**
  - MDOT to work with stakeholders across all modes to identify where infrastructure needs right-sizing
  - Work with locals on context sensitive solutions
  - MIC to work with locals to encourage & incentivize collaboration & consolidation
  - MDOT to work with MPOs & planning agencies to help right-size infrastructure
- **Review Act 51** – MIC to work with Legislature to make distribution of Act 51 revenues “simpler, equitable, more transparent, & more accountable while improving system outcomes.”
Transportation Recommendations

• Local Revenue Generation Options – Legislature to provide new options for local governments to raise revenue for transportation such as regional sales, gas tax, registration fee & impact fee
  – Existing RTA regional option registration fee could be extended statewide
• Road & Bridge User Fees – Pilot test a per-mile fee system & distribute user fees based on travel
• Tolling – Position Michigan to take advantage of openings that occur in federal tolling pilot program, & encourage Congress to allow tolling of existing Interstates
## Investing in 21st Century Infrastructure

<table>
<thead>
<tr>
<th>Infrastructure</th>
<th>Shortfall</th>
<th>Timeframe</th>
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</thead>
<tbody>
<tr>
<td>Communications</td>
<td>$618.6 M</td>
<td>Short term but major costs over 10 years</td>
</tr>
<tr>
<td>Energy</td>
<td>Private sector investment only</td>
<td></td>
</tr>
<tr>
<td>Transportation</td>
<td>$40.2 B</td>
<td>Over 15 years</td>
</tr>
<tr>
<td>Water</td>
<td>$19 B</td>
<td></td>
</tr>
</tbody>
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Seeking $4 billion/year for next 20 years.
# Funding Possibilities
(Total $4.2 B/Year)

<table>
<thead>
<tr>
<th>Potential Revenue Sources</th>
<th>Asset Type</th>
<th>Example Scenario</th>
<th>Estimated Annual Revenue Generation Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dedicated sales tax for infrastructure</td>
<td>All infrastructure</td>
<td>1 percent increase</td>
<td>$1.5 billion</td>
</tr>
<tr>
<td>Dedicated statewide property tax</td>
<td>All infrastructure</td>
<td>1 mill increase</td>
<td>$325 million</td>
</tr>
<tr>
<td>Broadband service surcharge</td>
<td>Communications</td>
<td>$1.54 per month surcharge on 2.7 million broadband service bills</td>
<td>$50 million</td>
</tr>
<tr>
<td>METRO fee</td>
<td>Communications</td>
<td>11 cents per linear foot increase</td>
<td>$50 million</td>
</tr>
<tr>
<td>Fuel tax</td>
<td>Transportation</td>
<td>10 cent per gallon increase</td>
<td>$500 million</td>
</tr>
<tr>
<td>Local revenue generation options</td>
<td>Transportation</td>
<td>Up to $40 county-wide registration fee or 10 cent county-wide gas tax</td>
<td>$400-500 million</td>
</tr>
<tr>
<td>Mileage-based user fee</td>
<td>Transportation</td>
<td>1 cent per mile based on current average miles driven statewide</td>
<td>$970 million</td>
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<tr>
<td>Nonmotorized transportation registration fee</td>
<td>Transportation</td>
<td>$10 per year, for two million bikes, kayaks, canoes</td>
<td>$20 million</td>
</tr>
<tr>
<td>Tolling</td>
<td>Transportation</td>
<td>5 cents per mile on 360 miles of US-23</td>
<td>$138 million</td>
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<tr>
<td>Vehicle registration fee</td>
<td>Transportation</td>
<td>20 percent increase</td>
<td>$200 million</td>
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<tr>
<td>Water infrastructure user fee</td>
<td>Water</td>
<td>$1 per 10,000 gallons based on the state's annual water withdrawal</td>
<td>$36 million</td>
</tr>
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Conclusion

• Call to Action
  – Asks that Asset Management Pilot begin in 2017
  – Requests Legislature create MIC by 2018

“Our residents deserve reliable, safe, efficient and cost-effective infrastructure -- a 21st century infrastructure system that creates a foundation for the future.”

--21st Century Infrastructure Commission