

Legislating Geotechnical Asset Management: Lessons Learned

68th Highway Geology Symposium, Portland, Maine

September 10, 2018

Representative Connie Bernardy and John Siekmeier P.E.



Greetings from Minnesota



Representative Connie Bernardy

Thank you for all you do to improve our transportation system. We need your voices heard in every state. I had hoped to join you today so please contact me if you have any further questions. Have a great conference.



Topics

- **A Little History**
- **Proposed Legislation**
- **Lessons Learned**
- **Discussion**



A Little History

- MAP-21 and FAST are existing federal laws that require federal transportation investments to be based on measured outcomes.
 - “Moving Ahead for Progress in the 21st Century” 2012.
 - “Fixing America’s Surface Transportation” 2015.
- Congress worked for many years listening and learning prior to passing these laws.
 - American Society of Civil Engineers infrastructure report cards.
 - Congressional office visits on vacation time.
- Chairman Oberstar “The Future of Transportation” 2009
 - US House of Representatives 1975 to 2011.
 - "from **hydrocarbon** based system to **carbohydrate** based system."



"Future of Transportation" 2009 Chairman Oberstar

THE FUTURE OF TRANSPORTATION

received 4/29/09
D.C. Oberstar Staff

FROM PRESCRIPTIVE

TO

PERFORMANCE

• DOT + STATES design:
- 6-yr Targets for each of 4

- Annual Benchmarks
- Annual Reports on progress
• TO DOT/Congress

• Transparency on web {
ST
DOT
Cong

F. Hwy Adm Re-structure

Ofc. of Expedited Project Delivery

Ofc. of Liveability

TRANSIT - New starts / small starts

• Level decision-making factors between
Hwy + Transit choices/projects

"Future of Transportation" 2009 Chairman Oberstar

THE FUTURE OF TRANSPORTATION

received 4/29/09
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○ CRITICAL ASSET PRESERVATION

I-Maint	Hwy - BRIDGE
NHS	

○ HIGHWAY SAFETY IMPROVEMENT

RFD safety	Motorcycle safety
R.R. Crossing	etc.

○ SURFACE TRANSPORTATION PROG

Enhancements - 10% set-aside
MPD Sub-Allocations - based on Population

○ CONGESTION MITIGATION + AIR QUALITY IMPROVEMENT

15% of HWY miles - in urban
50% of VMT

Bipartisan Investment and Reform 2009

COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE

THE SURFACE TRANSPORTATION AUTHORIZATION ACT OF 2009

A BLUEPRINT FOR INVESTMENT AND REFORM

Presented by

*Chairman James L. Oberstar, Ranking Member John L. Mica,
Chairman Peter A. DeFazio, and Ranking Member John J. Duncan, Jr.*

June 18, 2009

Bipartisan Investment and Reform 2009



30%
of the
pages

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CONGESTION MITIGATION AND AIR QUALITY IMPROVEMENT	
HIGHWAY SAFETY IMPROVEMENT PROGRAM	
METROPOLITAN AND STATEWIDE TRANSPORTATION PLANNING	
SURFACE TRANSPORTATION PROGRAM	
FREIGHT IMPROVEMENT PROGRAM	
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“FHWA will shine light on transportation system to make the states accountable to the people.”

“Build trust and confidence at the state level to support greater investments.”

Looking for what to do in DC? Visit Congress.

m DEPARTMENT OF TRANSPORTATION

STATEWIDE 2016 PAVEMENT CONDITION

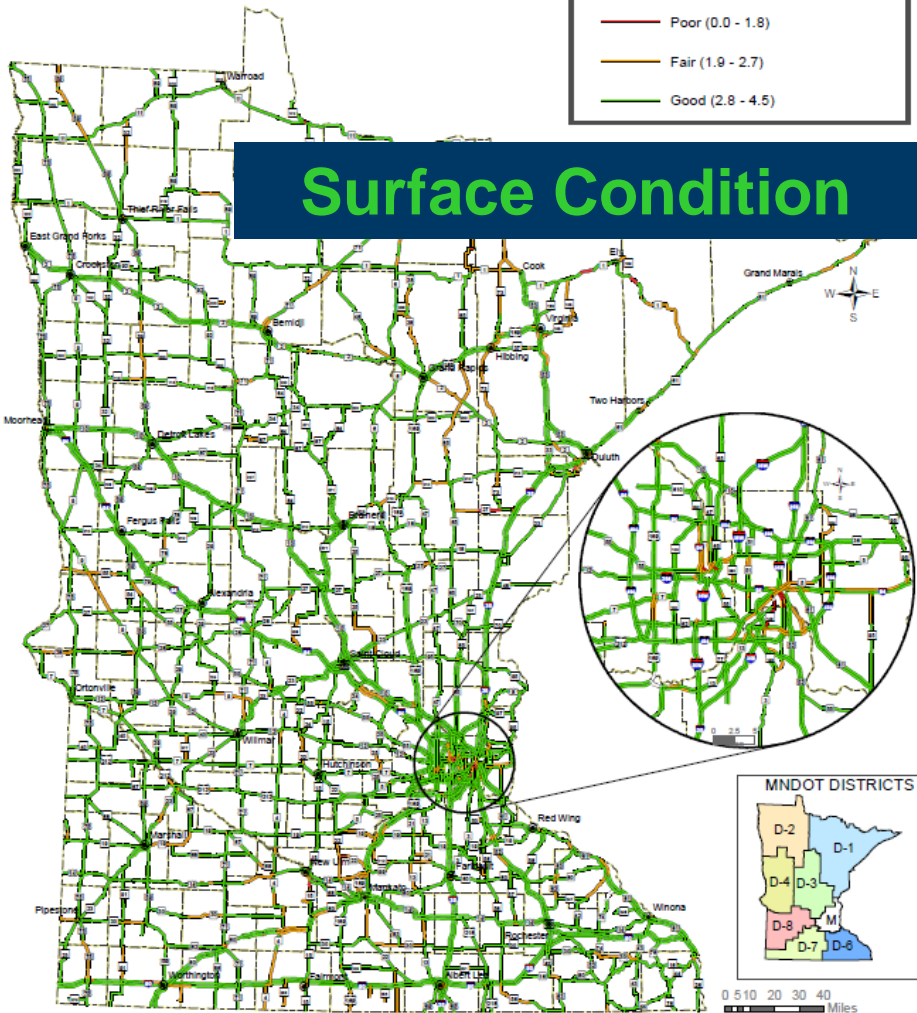
Pavement Quality Index (PQI)

Poor (0.0 - 1.8)

Fair (1.9 - 2.7)

Good (2.8 - 4.5)

Surface Condition



m DEPARTMENT OF TRANSPORTATION

STATEWIDE 2016 PAVEMENT CONDITION

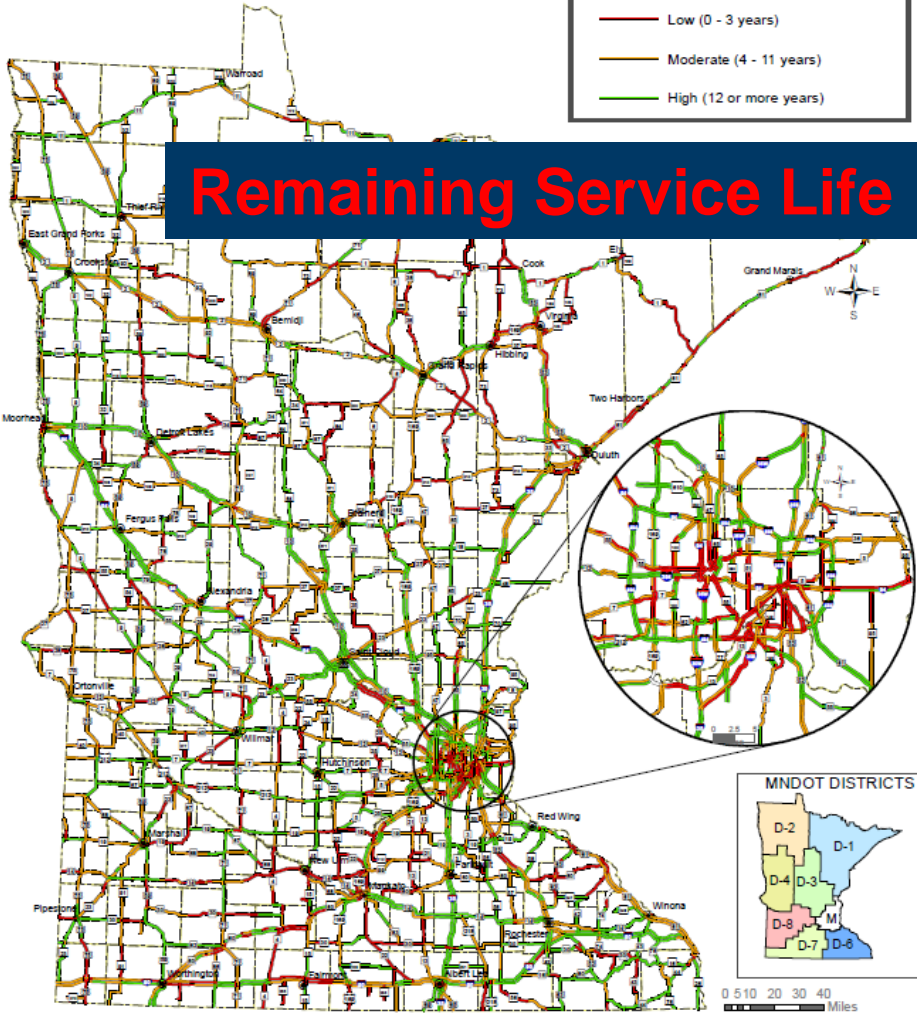
Remaining Service Life (RSL)

Low (0 - 3 years)

Moderate (4 - 11 years)

High (12 or more years)

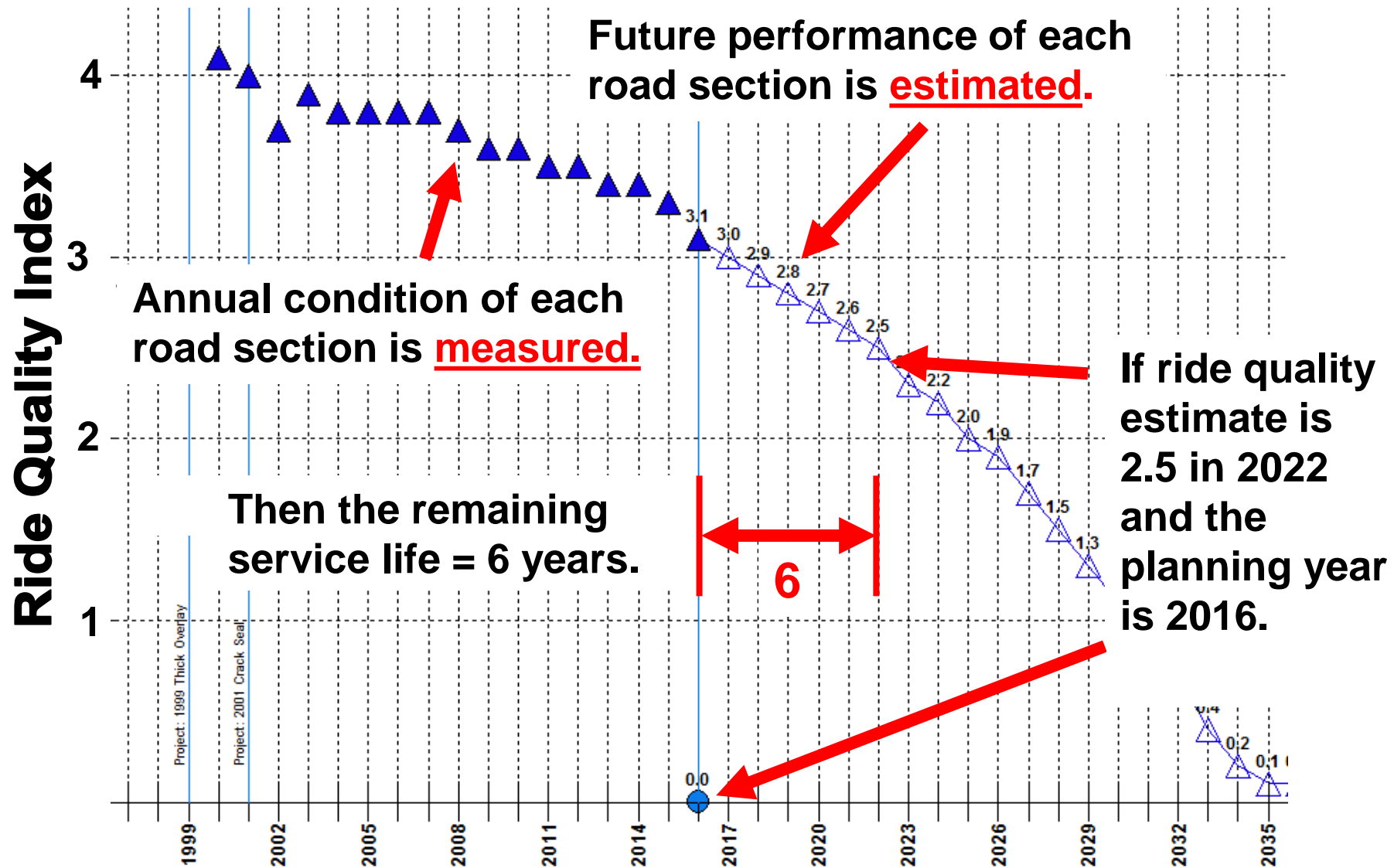
Remaining Service Life



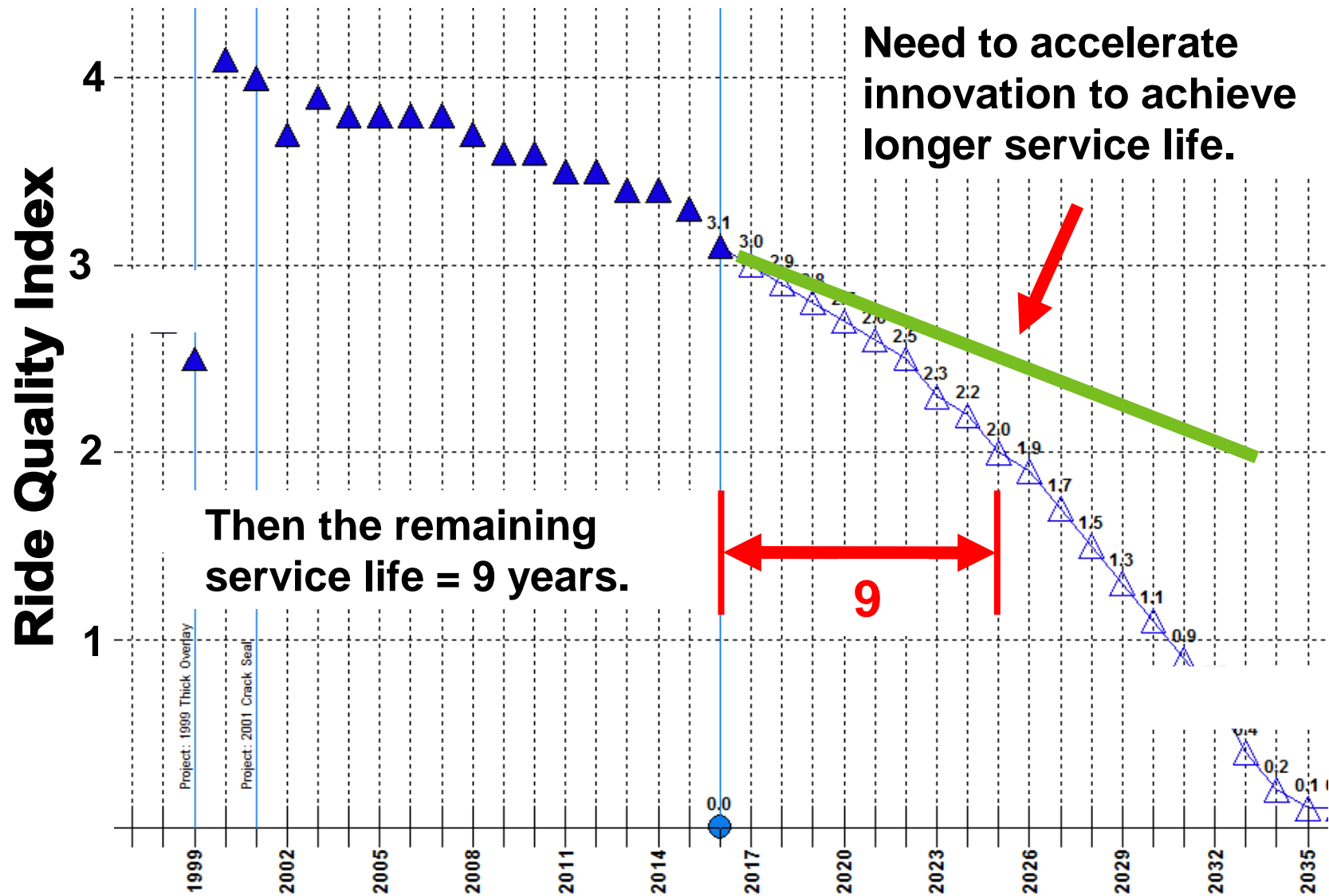
Visit Congress. Explain Pavement Management



Visit Congress. Explain Remaining Service Life



Visit Congress. Explain Need for Innovation



Proposed Legislation Minnesota

- Minnesota Statutes 2017, section 174.03, is amended by adding a subdivision to read:
- Trunk highway performance measurement and annual targets.
(a) The commissioner must implement performance measurement and annual targets for the trunk highway system in order to improve the condition of existing infrastructure, enhance the effectiveness of all transportation modes within trunk highway rights-of-way, and achieve the state transportation goals established in section 174.01.

Note: Very important to have planners aware of the goals.

Minnesota Transportation Goals (174.01)

- Minimize fatalities and injuries
- Increase multimodal access for all
- Ensure economic well-being and quality of life
- Provide reasonable travel time for commuters
- Enhance economic development
- Encourage tourism
- Provide transit services to all counties
- Promote accountability through performance management
- Utilize technological advancements
- Maximize long-term benefits
- Prioritize funding to maintain a state of good repair

Minnesota Transportation Goals (continued)

- Ensure all modes are consistent with environment and energy goals
- Increase high-occupancy vehicles and low-emission vehicles
- Provide air transportation sufficient to encourage economic growth
- Increase transit as a percentage of all trips statewide
- Prioritize modes with greatest people-moving capacity and lowest long-term economic and environmental cost
- Increase bicycling and walking as a percentage of all trips
- Reduce greenhouse gas emissions
- Accomplish these goals with minimal impact on the environment

Proposed Legislation (continued)

- (b) At a minimum, transportation planning processes must include:
- (1) an inventory of assets, including but not limited to bridge, pavement, geotechnical, pedestrian, bicycle, and transit asset categories;

Note: Build a coalition of minority interests to create a majority.
Stand together. Stick together.

Proposed Legislation (continued)

- (2) lead (predictive) and lag (resulting) performance measures and annual performance targets for assets in each category, identified in collaboration with the public, to be achieved by each district of the department;
- (3) gap identification and an explanation of the difference between performance targets and current status;

Proposed Legislation (continued)

- (4) life cycle assessment and risk assessment as part of asset management programs in each district of the department; and
- (5) an annual investment plan for each district of the department based on funding expected during the next ten years.

Proposed Legislation (continued)

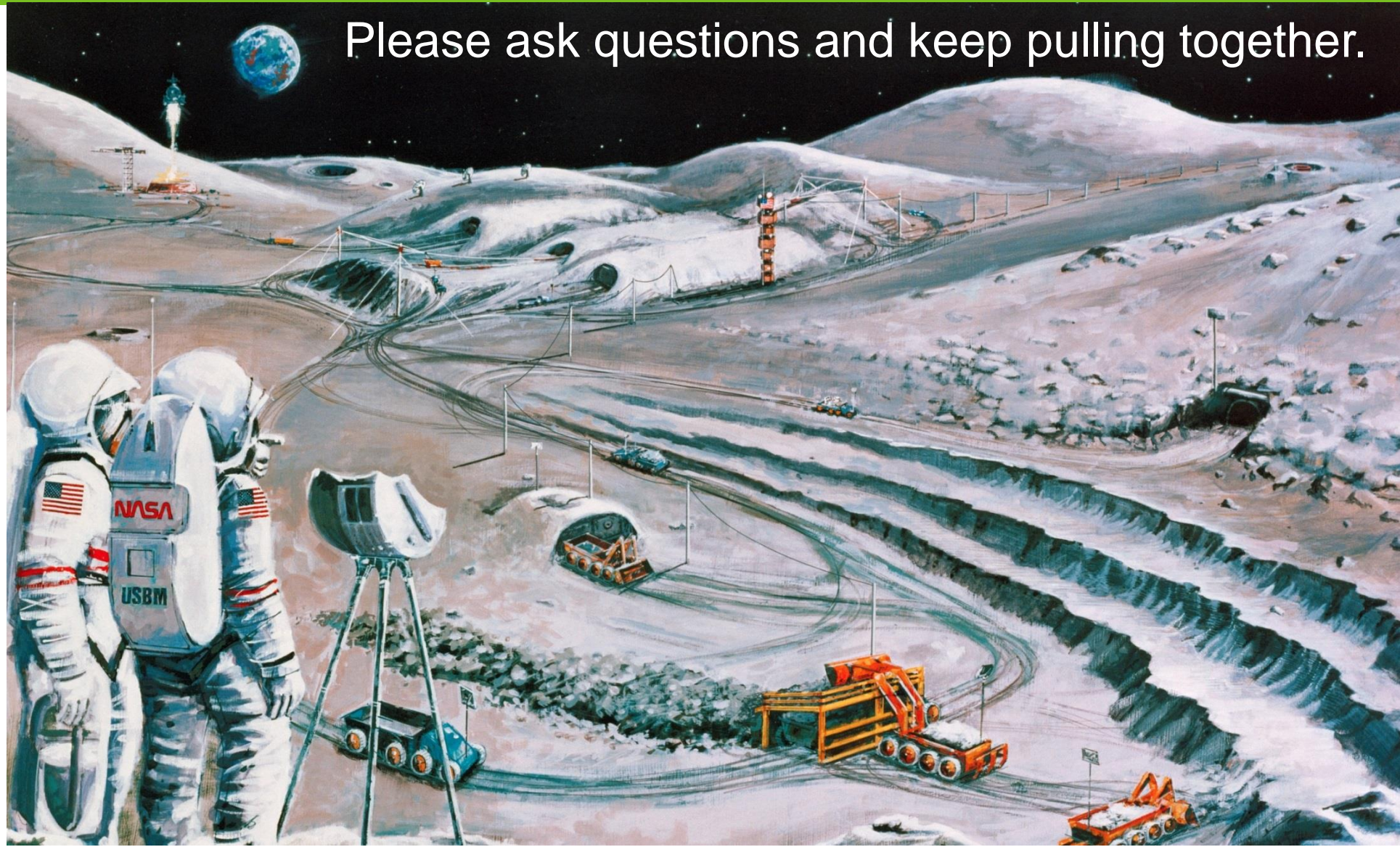
- (c) Annually by December 15, the commissioner must report trunk highway performance measurement and annual targets, including information detailing the department's progress on achieving the state transportation goals, to the chairs and ranking minority members of the legislative committees having jurisdiction over transportation policy and finance. The report must be signed by a professional engineer licensed in Minnesota.

Lessons Learned

- Elected and Selected Leaders
 - • “Tell me something I don’t know that I’m not going to like.”
 - “Keep pushing and asking questions.”
- Transportation Finance Advisory Committee, Governor Dayton 2012
 - Public testimony added. <https://www.dot.state.mn.us/tfac/about.html>
- Innovation and Resistance to Change (TRB publications)
 - Geotechnical Research: How Organizations Encourage Innovation 2014
 - • Transportation Asset Management Annual Conference 2016
 - Guide to Sustaining a Culture of Innovation in DOTs 2018
- Office of Legislative Auditor Evaluations of Minnesota DOT
 - Pavement Surface Selection 2014
 - Project Selection 2016
 - Measuring Financial Effectiveness 2018

Legislative Auditor → DOT Action

Thanks for Listening. Time for Discussion.



Possible Topics for Discussion

- The power of collaboration. “We are all pedestrians.”
- Never doubt what a small group can accomplish.
- Define the issue.
 - Listen and learn.
- Set the stage.
 - Engage professional associations. Develop standards and manuals.
 - “Geotechnical Asset Management Manual” NCHRP 2018
- Call to action.
 - Association members and the public.
 - Elected decision makers.

Thanks Again.

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mn MINNESOTA

