State DOT Innovation Programs: Identifying New Technologies and Practices from the Front Lines

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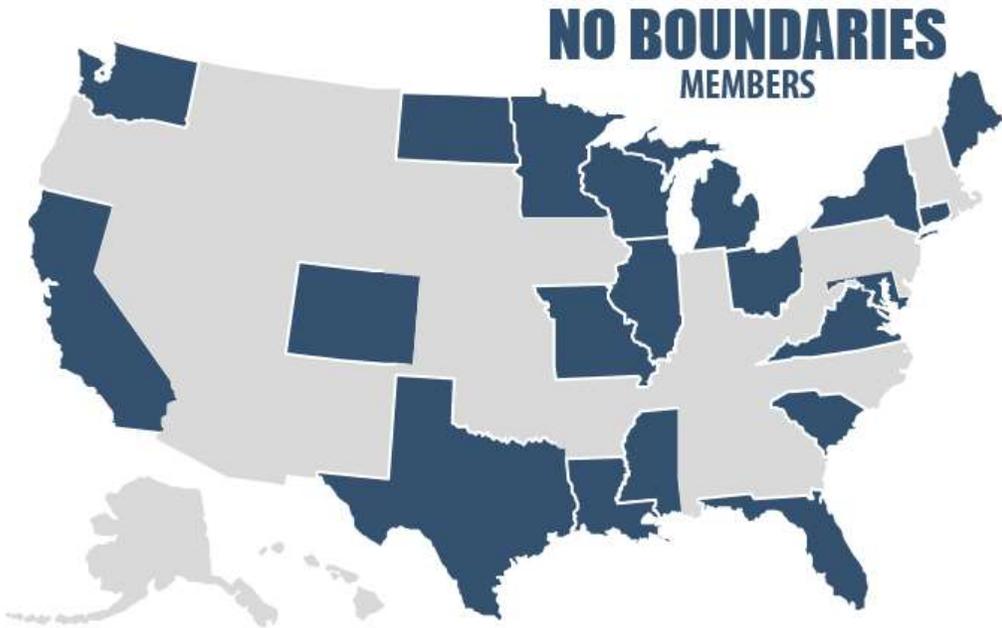
What is No Boundaries

- Pooled fund project **#TPF-5(330)**
  - A community of practice for roadway maintenance professionals
  - Identify innovative technologies and practices used by DOTs
  - Promote their use across states through marketing materials, training classes, webinars and other technology transfer efforts
- Complements AASHTO MaC peer discussions and relationships
- Focus on spring/summer/fall maintenance needs; excludes winter-specific maintenance

Current Members
20 State DOTs

Benefits

- **Networking** and **collaboration** with other agencies
  - Happens at a national level
  - Two-way street
- **Practitioner oriented**
  - Hands-on and usable today
  - Share new and better equipment, materials, procedures

- **Consistency** across agencies
  - Performance-based maintenance
  - Transportation asset management
  - Shared research (statements and outcomes)
- **Cost effective**
  - Minimize duplication of effort

Meetings for Peer Information Sharing

- Peer exchanges for members once or twice yearly
- Presentations by state DOTs and guest agencies:
  - Innovations
  - Program updates
  - Round table discussions
- Technical Tours

Maintenance technical tours

- SR 520 floating pontoon bridge
- Texas DOT Vehicle Fabrication Shop

Innovation has become a key focus area for No Boundaries.

Spotlight Innovation

Sign Refurbishing

SCDOT

- 2017-18 sign shop budget is ~$2.1 million.
- Sign shop manufactured ~73,680 signs last fiscal year.
- Refurbished ~160,000 square feet of signs last fiscal year.
- Refurbishing process estimated to save **$1.40 per square foot**.
- **Total savings in excess of $224,000 or 10.7% of annual operating budget for the sign shop.**

Spotlight Innovation

Truck-mounted Flagger

MoDOT

- Automated Flagger Assistance Device
  - Three color variable message boards
  - Automated stop/slow paddle
  - Flashing red/yellow signal
- Benefits
  - **SAFETY -** Eliminates the need for a flagger on the ground
  - **Time Savings** – In setting up and moving between work zones
  - **Cost Savings** – Increases productivity in poor weather

Innovations captured in the program's Innovations Database

- Innovations in all areas of non-winter maintenance
- Goal is to establish this as a national clearinghouse
- Open to submissions from all public agencies

Some agencies have programs to identify, reward, and implement innovative technologies and practices.

Innovation Programs – Today's Lectern Session

1. Inquiry by No Boundaries subject matter expert
   - Successes and challenges of 7 DOTs
   - Presentation today by Diana Clonch of D.W. Clonch
2. and 3. Case studies
   - Minnesota - Presentation today by Mindy Heinkel, Minnesota DOT
   - Connecticut – Presentation today by Donna Shea, UConn
4. Federal perspective
   - Every Day Counts - Presentation today by Jeff Zaharewicz, FHWA

Thank you

David Bergner, chair of sponsoring TRB Committee AHD15, Maintenance and Operations Personnel

James Bryant, TRB Senior Program Officer

How to Become a Member

- Phase II is ending in June 2019, but a Phase III is planned
- Evolving Focus

No Boundaries

Transportation Maintenance **Innovations**

- Solicitation forthcoming on the pooled fund website
- Please contact No Boundaries for more details at maintainroads.org