



TRB **AM** 2020
ANNUAL MEETING

99TH Annual Meeting
Washington, D.C.
January 12–16, 2020

**DIVISION OF STATEWIDE
PLANNING**

BUREAU OF RESEARCH

**Pragna Shah
Giri Venkiteela, PhD**



Pragna Shah



TRB Sessions Attended

- FHWA Leadership in Innovation
- Visualization Lightning Talks
- Applying Organizational Management Practices to Transportation Agencies
- Visualizing National Transportation Library Repository Metrics
- State DOT CEO Roundtable: Towards Zero Deaths: State DOTs Renewing Focus on a Nation Public Health Crisis
- Moving Research into Reality: Pedestrian and Technology Transfer
- Hyperloop: Commuter Dream or Regulatory Nightmare?



State DOT CEO Roundtable: Towards Zero Deaths: State DOTs Renewing Focus on a Nation Public Health Crisis

- **Missouri DOT**
 - Buckle Up Phone Down Campaign
 - Dozens of schools are challenging each other. Getting students involved.
 - Corporations and organizations have partnered with Missouri DOT enforcing company policies
 - Significant increase in safety belt use – increased by 6.4%
 - Goal is to bring this program nationwide – Get the culture change while we continue to develop the innovations and the techniques to improve engineering and to improve the safety of vehicles.





State DOT CEO Roundtable: Towards Zero Deaths: State DOTs Renewing Focus on a Nation Public Health Crisis

- **Montana DOT: Focused on**
 - Impaired Driving
 - Rural Safety Behavior Initiatives: Peer Teen to Teen Safety
 - Lack of seatbelt use
 - Collaborate and coordinate with different communities, infrastructure builders and engineers.
 - Infrastructure Improvements: To reduce severity of roadway departure and intersection crashes: centerline rumble strips, roundabouts, cable median barriers
 - Chair of AASHTO Committee on Safety



Hyperloop: Commuter Dream or Regulatory Nightmare?

- What is a Hyperloop?
- Can it meet energy and consumer demands?
- Is it Safe?
- Projects in the United States
- Policy and Legal Innovations



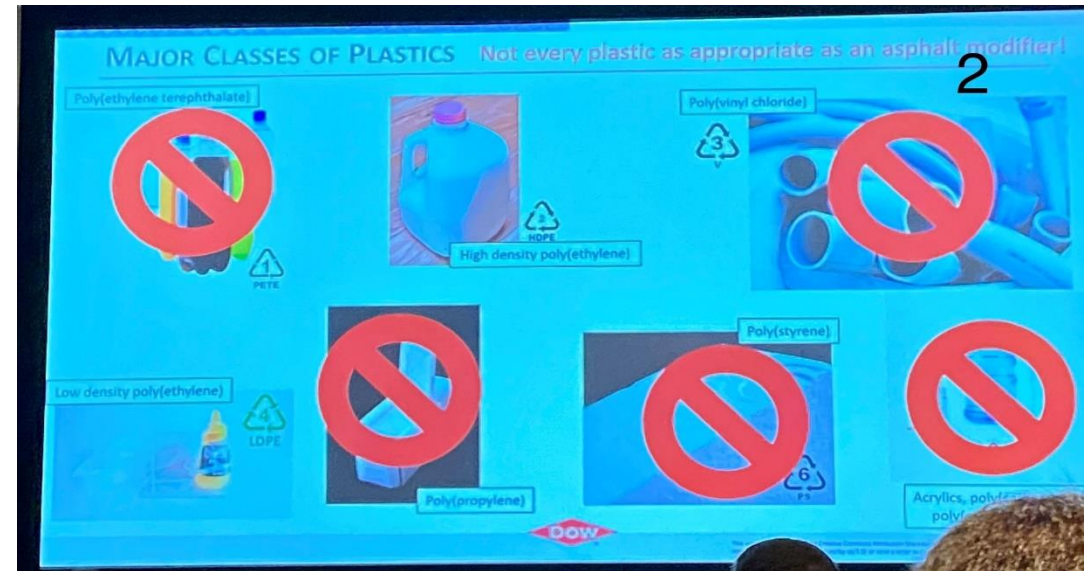
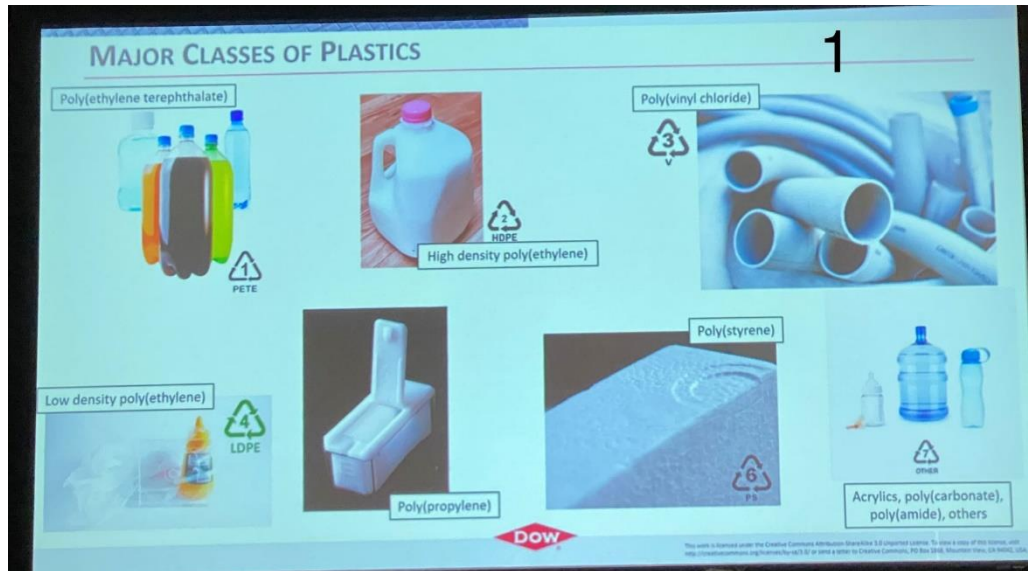
Key Takeaways:

- Success of safety projects relies on the input by everyone
- Engage with the public to get the message across
- Join AASHTO committees
- States need to communicate with each other and with national agencies – Peers learn best from peers.



Giri Venkateela, PhD

Recycled plastics in pavements:



Not all plastics are good for mixing with asphalt



MI DOT PG64-28P - NO DIFFERENCES THAN NORMAL PAVING



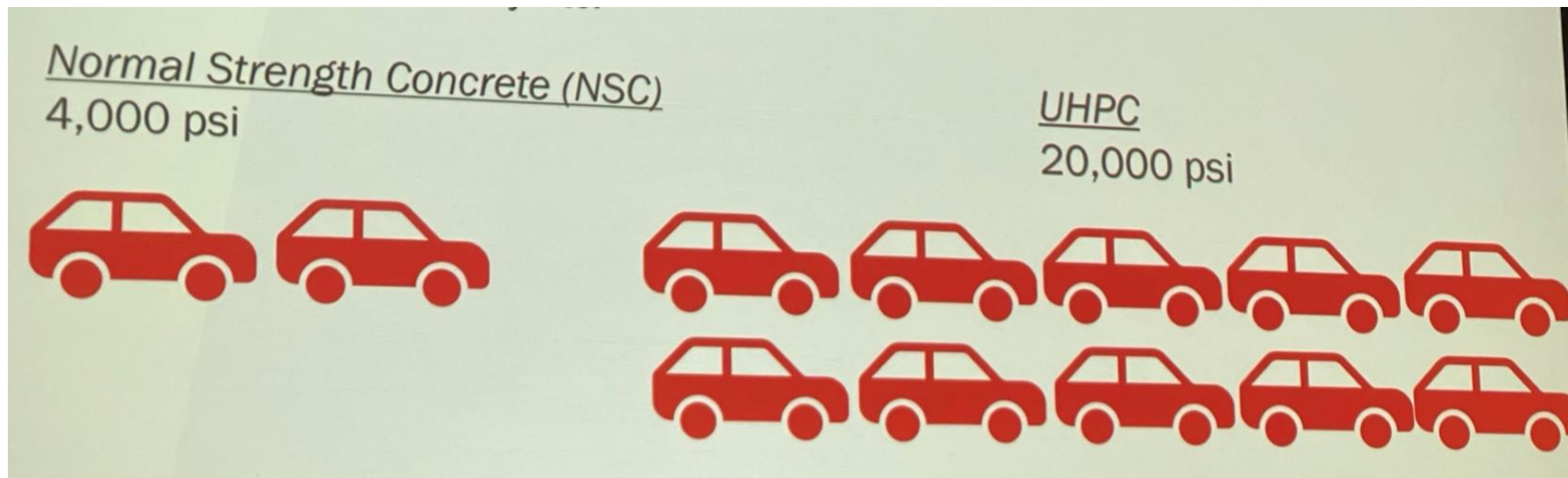
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Low cost ultra high performance concrete :

Why UHPC is getting popularity?

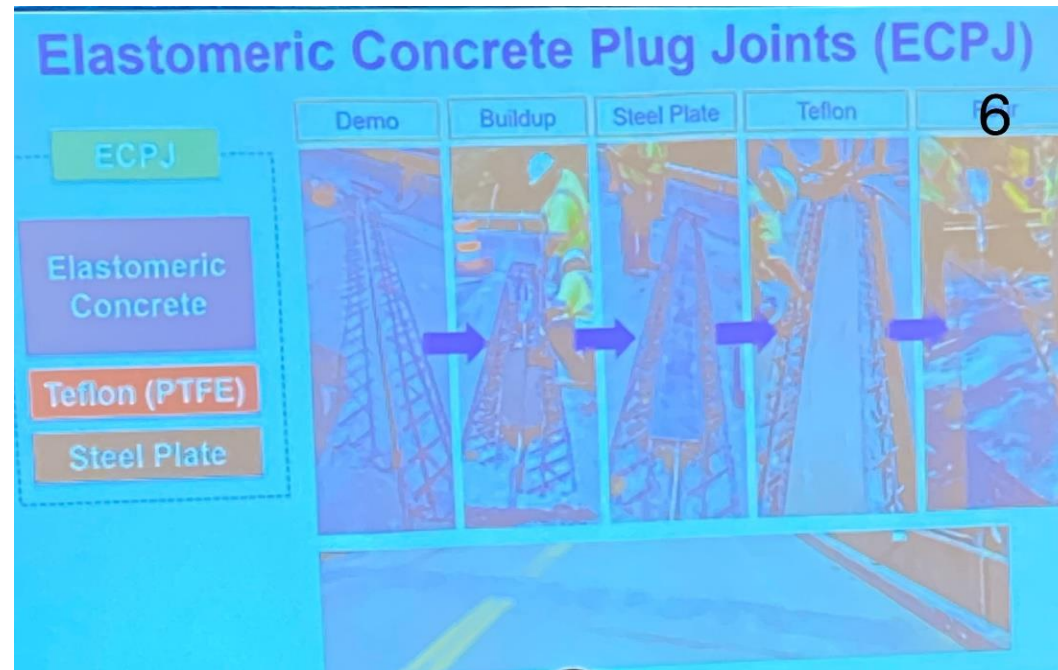
1. High compressive strength and tensile strength
2. Minimal long-term creep or shrinkage
3. Exceptional durability etc.

Because its high cost, currently not that many studies were conducted to better understand the material. If designed with low cost we can have many studies and understand this material better.



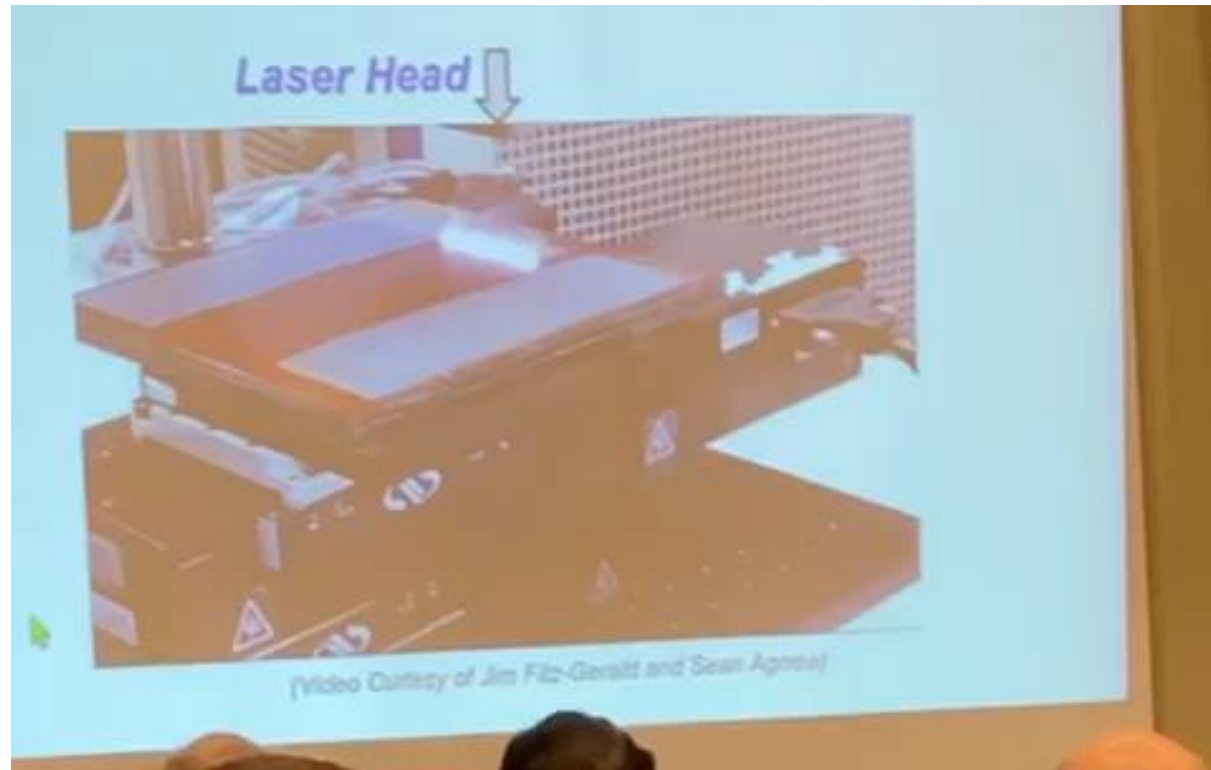
VDOT bridge decks

VDOT is eliminating conventional bridge deck joints with elastomeric concrete plug joints (ECPJ)





VDOT showed a laser coating removal demonstration video





Other sessions and committee meeting attended

1. Corrosion committee meeting (member and research coordinator).
2. Concrete bridge committee meeting (member)
3. Attended sessions on shared mobility and concrete related materials.