Safety Conference 2016
MASH IMPLEMENTATION AND OBSTACLES FROM A STATE PERSPECTIVE

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Preparing for MASH Implementation

1. Create list of existing devices to test to MASH
2. Develop budget for testing
3. Securing funding for MASH testing of existing devices
4. Coordination efforts
Create List of Existing Devices to test to MASH

- Factors to consider
  - Has anyone else tested the device?
  - Do we need the device?
  - Elimination of devices that were unlikely to pass MASH testing?
Develop Budget for testing

- Consulted with TTI for evaluation of required tests for each device
  - Is the entire test matrix required?
  - Can we run worst case scenario and eliminate tests on similar devices?
- Consulted with TTI for preliminary test costs
  - TTI agreed with an average estimated cost for Traffic, Maintenance and Design tests based on previous test costs
  - TTI provided a more detailed estimate for the bridge railing tests due to the construction and time involved in conducting these tests.
Securing funding for MASH testing

- Option A- Request funding from administration specifically for testing of existing devices to MASH
  - Option A is in progress. We have not secured funding as of yet
- Option B- Use our existing research budget to propose MASH testing
  - Option B would limit eliminate our resources for innovative research in roadside safety for the near future
Coordination Efforts

- Although funding has not been secured, we are investigating possibilities with CalTrans and Florida DOT currently.
  - We have traded lists of items we wish to test to MASH
  - CalTrans and TxDOT are both reviewing the lists to determine the common items that we may be able to collaborate on.
  - Florida Contacted TxDOT about specific items that we may be able to coordinate testing with.
  - Once funding is secured we will develop details of the collaboration
  - TxDOT is open to collaboration with other states
TxDOT MASH Implementation Plan

- MASH Implementation Dates
  - TxDOT will adopt sunset dates mandated in the implementation agreement. We will not adopt MASH early.

- Hardware that has not been crash tested to NCHRP 350 or later?
  - Will replace with current approved device when encountered on a 3R or 4R project
  - Actively seeking out obsolete MBGF, transitions, and MBGF end treatments used to protect bridge rail ends. We will replace hardware when bridge rails require replacement as well.

- NCHRP 350 tested devices and later?
  - TxDOT has yet to define “Damaged beyond repair”
Prioritizing Testing

- TxDOT created plan, budget, and priority list based on approval of devices with reduced test matrices when engineering judgement supports the decision.

- Factors considered for prioritization
  - Sunset dates
    - What if device fails testing?
    - Time it will take to conduct tests for each device
  - Cost of testing each device
  - Confidence in passing testing
  - What need does the device fill?
  - Proposed research
MASH Coordination Effort- Roadside Pooled Fund
- TxDOT will use this project to actively seek out partners with similar interests in testing in an effort to reduce costs
- TxDOT will also use this project as a vehicle to move closer to standardization.

NCHRP 20-7 Systemic Hardware Replacement Tool
- TxDOT may use this as a cost based tool to evaluate which, if any, pre NCHRP 350 devices to replace.

NCHRP 20-7 Bridge Railing NCHRP 350 to MASH equivalency
- Dependent upon the results of this project we may be able to eliminate one/or more bridge rails from our to do list.
Obstacles with implementation

- How do we implement changes into Maintenance contracts?
  - How do we include new hardware in existing maintenance contracts
  - How will contractors bid on new devices
- Coordinating elimination of obsolete stock
- Possibility of delaying innovative research
- Addition of proprietary items to the QPL
  - Will we have enough time for in service evaluations
Questions?

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