Presentation Outline

• Bridge Conditions
• Bridge Bundling Overview
• Program Goals
• Partnering
• Feedback & Next Steps
• Q & A
Bridge Conditions
Local Agency Bridge Bundling Initiative
Bridges of Concern

- **400** LOCAL HIGHWAY BRIDGES ARE RATED IN SERIOUS OR CRITICAL CONDITION
- **44** LOCAL BRIDGES ARE CURRENTLY CLOSED DUE TO LOAD OR CONDITION CONCERNS

According to NBIS Data December 21, 2018
Bridges of Concern

• **244** LOCAL BRIDGES in **POOR CONDITION** are LOAD RESTRICTED

According to NBIS Data December 21, 2018
Current/Potential Program Strategies

• Local bridge projects developed and delivered separately by bridge owners – limited by $$$ and LAP Capacity
• New funding, rising needs and stakeholder expectations provide opportunity for some state-local program integration to preserve resources and optimize program strategies
• A statewide, accelerated strategy --- like Bridge Bundling --- could yield positive system improvements and drive economic development
Local Bridge Owner Facts

- 312 separate local agencies own at least 1 bridge
  - MDOT
  - 83 Counties
  - 148 Cities
  - 80 Villages
- 77 local agencies own only 1 bridge
Collaborative Process

- MDOT Bureau of Bridges and Structures Proposal
- Partnering and collaboration sessions with CRA
- Development of survey tool to solicit further input
- Evaluate national models, funding options, delivery options, etc.
- Provided program estimates for inclusion in Governor Whitmer’s proposed budget
Local Agency Bridge Bundling Initiative

What is Bridge Bundling?

Grouping similar bridges contractually to enable efficient use of program resources, saving time and money on design and construction.

- Applicable to all project types and sizes
- Encourages standardization
- Increases economies of scale
- Reduces management time and construction administration
- Streamlines external coordination and permitting
- Achieves significant improvement to local bridge conditions statewide
MDOT Bridge Bundling Program

Preliminary Bridge Bundle Development Process

- +6000 Local Bridge Structure Inventory & Appraisal (SIA) Data Collected and Analyzed
- Focused on Replacements/Partial Replacements
- Screening Criteria/Process
  - Condition/Operational Status
  - LAP Program Status
  - Geography
  - Work type
  - Likely Categorical Exclusions
  - Permitting Time & Risk
  - Local Vetting/Support

SIA Data Review/Analysis

Cost Estimating Assumptions

Screening Criteria

Preliminary Bundles: ‘Early Works’ & Beyond
Examined nearly 1000 S/C/P bridges
Developed candidate ‘Early Works’ bundle alternatives for 326 structures that could be part of early packages
  - Partial replacements (deck, superstructure) – based on NBI rating
  - ‘Low hanging fruit’ – many already vetted in the LAP Program
Then we assessed these ‘early works’ candidates at the SI&A level for waterway adequacy - scour critical designations - historical significance - navigable waterway significance
MDOT Bridge Bundling Program

Illustrative Design-Build-Finance-Operate-Maintain (DBFOM) Structure

Public Sponsor

- Performance Based Availability Payments
- DBFOM Contract

Capital and Operating Subsidies
- Debt Service & Dividends
- Debt & Equity Financing

Government Entities

Finance Providers

Project Assets

- 100% Ownership

Special Purpose Vehicle

- Progress or Milestone Pmts Operating & Lifecycle Pmts
- DB/O&M Procurement

DBOM Entity

- Construction, O&M & Lifecycle Costs

- Design Build Operate Maintain

Engineering & Construction

Operations & Maintenance

- Design
- Build
- Operate
- Maintain
Program Goals
GO BRIDGE OR GO HOME

BIG HAIRY AUDACIOUS GOAL

ZERO CRITICAL BRIDGES IN MICHIGAN BY 2025
Preliminary Project Goals and Objectives

—Achieve goal of **Zero Critical Bridges by 2025** (or earlier)
—Prioritize **Closed/Critical/Serious/Poor** bridges
—**Integrate** with existing Local Agency Bridge Program to achieve sustained system goals
—Leverage national, statewide and local **best practices**
—Use funding sources **efficiently**
—Best use of limited available construction labor and **resources**
—Encourage **standardization**, streamlining and innovation to drive program value
—**Engage** local stakeholders for a collaborative and coordinated Bridge Program
—Maintenance and **lifecycle** plan to provide the best whole life value
Partnering
MDOT Bridge Bundling Program

Risk Management Process Overview

— **Iterative, analytical** process; results during program planning phase help with structured decision-making

— Risk Identification

— Analysis
  — *Qualitative*
  — *Quantitative*

— Response Planning

— Monitoring & Control
Local Bridge Survey Tool & Workbook

- Survey Tool Developed with feedback from Local Working Group
- ‘Bridges of Concern’ Workbook Developed from MiBridge and SI&A Data
- FY 19-21 LAP Program Data added
- 17 Survey Questions drafted and vetted to inform Program Assessment
- County Bridge Champions Identified by CRA
- Survey Version 1.0 Sent to Champions by CRA last week
- Goal of this stage of the assessment is to validate program-level data and get feedback from local owners on priorities and planning and design inputs for program-level cost and schedule considerations
Local Bridge Survey Tool & Workbook

- 4 questions on demographics/program management
- 13 questions (5-17) focused on ‘bridges of concern’ in the ‘Table of Structures’
- + Final ‘Open-ended’ question for any additional feedback
- Responses due March 29, 2019
KPMG and HNTB working together to provide financial and delivery method modeling, along with development of preliminary bridge bundles.
Next Steps
Next Steps

Collect and analyze local bridge survey data

Continue engagement and collaboration with local agency partners

Continue refinement and evaluation of bundle investment and delivery options

Feasibility Report – Spring 2019

Program Manager(s) to be selected to support next steps and possible implementation