INNOVATE MOUND

Innovate Mound 101
Community Open House

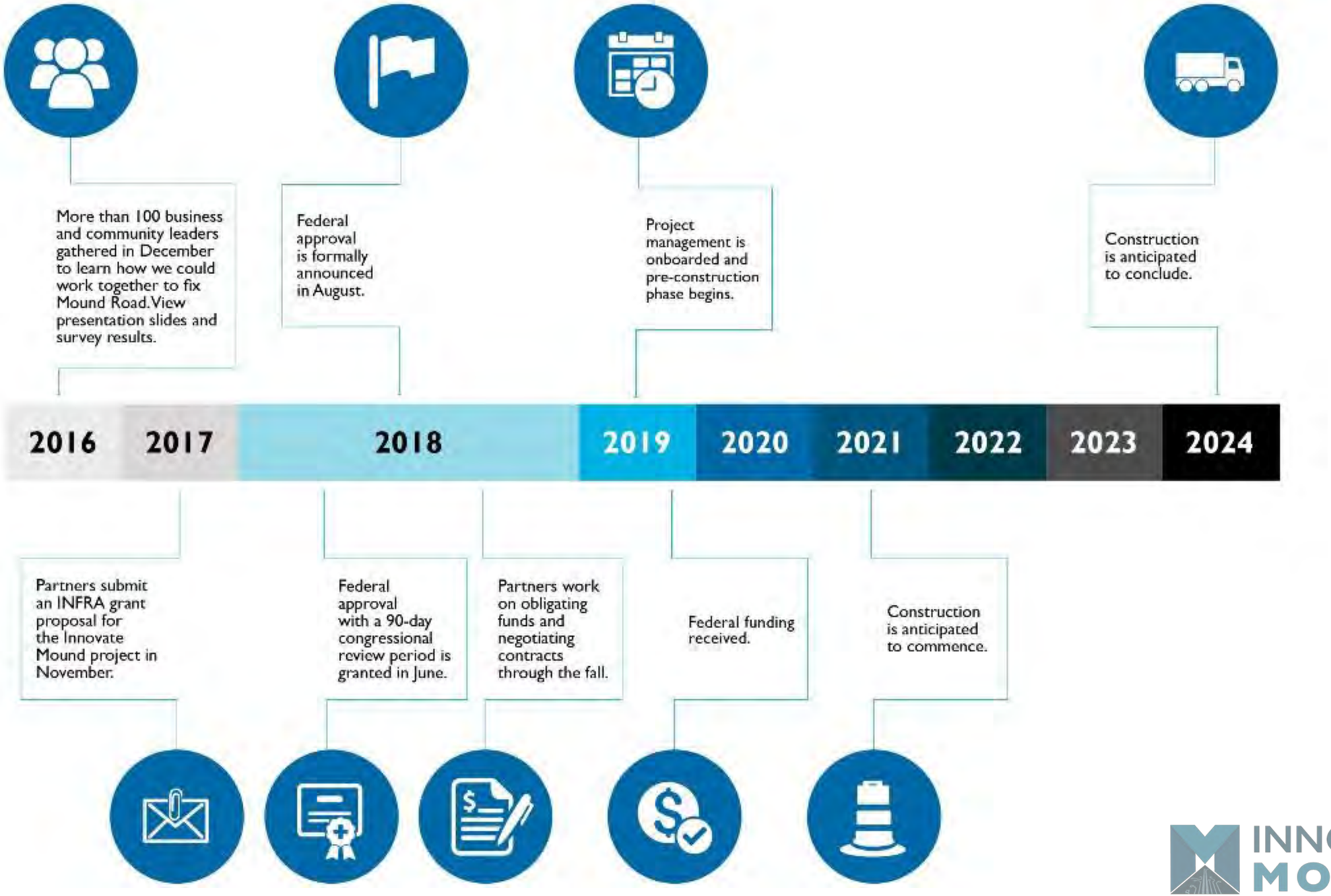
FEBRUARY 25, 2020

HNTB

WELCOME

1. Project Overview
2. Project Schedule
3. Project Status Update
   a) Planning
   b) Project Readiness
   c) Engineering
   d) Procurement
4. Communications
5. Access and Operational Improvements
6. Construction

PROJECT TIMELNIE



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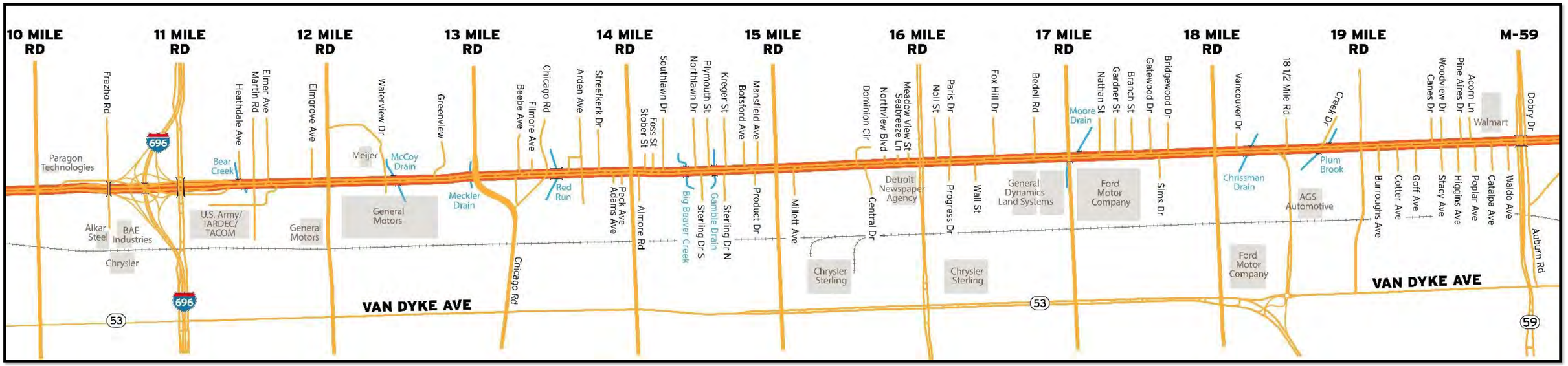
PROJECT AREA MAP



- Northern limit: M-59
- Southern limit: I-696 Service Drives

- Added lane in each direction north of 17 Mile

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PROJECT SCOPE

Project Work

- Reconstruct 9 miles of concrete pavement
- Add a fourth lane in each direction between 17 Mile and M-59
- Improved traffic operations and safety
- Traffic signal modernization
- Drainage improvements
- Upgraded pavement marking and signage
- Upgraded lighting
- Improved non-motorized connectivity and accessibility

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PROJECT SCOPE

Outcome

- Improved Pavement Surface
- Traffic flow improvements
- Enhanced landscaping
- Unified lighting
- Improved pedestrian access
- Transit Connectivity
- Innovative emerging mobility features

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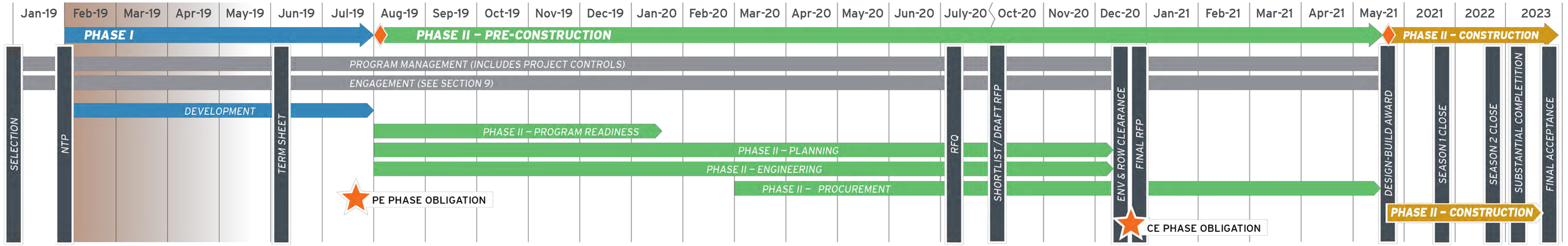
SCHEDULE



PHASE I
WORK ORDER #1

ITEMS ACCOMPLISHED DURING PHASE I

1. Conducted Weekly Coordination Meetings with MCDR, MDOT, FHWA and HNTB
2. Finalized STIP/TIP
3. Selected Project Delivery Method - Design Build
4. Received Approval from MDOT for Innovate Contracting Method
5. Executed INFRA Grant Term Sheet
6. Supported development and approval of the PoDI Action Plan
7. Develop Phase II Work Plan
8. Maintain and Update Innovate Mound Project Website
9. Develop Innovate Mound SharePoint Site for Project Document Sharing/Storage
10. Obligated PE Funds
11. Held Initial Stakeholder Engagement (Project Kickoff) Meeting
12. One on One Stakeholder Meeting with Ford Sterling Axle Plant and the Innovate Mound Committee

PHASE II – PRE-CONSTRUCTION
WORK ORDER #2

OUTCOMES

PROGRAM MANAGEMENT/ READINESS

1. Execute Project Charter
2. Functioning project dashboard (SharePoint)
3. Approved Project Management Plan (PMP)
4. Updated cost estimates
5. Field Data (survey, SUE, condition, geotechnical)
6. "Living" innovation register
7. Defined emerging mobility vision
8. Approved quality and document control plan

PLANNING

1. Improved access plans for **all** users
2. Environmental clearance
3. Validated safety/mobility improvements
4. Emerging mobility roadmap

ENGINEERING

1. Defined scope and design criteria
2. Defined footprint and certify right-of-way
3. Allowable staging options
4. Basic configuration requirements

PROCUREMENT

1. Defined risk allocation strategy
2. Qualified shortlist of bidders
3. Final DB contract
4. Awarded contract within program budget
5. Executed Work Order No. #3 (WO #3)

CRITICAL TASKS

PROGRAM MANAGEMENT/ READINESS

1. Convene Innovation Council
2. Hold Emerging Mobility Workshop
3. Prepare success management report
4. Develop PMP
5. Deploy Project Quality Plan (QMP)
6. Hold partnering workshop with key stakeholders
7. Prepare communications plan
8. Host communications workshop and open house
9. Collect data (survey, geotechnical, utility/SUE)
10. Conduct condition assessments
11. Host meetings with potential funding partners
12. Develop and update risk register

PLANNING

1. Use Vissim to identify mobility hotspots
2. Plan access modifications
3. Evaluate transit and non-motorized needs
4. Prepare traffic analysis report
5. Develop purpose and need
6. Conduct air/noise analysis
7. Prepare NEPA documentation
8. Prepare emerging mobility roadmap

ENGINEERING

1. Define 3D footprint/ basic configuration
2. Coordinate utilities
3. Complete drainage and structure studies
4. Prepare TMP, phasing/ staging plan
5. Develop ConOps, system requirements

PROCUREMENT

1. Hold industry meetings
2. Issue RFQ
3. Develop DB contract
   - Instructions to Proposers
   - Book 1
   - Book 2
   - Book 3
4. Assemble reference information
5. Determine shortlist
6. Administer bidding process

INNOVATIONS

PROGRAM MANAGEMENT/ READINESS

1. Hold Innovation Council Brainstorming Workshop
2. Hold practical design workshop/VE study
3. Establish innovation register for implementation
4. Conduct advanced LiDAR survey data collection

PLANNING

1. Advance NEPA start to Phase I
2. Integrate ConceptStation and Vissim
3. Create an emerging mobility roadmap to guide innovation

ENGINEERING

1. Use stormceptors to improve water quality
2. Develop 3D utility model to identify conflicts
3. Deploy emerging mobility roadmap

PROCUREMENT

1. Industry review of draft RFP
2. Draft RFP ready prior to Categorical Exclusion

PHASE II – CONSTRUCTION
WORK ORDER #3

OUTCOMES

DESIGN ASSISTANCE DURING CONSTRUCTION

1. Contract and standard conformance

CONSTRUCTION MANAGEMENT/CEI

1. Verified construction per DB contract and standards
2. Inform stakeholders and positive public perception
3. Grant compliance
4. Project built on time, within budget

CRITICAL TASKS

DESIGN ASSISTANCE DURING CONSTRUCTION

1. Respond to requests for information (RFI)
2. Conduct design reviews (over-the-shoulder and milestone)
3. Review shop drawings
4. Verify adherence to INFRA grant term sheet

CONSTRUCTION MANAGEMENT/CEI

1. Hold stakeholder meetings, including public open houses
2. Construction inspection and material testing verification
3. Determine change management and dispute resolution
4. Review and approve schedule and invoices
5. Maintain project record (SharePoint, FieldManager)

INNOVATIONS

1. Provide a dedicated ombudsman during construction
2. Document control through Sharepoint
3. Use collaborative reviews through Bluebeam
4. Use GPS rovers to expedite verification of work

PROJECT TEAM

SECTION 7

ORGANIZATIONAL CHART OF PRIMARY STAFF AND RESUMES

The multidiscipline HNTB team is organized to efficiently deliver Innovate Mound, bringing together the ideal mix of project management expertise, corridor experience and stakeholder relationships. **HNTB and our team members confirm we are prequalified in the categories listed in the RFP.**

Macomb County Department of Roads
Planning Director
John Crumm, AICP

Warren
Jim Van Havermaat, PE

Sterling Heights
Brent Bashaw, PE

Key

(H)	HNTB Michigan, Inc.
(HRC)	Hubbell, Roth & Clark
(AEW)	Anderson, Eckstein & Westrick
(AS)	ASTI Environmental
(CA)	CAVita
(C)	Commonwealth Heritage Group
(E)	E. Austell Associates (DBE)
(HA)	Hanka Advisor, LLC
(HG)	Hayden Creative Group
(M)	MKSK
(N)	NTH Consultants, Ltd.
(S)	Somat Engineering, Inc. (DBE)
(SSI)	Surveying Solutions, Inc.

* Key personnel with resumes beginning on page R.1

** Denotes coordination with these entities through MDOT's Statewide Support Contract

Worked on Innovate Mound


Innovation Council

Co-Chairs
Kirk Steudle, PE (SVP of CAVita (CA))*
Jim Barbaresso (Emerging Mobility Solutions at HNTB)*

Members
John Barton, PE (Transportation Market Leader at HNTB)
Nicolas Tcharos (Cisco Networking Solutions)
Bob McQueen (TeraData "Big Data" Analytics)
Dan Rozycki (TransTec Group Pavement Design)
Christopher Bluemle (Crown Castle Communications)
Brad Guilmino (Innovative Financing at HNTB)*
Jim Barbaresso (Emerging Mobility Solutions at HNTB)*
Colin Castle, PE (MDOT)

Innovation Council members in orange are located along the Innovate Mound corridor

Jevan Zagajac (Ford Smart Mobility)
Frank Sgambati (Bosch Smart Cities/Freight Mobility)
Jim Burg (CEO of Jim Burg Trucking)
*Steve Tomaszewski (Director of Global Facilities at GM)
*Derhun Sanders (Communications & Outreach at TARDEC)

* acceptance pending

Project Principal
Eric Morris, PE (H)*

Project Manager
Regine Beauboeuf, PE (H)*

Deputy Project Manager
Steve Griffith, PE (H)*

Project Controls

Quality Management
Peter Kinney, PE (H)*
Roy Rose, PE, (AEW)*

Process & Document Control
Kay Gardner (H)

Schedule & Cost Management
Kristen Aston, PSP (H)*
David Frogner (H)*
Shaun Winwood (H)

Engagement
Nate Ford (H)*

Branding & Public Relations
Sarah Stanley (HG)*

Public Engagement
Elnora Austell, APR (E)*

Corridor Stakeholder Coordination
Brad Strader, AICP, PTP (M)*

Website Development & Maintenance
Sarah Stanley (HG)*
Jodi Drosner (H)

Federal & State Policy Coordination
Roger Safford, PE (H)*

Grant Compliance
Bill Hanka (HA)*
Roger Safford, PE (H)*

Grant Application & Writing Support
Bill Hanka (HA)*
Mike MacDonald, PE (HRC)*
Jim Barbaresso (H)*

Project Readiness
Tom Weston, PE (H)*

Innovative Project Delivery
Paul Huston, PE (H)*

Innovative Contract Document Development
Steve Howe, PE (H)*

Project Finance
Brad Guilmino (H)*
KPMG**

Legal
Nossaman**

Risk Management
Leah Tapp, PE (H)*

Survey
Jeff Bartlett, PS (SSI)*

Utility Investigation & Coordination
Nguyen Nguyen, PE (H)

Subsurface Utility Engineering
Tyler Dawson, PhD, PE (N)*

Geotechnical Investigation
Jon Zaremski, PE (S)*

Environmental Investigations
Michael Bensing, PE (S)

Planning
Carly Shapiro, AICP (H)*

Access Management
Brad Strader, AICP, PTP (M)*

Traffic
Danielle Booms, PE (H)*
Jeff Feeney, PE, PTOE (H)

Transit & Non-Motorized
Brad Strader, AICP, PTP (M)*
Jeremy Papuga (H)

Placemaking & Urban Design
Andy Knight, PLA, ASLA (M)*

NEPA Documentation
Carolyn Seboe, AICP (H)
Adin McCann, PE (H)

Noise & Air Quality
Suheil Acra (H)*
Ruth Mazur (H)

Ecology & Waterway Permitting
Dianne Martin (AS)*

Wetland Assessment
Dianne Martin (AS)*

Cultural Resources & Section 106 Compliance
Brandon Gabler, PhD, RPA (C)*

Engineering
Mike MacDonald, PE (HRC)*

Road
Nancy Faught, PE (HRC)*
Brian Davies, PE (HRC)

Drainage
Salvatore Conigliaro, PE (HRC)*
Jacob Darnall, PE (HRC)

Structures
Amy Foster, PE (H)

Traffic Management Plan
Karianne Steffen, PE, PTOE (H)*

Maintenance-of-Traffic Plans
Lia Michaels, PE, PTOE (HRC)*

Municipal Utility Design
Lyle Winn, PE (AEW)*
Michael Vigneron, PE, PTOE (AEW)

Real Estate (As-Needed)
Ed Strada, PE (H)

Roadway Lighting
Matt Durning, PE (H)

Systems Engineering & Emerging Mobility
Jim Barbaresso (H)*

ITS
Matt Junak, PE (H)*
Colleen Hill-Stramsak, PE, PTOE (HRC)

CV/AV
Greg Krueger, PE (H)*

Shared & Electric Mobility
Katie Zehnder, PE, PTOE, AICP (H)*

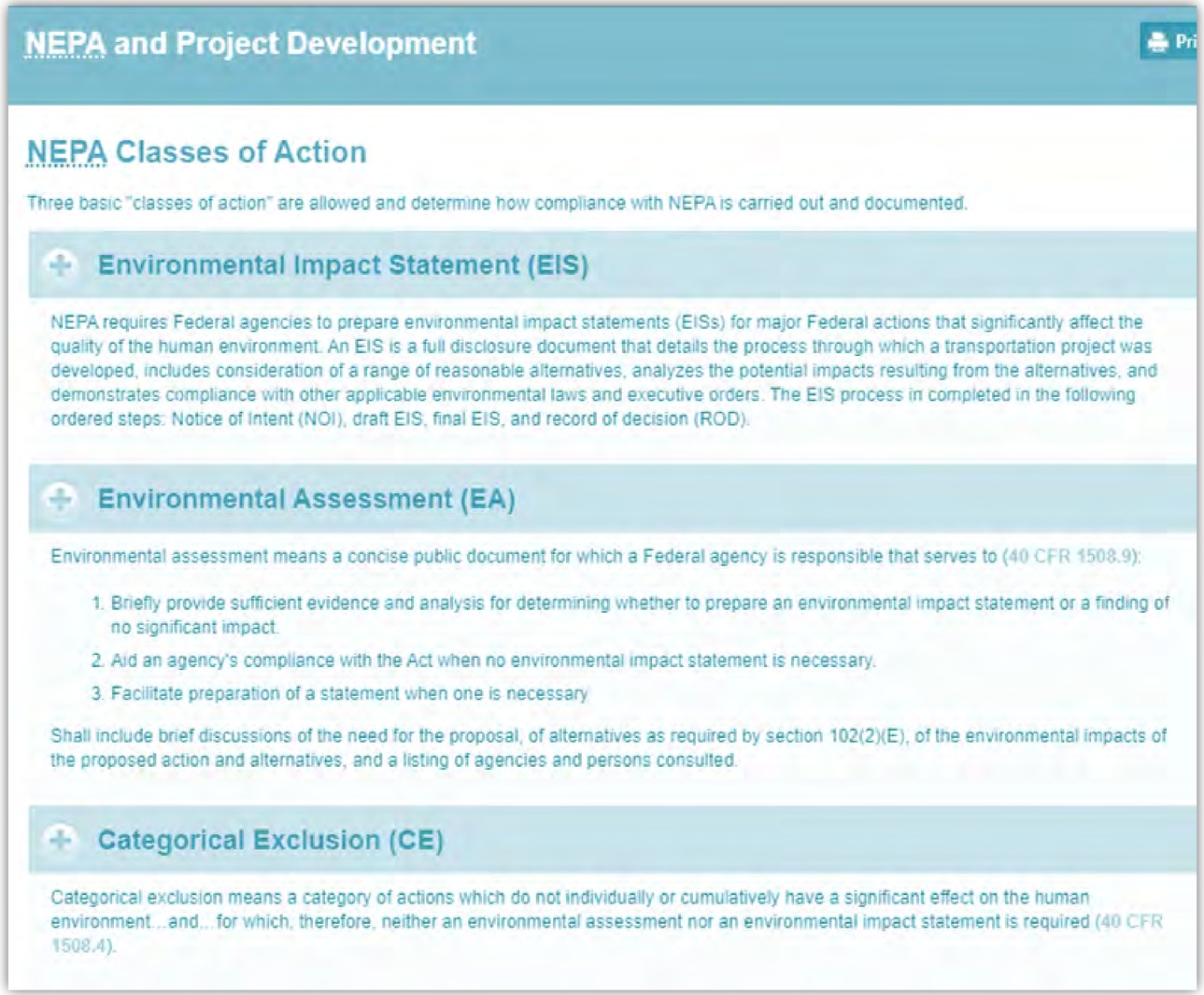
Systems Planning & Concept Development
Stephen Novosad (H)*
Steve Johnson, CISSP, CVP (H)

PLANNING

Environmental Compliance

Primary Activities

- Environmental screening maps
- Using public databases and data provided by MCDR.
- Confirm Class of Action: Enhanced CE
- Ongoing agency coordination
- Environmental documentation



NEPA and Project Development

NEPA Classes of Action

Three basic "classes of action" are allowed and determine how compliance with NEPA is carried out and documented.

Environmental Impact Statement (EIS)

NEPA requires Federal agencies to prepare environmental impact statements (EISs) for major Federal actions that significantly affect the quality of the human environment. An EIS is a full disclosure document that details the process through which a transportation project was developed, includes consideration of a range of reasonable alternatives, analyzes the potential impacts resulting from the alternatives, and demonstrates compliance with other applicable environmental laws and executive orders. The EIS process in completed in the following ordered steps: Notice of Intent (NOI), draft EIS, final EIS, and record of decision (ROD).

Environmental Assessment (EA)

Environmental assessment means a concise public document for which a Federal agency is responsible that serves to (40 CFR 1508.9):

1. Briefly provide sufficient evidence and analysis for determining whether to prepare an environmental impact statement or a finding of no significant impact.
2. Aid an agency's compliance with the Act when no environmental impact statement is necessary.
3. Facilitate preparation of a statement when one is necessary

Shall include brief discussions of the need for the proposal, of alternatives as required by section 102(2)(E), of the environmental impacts of the proposed action and alternatives, and a listing of agencies and persons consulted.

Categorical Exclusion (CE)

Categorical exclusion means a category of actions which do not individually or cumulatively have a significant effect on the human environment…and…for which, therefore, neither an environmental assessment nor an environmental impact statement is required (40 CFR 1508.4).

PLANNING

Resource Studies

Ecology

- Wetland and Stream Delineation report
- Fieldwork is complete
- Threatened and endangered species report
- Michigan Natural Features Inventory (MNFI) requested

Cultural Resources/Section 106

- Includes above ground survey/ report and archaeology report
- Area of Potential Effect (APE) submitted to MDOT
- Background research on the corridor is underway

Air and Noise Analyses

- Noise analysis – Modeling existing objects
- Air analysis – begins following the completion of the traffic analysis

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PLANNING

Resource Studies

Contaminated Materials	Community, Economic, & Land Use	Environmental Justice
• Project Area Contamination Survey (PACS) report will be completed to identify contaminated sites	• Review of local and regional plans to identify existing and planned economic and land use in the corridor.	• Review of local and regional plans to identify existing and planned economic and land use in the corridor.

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PLANNING

Resource Studies

Existing & Future No-Build

Synchro Analysis

Existing Synchro Analysis
Update 2016 Macomb County files to incorporate entire study area

Future No-Build Synchro Analysis
Include any improvements implemented within the study area and optimized signal timings

Vissim Analysis

Existing Vissim Analysis
Calibrated model based on FHWA criteria (Traffic Analysis Toolbox Volume III)

Future No-Build Vissim Analysis
Include any improvements implemented within the study area and optimized signal timings

Identify Problem Areas
Spot locations corridor-wide issues

Future Build

Synchro Analysis

Future Build Synchro Analysis
Analyze recommended improvements based on problem areas identified

Develop and Document
Spot improvements, corridor-wide improvements

Vissim Analysis

Build Vissim Analysis
Modify future no-build Vissim models with preferred improvements

PLANNING

Access Management Improvements

- Reduce the number of driveways near signalized intersections
- Adequate space to weave between driveways and median crossovers
- Signal spacing to facilitate traffic flow
- Good spacing between access points
- Driveways design to minimize disruption caused by vehicles turning

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PLANNING

Access Management Process

1. Identify where existing access locations and crossovers do not meet standards
2. Focus on problem areas
3. Engage Property Owners to discuss access situations, needs, and options
4. Identify potential changes to access
5. Look for shared access opportunities
6. Engage stakeholders to present preliminary access related recommendations

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PROJECT READINESS

Survey

• Establishing targets and control in field	**Completed**
• Collect mobile LiDAR point cloud	**Completed**
• 2D topographic mapping extraction & deliverables	**Completed**
• 3D mapping deliverables	**Ongoing**

Geotechnical Investigations

• Field work for roadway borings (Mobilization #1)	**Completed**
• Field work for structure borings (Mobilization #2)	**Spring 2020**

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PROJECT READINESS

Contaminated Materials

• Complete PACS Study	**Completed**
• Complete PSIs	**Spring 2020**

Utility Investigation

• Submitted Utility Request letters to utility companies & received 90% + utility plans	**Completed**
• Developed Utility Plan Map	**Ongoing**
• Identify critical utility crossings and began SUE Quality Level A & B field data	**Ongoing**

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ENGINEERING

Roadway

- Condition Assessment, Design Criteria & Roadway Scoping Report
- Roadway Geometry based on Traffic Model
- Preliminary Vertical Alignment
- Development of Proposed 3D Surface
- Pavement Cross Section
- 30% Design Plans

Hydraulics

- Condition Assessment of County Drains
- County Drain Capacity Review
- Permit/Regulatory Requirements

Structures

- Condition Assessment of Bridges
  - Red Run Drain
  - Plumbrook Drain
  - Big Beaver Creek
  - Sterling Relief Drain
  - Bear Creek Drain
- Scoping Report
- 30% Design

Cost Estimating

- Develop Initial Cost Estimate
- Refine Cost Estimate During Design

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ENGINEERING

Systems Engineering & Emerging Mobility Innovation Council

Purpose: Convene group of industry leaders to inject big innovative ideas into project

Process: Generate & Confirm roster for the corridor, Invitation letter/calls, Convene IC workshop in December, Ongoing Coordination

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ENGINEERING

Systems Engineering & Emerging Mobility

Needs Assessment

Purpose: Inventory and Categorize Corridor Needs

Process: Information requests, interdisciplinary coordination, stakeholder interviews, logging improvement requests, agency interviews

Outcome: Establish Innovation Register

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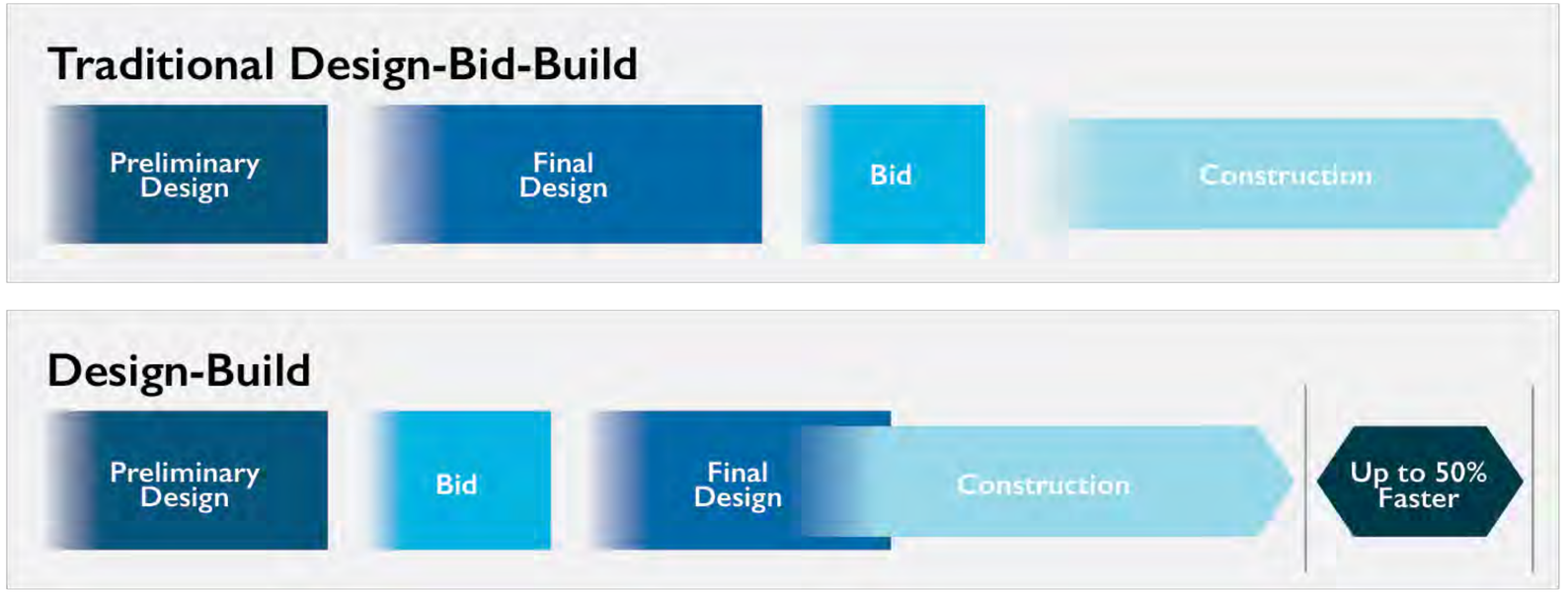
PROCUREMENT

Design-Build Delivery

Utilize MDOT design-build 2-step procurement process & contract



1. RFQ issuance - shortlisting based on SOQ responses
2. RFP issuance to shortlisted proposers with contract awarded to lowest bid responsive proposer

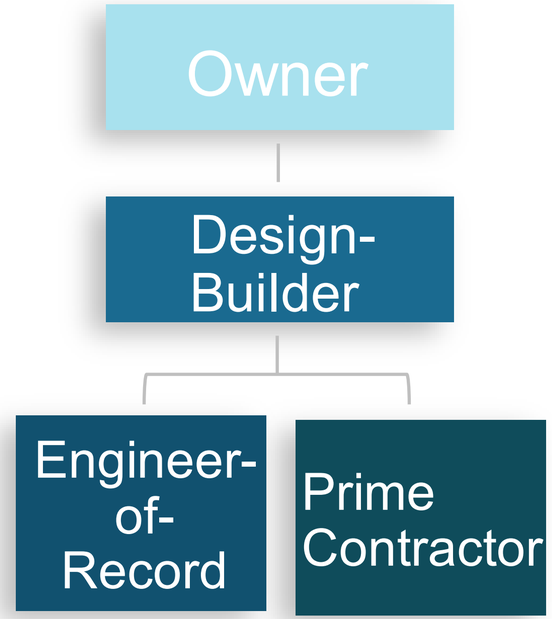
PROCUREMENT

Benefits

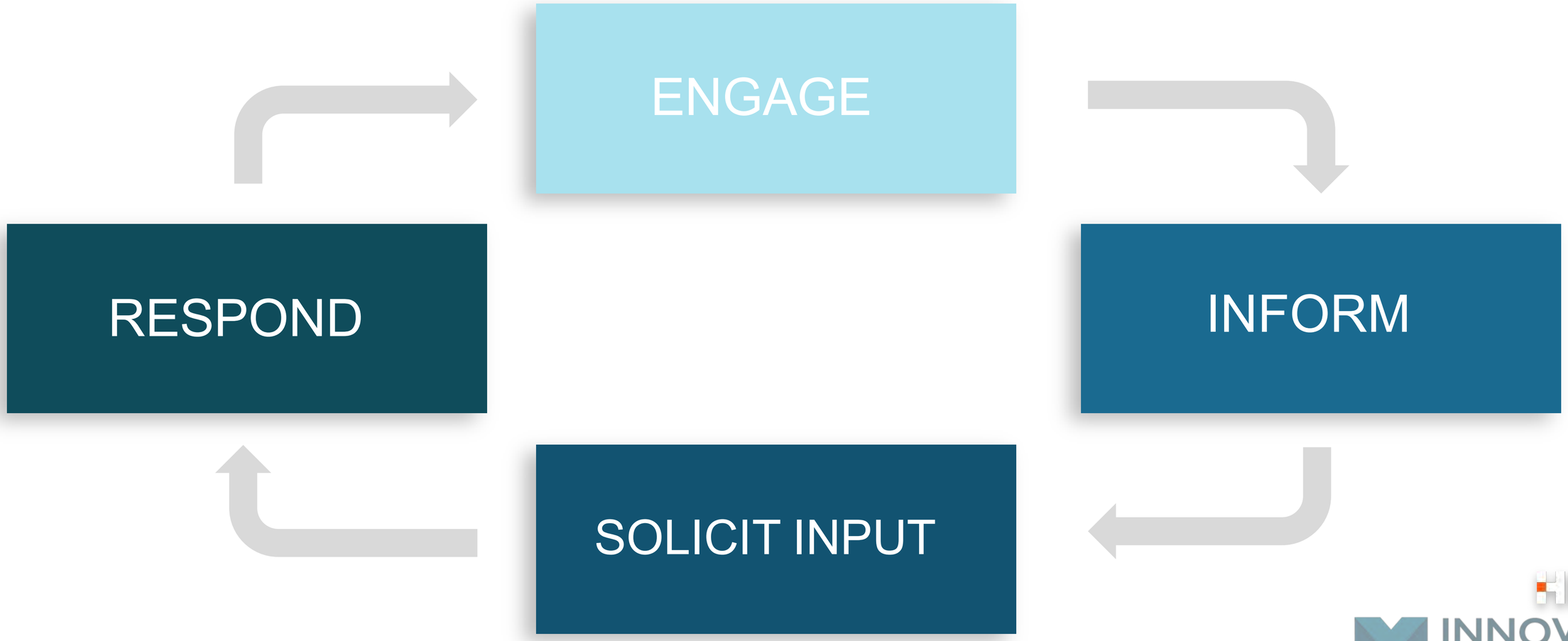
- Risk transfer to a single contractual party (Design-Builder)
- Schedule acceleration due to design/construction phase overlap
- Leverage private sector innovation (ATCs)

Next Steps

- Conduct Phase 1 of Design-Build Training
- Begin preparation of contract documents
- Industry outreach



COMMUNICATIONS – OBJECTIVES



COMMUNICATIONS – KEY MESSAGES

SAFETY

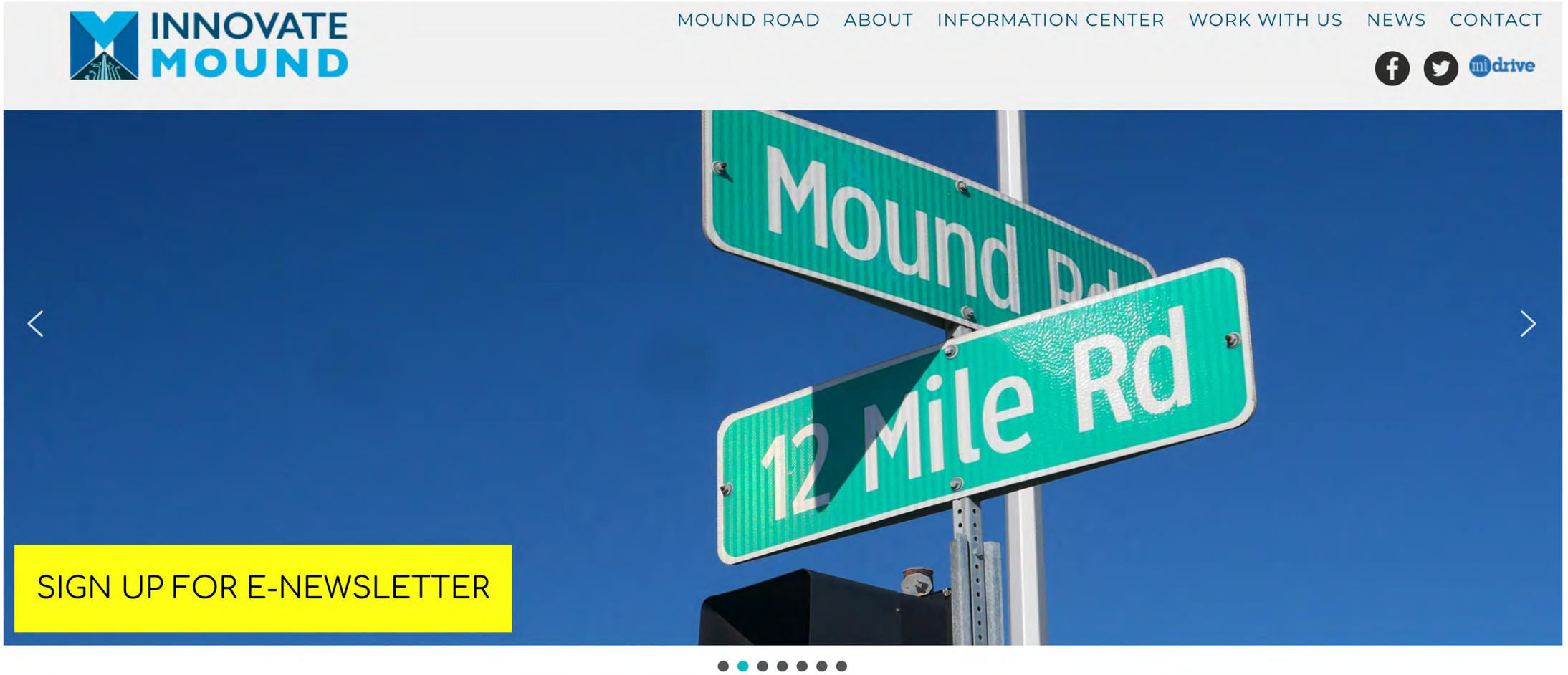
INNOVATION

INVESTMENT

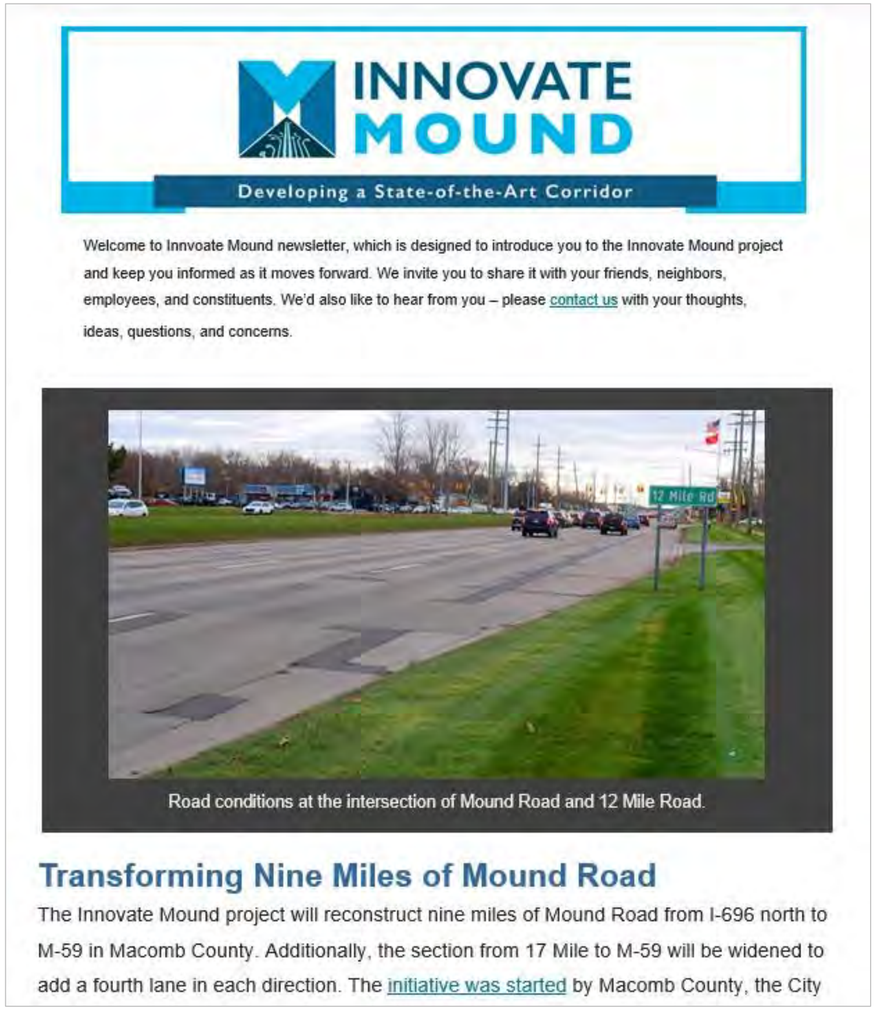
IMPACT

COMMUNICATIONS – TOOLS

Dedicated Project Website: InnovateMound.org



COMMUNICATIONS – TOOLS



INNOVATE MOUND

Developing a State-of-the-Art Corridor

Welcome to Innvoate Mound newsletter, which is designed to introduce you to the Innovate Mound project and keep you informed as it moves forward. We invite you to share it with your friends, neighbors, employees, and constituents. We'd also like to hear from you – please contact us with your thoughts, ideas, questions, and concerns.

Road conditions at the intersection of Mound Road and 12 Mile Road.

Transforming Nine Miles of Mound Road

The Innovate Mound project will reconstruct nine miles of Mound Road from I-696 north to M-59 in Macomb County. Additionally, the section from 17 Mile to M-59 will be widened to add a fourth lane in each direction. The initiative was started by Macomb County, the City

- Small group stakeholder meetings
- Community-wide events
- Community outreach partnerships
- E-newsletter
- Social media, e-blasts
- Collateral materials, mailings
- Media relations
- Dedicated 24/7 hotline
  1-855- MOUND4U

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CONSTRUCTION

Summer 2021 to end of 2023

- Construction Staged over Multiple Years
- Minimum Access Requirements
- Communication During Construction
  - Traffic Advisories
  - Project Website
  - Ombudsman

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Contact Us

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Macomb County Department of Roads

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