

# MDOT MEGA PROJECTS MEETING

*April 26, 2013*



# TODAY'S AGENDA



- Purpose of the Meeting
- Mega Projects Overview
- Recap of October 2012 meeting
- Conceptual Delivery Schedules
- Industry Input (Q&A)

DRAFT - Subject to change

# OVERVIEW – GOALS



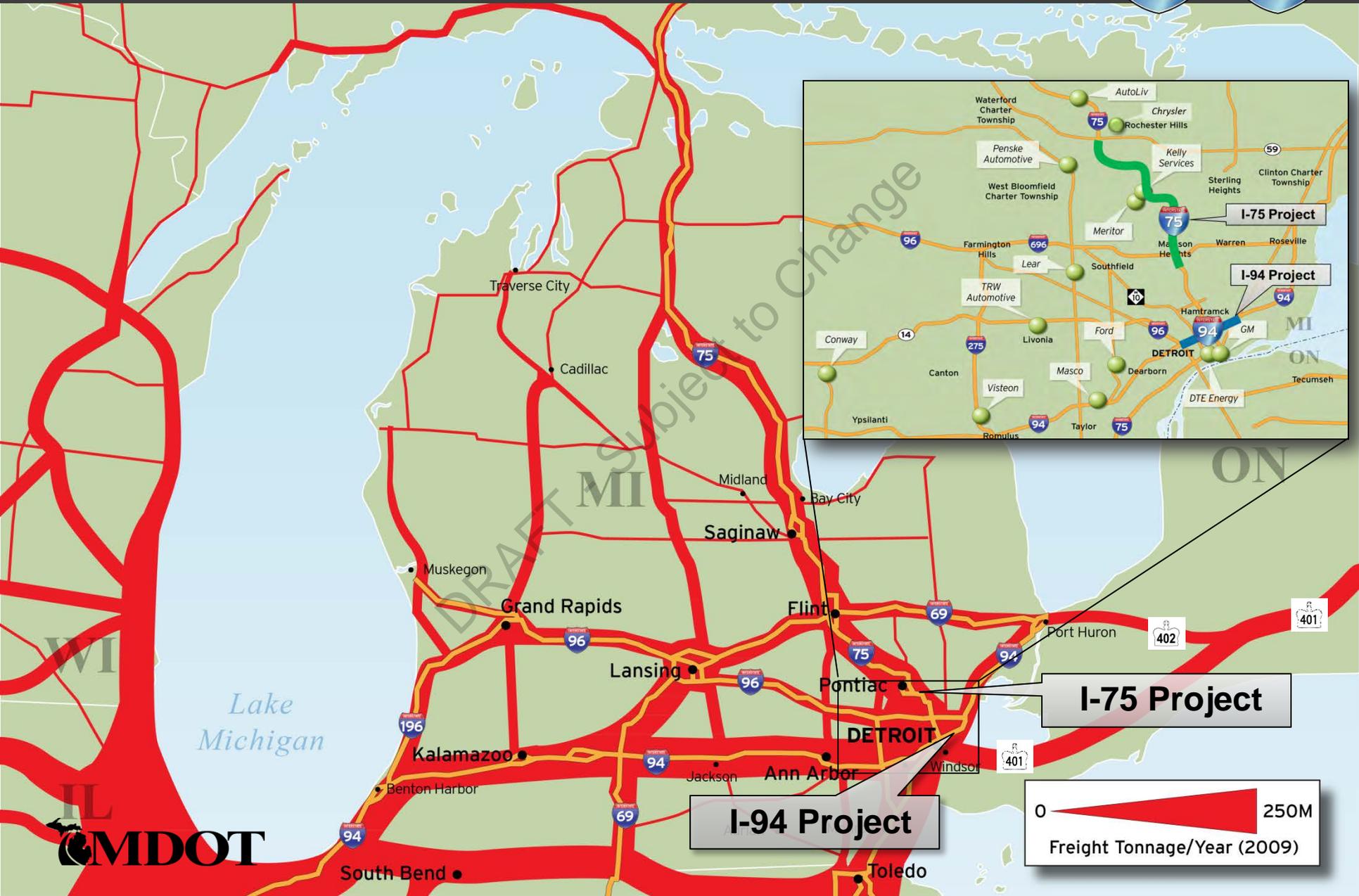
## I-94 GOALS

- Maintain regional mobility during construction for freight users and access to businesses and homes.
- Deliver I-94 for < \$1.5 billion (in 2011 dollars)
- Deliver I-94 in four years
- Maximize opportunities for Michigan Contractors to competitively bid work.

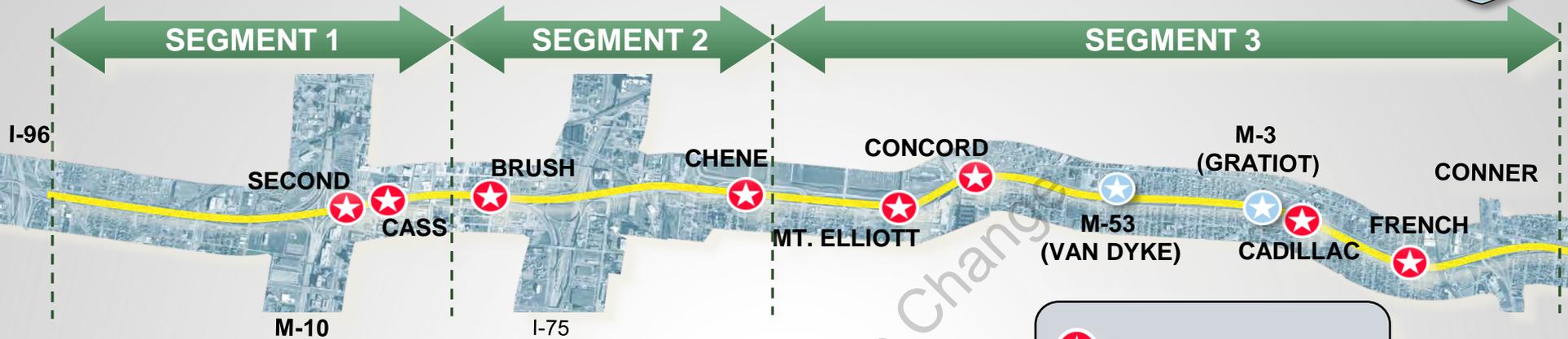
## I-75 GOALS

- Maintain regional mobility during construction for public users and access to businesses and homes.
- Deliver I-75 for < \$800 million (in 2011 dollars)
- Deliver I-75 in four years
- Maximize opportunities for Michigan Contractors to competitively bid work.

# OVERVIEW – SIGNIFICANCE



# OVERVIEW OF I-94



## PROJECT PURPOSE AND NEED

Improve the capacity and condition of the existing I-94 roadway and interchanges to support the mobility needs of local and interstate commerce as well as national and civil defense. The condition of the existing facility is the primary need for action. The condition and capacity problems have resulted in this section of I-94 being recognized in statewide and regional plans as the Michigan roadway section most needing action.

## PROJECT HIGHLIGHTS

- 6.7-mile roadway reconstruction/widening from I-96 to Conner Ave
- Adds I-94 main travel lane in each direction
- Replace aging bridges (vehicular, pedestrian, RR)
- New continuous I-94 service drives (impacts > 300 parcels)
- Improve drainage system
- Upgrade geometrics including I-94/M-10 and I-94/I-75 Interchanges

- PRIORITY BRIDGES
- PRIORITY BRIDGES  
2012-2013 Letting



"It is essential that you have good roads and bridges if you want to revitalize this city. You can't have people come back to Detroit unless they have a freeway to get in."



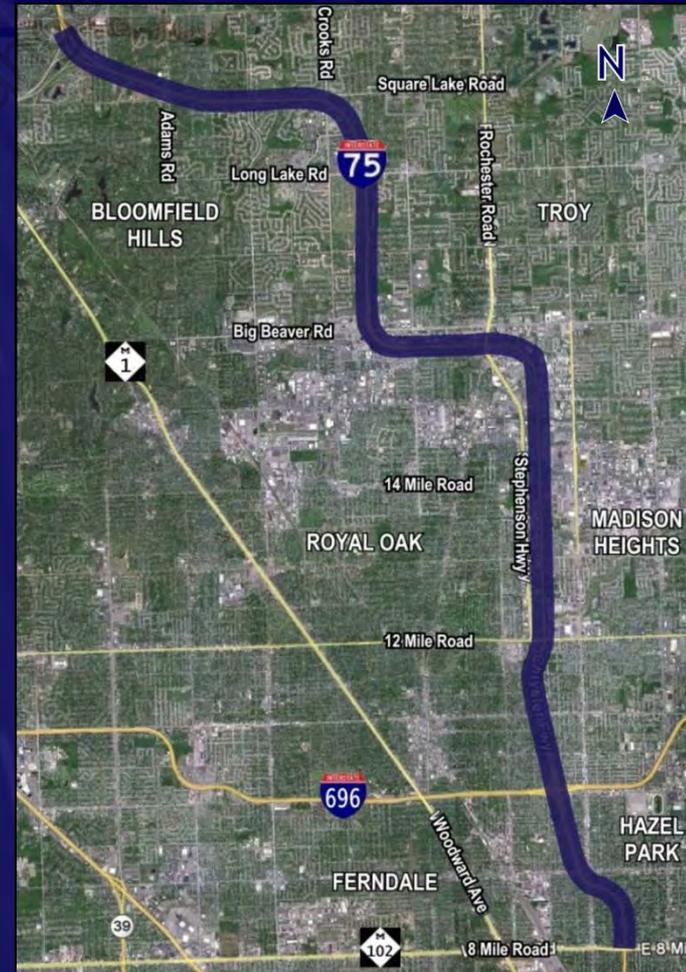
# Scope

## I-75 Freeway Widening & Reconstruction

(north of M-102 to south of M-59/South Boulevard)

Approximately 17.7 miles total length

- Reconstruct existing pavement
- Add one new lane (HOV in peak hours)
- Replace bridges
- Improve drainage system
- Upgrade geometrics and interchanges





# Significance

Current Daily Traffic Volumes: 103,000 to 174,000

- Critical commercial route for local, intrastate and interstate goods movement
- Key bi-directional commuter route
- Vital tourist route to north
- Important local residential & business route
- Essential to maintain economic vitality of Oakland County





## MDOT Perspective:

- Delivering I-94 and I-75 will have a huge positive impact on Michigan's Economy.
- These Mega Projects are bigger than anything we've done before. We need to do these differently.
- Expectation is to deliver I-94 and I-75 Better, Faster and Cheaper to achieve our goals.
- MDOT needs the Contractor and Consultant industry to make these projects a success!



## Meeting discussion:

- Consider segmentation into \$400 million +/- pieces (contracts) with umbrella program manager.
- Service drives first (I-94) as separate contract similar to IDOT's Dan Ryan?
- Review alternative disposition resolution process similar to Florida model
- Public relations risk of two mega projects.
- Joint Ventures



## Meeting discussion:

- FHWA concurrence with innovative contracting plan especially with the use of alternative technical concepts (ATC)?
- Risk management if design-build?
  - Michigan past experience has been relatively low risk
  - Proper risk allocation
- Process for industry input to address challenges
  - But don't want to give all creative ideas away until there is a commitment to not do as one big project



## Meeting discussion:

- Sweet spot of : Cost, Schedule, Risk Management, Reward
- Design-build mega project approach mostly about speed
- Issues with two big projects
  - Finance
  - Insurance
- MDOT'S ability to manage/interface risks
- Enhanced coordination clause (MITA to research)

## Key considerations:



### **Deliver I-94 for less than \$1.5 billion (2011 dollars)**

- Non-subjective, highly cost-competitive bidding process.
- Utilize incentives, including post-bid incentives.



### **Deliver Program in less than five years.**

- Substantial visible start in 2014.
- Construct the I-94 freeway within four years.



### **Maximize opportunities for Michigan Contractors to competitively bid work.**

- Let a Master Building Demolitions contract to engage DBE contractors early.
- Let priority bridge and local access improvements contract early to engage industry.
- Optimize number of construction packages.



### **Maintain Regional Mobility.**

- Freight users never experience more than 5 minutes of added delay during construction.
- Maintain access to businesses and homes.
- Minimize contract coordination during construction to support mobility and minimize claims.

# CONCEPTUAL DELIVERY SCHEDULE



CONTRACT DELIVERY*	2013				2014				2015				2016				2017				2018															
	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	01	02	03	04	01	02	03	04	01	02	03	04	01	02	03	04				
Owners Representative/ Program Manager	NTP 10/2013				RISK MANAGEMENT, PROCUREMENT & ROW ACQUISITION																CONSTRUCTION OVERSIGHT & CONTRACT COORDINATION															
Master Building Demolition Contract #1 (Building & Structures Removals) Corridor	PROCUREMENT				DEMOLITION & SITE REMEDIATION DURING ROW ACQUISITION (357 PARCEL IMPACTS)																															
Design-Build Contract #2 (Priority Bridges & Enhanced Local Access)	PROCUREMENT				DESIGN & CONSTRUCTION																															
Design-Build Contract #3 (E. of I-75 to E. of Conner Ave.) EAST	PROCUREMENT								DESIGN & CONSTRUCTION																											
Design-Build Contract #4 (E. of I-96 to E. of I-75) WEST	PROCUREMENT								DESIGN & CONSTRUCTION																											



**PROGRAM MANAGER CONTRACT**  
**Description:**  
 Extension of MDOT to provide the following: project management (procurement, risk management, project controls, quality, and communications), assist with engineering activities to manage key risks, develop contracting strategy, design-build contract documents and support bidding process through award. Facilitate DBE, contractor and stakeholder outreach. Assist with public education & information. Ensure FHWA compliance throughout.  
**Start Date:** October 2013  
**Finish Date:** December 2018  
**Major Scope items:**  
 ■ Staff project office, implement PMP & project controls system  
 ■ Design/ROW plans to manage key risks  
 ■ Assist with ROW acquisition  
 ■ Create design-build packages (RFQ, RFP)  
 ■ Co-house with Design-Build teams  
 ■ Provide design & construction oversight\*\*  
**Estimated Costs:**  
 \$40 - 60 Million\*\*

**MASTER BUILDING DEMOLITION CONTRACT #1 (BUILDING & STRUCTURES REMOVAL) CORRIDOR**  
**Description:**  
 Buildings & structures removals on ROW parcels acquired for project construction.  
**Delivery Method:**  
 Master on-call contracts.  
**Construction Start Date:** October 2013  
**Construction Finish Date:** September 2015  
**Major Scope items:**  
 ■ Building & structures demolition  
 ■ Remediation (if required)  
**Estimated Costs:**  
 \$10 - 30 Million

**DESIGN-BUILD CONTRACT #2 (PRIORITY BRIDGES & ENHANCED LOCAL ACCESS)**  
**Description:**  
 Priority bridge replacements, approaches, and local access improvements to facilitate maintenance of traffic.  
**Delivery Method:**  
 Design-Build (2 step) with stipends and a confidential Alternative Technical Concepts (ATC) process to encourage innovation, creativity and cost savings.  
**Construction Start Date:** February 2014  
**Construction Finish Date:** November 2014  
**Major Scope items:**  
 ■ Utility Relocation  
 ■ Maintaining Traffic  
 ■ Removals  
 ■ Grading & Drainage  
 ■ Priority Bridges & Approaches  
 ■ Local Access Roadway Improvements  
 ■ Retaining/Noise Walls  
**Estimated Costs:**  
 \$50 - 100 Million\*\*  
 \*\*includes milestone completion incentives

**DESIGN-BUILD CONTRACT #3 (E. OF I-75 TO E. OF CONNER) EAST**  
**Description:**  
 Freeway reconstruction, construction of continuous Service Drives including utility and drainage improvements, and bridge replacements including Dequindre Yard.  
**Delivery Method:**  
 Design-Build (2 step) with stipends and a confidential Alternative Technical Concepts (ATC) process to encourage innovation, creativity and cost savings.  
**Construction Start Date:** December 2014  
**Construction Finish Date:** December 2016  
**Major Scope items:**  
 ■ Utility Relocation  
 ■ Maintaining Traffic  
 ■ Removals  
 ■ Freeway Grading & Drainage  
 ■ Freeway Paving  
 ■ Service Drives  
 ■ Bridges & Approaches  
 ■ Retaining/Noise Walls  
**Estimated Costs:**  
 \$400 - 500 Million\*\*  
 \*\*includes milestone completion incentives

**DESIGN-BUILD CONTRACT #4 (E. OF I-96 TO E. OF I-75) WEST**  
**Description:**  
 Freeway reconstruction, construction of continuous Service Drives including utility and drainage improvements, and bridge replacements.  
**Delivery Method:**  
 Design-Build (2 step) with stipends and a confidential Alternative Technical Concepts (ATC) process to encourage innovation, creativity and cost savings.  
**Construction Start Date:** October 2015  
**Construction Finish Date:** October 2018  
**Major Scope items:**  
 ■ Utility Relocation  
 ■ Maintaining Traffic  
 ■ Removals  
 ■ Freeway Grading & Drainage  
 ■ Freeway Paving  
 ■ I-94/M-10 and I-94/I-75 Interchanges  
 ■ Service Drives  
 ■ Bridges & Approaches  
 ■ Retaining/Noise Walls  
**Estimated Costs:**  
 \$600 - 700 Million\*\*  
 \*\*includes milestone completion incentives

\*PROCUREMENT TIMEFRAMES MAY BE ADJUSTED TO MATCH FUNDING AVAILABILITY.

\*\* Assumes 3-5% of total construction costs for program management services. This excludes estimated costs for full CEI services

## One Master Building Demolition Contract

- **Contract #1:** Building and structures removal on right-of-way acquired in advance of project construction.

## Three Design-Build Contracts

Two-step process with stipends and a confidential Alternative Technical Concepts (ATC) process to encourage creativity, innovation & cost savings.

- **Contract #2:** Priority Bridges and Enhanced Local Access
- **Contract #3:** East of I-75 to East of Conner Avenue including the Dequindre Yard Bridge
- **Contract #4:** I-96 to east of I-75 including the I-94/M-10 and I-94/I-75 Interchanges



# Conceptual Delivery Schedule

## CONCEPTUAL DELIVERY OPTION

CONTRACT DELIVERY*	2013			2014												2015				2016				2017				2018			
	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	Q1	Q2	Q3	Q4												
<b>Owners Rep/Program Manager</b>	Risk Management, Procurement, & ROW Acquisition												Construction Oversight & Contract Coordination																		
<b>Design-Build Contract #1 (13 Mile to S. of South Blvd.) NORTH</b>	Procurement												Construction																		
<b>Design-Build Contract #2 (N. of M-102 to 13 Mile) SOUTH</b>	Procurement												Construction																		

**OWNERS REP/PROGRAM MANAGER CONTRACT**

**Description:**  
Extension of MDOT. Provide project management (scope, finance & budget). Develop D/B procurement process & create D/B packages. Support bidding process & D/B on-boarding. Facilitate DBE, contractor & stakeholder collaboration mtgs. Coordinate D/B teams work & schedule. Assist with public education & information. Ensure FHWA compliance throughout.

**Start Date:** October 2013  
**Finish Date:** June 2018

**Major Scope Tasks:**

- Develop design plans to 30%+
- Create D/B packages (RFP, Scope)
- Conduct industry & stakeholder collaboration mtgs.
- Host regular team coordination meetings
- Assist with right-of-way acquisition
- Provide construction oversight

**Estimated Cost: \$22 Million\*\***

**DESIGN-BUILD CONTRACT #1\*\*\*  
(13 Mile to S. of South Blvd.) NORTH**

**Description:**  
Twelve miles of roadway reconstruction, construction of HOV lane including utility and drainage improvements, and bridge replacements.

**Construction Start Date:** July 2015  
**Construction Finish Date:** June 2018

**Major Scope Tasks:**

- Construct Square Lake Road ramp configuration
- Relocate utilities
- Construct drainage improvements
- Build ramp improvements
- Construct HOV lane

Possible 0.2% Stipend: \$751,000  
**Estimated Cost: \$375 Million**

**DESIGN-BUILD CONTRACT #2\*\*\*  
(N. of M-102 to 13 Mile) SOUTH**

**Description:**  
Five miles of roadway reconstruction, construction of HOV lane including utility and drainage improvements, and bridge replacements.

**Construction Start Date:** October 2015  
**Construction Finish Date:** June 2018

**Major Scope Tasks:**

- Construct braided ramps
- Relocate utilities
- Construct drainage improvements
- Build connection to Red Run Drain under NB service drive
- Construct ramp improvements
- Build 12 Mile Road interchange improvements
- Construct HOV lane
- Construct new pedestrian bridges

Possible 0.2% Stipend: \$719,000  
**Estimated Cost: \$360 Million**



DRAFT (April 22, 2013)  
\*Procurement timeframes may be adjusted to match funding availability  
\*\* = Assumes 3% of total construction costs, assumes Owners Rep conducts QA construction and materials testing oversight & assumes D/B Team provides independent QC firm/testing lab  
\*\*\*Delivery method: Design-Build two step process with stipends and confidential ATCs to encourage innovation, creativity & cost savings

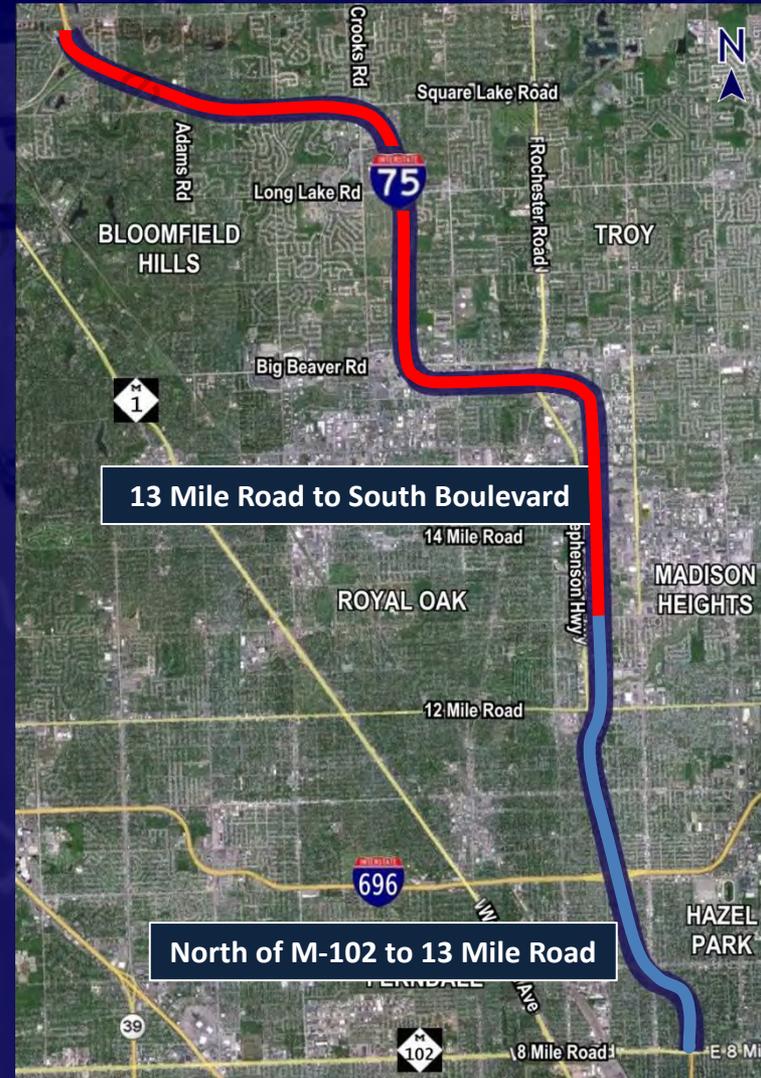


# Construction Contracts

## Two Design/Build Contracts

Two-step process with stipends and confidential Alternative Technical Concepts to encourage creativity, innovation & cost savings

- 13 Mile Road to South Boulevard
- North of M-102 to 13 Mile Road



## Owners Rep/Program Manager Contract

- Separate owners representative teams dedicated to each mega project
- Extension of MDOT staffing and expertise
- Assist with management, budget, procurement, coordination, collaboration, and compliance throughout project duration to successful completion



QUESTIONS?

