



GRAND VALLEY METROPOLITAN COUNCIL

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GREENVILLE • HASTINGS • HUDSONVILLE • IONIA • JAMESTOWN TOWNSHIP • KENT COUNTY • KENTWOOD • LOWELL • LOWELL TOWNSHIP • MIDDLEVILLE • NELSON TOWNSHIP  
OTTAWA COUNTY • PLAINFIELD TOWNSHIP • ROCKFORD • SAND LAKE • SPARTA • TALLMADGE TOWNSHIP • WALKER • WAYLAND • WYOMING

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**TECHNICAL COMMITTEE MEETING**

**Wednesday, May 3, 2023**

**9:30 AM**

**Rapid Central Station  
250 Cesar E. Chavez Ave SW  
Grand Rapids, MI 49503**

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**AGENDA**

- I. ROLL CALL AND INTRODUCTIONS**
- II. APPROVAL OF MINUTES—ACTION: Technical and Policy Committee minutes dated December 7, 2022 and Technical Committee minutes dated March 1, 2023.  
**Please refer to Item II: Attachment A****
- III. OPPORTUNITY FOR PUBLIC COMMENT**
- IV. TIP AMENDMENTS—ACTION: On behalf of MDOT and Grand Rapids, amendments/modifications to the FY2023-2026 TIP are being requested.  
**Please refer to Item IV: Attachment A****
- V. PAVEMENT, BRIDGE, AND RELIABILITY PERFORMANCE MEASURES—ACTION: The Technical Committee will be asked to review and recommend support for MDOT’s performance targets for the federal Pavement, Bridge, and Reliability performance measures.  
**Please refer to Item V: Attachment A****
- VI. AIRPORT ACCESS STUDY FINAL REPORT—DISCUSSION/ACTION: The Technical Committee will be asked to review the Airport Access Study final report and recommend acceptance of study results.  
**Please refer to Item VI: Attachment A****
- VII. OTHER BUSINESS**
- VIII. ADJOURNMENT**

**MINUTES**

**Grand Valley Metropolitan Council  
Transportation Division  
JOINT TECHNICAL/POLICY COMMITTEE MEETING  
Wednesday, December 7, 2022  
Rapid Central Station Conference Room  
250 Cesar E. Chavez Ave SW, Grand Rapids, MI 49503**

Naramore, Chair of the Policy Committee, called the December 7, 2022, joint Technical/Policy Committee meeting to order at 9:33 a.m. Those present introduced themselves to the Committee.

**I. ROLL CALL AND INTRODUCTIONS**

**Voting Members Present**

Sue Becker  
Kristin Bennett  
Mark Bennett  
Tim Bradshaw  
Terry Brod  
Scott Connors  
Rick DeVries  
Karyn Ferrick  
Jeff Franklin  
Wayne Harrall

*Proxy for  
Mike DeVries*

Russ Henckel  
Brian Hilbrands

*Proxy for  
John Said  
Proxy for  
Mike Burns*

Dennis Kent

Jim Kirkwood  
Doug LaFave  
Greg Madura  
Jim Miedema  
Tim Mroz  
Josh Naramore  
Jeff Oonk

*Proxy for  
Nicole Hofert*

Casey Ries  
Darrel Schmalzel  
Terry Schweitzer  
Rick Solle  
Rick Sprague  
Jeff Thornton  
Cameron Van Wyngarden  
Luke Walters  
Steve Warren  
Kevin Wisselink

Alpine Township  
City of Grand Rapids  
Tallmadge Charter Township  
Caledonia Charter Township  
Cannon Township  
City of Walker  
City of Grand Rapids  
City of Grand Rapids  
MDOT  
Kent County  
Grand Rapids Charter Township  
City of Wyoming  
Cascade Charter Township  
Ada Township  
MDOT  
City of Lowell  
City of Kentwood  
City of East Grand Rapids  
Alpine Township  
OCRC  
The Right Place  
City of Grand Rapids  
City of Wyoming  
City of Wyoming  
GRFIA  
City of Walker  
City of Kentwood  
Plainfield Charter Township  
KCRC  
Village of Caledonia  
Plainfield Charter Township  
MDOT  
Kent County Road Commission  
The Rapid

**Staff and Non-Voting Guests Present**

Clover Brown  
Andrea Faber  
Mara Gericke  
Laurel Joseph  
Tyler Kent  
Peter Kimball  
George Yang  
Mike Zonyk

GVMC  
GVMC  
GVMC  
GVMC  
MDOT  
GVMC  
GVMC  
GVMC

**Voting Members Not Present**

Mike Burns  
Michael DeVries  
Adam Elenbaas  
Shay Gallagher  
Kevin Green  
Tim Haagsma  
Jerry Hale  
Bryan Harrison  
Nicole Hofert  
Jim Holtvluwer  
Ken Krombeen  
Melissa LaGrand  
Bill LaRose  
Brett Laughlin  
Matt McConnon  
Robert Miller  
Clint Nemeth  
Tom Noreen  
Rob Postema  
John Said  
Dan Strikwerda  
Julius Suchy  
Charlie Sundblad  
Ben Swayze  
Don Tillema  
Laurie Van Haitsma  
Phil Vincent  
Rod Weersing  
Mike Womack  
Member Awaiting Appointment  
Member Awaiting Appointment  
Member Awaiting Appointment  
Member Awaiting Appointment

City of Lowell  
Grand Rapids Charter Township  
Allendale Charter Township  
Village of Sparta  
Algoma Township  
Gaines Charter Township  
Lowell Charter Township  
Caledonia Charter Township  
City of Wyoming  
Ottawa County  
City of Grandville  
Kent County  
City of Cedar Springs  
OCRC  
Courtland Township  
City of Hudsonville  
GRFIA  
Nelson Township  
City of Wyoming  
Ada Township  
City of Hudsonville  
Ada Township  
City of Grandville  
Cascade Charter Township  
Byron Township  
Jamestown Charter Township  
City of Rockford  
Georgetown Charter Township  
City of Cedar Springs  
Gaines Charter Township  
City of Rockford  
City of Wyoming  
Village of Sand Lake

**II. APPROVAL OF MINUTES**

Action will be deferred until the Technical and Policy Committees meet individually.

**III. OPPORTUNITY FOR PUBLIC COMMENT**

No public comment.

**IV. TIP AMENDMENTS/MODIFICATIONS**

**Referring to Item IV: Attachment A**, Joseph introduced the amendments/modifications to the FY2023-2026 TIP that were described in the agenda package. They are as follows:

In late October, GVMC received updated funding allocations from MDOT for FY2023. In addition to solidifying the expected FY2023 revenue, MPOs were given the authority to program and spend a portion of carryover funds as MDOT's way of paying back the local program for spending more than 75% of the FY2022 August redistribution funding. In all, an additional \$2.5 million in funding needs to be programmed. The TPSG Subcommittee met on November 21 to develop programming recommendations for this funding. Today, the Technical and Policy Committees are tasked with reviewing and taking action on these recommendations.

Joseph presented Item IV: Attachment A, which shows the recommended adjustments to funding levels for FY2023 projects aligning with the general recommendation from TPSG. These recommendations absorb the funding into projects that are currently programmed to get everyone as close to maxed out for federal funding as possible. Most, if not all, of these changes will be able to be processed as administrative adjustments if approved by Committees, but staff will submit a TIP amendment package to MDOT/FHWA/FTA if necessary.

Additionally up for consideration is \$199,500 in HIP-COVID relief funding that needs to be obligated prior to the end of FY2024. TPSG has recommended that this funding be allocated to a FY2024 KCRC bridge project that includes bridge preventative maintenance work on three bridges: Rogue River Drive over the Rogue River, Packer Drive over the Rogue River, and Packer Drive over the White Pine Trail. This job was previously abandoned by MDOT to be funded with local funds, but if approved, staff will coordinate with MDOT to get it reprogrammed.

**MOTION by Warren, SUPPORT by Schmalzel, to approve the TIP amendments/modifications as recommended by the TPSG Subcommittee.**  
**MOTION CARRIED UNANIMOUSLY.**

**V. OTHER BUSINESS**

- Joseph announced that there will be a combined Technical and Policy Committee meeting in January on the Policy Committee meeting date.
- Warren mentioned that currently MDOT has a call for projects to buy federal aid for FY2024. Warren asked if anyone is currently considering this. Joseph noted that some jurisdictions did participate in this for FY2023, but is unsure about FY2024.

- Warren noted that construction on the new Kent County Road Commission central complex facility should be complete by spring of 2023. KCRC is hopeful to host a Committee meeting at this facility in the summer or early fall of 2023.
- Harrall asked if there is an update regarding the Safe Streets for All grant. Joseph noted GVMC should hear back about the grant in January 2023.

**VI. ADJOURNMENT**

Naramore adjourned the December 7, 2022, joint Technical/Policy Committee meeting at 9:43 a.m.

DRAFT

**MINUTES**

**Grand Valley Metropolitan Council  
Transportation Division  
TECHNICAL COMMITTEE MEETING  
Wednesday, March 1, 2023  
Rapid Central Station Conference Room  
250 Cesar E. Chavez Ave SW, Grand Rapids, MI 49503**

Conners, Vice Chair of the Technical Committee, called the March 1, 2023, Technical Committee meeting to order at 9:30 a.m. Those present introduced themselves to the Committee.

**I. ROLL CALL AND INTRODUCTIONS**

Sue Becker		Alpine Township
Kristin Bennett		City of Grand Rapids
Mark Bennett		Tallmadge Charter Township
Terry Brod		Cannon Township
Scott Conners		City of Walker
Rick DeVries		City of Grand Rapids
Tim Haagsma		Gaines Charter Township
Wayne Harrall		Kent County
Russ Henckel		City of Wyoming
Brian Hilbrands	<i>Proxy for John Said</i>	Cascade Charter Township
	<i>Proxy for Mike Burns</i>	Ada Township
Dennis Kent		MDOT
		City of Lowell
Jim Kirkwood		City of Kentwood
Brett Laughlin		Ottawa County Road Commission
Robert Miller		City of Hudsonville
Casey Ries	<i>Proxy for Clint Nemeth</i>	Gerald R. Ford Intl. Airport
	<i>Proxy for Steve Warren</i>	Gerald R. Ford Intl. Airport
Rick Sprague		Kent County Road Commission
		Kent County Road Commission
Charlie Sundblad		City of Grandville
Jeff Thornton		Village of Caledonia
Steve Waalkes	<i>Proxy for Mike Devries</i>	Grand Rapids Charter Township
		Grand Rapids Charter Township
Luke Walters		MDOT
Kevin Wisselink		ITP - The Rapid
 <b>Staff and Non-Voting Guests Present</b>		
Scott Alsgaard		Hope Network
Clover Brown		GVMC Staff
Andrea Faber		GVMC Staff
Mara Gericke		GVMC Staff
Laurel Joseph		GVMC Staff
Peter Kimball		GVMC Staff
Terry Martin		Carrier and Gable
Tim Mroz		The Right Place

Jason Ulanowicz  
George Yang  
Mike Zonyk

Hope Network  
GVMC Staff  
GVMC Staff

**Voting Members Not Present**

Tim Bradshaw (*Chair*)  
Mike Burns  
Mike DeVries  
Adam Elenbaas  
Kevin Green  
Jerry Hale  
Nicole Hofert  
Jim Holtvluwer  
Doug LaFave  
Bill LaRose  
Matt McConnon  
Clint Nemeth  
Tom Noreen  
John Said  
Dean Smith  
Rick Solle  
Charlie Sundblad  
Don Tillema  
Phil Vincent  
Steve Warren  
Rod Weersing  
Blaine Wing  
Member Awaiting Appointment

Caledonia Charter Township  
City of Lowell  
Grand Rapids Charter Township  
Allendale Charter Township  
Algoma Township  
Lowell Charter Township  
City of Wyoming  
Ottawa County  
City of East Grand Rapids  
City of Cedar Springs  
Courtland Township  
Gerald R. Ford Intl. Airport  
Nelson Township  
Ada Township  
Jamestown Charter Township  
Plainfield Charter Township  
City of Grandville  
Byron Township  
City of Rockford  
Kent County Road Commission  
Georgetown Charter Township  
Village of Sparta  
Village of Sand Lake

**II. APPROVAL OF MINUTES**

D. Kent suggested a spelling correction to the November 2, 2022 Technical Committee Minutes.

Referring to Item II: Attachment A, Connors entertained the following motions:

**MOTION by K. Bennett, SUPPORT by Haagsma, to approve the November 2, 2022 Technical Committee Minutes as corrected. MOTION CARRIED UNANIMOUSLY.**

**MOTION by Thornton, SUPPORT by M. Bennett, to approve the January 18, 2023 Joint Technical/Policy Committee Minutes. MOTION CARRIED UNANIMOUSLY.**

**III. OPPORTUNITY FOR PUBLIC COMMENT**

No public comment.

#### IV. TIP AMENDMENTS/MODIFICATIONS

**Referring to Item IV: Attachment A**, Zonyk introduced the amendments/modifications to the FY2023-2026 TIP that were described in the agenda package. They are as follows:

##### MDOT

MDOT is requesting approval for six S/TIP line items and two GPA threshold changes. The line item amendments are due to scope changes, added phases, and changes in fiscal year. The M-6/92nd St project is a Wetland Mitigation site ownership transfer to Byron Township and is treated as a new project needing approval. The two GPA thresholds include the Trunkline Bridge GPA project for I-96 which has had an increase in PE funds requiring a GPA amendment, and the Trunkline Road GPA, which is due to cost increases on Capital Preventative Maintenance Road projects.

D. Kent explained an additional project phase that was programmed the day after the agenda went out. The reconstruction project on US-131 from South Kent Line to 76<sup>th</sup> Street is already in the TIP but needs the right of way for drainage work. MDOT is creating a right of way phase for \$500,000 out of funding that is already in this project.

For the S/TIP exempt list, D. Kent noted that most projects on the list are low impact and consist of phases that are moving from one year to another. D. Kent added that the I-96 at M-6 project is moving up from FY 2028 to FY 2024, which is a ramp reconstruction project.

Walters added that he has updated the M-37 project in JobNet to make it a regionally significant project. This project will be moved to the TIP in the future because it is a significant project for the area. D. Kent added that MDOT will continue to provide updates on the project as the environmental assessment continues. Joseph confirmed with Walters that the formal addition of the M-37 project to the TIP can be handled at a Policy Committee meeting.

##### KCRC and OCRC

KCRC and OCRC have been awarded Bridge funds for Crahen Ave. and 12th Ave. bridge rehabilitation projects, triggering a GPA threshold change for Local Bridge.

##### City of Grand Rapids

Grand Rapids has been awarded Earmark Funds and added Local NonParticipating funds for their Cesar E Chavez Ave. reconstruction project resulting in two S/TIP line item amendments needing approval. Joseph added that after the packet went out, there was a change request for this job put in by MDOT to increase part of the budget. Joseph will talk with R. DeVries to make sure the budget increase amount



is correct for the Policy Committee meeting. Joseph noted the federal budget amount is not changing, just the local side.

**MOTION by Harrall, SUPPORT by Walters, to approve the TIP amendments/modifications as recommended by MDOT, KCRC, OCRC, and the City of Grand Rapids. MOTION CARRIED UNANIMOUSLY.**

**V. 2050 MTP DRAFT VISION STATEMENT, GOALS, AND OBJECTIVES**

**Referring to Item V: Attachment A,** Faber introduced the discussion on the draft vision statement, goals, and objectives for the 2050 MTP.

Faber noted that GVMC staff met with the MTP Steering Committee in January, and presented the vision statement, goals, and objectives from the 2045 MTP as a starting point for discussion, along with the results of the recent public survey. Staff used recommendations from the meeting, along with the 10 Federal Planning Factors and the Federal Highway Administration and Federal Transit Administration Planning Emphasis Areas (PEAs), to further update the vision statement, goals, and objectives for the 2050 MTP. GVMC sought additional feedback on the revised vision statement, goals, and objectives from the MTP Steering Committee and presented them for discussion at the combined Technical and Policy Committee meeting in January. One change was requested, which Faber noted is in red on page two in the agenda packet.

**MOTION by Thornton, SUPPORT by Haagsma, to approve the 2050 MTP vision statement, goals, and objectives as presented. MOTION CARRIED UNANIMOUSLY.**

**VI. SOCIO-ECONOMIC (SE) DATA APPROVAL**

**Referring to Item VI: Attachment A,** Zonyk presented a summary of results from the SE data meetings held from November 22, 2022 - January 23, 2023, with jurisdictions that needed to allocate household and employment growth for the 2050 MTP.

Zonyk noted that MDOT provides the MPO with employment and household data at the community level that needs to be dispersed to our Traffic Analysis Zones (TAZ's) so the GVMC transportation model can process these changes to determine potential deficiencies. Zonyk presented a handout which summarizes the findings by county for households and employment, which were within 1% of the state forecast. Zonyk also presented a map application displaying the results by TAZ and jurisdiction. Zonyk thanked the jurisdictions for meeting with GVMC to allocate the growth and noted that Committee approval is needed to move forward with model development for the 2050 MTP.

**MOTION by Waalkes, SUPPORT by Kirkwood, to approve the socio-economic data for the 2050 MTP. MOTION CARRIED UNANIMOUSLY.**

**VII. OTHER BUSINESS**

- MDOT Updates

D. Kent noted that there was good turnout for the M-37 public open house. MDOT is working with consultants to get the formal environmental assessment underway. They also have meetings scheduled with FHWA to formally initiate the environmental assessment.

D. Kent also noted that the Fruitridge 1-96 project funding was approved by the state legislature to help with basic maintenance for the project. MDOT is meeting with the City of Walker tomorrow to discuss how the process will work, but they should be able to complete most of what was originally planned with the grant money. The general target for construction to begin for this project is FY 2025.

D. Kent noted that there is an Advisory Committee meeting on March 24 for the US-131 environmental linkages study. They will meet with the City of Grand Rapids, MDOT, DGRI, and Kent County. D. Kent noted that for this project, MDOT is trying to transition out of the PEL and into the \$10,000,000 earmark from a few years ago. They are trying to move toward a preferred alternative, focusing on the Wealthy St. interchange area.

- Harrall asked the group about the application process for the federal funding opportunity from Senator Peters. Ries explained that the Transportation Committee of the Senate provides information to the Senator's offices, which is then reflected to the applicants. So, it is the responsibility of the Senator's office to make the submittals on behalf of the community. Ries stated the application last year asked for high level project information such as the project cost, general schedule, and scope. Ries also suggested to focus on the impact of the social economic value, sustainability efforts of the project, etc. when writing the submittals. Ries noted that it took about 8-10 months to hear a response back about the funding.

R. DeVries noted that the City of Grand Rapids has examples of previous applications as well that he could share with Harrall.

Ries asked if Senators Peter's office has designated a new lead of transportation. Joseph stated that she is not sure. Joseph offered letters of support for these applications if needed as well.

- Kimball announced that the 2022 traffic counts are almost complete. There will be a kickoff meeting next week, but Kimball is also available for one-on-one meetings if needed. The kickoff meeting will provide jurisdictions with their traffic counts and provide a general overview. There will also be a call for materials that jurisdictions might need.

- Joseph gave an update on the Airport Access Study. Over 100 people attended the open house in Cascade and there was good engagement there. Joseph noted that this phase of engagement is now over, and a summary is being compiled. The draft final report of the phase 3 engagement will be included with the packet in May. Joseph noted the main secondary access point is proposed from the 36<sup>th</sup> Street interchange on I-96. Other proposals include intersection improvements at 44<sup>th</sup>/Patterson and 60<sup>th</sup>/Broadmoor, freight improvements on Thornapple Ave, and bike and pedestrian improvements. There was also high public support for a downtown shuttle or transit service from the airport. Joseph thanked the committee for their support and assistance with the study.
  - Joseph announced that GVMC was approved for the Safe Streets for All grant. Staff will be developing a regional safety action plan which will cover all of the GVMC jurisdictions. At the end of the process, there will be a list of safety projects and strategies that each community can then apply for implementation funds to help fund those projects. Joseph stated that based on the federal timeline, she expects this to end up in the FY 2024 work program. Staff will work on forming the safety committee and steering committee this year for pre-work on the process.
- K. Bennet asked for budget clarifications for the SS4A grant. Joseph stated the budget is \$300,000; however, she will potentially propose to the Policy Committee to add the \$150,000 in STP funding in the work program to supplement the funding.
- Conners suggested a group outing for everyone to get to know each other better. Discussion ensued.

## VIII. **ADJOURNMENT**

Conners adjourned the March 1, 2023, Technical Committee meeting at 9:57 a.m.



**GRAND VALLEY METROPOLITAN COUNCIL**

ADA TOWNSHIP • ALGOMA TOWNSHIP • ALLENDALE TOWNSHIP • ALPINE TOWNSHIP • BELDING • BYRON TOWNSHIP • CALEDONIA • CALEDONIA TOWNSHIP • CANNON TOWNSHIP • CASCADE TOWNSHIP  
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GREENVILLE • HASTINGS • HUDSONVILLE • IONIA • JAMESTOWN TOWNSHIP • KENT COUNTY • KENTWOOD • LOWELL • LOWELL TOWNSHIP • MIDDLEVILLE • NELSON TOWNSHIP  
OTTAWA COUNTY • PLAINFIELD TOWNSHIP • ROCKFORD • SAND LAKE • SPARTA • TALLMADGE TOWNSHIP • WALKER • WAYLAND • WYOMING

**MEMORANDUM**

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**DATE:** April 26, 2023  
**TO:** Tech Committee  
**FROM:** Mike Zonyk, Transportation Planner  
**RE:** **FY2023-2026 Transportation Improvement Program**

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On behalf of MDOT and Grand Rapids the following amendments/modifications to the FY2023-2026 TIP are being requested:

- MDOT is requesting approval for five S/TIP line items. The line item amendments are due to added phases, added cost, and a change in fiscal year. The Fruit Ridge bridge project is being reactivated. The traffic safety, M-6/Holstege wetland mitigation, and US-131 projects are all being modified due to additional needs and cost constraints. Additionally, the Leonard Street project is being delayed to a future S/TIP cycle to balance the budget in the current S/TIP. Enclosed is also the S/TIP exempt project list and MDOT staff will provide highlights as necessary (please see attachments).
- Grand Rapids is taking advantage of the federal buyout program for their Fuller Ave project resulting in the construction phase being abandoned. This also requires an amendment needing approval. (please see attachments).

If you have any questions, please do not hesitate to contact me at (616) 776-7669.

## About GVMC

The Grand Valley Metropolitan Council (GVMC) is the Metropolitan Planning Organization (MPO) for Kent and eastern Ottawa Counties. MPOs provide a comprehensive transportation planning and decision making process for their region which encompasses all modes of transportation and includes both short and long-range transportation planning.

## What is the TIP?

The Transportation Improvement Program (TIP) identifies and lists all proposed transportation projects occurring in the MPO area that will be using federal funding over the course of four years. The planning process includes local jurisdictions, transit agencies, and state and federal transportation officials. More information about the development process can be found below, and the full document, including the list of projects for FY2023-2026, can be found on the GVMC website at:

[www.gvmc.org/tip](http://www.gvmc.org/tip)

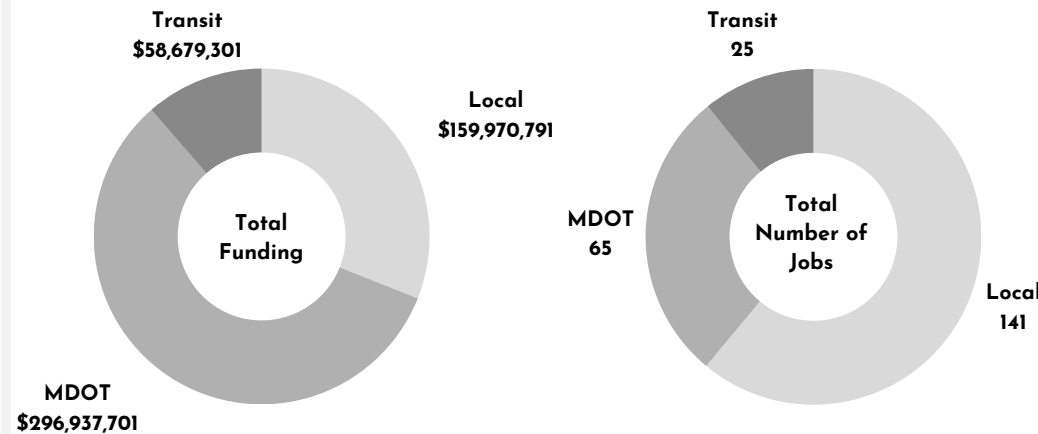
## TIP Development Process



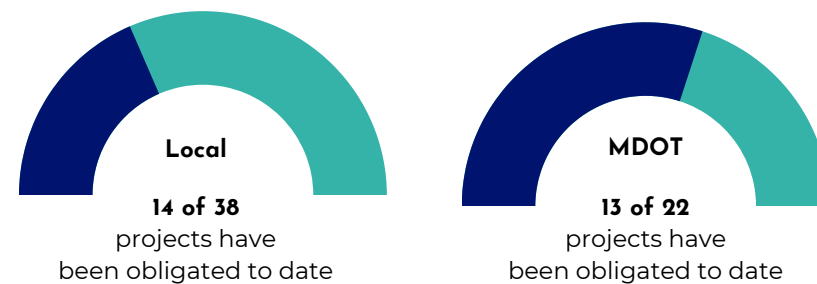
## The FY2023-2026 TIP Includes

231 Projects totaling \$515,587,793

This Includes:



## FY2023 Obligation Update



All transit jobs will be obligated on 9/30/2023

## TIP Amendment Process

GVMC regularly amends the TIP to reflect changes to the list of projects. These changes include modifications to the cost of projects, scope, description, and fiscal years. Projects may also be added and deleted. While some changes are able to be made by GVMC staff, others require a formal amendment, which includes approval by the GVMC Technical and Policy Committees, MDOT, and by the Federal Transit Administration (FTA) and Federal Highway Administration (FHWA).

An amendment to the TIP is required if:

- A project is added or deleted from the list
- The cost of a project increases by 25% or more
- Project scope changes significantly

## May 2023 TIP Amendment Summary

Additions

1

Delays

1

Cost Changes

2

Removals

2

The complete list of amendments, including project information such as jurisdiction, cost, and project year, can be found on the following page.

**GMVC - May 2023 Amendment/Modifications (2023-2026 TIP)**

Fiscal Year	Job Type	Job#	GPA Type	Responsible Agency	Project Name	Limits	Length	Primary Work Type	Project Description	Phase	Fed Estimated Amount	State Estimated Amount	Local Estimated Amount	Total Estimated Amount	Fund Source	Template Name	Federal Amendment Type
2024	Trunkline	201305	S/TIP Line items	MDOT	I-96	Fruit Ridge Road Over I-96	1.439	Bridge Replacement	Bridge Replacement	CON	\$1,721,139	\$191,238	\$0	\$1,912,377	IM	Bridge Replacement and Preservation	Phase Added, Previously Suspended (Reactivation of CON Phase to Allow for Future State Grants)
2023	Local	205658	S/TIP Line items	Grand Rapids	Fuller Ave SE	Kalamazoo Street to Adams Street	0.281	Reconstruction	Asphalt Reconstruct	CON	\$358,094	\$0	\$1,086,075	\$1,444,169	STU	STP - TMA	Phase Abandoned, Federal Buyout Program
2023	Trunkline	207359	S/TIP Line items	MDOT	Regionwide	All trunkline routes of GVMC MPO, All trunkline routes of GVMC MPO	1.845	Traffic Safety	Special pavement marking application on trunklines in Grand Region	CON	\$129,625	\$14,403	\$0	\$144,028	HSIP	Traffic And Safety - Pavement Markings	Phase Abandoned Due to Added Cost
2023	Trunkline	209604	S/TIP Line items	MDOT	M-6 / Holstege Wetland Mitigation Site	M-6 / Holstege Wetland Mitigation Site	0.000	Environmental	Wetland Mitigation Site Access and Additional Wetland Restoration	CON	\$945,368	\$209,633	\$0	\$1,155,000	ST	Wetland Pre-Mitigation	Budget Increase Over 25%, Addition Culverts and PE Phase Funds Necessary.
2023	Trunkline	210072	S/TIP Line items	MDOT	US-131	from 100th Street north to 76th Street	3.187	Reconstruction	Reconstruction, Add Weave/Merge Lanes	CON	\$100,000	\$64,400,000	\$0	\$64,500,000	RBMP, NH	Road - Rehabilitation and Reconstruction	Budget Increase Over 25%, & Length Reduction to Match Available Funds.
2023	Trunkline	213954	S/TIP Line items	MDOT	Leonard St NE	TSC - major PR	26.055	Traffic Safety	Non-freeway signing upgrade	PE	\$0	\$0	\$0	\$0	STG	Traffic And Safety - Signs	PE Phase Delayed to Future S/TIP Cycle



## S/TIP EXEMPT - REVERSIBLE JOBS

Fiscal Year(s) : 2023, 2024, 2025, 2026

Date: 04/21/2023

Page: 1 of 5

Classification: Public

Fiscal Year	Job Type	Job #	MPO	County	Responsible Agency	Project Name	Limits	Length	Primary Work Type	Project Description	AC/ACC	ACC Year(s)	Phase	Phase Status	S/TIP Cycle	S/TIP Status	Fed Authorized Amount	Total Authorized Amount	Fed Estimated Amount	Total Estimated Amount	Cost To Date	Fund Source	Schedule Obligation Date	Actual Obligation Date	Schedule Let Date	Actual Let Date	CR Approved Date	Comments
2023	Trunkline	204773	Grand Valley Metropolitan Council (GVMC)	Ottawa	MDOT	I-196	at the 32nd Avenue Interchange	0.000	New Facilities	Construct new carpool lot.			ROW	Abandoned	20-23	A	\$0	\$0	\$0	\$48,000	\$0	M	10/10/2022		11/01/2024		10/09/2022	
2023	Trunkline	204773	Grand Valley Metropolitan Council (GVMC)	Ottawa	MDOT	I-196	at the 32nd Avenue Interchange	0.000	New Facilities	Construct new carpool lot.			PE	Abandoned	20-23	A	\$0	\$0	\$0	\$20,000	\$0	M	10/10/2022		11/01/2024		10/09/2022	
2023	Trunkline	210829	Grand Valley Metropolitan Council (GVMC)	Kent	MDOT	I-96	From M-37 east to Cascade Road	2.682	Road Capital Preventive Maintenance	Milling & One Course Asphalt Overlay (2")			PE	Active	23-26	A	\$0	\$100,000	\$0	\$100,000	\$52,870	M	02/01/2023	01/24/2023	09/06/2024		03/29/2023	
2023	Trunkline	212524	Grand Valley Metropolitan Council (GVMC)	Kent	MDOT	US-131	2 structures located along US-131	0.000	Bridge CPM	Pin and Hanger Replacement, Joint Replacement, Zone Painting, Spot Paint			CON	Programmed	23-26	A	\$0	\$0	\$0	\$1,101,148	\$0	M	09/01/2023		11/03/2023		01/25/2023	
2023	Trunkline	212533	Grand Valley Metropolitan Council (GVMC)	Kent	MDOT	M-11	2 structures located on M-11 & I-96 EB	0.000	Bridge CPM	Scour Repair			ROW	Active	23-26	A	\$0	\$20,000	\$0	\$20,000	\$522	M	01/06/2023	01/09/2023	12/01/2023		02/07/2023	
2023	Trunkline	212929	Grand Valley Metropolitan Council (GVMC)	Kent	MDOT	US-131 NB	US-131 NB over Cesar E. Chavez Ave	0.000	Bridge CPM	Epoxy Overlay			PES	Active	23-26	A	\$0	\$330,942	\$0	\$330,942	\$0	M	10/07/2022	02/01/2023	11/07/2025		10/08/2022	
2023	Trunkline	212929	Grand Valley Metropolitan Council (GVMC)	Kent	MDOT	US-131 NB	US-131 NB over Cesar E. Chavez Ave	0.000	Bridge CPM	Epoxy Overlay			PE	Active	23-26	A	\$0	\$53,607	\$0	\$53,607	\$0	M	10/07/2022	02/01/2023	11/07/2025		10/08/2022	
2023	Trunkline	213068	Grand Valley Metropolitan Council (GVMC)	Kent	MDOT	US-131 S	US-131 SB over Grandville Ave	0.000	Bridge CPM	Epoxy Overlay			PES	Active	23-26	A	\$0	\$249,085	\$0	\$249,085	\$0	M	03/01/2023	02/01/2023	12/04/2026		10/08/2022	
2023	Trunkline	213068	Grand Valley Metropolitan Council (GVMC)	Kent	MDOT	US-131 S	US-131 SB over Grandville Ave	0.000	Bridge CPM	Epoxy Overlay			PE	Active	23-26	A	\$0	\$40,127	\$0	\$40,127	\$0	M	03/01/2023	02/01/2023	12/04/2026		10/08/2022	
2023	Multi-Modal	217066	Grand Valley Metropolitan Council (GVMC)	Kent	Interurban Transit Partnership	Transit Operating	areawide	0.000	SP09-Specialized Service	FY23 Spec. Srv.-Services for the elderly and individuals with disabilities			NI	Active	23-26	A	\$0	\$542,369	\$0	\$542,369	\$433,118	CTF	09/29/2023	12/20/2022			10/11/2022	
2023	Trunkline	217484	Grand Valley Metropolitan Council (GVMC)	Kent	MDOT	US-131 N/I 96 Ramp	US-131 NB Ramp to I-96 WB over the Marquette Rail	0.000	Bridge Miscellaneous	Railroad Oversight			CON	Active	23-26	A	\$0	\$72,795	\$0	\$72,795	\$0	M	06/01/2023	12/21/2022		01/01/2023	10/28/2022	
2023	Multi-Modal	217492	Grand Valley Metropolitan Council (GVMC)	Kent	Interurban Transit Partnership	Transit Operating	Areawide	0.000	SP05-Local Bus Operating	FY23 Local Bus Operating			NI	Active	23-26	A	\$0	\$15,217,955	\$0	\$15,217,955	\$8,877,141	CTF	09/29/2023	10/01/2022			11/01/2022	
2023	Trunkline	217734	Grand Valley Metropolitan Council (GVMC)	Kent	MDOT	I-196BS	I-196BS at Clyde Park	0.000	Traffic Safety	Modernize signalized intersection			ROW	Programmed	23-26	A	\$0	\$0	\$0	\$25,000	\$0	M	06/01/2023		01/05/2024		04/11/2023	
2023	Multi-Modal	217747	Grand Valley Metropolitan Council (GVMC)	Kent	Hope Network, Inc.	Transit Operating	areawide	0.000	3000-Operating Assistance	Operating assistance under the FY23 5310 ARPA			NI	Active	23-26	A	\$81,889	\$81,889	\$81,889	\$81,889	\$0	AR11	09/29/2023	02/22/2023			10/20/2022	
2023	Multi-Modal	217748	Grand Valley Metropolitan Council (GVMC)	Kent	Senior Neighbors	Transit Operating	areawide	0.000	3000-Operating Assistance	Operating assistance under the FY23 5310 ARPA			NI	Active	23-26	A	\$2,492	\$2,492	\$2,492	\$2,492	\$0	AR11	09/29/2023	02/18/2023			10/20/2022	
2023	Multi-Modal	217749	Grand Valley Metropolitan Council (GVMC)	Kent	United Methodist Community House	Transit Operating	areawide	0.000	3000-Operating Assistance	Operating assistance under the FY23 5310 ARPA			NI	Active	23-26	A	\$2,836	\$2,836	\$2,836	\$2,836	\$0	AR11	09/29/2023	02/22/2023			10/20/2022	
2023	Multi-Modal	217757	Grand Valley Metropolitan Council (GVMC)	Ottawa	Georgetown Seniors, Inc.	Transit Operating	areawide	0.000	3000-Operating Assistance	Operating assistance under the FY23 5310 ARPA			NI	Active	23-26	A	\$25,316	\$25,316	\$25,316	\$25,316	\$0	AR11	09/29/2023	02/27/2023			10/20/2022	



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Fiscal Year	Job Type	Job #	MPO	County	Responsible Agency	Project Name	Limits	Length	Primary Work Type	Project Description	AC/ACC	ACC Year(s)	Phase	Phase Status	S/TIP Cycle	S/TIP Status	Fed Authorized Amount	Total Authorized Amount	Fed Estimated Amount	Total Estimated Amount	Cost To Date	Fund Source	Schedule Obligation Date	Actual Obligation Date	Schedule Let Date	Actual Let Date	CR Approved Date	Comments	
2023	Multi-Modal	217801	Grand Valley Metropolitan Council (GVMC)	Kent	Interurban Transit Partnership	FY2020 CARES	Areawide	0.000	SP1403-office equipment (copier, office furniture, etc.)	FY2020 CARES Act Operating and Capital			NI	Programmed	23-26	A	\$50,000	\$0	\$50,000	\$50,000	\$0	CA07	10/20/2022					10/20/2022	
2023	Multi-Modal	217801	Grand Valley Metropolitan Council (GVMC)	Kent	Interurban Transit Partnership	FY2020 CARES	Areawide	0.000	SP3000-operating except JARC and New Freedom	FY2020 CARES Act Operating and Capital			NI	Programmed	23-26	A	\$23,909,064	\$0	\$23,909,064	\$23,909,064	\$0	CA07	10/20/2022					10/20/2022	
2023	Multi-Modal	217801	Grand Valley Metropolitan Council (GVMC)	Kent	Interurban Transit Partnership	FY2020 CARES	Areawide	0.000	SP1104-40 foot and greater replacement bus with or without lift	FY2020 CARES Act Operating and Capital			NI	Programmed	23-26	A	\$2,875,000	\$0	\$2,875,000	\$2,875,000	\$0	CA07	10/20/2022					10/20/2022	
2023	Multi-Modal	217801	Grand Valley Metropolitan Council (GVMC)	Kent	Interurban Transit Partnership	FY2020 CARES	Areawide	0.000	SP1404-computers (hardware and software)	FY2020 CARES Act Operating and Capital			NI	Programmed	23-26	A	\$325,000	\$0	\$325,000	\$325,000	\$0	CA07	10/20/2022					10/20/2022	
2023	Multi-Modal	217801	Grand Valley Metropolitan Council (GVMC)	Kent	Interurban Transit Partnership	FY2020 CARES	Areawide	0.000	SP1203-admin/maintenance facility improvements	FY2020 CARES Act Operating and Capital			NI	Programmed	23-26	A	\$200,000	\$0	\$200,000	\$200,000	\$0	CA07	10/20/2022					10/20/2022	
2023	Multi-Modal	217801	Grand Valley Metropolitan Council (GVMC)	Kent	Interurban Transit Partnership	FY2020 CARES	Areawide	0.000	SP1408-maintenance equipment (hoists, tools, etc.)	FY2020 CARES Act Operating and Capital			NI	Programmed	23-26	A	\$50,000	\$0	\$50,000	\$50,000	\$0	CA07	10/20/2022					10/20/2022	
2023	Multi-Modal	217801	Grand Valley Metropolitan Council (GVMC)	Kent	Interurban Transit Partnership	FY2020 CARES	Areawide	0.000	SP1406-security equipment - facilities	FY2020 CARES Act Operating and Capital			NI	Programmed	23-26	A	\$150,000	\$0	\$150,000	\$150,000	\$0	CA07	10/20/2022					10/20/2022	
2023	Multi-Modal	217801	Grand Valley Metropolitan Council (GVMC)	Kent	Interurban Transit Partnership	FY2020 CARES	Areawide	0.000	SP1402-fare collection	FY2020 CARES Act Operating and Capital			NI	Programmed	23-26	A	\$500,000	\$0	\$500,000	\$500,000	\$0	CA07	10/20/2022					10/20/2022	
2023	Multi-Modal	217801	Grand Valley Metropolitan Council (GVMC)	Kent	Interurban Transit Partnership	FY2020 CARES	Areawide	0.000	SP1401-bus equipment (spare, tires, windshields, lifts, bus wraps, bike rack, ADA)	FY2020 CARES Act Operating and Capital			NI	Programmed	23-26	A	\$300,000	\$0	\$300,000	\$300,000	\$0	CA07	10/20/2022					10/20/2022	
2023	Multi-Modal	217802	Grand Valley Metropolitan Council (GVMC)	Kent	Interurban Transit Partnership	FY2021 CRRSAA Operating	Areawide	0.000	SP3000-operating except JARC and New Freedom	FY2021 5307 CRRSAA Operating			NI	Programmed	23-26	A	\$6,246,871	\$0	\$6,246,871	\$6,246,871	\$0	CR11	10/20/2022					10/20/2022	
2023	Multi-Modal	217803	Grand Valley Metropolitan Council (GVMC)	Kent	Interurban Transit Partnership	FY2021 ARP Operating	Areawide	0.000	SP3000-operating except JARC and New Freedom	FY2021 5307 ARP Operating			NI	Programmed	23-26	A	\$26,377,113	\$0	\$26,377,113	\$26,377,113	\$0	AR11	10/20/2022					10/20/2022	
2023	Multi-Modal	217872	Grand Valley Metropolitan Council (GVMC)	Kent	Hope Network, Inc.	Transit Capital	Areawide	0.000	SP02-Bus Capital	100% state funds			NI	Active	23-26	A	\$0	\$83,055	\$0	\$83,055	\$66,285	CTF	09/29/2023	11/30/2022				11/03/2022	
2023	Trunkline	218237	Grand Valley Metropolitan Council (GVMC)	Kent	MDOT	Regionwide - Grand Region	Regionwide - Grand Region	0.000	Contracts	Warranty Administration for Road CPM, Road R&R and Bridge Projects			CON	Active	23-26	A	\$0	\$300,000	\$0	\$300,000	\$3,685	M	01/20/2023	01/23/2023				01/05/2023	
2023	Local	218296	Grand Valley Metropolitan Council (GVMC)	Kent	Sand Lake	W Maple St NE	Various Streets, Sand Lake, Kent County	0.767	Road Capital Preventive Maintenance	Skip patch and chip sealing			CON	Active	23-26	A			\$0	\$258,000		TEDB	02/15/2023	02/13/2023				02/10/2023	
2023	Local	218694	Grand Valley Metropolitan Council (GVMC)	Kent	Grand Elk Railroad, LLC	68th St SW	At Grand Elk Railroad in Byron Township, Kent County	0.000	Railroad	install new crossing surface			CON	Active	23-26	A			\$0	\$85,585		MRR	04/03/2023	04/18/2023				03/01/2023	





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Fiscal Year	Job Type	Job #	MPO	County	Responsible Agency	Project Name	Limits	Length	Primary Work Type	Project Description	AC/ACC	ACC Year(s)	Phase	Phase Status	S/TIP Cycle	S/TIP Status	Fed Authorized Amount	Total Authorized Amount	Fed Estimated Amount	Total Estimated Amount	Cost To Date	Fund Source	Schedule Obligation Date	Actual Obligation Date	Schedule Let Date	Actual Let Date	CR Approved Date	Comments
2023	Local	218695	Grand Valley Metropolitan Council (GVMC)	Kent	Grand Rapids Eastern Railroad Co.	Maryland Ave NE	At Grand Rapids Eastern Railroad in the City of Grand Rapids, Kent County	0.000	Railroad	install new crossing surface			CON	Active	23-26	A			\$0	\$71,520		MRR	04/03/2023	04/12/2023			03/01/2023	
2023	Local	218742	Grand Valley Metropolitan Council (GVMC)	Kent	Grand Rapids Eastern Railroad Co.	Plymouth Ave NE	At Grand Rapids Eastern Railroad in the City of Grand Rapids, Kent County	0.000	Railroad	install new crossing surface			CON	Active	23-26	A			\$0	\$84,310		MRR	04/03/2023	04/12/2023			03/07/2023	
2023	Local	218746	Grand Valley Metropolitan Council (GVMC)	Kent	Grand Rapids Eastern Railroad Co.	Spaulding Ave SE	At Grand Rapids Eastern Railroad in Ada Township, Kent County	0.000	Railroad	install new crossing surface			CON	Active	23-26	A			\$0	\$65,433		MRR	04/03/2023	04/12/2023			03/07/2023	
2023	Multi-Modal	218924	Grand Valley Metropolitan Council (GVMC)	Kent	United Methodist Community House	Transit Capital	Areawide	0.000	SP02-Bus Capital	100% state funds			NI	Programmed	23-26	A	\$0	\$0	\$0	\$18,046	\$0	CTF	09/29/2023				03/30/2023	
2023	Multi-Modal	218929	Grand Valley Metropolitan Council (GVMC)	Kent	Kent County Community Action	Transit Capital	Areawide	0.000	SP02-Bus Capital	100% state funds			NI	Programmed	23-26	A	\$0	\$0	\$0	\$22,597	\$0	CTF	09/29/2023				03/31/2023	
2024	Trunkline	204758	Grand Valley Metropolitan Council (GVMC)	Ottawa	MDOT	M-6	Grand Rapids/South Beltline W	0.000	Roadside Facilities - Preserve	Cold milling and one course asphalt overlay.			PE	Abandoned	23-26	A	\$0	\$0	\$0	\$5,000	\$0	M	12/01/2023		08/02/2024		12/07/2022	
2024	Trunkline	208925	Grand Valley Metropolitan Council (GVMC)	Kent	MDOT	I-96	3 Mile Road Over I-96 (41025-S06)	0.000	Bridge Rehabilitation	Deep Overlay			PES	Programmed	23-26	A	\$0	\$0	\$0	\$125,941	\$0	M	10/02/2023		10/03/2025		10/08/2022	
2024	Trunkline	208925	Grand Valley Metropolitan Council (GVMC)	Kent	MDOT	I-96	3 Mile Road Over I-96 (41025-S06)	0.000	Bridge Rehabilitation	Deep Overlay			PE	Programmed	23-26	A	\$0	\$0	\$0	\$48,385	\$0	M	10/02/2023		10/03/2025		10/08/2022	
2024	Trunkline	210063	Grand Valley Metropolitan Council (GVMC)	Kent	MDOT	M-37	From 92nd Street north to 76th Street	3.324	Major Widening	Reconstruction and Widening for a Boulevard			ROW	Programmed	23-26	A	\$0	\$0	\$0	\$1,500,000	\$0	M	12/01/2023		08/02/2024		02/27/2023	
2024	Trunkline	210829	Grand Valley Metropolitan Council (GVMC)	Kent	MDOT	I-96	From M-37 east to Cascade Road	2.682	Road Capital Preventive Maintenance	Milling & One Course Asphalt Overlay (2")			CON	Programmed	23-26	A	\$0	\$0	\$0	\$3,958,000	\$0	M	07/12/2024		09/06/2024		03/29/2023	
2024	Trunkline	211401	Grand Valley Metropolitan Council (GVMC)	Ottawa	MDOT	I-96	I-96 EB over M-11 WB	0.000	Bridge CPM Deck Patching				PES	Programmed	23-26	A	\$0	\$0	\$0	\$124,766	\$0	M	08/05/2024		08/04/2028		10/08/2022	
2024	Trunkline	211401	Grand Valley Metropolitan Council (GVMC)	Ottawa	MDOT	I-96	I-96 EB over M-11 WB	0.000	Bridge CPM Deck Patching				PE	Programmed	23-26	A	\$0	\$0	\$0	\$116,061	\$0	M	08/05/2024		08/04/2028		10/08/2022	
2024	Trunkline	211402	Grand Valley Metropolitan Council (GVMC)	Kent	MDOT	I-96	Four (4) Bridges on I-96	0.000	Bridge Rehabilitation	Deep Overlay and Deck Patching			PES	Programmed	23-26	A	\$0	\$0	\$0	\$272,324	\$0	M	09/03/2024		08/04/2028		10/08/2022	
2024	Trunkline	211402	Grand Valley Metropolitan Council (GVMC)	Kent	MDOT	I-96	Four (4) Bridges on I-96	0.000	Bridge Rehabilitation	Deep Overlay and Deck Patching			PE	Programmed	23-26	A	\$0	\$0	\$0	\$170,852	\$0	M	09/03/2024		08/04/2028		10/08/2022	
2024	Trunkline	211403	Grand Valley Metropolitan Council (GVMC)	Kent	MDOT	I-96	I-96 over Bristol Road	0.000	Bridge CPM Deck Patching				PES	Programmed	23-26	A	\$0	\$0	\$0	\$98,500	\$0	M	09/03/2024		08/04/2028		10/08/2022	
2024	Trunkline	211403	Grand Valley Metropolitan Council (GVMC)	Kent	MDOT	I-96	I-96 over Bristol Road	0.000	Bridge CPM Deck Patching				PE	Programmed	23-26	A	\$0	\$0	\$0	\$37,600	\$0	M	09/03/2024		08/04/2028		10/08/2022	
2024	Trunkline	211441	Grand Valley Metropolitan Council (GVMC)	Kent	MDOT	US-131	Two (2) Bridges on US-131 over 6 Mile Road	0.000	Bridge Rehabilitation	Deep Overlay and Deck Patching			PES	Abandoned	23-26	A	\$0	\$0	\$0	\$86,000	\$0	M	10/02/2023		10/03/2025		10/08/2022	
2024	Trunkline	211441	Grand Valley Metropolitan Council (GVMC)	Kent	MDOT	US-131	Two (2) Bridges on US-131 over 6 Mile Road	0.000	Bridge Rehabilitation	Deep Overlay and Deck Patching			PE	Abandoned	23-26	A	\$0	\$0	\$0	\$81,000	\$0	M	10/02/2023		10/03/2025		10/08/2022	



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Fiscal Year	Job Type	Job #	MPO	County	Responsible Agency	Project Name	Limits	Length	Primary Work Type	Project Description	AC/ACC	ACC Year(s)	Phase	Phase Status	S/TIP Cycle	S/TIP Status	Fed Authorized Amount	Total Authorized Amount	Fed Estimated Amount	Total Estimated Amount	Cost To Date	Fund Source	Schedule Obligation Date	Actual Obligation Date	Schedule Let Date	Actual Let Date	CR Approved Date	Comments				
2024	Trunkline	211492	Grand Valley Metropolitan Council (GVMC)	Ottawa	MDOT	M-45 OLD	From the Grand River east to M-45	1.288	Road Capital Preventive Maintenance	Milling and One Course Asphalt Overlay			PE	Programmed	23-26	A	\$0	\$0	\$0	\$40,000	\$0	M	10/09/2023		11/01/2024		02/23/2023					
2024	Trunkline	211492	Grand Valley Metropolitan Council (GVMC)	Ottawa	MDOT	M-45 OLD	From the Grand River east to M-45	1.288	Road Capital Preventive Maintenance	Milling and One Course Asphalt Overlay			CON	Programmed	23-26	A	\$0	\$0	\$0	\$866,000	\$0	M	09/06/2024		11/01/2024		02/23/2023					
2024	Trunkline	211694	Grand Valley Metropolitan Council (GVMC)	Kent	MDOT	US-131	From I-96 north to Post Drive	6.185	Active Traffic Management	Active Traffic Management Systems			PES	Programmed	23-26	A	\$0	\$0	\$0	\$356,000	\$0	M	10/02/2023		08/07/2026		11/30/2022					
2024	Trunkline	212533	Grand Valley Metropolitan Council (GVMC)	Kent	MDOT	M-11	2 structures located on M-11 & I-96 EB	0.000	Bridge CPM	Scour Repair			CON	Programmed	23-26	A	\$0	\$0	\$0	\$666,000	\$0	M	10/06/2023		12/01/2023		02/07/2023					
2024	Trunkline	214056	Grand Valley Metropolitan Council (GVMC)	Kent	MDOT	US-131	From M-11 (28th Street) to Pearl Street	3.923	Road Capital Preventive Maintenance	Full Depth Concrete Pavement Repairs			PE	Programmed	23-26	A	\$0	\$0	\$0	\$115,000	\$0	M	11/03/2023		12/06/2024		03/29/2023					
2024	Trunkline	214788	Grand Valley Metropolitan Council (GVMC)	Kent	MDOT	Regionwide	US-131/54th Street	0.000	Bridge Rehabilitation	Regionwide High Load Hit Repairs			CON	Programmed	23-26	A	\$0	\$0	\$0	\$1,306,826	\$0	M	08/30/2024		11/01/2024		10/08/2022					
2024	Trunkline	217734	Grand Valley Metropolitan Council (GVMC)	Kent	MDOT	I-196BS	I-196BS at Clyde Park	0.000	Traffic Safety	Modernize signalized intersection			CON	Programmed	23-26	A	\$0	\$0	\$0	\$351,817	\$0	M	11/09/2023		01/05/2024		04/11/2023					
2024	Trunkline	218807	Grand Valley Metropolitan Council (GVMC)	Kent	MDOT	TSC-wide	M-11 at Leonard and US-131 SB at Post	0.027	Traffic Safety	Traffic signal installation and modernization			CON	Programmed	23-26	A	\$0	\$0	\$0	\$703,610	\$0	M	12/08/2023		02/02/2024		03/23/2023					
2025	Trunkline	201965	Grand Valley Metropolitan Council (GVMC)	Kent	MDOT	US-131	US-131 Carpool Lot at 10 Mile Road Interchange (Facility 541007 - Rockford)	0.000	Roadside Facilities - Preserve	Cold Milling and Resurfacing			PE	Suspended	23-26	A	\$0	\$0	\$0	\$5,000	\$0	M	12/02/2024		01/03/2025		10/09/2022					
2025	Trunkline	214056	Grand Valley Metropolitan Council (GVMC)	Kent	MDOT	US-131	From M-11 (28th Street) to Pearl Street	3.923	Road Capital Preventive Maintenance	Full Depth Concrete Pavement Repairs			CON	Programmed	23-26	A	\$0	\$0	\$0	\$5,812,000	\$0	M	10/11/2024		12/06/2024		03/29/2023					
2025	Trunkline	214816	Grand Valley Metropolitan Council (GVMC)	Kent	MDOT	M-37	M-44 over Grand Rapids Eastern Railroad	0.000	Bridge CPM	Substructure Patching			CON	Programmed	23-26	A	\$0	\$0	\$0	\$337,172	\$0	M	10/11/2024		12/06/2024		12/07/2022					
2026	Trunkline	213789	Grand Valley Metropolitan Council (GVMC)	Kent	MDOT	I-96	Forest Hill Avenue over I-96	0.000	Bridge Rehabilitation	Deep Overlay			PES	Programmed	23-26	A	\$0	\$0	\$0	\$181,000	\$0	M	04/01/2026		10/06/2028		10/08/2022					
2026	Trunkline	213789	Grand Valley Metropolitan Council (GVMC)	Kent	MDOT	I-96	Forest Hill Avenue over I-96	0.000	Bridge Rehabilitation	Deep Overlay			PE	Programmed	23-26	A	\$0	\$0	\$0	\$37,000	\$0	M	04/01/2026		10/06/2028		10/08/2022					
<b>Grand Total:</b>																	<b>\$61,095,581</b>	<b>\$17,122,468</b>	<b>\$61,095,581</b>	<b>\$97,307,009</b>	<b>\$9,433,622</b>											

**Total Job Phases Reported: 55**

**Preferences:**  
**Report Format:** Standard  
**FISCAL Year(s):** 2023, 2024, 2025, 2026  
**MPO/Non-MPO:** Grand Valley Metropolitan Council (Grand Rapids)  
**County:** ALL  
**Prosperity Region:** ALL  
**MDOT Region:** ALL



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Classification: Public

Fiscal Year	Job Type	Job #	MPO	County	Responsible Agency	Project Name	Limits	Length	Primary Work Type	Project Description	AC/ACC	ACC Year(s)	Phase	Phase Status	S/TIP Cycle	S/TIP Status	Fed Authorized Amount	Total Authorized Amount	Fed Estimated Amount	Total Estimated Amount	Cost To Date	Fund Source	Schedule Obligation Date	Actual Obligation Date	Schedule Let Date	Actual Let Date	CR Approved Date	Comments
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**STIP Cycle:** Fiscal Year 2023 - Fiscal Year 2026

**STIP Status:** Approved, Pending  
(A - Approved, P - Pending)

**Job Type:** Trunkline, Local, Multi-Modal

**Phase Type:** ALL

**Phase Status:** ALL  
(AP - Programmed, AC - Active, CP - Completed)

**Amendment Type:** ALL

**Templates:** Trunkline - ALL, Local - ALL, Multi-Modal - ALL

**Finance System:** Trunkline - ALL, Local - ALL, Multi-Modal - ALL



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**MEMORANDUM**

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**DATE:** April 26, 2023

**TO:** Technical Committee

**FROM:** Laurel Joseph, Director of Transportation Planning

**RE:** **Pavement, Bridge, and Reliability PM Targets**

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The final rules for the Pavement, Bridge, and System Performance Measures became effective on May 20, 2017, directing the development of 2- and 4-year targets for a 4-year period in support of national goals. We've completed the first performance period and now it is time to set targets again for the following measures:

Pavement/Bridge

- Percentage of pavements on the Interstate system in "Good" condition
- Percentage of pavements on the Interstate system in "Poor" condition
- Percentage of pavements on the non-Interstate NHS in "Good" condition
- Percentage of pavements on the non-Interstate NHS in "Poor" condition
- Percentage of NHS bridges classified as in "Good" condition
- Percentage of NHS bridges classified as "Poor" condition

System Performance

- Percent of the person-miles traveled on the Interstate that are reliable
- Percent of the person-miles traveled on the non-Interstate NHS that are reliable
- Truck Travel Time Reliability (TTTR) Index

At the mid-point of the last performance period, in 2020, FHWA determined that the State of Michigan had achieved their targets and made significant progress toward improving the baseline condition for all but one of these measures – percentage of NHS bridges in good condition, which was then adjusted for the second half of the reporting period. A table summarizing this determination can be found here:

<https://www.fhwa.dot.gov/tpm/reporting/state/spg.cfm?state=Michigan>

As a reminder, MPOs have 180 days after the State establishes their targets to act either to support State targets or develop regional targets. In this case that decision needs to be made by June 14, 2023. As was done during the previous target development processes, GVMC staff has participated in target coordination meetings and working groups throughout the development process of all the state targets that have been presented to the committee and believe the State’s methodology for target development to be reasonable. Therefore, staff is recommending that the Technical Committee again recommends support of the state targets for Pavement, Bridge, and System Performance Measures for this reporting period.

A table of the State performance targets compared to GVMC baseline information, and the staff recommended action is provided below. Also attached for additional information are the State’s TPM newsletters for the System Performance, Pavement, and Bridge PMs. These newsletters provide an excellent overview of the target development requirements and process.

<b>Pavement/Bridge Performance Measures</b>				
<b>Performance Measure</b>	<b>State Target</b>	<b>State Baseline</b>	<b>GVMC Baseline</b>	<b>Recommended Action</b>
<b>% of pavements on the Interstate system in “Good” condition</b>	2-year: 59.2% 4-year: 56.7%	70.4%	57.6% (2021) 56.6% (2017)	Support State Target
<b>% of pavements on the Interstate system in “Poor” condition</b>	2-year: 5.0% 4-year: 5.0%	1.8%	1.8% (2021) 0.9% (2017)	Support State Target
<b>% of pavements on the non-Interstate NHS in “Good” condition</b>	2-year: 33.1% 4-year: 33.1%	41.6%	43.9% (2021) 47.3% (2017)	Support State Target
<b>% of pavements on the non-Interstate NHS in “Poor” condition</b>	2-year: 10.0% 4-year: 10.0%	8.9%	2.0% (2021) 14.8% (2017)	Support State Target
<b>% of NHS bridges classified as in “Good” condition</b>	2-year: 15.2% 4-year: 12.8%	22%	26% (2021)	Support State Target
<b>% of NHS bridges classified as “Poor” condition</b>	2-year: 6.8% 4-year: 5.8%	7%	6% (2021)	Support State Target

System Performance Measures				
Performance Measure	State Target	State Baseline	GVMC Baseline	Recommended Action
<b>% of the person-miles traveled on the Interstate that are reliable</b>	2-year: 80.0% 4-year: 80.0%	97.1%	97.8 (2021)	Support State Target
<b>% of the person-miles traveled on the non-Interstate NHS that are reliable</b>	2-year: 75.0% 4-year: 75.0%	94.4%	93.4% (2021)	Support State Target
<b>Truck Travel Time Reliability (TTTR) Index</b>	2-year: 1.60 4-year: 1.60	1.31	1.42 (2021)	Support State Target

If you have any questions, please do not hesitate to contact me at (616) 776-7610 or [laurel.joseph@gvmc.org](mailto:laurel.joseph@gvmc.org).

# PAVEMENT PERFORMANCE MANAGEMENT NEWSLETTER

## 2022-2025 PERFORMANCE PERIOD - BASELINE REPORT

Title 23 CFR §490 – National Performance Management Program (NPMP), Subpart C, directs MDOT and Michigan MPOs coordinate development of 2-year and 4-year predicted performance pavement targets within a defined four-year performance period in support of the national goals established by Congress in MAP-21 of 2012. In accordance with regulation and Federal Highway Administration (FHWA) guidance, targets are data-informed, analysis driven, realistic predictions of future performance constrained to projected program funding. These short-term predictions are intended to evaluate and support the most effective investment strategies for achieving long-term performance goals and expectations in State and MPO planning documents. The NPMP pavement measures are limited to the National Highway System (NHS), regardless of ownership, and the NHS represents a subset of the entire pavement network managed by MDOT, MPOs and local governments.

The four-year performance period baseline is actual pavement performance calculated from data collected the year prior to the first year of a performance period, and reported to the HPMS in the first year of the performance period. Pavement performance is calculated using the Pavement Condition Measure (PCM) which requires evaluation of pavement condition thresholds using International Roughness Index (IRI), Cracking Percent, Rutting (asphalt) and Faulting (jointed concrete) metrics (Figure 1), or Pavement Serviceability Rating (PSR) for segments where the posted speed limit is less than 40 miles per hour (mph).

Within each four-year performance period, FHWA will determine whether the State DOT has made significant progress toward respective State 2- and 4-year target achievement. Regulation defines significant progress as (1) actual performance is better than baseline or (2) actual performance is better than the respective target.

Pavement Condition Thresholds				
Metric	Surface Type	Metric Value Range		
		Good	Fair	Poor
International Roughness Index [IRI] (inches/mile)	Asphalt Pavement,	<95	95 - 170	>170
	Jointed Concrete Pavement,			
	CRCP <sup>1</sup>			
Cracking Percent (% of total area)	Asphalt Pavement	<5%	5 - 20%	>20%
	Jointed Concrete Pavement	<5%	5 - 15%	>15%
	CRCP <sup>1</sup>	<5%	5 - 10%	>10%
Rutting (inches)	Asphalt Pavement	<0.20	0.20 - 0.40	>0.40
Faulting (inches)	Jointed Concrete Pavement	<0.10	0.10 - 0.15	>0.15

Figure 1

### 2018-2021 “Phase-In” Comparison to 2022-2025

The 2018-2021 performance period was the first under the national program and several requirements of Title 23 CFR §490 were “phased-in.” For pavement performance, there are two fundamental changes that apply to the 2022-2025 performance period, and all future performance periods.

First, State DOTs and MPOs are required to develop two-year and four-year targets for Interstate good and poor measures, where the 2018-2021 period only required four-year targets. Second, the 2022-2025 Non-Interstate NHS baseline and targets will be calculated using the PCM or PSR compared to the 2018-2021 performance period that required targets based on IRI or PSR.

## Baseline Condition

In the first year of a new four-year performance period, a baseline for each pavement measure is calculated using prior year actual performance data and in accordance with Section 490, Subpart C.

NHS pavement data collected in 2021 and certified by FHWA in the 2021 HPMS Pavement Data Quality Summary (Figure 2, published 2022), serves as the performance period baseline condition for both Interstate and Non-Interstate NHS measures.

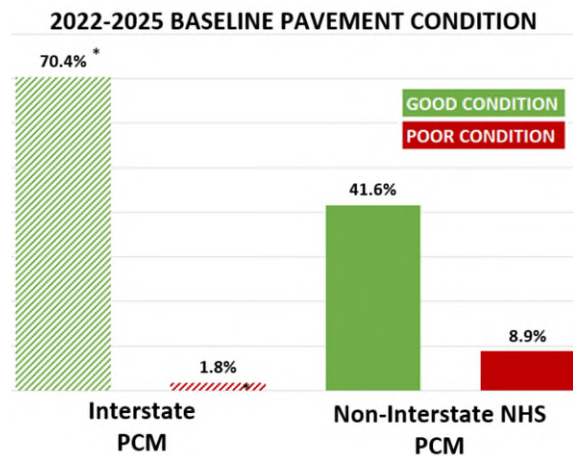


Figure 2 – Reflects condition reported by FHWA in the 2021 HPMS Pavement Data Quality Summary

In 2020, the Rebuilding Michigan Bond Program (RBMP) was announced. The RBMP focuses on rebuilding state highways and bridges critical to the state’s economy and that carry the most traffic. The bond financing is aimed at long-term asset performance. In 2021, the data collection vendor was not able capture 5.1 percent of the Interstate pavement segment due to construction-related traffic controls that prevented collection in compliance with 23 CFR 490.309.

Through regulation, FHWA established a 5.0 Missing, Invalid, or Unresolved (MIU) threshold. If a categorical dataset exceeds 5.0 MIU, FHWA considers the data set to be invalid for use in the national performance program. FHWA has unofficially signaled MDOT’s 2021 Interstate dataset at 5.1 MIU will be insufficient to determine significant progress for (1) the 2018-2021 Interstate performance and (2) the 2022-2025

performance period baseline - although regulation on the latter is more ambiguous.

This was something Michigan and peer State DOTs raised as a concern during the rule-making process. Michigan is encouraging FHWA evaluate the regulatory threshold impact and consider exceptions where the MIU is the direct verified result of program investment. FHWA will provide their formal written assessment by mid-year 2023.

## Target Setting Process

As directed by Section 490 and FHWA guidance, national predicted performance targets are to reflect data-informed, analysis driven, realistic predictions of future performance constrained to available program funding for the four-year performance period. FHWA strongly discourages establishing aspirational targets for this program.

It is also important to distinguish the difference between performance goals, such as those established by the State Transportation Commission (STC) for MDOT or by a board for an MPO, and the federally required predicted performance targets. For example, the STC pavement goals for MDOT are for State trunkline measured by Remaining Service Life (RSL), wherein the national predicted performance targets are for the NHS (State and local owned), measured by PCM. These are not equivalent or appropriate for comparison. The NHS represents a portion of the pavement system managed by MDOT and local governments.

For the **2022-2025 performance period**, the analysis and methods used by the TPM Pavement Team to develop the national predicted performance targets considered inputs and influences not limited to the following: historical trends (outcome of prior investments), current condition (baseline), improvements from investment strategies (5-year program/projects), anticipated natural deterioration based on life-cycle analysis (assets), anticipated changes in use (system performance), and other exogenous factors. Grant and other competitive funding opportunities being pursued but not officially



awarded at the time of analysis were not considered in the target setting process

As part of the current/forecasted condition analysis, the TPM pavement team examined the segments currently rated in fair condition and determined it necessary to further subdivided fair rated segments into three categories: “near good”, “fair”, and “near poor.” As shown in Figure 4, 7.8 percent of the network currently rated in “Fair” condition is nearing poor condition. The team then examined the 5-year investment program to determine the extent to which investments planned for the 4-year period would offset/manage the decline.

PCM Rating	Composite Metric		Interstate % of	
	Combinations	Breakdown	Lanemiles	Interstate
Fair	Poor, Fair, Fair	Near Poor	77	1.3%
	Poor, Fair, Good	Near Poor	393	6.5%
	Poor, Good, Good	Fair	299	4.9%
	Fair, Fair Fair,	Fair	21	0.3%
	Good, Fair, Fair	Fair	197	3.2%
	Good, Good, Fair	Near Good	704	11.6%

Figure 3 – Further analysis of “Fair” PCM rated Interstate segments

On a related matter, when FHWA published the final HPMS PDQS there were notable differences from the preliminary condition used for the MDOT- MPO pavement target-setting coordination session held in July 2022 as shown in Figure 4. While not uncommon for preliminary condition estimates and the final performance reported in the HPMS PDQS to have minor differences, this year the differences were more significant. Of interest in 2022, FHWA had to delay the biennial performance reporting process due to ongoing issues with their HPMS 9.0 system upgrade. This complicated the data verification and reconciliation process.

Performance Measure	Baseline Performance
<b>NHPP: NHS Pavement Condition (§490, Subpart C)</b>	
<b>Pavement Condition Metric (PCM) is IRI, Cracking, and Rutting (asphalt)</b>	
Percentage of Pavements of the <u>Interstate</u> in Good Condition (PCM)	70.4% <del>65.0%</del>
Percentage of Pavements of the <u>Interstate</u> (NHS) in Poor Condition (PCM)	1.8% <del>2.3%</del>
Percentage of Pavements of the <u>Non-Interstate</u> NHS in Good Condition (PCM)	41.6% <del>42.1%</del>
Percentage of Pavements of the <u>Non-Interstate</u> NHS in Poor Condition (PCM)	8.9% <del>6.2%</del>

Figure 4 – 2022-2025 baseline changes between MDOT-MPO coordination session and final HPMS PDQS.

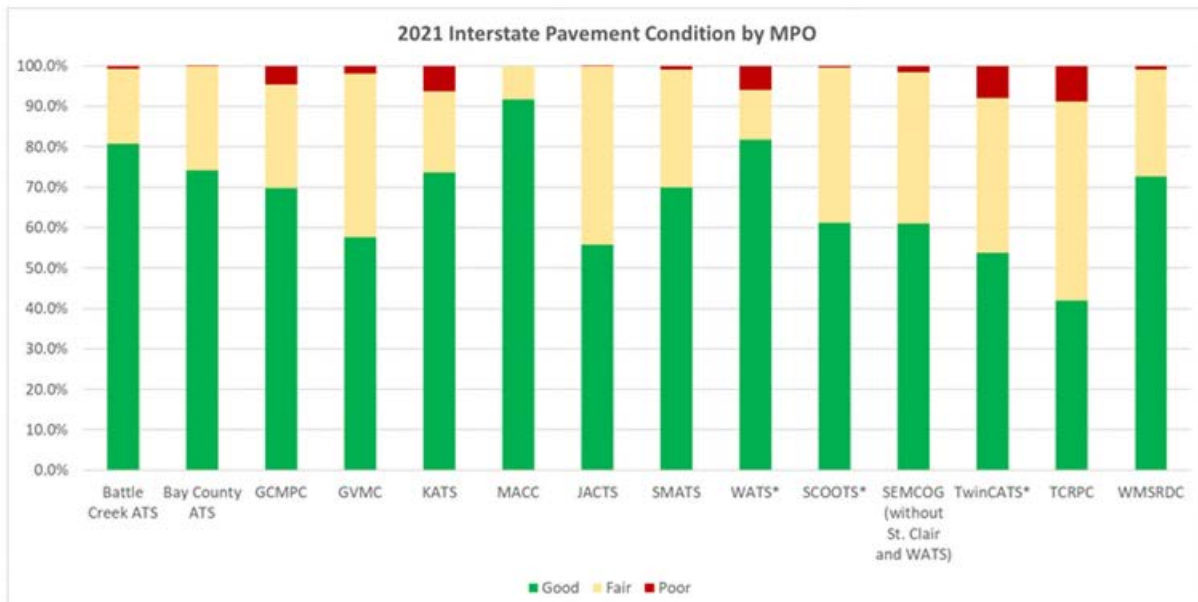
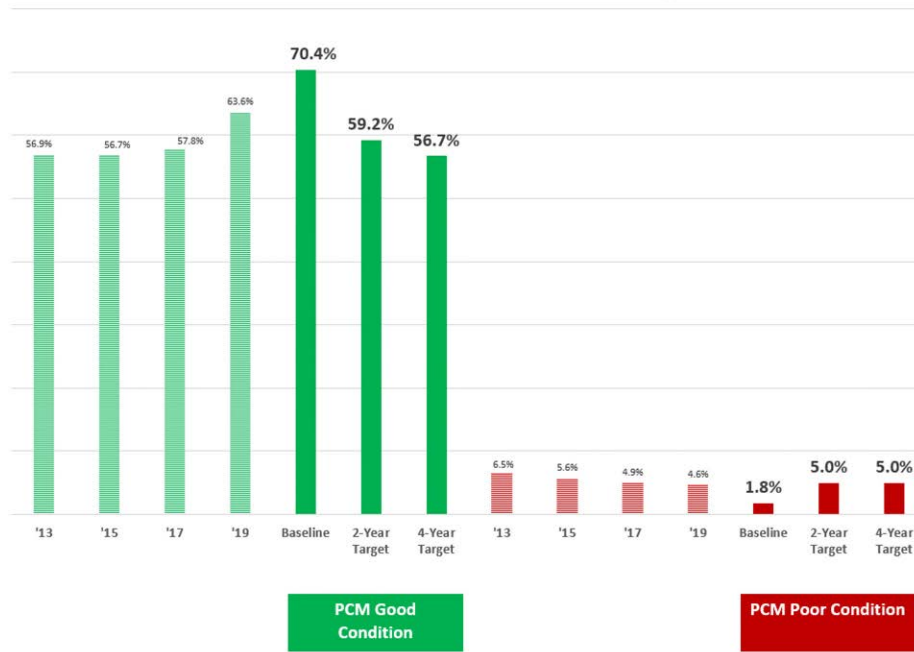
Considering the baseline changes, the TPM Pavement Team conservatively improved the State Interstate good condition 2-year target from 56.7 percent to 59.2 percent from the draft targets discussed by MDOT-MPOs at the target setting coordination meeting in July 2022. The 2.5-point improvement represents about half of the difference between the preliminary calculated baseline and the final 2021 HPMS PDQS reported by FHWA. This change was presented to MTPA in November 2022 with no noted concerns. The pavement team recommended no changes to the remaining pavement targets. Actual performance will be evaluated over the next two years and if supported by data, there will be an opportunity to discuss adjusting one or more 4-year State pavement targets within the mid-performance period report of 2024.

*By June 14, 2023 (180 days following establishment of State targets), MPOs are required to develop 2- year and 4-year targets for all four pavement measures. MPOs have two options for target development: (1) agree to plan and program projects that supports a State target(s) or (2) develop a quantifiable target(s) for the metropolitan planning area. MPOs target elections can be made on a per measure basis. For example, an MPO can elect to support the State 2-year target for Interstate Good and develop an MPO boundary 2-year target for Interstate Poor.*

*Also note, FHWA does not make a significant progress determination of MPO targets whether the MPO elects to support the State target or develop an MPO boundary target. Further, an MPO is not subject the consequence or penalty imposed upon the State DOT for not achieving State targets regardless of whether the MPO elected to support the State target or develop an MPO boundary target.*

## Interstate State Targets and MPO 2021 Performance

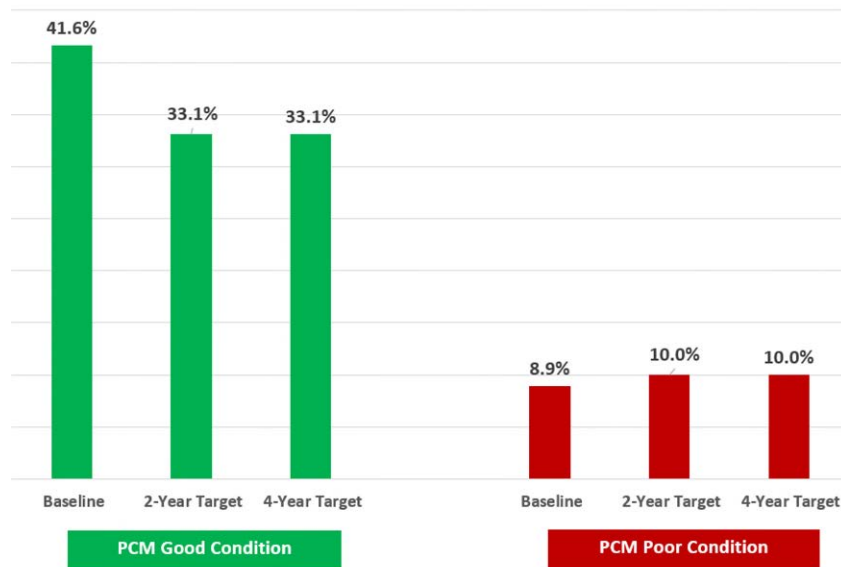
2022-2025 State Interstate Pavement Targets



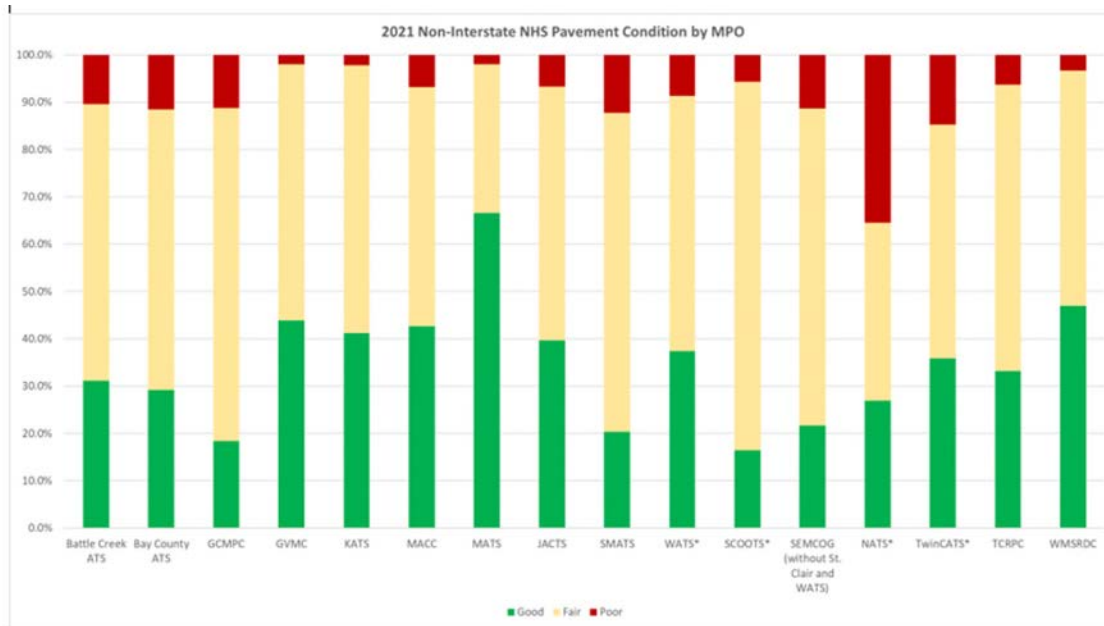
2021 Interstate Pavement Condition Measure by MPO				
MPO	Good	Fair	Poor	Interstate Thru Miles **
Battle Creek Area Transportation Study	80.7%	18.6%	0.7%	66.5
Bay County Area Transportation Study	74.1%	25.8%	0.1%	92.2
Genesee County Metropolitan Planning Commission	69.7%	25.6%	4.6%	390.4
Grand Valley Metropolitan Council	57.6%	40.6%	1.8%	253.6
Kalamazoo Area Transportation Study	73.6%	20.1%	6.4%	161.1
Macatawa Area Coordinating Council	91.7%	8.3%	0.0%	76.3
Region 2 Planning Commission	55.8%	44.1%	0.0%	124.3
Saginaw Metropolitan Area Transportation Study	69.9%	29.2%	0.9%	198.8
Southeast Michigan Council of Governments	63.0%	35.1%	1.9%	2,291.8
Washtenaw Area Transportation Study *	81.8%	12.3%	5.9%	211.1
St. Clair County Transportation Study *	61.2%	38.4%	0.3%	158.5
SEMCOG (without St. Clair and WATS)	61.1%	37.3%	1.6%	1,922.2
Southwest Michigan Planning Commission	53.8%	38.3%	7.9%	169.7
Twin Cities Area Transportation Study *	53.8%	38.3%	7.9%	169.7
Tri-County Regional Planning Commission	41.9%	49.3%	8.7%	432.4
West Michigan Shoreline Regional Development Commission	72.7%	26.5%	0.8%	48.4

### Non-Interstate NHS State Targets and MPO 2021 Performance

2022-2025 State Non-Interstate NHS Pavement Targets



The 2022-2025 performance period introduces PCM as the Non-Interstate NHS pavement measure for the national program.

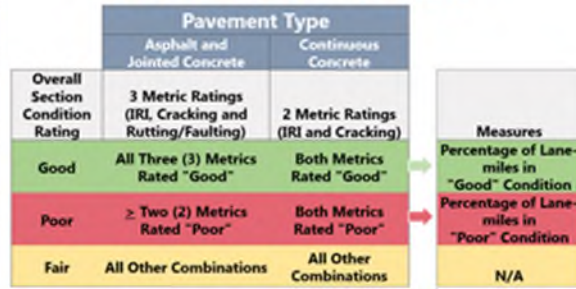


2021 Non-Interstate NHS Pavement Condition by MPO				
MPO	Good	Fair	Poor	Non-Interstate Thru Miles **
Battle Creek Area Transportation Study	31.1%	58.5%	10.4%	101.7
Bay County Area Transportation Study	29.1%	59.3%	11.6%	147.7
Genesee County Metropolitan Planning Commission	18.4%	70.4%	11.2%	488.0
Grand Valley Metropolitan Council	43.9%	54.2%	2.0%	831.0
Kalamazoo Area Transportation Study	41.2%	56.6%	2.2%	308.0
Macatawa Area Coordinating Council	42.7%	50.5%	6.8%	134.9
Midland Area Transportation Study	66.6%	31.4%	2.0%	296.4
Region 2 Planning Commission	39.6%	53.7%	6.7%	199.3
Saginaw Metropolitan Area Transportation Study	20.3%	67.4%	12.3%	280.9
Southeast Michigan Council of Governments	22.7%	66.2%	11.1%	5,825.9
Washtenaw Area Transportation Study *	37.4%	53.9%	8.7%	428.7
St. Clair County Transportation Study *	16.4%	77.8%	5.7%	83.3
SEMCOG (without St. Clair and WATS)	21.6%	67.0%	11.4%	5,313.9
Southwest Michigan Planning Commission	32.3%	44.7%	23.0%	235.1
Niles-Buchanan-Cass Area Transportation Study	26.9%	37.6%	35.5%	94.4
Twin Cities Area Transportation Study *	35.9%	49.4%	14.7%	140.7
Tri-County Regional Planning Commission	33.2%	60.5%	6.3%	554.8
West Michigan Shoreline Regional Development Commission	47.0%	49.7%	3.4%	356.4

### Pavement Condition Thresholds

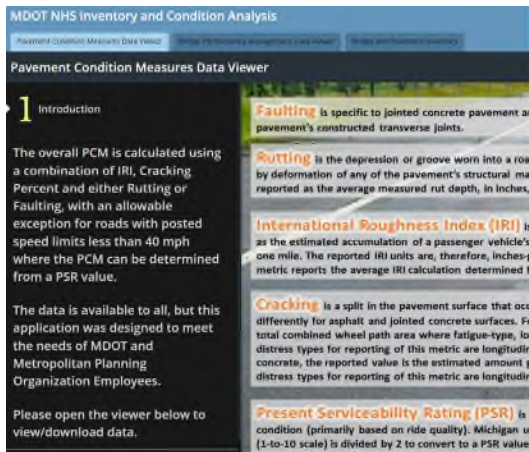
	Good	Fair	Poor
IRI (inches/mile)	<95	95-170	>170
Rutting (inches)	<0.20	0.20-0.40	>0.40
Faulting (inches)	<0.10	0.10-0.15	>0.15
Cracking (%)	<5	5-20 (asphalt) 5-15 (JCP) 5-10 (CRCP)	>20 (asphalt) >15 (JCP) >10 (CRCP)

### Calculation of Pavement Condition Measures for Interstate



### Available Data

The [MDOT NHS Inventory and Condition Analysis](#) data viewer is available online, which provides pavement condition and inventory information for Interstate PCM and non-Interstate IRI data, and information on bridges as well. In addition, MDOT developed the [Michigan Transportation Program Portal](#) providing links and maps to the 5-Year Transportation Plan, State Transportation Improvement Program, and the Rebuilding Michigan Program.



### For More Information

Pavement condition data: Dan Sokolnicki  
517-241-0736; [SokolnickiD@Michigan.Gov](mailto:SokolnickiD@Michigan.Gov)

Pavement condition information: Marcus Whitters  
517-335-2925; [WhittersM1@Michigan.Gov](mailto:WhittersM1@Michigan.Gov)

# BRIDGE PERFORMANCE MANAGEMENT NEWSLETTER

## 2022-2025 PERFORMANCE PERIOD – BASELINE REPORT

### BRIDGE CONDITION

Title 23 CFR §650, Subpart C - National Bridge Inspection Standards (NBIS), defines a bridge as a structure carrying traffic with a span greater than 20 feet and requires that all bridges be inspected every two years to monitor and report condition ratings. The FHWA requires that for each applicable bridge, the performance measures for determining condition be based on the minimum values for substructure, superstructure, deck, and culverts. The FHWA further requires counting this condition by the respective deck area of each bridge and express condition totals as a percentage of the total deck area of bridges in a state.

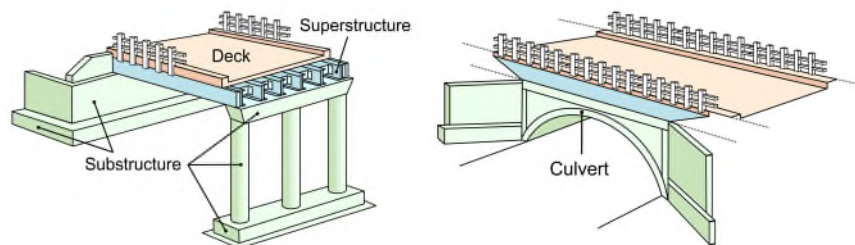
Condition ratings are based on a 0-9 scale and assigned for each culvert, or the deck, superstructure and substructure of each bridge. These ratings are recorded in the National Bridge Inventory (NBI) database. Condition ratings are an important tool for transportation asset management, as they are used to identify preventative maintenance needs, and to determine rehabilitation and replacement projects that require funding.

### REPORTING ON BRIDGE CONDITION

Title 23 CFR §490, National Performance Management Measures, Subpart D, designates recurring four-year performance periods for which MDOT is required to develop, in coordination with MPOs, two-year and four-year State targets for bridge condition on the National Highway System (NHS). The two performance measures for assessing bridge condition are:

- % of NHS bridges in Good Condition; and
- % of NHS bridges in Poor Condition.

In accordance with regulation and FHWA guidance, targets are data-informed, analysis driven, realistic predictions of future performance constrained to projected program funding. These short-term predictions are intended to evaluate and support the most effective investment strategies for achieving long-term performance goals and expectations in State and MPO planning documents. The bridge measures are limited to the National Highway System (NHS), regardless of ownership, and the NHS represents a subset of the entire bridge network managed by MDOT, MPOs and local governments.



ANATOMY OF A BRIDGE OR CULVERT

NBI Condition Ratings		
7-9	Good Condition	Routine maintenance candidate.
5-6	Fair Condition	Preventative maintenance and minor rehabilitation candidate.
4	Poor Condition	Poor Major rehabilitation or replacement candidate.
2-3		Serious or Critical Emergency repair or high priority major rehabilitation or replacement candidate. Unless closely monitored it may be necessary to close until corrective action can be taken.
0-1		Imminent Failure or Failed Major rehabilitation or replacement candidate. <b>Bridge is closed to traffic.</b>

## REPORTING ON BRIDGE CONDITION, CONTINUED

By June 14, 2023 (180 days following establishment of State targets), MPOs are required to develop 2- year and 4-year targets for each bridge measure in coordination with MDOT. MPOs have two options for target development: (1) agree to plan and program projects that support State targets, or (2) develop to a quantifiable target for the respective metropolitan planning area. MPO target elections can be made on a per measure basis. For example, an MPO can elect to support the State 2-year good condition target, and develop an MPO boundary 2-year poor condition target.

While FHWA does not make a significant progress determination of MPO targets, whether the MPO elects to support the State target or develop an MPO boundary target, the MPO is required to report progress in a system performance report. Also note, an MPO is not subject to any regulatory consequence or penalty if significant progress is not achieved regardless of whether the election was to support a State target or develop an MPO boundary target.

Baseline NHS Bridge Condition by Deck Area - Statewide								
Owner	Good		Fair		Poor		Total (sft)	
Trunkline	7,290,726	22%	23,690,343	71%	2,242,167	7%	33,223,236	88%
Bridge Authority	320,575	16%	1,676,900	83%	11,944	1%	2,009,419	5%
Local	717,498	29%	1,354,360	55%	381,037	16%	2,452,895	7%
Total	8,328,799	22%	26,721,604	71%	2,635,147	7%	37,685,550	

Baseline NHS Bridge Condition by Count – Statewide (for reference only)								
Owner	Good		Fair		Poor		Total	
Trunkline	663	24%	1910	70%	170	6%	2743	92%
Bridge Authority	4	44%	4	44%	1	11%	9	<1%
Local	83	37%	101	45%	40	18%	224	8%
Total	750	25%	2015	68%	211	7%	2976	

## BASELINE NHS BRIDGE CONDITION

Structures that meet the definition of a bridge according to the NBIS are recorded in the Michigan Bridge Inventory database through a web-based system called MiBRIDGE. MDOT's Bureau of Bridges and Structures (BOBS) in turn submits this information to the National Bridge Inventory (NBI). Using this database, BOBS compiles the number of bridges and deck area for each of the categories required by the Performance Management requirements.

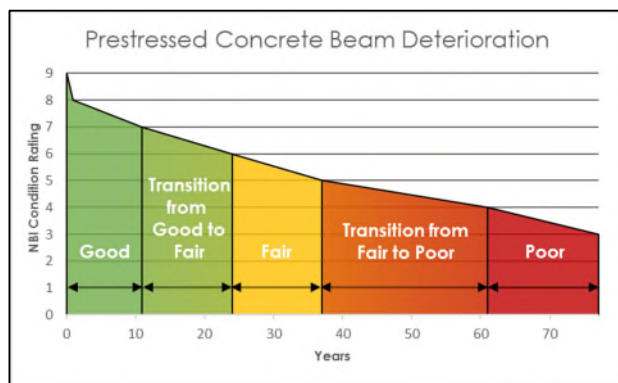
While the National Bridge Inspection Standards applies to all publicly owned highway bridges, the TPM Targets are only applied to those bridges carrying routes on the NHS including bridge on- and off-ramps connected to the NHS. The NHS consists of roadways important to the nation's economy, defense, and mobility. The NHS includes the following subsystems of roadways: interstate, other principal arterials, strategic highway network, major strategic highway network connectors, and intermodal connectors. condition totals as a percentage of the total deck area of bridges in a state.

The FHWA requires calculating the NHS condition by the respective deck area of each bridge and express condition totals as a percentage of the total deck area of bridges in a state. The area is computed using the NBI Structure Length and Deck Width or Approach Roadway Width (for some culverts). Tables above represent the data submitted to the FHWA on March 13, 2022.

Local agencies own 7 percent of the NHS bridge deck area in Michigan, while MDOT and the Bridge Authorities maintain ownership of approximately 93 percent of bridge deck area. MDOT and MPO targets must cover the entire NHS, regardless of ownership. To account for this, the rule requires MDOT and MPOs to coordinate target setting, planning, and programming, ensuring targets are feasible, and projects are geared toward achieving them.

## BRIDGE DETERIORATION MODELS

As a bridge ages, its condition declines and an increasing amount of work is required to restore condition or extend the usable life of the bridge. By tracking the rate at which bridges have declined in the past, MDOT is able to predict the rate at which a bridge will decline in the future. MDOT has an established process through which trends in bridge deterioration rates can be evaluated at regular intervals. These periodic reviews will show whether preventive maintenance and other small actions taken on bridges are effective over time. This process is documented in the report “A Process for Systematic Review of Bridge Deterioration Rates” which is available on the MDOT website at: [http://www.michigan.gov/documents/mdot/A\\_Process\\_for\\_Systematic\\_Review\\_of\\_Bridge\\_Deterioration\\_Rates\\_522422\\_7.pdf](http://www.michigan.gov/documents/mdot/A_Process_for_Systematic_Review_of_Bridge_Deterioration_Rates_522422_7.pdf).



As shown in the image above, the minimum NBI condition rating is the y axis, and the number of years in each condition state is the x axis. As the Target setting periods are two and four years, the key transition times for this analysis are the Transition from Good to Fair (the time it takes to drop from 7 to 6) and the Transition from Fair to Poor (the time it takes to drop from 5 to 4). Outside of the initial drop for 9 (Excellent) to 8 (Very Good), a bridge would not be *predicted* to fall multiple condition ratings over a span of four years as it is based on statewide averages. This can sometimes occur in practice and is part of the error involved in predictions.

## PROJECT IMPACTS

**MDOT PROJECT SELECTION** - As the product of ongoing asset management by MDOT and our local agencies, projects are programmed each year to extend life or improve condition throughout the bridge network. MDOT analyzes the candidates for each of the major work types – preventive maintenance, rehabilitation and replacement – and identifies a strategy that is the most cost-effective means to achieve

and sustain a state of good repair within financial constraints. Starting from this initial strategy, the regions then perform more detailed analysis and scopes, coordinating with other programs such as road, and selecting projects through the annual Call for Projects process.

A small number of MDOT bridges are managed centrally within the Big Bridge Program. The Big Bridge Population is a unique subset of MDOT’s trunkline bridge population that includes sixteen large deck bridges (deck area in excess of 100,000 sq ft), nineteen complex bridges, and twelve moveable bridges. These fifty-one bridges are unique not only from an engineering standpoint, but they also represent large capital investments in terms of their initial construction costs and in terms of their long-term preservation and rehabilitation costs. Because of the significant investment these bridges represent, MDOT’s goal is to preserve and maintain the Big Bridge inventory in a continuously good or fair condition state. This population is also of unique importance to the Performance Management Target Settings as the 39 structures that carry NHS comprise 14% of the trunkline NHS deck area.

**LOCAL AGENCY PROJECT SELECTION** - As the product of ongoing asset management by MDOT and our local agencies, projects are programmed within JobNet, and local agency bridge projects included in this analysis are those that have been selected through the local bridge program. Legislation enacted October 1, 2004 created a local bridge fund, a local bridge advisory board (LBAB) and seven regional bridge councils (RBC). The legislation places control of the funding allocations of the local bridge fund in the hands of the local agencies of Michigan through the LBAB and RBCs. A call for applications is sent to all local agencies on an annual basis. The submitted applications are reviewed by the staff of MDOT local agency program’s bridge unit for completeness and funding eligibility. Formula rating points are computed and each region’s applications are submitted to their respective RBC for addition of discretionary points. A 3-year bridge program is maintained by each RBC.

Local Agencies may also identify bridge projects through their Metropolitan Planning Organization or Rural Task Force, although because of the dollar amounts available these projects are rare. Many local agencies do projects on their bridges with their Act 51 fund distributions. These projects, however, do not have to be entered as a programmed project within JobNet and would not be reflected in the results. Due to the relatively small amount of local agency deck area, this is considered an acceptable omission at this time, but is an area identified for future improvement.

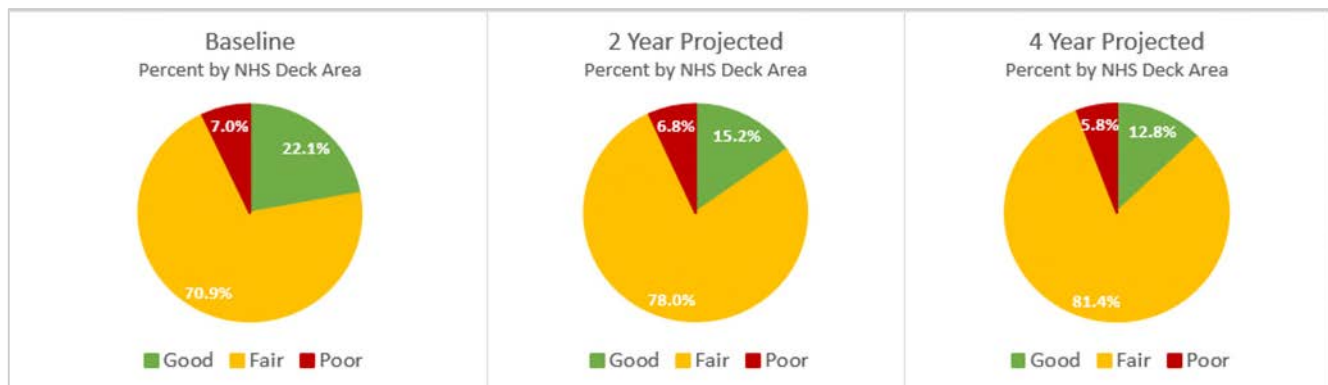


## DEVELOPING TARGETS

Starting from the condition reported with the NBI submittal on March 13, 2022, the expected improved condition from projects and reduced condition from deterioration was summarized into projected 2-Year and 4-year condition. The deck areas in good, fair and poor conditions at each year was summarized. To account for uncertainty, the amount of deck area in good condition was conservatively reduced by 1%, and the amount of deck area in poor condition was increased by 1%. A 1% reduction for uncertainties reflects about 30 average size structures that either deteriorated faster than predicted or that did not see as much of an improvement as predicted.

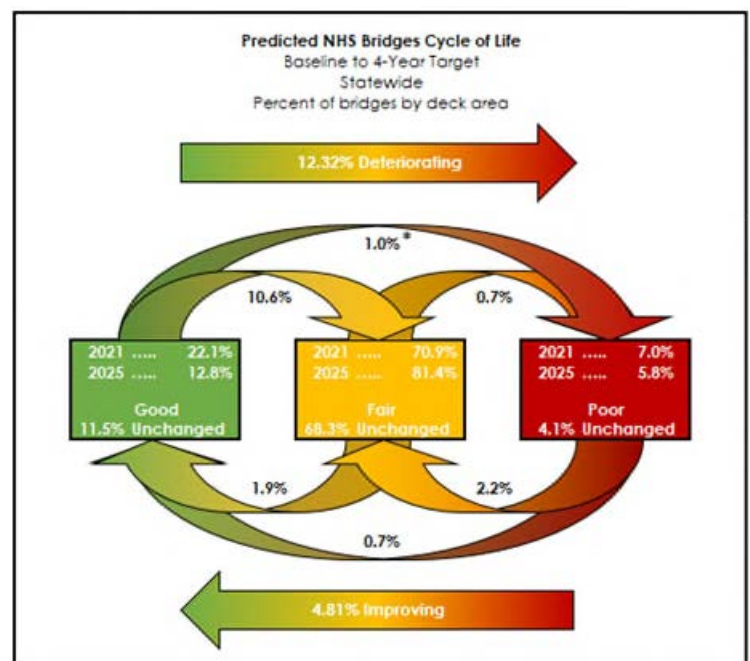
## ANALYZING TARGETS

Overall, the number of good bridges is expected to decline significantly as preservation efforts tend to extend life in fair condition. While the amount of bridges in good condition is predicted to decrease, the amount of deck area in poor condition is also predicted to decrease. While the decrease in poor deck area is important towards achieving/maintaining a state of good repair, the amount of fair deck area will require a sustained commitment to preservation in order to prevent an unsustainable number of fair bridges from falling into poor condition.



## EVALUATING GOOD CONDITION

The target for Good condition was set as a combination of estimating the deck area that is expected to deteriorate and the deck area that is expected to be improved. This is demonstrated in Cycle of Life, which shows that 10.6% of the NHS deck area is predicted to leave Good condition and 1.9% is expected to enter Good condition during the time period.



## MPO COORDINATION

Shown below is the 2021 NHS bridge deck area estimated condition for each MPO's population of bridges. As discussed earlier, the method used to predict bridge deterioration for State targets applies statewide average deterioration rates to all bridges. Some bridges will deteriorate faster while others will deteriorate slower. At the network level, these differences tend to balance. When looking at smaller populations, such as at an MPO boundary level, the difference between specific bridge deterioration and statewide averages can lead to large differences between predictions and measured values. When the performance values are measured in terms of deck area rather than count, large bridges can exacerbate this discrepancy.

MDOT also created a Transportation Performance Measures Dashboard for MPOs and bridge owners to aid in reviewing

State bridge targets. The 2022 baseline data (bridge inspection data collected between March 2021 and March 2022) can be found via [the NHS Bridge Inventory](#). This page represents a snapshot of data of the NHS bridges in the NBI submittal to FHWA, and is what will be used by FHWA to evaluate the respective 2-year and 4-year State target achievement for the performance period. For more current information, all NBI bridge data is updated monthly at the [NBIS website](#).

MPO	Good		Fair		Poor		Total	
	Deck Area	Percentage	Deck Area	Percentage	Deck Area	Percentage	Deck Area	Percentage
Battle Creek Area Transportation Study	3,429	1%	420,443	92%	31,720	7%	455,593	100%
Bay City Area Transportation Study	104,804	17%	465,703	76%	45,655	7%	616,162	100%
Genesee County Metropolitan Planning Commission	138,432	7%	1,561,627	81%	233,080	12%	1,933,138	100%
Grand Valley Metropolitan Council	1,034,362	26%	2,663,907	68%	244,662	6%	3,942,932	100%
Jackson Area Comprehensive Transportation Study / Region 2 Planning Commission	15,419	5%	277,594	82%	44,780	13%	337,793	100%
Kalamazoo Area Transportation Study	199,736	37%	271,815	51%	65,117	12%	536,668	100%
Macatawa Area Coordinating Council	44,805	15%	255,007	84%	4,149	1%	303,960	100%
Midland Area Transportation Study	41,127	21%	154,374	79%	-	0%	195,501	100%
Niles Area Transportation Study	8,757	3%	254,883	97%	-	0%	263,640	100%
Saginaw Area Transportation Agency	186,425	8%	1,995,579	90%	31,484	1%	2,213,489	100%
Southeast Michigan Council of Governments	5,274,541	32%	10,086,998	61%	1,290,294	8%	16,651,833	100%
Tri-County Regional Planning Commission	41,937	2%	1,990,461	86%	287,576	12%	2,319,974	100%
Twin Cities Area Transportation Study	23,312	3%	747,123	96%	6,655	1%	777,089	100%
West Michigan Metropolitan Planning Program	36,164	5%	617,306	92%	15,841	2%	669,311	100%
Outside MPO Boundaries	1,175,550	18%	4,958,783	77%	334,134	5%	6,468,467	100%
All NHS	8,328,799	22%	26,721,604	71%	2,635,147	7%	37,685,550	100%

### For More Information

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# RELIABILITY PERFORMANCE MANAGEMENT NEWSLETTER

## 2022-2025 PERFORMANCE PERIOD - BASELINE REPORT

Title 23 CFR §490 – National Performance Measures, Subpart E, directs MDOT and Michigan Metropolitan Planning Organizations (MPOs) to coordinate development of 2-year and 4-year predicted performance reliability targets within a defined four-year performance period in support of the national goals established by Congress in MAP-21 of 2012.

In accordance with regulation and Federal Highway Administration (FHWA) guidance, targets are data-informed, analysis driven, realistic predictions of future performance constrained to projected program funding. These short-term predictions are intended to evaluate and support the most effective investment strategies for achieving long-term performance goals and expectations in State and MPO planning documents.

The reliability measures are limited to directional mainline highways on the National Highway System (NHS), regardless of ownership, and the NHS represents a subset of the entire network managed by MDOT, MPOs and local governments.

Section 490 directs State DOTs and MPOs to use three performance measures (*Figure 1*) for assessing travel time reliability. The National Performance Management Research Data Set (NPMRDS) is vehicle probe-based travel time data used to calculate the national reliability measures. The NPMRDS is provided by the Federal Highway Administration (FHWA) for use by states and MPOs. The NPMRDS is processed through an analytical software tool known as Regional Integrated Transportation Information System (RITIS).

### Level of Travel-Time Reliability (LOTR)

**Percentage of person-miles traveled on the [Interstate/Non-Interstate NHS] that are reliable**

- (1) Interstate **and** (2) Non-Interstate NHS
- 2-Year and 4-Year Targets
- **Four (4)** Time Periods
- Fifteen (15) Minute Travel Intervals
- Longer Travel Time: **80<sup>th</sup>** Percentile
- Normal Travel Time: 50<sup>th</sup> Percentile
- Threshold: **Reliability <1.50**
- Factors Applied: Vehicle volumes (HPMS) and Vehicle Occupancy Factor (provided by FHWA)

### Truck Travel-Time Reliability (TTTR)

**Interstate freight reliability, truck travel time Index**

- Interstate **(only)**
- 2-Year and 4-Year Targets
- **Five (5)** Time Periods
- Fifteen (15) Minute Travel Intervals
- Longer Travel Time: **95<sup>th</sup>** Percentile
- Normal Travel Time: 50<sup>th</sup> Percentile
- Threshold: **None**
- Factors Applied: No additional factors are applied

Figure 1: Reliability metrics/measures

### Travel Time Reliability Overview

Travel time reliability measures how consistent travel between X and Y is from one day to the next. To determine reliability, data is analyzed to see how it varies over time. As directed by Section 490, travel time for each discrete segment of the National Highway System (NHS) is placed in order from the shortest time (fastest speed), which is the 1st percentile speed, to the longest time (slowest speed), which is the 100th percentile speed. Three performance measures are examined to compare the “normal” travel time, (which is defined as the 50th percentile travel time) on a segment, with either the 80th percentile or the 95th percentile travel time to determine the overall reliability. If the difference between the normal travel time and the longer travel time (80th for person-miles or 95th percentile for freight) is greater than 50 percent, then the segment is classified as unreliable.

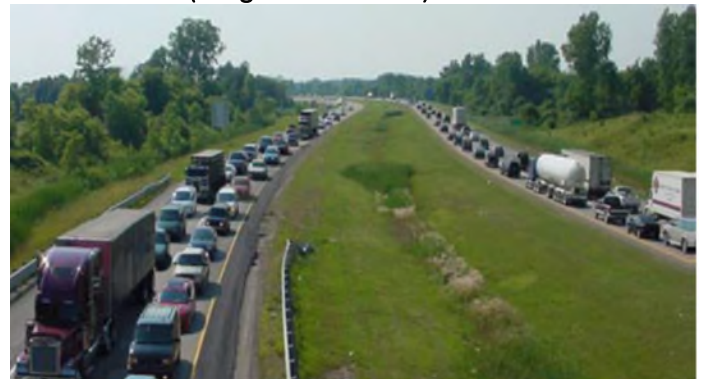
To help explain travel time reliability, consider the following simplified hypothetical example. Suppose an individual person’s normal travel time from home to work is 20 minutes. The 80th percentile is defined as one out of every five days, or approximately one time in a traditional commuter work week. If in a typical week, it takes an individual 30 minutes or longer to travel to work one or more times, then the route driven would be designated as unreliable (exceeds the 1.50 threshold). See page five for more a detailed example of the metrics/ measures.

**Travel Time Reliability is not the same as Congestion.** Reliability is important because travelers prefer a consistent travel time to their destination. If people understand that a route is routinely congested, they can plan accordingly. However, if a route is unreliable, they really have no consistent reference of how long it will take to get to their destination, which creates frustration. In addition, segments of roads can be both congested, and reliable (e.g., reliably congested).

### 50<sup>th</sup> Percentile (Average or Normal Travel Time)



### 80<sup>th</sup> Percentile (Longer Travel Time)



### Baseline Condition

As a result of the global pandemic, Michigan (and the United States more broadly) experienced an unprecedented reduction in traffic volumes starting in early 2020. While traffic volumes have increased, through the end of 2022 reliability performance remains notably improved from pre-pandemic levels. That said, it is difficult to predict future performance with a higher-than-normal level of uncertainty. For this reason, MDOT is hesitant the 2022 baseline (2021 actual performance) will accurately reflect a sustainable expectation of future performance.

**LOTTR: Reliable Person Miles**

**Desired Trend** ↑

Data Year/ Reporting Year	Interstate	Non- Interstate NHS
2017/2018	85.2%	84.0%
2019/2020	88.6%	88.5%
<b>2021/2022</b> <b>2022 Baseline</b>	<b>97.1%</b>	<b>94.4%</b>

**Truck Travel Time Index**

**Desired Trend** ↓

Data Year/ Reporting Year	Interstate
2017/2018	1.38
2019/2020	1.44
<b>2021/2022</b> <b>2022 Baseline</b>	<b>1.31</b>

*Note: It is important to note the NPMRDS data set continues to evolve and MDOT has found prior year reported data changes in the RITIS system. MDOT has also observed the baseline/actual performance reported by FHWA is frequently different than the RITIS system, although typically by +/- 1 point. MDOT does not have the authority to override the performance data reported by FHWA in the biennial reports. Therefore, baseline/actual performance data for MDOT required biennial reporting should be considered a snapshot of what was reported by FHWA in the respective reporting year which may be different than what RITIS reports for that year now/in the future.*

**Target Setting Process**

These short-term predicted performance targets are intended to evaluate and support the most effective investment strategies for achieving long-term performance goals and expectations in State and MPO planning documents. Policies and investment strategies included in Michigan Mobility 2045 (state long-range transportation plan) contribute to Michigan’s ability to meet the national transportation performance management goals established by Congress. In alignment with MM2045, MDOT created a new operations template program to fund projects that will improve safety and reliability while also

addressing congestion. The level of travel time reliability is a key factor in prioritizing projects and measuring anticipated investment outcomes.

For the **2022-2025 performance period**, the analysis and methods used to develop the national predicted performance reliability targets considered inputs and influences not limited to the following:

- Historical trends and current baseline. As previously noted, the 2022 baseline (2021 actual performance) is unlikely sustainable as post-pandemic traffic volumes have increased, while also acknowledging reliability remains notably improved from pre-pandemic historical trends.
- Expected outcomes from projects programmed to improve reliability (5-year program/projects).
- The next two to three years will see more RMBP construction projects on the NHS.
- Anticipated changes in use (long-term adoption of telecommuting/hybrid work, for example).
- Potential competitive funding opportunities that are not appropriate to quantify and consider in target-setting until an award has been made.
- Other factors of influence:
  - Inclement weather, especially winter weather, has a major impact on reliability.
  - The Interstate has a small percentage of segments nearing unreliable while Non-Interstate NHS has shown to be more volatile and has a higher percentage of segments nearing unreliable.
  - Freight performance as measured is more volatile due to using 95<sup>th</sup> percentile speeds.

### 2022-2025 Predicted Performance State Targets

Measure	2-Year	4-Year
LOTTR: Interstate	80.0%	80.0%
LOTTR: Non-Interstate NHS	75.0%	75.0%
Freight Travel Time Index	1.60	1.60

The State LOTTR predicted performance targets are improved by five percentage-points from those established for the 2018-2021 performance period. The freight Index target is also improved by .15 (from 1.75 to 1.60).

#### MPO Target Setting

In accordance with Section 490, MPOs have 180 days following the recording of State national performance program targets to develop and report MPO targets to MDOT. For 2022, FHWA delayed the biennial report from October 1 to December 16 therefore MPO target reporting to MDOT has respectively changed to June 14, 2023.

MPOs can satisfy the Section 490 target setting requirements by either electing to plan and program projects that support State targets, or develop a quantifiable target for the respective metropolitan planning area. MPO target elections can be made on a per measure basis. For example, an MPO can elect to support the State 2-year LOTTR Interstate target, and develop a quantifiable MPO boundary 4-year LOTTR Interstate target. That said, once target elections have been made (i.e., support State or develop MPO specific), the MPO must retain each election for the duration of the four-year performance period.

Also note, FHWA does not make a significant progress determination of MPO targets whether the MPO elects to support the State target(s) or develop MPO boundary target(s). Further, an MPO is not subject to any consequence or penalty imposed by FHWA on MDOT should a

target not be achieved regardless of which target development option the MPO selected. For reference, significant progress is defined by regulation as achieving performance that is equal to or better than the target, or better than the baseline performance.

**Level of Travel Time Reliability (LOTTR) Example**

**Segment:** Longer Travel Time (80<sup>th</sup>) ÷ Normal Travel Time (50<sup>th</sup>) = # seconds ÷ # seconds = LOTTR

Monday – Friday	6am - 10am	LOTTR = 44 sec ÷ 35 sec = 1.26
	10am - 4pm	LOTTR = 1.39
	4pm – 8pm	LOTTR = <b>1.54</b>
Weekends	6am – 8pm	LOTTR = 1.31
Reliability Threshold: LOTTR below 1.50 during ALL of the time periods		<b>Segment is NOT reliable</b>

**Measure: Percent of person-miles traveled on the [Interstate/Non-Interstate NHS] that are reliable**

1. Length x Volume (AADT x 365) x Occupancy = person miles
2.  $\frac{\sum (\text{Reliable Person-Miles})}{\sum (\text{Total Person-Miles})} = \text{Reliability}$

**Truck Travel Time Reliability (TTTR (This is an index, not a reliability threshold) Example**

**Segment:** Longer Travel Time (95<sup>th</sup>) ÷ Normal Travel Time (50<sup>th</sup>) = # seconds ÷ # seconds = TTTR

Monday – Friday	6am - 10am	TTTR = 72 sec ÷ 50 sec = 1.44
	10am - 4pm	TTTR = 1.39
	4pm – 8pm	TTTR = 1.49
Weekends	6am – 8pm	TTTR = 1.31
Overnight	8pm – 6am	TTTR = 1.20
Maximum TTTR		1.49

**Measure: Truck Travel Time Reliability (TTTR) Index**

1. Length x MaxTTTR = Length-weighted TTTR
2.  $\frac{\sum (\text{All segment length weighted TTTR})}{\sum (\text{All segment lengths})}$

**Michigan**

MAP-21 Percent of the Person-Miles Traveled on the Interstate That Are Reliable (the Interstate Travel Time Reliability measure)

2021 Target  
at least  
**75.0%**

**97.1%**

Year-to-Date  
2021

**Target: At least 75% of the system should have a LOTTR less than 1.50**



[Show map...](#)

Calculated using 99.77% of miles in Michigan

Data source: NPMRDS INRIX

### Michigan

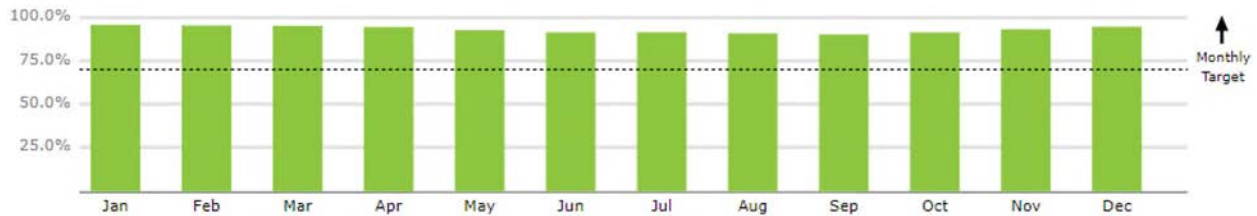
MAP-21 Percent of the Person-Miles Traveled on the Non-Interstate NHS That Are Reliable (the Non-Interstate NHS Travel Time Reliability measure)

2021 Target  
at least  
**70.0%**

**94.4%**

Year-to-Date  
2021

Target: At least 70% of the system should have a LOTTR less than 1.50



[Show map...](#)

Calculated using 98.95% of miles in Michigan

Data source: NPMRDS INRIX

### Michigan

MAP-21 Truck Travel Time Reliability Index (for interstate roads only)

2021 Target  
less than  
**1.75**

**1.31**

Year-to-Date  
2021

Target: The system should have a TTTR less than 1.75



[Show map...](#)

Calculated using 99.77% of miles in Michigan

Data source: NPMRDS INRIX



## 2021 MPO System Performance

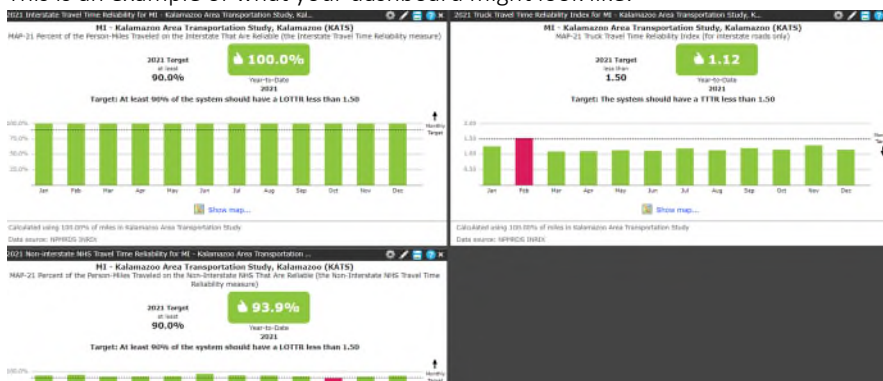
MPOs can access a wealth of system performance information, including the below reliability performance, through the RITIS [NPMRDS Analytics](#) tool. At this time there is no cost to Michigan MPOs to use this valuable tool and available data can greatly benefit decision-making.

MPO/Study Area	Interstate Reliability	Non-Interstate NHS Reliability	Freight Reliability
Battle Creek Area Transportation Study	100.0%	93.6%	1.15
Bay City Area Transportation Study	100.0%	95.3%	1.56
Genesee County Metropolitan Planning Commission	100.0%	88.0%	1.20
Grand Valley Metropolitan Council	97.8%	93.4%	1.42
Kalamazoo Area Transportation Study	100.0%	93.9%	1.12
Macatawa Area Coordinating Council	100.0%	91.1%	1.35
Midland Area Transportation Study	Not Avail	99.7%	Not Avail
Region 2 Planning Commission	100.0%	92.5%	1.13
Saginaw Metropolitan Area Transportation Study	100.0%	89.1%	1.21
Southeast Michigan Council of Governments	94.8%	93.5%	1.44
Southwest Michigan Planning Commission	100.0%	95.9%	1.12
Tri-County Regional Planning Commission	99.5%	97.1%	1.30
West Michigan Shoreline Regional Dev Commission	100.0%	93.9%	1.22

The steps to access the reliability performance information is as follows:

- From the opening screen scroll down and select the “MAP-21” dashboard widget.
- Select your respective MPO from the drop-down menu titled “MPA.”
- Select the measure(s) you want to include on your dashboard. Optional: The default target is 90% for LOTTR and 1.5 for TTTR. You can change these to reflect your target value or just leave the targets as-is.
- Select the year(s) you want to review; you can select multiple years for longer historical trends. [Note, you need to actually click the “Add time period” green button for each year you select, this is less intuitive.]
- Select whether you want to see the data in graph or map format.
- Select the “Add Widget” blue button.
- You can save this to your dashboard for future reference.

This is an example of what your dashboard might look like.



For Travel Time Reliability Technical Information, contact Lee Nederveld at (517) 202-0322 or [NederveldL@michigan.gov](mailto:NederveldL@michigan.gov)



**GRAND VALLEY METROPOLITAN COUNCIL**

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## MEMORANDUM

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**DATE:** April 26, 2023

**TO:** Technical Committee

**FROM:** Laurel Joseph, Director of Transportation Planning

**RE:** **Airport Access Study Final Report**

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GVMC's Airport Access Study has concluded, and the results and report (attached) are ready for review by GVMC Committees. This study has been a super collaborative process among GVMC, state and local planning partners, and an excellent consultant team. We went through multiple rounds of alternatives analysis and got a huge amount of feedback and input from the public and stakeholders as well. This input from stakeholders and the public was critical to the success of this project, adding personal and lived experience to quantitative data used to evaluate alternatives.

The projects that came through as "preferred projects" are as follows:

- I-96/36<sup>th</sup> Street Direct Access – long-term
- Thornapple River Drive Secondary Freight Access – near-term
- Patterson Avenue/44<sup>th</sup> Street Safety Enhancements – near-term
- M-37/Patterson Avenue/60<sup>th</sup> Street Intersection Enhancements – near-term
- Downtown Express Bus/Shuttle – near-term
- Pedestrian/Bike Connectivity Enhancements – near-term/long-term

These projects will require additional study, engineering, design, funding, etc. before they would be ready to implement. Details about the projects, including rough estimates of cost, are included in the report.

The report is designed to be easy for stakeholders and the public to digest, and thus is not extremely technical. However, it also provides links to technical memos and the [project website](#), which houses more detailed documentation of study processes.

While this study does not necessarily *require* approval by Committees or the GVMC Board, staff would appreciate a recommendation from the Technical Committee to acknowledge and accept the results as a sign of Committee support for project partners to continue work toward implementation of the study outcomes.

If you have any questions, please do not hesitate to contact me at (616) 776-7610 or [laurel.joseph@gvmc.org](mailto:laurel.joseph@gvmc.org).

**GVMC**



***GRAND VALLEY METROPOLITAN COUNCIL***  
**AIRPORT ACCESS STUDY**

Final Report  
***March 2023***

**AECOM**

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# 1. INTRODUCTION

## Overview

Gerald R. Ford International Airport (GRR) is a commercial airport approximately 13 miles southeast of Downtown Grand Rapids. GRR has been experiencing rapid growth over the past two decades, and has plans for significant expansion in the near future. The Grand Valley Metropolitan Council (GVMC) Airport Access Study investigated ways to improve access to the airport as well as the surrounding local road and freeway systems.

The study area is an approximately one-mile area around the airport that is used to evaluate potential access paths and surrounding land use and development. The study area is shown in the map on this page and includes East Paris Avenue to the west, Thornapple River to the east, 28th Street (M-11) to the north, and 68th Street to the south. It includes parts of the City of Kentwood, Cascade Charter Township, Gaines Charter Township, and Caledonia Township, all within Kent County, Michigan. Major adjacent transportation assets include the GRR, I-96 and M-6, and the CSX rail lines. Nearby development includes Davenport University and the large concentration of industrial and commercial development primarily on the west side of the airport.



Study Area



## Technical Advisory Committee (TAC)

To assist in management of the project and consideration of enhancement options, GVMC assembled a Technical Advisory Committee (TAC) that included representatives from adjacent municipalities, transportation agencies, and business and tourism industries. As key stakeholders, the team participated in the project process and advised on key decisions.

Each TAC meeting provided a project status update and information on public engagement. The TAC met four times through the process:

TAC Meeting #1 (**February 2022**): Existing Conditions, Conceptual Alternatives, Phase 1 Engagement Plan

TAC Meeting #2 (**June 2022**): Purpose and Need, Evaluation Criteria and Process, Phase 2 Engagement Plan

TAC Meeting #3 (**October 2022**): Practical Alternatives Analysis, Preliminary Recommended Alternatives

TAC Meeting #4 (**December 2022**): Recommended Alternatives, Phase 3 Engagement Plan



Michigan Department of Transportation  
(Grand Region)



Kent County



Gerald R. Ford International Airport



The Rapid



Kent County Road Commission



The Right Place



Cascade Charter Township



Grand Rapids Chamber



City of Kentwood



Experience Grand Rapids

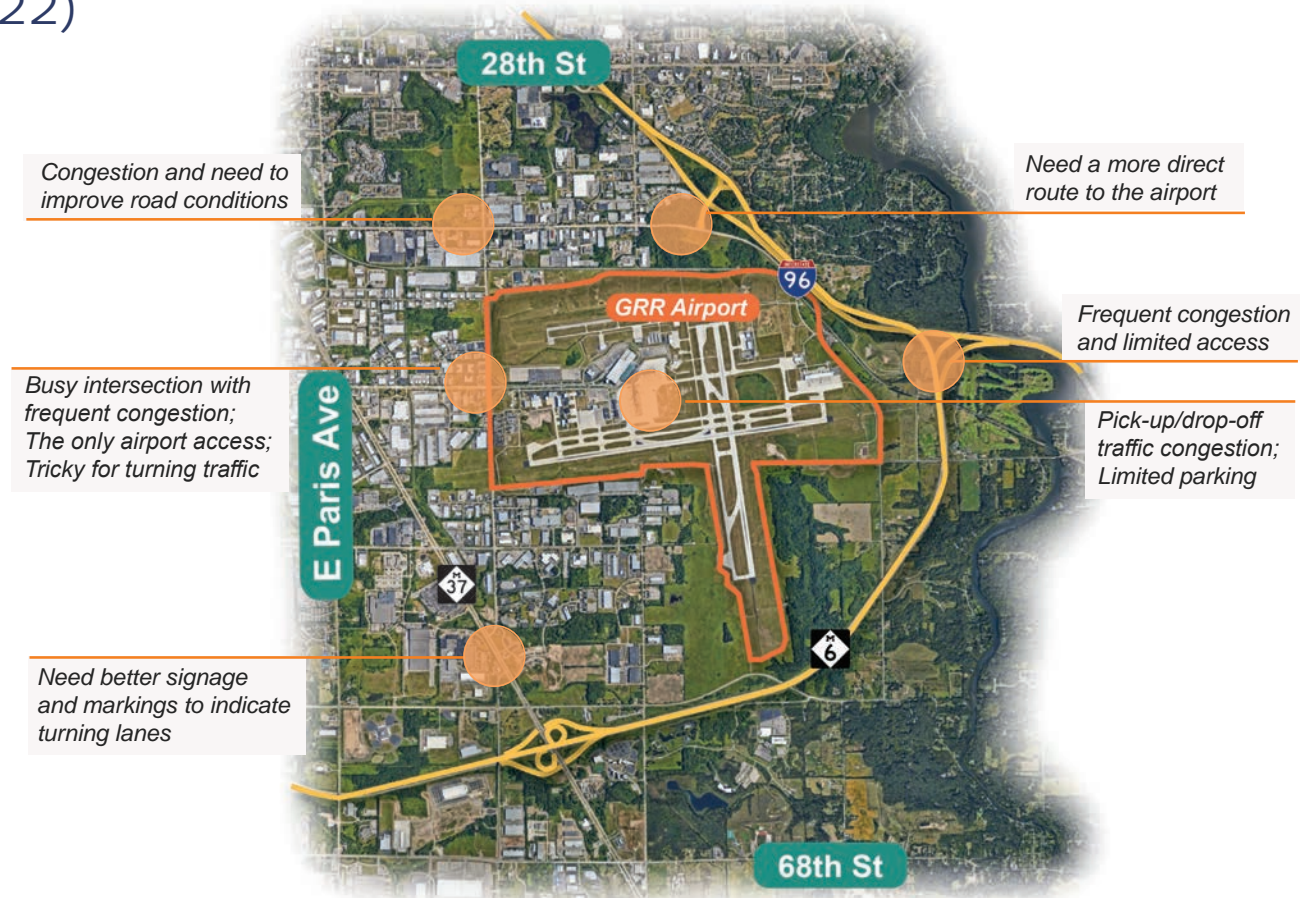
## 2. PUBLIC ENGAGEMENT

The Study involved three phases of public engagement to educate the public and gather input during and after the development of the alternatives. Engagement activities included an in-person public open house, virtual public meeting, and an online story map with a survey. A detailed summary of engagement results was compiled for each phase, and can be found on the [GVMC website](#).

### Phase 1 (March/April 2022)

During Phase 1 Public Engagement, participants were informed about the current transportation and economic conditions within the Study Area. The survey asked about people’s travel modes to and/or from the airport and whether there are significant issues accessing the airport. It included a map-based question which allowed people to identify challenges and opportunities of airport access at specific locations. More than 3,000 people within the GVMC region participated in the survey, which included the following themes:

- ▶ The need for a more direct route to the airport from I-96
- ▶ Congestion issues at the Patterson Avenue/44th Street intersection, which is currently the primary access point to the airport. This traffic makes turning an merging difficult
- ▶ The need for better signage and markings at the 36th Street/Patterson Avenue intersection and the airport entrance
- ▶ Limited options to access the airport via transit, biking and walking
- ▶ Congestion and safety issues near surrounding freeway interchanges



Frequently offered map-based comments from Phase 1 Engagement online survey

## Phase 2 (August/September 2022)

Phase 2 Public Engagement provided opportunities for participants to examine the Practical Alternatives. A story map with an introduction to each alternative was shared on the GVMC website, along with an online survey. The survey further explored people's preferences on the specific types of airport access improvement, and asked how much they would support each alternative.

More than 2,000 local participants within the GVMC region submitted their responses. The

results show an overall support for the Practical Alternatives.

Top priorities of airport access are shown in the chart below. The most preferred airport access improvements were "*More public transit and shuttle options to the airport and surrounding area*" and "*Secondary access point from the north or east*".

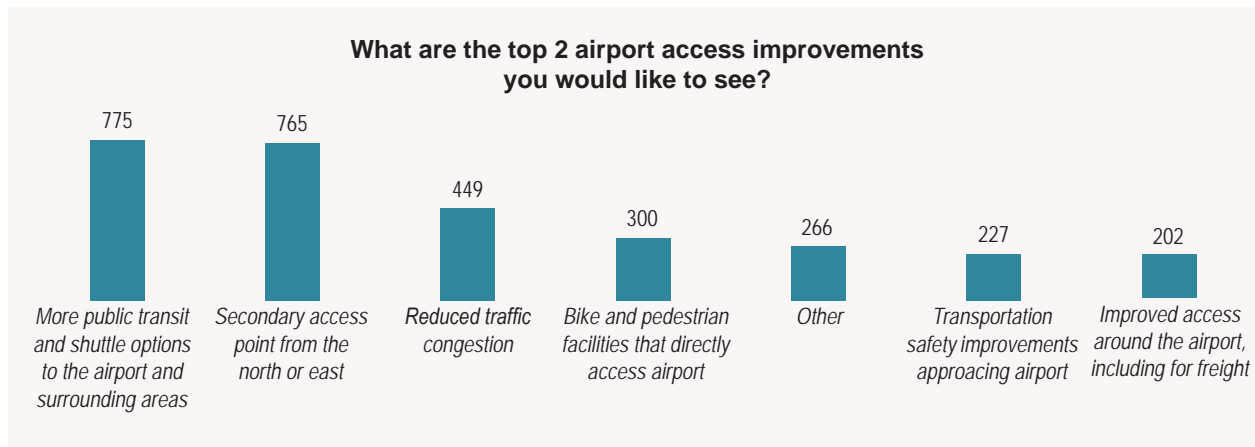
## Phase 3 (January/February 2023)

Phase 3 Public Engagement advised the public on the Preferred Projects and Future

Options. Two Public Open House events were held in Kentwood and Cascade Township. Over 100 residents joined the events to learn about the Study Background, Evaluation Process, and Preferred Projects.

A virtual public meeting was held online to present the Study. At the same time, a story map with descriptions of the Preferred Projects and the Future Options was shared on the GVMC website, and an online survey opened to ask the public about prioritization of the Preferred Projects and consideration of the Future Options.

In the third phase, nearly 600 people participated in the survey. Overall, results of Phase 3 Public Engagement show support for the Preferred Projects. Among these projects, ***I-96/36th Street Access*** received significantly higher support. Most participants considered these Preferred Projects as "medium" to "high" priority for implementation. There are mixed opinions regarding the Future Options. The general results show a slight preference for ***M-6 Interchanges*** and ***Expanded Curb Access*** as priorities for future implementation. However, ***M-6 Interchanges*** received relatively low support from participants with zip code residence in Kentwood and Cascade Township near GRR. These Future Options will need further study accompanied by public input.



Top 2 selected airport access improvements from Phase 2 Engagement online survey

## 3. PURPOSE AND NEED

### Existing Conditions

During the initial phase of the Study, the project team developed a comprehensive overview of the existing transportation, economic and land use conditions, as well as the previous regional and local planning efforts impacting the area. Detailed existing conditions information from the Study can be found in the [Existing Conditions Technical Memorandum](#). Overall, the main themes from this report are included in the elements below.

#### **Limited Access**

Public vehicular access to the airport terminal is currently limited to the Patterson Avenue and 44th Street/Oostema Boulevard intersection and, secondarily, the Patterson Avenue and Van Laar Drive intersection. Periodic safety events or congestion could significantly limit the ability to access GRR. Additional access to and potentially through GRR could add redundancy to the airport access network.

#### **Airport Expansion Plans**

GRR is the second largest airport in Michigan behind the Detroit Metropolitan Wayne County Airport (DTW) with about 3,200 acres of land, \$3.1 billion of annual economic impact to West Michigan, and over 100 businesses

supporting over 2,000 direct jobs. GRR has experienced rapid growth over the past few years and is positioned for continued growth in the future.

The region of Grand Rapids is also growing. Recent growth and projected future growth highlight the important relationship between regional and airport expansion, a reality demonstrated in recent airport master planning, the demand for direct and reliable access will only grow. At the same time, this momentum toward airport expansion makes it increasingly important to help ensure compatibility with other airside infrastructure investments and their construction.

#### **Indirect Circulation**

Public access from major expressways and cargo access from the FedEx Sort Facility on 52nd Street follows a circuitous route along local streets. Based on previous planning for the I-96 and M-6 corridors, there may be opportunities to create a more direct access route that enables faster access, especially from areas north and east of GRR.

#### **Surrounding Growth and Development**

The airport area is one of the areas expected to grow most in the entire region according to the GVMC 2045 Metropolitan *Transportation*

*Plan*. To accommodate such growth, access to GRR has become a critical local and regional priority.

Plans for the area immediately surrounding the airport include several areas of new development as well as many new nonmotorized facilities. This presents potential future challenges to accommodate more people traveling in the study area and to ensure the safety of nonmotorized users as they navigate a predominantly vehicle-oriented environment.

#### **Expanding Access Options**

Technology is changing how people get to and from the airport, with an uptick in Transportation Network Company (TNC, such as Uber or Lyft) and carshare use decreasing the expected future parking demand. In addition, The Rapid has recently initiated or planned additional public transit services that could improve access to GRR. These shifts underscore a potential need to prioritize curbside access for these modes in the future as a way to reduce congestion and the need for additional parking.

Based on the existing conditions analysis as well as the initial phase of public engagement, GVMC and its project partners developed the following Purpose and Need" for the project:

## Study Purpose

***"Expand multi-modal access options for the Gerald R. Ford International Airport and improve the connectivity of the surrounding local road and freeway network, in order to facilitate future airport expansion and accommodate regional growth and development (increasing population and jobs) in southeastern Kent County."***

## Study Needs

According to the existing conditions, the Study aims to improve or support the listed issues:



***Limited Access Points to Airport's Core***



***Indirect Circulation (around Airport and from Major Expressways)***



***Providing for Surrounding Growth and Development***



***Support for Airport Expansion Plans***



***Expansion of Convenient Access Options***

# 4. ALTERNATIVES DEVELOPMENT AND EVALUATION

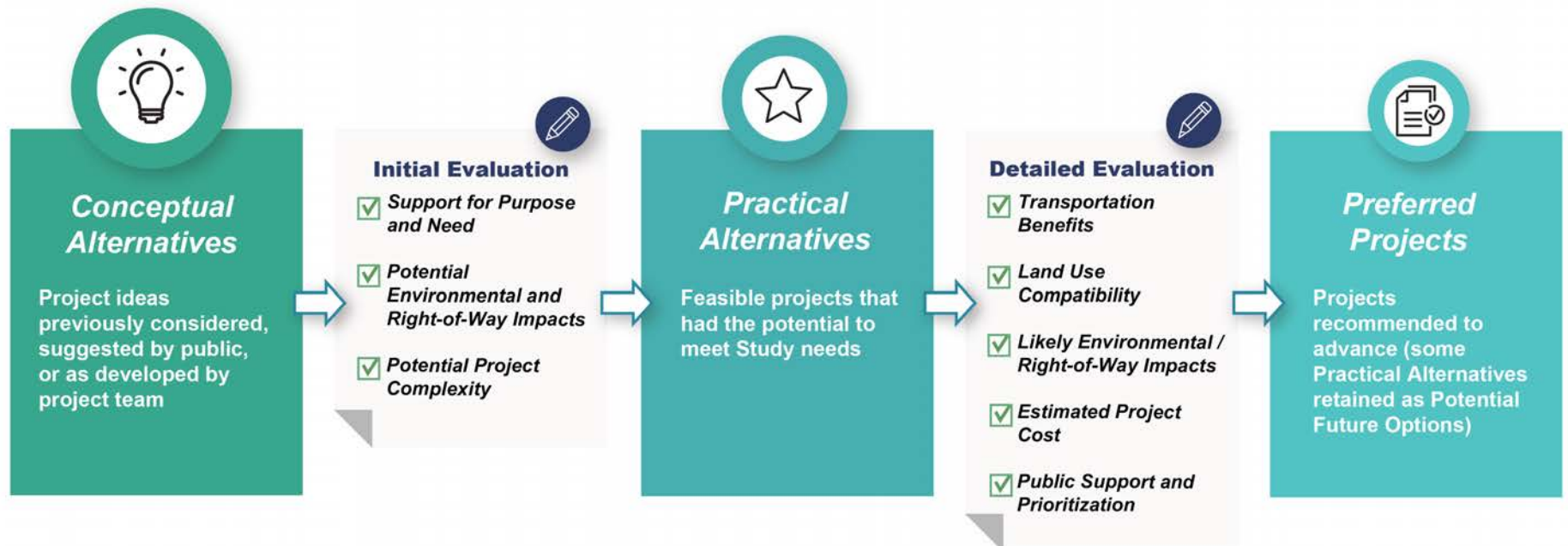
## Evaluation Process and Criteria

The Study utilized a two-step evaluation process which consisted of an *initial evaluation* and a second round of *detailed evaluation*. The evaluation process and evaluation criteria are shown below. The full evaluation can be found in the *Initial and Practical Alternatives Evaluation Technical Memorandums* on the [GVMC website](#).

## Conceptual and Practical Alternatives

The Study Team developed Conceptual Alternatives based on previous plans, issues identified in the existing conditions study, and input from the public. These were divided into two categories of *Airport Roadway Access*, which mainly considers improvements of vehicular access to the airport, and *Multi-modal Enhancements*, which includes transit,

rail and non-motorized access. Selected Roadway Access alternatives were developed to include multiple options. For example, the creation of an additional M-6 interchange on the east side of the airport could occur at multiple locations (but only one would be viable).



Evaluation Process and Criteria

# Initial Evaluation


The potential projects for improving access in and around the Airport are presented on the map below. All of the *Airport Roadway Access* alternatives passed the initial evaluation except **Alternative 3b: M-6 Interchange** -


**Egan Avenue Interchange** variation, which had high potential right-of-way impact and high project complexity.

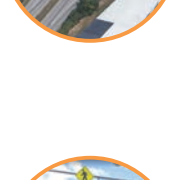
initial evaluation due to its potential large scale railway upgrades, which results in high right-of-way impact and high project complexity.


Among the *Multi-Modal Enhancement* alternatives, **Alternative 3: Passenger Rail Service** was not carried forward from the


## Airport Roadway Access

- 

1 **I-96/36th Street Access**  
 1a - Direct Access  
 1b - Indirect Access
- 

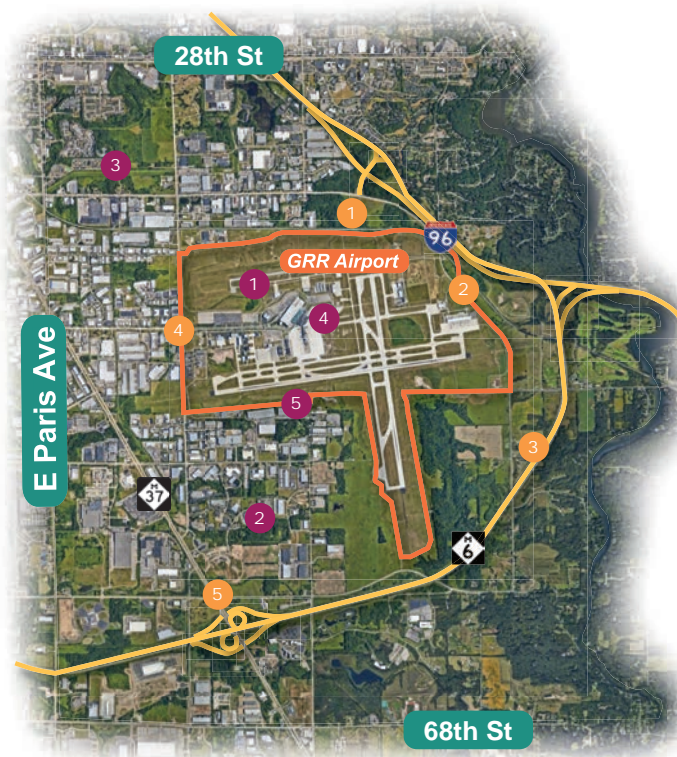
2 **Thornapple River Drive Access**  
 1a - Direct Access  
 1b - Indirect Access
- 

3 **M-6 Interchanges**  
 3a - 60th St Interchange  
 3b - Egan Ave Interchange\*  
 3c - Thornapple River Dr and 48th St Interchange  
 3d - 48th St Interchange
- 

4 **Patterson Avenue/44th Street Safety Enhancement**
- 


5 **M-37/Patterson Avenue/60th Street Safety Enhancement**


Alternatives with \* did not qualify as Practical Alternatives





Conceptual and Practical Alternatives

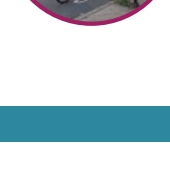
## Multi-modal Enhancements

- 

1 **Downtown Express Bus / Shuttle**
- 

2 **Expanded Transit Service (Cascade / Caledonia)**
- 

3 **Passenger Rail Service\***
- 

4 **Expanded Curb Management**
- 

5 **Pedestrian / Bike Connectivity Enhancements**

# Detailed Evaluation

## Airport Roadway Access

Based on the evaluation process, **I-96/36th Street Access Direct Access** emerged as the preferred secondary access point to the airport terminal, although this project will

require additional time for implementation due to its high cost and the need for coordination with potential airport runway construction. **I-96/36th Street Access Indirect Access** and **Air Cargo Drive Access** are no longer qualified alternatives due to their lower overall score. **Thornapple River Drive Secondary**

**Freight Access** and the two safety enhancements projects received relatively high ratings and they are also preferred projects for Airport Roadway Access.

Alternative	Variation	Transportation Benefit	Planning / Land Use Compatibility	Environmental/ ROW Impacts	Estimated Project Cost	Public Support and Prioritization	Overall Rating
I-96/36th Street Access	Direct I-96/36th St Access	●	◐	◐	◐	●	◐
	Indirect I-96/36th St Access	◐	◐	◐	◐	◐	◐
Thornapple River Drive Access	Secondary Freight Access	◐	●	●	●	◐	●
	Air Cargo Dr Access	●	◐	●	○	◐	◐
M-6 Interchange	60th St Interchange and Ring Road	◐	◐	◐	◐	◐	◐
	Thornapple River Dr and 48th St Partial Interchanges	◐	◐	◐	◐	◐	◐
	48th St Full Interchange	◐	◐	◐	◐	◐	◐
Patterson Ave /44th St Enhancements	N/A	◐	◐	●	◐	◐	◐
M-37/Patterson Ave/60th St Intersection Enhancements	N/A	◐	◐	●	◐	◐	◐

Address the criteria the least ○ ◐ ◑ ◒ ◓ Address the criteria the most

Airport Roadway Access Detailed Evaluation Results



**Multi-Modal Enhancements**

Based on the evaluation of Multi-Modal Enhancement Projects, those recommended for implementation are **Downtown Express Bus/Shuttle** and **Pedestrian/Bike Connectivity Enhancements**. Additional projects that were considered but deemed a

lower priority included **Expanded Transit Service**, which will require further coordination with transit operators and local jurisdictions to both fund and plan for service needs over the long term. **Expanded Curb Management** includes additional space for pick-up and drop-off and possibly the additio

of a new level to allow for splitting arrival and departure traffic. This will remain a focus of Airport expansion efforts. Each will be future considerations but are not preferred projects for implementation at this stage.

Alternative	Transportation Benefit	Planning / Land Use Compatibility	Environmental/ ROW Impacts	Estimated Project Cost	Public Support and Prioritization	Overall Rating
Downtown Express Bus/Shuttle	●	●	●	◐	●	◐
Expanded Transit Service (nearby airport)	◐	◐	●	◐	◐	◐
Expanded Curb Access/Management	◐	●	●	●	◐	◐
Pedestrian/Bike Connectivity Enhancements	◐	●	●	●	◐	◐

Address the criteria the least ○ ◐ ◑ ◒ ● Address the criteria the most

Multi-Modal Enhancements Detailed Evaluation Results

## 5. PREFERRED PROJECTS

The Study has identified a set of Preferred Projects for advancement, which are presented in more detail on the pages that follow. Each includes a defined timeline for implementation, conceptual design and a range of costs developed along with potential funding pathways. Additional design, input and environmental reviews will be needed for preferred projects to advance.

According to the evaluation results, Preferred Projects are the following:

- ▶ ***I-96/36th Street Access Direct Access***
- ▶ ***Thornapple River Drive Secondary Freight Access***
- ▶ ***Patterson Avenue /44th Street Safety Enhancements***
- ▶ ***M-37/Patterson Avenue/60th Street Intersection Enhancements***
- ▶ ***Downtown Express Bus/Shuttle***
- ▶ ***Pedestrian/Bike Connectivity Enhancements***

### I-96/36th Street Direct Access

Long-Term

#### ***Airport Roadway Access***

***Project Sponsor:*** GRR, Michigan Department of Transportation (MDOT)

***Estimated Construction Cost:*** \$157 million

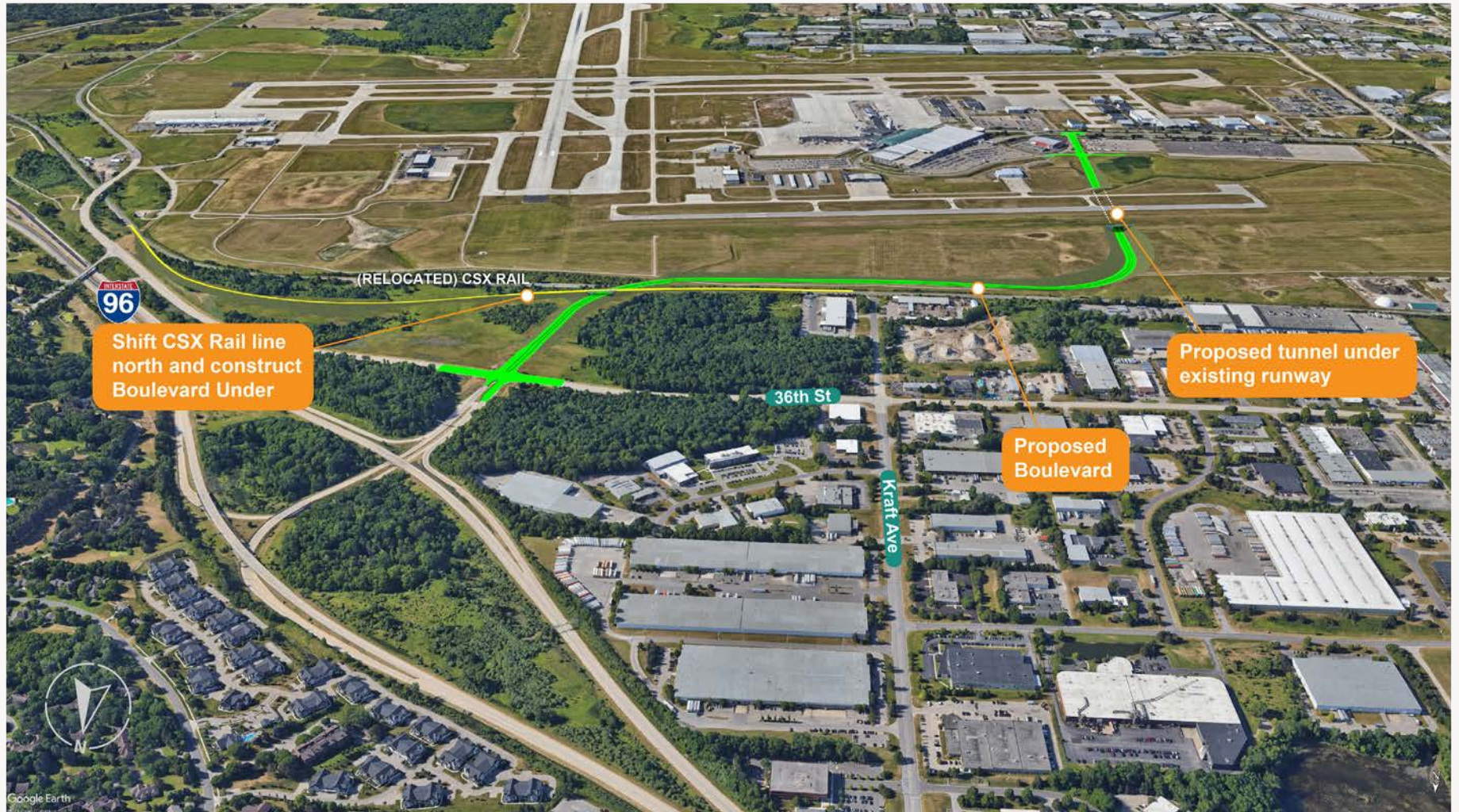
***Implementation Timeline:*** 5-10 Years

This project extends the I-96/36th Street interchange south of 36th Street to create a direct roadway connection to the airport. It includes a tunnel below the current and future expanded runway and avoids parking expansion zone on north side of terminal. This access would relieve traffic entering the airport from Patterson Avenue and adds redundancy to the current airport access network.

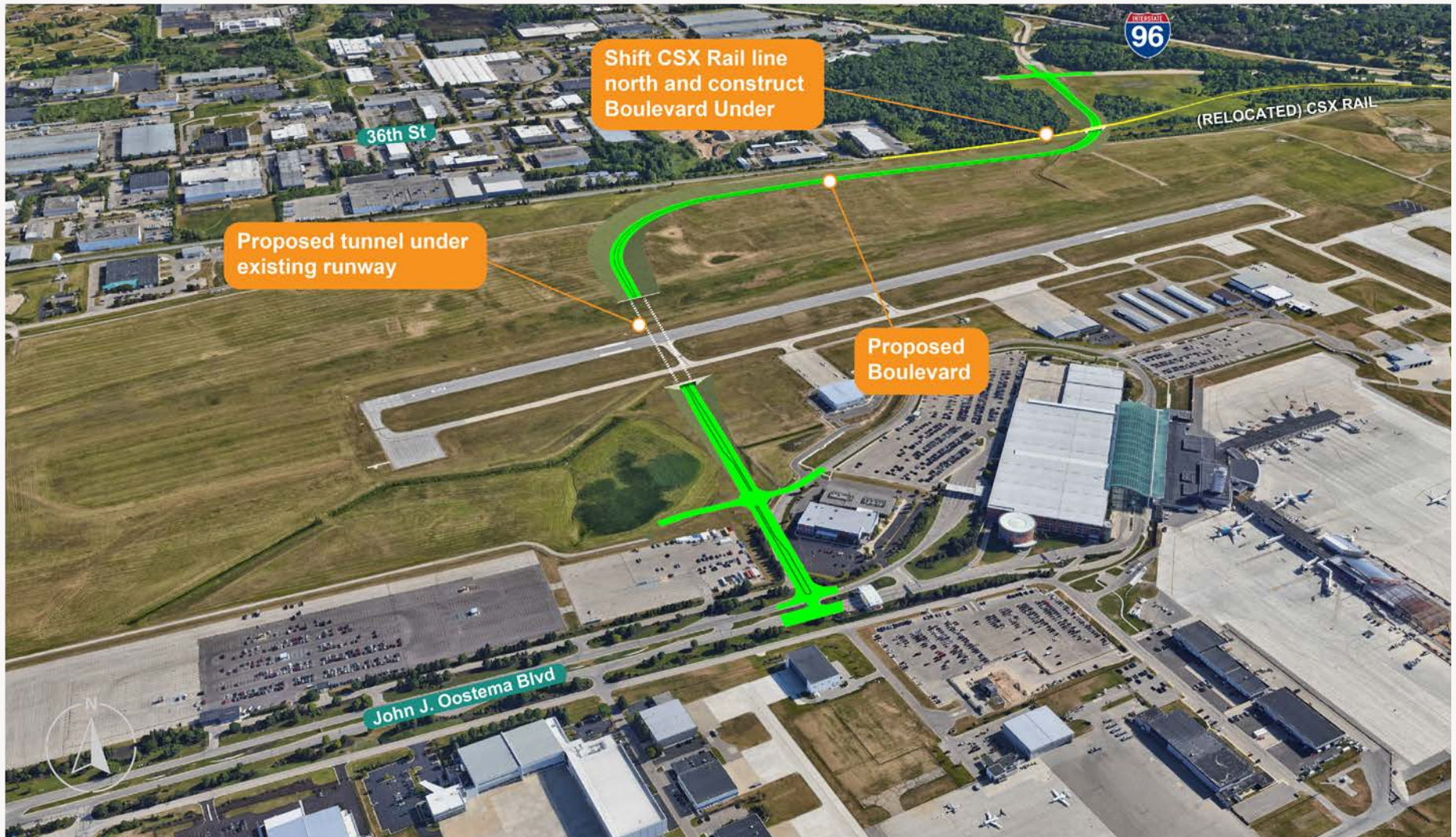
The construction could be phased in along with airport expansion. Once implemented, the new access could save approximately 4 minutes travel time compared to the existing access from I-96/36th St and Patterson Avenue.

***Funding Options:*** Funding for a project of this scale will rely on State and Federal transportation dollars, and could be competitive for either transportation or economic development grants.

***Next Steps:*** Preliminary Design and Environmental Reviews



*Proposed I-96/36th Street Direct Access (View 1)*



*Proposed I-96/36th Street Direct Access (View 2)*

## Thornapple River Freight Access

### Near-Term

#### **Airport Roadway Access**

**Project Sponsor:** GRR, Kent County Road Commission (KCRC)

**Estimated Construction Cost:** \$2M

**Implementation Timeline:** Next 5 Years

This alternative adds a new access point on Thornapple River Drive near the current freight access point next to FedEx Ship Center, which supports the growing cargo operations hub. This access enhancement is a portion of the Airport's recent Master Plan.

**Funding Options:** This will be an Airport-funded project, as it will occur primarily on Airport property.

**Next Steps:** Preliminary Design



*Proposed Thornapple River Freight Access*

## Patterson Avenue/ 44th Street Safety Enhancements

### Near-Term

#### **Airport Roadway Access**

**Project Sponsor:** GRR, KCRC, City of Kentwood

**Estimated Construction Cost:**

Approximately \$2M - \$4M

**Implementation Timeline:** Next 5 Years

This intersection is a significantly high crash activity spot with an incomplete pedestrian network. The project reconfigures roadway access to open possibility for airport-related commercial development, provides additional turn lanes at Patterson and 44th to accommodate existing and future traffic demand, and adds additional access and exit road onto Patterson Avenue.

**Funding Options:** Funding will likely be assembled via the programmed funding available to the Airport and the Kent County Road Commission

**Next Steps:** Preliminary Design and Traffic Study



*Proposed Patterson Avenue/44th Street Safety Enhancements and Surrounding Development*

## M-37/Patterson Avenue/60th Street Safety Enhancements

### Near-Term

#### **Airport Roadway Access**

**Project Sponsor:** MDOT

**Estimated Construction Cost:** Less than \$1M (as part of MDOT widening project)

**Implementation Timeline:** Next 5 Years

Currently, these intersections have the highest crash activity within the study area. This project builds eastbound to southbound right turn lane marking extension to reduce sideswipe accidents, and adds signing and marking to southbound M-37 from north of 60th Street to M-6. There is also planned roadway widening along M-37 by MDOT.

**Funding Options:** Michigan DOT will use a combination of state and federal transportation funding sources.

**Next Steps:** Preliminary Design and Traffic Studies



Proposed M-37/Patterson Avenue/60th Street Safety Enhancements

# Downtown Express Bus/Shuttle

Near-Term

## Multi-modal Enhancements

**Project Sponsor:** The Rapid

**Estimated Construction Cost:** \$800K to \$1.8M depending on chosen concept

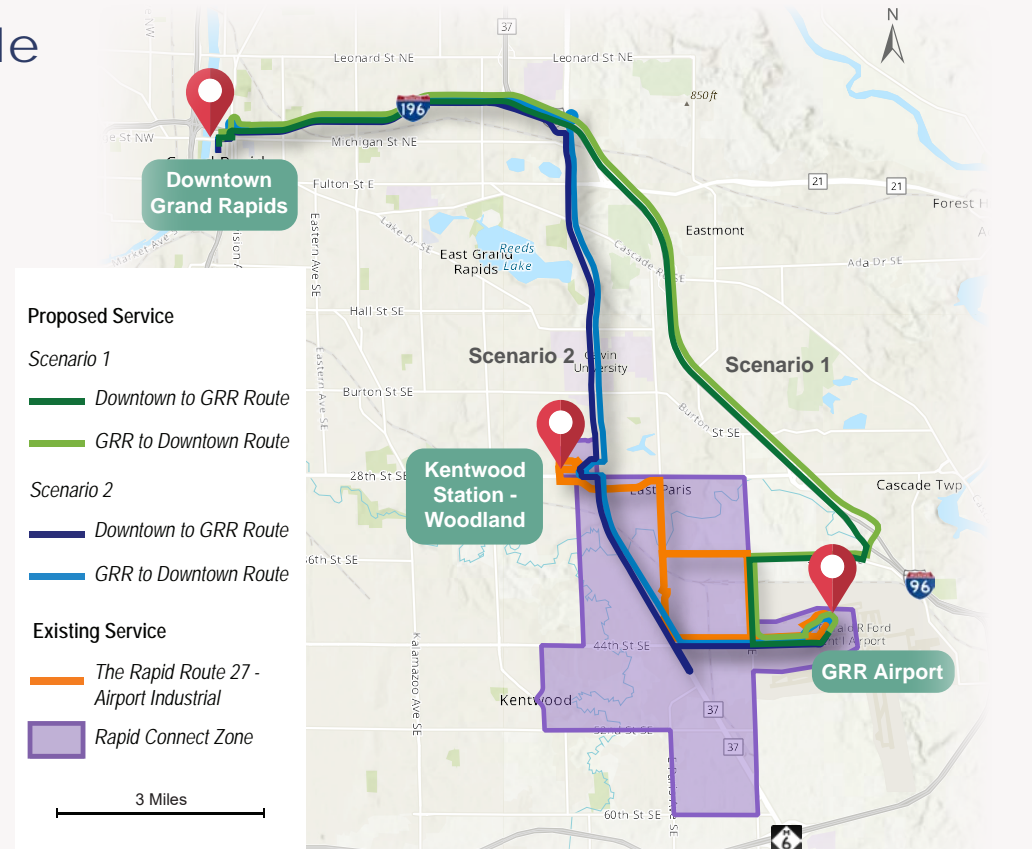
**Implementation Timeline:** Next 5 Years

Two scenarios are proposed for the Downtown Express Bus/Shuttle:

In Scenario 1, the direct shuttle departs every 30 minutes and stops at Downtown Grand Rapids and GRR Airport. In Scenario 2, the added shuttle serves as part of The Rapid bus system. It stops at Downtown Grand Rapids, Woodland, and GRR Airport.

**Funding Options:** The Rapid could fund through their ongoing budget, which relies on a mix of local (millage), state and federal funding. Based on examples from other regions, additional resources may be available through public or private partnerships, such as with the Airport, Convention and Visitor’s Bureau, or other business / tourism interests.

**Next Steps:** Operations Planning and Funding Coordination



	Scenario 1 Added Direct Downtown /GRR Airport Shuttle	Scenario 2 Downtown & Woodland Mall & GRR Airport Shuttle
Travel Time	21 minutes	29 minutes
Travel Distance	14 miles	15 miles
Frequency	30 minutes	30 minutes
Stops	GRR, Downtown	GRR, Woodland, Downtown
Fare	\$10 - \$15	\$1.75

Proposed Downtown Express Route Scenarios



# Pedestrian/Bike Connectivity Enhancements

Near-Term

Long-Term

## Multi-modal Enhancements

**Project Sponsor:** GRR, KCRC, City of Kentwood, Cascade Charter Twp

**Estimated Construction Cost:** Low

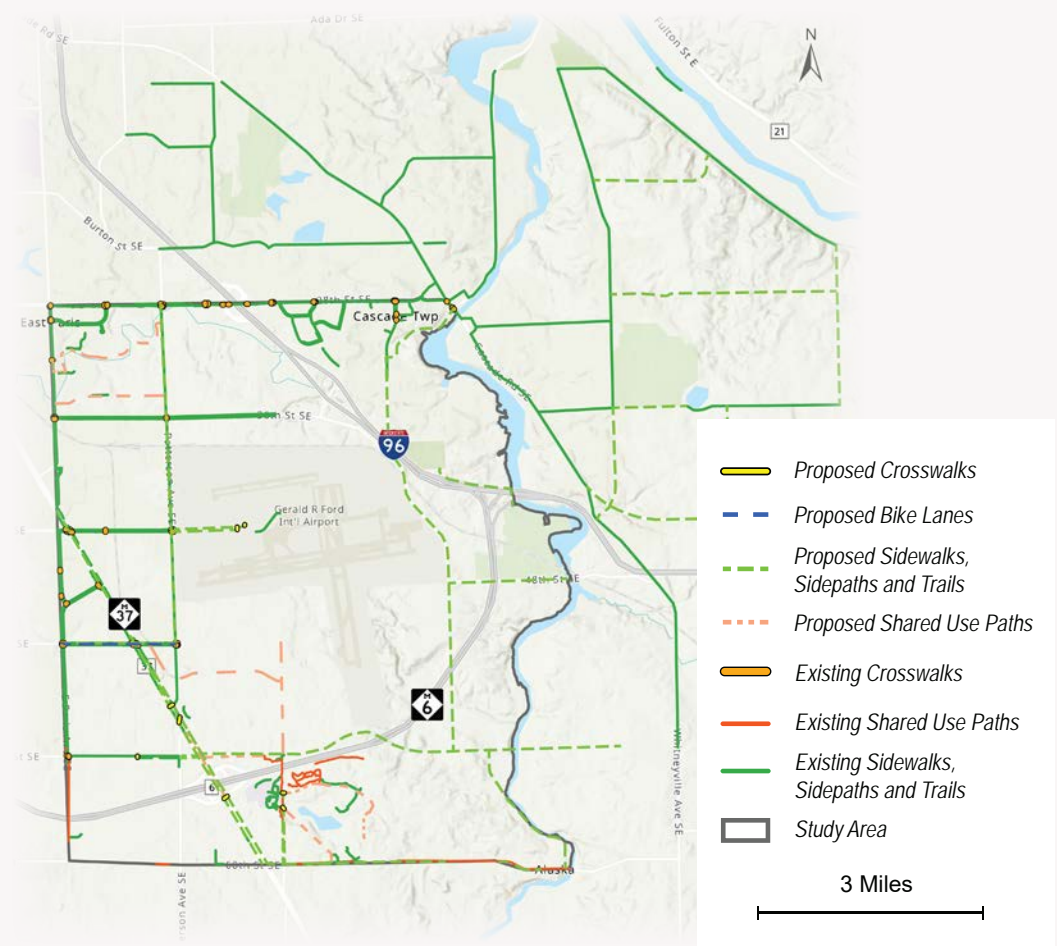
**Implementation Timeline:** Next 5 Years/5-10 Years

Recommended non-motorized connections are:

- ▶ Sidewalks/Sidepaths along 44th St/Oostema Blvd from - Patterson Ave to West Michigan Aviation Academy (Part of 2019 Airport Master Plan)
- ▶ New nonmotorized facilities are also contained in regional planning for corridors including along Patterson Ave, Broadmoor Ave (M-37), in the 52nd St and Kraft Ave corner of the Four Corners, and in the Davenport University area
- ▶ Proposed trail extensions along 60th Street, Thornapple River Drive, and 48th Street (Part of 2022 Cascade Township Strategic Plan)

**Funding Options:** Individual projects are likely to be advanced by local jurisdictions (cities and townships), potentially supported by state or federal grants.

**Next Steps:** Preliminary Design and Funding Coordination



Existing and Proposed Non-motorized Facilities

# 6. FUTURE OPTIONS

Potential Future Options are project opportunities that help address current and future transportation needs, but that are unlikely to be implemented in the near term. These could be considered in the future by the jurisdictions and infrastructure owners.

## Expanded Curb Management



### Multi-modal Enhancements

**Project Sponsor:** GRR

This option proposes terminal curb extension to accommodate and separate departure and arrival traffic. It is likely to be undertaken with future Airport expansion.

**Next Steps:** Design and Demand Studies

## Expanded Transit Service (Cascade/Caledonia)



### Multi-modal Enhancements

**Project Sponsor:** Caledonia Twp, Cascade Charter Twp, The Rapid

This option would add fixed-route or on-demand transit services in Cascade/Caledonia and better connects to growing job cluster near Airport. However, currently Cascade/Caledonia is not part of The Rapid's service area.

**Next Steps:** Community Engagement and Operations Planning



Future Options



M-6 Interchange near 48th Street and 60th Street

### Airport Roadway Access

**Project Sponsor:** MDOT

Added M-6 interchange could help complete roadway network surrounding the Airport and improve traffic flow to a from the freight uses on the east side. But recent Cascade Township planning targets less economic growth in this area.

**Next Steps:** Design and Demand Studies

## 7. NEXT STEPS

The development of this Airport Access Study is the initial step toward achieving a set of projects and services that will enhance the resilience and reliability of connections to the Gerald R. Ford International Airport. In the future, the infrastructure owners (including the Airport, MDOT, Kent County, The Rapid, and the local cities/townships) will need to conduct more detailed design studies, environmental reviews, and potentially funding applications prior to construction occurring. The table below indicates a potential timeframe for implementation.

Other than the development of local infrastructure that supports pedestrian and bicycle enhancements, the projects recommended by this study are likely to require state and federal funding contributions in order to advance. In its role as the programming entity for regional transportation funds, GVMC can play a unique role in considering and potentially prioritizing these enhancements to regional airport access.

Project	Project Lead	Project Partner(s)	Short-Term (1-2 Years)	Mid-Term (3-5 Years)	Long-Term (5-10 Years)
<b>Thornapple River Drive Secondary Freight Access</b>	GRR	Cascade Charter Twp	Finalize design and implement access		
<b>Patterson Avenue /44th Street Safety Enhancements</b>	GRR	Kent County, Kentwood, Cascade Charter Twp	Finalize design, determine funding	Construction	
<b>M-37/Patterson Avenue/60th Street Intersection Enhancements</b>	MDOT	Kentwood, Cascade Charter Twp	Finalize design, determine funding	Construction	
<b>Downtown Express Bus/Shuttle</b>	The Rapid	GRR	Study scenarios, include within regional master plan	Determine funding and launch service	
<b>Pedestrian/Bike Connectivity Enhancements</b>	Multiple	Multiple	Conduct design studies and secure funding	Initial construction of priority segments	Complete construction of primary connections
<b>I-96/36th Street Access Direct Access</b>	GRR	MDOT, Kent County, Cascade Charter Twp	Conduct additional design studies, integrate with Airport planning	Conduct environmental reviews, secure funding	Finalize design, initiate construction

*Potential Timeframe for Implementation*