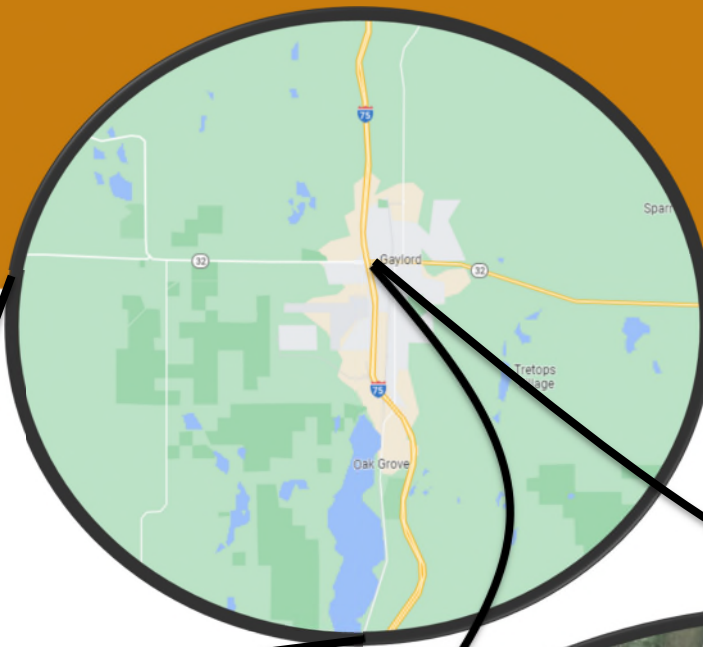


# I-75/M-32 Proposed Reconfiguration Gaylord, Michigan





# Location



# Purpose – Moment of Opportunity

The I-75 bridges over M-32 were built in 1961, are in poor condition, and will need to be replaced in the near future. This is a moment of opportunity to consider alternatives that meet or exceed the needs of the community and all users of the corridor.

- ✓ New bridge service life of 70 years
- ✓ Provide safe, efficient and secure movement of people and goods on I-75 and M-32 to support the economies of the Gaylord Area, Michigan, and the United States
- ✓ Anticipate traffic to increase over the service life of the bridge



# Purpose – Moment of Opportunity





# What are the needs?

- Accommodate projected 2045 traffic growth
- Minimize construction impacts
- Stay within budget
- Connect sidewalk gaps
- Address safety issues

What other needs should be considered?

- Aesthetic enhancement?
- Utility betterments?
- Driveway access improvements?
- Improvements for other modes of transportation?
- What else?



# Project Overview - History

- Freeway constructed – 1962
- Loop ramp construction – 1997
- 5-lane section under I-75 – 2002
- E-W corridor study – 2004
- McCoy Road underpass – Late 2000s
- Truck bypass route – 2014
- Responsive signal system – 2019
- RSA - 2019
- Operations project – abandoned due to this project





# Project Overview – Existing Layout





# Project Overview – Existing Congestion

Level of Service (LOS) is a qualitative measure used to describe the operational conditions of a roadway based on factors such as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety. LOS A represents the best operating condition and LOS F represents the worst.

Table 9-2—Motor Vehicle Level of Service Definitions for Signalized Intersections (49)

Level of Service	Intersection Conditions
A	Very short delay and most vehicles do not stop as a result of favorable progression or short cycle length
B	Short delay and many vehicles do not stop or stop for a short time as a result of short cycle lengths or good progression
C	Moderate delay, many vehicles have to stop; occasional individual cycle failures as a result of insufficient capacity during the cycle
D	Longer delays; many vehicles have to stop; and a noticeable number of individual cycle failures as a result of long cycle lengths, high volume to capacity ratios, and/or unfavorable progression
E	Long delays and frequent individual cycle failures result from one or both of the following: long cycle lengths or high volume to capacity ratios, which, in turn, result in poor progression
F	Delays considered unacceptable to most drivers occur when the vehicle arrival rate is greater than the capacity of the intersection for extended periods of time

AASHTO A Policy on Geometric Design of Highways and Streets (7<sup>th</sup> Edition), 2018



# Intersection Congestion Issues



Level of Service (LOS) at the intersections



# Project Overview – Existing Crash Map

## M-32 Crashes





# Alternative Interchange Concepts: Diverging Diamond Interchange (DDI)



DDI is an alternative interchange that improves safety and improves traffic flow.

Benefits:

- Reduced opportunities for collisions
- Greater capacity and efficiency
- Reduced backup congestion at the interchange



# Alternative Interchange Concepts: Single Point Urban Interchange (SPUI)

SPUI Interchange uses a single traffic signal at the center of the interchange to control left-turns.

Benefits:

- It uses less space than a standard interchange
- Able to handle larger traffic volumes
- It provides wider turns for larger vehicles to safely navigate through the interchange





# Moving Forward – Tentative Schedule

**WE  
ARE  
HERE**

**Fall 2023 –  
MDOT Selects  
Alternative**

**Spring 2024 –  
Advisory and  
Public Meeting**

**Fall 2026 to 2027**

Focus on maintenance of  
traffic and any updates

Construction

**October 2023 – 2<sup>nd</sup>  
Public Meeting**

Focus on analysis of  
the three  
alternatives

**Spring 2024**

Preliminary design and  
preparation of the  
contract documents

**Fall 2024 - Spring  
2025**

Shortlisting, RFP  
Advertisement, letting,  
and Public Meeting