



DEPARTMENT OF ROADS

117 South Groesbeck Highway | Mount Clemens, Michigan 48043

586-463-8671

macombgov.org/roads

Bryan E. Santo, P.E.
Director of Roads

December 29, 2020

John Crumm

Macomb County Department of Roads
117 S. Groesbeck Hwy.,
Mt. Clemens, MI 48043

Dear resident,

I am writing as a follow up to the Innovate Mound Arden neighborhood meeting held on Wednesday, December 2, 2020. First, thank you for your feedback. Hearing and addressing the concerns of community residents and others who live near and/or travel Mound Road is critical to the success of this project.

As a follow up, we wanted to share the information discussed about the plans for making the intersection at Mound Road and Arden Avenue safer for both vehicular and pedestrian traffic. In addition to improving overall operations on both Mound Road and Arden Avenue, traffic analysis for the project found the following results:

- The right-in, right-out alternative will cause fewer delays at both Arden Avenue approaches than the current configuration.
- The modification to the signal at Arden Avenue will allow more flexibility and improve traffic flow progression and coordination between nearby signals.
- The improvements will allow for more available gaps in traffic and opportunities to travel safely to nearby turnarounds.
- The signal on the Arden Avenue approaches will provide vehicles a protected right turn movement. The protected movement will allow vehicles to turn onto Mound Road and begin to travel across the four lanes to enter the turnaround while traffic is stopped on Mound Road. The transportation system (which includes Arden Avenue, pedestrian traffic in Historic Warren Village, access out of St. Anne's Catholic Church and access out for Warren Consolidated Schools) will be improved, minimizing congestion and delays.
- Emergency vehicles will be able to safely access Arden Avenue by using the nearby turnarounds as well as the potential for a protected right-turn movement from Arden Avenue onto Mound Road. (This is the same for all other single access roads along Mound Road.)

The Mound Road corridor was analyzed from both a traffic operation and a safety perspective to determine roadway segments and/or spot locations that need improvement. The traffic analysis began by analyzing existing 2019 conditions within the study area. The traffic counts, travel time data, and field observations for the existing conditions were all collected prior to the March 2020 start of the COVID-19 pandemic. The existing traffic model was run and compared to the traffic counts recorded on Mound to make sure the model was calibrated to existing 2019 conditions and represented a typical weekday condition within the study area.

The Mound Road corridor segment between 13 Mile Road and 14 Mile Road was identified in the traffic and safety analysis as an opportunity to improve the traffic flow and safety along Mound Road as well as cross streets and driveways. The proposed improvements will still provide a traffic signal at Mound Road and Arden Avenue but the through movement on Arden Avenue is proposed to be removed allowing vehicles to make a right-turn only from Arden Avenue onto Mound Road. The right turn movement from Arden Avenue will include a signal head and will provide a protected right turn movement onto Mound Road. The intersection will also include enhanced pedestrian crossings.



DEPARTMENT OF ROADS

117 South Groesbeck Highway | Mount Clemens, Michigan 48043
586-463-8671
macombgov.org/roads

Bryan E. Santo, P.E.
Director of Roads

The existing safety analysis conducted for the project indicated a high percentage of rear-end crashes occurring at the intersection as shown in **Table 1** on the attachment. The crashes could be a result of the short driving distance between existing traffic signals and the difficulty of timing them to allow a smooth flow of traffic through this segment of Mound Road. The safety analysis also identified angle crashes as a crash type of concern at the intersection. The angle crashes are mostly related to the through movement on Arden Avenue in relation to the heavy traffic on Mound Road. The proposed intersection improvement will remove the possibility of angle crashes related to the through movement on Arden Avenue. Angle crashes are among the most dangerous and severe crash types. The improved traffic flow will decrease congestion on Mound Road resulting in fewer rear-end and angle crashes both on Mound Road and in the Arden Avenue vicinity.

The traffic analysis also indicated that the majority of peak morning and afternoon traffic on Arden Avenue is turning right onto Mound Road as opposed to traveling through the intersection. The Future No-Build year 2050 traffic volumes are shown in

Figure 1, on the attachment, for the intersection of Mound Road and Arden Avenue for both the peak hours in the morning and afternoon. The Future No-Build condition assumes that the current configuration remains the same along Mound Road. The proposed intersection improvement would eliminate the through movement at this intersection and allow only a right turn onto Mound Road.

The proposed right-in right-out movement at Mound Road and Arden Avenue will allow more flexibility for improving traffic flow progression and coordination between nearby signals but will also reduce the delay experienced on both Arden Avenue approaches. The morning peak traffic conditions at Mound Road and Arden Avenue are shown in **Figure 2**, on the attachment, for both the Future No-Build condition (current intersection configuration) and the proposed build improvement intersection. The build improvement will result in less delay on both the eastbound and westbound approaches on Arden Avenue.

The afternoon peak traffic conditions at Mound Road and Arden Avenue are shown in **Figure 3**, on the enclosure, for both the Future No-Build condition (current intersection configuration) and the proposed build improvement. Like the morning conditions, the afternoon peak traffic conditions will result in less delay on both Arden Avenue approaches under the build intersection improvements.

Thank you again for your feedback and participation. Please stay connected and informed as the project continues at www.InnovateMound.org. If you have further questions, please contact our project team at 1-855-MOUND4U (1-855-668-6368).

Sincerely,

John Crumm
Director, Planning
Macomb County Department of Roads

Enclosure: Table 1, Figures 1-3, Rendering 1

Table 1: Crashes at Mound Road and Arden Avenue (2015 – 2018)

Crash Type	Number of Crashes (2015-2018)
Rear-ends	50
Angle	13
Sideswipe (same direction)	11
Single motor vehicle	3
Backing	1
Total	78

Figure 1: Morning (AM) and Afternoon (PM) Peak Hour Volumes

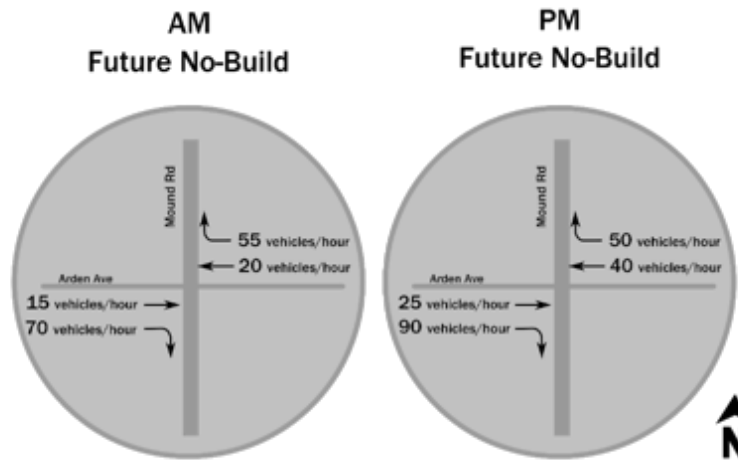


Figure 2: Morning (AM) Delay Comparison between Future No-Build and Build

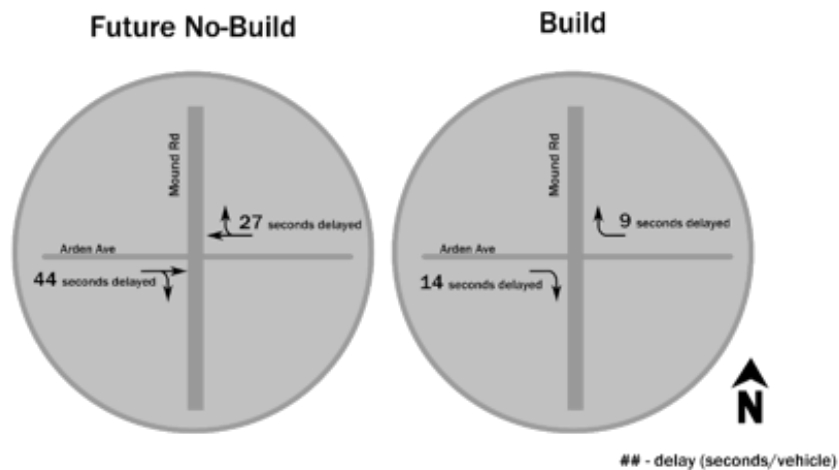
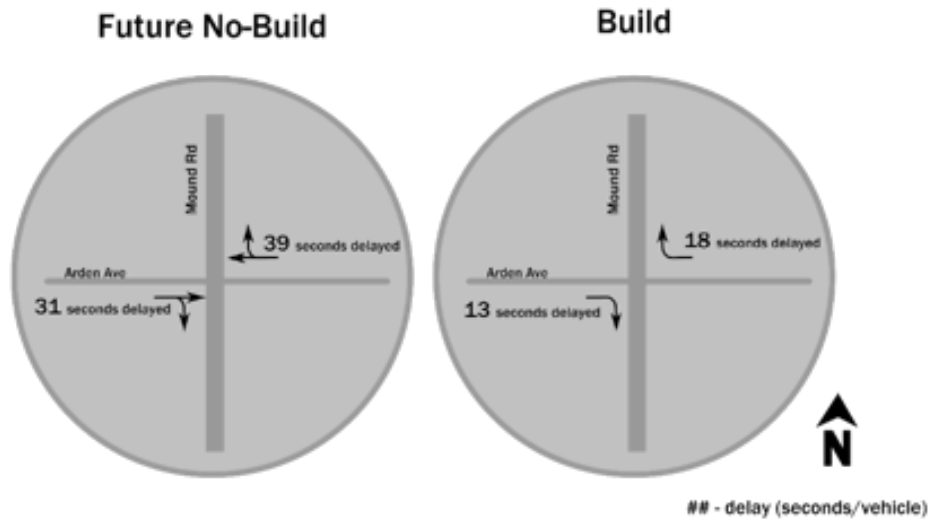


Figure 3: Afternoon (PM) Delay Comparison between Future No-Build and Build



Rendering 1: Improvements Rendering of Mound Road at Arden Ave.

