US-10 Business Route Buttles Street Road Diet Traffic Data Report
Buttles Street Road Diet
Traffic Data Report

- In 2015 MDOT commissioned a corridor study of US-10 BR through City of Midland
  - Washington Street to US-10 BR/US-10 Interchange

- Partnership with the City

- Other Recent Studies
  - Main Street Streetscape Study (City of Midland)
  - Downtown Midland Study (Momentum Midland)
Corridor Study included:

- Public Engagement
  - Steering Committee
  - Stakeholder Committee
  - Public Information Meetings
- Traffic Analysis
  - Existing Conditions
  - No Build (2040)
  - Review of crashes
Corridor Study presented to City Council March 27, 2017

- Study presented improvement alternatives
  - Three alternatives identified
  - Comparison of alternatives
  - Presented the preferred alternative of a lane reduction, or road diet.
Buttles Street Road Diet
Traffic Data Report

Proposal to focus on the Buttles Street from Jerome (M-20) to State Street

- Reduction in number of travel lanes
- Non-motorized zone signal upgrades, retiming
- Sidewalk connections
- Access Management
- Connection to Downtown Midland
Buttles Street Road Diet Traffic Data Report

BUTTLES STREET ROAD DIET
JEROME TO STATE
Buttles Street Road Diet
Traffic Data Report

• Preferred Alternative – Road Diet
  • Provide acceptable levels of traffic operations
  • Traffic calming
  • Low cost
  • Promote future development in the corridor
  • Increase the connection between the downtown area and surrounding neighborhoods
  • Improve pedestrian experience by reducing the number of lanes required to cross Buttles
  • Provide a non-motorized zone, with various options
Buttles Street Road Diet Traffic Data Report

- Two short term assessments of a lane reduction on Buttles Street previously completed
- August 28-30, 2017
  - Data collected included volume and speed during peak travel times
- November 6-13, 2017
  - Reviewed for backup and delay at signalized intersections
Buttles Street Road Diet
Traffic Data Report

• Traffic data from the previous assessments presented to City Council on December 18, 2017

• Also proposed a long term trial period to assess the lane reduction on Buttles Street
  • Assessment includes traffic data collection
    • Volume, speeds, delay and crashes
Buttles Street Road Diet
Traffic Data Report

Long term trial period of road diet -

- May 14, 2018 traffic bollards and pavement markings were installed on Buttles Street, reducing the three lane road section to two lanes

- Traffic data collection began September 24, 2018
Buttles Street Road Diet
Traffic Data Report

Long term trial period of road diet -

• Representatives from the Michigan Department of Transportation (MDOT) are here to present the traffic data collected as part of the long term trial period

• Resolution before you receives and files the traffic data report for the lane reduction on Buttles Street.
Buttles Street Road Diet Traffic Data Report

Total Volume
Tuesday, September 25, 2018 - Friday, September 28, 2018
Zone 1, Zone 2

Total Volume

Vehicles per 60-Minute Period

0 200 400 600 800 1000 1200 1400

09/25/2018 05:00 06:00 07:00 08:00 09:00 10:00 11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00

09/28/2018 05:00 06:00 07:00 08:00 09:00 10:00 11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00

Zone 1

Zone 2
Buttles Street Road Diet
Traffic Data Report

Total Volume

Friday, October 12, 2018 - Sunday, October 14, 2018
Zone 1, Zone 2

Vehicles per 60-Minute Period

- Total Volume
Buttles Street Road Diet Traffic Data Report

Average Speed
Tuesday, September 25, 2018 - Friday, September 28, 2018
Zone 1, Zone 2

Average Speed

Average Speed in PH
Buttles Street Road Diet Traffic Data Report

Average Speed
Friday, October 12, 2018 - 10/14/2018
Zone 1, Zone 2

Average Speed in PH

38.500
38.000
37.500
37.000
36.500
36.000
35.500
35.000
34.500
Buttles Street Road Diet
Traffic Data Report

Speed
Tuesday, September 25, 2018 - Friday, September 28, 2018

Average Speed in PH

- Zone 1
- Zone 2
Buttles Street Road Diet
Traffic Data Report

**Speed**
Friday, October 12, 2018 - Sunday, October 14, 2018

- Zone 1
- Zone 2
Buttles Street Road Diet
Traffic Data Report

• Level of Service (LOS)
  • Measure of the restrictive effects of volume upon capacity
  • LOS is represented in a range from A to F
  • LOS of A is the least congested
  • LOS of D is generally acceptable
  • City of Midland targets LOS of C

• Traffic data collected shows that Buttles Street, in the road diet section is operating at a LOS of A.
Buttles Street Road Diet
Traffic Data Report

- Delay Study
  - Vehicle delay data was collected between September 24 and September 27, 2018
  - Delay study identifies the number of vehicles that are delayed at a signalized intersection for more than one cycle of the signal
  - During the November 2017 delay study, no vehicle delays were identified
  - During the September 2018 delay study, long queues were noted but no vehicle delays identified
Buttles Street Road Diet
Traffic Data Report

Long Term Trial Period:

- Observed LOS of A is in line with the LOS observed during the two short term assessments completed in 2017.

- Observed LOS of A is in line with the LOS anticipated from the traffic model developed for the corridor study.
Crash Data:

- Collected and reviewed since implementation of the long term trial period (May to October 2018)
  - 15 crashes observed 2018
  - 9 crashes observed 2017
  - 12 crashes observed 2016

<table>
<thead>
<tr>
<th>Year</th>
<th>Angle Straight</th>
<th>Misc Single Vehicle</th>
<th>Misc Multiple Vehicle</th>
<th>Rear End Straight</th>
<th>Side Swipe Same</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>7</td>
<td>1</td>
<td>0</td>
<td>5</td>
<td>2</td>
<td>15</td>
</tr>
<tr>
<td>2017</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>2016</td>
<td>5</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>12</td>
</tr>
</tbody>
</table>
Buttles Street Road Diet
Traffic Data Report

Long Term Trial Period:

- Traffic data will continue to be collected this fall
- Traffic data will also be collected in spring 2019
- An assessment of the traffic data will be presented in spring of 2019
End