

# Medora Business Loop & City Section Project

5-094(152)900, PCN 23114

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## INTRODUCTION

The North Dakota Department of Transportation is evaluating potential roadway improvements on Pacific Avenue (I-94 Business Loop) between I-94 Exit 24 and Exit 27 through Medora, ND. The project consists of potential improvements to Pacific Avenue from Chateau Rd to the Little Missouri River Bridge to 6th Street (City Section), and a mill and overlay for the portions of roadway outside the City Section (from Exit 24 to Exit 27). The Little Missouri River Bridge may be widened and improved.

## PROJECT GOALS






1. Gather input and inform stakeholders and the public about the purpose and needs of the Pacific Avenue Project
2. Develop previous study concepts into alternatives and set schedule to facilitate the timely development of the Environmental Document and design plans
3. Partner with local stakeholders to promote project milestones and public input opportunities with a sensitivity to the Western Heritage context of the Medora Community
4. Engage the stakeholders and the public and collect feedback

## PROJECT PURPOSE & NEED

### Purpose:

Provide for project improvements that address project needs and integrate the unique western heritage context of Medora.

### Needs:

-  Maintain or increase parking in the downtown area
-  Improve consistency of the Pacific Avenue roadway cross section and the Little Missouri River bridge section
-  Address pedestrian and vehicular conflict conditions
-  Address forecasted traffic operational deficiencies at the E River Road N intersection
-  Improvements that are consistent with the local western heritage theme



# ALTERNATIVES PRESENTED

The following are the alternatives presented to public input and comment that will be in addition to the base project elements which include: pavement mill and asphalt overlay, Little Missouri River Bridge widening, and downtown cross section extension from E River Rd N to Chateau Rd.

## PACIFIC AVENUE CROSS SECTION



Alternative	Overview	Advantages	Disadvantages
<b>Alt 1 – No Build</b>  Purpose & Need Compatibility 	<ul style="list-style-type: none"> <li>Maintain current cross section</li> <li>Maintain current parking</li> </ul>	<ul style="list-style-type: none"> <li>No additional cost</li> </ul>	<ul style="list-style-type: none"> <li>Does not alert drivers to bicycles</li> <li>Continued speed concerns</li> <li>Inefficient parking in downtown</li> </ul>
<b>Alt 2, OPTION 1 – 12-foot Travel Lanes with Sharrows</b>  Purpose & Need Compatibility 	<ul style="list-style-type: none"> <li>Match current cross section</li> <li>Sharrows - identifying sharing the road with bicycles</li> <li>Multi-modal – Bikes will share roadway, other modes (scooters, segues, etc.) would stay the same</li> </ul>	<ul style="list-style-type: none"> <li>Maintains current parking</li> <li>Better identification of bicycle use</li> </ul>	<ul style="list-style-type: none"> <li>None</li> </ul>
<b>Alt 2, OPTION 2 – 11-foot Travel Lanes, Sharrows &amp; Parking Improvements</b>  Purpose & Need Compatibility 	<ul style="list-style-type: none"> <li>Change striping – narrow driving lane width to 11-feet</li> <li>Parking – painting parking lines would allow for more parking in downtown Medora area</li> </ul>	<ul style="list-style-type: none"> <li>Increased number of parking stalls in downtown</li> <li>Allows for Bike traffic to share the road</li> <li>Speed reduction with narrowed lanes</li> </ul>	<ul style="list-style-type: none"> <li>None</li> </ul>

## PEDESTRIAN CROSSINGS



Alternative	Overview	Advantages	Disadvantages
<b>Alt 1 – No Build</b>  Purpose & Need Compatibility 	<ul style="list-style-type: none"> <li>Leave marked pedestrian crossing at 4th Ave</li> <li>Number of locations (2)</li> <li><b>Vehicle/Ped Conflict Points (509)</b></li> </ul>	<ul style="list-style-type: none"> <li>No additional cost</li> </ul>	<ul style="list-style-type: none"> <li>Does not address pedestrian safety concerns</li> <li>Increase in safety risk as traffic increases</li> </ul>
<b>Alt 2, OPTION 1 – Mid-Block &amp; Corner Pedestrian Crossings</b>  Purpose & Need Compatibility 	<ul style="list-style-type: none"> <li>Expanded number of locations: (6)</li> <li>Mix of Channelization* (3) and Standard Crosswalks (3)</li> <li><b>Vehicle/Ped Conflict Points (212)</b></li> </ul>	<ul style="list-style-type: none"> <li>Improved pedestrian channelization and crossing safety</li> <li>Channelization focus in areas of greatest pedestrian concentration</li> </ul>	<ul style="list-style-type: none"> <li>Modifications in access and intersection turning</li> </ul>
<b>Alt 2, OPTION 2 – Mid-Block &amp; Corner Pedestrian Crossings</b>  Purpose & Need Compatibility 	<ul style="list-style-type: none"> <li>Expanded number of locations: (6)</li> <li>Mix of Channelization* (2) and Standard Crosswalks (4)</li> <li><b>Vehicle/Ped Conflict Points (315)</b></li> </ul>	<ul style="list-style-type: none"> <li>Improved pedestrian channelization and crossing safety</li> <li>Channelization focus in areas of greatest pedestrian concentration</li> </ul>	<ul style="list-style-type: none"> <li>Modifications in access and intersection turning</li> </ul>
<b>Alt 2, OPTION 3 – Mid-Block &amp; Corner Pedestrian Crossings</b>  Purpose & Need Compatibility 	<ul style="list-style-type: none"> <li>Expanded number of locations: (6)</li> <li>Mix of Channelization* (3) and Standard Crosswalks (3)</li> <li><b>Vehicle/Ped Conflict Points (192)</b></li> </ul>	<ul style="list-style-type: none"> <li>Improved pedestrian channelization and crossing safety</li> <li>Channelization focus in areas of greatest pedestrian concentration</li> </ul>	<ul style="list-style-type: none"> <li>Modifications in access and intersection turning</li> </ul>
<b>Alt 3, OPTION 1 – Mid-Block &amp; Corner Pedestrian Crossings</b>  Purpose & Need Compatibility 	<ul style="list-style-type: none"> <li>Expanded number of locations: (4)</li> <li>Focus on Channelization* &amp; Safety</li> <li><b>Vehicle/Ped Conflict Points (107)</b></li> </ul>	<ul style="list-style-type: none"> <li>Comprehensive pedestrian channelization</li> <li>Highest Safety Benefits – reduced conflicts</li> </ul>	<ul style="list-style-type: none"> <li>Largest number of modifications in access and intersection turning</li> <li>Highest cost/longest construction period</li> </ul>



# INTERSECTION IMPROVEMENTS



Alternative	Overview	Advantages	Disadvantages
<b>Alt 1 – No Build</b>  Purpose & Need Compatibility 	<ul style="list-style-type: none"> <li>Stacking and Delay conditions to increase as traffic volumes will continue to grow</li> <li>Concerns with right turns stacking on Pacific Ave and Left turns from East River Road N onto Pacific Ave</li> </ul>	<ul style="list-style-type: none"> <li>No changes</li> <li>Lowest cost</li> </ul>	<ul style="list-style-type: none"> <li>Does not meet Purpose &amp; Need</li> <li>Failed long-term function standards</li> <li>Traffic stacking to turn onto Pacific Ave will increase</li> </ul>
<b>Alt 2 – Chateau Rd Roundabout</b>  Purpose & Need Compatibility 	<ul style="list-style-type: none"> <li>Restricted Crossing U-Turn Intersection (RCUT) , limits left turning movement from East River Road N</li> <li>Drivers will right-turn out at East River Road and utilize roundabout at Chateau Rd to turn around</li> </ul>	<ul style="list-style-type: none"> <li>Improved traffic operations</li> <li>Multiple lanes to maintain traffic flow</li> </ul>	<ul style="list-style-type: none"> <li>Impacts to BNSF railroad property at Chateau Rd</li> </ul>
<b>Alt 2, OPTION 1 – One Lane Roundabout**</b>	<ul style="list-style-type: none"> <li>One lane roundabout that connects Pacific Avenue &amp; Chateau Road – shifted to avoid Railroad impacts</li> <li>Allows for right-turn only out from East River Rd N</li> </ul>	<ul style="list-style-type: none"> <li>Reduces left turn stacking at E River Road N</li> <li>All improvements inside existing right-of-way (easement)</li> </ul>	<ul style="list-style-type: none"> <li>Indirect traffic flow</li> </ul>
<b>Alt 2, OPTION 2 – Two Lane Roundabout**</b>	<ul style="list-style-type: none"> <li>Two lane roundabout that allows for traffic flow with trains at Chateau Rd</li> </ul>	<ul style="list-style-type: none"> <li>Reduces left turn stacking at E River Road N</li> <li>Eliminates main traffic flow delays when trains come through</li> </ul>	<ul style="list-style-type: none"> <li>Impact to BNSF Railroad Property</li> </ul>
<b>Alt 3 – Roundabout at E River Rd N</b>  Purpose & Need Compatibility 	<ul style="list-style-type: none"> <li>Roundabout at E River Rd N</li> <li>Layout intended to not impact National Park Service property</li> </ul>	<ul style="list-style-type: none"> <li>Improved future traffic operations</li> <li>Reduced intersection conflicts – safety enhancement</li> </ul>	<ul style="list-style-type: none"> <li>Impact to BNSF railroad property</li> <li>Change in Access to National Park / Need for Entrance Station Relocation</li> </ul>

\*Note: Channelization = raised median with bulb-outs and Danish off-set crosswalks

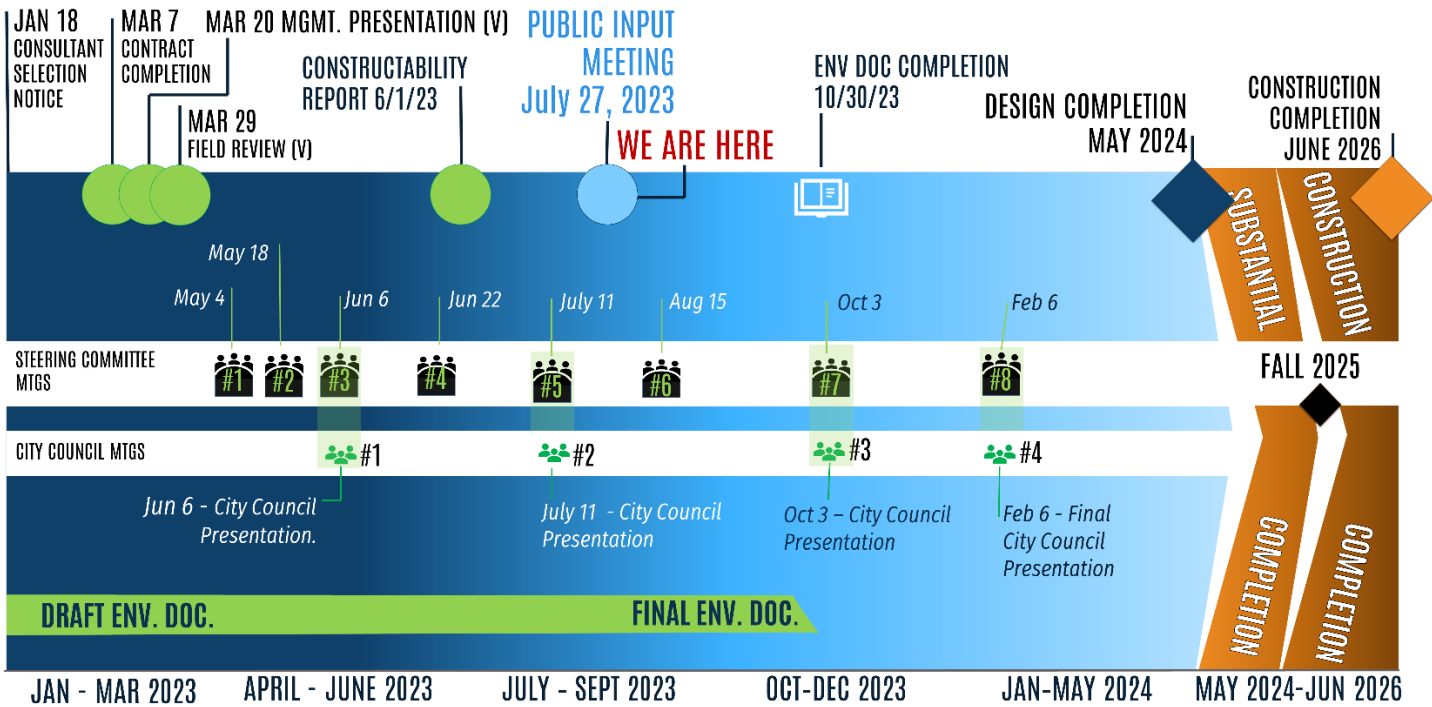
\*\*Note: Roundabout location and orientation to be further refined as part of final design

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## CONTINUED PUBLIC ENGAGEMENT

The NDDOT Team has endeavored to partner with local government, business, and other stakeholder interests to find needs and goals related to Pacific Avenue. The ongoing schedule for multiple points of public interaction and engagement and the timing of planned project completion is detailed in the figure below:



## PUBLIC INFORMATION OPPORTUNITIES

Civil Science will continue to provide community information at City Council Meetings as follows:

Medora Community Center  
 465 Pacific Avenue  
 Medora, ND 58645

- October 3, 2023 – City Council Presentation Update
- February 6, 2024 – City Council Presentation focused on Design and Construction Planning

### ONGOING PROJECT INFORMATION:

[dot.nd.gov/MedoraBusinessLoop](http://dot.nd.gov/MedoraBusinessLoop)



Please email written comments to [comments@civilsience.com](mailto:comments@civilsience.com) with “public input” in the subject line

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