MIDLAND COUNTY ROAD COMMISSION

POLICY

NUMBER: **100.25**
SECTION: **100.25**

SUBJECT: **3' PAVED SHOULDERS**

POLICY: The Midland County Board of Road Commissioners will consider the adoption of the 3' Paved shoulder requirement in the MDOT 3R guidelines on Locally funded Primary projects if the following conditions are met.

Corridor is identified as having above average safety issues
Maintenance of Gravel shoulders is an ongoing issue
Significant biker and pedestrian usage of the shoulders

Justification on why they shouldn't be widened and/or paved may include high cost, environmental issues, local public input, and should be documented in the project file.

If the corridor is identified as a bicycle route inside the county, consideration should be given to widening the 3' paved shoulder to 4' paved if feasible. Share the road signs are an option especially if the traffic volume is less than 2000 ADT.

Policy goes into effect in the 2020 construction program.

1) Local Agency Programs Guidelines for Geometrics on Local Agency Projects 2017 Edition for projects which are funded thru MDOT Local Agency Programs

ADOPTED 7-10-2019
POLICY\PAVED SHOULDERS

<table>
<tr><th>Geometric Elements</th><th colspan="3">3R Minimum Guidelines: Non-NHS</th></tr>
<tr><td rowspan="4">Design Speed

Shoulder Width
NOTE: Minimum shoulder widths apply for posted speeds greater than 45 mph. Restrictions such as right of way and roadside context sensitivity issues may preclude the use of minimum shoulders within city, village or township limits with posted speeds of 45 mph and less.</td><td colspan="3">Posted Speed Minimum</td></tr>
<tr><td>Current ADT
Two-Way</td><td colspan="2">Inside and Outside Shoulder Width</td></tr>
<tr><td>≤750

750-2000

>2000</td><td colspan="2">2'-0" (Gravel)

3'-0" (with 1’-0” Paved required when a 3R Safety review shows a pattern of lane departure crashes.)

6'-0" (with 3'-0" Paved required)</td></tr>
<tr><td>Multi-Lane
(Divided &
Undivided)</td><td>Inside
(Divided)
3'-0" Paved</td><td>Outside
(Both sides for un-divided)
6'-0" (3'-0" Paved)</td></tr>
<tr><td rowspan="2">Lane Width</td><td>Current ADT
Two-Way</td><td colspan="2">Lane Width*
(excluding curb and gutter or shy distance from face of curb)</td></tr>
<tr><td>≤750

>750</td><td colspan="2">10'-0"
(Lane width may be 9' where design speed ≤ 35 mph and ADT ≤250)
11'-0"
10'-0" lanes with curb and gutter may be retained in urban areas for multi-lane un-divided (regardless of ADT) and multi-lane divided (ADT < 10,000) without crash concentration.

12'-0" lanes are desirable on designated truck routes and the Priority Commercial Network (PCN) or where truck traffic ≥10%</td></tr>
<tr><td rowspan="6">Bridge Width, Structural Capacity & Horizontal Clearances

(Existing Bridges to remain in place)</td><td>ADT
Two-Way
(Design Year)</td><td>Minimum
Design
Loading</td><td>Usable Width</td></tr>
<tr><td>0-750</td><td>H15</td><td>Width of approach lanes.</td></tr>
<tr><td>751-1500</td><td>HS 15</td><td>Width of approach lanes.</td></tr>
<tr><td>1501-2000</td><td>HS15</td><td>Width of approach lanes plus 1' each side.</td></tr>
<tr><td>2001-4000</td><td>HS15</td><td>Width of approach lanes plus 2' each side.</td></tr>
<tr><td>>4000</td><td>HS15</td><td>Width of approach lanes plus 3' each side.</td></tr>
<tr><td rowspan="2">Horizontal/Vertical Alignment and Stopping Sight Distance</td><td>Vertical</td><td colspan="2">0-20 mph less than project design speed may be retained without crash concentration.</td></tr>
<tr><td>Horizontal</td><td colspan="2">0-15 mph less than project design speed may be retained without crash concentration.</td></tr>
<tr><td>Grade</td><td colspan="3">Review crash data. Existing grade may be retained without crash concentration.</td></tr>
<tr><td>Cross Slopes</td><td colspan="3">1.5% Minimum – 2% Maximum (refer to page C-9 for further guidance)</td></tr>
<tr><td>Superelevation</td><td colspan="3">MDOT Standard Plan R-107-Series; reduced maximum (6%) Straight Line Superelevation chart; or AASHTO requirements with max e=6%.</td></tr>
<tr><td>Vertical Clearance</td><td colspan="3">Maintain 14'-0” minimum.</td></tr>
</table>

*Outside lanes: Lane width for outside lanes are measured to the edge of metal of the curb and gutter, or in the case of concrete pavement with integral curb, a 1 foot minimum shy distance from face of curb will be maintained and may not be considered as lane width.