LONGITUDINAL BULKHEAD JOINT - SYMBOL (B)

All Symbol (B) joints shall be sawed and sealed except joints without lane ties and joints adjacent to vertical faces which would prohibit sawing.

LONGITUDINAL SMOOTH LANE TIE JOINT - SYMBOL (S)

Symbol (D) and Symbol (S) tie bars shall be placed at the proper spacing longitudinally and transversely at 90° with the joint.

MAXIMUM ALLOWABLE LANE TIE SPACING

<table>
<thead>
<tr>
<th>Symbol (B)</th>
<th>Symbol (D), (L2), and (S)</th>
<th>Total Distance of Tied Joint from Nearest Free Edge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 40</td>
<td>2'-10&quot;</td>
<td>12' or less</td>
</tr>
<tr>
<td></td>
<td>1'-11&quot;</td>
<td>OVER 12' THROUGH 17'</td>
</tr>
<tr>
<td></td>
<td>1'-5&quot;</td>
<td>OVER 17' THROUGH 24'</td>
</tr>
<tr>
<td></td>
<td>1'-2&quot;</td>
<td>OVER 24' THROUGH 28'</td>
</tr>
<tr>
<td></td>
<td>1'-1&quot;</td>
<td>OVER 28' THROUGH 36'</td>
</tr>
<tr>
<td>Grade 60</td>
<td>1'-10&quot;</td>
<td>36' or greater **</td>
</tr>
</tbody>
</table>

* Includes any tied combination of lane width, valley gutter, curb & gutter, or shoulder.

** For widths greater than 48' use #6 deformed bars at 1'-2" spacing.
METHOD OF EDGING

SYMBOL (L2)

EXISTING HMA SURFACED PAVEMENT

PROPOSED PAVEMENT WIDENING

TO BE CAST AFTER LANE TIE HAS BEEN GROUTED INTO EXISTING PAVEMENT

LOAD TRANSFER ASSEMBLY

(SEE STANDARD PLAN R-40-SERIES)

NOTE:

SYMBOL (L2) JOINT USED FOR WIDENING CONCRETE PAVEMENTS WITHOUT HMA OVERLAYS SHALL BE SAWED AND SEALED ACCORDING TO THE SYMBOL (B) JOINT.

LONGITUDINAL BULKHEAD JOINT

FOR WIDENING EXISTING CONCRETE PAVEMENT OR CONCRETE BASE COURSE (USING EPOXY ANCHORED LANE TIES)

THE LONGITUDINAL JOINT USED FOR WIDENING EXISTING CONCRETE BASE COURSE OR CONCRETE PAVEMENT HAVING A HMA SURFACE SHALL HAVE EPOXY ANCHORED LANE TIES PLACED AS SPECIFIED.

TAPERED PAVEMENT THICKNESS OVER THE DISTANCE OF PAVEMENT WIDENING OR IN ONE LANE WIDTH WHEN WIDENING IS FOR TWO OR MORE LANES.

THE FIRST SLAB SHALL BE EDGED WITH AN EDGER HAVING A ¾" LIP AND A RADIUS OF ¼" TO ¹⁄₄"

EDGING TOOL SHALL BE 6" x 12" AND SHALL HAVE A 1" LIP WITH A RADIUS OF ¼" TO ¹⁄₄"

METHOD OF EDGING

NOTES:

1. WHEN MAXIMUM ALLOWABLE LANE TIE SPACING EXCEEDS 3'-4", PLACE FIRST AND LAST LANE TIE A MINIMUM OF 1'-8" FROM JOINT.

2. WHEN MAXIMUM ALLOWABLE LANE TIE SPACING IS LESS THAN 3'-4", PLACE FIRST AND LAST LANE TIE A MINIMUM OF 1'-8" FROM JOINT.

IT MAY BE NECESSARY TO ADJUST THE LAST THREE LANE TIE SPACINGS TO ENSURE UNIFORM LOADING RESISTANCE ALONG THE LONGITUDINAL JOINT.

FOR THE USE AND PLACEMENT OF STEEL REINFORCEMENT, SEE STANDARD PLAN R-45-SERIES.

FOR THE USE AND PLACEMENT OF STEEL REINFORCEMENT, SEE STANDARD PLAN R-45-SERIES.

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR LONGTIDUAL PAVEMENT JOINTS

1-25-2013 4-9-2012 R-41-G SHEET 2 OF 2