GENERAL NOTES

The primary roadway controls the transverse joint pattern.

Avoid new joints with existing joints or cracks.

Construct transverse joints perpendicular to the roadway.

Adjust transverse joints to align with utility entries (e.g., manholes and electrical in the pavement structure) when possible. Water valves do not require joint adjustment.

Avoid angles less than 60° by doglegging joints through curve radius points.

See table for transverse joint spacing. Joint spacing specified is maximum and actual spacing can be adjusted to accommodate intersections.

Avoid angles less than 60° by doglegging joints through curve radius points.

Correlate longitudinal joints with lane lines when possible.

1. Prove transverse joints at all pavement width changes.

2. Construct a corner expansion joint on the side road of an intersection of the side road is concrete pavement and greater than 300 feet in length. Also, construct transverse joint with joint of radius.

3. The Engineer may approve slight variations from these jointing details.

Pavement depth and joint spacing table

<table>
<thead>
<tr>
<th>Pavement Depth</th>
<th>Joint Spacing</th>
</tr>
</thead>
<tbody>
<tr>
<td>All less than 12&quot;</td>
<td>2&quot; Typ.</td>
</tr>
<tr>
<td>12&quot; to 15&quot;</td>
<td>3&quot; Typ.</td>
</tr>
<tr>
<td>16&quot; &amp; above</td>
<td>4&quot; Typ.</td>
</tr>
</tbody>
</table>

See note 1 to ensure no acute angles.

See note 2 providing minimum 2' dogleg to ensure no acute angles.

See note 3 to align nose with square up island nose.

Provide minimum 2' dogleg to ensure no acute angles.

State of Wisconsin Department of Transportation

Concrete Pavement Jointing

S.D.D. 13 C 18-5a

State of Wisconsin Department of Transportation
GENERAL NOTES

1. Use doweled expansion joints on side roads at intersections to isolate the side road from the through street if the side road is concrete pavement and greater than 300 feet in length.

2. Space contraction joints in accordance with 13C4, 13C11, or 13C13.

3. Locate contraction joints a minimum of 6 feet from the nearest construction joint and also parallel to contraction joints.

4. Construction joints can be formed or sawed.

5. Joint is formed, provide a 1/4-inch radius.

6. Anchor tie bars into drilled holes with epoxy.

CONTRACTION JOINTS

DOWELED-TRANSVERSE

UNDOELED-TRANSVERSE

SEENOTE ②

CONSTRUCTION JOINTS

SEE NOTE ①

See Table for size and spacing.

TIE BAR TABLE

<table>
<thead>
<tr>
<th>PAVEMENT DEPTH (D)</th>
<th>TIE BAR SIZE</th>
<th>Tie Bar Length (L)</th>
<th>Max. Tie Bar Spacing</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 4 ft</td>
<td>No. 4</td>
<td>30&quot;</td>
<td>16&quot;</td>
</tr>
<tr>
<td>2 ft - 4 ft</td>
<td>No. 3</td>
<td>36&quot;</td>
<td>36&quot;</td>
</tr>
<tr>
<td>2 ft - 8 ft</td>
<td>No. 3</td>
<td>36&quot;</td>
<td>24&quot;</td>
</tr>
</tbody>
</table>

* Substitute bent bars at longitudinal joints when equipment limitations during construction warrant (e.g., auxiliary lanes or turn lanes).

** Conform to 2" minimum spacing from transverse joints; spacing between tie bars will be 30" at transverse joints.

CONCRETE PAVEMENT JOINT TYPES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIAGONAL MANHOLE BOXOUT FOR CONSTRUCTION JOINTS

GENERAL NOTES
1. USE BOXOUTS WHEN UTILITY STRUCTURE IS IN THE PATH OF CONSTRUCTION JOINTS, PROVIDE A 1-FOOT MINIMUM CLEARANCE BETWEEN THE EXTERIOR LIMIT OF THE STRUCTURE TO THE DIAGONAL BOXOUT.
2. ADJUST TRANSVERSE JOINT TO INTERSECT MANHOLE IF POSSIBLE.
4. IF DISTANCE FROM THE EDGE OF THE MANHOLE TO THE NEAREST TRANSVERSE JOINT IS 6 FEET OR LESS, REDIRECT JOINT TO INTERSECT THE CENTER OF THE MANHOLE. IF DISTANCE IS GREATER THAN 6 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REBAR REINFORCEMENT AROUND THE MANHOLE.
5. ALIGN TRANSVERSE JOINT WITH ONE EDGE OF MANHOLE PRUUCTICAL.

MANHOLE WITH LONGITUDINAL JOINT

MANHOLE WITH TRANSVERSE JOINT

MANHOLE WITH DIVERTED LONGITUDINAL CONTRACTION JOINT

MANHOLE WITH DIVERTED TRANSVERSE CONTRACTION JOINT
13C18 sheet e: Concrete Pavement Jointing and Steel Reinforcement in Roundabouts

**General Notes**

- Maximum joint spacing is in accordance with the table shown on SDD 13C18 sheet "a".
- **NOTICE**: DO NOT DOWEL OR TIE THE TRUCK APRON TRANSVERSE JOINTS.
- **NOTICE**: **DO NOT** TIE THE Outside Truck Apron to the Back Side of Curb ONLY WHEN ENTIRE TRUCK APRON WIDTH IS LESS THAN 3 FEET.
- **NOTICE**: CONFORM TO PLAN CONSTRUCTION DETAILS FOR CIRCULATORY ROADWAY CROSS SLOPE.

**Legend**

- **EXPANSION JOINT**
- **TIE BAR**
- **TRUCK APRON**
- **CURB & GUTTER**
- **CENTRAL ISLAND**
- **UTILITY STRUCTURES**

**Isolated Circle Joint Layout for Roundabouts**

- Concrete Curb and Gutter Tied to Pavement
- Back of Curb (Typ.)
- Flange of Curb (Typ.)
- Expansion Joint

**Pinwheel Joint Layout for Roundabouts**

- Concrete Curb and Gutter Tied to Pavement
- Back of Curb (Typ.)
- Flange of Curb (Typ.)
- Expansion Joint

**Section A-A**

- Central Island
- Curb & Gutter 30-in, Type A
- 12" Truck Apron
- Curb & Gutter 30-in, Type A
- Roadway

**Section B-B**

- Central Island
- Curb & Gutter 30-in, Type A
- 12" Truck Apron
- Variable Width
- Curb & Gutter 30-in, Type A
Concrete Pavement Jointing

References:
FDM 14-10-10
FDM 14-10-35

Bid items associated with this drawing:

<table>
<thead>
<tr>
<th>ITEM NUMBER</th>
<th>DESCRIPTION</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>320.0100 - 0199</td>
<td>Concrete Base (inch)</td>
<td>SY</td>
</tr>
<tr>
<td>320.0300 - 0399</td>
<td>Concrete Base HES (inch)</td>
<td>SY</td>
</tr>
<tr>
<td>415.0060 - 0199</td>
<td>Concrete Pavement (inch)</td>
<td>SY</td>
</tr>
<tr>
<td>415.1080 - 1199</td>
<td>Concrete Pavement HES (inch)</td>
<td>SY</td>
</tr>
</tbody>
</table>

Standardized Special Provisions associated with this drawing:

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<thead>
<tr>
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<th>TITLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>NONE</td>
<td></td>
</tr>
</tbody>
</table>

Other SDDs associated with this drawing:

- **SDD 8d1**: Concrete Curb, Concrete Curb & Gutter and Ties
- **SDD 13c1**: Concrete Pavement Longitudinal Joints and Ties
- **SDD 13c4**: Urban Non-Doweled Concrete Pavement
- **SDD 13c11**: Rural Doweled Concrete Pavement
- **SDD 13c13**: Urban Doweled Concrete Pavement

Design Notes:
Include this SDD along with SPV.0105.XX, Concrete Pavement Joint Layout (located at http://wisconsindot.gov/Documents/doing-bus/eng-consultants/cnslt-rsrces/tools/qmp/jointlayout.pdf), whenever the plans include concrete pavement or concrete base. Always include sheets "a", "b", "c", and "d" together in plan sets. Sheet "e" is only needed if the project includes a roundabout. For unique project circumstances that are not covered in this set of SDDs, the contractor shall review the joint layout plan with the engineer.

Contact Person:
Myungook (MK) Kang (608) 246-7957