

*Dowel Basket Standardization
Questionnaire Results*

National Concrete Consortium

*San Antonio, TX
March 2009*

	1). WERE YOU INVOLVED WITH THE MIDWEST CONCRETE CONSORTIUM IN 2001? DO YOU USE THE AGREED UPON DESIGN?	2). ARE YOU IN FAVOR OF ESTABLISHING A UNIVERSAL DOWEL BAR BASKET DESIGN?	3). DO YOU HAVE A REQUIRED DOWEL BAR BASKET CONFIGURATION?
CALIFORNIA	Not involved. No we do not use the design.	Yes, if it is compatible with our practice.	Yes
GEORGIA			
* IOWA	Yes we were involved. No we do not use the design.	Yes we are.	Yes
* ILLINOIS	Yes we were involved. No we do not use the design.	Yes we are.	No
* INDIANA	Not to their knowledge. No we do not use the design.	No	No
* KANSAS	Yes No	Yes	Yes
LOUISIANA	Not involved. No we do not use the design.	Possibly	Yes
* MICHIGAN	Yes we were involved. We do use the universal design.	Yes we are.	Yes
* MINNESOTA			
* MISSOURI	No, Tom Keith was early on then retired before it was completed. No we do not use the design.	Yes we are.	Yes
NEW YORK			
N. CAROLINA	No we were not involved. We do not use the design.	No answer.	Yes
N. DAKOTA	No we were not involved. No we do not use the design.	Yes we are.	No
* OHIO	Yes we were involved. Yes we do.	No	Yes
OKLAHOMA			
PENNSYLVANIA			
S. DAKOTA			
TEXAS	No we were not involved. No we do not use the design.	Yes we are.	No
* WISCONSIN	Yes we were involved. Detail drawing does not match but it can be used.	Yes we are.	Yes

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	4). WHICH BASKET LEG STYLE DO YOU USE?	5). DO YOU SPECIFY MIN. WIRE SIZES FOR: TOP AND BOTTOM SUPPORT WIRE, SIDE LEG WIRE, AND SHIPPING WIRE?	6). DO YOU HAVE SPECIFIC WELD REQUIREMENTS FOR THE WIRE BASKET?
CALIFORNIA	U- Leg or V-Leg.	W10 wire size for top and bottom support wires.	Arc or resistance welds.
GEORGIA			
* IOWA	U-Leg, J-Leg, Choked V-Leg, and V-Leg.	Top and bottom support wire, and side leg wire are #1/0 (0.306). Shipping wire is #10 wire (0.135)	Arc or resistance welds.
* ILLINOIS	Basket type not specified.	Top and Bottom support wire and side leg wire are W7. Shipping wire is W3.	No.
* INDIANA	Basket type not specified.	Top and Bottom support wire and side leg wire are W7.5.	No
* KANSAS	J-Leg.	Yes. Support wires are 0.306". Tie wires are 0.177".	Yes. Arc or resistance.
LOUISIANA	V-Leg.	Top and Bottom support wire and side leg wire are 0.306	Yes, spot welds.
* MICHIGAN	U-Leg or J-Leg	Top and Bottom support wire and side leg wire are 0.306. shipping wire not specified.	Arc or Resistance welds.
* MINNESOTA			
* MISSOURI	U-Leg, J-Leg, Other(Wire chair)	Top and Bottom support wire and side leg wire are #0 gauge wire.	No.
NEW YORK			
N. CAROLINA	V-Leg.	Top and Bottom support wire and leg wire are #2 gauge wire(.276"). Shipping wire #6 gauge wire.(.192")	Resistance welds for frame members. Dowels and spreader wires may be arc welds.
N. DAKOTA	Basket type not specified.	Wire sizes not specified.	No.
* OHIO	U-Leg or J-Leg	Top and Bottom support wire and side leg wire are 0.306". Shipping wire is 0.177"	No.
OKLAHOMA			
PENNSYLVANIA			
S. DAKOTA			
TEXAS	Basket type not specified.	Wire sizes not specified.	No.
* WISCONSIN	V-Leg	Wire sizes not specified.	No.

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	7). DO YOU SPECIFY WHERE THE DOWEL IS TO BE WELDED TO THE BASKET? CONTRACTION AND EXPANSION.	8). WHAT IS YOUR SPECIFICATION FOR # OF FILLER SPACER WIRES ON EXPANSION BASKETS?	9). WHAT DOWEL SIZES DO YOU USE? WHAT DETERMINES THE SIZE? WHAT GRADE OF STEEL?
CALIFORNIA	Weld may be at the top or bottom of the dowel bar.	Five spacer wires welded to top support wire.	1 ¼" dowel for PCC less than 0.70 ft thick. 1 ½" dowel for PCC 0.70ft. or greater.
GEORGIA			
* IOWA	Weld on the top of the dowel bar.	4-5 filler spacer wires, #5 gauge or #7 gauge.	7.5" and less ¾" dowel. 8" to 9.5" = 1 ¼" dowel bar. 10" to 13" = 1 ½" dowel bar. 40/60 grade (ASTM)
* ILLINOIS	Weld on the top or bottom of dowel bar. One weld per bar.	Not applicable.	less than 7" thick = 1" dia. 7 to 7.99" = 1 ¼" dia. 8" or greater = 1 ½". AASHTO M 227 Gr. 70-80.
* INDIANA	Weld location is not specified.	Not applicable.	Less than 9" = 1" dia. 9" thru 12" = 1 ¼" dia. Greater than 12" = 1 ½". Grade 40 or 60.
KANSAS	No.	22 tie wires.	1/8 inch of concrete. Grade 40 or 60.
LOUISIANA	Weld on top and bottom of dowel bar.	Not specified.	1 ¼" & 1 ½" dowels are used based on thickness. Grade 60 Steel is required.
* MICHIGAN	Weld may be at the top or bottom of the dowel bar.	22 filler spacer wires. 0.177" diameter minimum.	less than 8" = 1" diameter dowel. 8" to 11" thick pavt. = 1 ¼" . Greater than 11" = 1 ½". Grade 40 steel.
* MINNESOTA			
* MISSOURI	Weld location not specified.	Not specified.	1 ¼" for pavt. 10" thick or less. 1 ½" for pavt. more than 10". Dowels must meet AASHTO M31.
NEW YORK			
N. CAROLINA	Weld on bottom of dowel bar.	2 wires minimum.	Dowel sizes not given. Grade 60 dowels.
N. DAKOTA	Weld location not specified.	Not specified.	1 ¼" when pavt is 10" thick or less. 1 ½" diameter when greater than 10". Grade not specified.
* OHIO	Weld on bottom of dowel bar.	Spacer wires every 12".	less than 8.5" = 1" dia. 8.5" to 10" = 1.25" dia. Greater than 10" = 1.5" dia. Grade not specified.
OKLAHOMA			
PENNSYLVANIA			
S. DAKOTA			
TEXAS	Weld location not specified.	Not applicable.	8" thick = 1" dia. Increase dia. By 1/8" per 1" of thickness. Grade 60 steel bars required.
* WISCONSIN	Weld location not specified.	Not specified.	7 -7.5" = 1" dia. 8 - 9.5" = 1.25" dia. 10" and above = 1.5" dia. Grade 40 or 60 dowels.

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	10). DO YOU REQUIRE A MINIMUM DISTANCE FROM THE END OF THE DOWEL TO THE TOP LONGITUDINAL SPACER WIRE?	11). DO YOU REQUIRE THE SPACER WIRES TO BE CUT AFTER THE BASKET IS STAKED?	12). DO YOU LOCATE DOWELS AT ANY LOCATION OTHER THAN HALF THE DEPTH OF THE SLAB?
CALIFORNIA	The requirement is 1 ½" (typical) and not specified as a minimum.	Yes we do.	No
GEORGIA			
* IOWA	We require 1 ½" minimum	Contractors option. Cannot leave more than 3 uncut.	No.
* ILLINOIS	No.	Yes we do.	No.
* INDIANA	No.	Yes we do. They shall be cut near the center.	No.
* KANSAS	Yes, 1 ½" approx.	Yes.	D/2 +/- 0.1D is acceptable.
LOUISIANA	No.	Yes we do.	No.
* MICHIGAN	We require 1 ½" minimum.	Yes we do. We require a portion of the wire to be removed.	No.
* MINNESOTA			
* MISSOURI	Yes, ¾" for a type A basket.	No.	Yes. For pavements having thicknesses in ½" increments they are D/2 - ¼".
NEW YORK			
N. CAROLINA	Yes, 1 - 1 ½"	Yes we do.	No.
N. DAKOTA	No.	No.	No.
* OHIO	Approximately 1 ½".	Yes we do.	No.
OKLAHOMA			
PENNSYLVANIA			
S. DAKOTA			
TEXAS	No.	No.	No.
* WISCONSIN	No.	No.	No.

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	13). DO YOU REQUIRE DOWELS TO BE EPOXY COATED? WHAT IS YOUR SPECIFICATION?	14). DO YOU REQUIRE DOWELS TO BE LUBRICATED? IF SO WHAT WITH?	15). WHAT IS YOUR LATERAL SPACING BETWEEN DOWEL BARS?
CALIFORNIA	Yes. A smooth coating.	Yes. DSC BB-Coat, Tectyl 506, or a curing compound conforming to ASTM C-309. Applied by manufacturer.	12" on center.
GEORGIA			
* IOWA	Yes. AASHTO M284, electrostatic sprayed, 6 mils minimum.	Yes. Assembly dipped in bituminous or paraffin.	12" on center.
* ILLINOIS	Yes. AASHTO M284, with a maximum coating thickness of 20 mils.	Yes. A light coat of oil uniformly applied.	12" on center.
* INDIANA	Yes. Minimum of 7mils after cure.	Yes. A bond breaker is required but type is not specified. Can be applied in field or at manufacturer.	12" on center.
* KANSAS	Yes. M284.	Yes. Grease or other bond breaker.	12" on center.
LOUISIANA	No. Requirements are an adhesive coat of the dowel followed by an outer coat of polypropylene or polyeth.	No. If dowel bar coating is damaged we require a light coat of oil or grease.	12" on center.
* MICHIGAN	Yes. In accordance with AASHTO M-284	Yes. Tectyl 506 factory dipped, without excessive drips or thickness.	12" on center.
* MINNESOTA			
* MISSOURI	Yes. In accordance with AASHTO M284 with a minimum coating of 5 mils. Flexibility req. waived.	Yes. Graphite grease applied in field or Bond Breaker applied by Fabricator, without excessive drips.	12" on center.
NEW YORK			
N. CAROLINA	Yes. No specification given.	Yes. A wax based coating applied by the manufacturer.	12" on center.
N. DAKOTA	Yes. AASHTO M 284	Yes. Tectyl 506 or lithium grease applied by the manufacturer.	12" on center.
* OHIO	Yes. AASHTO M 284	Yes. A thin layer of oil sprayed on half of the dowel.	12" on center.
OKLAHOMA			
PENNSYLVANIA			
S. DAKOTA			
TEXAS	No.	Yes. A thin film of grease or other approved de-bonding material.	12" on center.
* WISCONSIN	Yes. AASHTO M 284 type B.	Yes. Tectyl 506 by manufacturer	12" on center.

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	16). DO YOU HAVE ANY UNIQUE REQUIREMENTS THAT WOULD MAKE STANDARDIZATION IMPOSSIBLE?	17). DO YOU HAVE TROUBLE GETTING BASKETS TO MEET YOUR SPECIFICATIONS?	
CALIFORNIA	None unique.	Don't know.	
GEORGIA			
* IOWA	No.	No.	
* ILLINOIS	No.	No.	
* INDIANA	No.	No.	
* KANSAS	No.	No.	
LOUISIANA	Not to our knowledge.	No. Plastic coating requirement is a common complaint.	
* MICHIGAN	No.	No.	
* MINNESOTA			
* MISSOURI	No.	No.	
NEW YORK			
N. CAROLINA	No.	Occasionally.	
N. DAKOTA	No.	No.	
* OHIO	No	Not to our knowledge.	
OKLAHOMA			
PENNSYLVANIA			
S. DAKOTA			
TEXAS	No.	No.	
* WISCONSIN	No	No.	

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