# Illinois Tollway Standard Drawing Revisions

## Section A  Roadway / Pavement  
### Standard Modification Summary  
**Effective:** 03-31-2016

<table>
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<th>Standard</th>
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<td>The electronic (pdf) version of the Standard Drawing are now made searchable (text).</td>
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| A1 | Concrete Pavement Repair Full Depth | Revised Repair Typical Roadway Plan to show patch at contraction joint in one lane only and to show offset midpanel patches.  
Revised minimum offset from existing contraction joint to patch to be 4’ min.  
Revised minimum distance across existing contraction joint that patch must be extended to 1’ min.  
Added transverse joints in the proposed widening plan along with note that these joints shall be aligned with existing joints.  
Revised reference to Note 4 (instead of Detail A) in callout for joint saw/seal in both Sections B-B, C-C and E-E for longitudinaljt.  
Revised Detail A and added Detail B.  
Added one lane patch layout at transverse joint to the Proposed Concrete Pavement Full Depth Repair Typical Roadway Plan  
Revised Note 1 and details for dimensions from existing transverse contraction joints to the patch.  
Revised Note 3 to begin with “Unless otherwise noted...” and that this applies for for both dowels and tie bars which are drilled/grouted.  
Revised Note 4 and regard which joint details to use.  
Revised Note 6 reference to Standard Specifications Article 109.04 to be Tollway Supplemental Specifications Article 109.04.  
Added Notes 10 and 11. |
| A2 | Asphalt Overlay Repair | Revised sheet title.  
Revised Asphalt Prime Coat to Asphalt Tack Coat in Section A-A & B-B.  
Added Patch areas which cross transvers and longitudinal joint to the Plan view; Added Section C-C  
Added Note 5 |
| A4 | Butt Joints and Temporary Asphalt Wedge | Revised Asphalt Prime Coat to Asphalt Tack Coat in Details.  
Added Note 4 for Butt Joint Type 2 |
| A5 | J.P.C Pavement 12” or Less | Added subbase over-build and associated Note 6.  
Revised references to Stabilized Subbase to be Asphalt Stabilized Subbase. |
| A6 | J.P.C Pavement 13” | Added subbase over-build and associated Note 6.  
Revised references to Stabilized Subbase to be Asphalt Stabilized Subbase. |
| A7 | Pavement Joints | Updated note for 13” pavement dowel bars to include that they shall be smooth and epoxy coated. |
| A8 | RESERVED | Retired Standard. Revised to “Reserved” |
| A9 | RESERVED | Retired Standard. Revised to “Reserved” |
| A10 | RESERVED | Retired Standard. Revised to “Reserved” |
| A11 | RESERVED | Retired Standard. Revised to “Reserved” |
| A12 | RESERVED | Retired Standard. Revised to “Reserved” |
| A13 | RESERVED | Retired Standard. Revised to “Reserved” |
| A14 | Jointing Plan Parallel Entrance Ramp Terminal | Sheet 1 Added 24” length and epoxy coated to lie bar call out for longitudinal joints.  
Sheet 2 Added 24” length and epoxy coated to lie bar call out for longitudinal joints.  
Revised Note 3 (no longer referencing Standard A12) |
| A15 | Jointing Plan Parallel Exit Ramp Terminal | Sheet 1 Added 24” length and epoxy coated to lie bar call out for longitudinal joints.  
Sheet 2 Added 24” length and epoxy coated to lie bar call out for longitudinal joints.  
Revised Note 2 (no longer referencing Standard A12) |
| A16 | Jointing Plan Parallel Exit Ramp Terminal | Sheet 1 Revised Note 5.  
Added 24” length and epoxy coated to lie bar call out for longitudinal joints.  
Sheet 2 Revised Note 3.  
Added 24” length and epoxy coated to lie bar call out for longitudinal joints.  
Added Note 7 referencing Contract Plans and Documents for details of pavement reinforcement (for CRC).  
Added title at bottom of sheet. |
| A17 | Jointing Plan Parallel Entrance Ramp Terminal | Sheet 1 Added 24” length and epoxy coated to lie bar call out for longitudinal joints.  
Sheet 2 Added 24” length and epoxy coated to lie bar call out for longitudinal joints.  
Revised Note 2 (no longer referencing Standard A12) |
| A18 | Precast Pavement Slabs | Sheets 1-19 Minor drafting revisions and spelling corrections.  
Sheet 11 Note - revised maximum to minimum for the 2'-0" offset between transverse joints which are not aligned.  
Sheet 12 Revised max. to min. for the 2'-0" offset between transverse joints which are not aligned.  
Sheet 18 Revised bottom stitching bar callout to reference to Detail H on Sheet 19 |
PROPOSED CONCRETE PAVEMENT FULL DEPTH REPAIR TYPICAL ROADWAY PLAN (PAID AS CLASS B PATCH)

GENERAL NOTES:
1. THE MINIMUM OVERALL DIMENSIONS OF REPAIRS SHALL BE 30 FEET BY 8 FEET PLUS THE LANE WIDTH OF THE ROADWAY PLAN. REPAIRS FOR REPLACEMENT OF DEGRADATION PARAVALLEY EDGES ADJACENT TO PROPOSED WIDENING (SEE SECTION E-E), REPAIRS REPAIRING AT TRANSVERSE CONTRACT JOINTS SHALL BE EXTENDED ONE FOOT ACROSS THE JOINT. WHEN A REPAIR EXTENDS WITHIN FOUR FEET OF AN EXISTING TRANSVERSE CONTRACT JOINT THE REPAIR SHALL BE EXTENDED ONE FOOT BEYOND THE JOINT.
2. ANY REPAIR IS REPAVED (PAID AS PART OF WIDENING) WITH THE NEW PAVEMENT TO BE CONSTRUCTED MONOLITHICALLY WITH THE EXISTING PAVEMENT. REPAIR SHALL BE REPARED BY REMOVAL AND REPLACEMENT OF A MINIMUM OF 1'-6" WIDE AT LOCATIONS OF PROPOSED PAVEMENT WIDENING, EDGE DETERIORATION REQUIRING FULL DEPTH PAVEMENT. SEE NOTE 7)
3. FOR REPAIRS IN EXISTING TRANSVERSE CONTRACTION JOINTS, THE REPAIR SHALL BE EXTENDED ONE FOOT ACROSS THE JOINT. WHEN A REPAIR EXTENDS WITHIN FOUR FEET OF AN EXISTING TRANSVERSE CONTRACTION JOINT THE REPAIR SHALL BE EXTENDED ONE FOOT BEYOND THE JOINT.
4. THE TIE BAR FOR THE LONGITUDINAL SAWED JOINT SHALL BE EXTENDED ONE FOOT ACROSS THE JOINT. WHEN A REPAIR EXTENDS WITHIN FOUR FEET OF AN EXISTING TRANSVERSE CONTRACTION JOINT THE REPAIR SHALL BE EXTENDED ONE FOOT BEYOND THE JOINT.
5. WHEN PATCH LENGTH OR EDGE REPAIR LENGTH IS 20' OR LESS, TIE BARS CAN BE OMITTED. IF OTHERWISE PROVIDED IN THE CONTRACT.
6. THE TIE BAR FOR THE LONGITUDINAL SAWED JOINT SHALL BE EXTENDED ONE FOOT ACROSS THE JOINT. WHEN A REPAIR EXTENDS WITHIN FOUR FEET OF AN EXISTING TRANSVERSE CONTRACTION JOINT THE REPAIR SHALL BE EXTENDED ONE FOOT BEYOND THE JOINT.
7. THE MINIMUM OVERALL DIMENSIONS OF REPAIRS SHALL BE 30 FEET BY 8 FEET PLUS THE LANE WIDTH OF THE ROADWAY PLAN. REPAIRS FOR REPLACEMENT OF DEGRADATION PARAVALLEY EDGES ADJACENT TO PROPOSED WIDENING (SEE SECTION E-E), REPAIRS REPAIRING AT TRANSVERSE CONTRACT JOINTS SHALL BE EXTENDED ONE FOOT ACROSS THE JOINT. WHEN A REPAIR EXTENDS WITHIN FOUR FEET OF AN EXISTING TRANSVERSE CONTRACT JOINT THE REPAIR SHALL BE EXTENDED ONE FOOT BEYOND THE JOINT.
8. ANY REPAIR IS REPAVED (PAID AS PART OF WIDENING) WITH THE NEW PAVEMENT TO BE CONSTRUCTED MONOLITHICALLY WITH THE EXISTING PAVEMENT. REPAIR SHALL BE REPARED BY REMOVAL AND REPLACEMENT OF A MINIMUM OF 1'-6" WIDE AT LOCATIONS OF PROPOSED PAVEMENT WIDENING, EDGE DETERIORATION REQUIRING FULL DEPTH PAVEMENT. SEE NOTE 7)
9. FOR REPAIRS IN EXISTING TRANSVERSE CONTRACTION JOINTS, THE REPAIR SHALL BE EXTENDED ONE FOOT ACROSS THE JOINT. WHEN A REPAIR EXTENDS WITHIN FOUR FEET OF AN EXISTING TRANSVERSE CONTRACTION JOINT THE REPAIR SHALL BE EXTENDED ONE FOOT BEYOND THE JOINT.
10. THE TIE BAR FOR THE LONGITUDINAL SAWED JOINT SHALL BE EXTENDED ONE FOOT ACROSS THE JOINT. WHEN A REPAIR EXTENDS WITHIN FOUR FEET OF AN EXISTING TRANSVERSE CONTRACTION JOINT THE REPAIR SHALL BE EXTENDED ONE FOOT BEYOND THE JOINT.
11. THE MINIMUM OVERALL DIMENSIONS OF REPAIRS SHALL BE 30 FEET BY 8 FEET PLUS THE LANE WIDTH OF THE ROADWAY PLAN. REPAIRS FOR REPLACEMENT OF DEGRADATION PARAVALLEY EDGES ADJACENT TO PROPOSED WIDENING (SEE SECTION E-E), REPAIRS REPAIRING AT TRANSVERSE CONTRACT JOINTS SHALL BE EXTENDED ONE FOOT ACROSS THE JOINT. WHEN A REPAIR EXTENDS WITHIN FOUR FEET OF AN EXISTING TRANSVERSE CONTRACT JOINT THE REPAIR SHALL BE EXTENDED ONE FOOT BEYOND THE JOINT.

REPLACEMENT OF DETERIORATED PAVEMENT EDGES ADJACENT TO PROPOSED WIDENING (PAID AS PART OF WIDENING)

SECTION A-A
REPAIR - FULL DEPTH, ONE LANE

SECTION B-B
REPAIR - LONGITUDINAL JOINT

SECTION C-C
REPAIR - CONSTRUCTION JOINT

SECTION D-D
REPAIR THROUGH LONGITUDINAL JOINT

SECTION E-E
REPAIR AT TRANSVERSE JOINT

LEGEND
- EXISTING WEATHERED CONCRETE
- FOR FULL DEPTH REPAIR ONLY
- CONCRETE PAVEMENT REPAIR

DATE: 5-01-2009
REVISED NOTE 7
MODIFIED JOINT DETAILS
REVISED REPAIR NOTE CONTRACTION JOINT SPECIFICATION
STANDARD A1-04

CONCRETE PAVEMENT REPAIR - FULL DEPTH
TYPICAL ROADWAY PLAN

PROPOSED ASPHALT OVERLAY REPAIR

TYPICAL ROADWAY PLAN

SECTION A-A & B-B

NOTES: TYPICAL ASPHALT OVERLAY REPAIR
1. LOCATION OF ALL OVERLAY REPAIR AREAS SHALL BE AS SHOWN IN TYPICAL ROADWAY PLAN.
2. PROPOSED ASPHALT OVERLAY PATCH MATERIAL SHALL BE IN ACCORDANCE WITH ILLINOIS TOLLWAY SPECIAL PROVISION "PARTIAL DEPTH ASPHALT PATCHING OF MAINLINE OVERLAYS."
3. ALL ASPHALT OVERLAY SHALL BE REMOVED TO THE TOP OF THE P.C.C. PAVEMENT.
4. SAWCUT MAY BE ELIMINATED IF MILLING EQUIPMENT IS USED AND VERTICAL AND STRAIGHT SIDES ARE OBTAINED.
5. PROPOSED ASPHALT OVERLAY PATCH MATERIAL SHALL BE IN ACCORDANCE WITH ILLINOIS TOLLWAY SPECIAL PROVISION "PARTIAL DEPTH ASPHALT PATCHING OF MAINLINE OVERLAYS."

LEGEND

- Existing or Proposed Asphalt Overlay
- Proposed Pavement Repair

SIGNATURES

APPROVED

DATE: 5-1-2009

CHIEF ENGINEER

DATE: 5-01-2009

REVISIONS

DATE

REMOVED PARTIAL DEPTH PC CONCRETE
2' MIN
VARIES
6 " MIN
VAR MIN
1 '-6 "
VARIES

ASPHALT OVERLAY
EXISTING OR PROPOSED
LANE 1
LANE 2
LANE 3

SECTION C-C

NOTES: TYPICAL ASPHALT OVERLAY REPAIR
1. MINIMUM DIMENSIONS SHALL BE AS SHOWN IN TYPICAL ROADWAY PLAN.
2. PROPOSED ASPHALT OVERLAY PATCH MATERIAL SHALL BE IN ACCORDANCE WITH ILLINOIS TOLLWAY SPECIAL PROVISION "PARTIAL DEPTH ASPHALT PATCHING OF MAINLINE OVERLAYS."
3. MAINLINE OVERLAYS" PROVISION "PARTIAL DEPTH ASPHALT PATCHING OF MAINLINE OVERLAYS."
4. TYPICAL ROADWAY PLAN.
5. MINIMUM DIMENSIONS SHALL BE AS SHOWN IN TYPICAL ROADWAY PLAN.
6. PROPOSED ASPHALT OVERLAY PATCH MATERIAL SHALL BE IN ACCORDANCE WITH ILLINOIS TOLLWAY SPECIAL PROVISION "PARTIAL DEPTH ASPHALT PATCHING OF MAINLINE OVERLAYS."

DATE

REVISED PRIME COAT TO TACK COAT, ADDED SECTION C-C AND PATCHES ACROSS JOINTS.

STANDARD  A2-04
DETAIL OF BUTT JOINT, TYPE 1

NOTES FOR BUTT JOINT, TYPE 1
1. THE ABOVE WORK WILL BE PERFORMED AT THE BORDERS OF ALL ASHPALT DECKING. REMOVAL OF CONCRETE PAVEMENT WILL BE PERFORMED IN CONTRACT UNIT PRICE PER SQUARE YARD FOR REMOVAL OF CONCRETE SURFACE COURSE MATERIALS. BUTT JOINTS, EXISTING OVERLAY TO BE PAID FOR. "ASPHALT BINDER COURSE" AND "ASPHALT SURFACE COURSE" OF THE TYPE SPECIFIED IN THE CONTRACT.
2. ONLY APPROVED SCARIFYING OR MILLING EQUIPMENT SHALL BE USED TO SCARIFY THE CONCRETE PAVEMENT.
3. REGARDLESS OF TYPE OF SURFACE MIX USED NUMBER OF THICKNESS OF COURSES OR LAYERS, THE OVERLAY THICKNESS IN THE CONTRACT IS STATUTED ON 1 1/2 1/2 AND THE MINIMUM LAYER THICKNESS SHALL BE 1 1/2 1/2.
4. REFER TO THE CONTRACT DOCUMENTS FOR THE REQUIRED BINDER AND SURFACE COURSE MATERIALS. "ASPHALT BINDER COURSE" AND "ASPHALT SURFACE COURSE", OF THE TYPE SPECIFIED IN THE CONTRACT. "ASPHALT BINDER COURSE" AND "ASPHALT SURFACE COURSE" OF THE TYPE SPECIFIED IN THE CONTRACT.

DETAIL OF BUTT JOINT, TYPE 2

NOTES FOR BUTT JOINT, TYPE 2
1. THE ABOVE WORK WILL BE PERFORMED AT THE BORDERS OF ALL ASHPALT DECKING. REMOVAL OF CONCRETE PAVEMENT WILL BE PERFORMED IN CONTRACT UNIT PRICE PER SQUARE YARD FOR REMOVAL OF CONCRETE SURFACE COURSE MATERIALS. BUTT JOINTS, EXISTING OVERLAY TO BE PAID FOR. "ASPHALT BINDER COURSE" AND "ASPHALT SURFACE COURSE" OF THE TYPE SPECIFIED IN THE CONTRACT.
2. ONLY APPROVED SCARIFYING OR MILLING EQUIPMENT SHALL BE USED TO SCARIFY THE CONCRETE PAVEMENT.
3. REGARDLESS OF TYPE OF SURFACE MIX USED NUMBER OF THICKNESS OF COURSES OR LAYERS, THE OVERLAY THICKNESS IN THE CONTRACT IS STATUTED ON 1 1/2 1/2 AND THE MINIMUM LAYER THICKNESS SHALL BE 1 1/2 1/2.
4. REFER TO THE CONTRACT DOCUMENTS FOR THE REQUIRED BINDER AND SURFACE COURSE MATERIALS. "ASPHALT BINDER COURSE" AND "ASPHALT SURFACE COURSE", OF THE TYPE SPECIFIED IN THE CONTRACT. "ASPHALT BINDER COURSE" AND "ASPHALT SURFACE COURSE" OF THE TYPE SPECIFIED IN THE CONTRACT.
GENERAL NOTES:

1. DOWEL BASKET ASSEMBLIES, WHERE USED, SHALL BE SUPPORTED AND Anchored IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

2. MATERIALS ARE PROJECT SPECIFIC, REFER TO PROJECT PLANS AND CONTRACT DOCUMENTS FOR DETAILS.

3. SEE ILLINOIS TOLLWAY STANDARD DRAWING A7 PAVEMENT JOINTS) FOR DETAILS OF JOINTS AND THE BARS NOT SHOWN.

4. PAVEMENT DESIGNS ARE PROJECT SPECIFIC, OTHER MATERIALS MAY BE SUBSTITUTED FOR ASPHALT STABILIZED SUBBASE AND SUBGRADE AGGREGATE. REFER TO PROJECTS PLANS AND CONTRACT DOCUMENTS FOR DETAILS.

5. THE TIE BAR FOR THE LONGITUDINAL SAWED JOINT SHALL BE 15" FROM THE TRANSVERSE CONTRACTION JOINT.

6. THE 1'-0" ASPHALT STABILIZED SUBBASE MAY BE REDUCED TO 1'-6" WHEN PAVING EQUIPMENT UTILIZED FOR THE 1'-6" WIDE ASPHALT STABILIZED SUBBASE MAY BE SUPPORTED AND ANCHORED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

7. CONSTRUCTION OF THE PCC PAVEMENT WILL ALLOW.

NOTE 3.

NOTE 5.

NOTE 6.
PAVEMENT CROSS-SECTION (2 LANES)

2-LANE SECTION

PAVEMENT PLAN

GENERAL NOTES:
1. DOWEL BASKET ASSEMBLIES, WHERE USED, SHALL BE SUPPORTED AND ANCHORED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.
2. MATERIALS FOR PROJECT SPECIFIC, REFER TO PROJECT PLANS AND CONTRACT DOCUMENTS FOR DETAILS.
3. SEE ILLINOIS TOLLWAY STANDARD DRAWING A7 (PAVEMENT JOINTS) AND CONTRACTUAL STANDARD B600 (PAVEMENT JOINTS) FOR DETAILS OF JOINTS AND TIE BARS.
4. PAVEMENT DESIGNS ARE PROJECT SPECIFIC, OTHER MATERIALS MAY BE SUBSTITUTED FOR ASPHALT STABILIZED SUBBASE AND SUBGRADE AGGREGATE. REFER TO PROJECTS PLANS AND CONTRACT DOCUMENTS FOR DETAILS.
5. THE TIE BAR FOR THE LONGITUDINAL SAWED JOINT SHALL BE 15" FROM THE TRANSVERSE CONTRACTION J OINT.
6. THE 1'-6" WIDE ASPHALT STABILIZED SUBBASE MAY BE REDUCED TO 1'-0" WHEN PAVING EQUIPMENT UTILIZED FOR CONSTRUCTION OF THE PCC PAVEMENT WILL ALLOW.

PAVEMENT PLAN

2 - LANE SECTION
GENERAL NOTES:
1. Doweled bar caps shall be placed on opposite end of adjacent dowel bars.
2. All dimensions are in inches unless otherwise shown.
3. t = pavement thickness
4. A t/2 x 9" saw cut shall be provided for pavement crack control.

NOTE: FOR 13" PAVEMENT USE THE FOLLOWING:
1-3/4" X 18" LONG SMOOTH EPOXY COATED DOWEL BARS ON 12" CENTERS OR
1-1/2" X 18" LONG SMOOTH EPOXY COATED DOWEL BARS ON 9" CENTERS

TRANVERSE CONSTRUCTION JOINT
(JOINTED PLAIN CONCRETE PAVEMENT)
NOTES:

1. All pavement joints shall be detailed as shown on Illinois Tollway Standard Drawing A14-02. All PCC joints shall be detailed as shown on the plans.

2. The thickness of the jointed ramp pavement in the tangent area shall match the mainline pavement. The extra thickness of pavement shall be included in the price for the ramp pavement.

3. Stubs shall be the minimum dimension as shown and aligned with a mainline transverse joint.

4. Nose location shall be adjusted to be aligned with a mainline transverse joint.

5. Typical PCC pavement joint spacing shall be 15'.

6. As additional ramp lanes are added, the maximum joint spacing shall be 15' long by 15' wide, typical spacing is 2'6" long by 2'6" wide. Longitudinal joint location in the wheel path shall be unchanged.

7. Dimension of lane 1 shall be as shown on the plans.

JOINTED PCC RAMP ADJACENT TO JOINTED PCC MAINLINE PAVEMENT

Paul Kinnear
CHIEF ENGINEER
1-31-2015

APPROVED DATE

REVISIONS

DATE

STANDARD A14-02

ENTRANCE RAMP TERMINAL

JOINTING PLAN

ILLINOIS TOLLWAY

RAMP BASELINE

LONGITUDINAL EDGE JOINT WITHOUT THE BARS IS PARALLEL TO RAMP BASELINE.

EDGE OF MAINLINE PAVEMENT - LONGITUDINAL CONSTRUCTION JOINT WITH NO. 6 THE BARS 24" LONG AT 24" CTS. EPOXY COATED. JOINT LINE IS PARALLEL TO RAMP BASELINE.

1000' NOMINAL

TYPICAL PCC PAVEMENT JOINT SPACING SHALL BE 15'.

THE THICKNESS OF THE JOINTED RAMP PAVEMENT IN THE TANGENT AREA SHALL MATCH THE MAINLINE PAVEMENT. THE EXTRA THICKNESS OF PAVEMENT SHALL BE INCLUDED IN THE PRICE FOR THE RAMP PAVEMENT.

STUBS SHALL BE THE MINIMUM DIMENSION AS SHOWN AND ALIGNED WITH A MAINLINE TRANSVERSE JOINT.

LONGITUDINAL JOINT SPACING SHALL BE 15'.

AS ADDITIONAL RAMP LANES ARE ADDED, THE MAXIMUM JOINT SPACING SHALL BE 15' LONG BY 15' WIDE, TYPICAL SPACING IS 2'6" LONG BY 2'6" WIDE. LONGITUDINAL JOINT LOCATION IN THE WHEEL PATH SHALL BE UNCHANGED.

DIMENSION OF LANE 1 SHALL BE AS SHOWN ON THE PLANS.
NOTES:

1. ALL PAVEMENT JOINTS SHALL BE DETAILED AS SHOWN ON ILLINOIS TOLLWAY STANDARD DRAWINGS AT AND EIGHT HUNDRED THOUSAND SCALE. EXCEPT EXPANSION JOINT SEALS SHALL BE AS DESCRIBED IN THE SPECIAL PROVISION. BONDED PREFORMED JOINT SEAL.

2. THE THICKNESS OF THE JOINTED RAMP PAVEMENT IN THE TANGENT AREA SHALL MATCH THE MAINLINE PAVEMENT. THE EXTRA THICKNESS OF PAVEMENT SHALL BE INCLUDED IN THE PRICE FOR THE RAMP PAVEMENT.

3. SEE PROJECT PLANS AND CONTRACT DOCUMENTS FOR DETAILS OF PAVEMENT REINFORCEMENT.

4. TYPICAL PCC PAVEMENT JOINT SPACING SHALL BE 15'.

5. AS ADDITIONAL RAMP LANES ARE ADDED, THE MAXIMUM JOINT SPACING SHALL BE 15' LONG BY 15' WIDE. TYPICAL JOINT SPACING IS 15' LONG BY 15' WIDE. LONGITUDINAL JOINT LOCATIONS IN THE WHEEL PATH SHALL BE VIVIDIZED.

6. DIMENSIONS OF LANE 1 SHALL BE AS SHOWN ON THE PLANS.
NOTES:

1. All pavement joints shall be detailed as shown on Illinois Tollway Standard Drawing 420001, except expansion joint seals shall be as described in the Special Provision, Bonded Preformed Joint Seal.

2. Stubs shall be the minimum dimension as shown and aligned with a mainline transverse joint.

3. Joint location shall be adjusted to be aligned with a mainline transverse joint.

4. The thickness of the jointed ramp pavement in the tangent area shall match the mainline pavement. The extra thickness of pavement shall be included in the price for the ramp pavement.

5. Typical PCC pavement joint spacing shall be 15'.

6. As additional ramp lanes are added, the maximum joint spacing shall be 6' long by 6' wide. Typical spacing is 15' long by 6' wide. Longitudinal joint locations in the wheel path shall be modified.

7. Dimensions of lane 1 shall be as shown on the plans.

DETAIL A

JOINTED PCC RAMP ADJACENT TO JOINTED PCC MAINLINE PAVEMENT

DETAIL B

JOINTED PCC RAMP ADJACENT TO JOINTED PCC MAINLINE PAVEMENT

CREATED BY:

APPROVED:

Date 1-31-2015

CHIEF ENGINEER

UPDATED NOTES AND CALL-OUTS:

3-11-2015

MODIFIED JOINT SPACING:

3-31-2016
NOTES:

1. All pavement joints shall be detailed as shown on Illinois Tollway Standard Drawing A700, Jointed PCC Ramp Adjacent to C.R.C. Mainline Pavement. Jointing shall be as described in the special provisions and jointed construction joint with No. 6 tie bars 24" long at 24" centers, epoxy coated. Joint line is parallel to mainline pavement.

2. See project plans and contract documents for details of pavement reinforcement.

3. The thickness of the jointed ramp pavement in the tangent area shall match the mainline pavement. The extra thickness of pavement shall be included in the price for the ramp pavement.

4. Typical PCC pavement joint spacing shall be 15'.

5. As additional ramp lanes are added, the maximum joint spacing shall be 20'. Typical spacing of 20' with longitudinal joint locations in the wheel path shall be furnished.

6. Dimensions of Lane 1 shall be as shown on the plans.

DETAIL C

3'0:1 TAPER

4' STUB (SEE NOTE 3)

6' NOMINAL

10'

4' STUB

RAMP BASELINE (20:1 TAPER RATE)

EDGE OF PAVEMENT PARALLEL TO MAINLINE

NO. 7 LONGITUDINAL BARS EDGE OF PAVEMENT PERPENDICULAR TO MAINLINE

NO. 4 TRANSVERSE BARS PARALLEL TO MAINLINE EDGE OF PAVEMENT

NO. 4 TRANSVERSE BARS PERPENDICULAR TO MAINLINE EDGE OF PAVEMENT

RAMP BASELINE-TRANSVERSE EXPANSION JOINT-MAINLINE PAVEMENT

RAMP PAVEMENT-MAINLINE PAVEMENT

NO. 6 TIE BARS 24" long at 24" centers, epoxy coated. Joint line is parallel to mainline pavement.
NOTES:

1. All pavement joints shall be detailed as shown on Illinois Tollway Standard Drawing 201000. Cleft expansion joint seals shall be as described in the Special Provision, bonded preformed joint seal.
2. Joints shall be the minimum dimension as shown and aligned with a mainline transverse joint.
3. 4’-0” joint spacing shall be adjusted to be aligned with a mainline transverse joint.
4. Typical PCC pavement joint spacing shall be 15’.
5. The thickness of the jointed ramp pavement shall match the mainline pavement. The extra thickness of pavement shall be included in the price for the ramp pavement.
6. Ramp narrows from 21’ to 18’.
7. As additional ramp lanes are added, the maximum joint spacing shall be 15’ long by 15’ wide. Typical joint spacing is 15’ long by 15’ wide. Longitudinal joint locations in the wheel path shall be adjusted.
8. Dimension of lane 1 shall be as shown on the plans.

DETAIL A

DETAIL B

JOINTED PCC RAMP ADJACENT TO JOINTER PCC MAINLINE PAVEMENT
NOTES:
1. ALL PAVEMENT JOINTS SHALL BE DETAILED AS SHOWN ON ILLINOIS TOLLWAY STANDARD DRAWING A7 AND IDOT HIGHWAY STANDARD 420001 EXCEPT EXPANSION JOINT SEALS SHALL BE AS DESCRIBED IN THE SPECIAL PROVISION, BONDED PREFORMED JOINT SEAL.

2. TYPICAL P.C.C. PAVEMENT JOINT SPACING SHALL BE 15'.

3. THE THICKNESS OF THE JOINTER PAVEMENT SHALL MATCH THE MAINLINE PAVEMENT. THE EXTRA THICKNESS OF JOINTER PAVEMENT SHALL BE INCLUDED IN THE PRICE FOR THE RAMP PAVEMENT.

4. RAMP NARROWS FROM 21' TO 18'.

5. AS ADDITIONAL RAMP LANES ARE ADDED THE MAXIMUM JOINT SPACING SHALL BE 15 LONG BY 15 WIDE. TYPICAL SPACING IS 15 LONG BY 15 WIDE. CONSTRUCTION JOINT LOCATIONS IN THE SHELL PAVEMENT SHALL BE IMPROVED.

6. DIMENSION OF LANE 1 SHALL BE AS SHOWN ON THE PLANS.

7. SEE PROJECT PLANS AND CONTRACT DOCUMENTS FOR DETAILS OF PAVEMENT REINFORCEMENT.
NOTES:

1. All pavement joints shall be detailed as shown on Illinois Tollway Standard Drawing A7 and IDOT Highway Standard 420001, except expansion joint seals which shall be as detailed in the special provision. Bonded preformed joint seal shall be as described in the Special Highway Standard 420001, except expansion joint seals.

2. See Project Plans and Contract Documents for details of pavement reinforcement.

3. Typical PCC pavement joint spacing shall be 15'.

4. Ramp pavers from 14' to 15'.

5. The thickness of the jointed ramp pavement shall match the mainline pavement. The extra thickness of pavement shall be included in the price for the ramp pavement.

6. As additional ramp lanes are added, the maximum joint spacing shall be 25' long by 15' wide, vertical spacing 25' long by 15' wide, longitudinal joint locations in the wheel path shall be avoided.

7. Dimension of lane 1 shall be as shown on the plans.
SLAB DESIGN:

1. SLAB ENGINEERING INFORMATION SHOULD BE USED TO CONFIRM THAT EACH OF THE SLAB DECKS MEETS THE SPECIFICATIONS FOR THE PROJECT. THE ENGINEER SHALL BE RESPONSIBLE FOR THE DESIGN OF THE SLAB DECKS AND SHALL PROVIDE THE FOLLOWING INFORMATION:

   A. THICKNESS AND WIDTH OF EACH SLAB DECK.
   B. LOCATION OF WELDING JOINTS.
   C. LOCATION OF CONCRETE COVER.
   D. LOCATION OF REBAR.
   E. LOCATION OF DOWEL BARS.
   F. LOCATION OF driveway lines.
   G. LOCATION OF TRANSVERSE JOINTS.
   H. LOCATION OF CURB AND GUTTER.

2. FOR CUSTOM SLAB DECKS, THE CUSTOMER SHALL BE RESPONSIBLE FOR PROVIDING THE FOLLOWING INFORMATION:

   A. THICKNESS AND WIDTH OF EACH SLAB DECK.
   B. LOCATION OF WELDING JOINTS.
   C. LOCATION OF CONCRETE COVER.
   D. LOCATION OF REBAR.
   E. LOCATION OF DOWEL BARS.
   F. LOCATION OF driveway lines.
   G. LOCATION OF TRANSVERSE JOINTS.
   H. LOCATION OF CURB AND GUTTER.

3. FOR STANDARD SLAB DECKS, THE ENGINEER SHALL PROVIDE THE FOLLOWING INFORMATION:

   A. THICKNESS AND WIDTH OF EACH SLAB DECK.
   B. LOCATION OF WELDING JOINTS.
   C. LOCATION OF CONCRETE COVER.
   D. LOCATION OF REBAR.
   E. LOCATION OF DOWEL BARS.
   F. LOCATION OF driveway lines.
   G. LOCATION OF TRANSVERSE JOINTS.
   H. LOCATION OF CURB AND GUTTER.

4. FOR CUSTOM SLAB DECKS, THE CUSTOMER SHALL BE RESPONSIBLE FOR PROVIDING THE FOLLOWING INFORMATION:

   A. THICKNESS AND WIDTH OF EACH SLAB DECK.
   B. LOCATION OF WELDING JOINTS.
   C. LOCATION OF CONCRETE COVER.
   D. LOCATION OF REBAR.
   E. LOCATION OF DOWEL BARS.
   F. LOCATION OF driveway lines.
   G. LOCATION OF TRANSVERSE JOINTS.
   H. LOCATION OF CURB AND GUTTER.

5. ALL FABRICATED SLABS SHALL BE SLID INTO PREDRILLED HOLES IN THE ADJACENT PAVEMENT. FOR ALL CUSTOM SLABS WITH WIDE OPEN SLOTS, THE DOWEL BARS SHALL BE FULLY RETROFITTED INTO ADJACENT PAVEMENT SLABS DURING FIELD INSTALLATION OF THE PRECAST SLABS TO MATCH EXISTING GRADES AT ALL CORNERS DURING INSTALLATION.

6. FOR CUSTOM SLABS REPLACING OR ADJACENT PAVEMENTS, ON CURVED RAMPS OR SUPERELEVATED MAINLINE SECTIONS, THE PROFILE GRINDING OPERATION FOR CUSTOM SLABS REPLACING ANY WARPED PAVEMENT SHALL RECEIVE A COMPLETE PRE-POUR INSPECTION OF THE FORMS TO CONFIRM THAT THE CORNERS OF THE SLAB ARE FLUSH OR EMBEDDED WITHIN THE FORMS.

7. FOR CUSTOM SLABS REPLACING OR ADJACENT PAVEMENTS, THE SLAB THICKNESS OR BEDDING MATERIAL SHALL BE ADJUSTED TO ALLOW FOR THE MINIMUM ALLOWABLE JOINT WIDTH TO MATCH EXISTING GRADES AT ALL CORNERS DURING INSTALLATION.

8. FOR CUSTOM SLABS FABRICATED TO REPLACE EXISTING WARPED PAVEMENT AT AN ISOLATED LOCATION, THE CUSTOM SLAB SHALL BE PREPARED ON A SINGLE SLAB OR ASSEMBLED ON TWO SLABS. FOR THE ELEVATION OF THE CUSTOM SLAB TO BE FLUSH WITH THE EXISTING PAVEMENT, THE CUSTOM SLAB SHALL BE FULLY REINFORCED WITH A MINIMUM OF TWO LAYERS OF STEEL REINFORCEMENT AS NOTED ON SHEET 5.

9. FOR CUSTOM SLABS FABRICATED TO REPLACE EXISTING WARPED PAVEMENT IN A SERIES OF CUSTOM SLABS, THE CUSTOMER SHALL PROVIDE THE FOLLOWING INFORMATION:

   A. LOCATION OF WELDING JOINTS.
   B. LOCATION OF CONCRETE COVER.
   C. LOCATION OF REBAR.
   D. LOCATION OF DOWEL BARS.
   E. LOCATION OF driveway lines.
   F. LOCATION OF TRANSVERSE JOINTS.
   G. LOCATION OF CURB AND GUTTER.

10. FOR CUSTOM SLABS FABRICATED TO REPLACE EXISTING WARPED PAVEMENT IN A SERIES OF CUSTOM SLABS, THE CUSTOMER SHALL PROVIDE THE FOLLOWING INFORMATION:

    A. LOCATION OF WELDING JOINTS.
    B. LOCATION OF CONCRETE COVER.
    C. LOCATION OF REBAR.
    D. LOCATION OF DOWEL BARS.
    E. LOCATION OF driveway lines.
    F. LOCATION OF TRANSVERSE JOINTS.
    G. LOCATION OF CURB AND GUTTER.

11. FOR CUSTOM SLABS FABRICATED TO REPLACE EXISTING WARPED PAVEMENT IN A SERIES OF CUSTOM SLABS, THE CUSTOMER SHALL PROVIDE THE FOLLOWING INFORMATION:

    A. LOCATION OF WELDING JOINTS.
    B. LOCATION OF CONCRETE COVER.
    C. LOCATION OF REBAR.
    D. LOCATION OF DOWEL BARS.
    E. LOCATION OF driveway lines.
    F. LOCATION OF TRANSVERSE JOINTS.
    G. LOCATION OF CURB AND GUTTER.

12. FOR CUSTOM SLABS FABRICATED TO REPLACE EXISTING WARPED PAVEMENT IN A SERIES OF CUSTOM SLABS, THE CUSTOMER SHALL PROVIDE THE FOLLOWING INFORMATION:

    A. LOCATION OF WELDING JOINTS.
    B. LOCATION OF CONCRETE COVER.
    C. LOCATION OF REBAR.
    D. LOCATION OF DOWEL BARS.
    E. LOCATION OF driveway lines.
    F. LOCATION OF TRANSVERSE JOINTS.
    G. LOCATION OF CURB AND GUTTER.

13. FOR CUSTOM SLABS FABRICATED TO REPLACE EXISTING WARPED PAVEMENT IN A SERIES OF CUSTOM SLABS, THE CUSTOMER SHALL PROVIDE THE FOLLOWING INFORMATION:

    A. LOCATION OF WELDING JOINTS.
    B. LOCATION OF CONCRETE COVER.
    C. LOCATION OF REBAR.
    D. LOCATION OF DOWEL BARS.
    E. LOCATION OF driveway lines.
    F. LOCATION OF TRANSVERSE JOINTS.
    G. LOCATION OF CURB AND GUTTER.

14. FOR CUSTOM SLABS FABRICATED TO REPLACE EXISTING WARPED PAVEMENT IN A SERIES OF CUSTOM SLABS, THE CUSTOMER SHALL PROVIDE THE FOLLOWING INFORMATION:

    A. LOCATION OF WELDING JOINTS.
    B. LOCATION OF CONCRETE COVER.
    C. LOCATION OF REBAR.
    D. LOCATION OF DOWEL BARS.
    E. LOCATION OF driveway lines.
    F. LOCATION OF TRANSVERSE JOINTS.
    G. LOCATION OF CURB AND GUTTER.

15. FOR CUSTOM SLABS FABRICATED TO REPLACE EXISTING WARPED PAVEMENT IN A SERIES OF CUSTOM SLABS, THE CUSTOMER SHALL PROVIDE THE FOLLOWING INFORMATION:

    A. LOCATION OF WELDING JOINTS.
    B. LOCATION OF CONCRETE COVER.
    C. LOCATION OF REBAR.
    D. LOCATION OF DOWEL BARS.
    E. LOCATION OF driveway lines.
    F. LOCATION OF TRANSVERSE JOINTS.
    G. LOCATION OF CURB AND GUTTER.

16. FOR CUSTOM SLABS FABRICATED TO REPLACE EXISTING WARPED PAVEMENT IN A SERIES OF CUSTOM SLABS, THE CUSTOMER SHALL PROVIDE THE FOLLOWING INFORMATION:

    A. LOCATION OF WELDING JOINTS.
    B. LOCATION OF CONCRETE COVER.
    C. LOCATION OF REBAR.
    D. LOCATION OF DOWEL BARS.
    E. LOCATION OF driveway lines.
    F. LOCATION OF TRANSVERSE JOINTS.
    G. LOCATION OF CURB AND GUTTER.

17. FOR CUSTOM SLABS FABRICATED TO REPLACE EXISTING WARPED PAVEMENT IN A SERIES OF CUSTOM SLABS, THE CUSTOMER SHALL PROVIDE THE FOLLOWING INFORMATION:

    A. LOCATION OF WELDING JOINTS.
    B. LOCATION OF CONCRETE COVER.
    C. LOCATION OF REBAR.
    D. LOCATION OF DOWEL BARS.
    E. LOCATION OF driveway lines.
    F. LOCATION OF TRANSVERSE JOINTS.
    G. LOCATION OF CURB AND GUTTER.
PRECAST PAVEMENT SLABS

A

APPROVED

DATE

CHIEF ENGINEER

5-1-2009

SHEET 2 OF 19

NOTE:

* MIN. CLEARANCE FOR TOP REINFORCEMENT SHALL BE ADJUSTED FOR SLABS TO FIT TREADLE FRAMES OR INSERTED HARDWARE.
TYPICAL REINFORCEMENT DETAIL FOR CUSTOM SLABS

REINFORCEMENT SECTION A-A

ONE WAY OF REINFORCEMENT SHALL BE FOR APPLICATION TO ALL CUSTOM SLABS GREATER THAN 6 FT. LONGITUDINAL LENGTH TO BE OPENED TO TRAFFIC BEFORE GROUTING IS COMPLETED.

NOTE:
- ALL STANDARD SLABS AND FOR ANY CUSTOM SLABS GREATER THAN 6 FT. LONGITUDINAL LENGTH TO BE OPENED TO TRAFFIC BEFORE GROUTING IS COMPLETED.
- ALL BARS ARE TRIM TO FIT #5 BAR.
- TYPICAL REINFORCEMENT DETAIL FOR CUSTOM SLABS
- ALL BARS ARE TRIM TO FIT #5 BAR.
- MIN. CLEARANCE FOR TOP REINFORCEMENT SHALL BE ADJUSTED FOR PLACE SLABS TO FIT SPECIFIC MATURE OR DESIGNER WISHES.
SLOTS IN ADJACENT PAVEMENT
WITH EMBEDDED DOWELS FOR PRECUT WIDE MOUTH
STANDARD 12'-6" WIDE PANEL LAYOUT FOR ISOLATED PLACEMENT

NOTES:

1. THE WIDTH AND LENGTH OF PRODUCED SLABS SHALL BE THE INDICATED DIMENSIONS ±1/8".
2. FOR MIDDLE LINE SLAB OPENINGS/PATCHES LESS THAN 12'-6" IN WIDTH AND GREATER THAN 12'-6" IN WIDTH, THE STANDARD PRECAST SLAB CAN BE CUT TO FIT WITHIN THE OPENING AND KEEP WITHIN TOLERANCES.
3. THE CONTRACTOR SHALL USE AN APPROVED TEMPLATE TO LOCATE THE SAW CUTS SHOWING (NONSKEWED) JOINT LINE TO ALLOW FOR DOWEL BAR PLACEMENTS WITHIN THE SPECIFIED TOLERANCES.
4. PERIMETER BACKER ROD SHALL BE PLACED AROUND THE OUTSIDE PERIMETER OF THE SLAB AT THE BOTTOM OF THE JOINTS BEFORE THE SLAB HAS BEEN SET AND BEFORE BEDDING/LEVELING FILL IS APPLIED. THE BACKER ROD SHALL NOT BE REQUIRED WHEN ANY SLAB IS LEVELED WITH FLOWABLE FILL.
5. IT SHALL BE THE CONTRACTOR'S OPTION TO REPLACE ANY EMBEDDED DOWEL BARS OR PREFORMED SLOTS AS SHOWN ON THESE DRAWINGS WITH FULLY RETROFITTED DOWEL BARS INSTALLED IN ACCORDANCE WITH "DETAIL C" OF SHEET 13. THE CONTRACTOR SHALL USE AN APPROVED TEMPLATE TO LOCATE THE SAW CUTS SHOWN ON THESE DRAWINGS.
7. SEE NOTE 7 ON SHEET 1 FOR LOCATING BEDDING/LEVELING FILL PORTS.
STANDARD 13'-6" WIDE PANEL LAYOUT FOR ISOLATED PLACEMENT WITH EMBEDDED DOWELS FOR PRECUT WIDE MOUTH SLOTS IN ADJACENT PAVEMENT.

NOTES:

1. THE WIDTH AND LENGTH OF PRODUCED SLABS SHALL BE THE INDICATED DIMENSIONS ± 1/8".

2. FOR ISOLATED LANE SLABS WIDTH/LENGTHS LESS THAN 13'-6" IN WIDTH AND GREATER THAN 12'-6" IN WIDTH, THE STANDARD PRECAST SLAB CAN BE SPRAY CUT ON-SITE TO FIT THE OPENING AND TO MAINTAIN ALIGNMENT WITH EXISTING LONGITUDINAL JOINTS. OTHERWISE, THE SLAB PATCH LOCATION MUST BE PREDETERMINED TO THE CONTRACTOR AND THE SLAB FABRICATED AS A CUSTOM SLAB.

3. CLEAR THICKNESS SHALL BE 11'-6" ± 1/2".

4. A FOAM BACKER ROD SHALL BE PLACED AROUND THE OUTSIDE PERIMETER OF THE SLAB AT THE BOTTOM OF THE SAW CUTS BEFORE THE SLAB IS LEVELED. THIS STEP IS CRUCIAL TO PREVENT BLANKET SET SETTLEMENTS OR UNLEVELNESS. THE BACKER ROD SHALL NOT BE REQUIRED WHEN ANY SLAB IS LEVELED WITH FLOWABLE FILM.

5. SEE SHEET 7 FOR SECTION DETAILS.

6. IT SHALL BE THE CONTRACTOR'S OPTION TO REPLACE ANY EMBEDDED DOWEL BARS OR PREFORMED SLOTS AS SHOWN ON THESE DRAWINGS WITH FULLY RETROFITTED DOWEL BARS FIELD INSTALLED IN ACCORDANCE WITH "DETAIL C" OF SHEET 1. THE CONTRACTOR SHALL USE AN APPROVED TEMPLATE TO LOCATE THE DOWEL BARS REQUIRED FOR PROPER SPACING AND RETROFITTING OF THE DOWEL BARS AS IN ACCORDANCE WITH "DETAIL C" OF SHEET 1. THE CONTRACTOR SHALL USE APPROVED TEMPLATE TO LOCATE THE DOWEL BARS REQUIRED FOR PROPER SPACING AND RETROFITTING OF THE DOWEL BARS AS SHOWN ON THESE DRAWINGS. FULLY RETROFITTED DOWEL BARS SHALL BE USED TO ENSURE CYLINDRICAL MEMBERS OF THE TRANSVERSE NONDEFORMING JOINT LINE TO ALLOW FOR DOWEL BAR PLACEMENTS WITHIN THE SPECIFIED TOLERANCES.

7. SEE NOTE 9 OF SHEET 1 FOR LOCATING BEDDING GROUT PORTS.
STANDARD 12'-6" WIDE PANEL LAYOUT FOR ISOLATED PLACEMENT WITH NARROW MOUTH PREFORMED DOWEL SLOTS TO ALIGN WITH PREDRILLED HOLES IN ADJACENT PAVEMENT.

1. The width and length of produced slabs shall be the indicated dimensions ± 1/8".
2. For middle lane slab openings/scrapes less than 12'-6" in width and greater than 11'-6" in width, the 13'-6" wide standard precast slab can be saw cut on-site to fit the opening and to maintain alignment with existing longitudinal joints. Otherwise, the slab patch location must be surveyed by the contractor and the slab fabricated as a custom slab.
3. For middle lane slab openings/scrapes less than 12'-6" in width and greater than 11'-6" in width, the 13'-6" wide standard precast slab can be saw cut on-site to fit the opening and to maintain alignment with existing longitudinal joints. Otherwise, the slab patch location must be surveyed by the contractor and the slab fabricated as a custom slab.
4. A foam backer rod shall be placed around the outside perimeter of the slab at the bottom of the slab to the extent that the slab is intended to be cast and before setting grout or polyurethane leveling fill in the joint. The backer rod shall not be required when any slab is leveled with polyurethane fill.
5. See Sheet 7 for section details.
6. See Sheet 8 for location details.

NOTES:

STANDARD 13'-6" WIDE PANEL LAYOUT FOR ISOLATED PLACEMENT WITH NARROW MOUTH PREFORMED DOWEL SLOTS TO ALIGN WITH PREDRILLED HOLES IN ADJACENT PAVEMENT.
NOTES:

1. A FOAM BACKER ROD SHALL BE PLACED AROUND THE OUTSIDE EDGES OF THE SLAB AT THE BOTTOM OF THE JOINTS BEFORE THE SLAB HAS BEEN SET AND BEFORE BEDDING GROUT OR POLYURETHANE LEVELING FILL IS APPLIED. THE BACKER ROD SHALL NOT BE REQUIRED AT ANY SLAB IS LEVELED WITH A FLOWABLE FILL.

2. EITHER SINGLE DIAMOND BLADED SAWS OR TRAPEZOIDAL DIAMOND BLADED SAWS SHALL BE USED TO MAKE THE SAW CUTS PERPENDICULAR TO THE TRANSVERSE (NONSKEWED) JOINT LINE. EACH PANEL SHALL BE INDIVIDUALLY WIELDED FOR CORRECT PLACEMENT.

3. FOR DOWEL BAR PLACEMENTS WITHIN THE TRANSVERSE (NONSKEWED) JOINT LINE TO ALLOW 2'-0" TO 2'-5" DIAMOND BLADED GANG SAWS SHALL BE USED TO MAKE THE SAW CUTS PERPENDICULAR TO THE TRANSVERSE (NONSKEWED) JOINT LINE TO ALLOW FOR SINGLE DIAMOND BLADED SAWS OR TRAPEZOIDAL DIAMOND BLADED SAWS.

4. SEE SHEET 7 FOR LOCATING BEDDING GROUT PORTS.

5. SEE NOTE 8 ON SHEET 1 FOR LOCATING SPECIFIED TOLERANCES.

6. SLABS 6'-12' IN LENGTH

(SEE NOTE 1)

BEDDING GROUT PORTS.

LAYOUT DETAIL FOR CUSTOM SLABS 6'-12' IN LENGTH

(VARIOUS WIDTHS)
1. The dowel bars of custom designed precast slabs shall be installed first, followed by the installation of the remaining slab components. The dowel bars shall be spaced not more than 18 inches on center, with the exception of the dowel bars at the perimeter of the slab, which shall be spaced not more than 12 inches on center. The dowel bars shall be installed in accordance with Division 1000 of the Standard Specifications.

2. The dowel bars of custom designed precast slabs shall be installed in a staggered pattern, with the dowel bars at the center of the slab being installed first, followed by the dowel bars at the edges of the slab. The dowel bars shall be spaced not more than 18 inches on center, with the exception of the dowel bars at the perimeter of the slab, which shall be spaced not more than 12 inches on center. The dowel bars shall be installed in accordance with Division 1000 of the Standard Specifications.

3. The dowel bars of custom designed precast slabs shall be installed in a staggered pattern, with the dowel bars at the center of the slab being installed first, followed by the dowel bars at the edges of the slab. The dowel bars shall be spaced not more than 18 inches on center, with the exception of the dowel bars at the perimeter of the slab, which shall be spaced not more than 12 inches on center. The dowel bars shall be installed in accordance with Division 1000 of the Standard Specifications.

4. The dowel bars of custom designed precast slabs shall be installed in a staggered pattern, with the dowel bars at the center of the slab being installed first, followed by the dowel bars at the edges of the slab. The dowel bars shall be spaced not more than 18 inches on center, with the exception of the dowel bars at the perimeter of the slab, which shall be spaced not more than 12 inches on center. The dowel bars shall be installed in accordance with Division 1000 of the Standard Specifications.

5. The dowel bars of custom designed precast slabs shall be installed in a staggered pattern, with the dowel bars at the center of the slab being installed first, followed by the dowel bars at the edges of the slab. The dowel bars shall be spaced not more than 18 inches on center, with the exception of the dowel bars at the perimeter of the slab, which shall be spaced not more than 12 inches on center. The dowel bars shall be installed in accordance with Division 1000 of the Standard Specifications.

6. The dowel bars of custom designed precast slabs shall be installed in a staggered pattern, with the dowel bars at the center of the slab being installed first, followed by the dowel bars at the edges of the slab. The dowel bars shall be spaced not more than 18 inches on center, with the exception of the dowel bars at the perimeter of the slab, which shall be spaced not more than 12 inches on center. The dowel bars shall be installed in accordance with Division 1000 of the Standard Specifications.

7. The dowel bars of custom designed precast slabs shall be installed in a staggered pattern, with the dowel bars at the center of the slab being installed first, followed by the dowel bars at the edges of the slab. The dowel bars shall be spaced not more than 18 inches on center, with the exception of the dowel bars at the perimeter of the slab, which shall be spaced not more than 12 inches on center. The dowel bars shall be installed in accordance with Division 1000 of the Standard Specifications.

8. The dowel bars of custom designed precast slabs shall be installed in a staggered pattern, with the dowel bars at the center of the slab being installed first, followed by the dowel bars at the edges of the slab. The dowel bars shall be spaced not more than 18 inches on center, with the exception of the dowel bars at the perimeter of the slab, which shall be spaced not more than 12 inches on center. The dowel bars shall be installed in accordance with Division 1000 of the Standard Specifications.

9. The dowel bars of custom designed precast slabs shall be installed in a staggered pattern, with the dowel bars at the center of the slab being installed first, followed by the dowel bars at the edges of the slab. The dowel bars shall be spaced not more than 18 inches on center, with the exception of the dowel bars at the perimeter of the slab, which shall be spaced not more than 12 inches on center. The dowel bars shall be installed in accordance with Division 1000 of the Standard Specifications.

10. The dowel bars of custom designed precast slabs shall be installed in a staggered pattern, with the dowel bars at the center of the slab being installed first, followed by the dowel bars at the edges of the slab. The dowel bars shall be spaced not more than 18 inches on center, with the exception of the dowel bars at the perimeter of the slab, which shall be spaced not more than 12 inches on center. The dowel bars shall be installed in accordance with Division 1000 of the Standard Specifications.

11. The dowel bars of custom designed precast slabs shall be installed in a staggered pattern, with the dowel bars at the center of the slab being installed first, followed by the dowel bars at the edges of the slab. The dowel bars shall be spaced not more than 18 inches on center, with the exception of the dowel bars at the perimeter of the slab, which shall be spaced not more than 12 inches on center. The dowel bars shall be installed in accordance with Division 1000 of the Standard Specifications.

12. The dowel bars of custom designed precast slabs shall be installed in a staggered pattern, with the dowel bars at the center of the slab being installed first, followed by the dowel bars at the edges of the slab. The dowel bars shall be spaced not more than 18 inches on center, with the exception of the dowel bars at the perimeter of the slab, which shall be spaced not more than 12 inches on center. The dowel bars shall be installed in accordance with Division 1000 of the Standard Specifications.

13. The dowel bars of custom designed precast slabs shall be installed in a staggered pattern, with the dowel bars at the center of the slab being installed first, followed by the dowel bars at the edges of the slab. The dowel bars shall be spaced not more than 18 inches on center, with the exception of the dowel bars at the perimeter of the slab, which shall be spaced not more than 12 inches on center. The dowel bars shall be installed in accordance with Division 1000 of the Standard Specifications.

14. The dowel bars of custom designed precast slabs shall be installed in a staggered pattern, with the dowel bars at the center of the slab being installed first, followed by the dowel bars at the edges of the slab. The dowel bars shall be spaced not more than 18 inches on center, with the exception of the dowel bars at the perimeter of the slab, which shall be spaced not more than 12 inches on center. The dowel bars shall be installed in accordance with Division 1000 of the Standard Specifications.

15. The dowel bars of custom designed precast slabs shall be installed in a staggered pattern, with the dowel bars at the center of the slab being installed first, followed by the dowel bars at the edges of the slab. The dowel bars shall be spaced not more than 18 inches on center, with the exception of the dowel bars at the perimeter of the slab, which shall be spaced not more than 12 inches on center. The dowel bars shall be installed in accordance with Division 1000 of the Standard Specifications.

16. The dowel bars of custom designed precast slabs shall be installed in a staggered pattern, with the dowel bars at the center of the slab being installed first, followed by the dowel bars at the edges of the slab. The dowel bars shall be spaced not more than 18 inches on center, with the exception of the dowel bars at the perimeter of the slab, which shall be spaced not more than 12 inches on center. The dowel bars shall be installed in accordance with Division 1000 of the Standard Specifications.

17. The dowel bars of custom designed precast slabs shall be installed in a staggered pattern, with the dowel bars at the center of the slab being installed first, followed by the dowel bars at the edges of the slab. The dowel bars shall be spaced not more than 18 inches on center, with the exception of the dowel bars at the perimeter of the slab, which shall be spaced not more than 12 inches on center. The dowel bars shall be installed in accordance with Division 1000 of the Standard Specifications.

18. The dowel bars of custom designed precast slabs shall be installed in a staggered pattern, with the dowel bars at the center of the slab being installed first, followed by the dowel bars at the edges of the slab. The dowel bars shall be spaced not more than 18 inches on center, with the exception of the dowel bars at the perimeter of the slab, which shall be spaced not more than 12 inches on center. The dowel bars shall be installed in accordance with Division 1000 of the Standard Specifications.

19. The dowel bars of custom designed precast slabs shall be installed in a staggered pattern, with the dowel bars at the center of the slab being installed first, followed by the dowel bars at the edges of the slab. The dowel bars shall be spaced not more than 18 inches on center, with the exception of the dowel bars at the perimeter of the slab, which shall be spaced not more than 12 inches on center. The dowel bars shall be installed in accordance with Division 1000 of the Standard Specifications.

20. The dowel bars of custom designed precast slabs shall be installed in a staggered pattern, with the dowel bars at the center of the slab being installed first, followed by the dowel bars at the edges of the slab. The dowel bars shall be spaced not more than 18 inches on center, with the exception of the dowel bars at the perimeter of the slab, which shall be spaced not more than 12 inches on center. The dowel bars shall be installed in accordance with Division 1000 of the Standard Specifications.

21. The dowel bars of custom designed precast slabs shall be installed in a staggered pattern, with the dowel bars at the center of the slab being installed first, followed by the dowel bars at the edges of the slab. The dowel bars shall be spaced not more than 18 inches on center, with the exception of the dowel bars at the perimeter of the slab, which shall be spaced not more than 12 inches on center. The dowel bars shall be installed in accordance with Division 1000 of the Standard Specifications.
20. REMOVAL OF EXISTING PAVEMENT SHALL BE IN ACCORDANCE WITH SECTION 440 OF THE
FULL WIDTH OF A LANE AND THE FULL DEPTH OF CONCRETE.

21. SHOP DRAWINGS. WITHIN A TOLERANCE OF ± 0.25 INCH. REPAIRS SHALL BE NO LESS THAN THE
AREAS TO BE REPAIRED AS DEFINED ON THE CONTRACT DOCUMENTS AND APPROVED
PERIMETER SAWCUTTING OF THE REMOVAL AREA AND SAWCUTTING OF THE DOWEL BAR SLOTS
THE SPECIFICATIONS.

22. THE SLABS ARE RAISED TO AN EVEN PLANE, WITH VERTICAL ELEVATION DIFFERENCE
OF RISE OF THE PAVEMENT SLAB. A LEVELING UNIT SHALL BE PROVIDED TO ENSURE
STRENGTH ARE ACHIEVED AND A UNIFORM, FLOWABLE MIXTURE IS DEVELOPED THAT
MIXTURE. NO WATER WILL BE ADDED TO THE FLOWABLE FILL MIXTURE AFTER
MEASURE THE SPECIFIED QUANTITIES OF EACH COMPONENT MATERIAL, AND MIXING
BATCHING EQUIPMENT FOR FLOWABLE FILL SHALL HAVE DEVICES DESIGNED TO
RODS USED FOR CONSOLIDATION OF THE REPAIR MATERIAL FOR NARROW MOUTH
MAXIMUM DIAMETER OF 1 INCH AND SHALL HAVE A RESILIENT COVERING THAT WILL
THE COMPRESSED AIR SHALL BE FREE FROM OIL AND OTHER CONTAMINANTS.

23. THE SLABS MUNDER CONSTRUCTION MOPS AND WATER CANNONS TO REMOVE THE REMAINING
MORTAR AND DUST FROM THE JOINES. THE PLACEMENT OF SUCCESSIVE LAYERS OF
FOAM INTERPLACEMENT SHOULDN'T BE AVOIDED AS THE JOINTS SHOULD BE TIGHTLY SEALED.
SEAL APPROVED BY THE ENGINEER TO WITHIN 1 INCH OF THE PAVEMENT SURFACE. ANY
SLAB IS OPENED TO TRAFFIC SHALL BE TEMPORARILY FILLED WITH A COMPRESSION
FABRICATED WITH TWO MATS OF STEEL REINFORCEMENT IN ACCORDANCE WITH THE
SPECIFICATIONS AT NO ADDITIONAL COST TO THE ILLINOIS TOLLWAY.

24. IF DETERMINED BY THE ENGINEER THAT THE EXISTING GROUTING IS UNSUITABLE FOR THE
SPECIFICATIONS. THE CONTRACTOR SHALL REMOVE THE EXISTING GROUTING AND INSTALL:
A. PLACEMENT OF UNDERSEALING GROUT SHALL FILL ALL VOIDS BENEATH THE CONCRETE Patch;
B. UNDERSEALING GROUT FILLS ANY TRANSVERSE JOINT TO WITHIN 9" OF THE JOINT;
DURING PLACEMENT OF THE CONCRETE PATCHING MATERIAL, THE WORK WILL BE REDEEMED AND REGRAMED NO ADDITIONAL COST TO THE ILLINOIS TOLLWAY.

25. THE SLABS MUNDER CONSTRUCTION MOPS AND WATER CANNONS TO REMOVE THE REMAINING
MORTAR AND DUST FROM THE JOINES. THE PLACEMENT OF SUCCESSIVE LAYERS OF
FOAM INTERPLACEMENT SHOULDN'T BE AVOIDED AS THE JOINTS SHOULD BE TIGHTLY SEALED.
SEAL APPROVED BY THE ENGINEER TO WITHIN 1 INCH OF THE PAVEMENT SURFACE. ANY
SLAB IS OPENED TO TRAFFIC SHALL BE TEMPORARILY FILLED WITH A COMPRESSION
FABRICATED WITH TWO MATS OF STEEL REINFORCEMENT IN ACCORDANCE WITH THE
SPECIFICATIONS AT NO ADDITIONAL COST TO THE ILLINOIS TOLLWAY.

26. REFER TO THIS PREDCAST PANEL INSTALLATION GENERAL NOTES.
INSTALLATION OF ISOLATED STANDARD PRECAST SLABS

GENERAL

EXISTING PAVEMENT

NOTE:

PAVEMENT EXISTING PCC

OR HMA SHOULDER

EXISTING PAVEMENT

MIN.

VARIES

SEE SHEET 14
DETAIL D

EXISTING LONGITUDINAL JOINT

SEE SHEET 14
DETAIL E

EXISTING TRANSVERSE JOINT

FOR DOWEL BARS TO BE SLID INTO PRE-DRILLED HOLES
REFER TO DETAIL C ON SHEET 11.

FOR DOWEL BARS FULLY RETROFITTED IN THE FIELD,
JOINTS SHALL BE PROVIDED.

ADJACENT LANES, A MINIMUM 2'-0" OFFSET BETWEEN
CANNOT BE ALIGNED WITH TRANSVERSE JOINTS IN
WHEN THE TRANSVERSE JOINTS OF ANY PRECAST SLAB
EITHER LANES A MINIMUM 2'-0" OFFSET BETWEEN
JOINTS SHALL BE PROVIDED.

• FOR DOWEL BARS FULLY RETROFITTED IN THE FIELD,
REFER TO DETAIL G ON SHEET 17.

• FOR DOWEL BARS TO BE SLID INTO PRE-DRILLED HOLES
IN THE FIELD, REFER TO DETAIL E ON SHEET 14.
DETAIL-C, WIDE MOUTH DOWEL BAR PLACEMENT DETAIL FOR ALL CUSTOM MADE PRECAST PANELS AND OPTIONAL FOR STANDARD SLABS

SECTION P-P

NOTES:
1. PLACE FOAM CORE BOARDS TO THE TOP OF PAVEMENT, NOR IN THE SLOTTED AREA OR SLOTTED AREA IN THE JOINT.
2. UPON COMPLETION, THE FINISHED SURFACE OF THE CONCRETE BACKFILL MATERIAL SHALL NOT BE BELOW EXISTING CONCRETE SURFACE.

ILLINOIS TOLLWAY
DETAIL D - WIDE MOUTH DOWEL BAR PLACEMENT

NOTES:
1. PLACE FOAM CORE BOARDS TO THE TOP OF PATCH.
2. UPON COMPLETION, THE FINISHED SURFACE OF THE CONCRETE BACKFILL MATERIAL SHALL NOT BE BELOW EXISTING CONCRETE SURFACE.

SECTION G-G

SECTION L-L

PLAN VIEW

SECTION 1-1

DETAIL FOR STANDARD PRECAST PANELS

DETAIL FOR STANDARD PRECAST PANELS

SHEET 14 OF 19

PRECAST PAVEMENT SLABS

STANDARD A18-03
DETAIL E - WIDE MOUTH DOWEL BAR PLACEMENT DETAIL FOR CONSECUTIVE STANDARD PRECAST PANELS

NOTES:
1. PLACE FOAM CORE BOARDS TO THE TOP OF PANEL.
2. UPON COMPLETION, THE FINISHED SURFACE OF THE CONCRETE BACKFILL MATERIAL SHALL NOT BE BELOW EXISTING CONCRETE SURFACE.
TRANSFER JOINT OF CONSECUTIVELY PLACED STANDARD PRECAST PANELS

NOTES:
1. PLACE FOAM CORE BOARDS TO THE TOP OF PATCH.
2. UPON COMPLETION, THE FINISHED SURFACE OF THE CONCRETE BACKFILL MATERIAL SHALL BE BELOW EXISTING CONCRETE SURFACE.

PLAN VIEW

SECTION F-F

DETAIL-F, WIDE MOUTH DOWEL BAR PLACEMENT DETAIL FOR THE LAST TRANSFER JOINT OF CONSECUTIVELY PLACED STANDARD PRECAST PANELS

CHAIR DETAIL
**PLACEMENT DETAIL FOR ISOLATED PRECAST PANELS**

**DETAIL G - NARROW MOUTH DOWEL BAR**

**NOTES:**
1. Place foam core boards to the top of panel.
2. Upon completion, the finished surface of the concrete backfill material shall not be below existing concrete surface.

**SECTION G-G**

- Concrete backfill material to be flush with existing concrete surface (Note 2)
- Concrete backfill material to maintain joint
- Concrete backfill material after backfilling
- Concrete backfill material after backfilling
- Concrete backfill material after backfilling
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**SECTION M-M**

- Concrete backfill material after backfilling
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NOTES:
1. NO STITCHING OF DEFORMED TIE BARS IS REQUIRED WHEN PRECAST SLABS IS PLACED ADJACENT TO HMA SHOULDER OR PLAZA LANE.

2. THE BAR STITCHING SHALL BE REQUIRED WHEN THE REPAIR AREA LENGTH EXCEEDS 20 FT. OR WHEN MORE THAN 3 PRECAST SLABS ARE PLACED IN SEQUENCE.

3. SHOP DRAWINGS SHALL BE REQUIRED FOR ALL CUSTOM PLAZA SLABS.

**LEGEND**
- RD = FIELD RETROFITTED DOWEL BARS
- ST = SLOT OR HOLE FOR STITCHED TIE BAR
- DS = DOWEL SLOT
- DB = DOWEL BAR EMBEDDED

**DIAGRAM**
Installation Detail for Custom Slabs
NOTES FOR TIE BAR STITCHING:

1. DRILL HOLES THAT ARE ORIENTED AT 40° | 5° ANGLE TO THE PRECAST PAVEMENT SURFACE SUCH THAT THEY INTERSECT THE LONGITUDINAL JOINT AT ABOUT MID-DEPTH. IT IS IMPORTANT TO START DRILLING THE HOLE AT A CONSISTENT DISTANCE FROM THE JOINT, IN ORDER TO CONSISTENTLY CROSS AT THE MID-DEPTH OF THE SLAB.

2. HOLE CENTERLINES ARE PERPENDICULAR TO THE JOINT IN PLAN VIEW AT EACH LOCATION BEING DRILLED.

3. SELECT A DRILL THAT MINIMIZES DAMAGE TO THE CONCRETE SURFACE SUCH AS A HAMMERED POWERED DRILL. SELECT A DRILL DIAMETER NO MORE THAN 0.375 IN. LARGER THAN THE TIE BAR DIAMETER. CHOOSE A GANG-MOUNTED DRILL IF A HIGHER PRODUCTIVITY IS NEEDED.

4. DRILL HOLES WITH NO LESS THAN A 24 INCH BAR SPACING. ADJACENT HOLES ARE DRILLED IN OPPOSITE DIRECTIONS ACROSS THE JOINT. THE HOLES AND INSERTED BAR SHALL BE NO LESS THAN 24 INCHES FROM ANY EXISTING TRANSVERSE JOINT OR ANY PRECAST OR REPAIR TRANSFER JOINT.

5. HOLE BOTTOMS ARE NO MORE THAN 1 INCH FROM THE SLAB BOTTOM.

6. AIR BLOW THE HOLES TO REMOVE DUST AND DEBRIS AFTER DRILLING.

7. SELECT A DRILL THAT MINIMIZES DAMAGE TO THE CONCRETE SURFACE SUCH AS A HAMMERED POWERED DRILL. SELECT A DRILL DIAMETER NO MORE THAN 0.375 IN. LARGER THAN THE TIE BAR DIAMETER. CHOOSE A GANG-MOUNTED DRILL IF A HIGHER PRODUCTIVITY IS NEEDED.

8. DRILL HOLES WITH NO LESS THAN A 24 INCH BAR SPACING. ADJACENT HOLES ARE DRILLED IN OPPOSITE DIRECTIONS ACROSS THE JOINT. THE HOLES AND INSERTED BAR SHALL BE NO LESS THAN 24 INCHES FROM ANY EXISTING TRANSVERSE JOINT OR ANY PRECAST OR REPAIR TRANSFER JOINT.

9. REMOVE EXCESS ADHESIVE AND FINISH FLUSH WITH THE PAVEMENT SURFACE.

10. PRECAST REPAIR SLABS

11. EXISTING PCC PAVEMENT

12. TRANSVERSE JOINT

13. PRECAST REPAIR SLABS

14. EXISTING PCC PAVEMENT

15. LONGITUDINAL JOINT