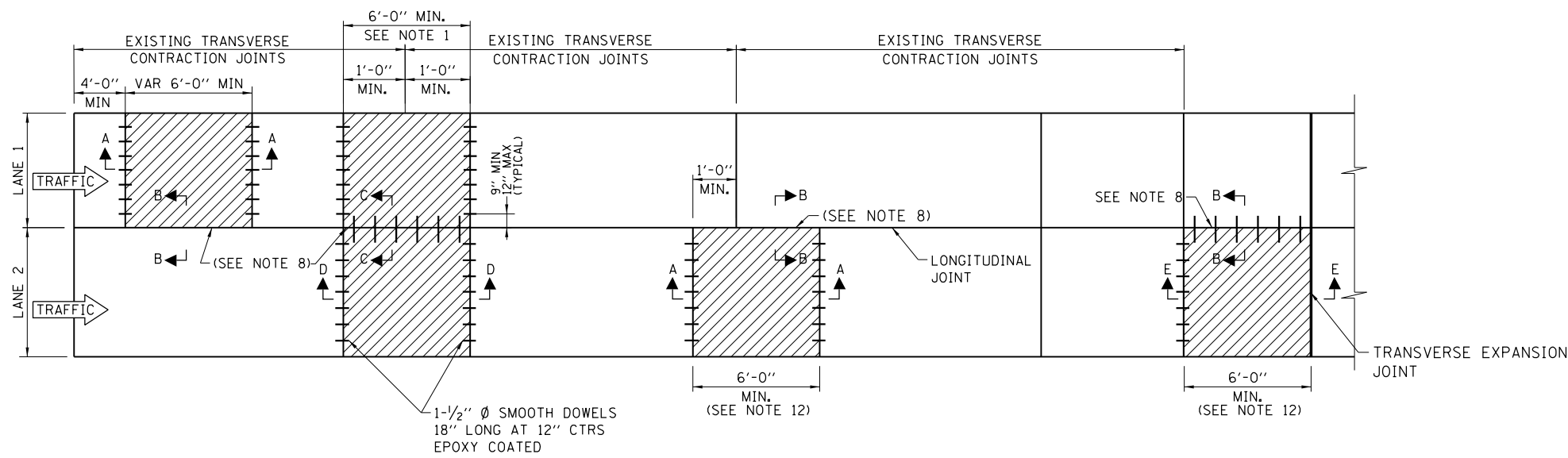


**Illinois Tollway Standard Drawing Revisions**

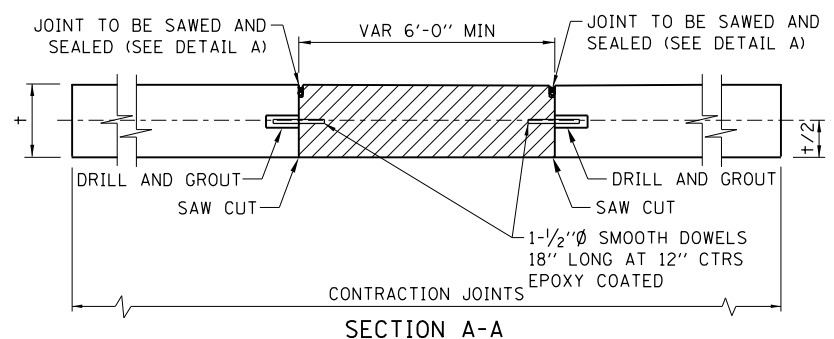
| <b>Section A Roadway Pavement</b> |   |                              |
|-----------------------------------|---|------------------------------|
| <b>Standard</b>                   | <b>Modification Summary</b>   | <b>Effective: 03-01-2020</b> |
| <b>A1-08</b>                      | <b>CONCRETE PAVEMENT REPAIR FULL DEPTH</b>                                    |                              |
|                                   | Revised callout note.   |                              |
|                                   | Removed reinforcement from section details                                    |                              |
|                                   | Added transverse expansion joint repair                                       |                              |
| <b>A2-07</b>                      | <b>ASPHALT OVERLAY REPAIR</b>   |                              |
|                                   | Removed note 5.   |                              |
| <b>A5-06</b>                      | <b>J.P.C PAVEMENT SHEET 1 &amp; 2</b>   |                              |
|                                   | Adjusted slope in lane 1.   |                              |
|                                   | Removed dowel bars and adjusted spacing.                                      |                              |
| <b>A7-04</b>                      | <b>PAVEMENT JOINTS</b>  |                              |
|                                   | Removed dowel transverse expansion joint                                      |                              |
|                                   | Added sleeper slab transverse expansion joint sheets.                         |                              |
| <b>A12-01</b>                     | <b>JOINTING PLAN ENTRANCE RAMP TERMINAL WITH AUXILIARY LANE SHEET 1 AND 2</b> |                              |
|                                   | Updated dimensions  |                              |
| <b>A13-03</b>                     | <b>JOINTING PLAN EXIT RAMP TERMINAL WITH AUXILIARY LANE SHEET 1</b>           |                              |
|                                   | Updated 12' min at gore.  |                              |
| <b>A13-03</b>                     | <b>JOINTING PLAN EXIT RAMP TERMINAL WITH AUXILIARY LANE SHEET 2</b>           |                              |
|                                   | Updated 12' min at gore.  |                              |
| <b>A14-06</b>                     | <b>JOINTING PLAN ENTRANCE RAMP TERMINAL SHEET 1</b>                           |                              |
|                                   | Added epoxy language to notes.  |                              |
| <b>A15-06</b>                     | <b>JOINTING PLAN EXIT RAMP TERMINAL SHEET 1</b>                               |                              |
|                                   | Updated 12' min at gore.  |                              |
| <b>A15-06</b>                     | <b>JOINTING PLAN EXIT RAMP TERMINAL SHEET 2</b>                               |                              |
|                                   | Updated 12' min at gore.  |                              |
| <b>A16-06</b>                     | <b>JOINTING PLAN PARALLEL EXIT RAMP TERMINAL SHEET 1</b>                      |                              |
|                                   | Modified outside loop ramp to 10'   |                              |
|                                   | Updated 12' min at gore.  |                              |
| <b>A16-06</b>                     | <b>JOINTING PLAN PARALLEL EXIT RAMP TERMINAL SHEET 2</b>                      |                              |
|                                   | Modified outside loop ramp to 10'   |                              |
|                                   | Updated 12' min at gore.  |                              |
| <b>A17-06</b>                     | <b>JOINTING PLAN PARALLEL ENTRANCE RAMP TERMINAL SHEET 1</b>                  |                              |
|                                   | Updated dimensions  |                              |
| <b>A17-06</b>                     | <b>JOINTING PLAN PARALLEL ENTRANCE RAMP TERMINAL SHEET 2</b>                  |                              |
|                                   | Updated dimensions  |                              |

 New Sheet

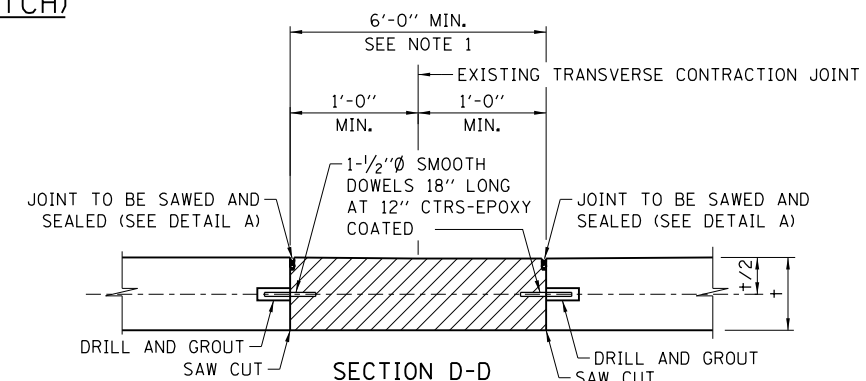
 Retired Standard



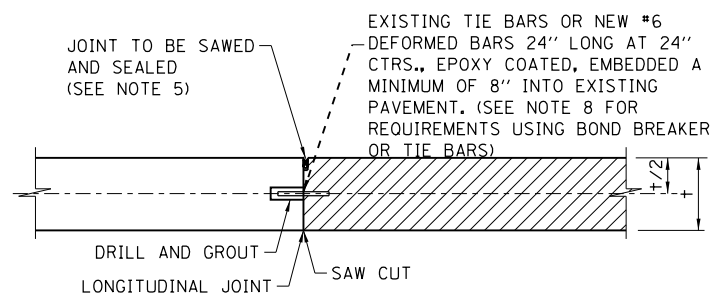
**PROPOSED CONCRETE PAVEMENT FULL DEPTH REPAIR TYPICAL ROADWAY PLAN (PAID AS CLASS B PATCH)**



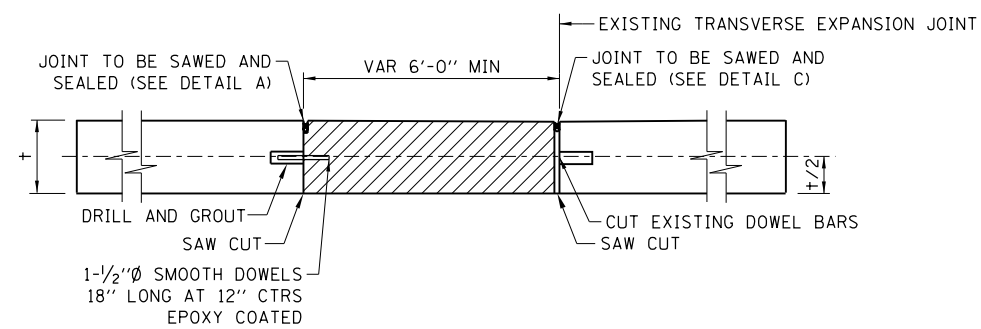
**REPAIR - FULL DEPTH, ONE LANE**



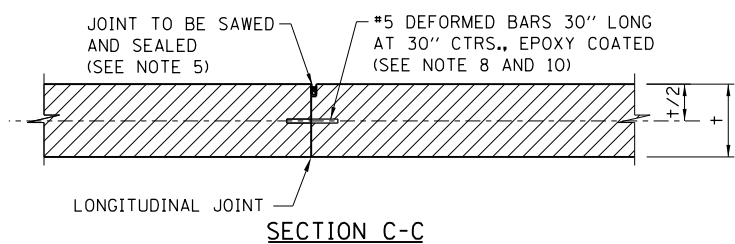
**REPAIR AT CONTRACTION JOINT**



**REPAIR ALONG LONGITUDINAL JOINT**



**REPAIR - FULL DEPTH, ONE LANE TRANSVERSE EXPANSION JOINT**



**REPAIR THROUGH LONGITUDINAL JOINT**

**GENERAL NOTES:**

1. THE MINIMUM OVERALL DIMENSIONS OF REPAIRS SHALL BE SIX (6) FEET BY THE LANE WIDTH EXCEPT FOR REPLACEMENT OF DETERIORATED PAVEMENT EDGES ADJACENT TO PROPOSED WIDENING (SEE SECTION E-E). REPAIRS TERMINATING AT TRANSVERSE CONTRACTION JOINTS 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.
2. WHENEVER A REPAIR IS CONSTRUCTED IN TWO OR MORE SEGMENTS BECAUSE OF MAINTENANCE OF TRAFFIC STAGING REQUIREMENTS, EACH SEGMENT SHALL BE CONSIDERED A SEPARATE PATCH WITH SIX (6) FEET MINIMUM DIMENSION.
3. UNLESS OTHERWISE NOTED, DRILLED AND GROUTED DOWELS SHALL BE EMBEDDED 1/2 THEIR LENGTH INTO THE EXISTING CONCRETE USING CHEMICAL ADHESIVE AS SPECIFIED.
4. UNLESS OTHERWISE NOTED, TIE BARS SHALL BE EMBEDDED 1/3 THEIR LENGTH INTO THE EXISTING CONCRETE USING CHEMICAL ADHESIVE AS SPECIFIED.
5. SAW CUTTING AND SEALING OF LONGITUDINAL JOINTS IN THE REPAIR AREAS SHALL FOLLOW IDOT HIGHWAY STANDARD 420001 (PAVEMENT JOINTS) WHERE TIE BARS ARE NEEDED OR DETAIL B WHERE BOND BREAKER IS USED. SEE NOTE 8 TO DETERMINE JOINT REQUIREMENTS. JOINT SEALING IS NOT REQUIRED FOR PAVEMENT BEING RESURFACED.
6. FOR REPAIR OF ASPHALT OVERLAY AND P.C.C. PAVEMENT, THE SAWCUT SHALL BE FULL DEPTH. THE PATCH SHALL MEET EXISTING CROSS SECTION MATERIALS THICKNESSES.
7. AT LOCATIONS OF PROPOSED PAVEMENT WIDENING, EDGE DETERIORATION REQUIRING FULL DEPTH REPAIR SHALL BE REPAIRED BY REMOVAL AND REPLACEMENT OF A MINIMUM OF 1'-6" WIDE STRIP. SAW CUTTING AND REMOVAL WILL BE PAID PER ARTICLE 109.04 OF THE ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS, UNLESS OTHERWISE PROVIDED IN THE CONTRACT. THE ADDITIONAL PAVEMENT WIDTH REPLACING THE EDGE DETERIORATION SHALL BE CONSTRUCTED MONOLITHICALLY WITH THE PAVEMENT WIDENING. THIS ADDITIONAL PAVEMENT SHALL BE PAID USING CONTRACT PAVEMENT WIDENING ITEMS IN ACCORDANCE WITH ARTICLE 109.03 OF THE ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS.
8. WHEN PROPOSED TRANSVERSE JOINTS ARE OFFSET FROM EXISTING JOINTS IN ADJACENT PAVEMENT TO REMAIN, BOND BREAKER SHALL BE USED AT THE LONGITUDINAL JOINT ADJACENT TO THE EXISTING PAVEMENT, WITH TIE BARS OMITTED. WHEN PROPOSED TRANSVERSE JOINTS LINE UP WITH ADJACENT JOINTS, TIE BARS SHALL BE USED WITH NO BOND BREAKER.
9. TYPICAL ROADWAY PLAN FOR FULL DEPTH REPAIR IS APPLICABLE TO ALL PAVEMENTS, LANE WIDTHS AND NUMBER OF EXISTING LANES.
10. THE TIE BAR FOR THE LONGITUDINAL SAWED JOINT SHALL BE 15" FROM THE TRANSVERSE CONTRACTION JOINT.
11. OMIT SEALING OF ALL JOINTS IN THE REPAIR AREA OF PAVEMENT TO BE RESURFACED.
12. THE MAXIMUM LENGTH BETWEEN TRANSVERSE CONTRACTION JOINTS IN ANY PATCH SHALL BE 15'.
13. CONTRACTOR WILL BE RESPONSIBLE TO ATTAIN A SMOOTHNESS REQUIREMENT OF PASSING A 3/16TH INCH BUMP TEST USING A 16' ROLLING STRAIGHT EDGE AFTER PATCHING IS COMPLETE. DIAMOND GRINDING MAY BE USED TO RESTORE RIDE QUALITY AND IS INCIDENTAL TO THE WORK UNLESS OTHERWISE SPECIFIED IN THE PLANS.

**LEGEND**

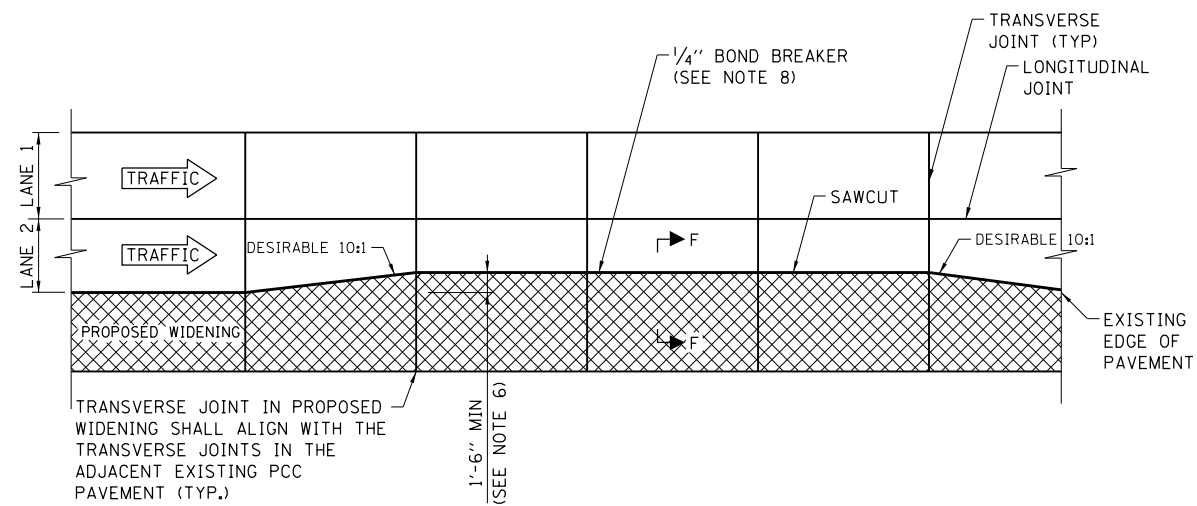
- EXISTING WELDED WIRE FABRIC (10" PAVEMENT ONLY)
- EXISTING PAVEMENT
- PROPOSED CONCRETE PAVEMENT REPAIR - FULL DEPTH
- PROPOSED CONCRETE PAVEMENT WIDENING
- = CONCRETE PAVEMENT THICKNESS



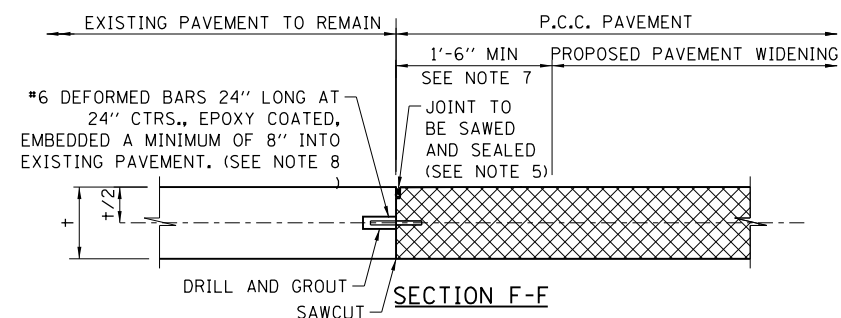
**CONCRETE PAVEMENT REPAIR FULL DEPTH**

| DATE      | REVISIONS   |
|-----------|---|
| 3-31-2017 | ADD PAVEMENT THICKNESS TO SECTION C-C REVISED NOTES |
| 3-1-2018  | REMOVED TIE BARS & REVISED NOTES TAPER SAW CUT      |
| 3-1-2019  | REVISED NOTES                                       |
| 3-1-2020  | ADDED TRANSVERSE EXPANSION JOINT                    |

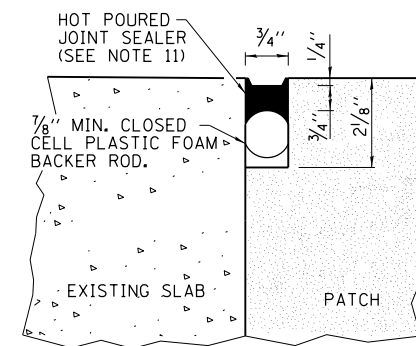
APPROVED: *Paul Kovacs* CHIEF ENGINEERING OFFICER DATE 5-1-2009



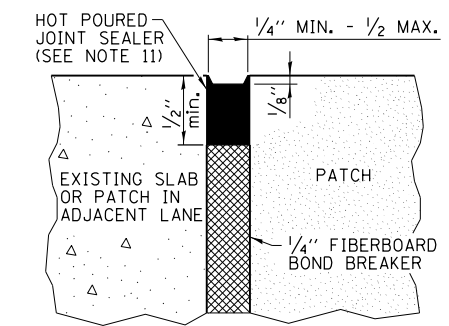
**REPLACEMENT OF DETERIORATED PAVEMENT  
EDGES ADJACENT TO PROPOSED WIDENING  
(PAID AS PART OF WIDENING)**



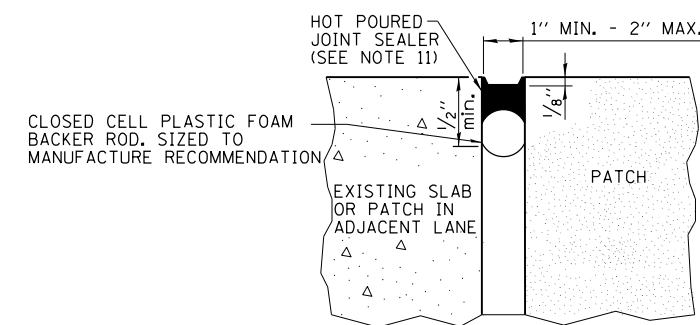
**REPLACEMENT OF DETERIORATED PAVEMENT  
EDGES ADJACENT TO PROPOSED WIDENING**



**DETAIL A  
(TRANSVERSE JOINT)**



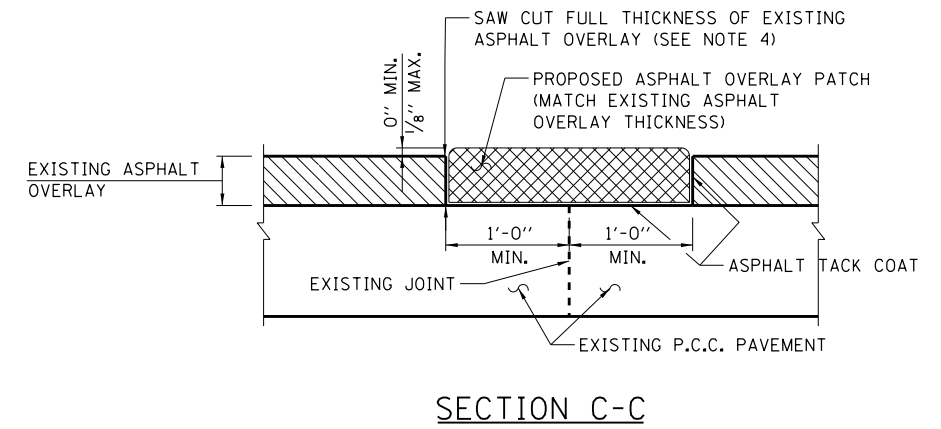
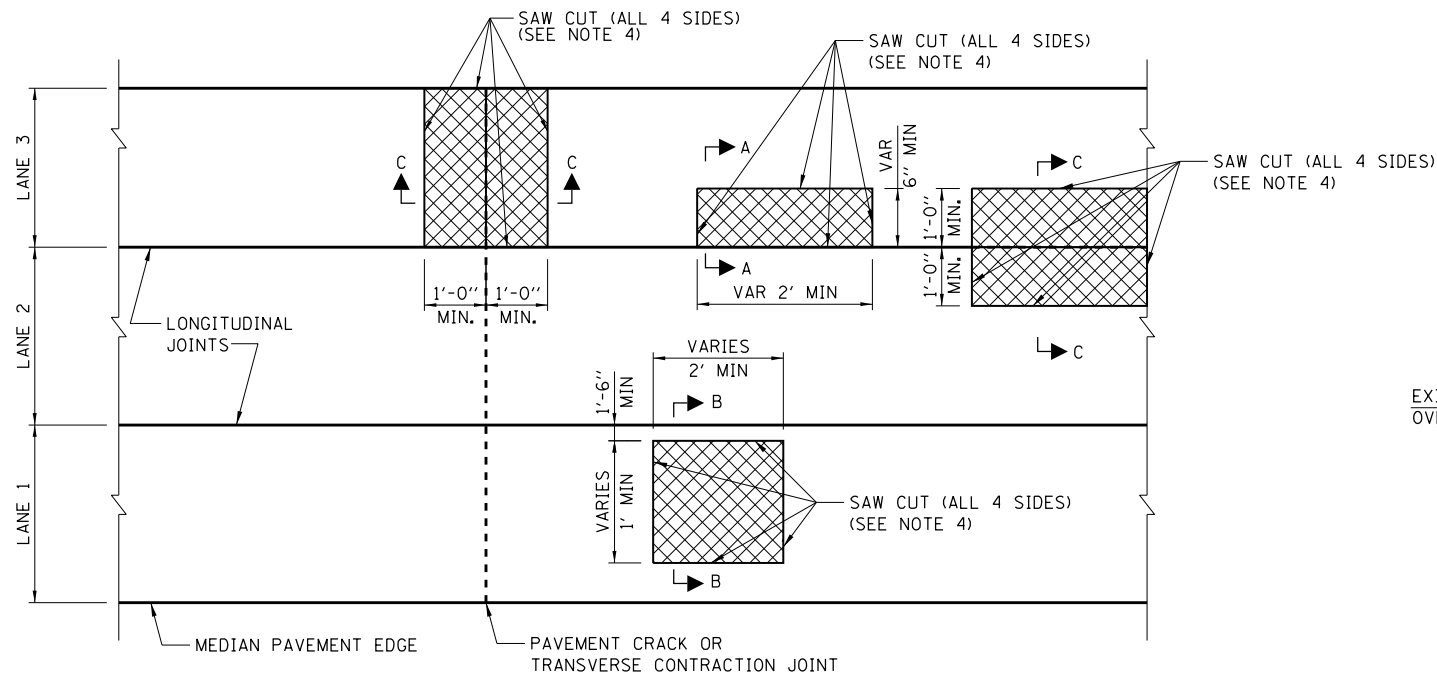
**DETAIL B  
(LONGITUDINAL JOINT)**



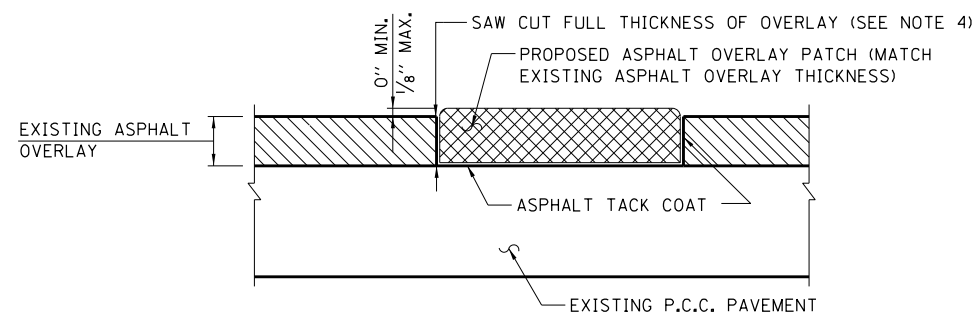
**DETAIL C  
(TRANSVERSE EXPANSION JOINT)**

APPROVED: *Paul Kovacs* DATE: 5-1-2009  
CHIEF ENGINEERING OFFICER





PROPOSED ASPHALT OVERLAY REPAIR  
TYPICAL ROADWAY PLAN



SECTION A-A & B-B  
ASPHALT OVERLAY REPAIR

**NOTES: TYPICAL ASPHALT OVERLAY REPAIR**

1. LOCATION OF ALL OVERLAY REPAIR AREAS SHALL BE DETERMINED BY THE ENGINEER.
2. MINIMUM DIMENSIONS SHALL BE AS SHOWN IN TYPICAL ROADWAY PLAN.
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. TRANSVERSE SAWCUTS ARE ALWAYS REQUIRED.

**LEGEND**

- EXISTING OR PROPOSED ASPHALT OVERLAY
- PROPOSED PAVEMENT REPAIR

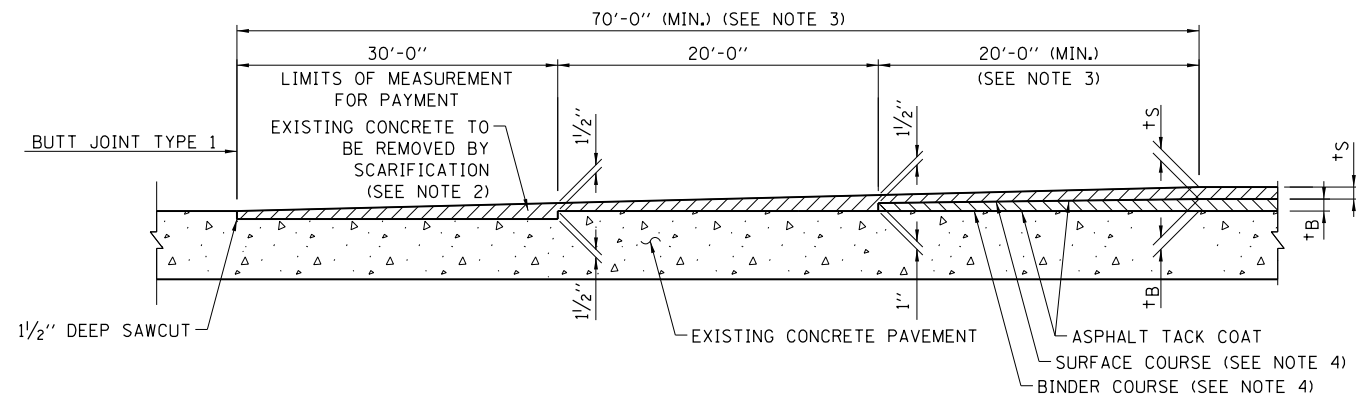


| DATE      | REVISIONS   |
|-----------|---|
| 3-11-2015 | REMOVED PARTIAL DEPTH PAVEMENT REPAIR.  |
| 3-31-2016 | REVISED PRIME COAT TO TACK COAT. ADDED SECTION C-C AND PATCHES ACROSS JOINTS. |
| 3-31-2017 | REVISED SPECIAL PROVISION REFERENCE   |
| 3-1-2019  | REVISED NOTES   |
| 3-1-2020  | REVISED NOTES   |

ASPHALT OVERLAY REPAIR

STANDARD A2-07

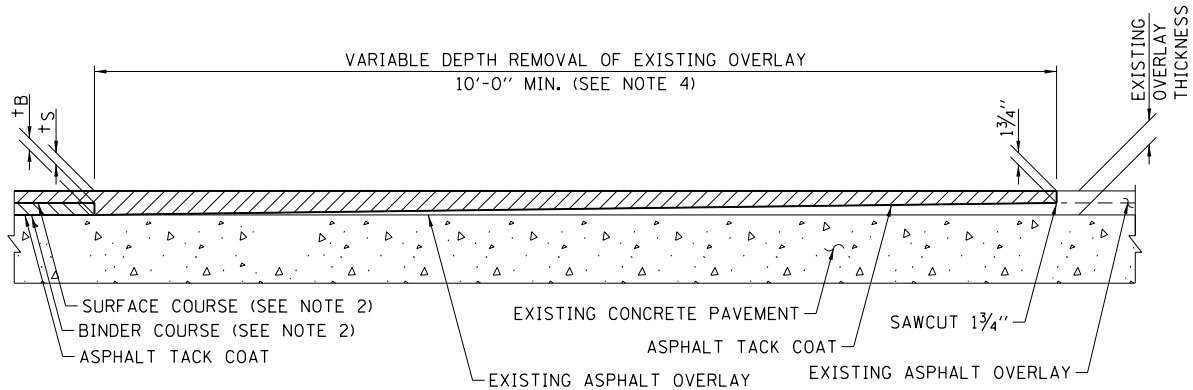
APPROVED: *Paul Kovacs* CHIEF ENGINEER DATE 5-1-2009



**DETAIL OF BUTT JOINT, TYPE 1**

**NOTES FOR BUTT JOINT, TYPE 1**

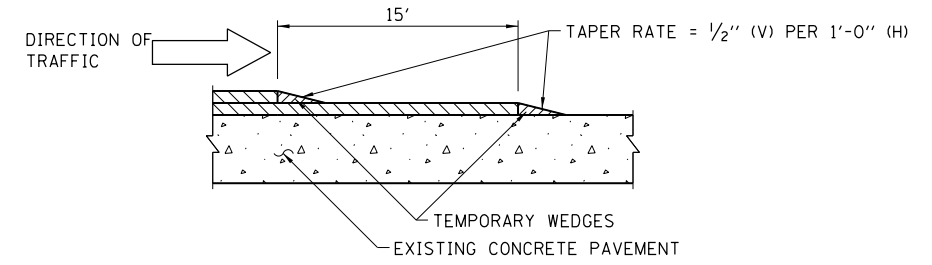
1. THE ABOVE WORK WILL BE PERFORMED AT THE ENDS OF ALL ASPHALT RESURFACING.
2. ONLY APPROVED SCARIFYING OR MILLING EQUIPMENT SHALL BE USED TO SCARIFY THE CONCRETE PAVEMENT.
3. REGARDLESS OF TYPE OF SURFACE MIX USED, NUMBER OR THICKNESS OF COURSES OR LAYERS, THE OVERLAY THICKNESS TRANSITION LENGTH SHALL BE BASED ON 1" IN 20' AND THE MINIMUM SURFACE LAYER THICKNESS SHALL BE 1/2".
4. REFER TO THE CONTRACT DOCUMENTS FOR THE REQUIRED BINDER AND SURFACE COURSE MATERIALS. "tS" IS THE THICKNESS OF THE SURFACE COURSE SPECIFIED IN THE CONTRACT. "tB" IS THE THICKNESS OF THE BINDER COURSE SPECIFIED IN THE CONTACT.



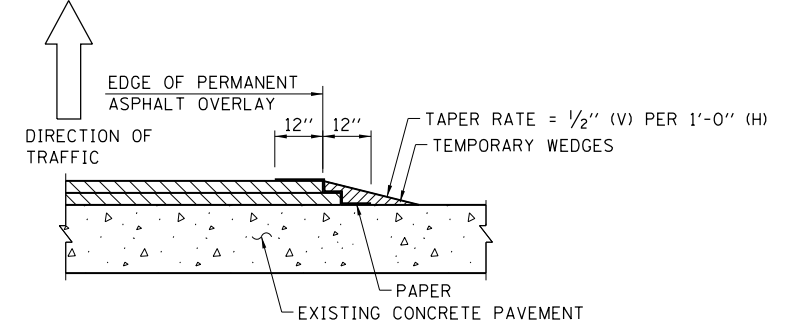
**DETAIL OF BUTT JOINT, TYPE 2  
AT EXISTING OVERLAY AREAS**

**NOTES FOR BUTT JOINT, TYPE 2**

1. THE ABOVE WORK WILL BE PERFORMED AT THE ENDS OF ALL ASPHALT RESURFACING WHERE BUTT JOINTS EXIST.
2. REFER TO THE CONTRACT DOCUMENTS FOR THE REQUIRED BINDER AND SURFACE COURSE MATERIALS. "tS" IS THE THICKNESS OF THE SURFACE COURSE SPECIFIED IN THE CONTRACT. "tB" IS THE THICKNESS OF THE BINDER COURSE SPECIFIED IN THE CONTACT.
3. SAWCUT MAY BE ELIMINATED IF MILLING EQUIPMENT IS USED AND VERTICAL AND STRAIGHT SIDES ARE OBTAINED.
4. REGARDLESS OF TYPE OF SURFACE MIX USED, NUMBER OR THICKNESS OF COURSES OR LAYERS, THE OVERLAY THICKNESS TRANSITION LENGTH SHALL BE BASED ON 1" IN 20' AND THE MINIMUM SURFACE LAYER THICKNESS SHALL BE 1 3/4".



**TEMPORARY ASPHALT WEDGE - TRANSVERSE**



**TEMPORARY ASPHALT WEDGE - LONGITUDINAL**

**NOTES FOR TEMPORARY ASPHALT WEDGE - LONGITUDINAL**

1. UPON REMOVAL OF THE WEDGES, THE SURFACE COURSE SHALL BE SAWCUT PARALLEL TO THE JOINT TO PROVIDE A TRUE VERTICAL SURFACE.
2. REFER TO THE CONTRACT DOCUMENTS FOR THE REQUIRED BINDER AND SURFACE COURSE MATERIALS.

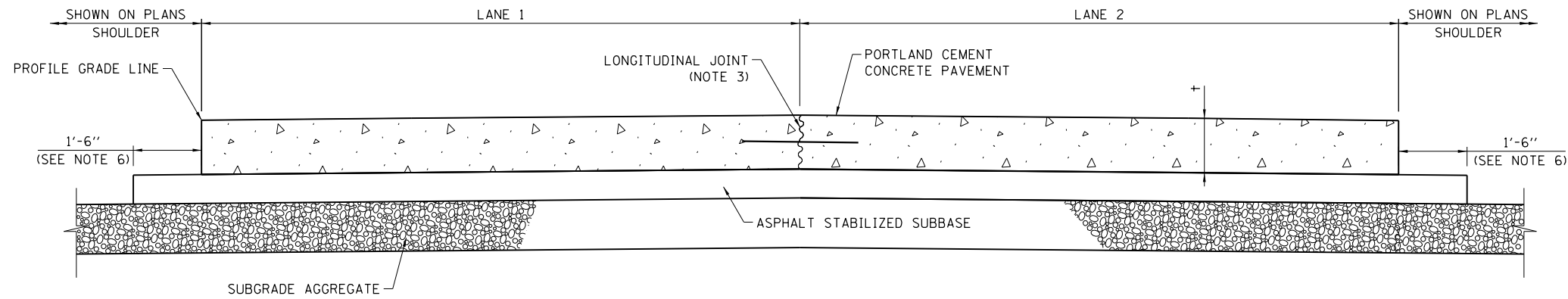
APPROVED: *Paul Kovacs* CHIEF ENGINEERING OFFICER DATE: 5-1-2009

| DATE      | REVISIONS   |
|-----------|---|
| 3-31-2016 | REVISED PRIME COAT TO TACK COAT AND REVISED NOTES.              |
| 3-31-2017 | REMOVED PAY ITEM DESIGNATION FROM NOTES REVISED MIN + THICKNESS |
|           | UPDATED BUTT JOINT TYPE 2                                       |
|           | ADDED TRAFFIC ARROWS  |
| 3-01-2018 | ADDED DIRECTION ARROWS  |



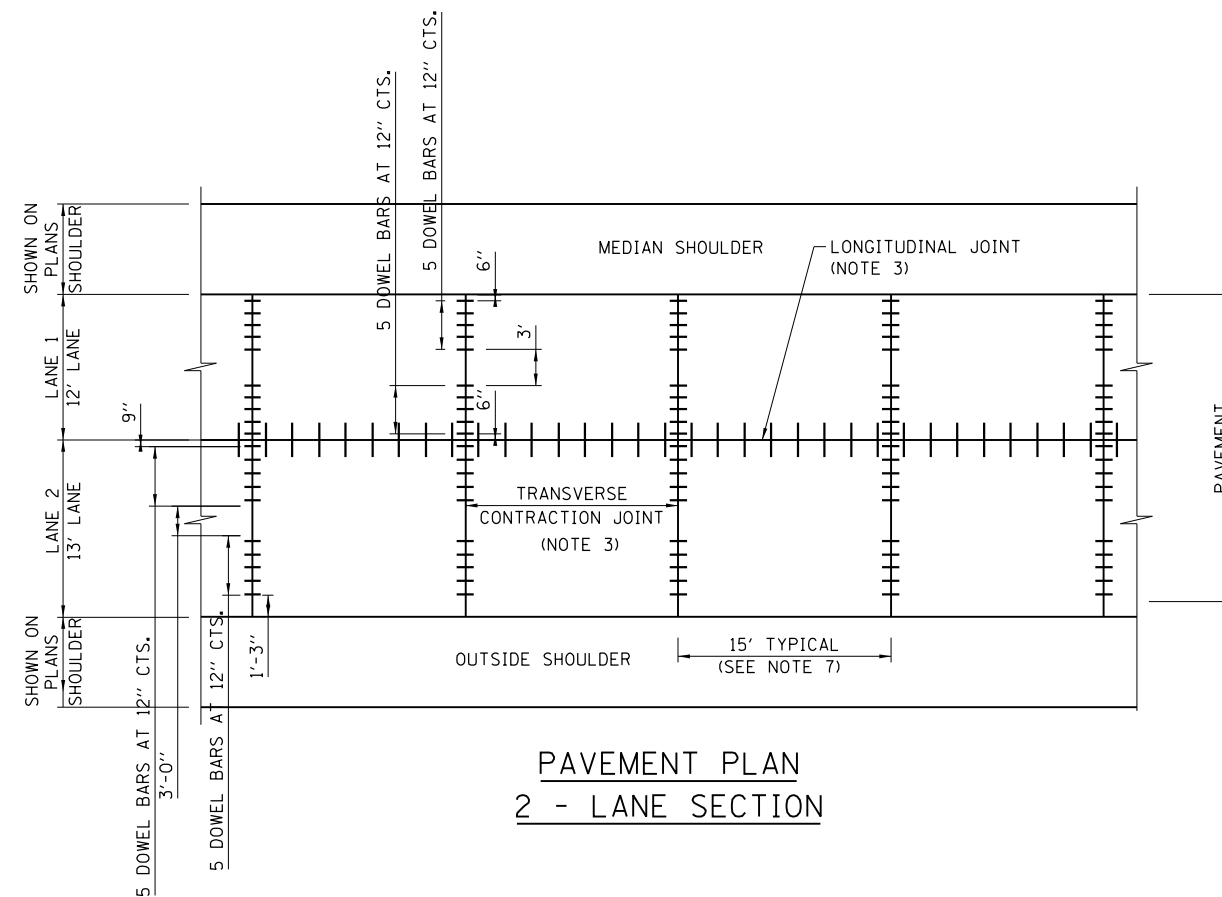
**BUTT JOINTS AND  
TEMPORARY ASPHALT WEDGE**

STANDARD A4-05



PAVEMENT CROSS - SECTION (2 LANES)

± = CONCRETE PAVEMENT THICKNESS



PAVEMENT PLAN  
2 - LANE SECTION

**GENERAL NOTES:**

1. DOWEL BASKET ASSEMBLIES, WHERE USED, SHALL BE SUPPORTED AND ANCHORED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS AND CONCRETE SPECIAL PROVISION.
2. MATERIALS ARE PROJECT SPECIFIC. REFER TO PROJECT PLANS AND CONTRACT DOCUMENTS FOR DETAILS.
3. SEE ILLINOIS TOLLWAY STANDARD DRAWING A7 (PAVEMENT JOINTS) AND IDOT HIGHWAY STANDARD 420001 (PAVEMENT JOINTS) FOR DETAILS OF JOINTS AND TIE 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 FOR DETAILS AND MATERIAL THICKNESS.
5. THE TIE BAR FOR THE LONGITUDINAL SAWED JOINT SHALL BE 15" FROM THE TRANSVERSE CONTRACTION JOINT.
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.
7. THE 15'-0" TYPICAL TRANSVERSE JOINT SPACING DIMENSION SHALL BE ADJUSTED TO 12'-0" MIN. TO 18'-0" MAX. WHEN PLACED ADJACENT TO EXISTING PCC PAVEMENT STRUCTURE SO THAT THE JOINTS ARE IN PROLONGATION. ADJUST THE TIE BAR SPACING TO MAINTAIN A CLEARANCE OF 6 (150) FROM DOWEL BARS.

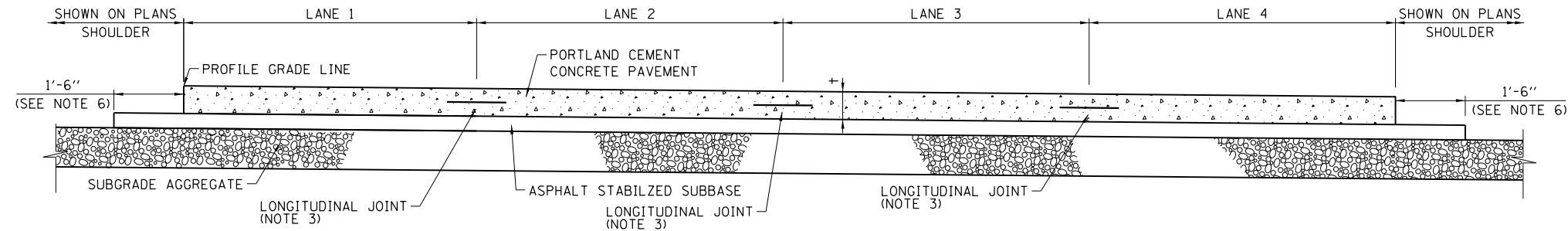


J.P.C. PAVEMENT

STANDARD A5-06

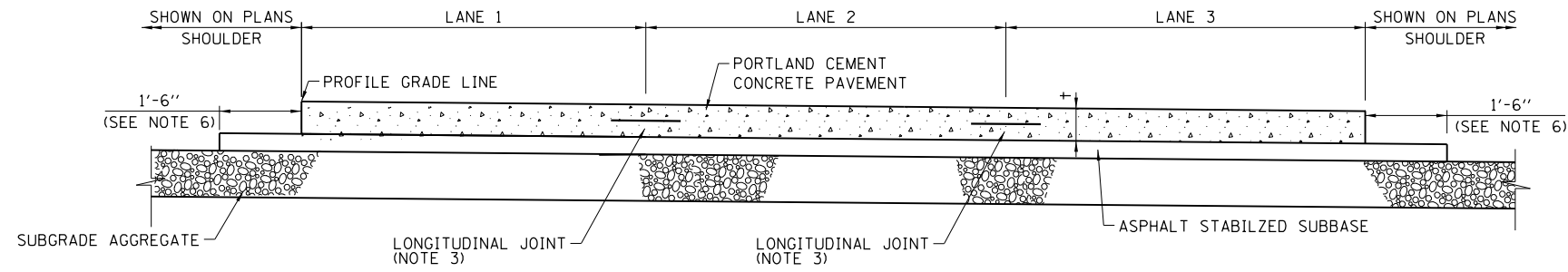
| DATE      | REVISIONS                |
|-----------|--------------------------|
| 3-11-2015 | REVISED NOTES            |
| 3-31-2016 | SHOW SUBBASE WIDENED     |
| 3-31-2017 | COMBINED WITH A6         |
|           | REVISED WIDTH            |
| 03-01-18  | CORRECTED DIMENSION      |
| 03-01-19  | UPDATED NOTES            |
| 03-01-20  | UPDATED CROWN AND DOWELS |

  
 APPROVED, CHIEF ENGINEERING OFFICER DATE 5-1-2009

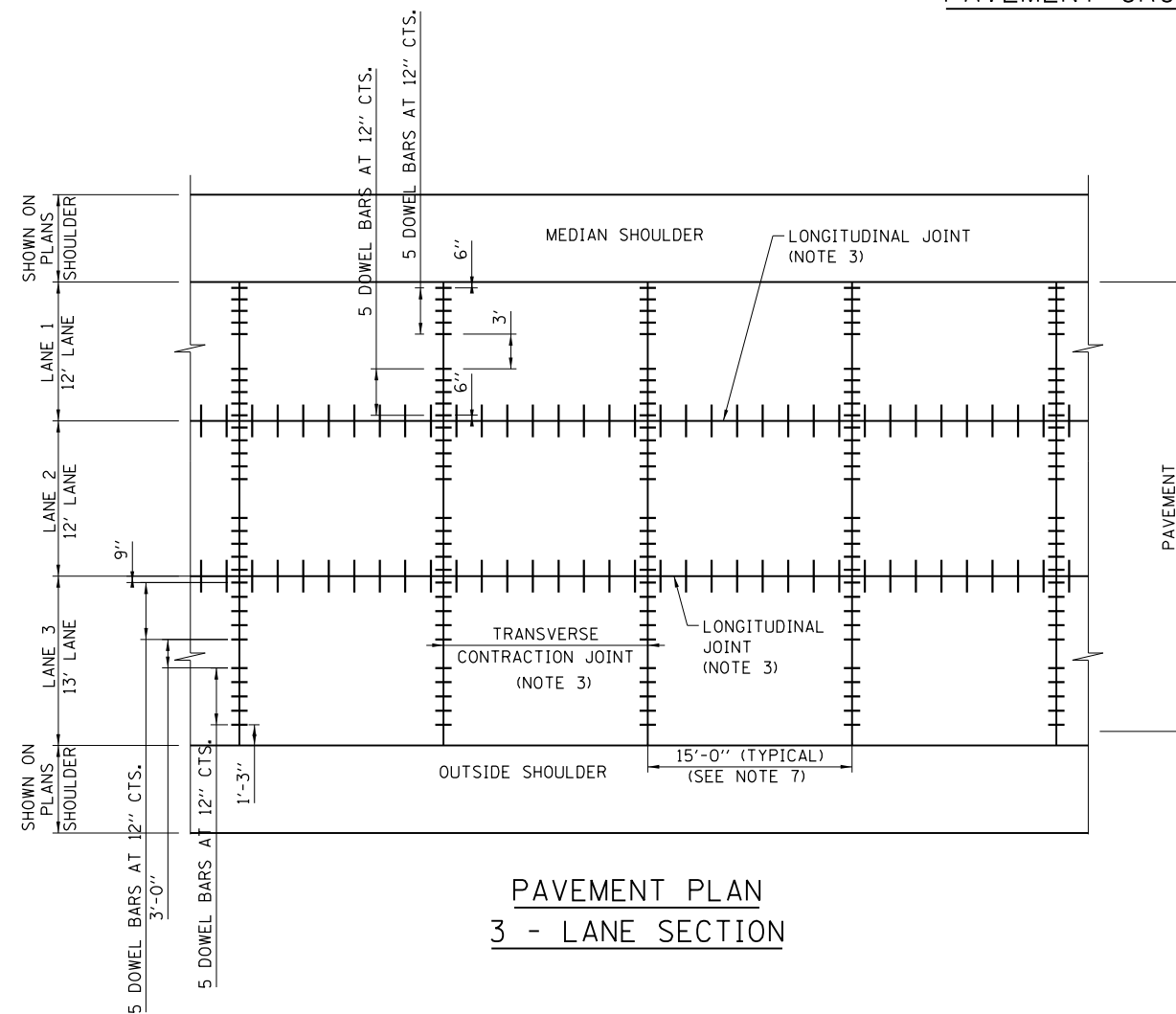


PAVEMENT CROSS - SECTION (4 LANES)

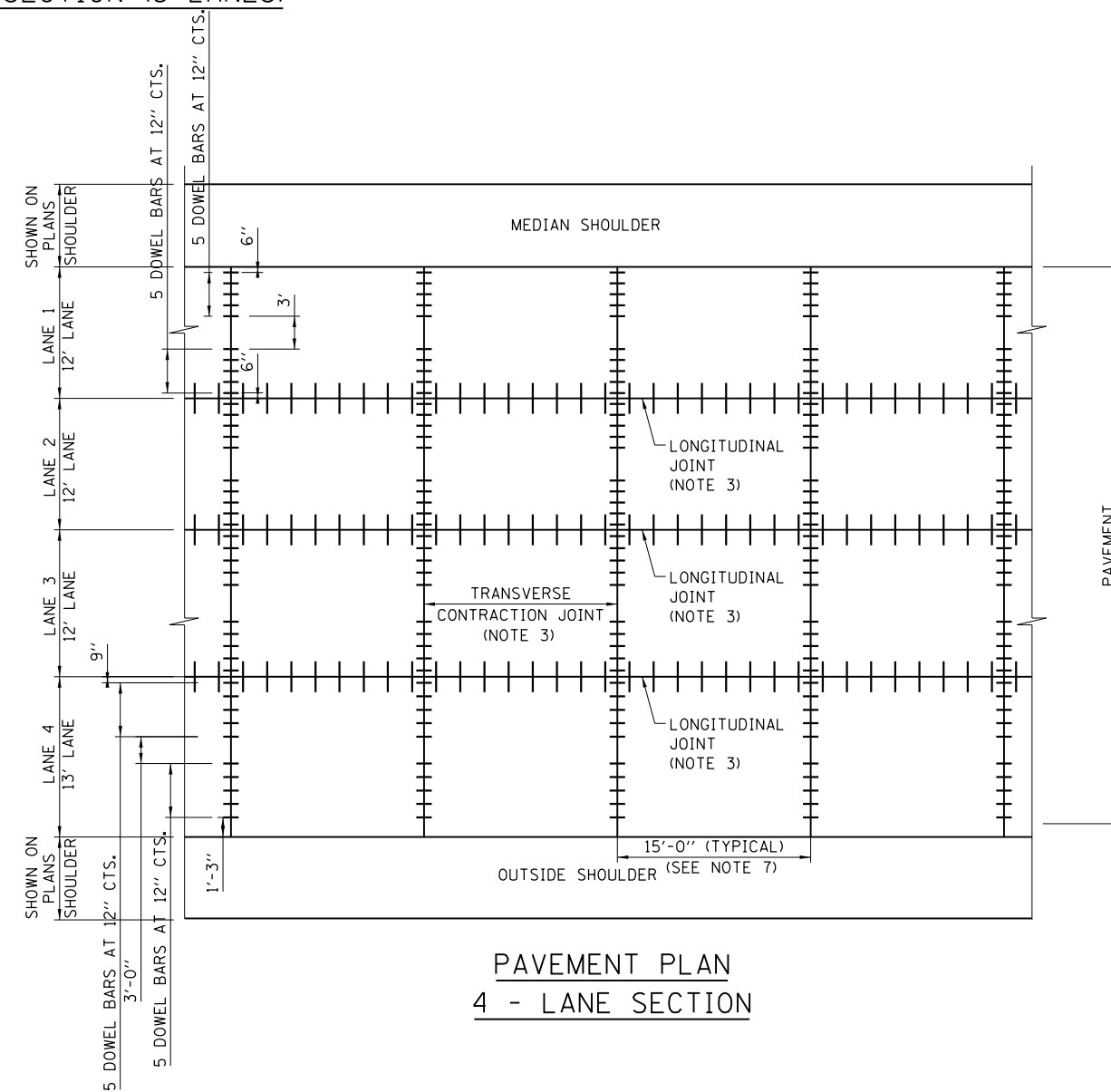
+ = CONCRETE PAVEMENT THICKNESS



PAVEMENT CROSS - SECTION (3 LANES)



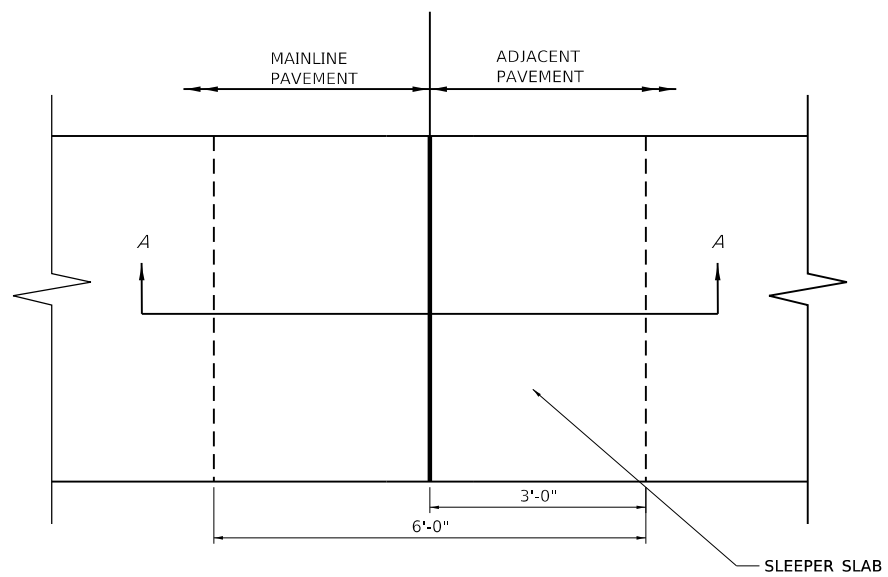
PAVEMENT PLAN  
3 - LANE SECTION



PAVEMENT PLAN  
4 - LANE SECTION

SEE SHEET 1 IN THIS SERIES FOR GENERAL NOTES.

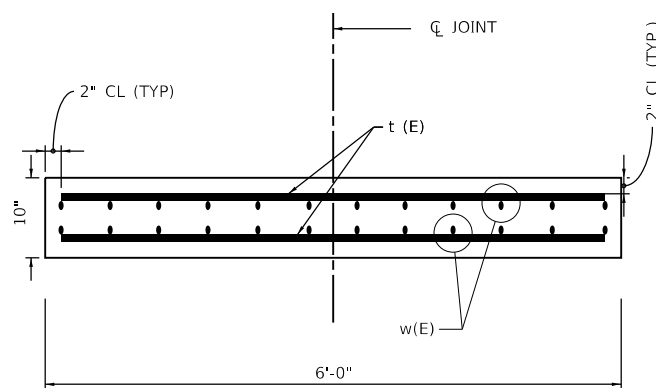




**PLAN**

**SLEEPER SLAB NOTES**

1. ADDITIONAL THICKNESS OF PAVEMENT SHALL BE INCLUDED IN THE COST OF THE PAY ITEM FOR THE PAVEMENT TYPE.
2. POLYETHYLENE SHEET AND AGGREGATE SUPPORTING THE SLEEPER SLAB SHALL BE INCLUDED IN THE COST OF SLEEPER SLAB.

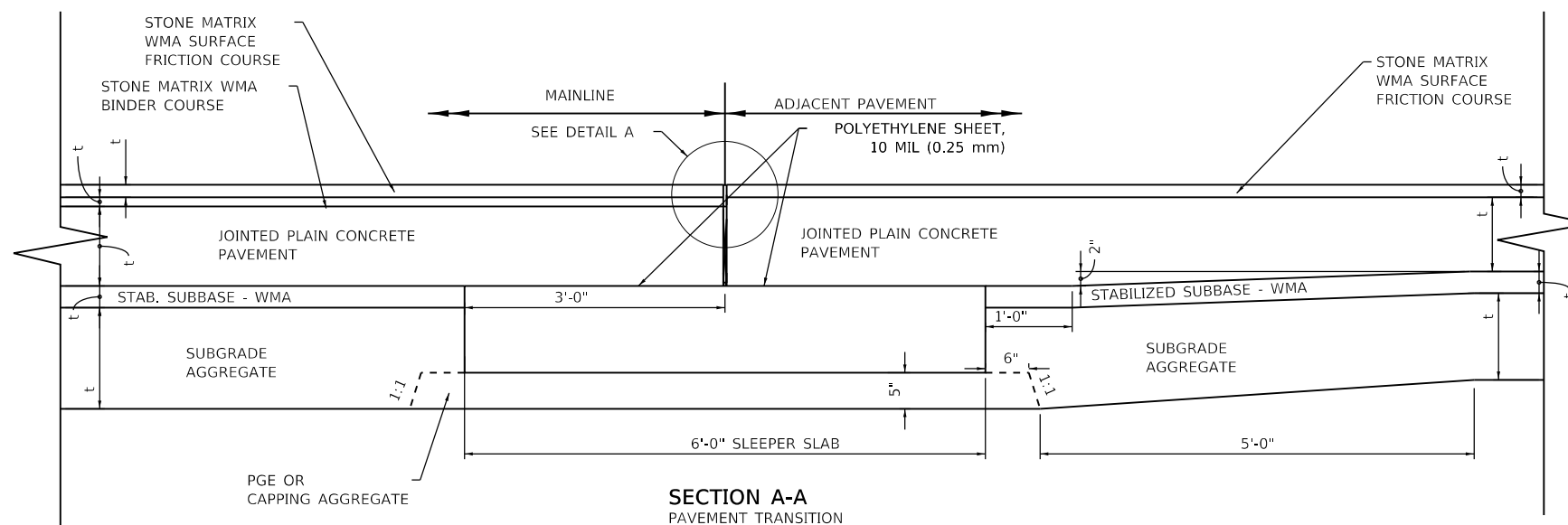


**SLEEPER SLAB SECTION**

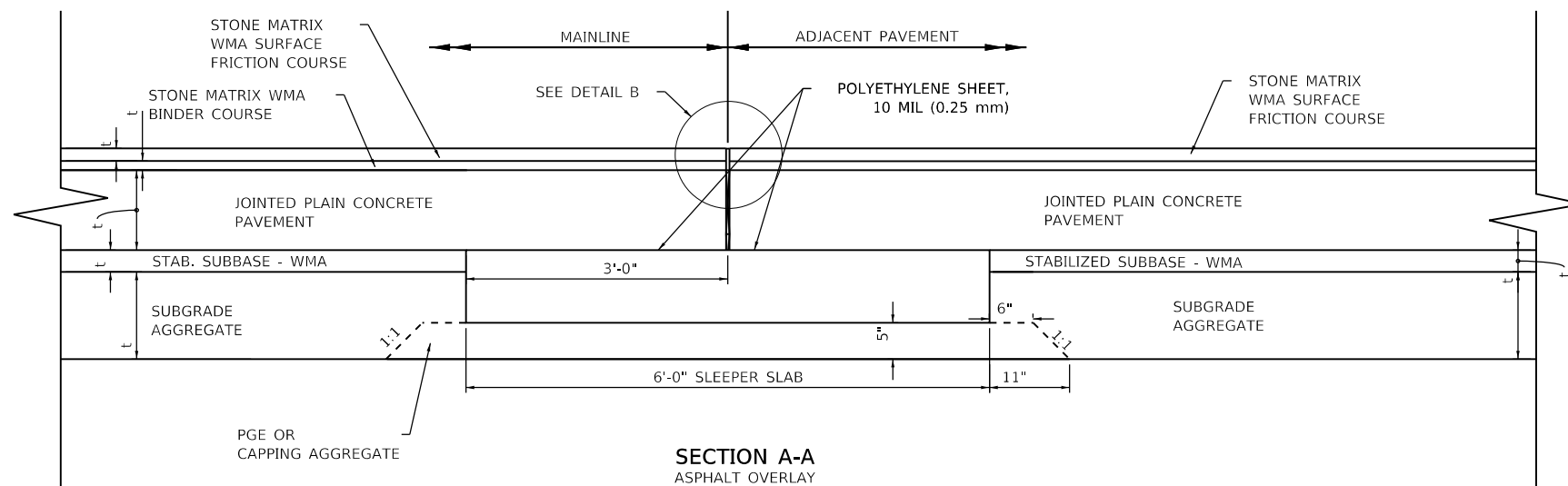
| Bar  | No. | Size | Length |
|------|-----|------|--------|
| t(E) | XX  | #4   | 5'-8"  |
| w(E) | XX  | #5   | XX     |

**SLEEPER SLAB SECTION NOTES**

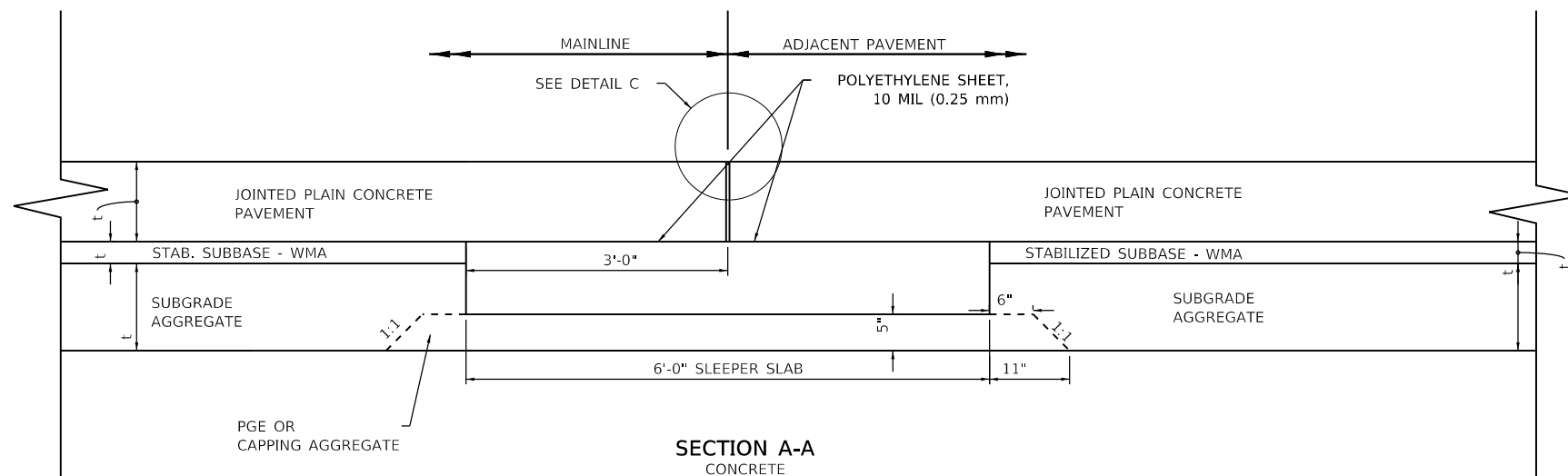
1. t(E) BARS SHALL BE PLACED AT 12" CTS.
2. w(E) NUMBER AND LENGTH DEPEND ON WIDTH OF ROADWAY.
3. USE 2'-8" MIN LAP FOR #4 BARS. USE 4-0" MIN. LAP FOR #5 BARS.



**SECTION A-A  
PAVEMENT TRANSITION**



**SECTION A-A  
ASPHALT OVERLAY**



**SECTION A-A  
CONCRETE**

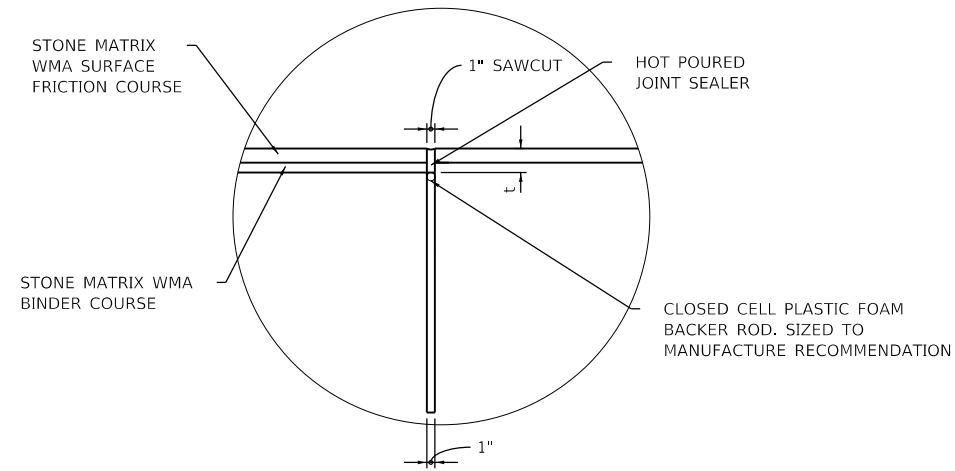


| REVISIONS |  |
|-----------|--|
| DATE      | DESCRIPTION                              |
| 3-01-2020 | REVISED TRANSVERSE EXPANSION JOINT       |
| 5-01-2017 | MODIFIED JOINT DETAIL, REVISED NOTES     |
| 3-31-2017 | ADDED TRANSVERSE EXPANSION JOINT         |
| 3-31-2016 | REVISED 13" PAVEMENT NOTE FOR DOWEL BARS |

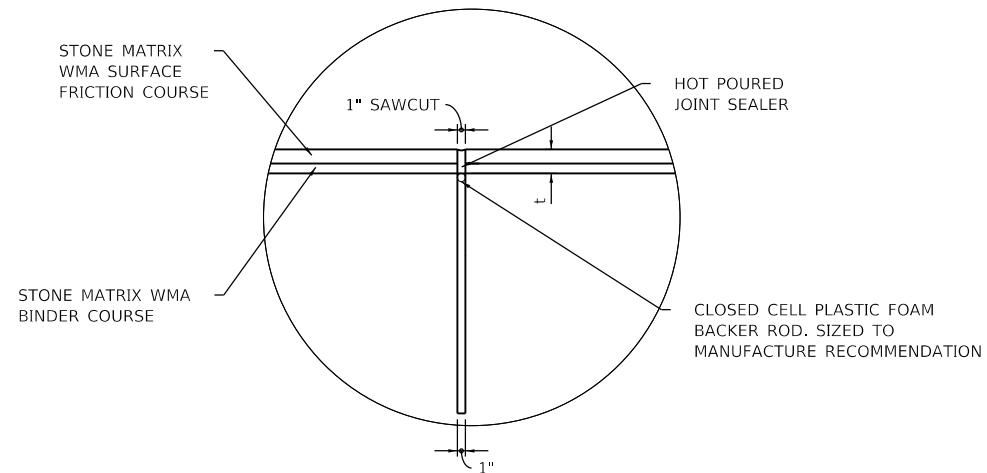
**PAVEMENT JOINTS**

STANDARD A7-04

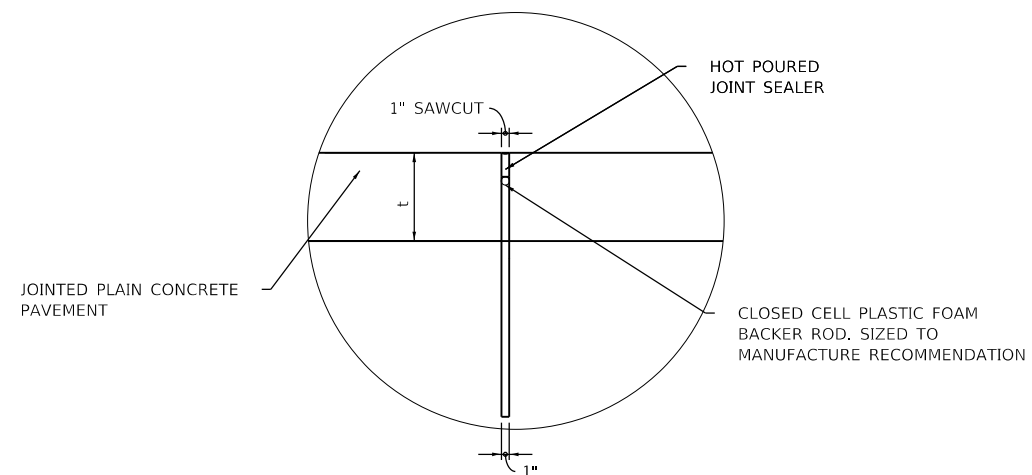




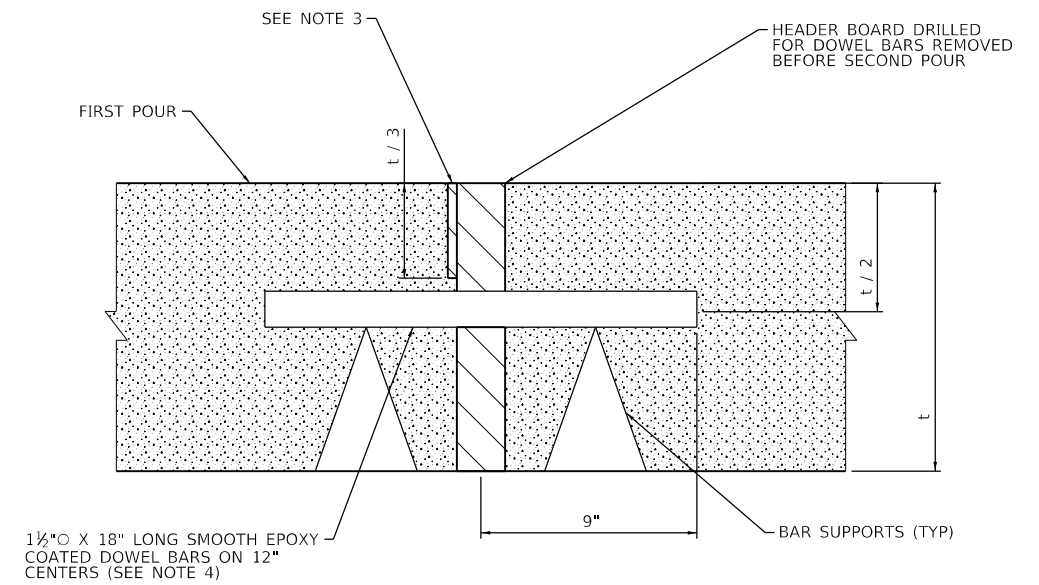
DETAIL A



DETAIL B



DETAIL C

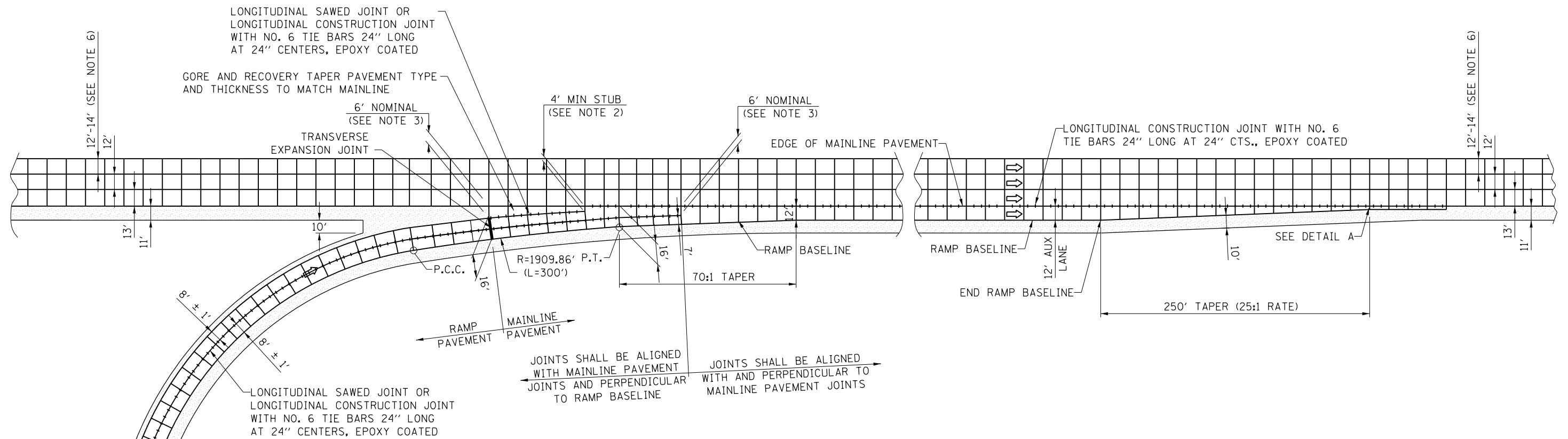


TRANSVERSE CONSTRUCTION JOINT  
(JOINED PLAIN CONCRETE PAVEMENT)

**GENERAL NOTES:**

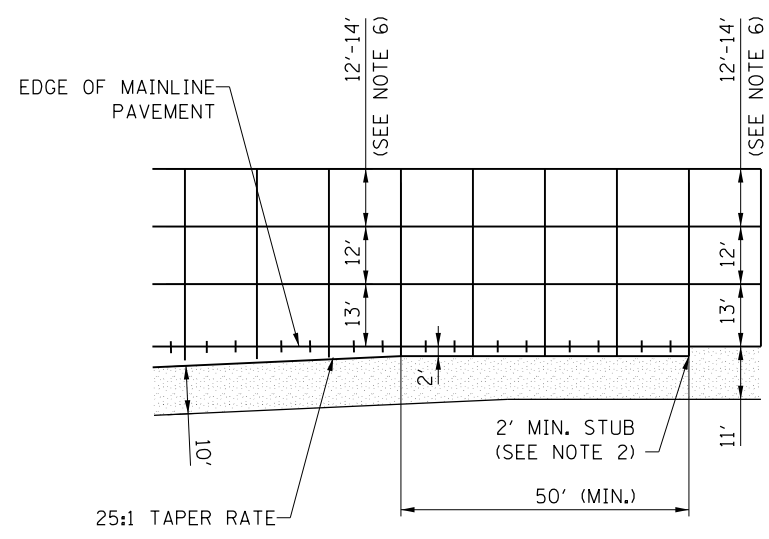
1. ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SHOWN.
2.  $t$  = PAVEMENT THICKNESS.
3. A  $3/8$ " SAW CUT SHALL BE PROVIDED FOR PAVEMENT CRACK CONTROL.





JOINTS SHALL BE ALIGNED WITH MAINLINE PAVEMENT JOINTS AND PERPENDICULAR TO RAMP BASELINE

JOINTS SHALL BE ALIGNED WITH AND PERPENDICULAR TO MAINLINE PAVEMENT JOINTS



DETAIL A

**NOTES:**

1. ALL TRANSVERSE CONSTRUCTION AND EXPANSION PAVEMENT JOINTS SHALL BE DETAILED AS SHOWN ON ILLINOIS TOLLWAY STANDARD DRAWING A7. ALL OTHER PAVEMENT JOINTS SHALL BE DETAILED AS SHOWN ON IDOT HIGHWAY STANDARD 420001.
2. STUBS SHALL BE THE MINIMUM DIMENSION AS SHOWN AND ALIGNED WITH A MAINLINE TRANSVERSE JOINT.
3. 6' NOSE LOCATION SHALL BE ADJUSTED TO BE ALIGNED WITH A MAINLINE TRANSVERSE JOINT.
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 SPACING IS 15' LONG BY 12' WIDE. LONGITUDINAL JOINT LOCATIONS IN THE WHEEL PATH SHALL BE MINIMIZED.
6. DIMENSION OF LANE 1 SHALL BE AS SHOWN ON THE PLANS.



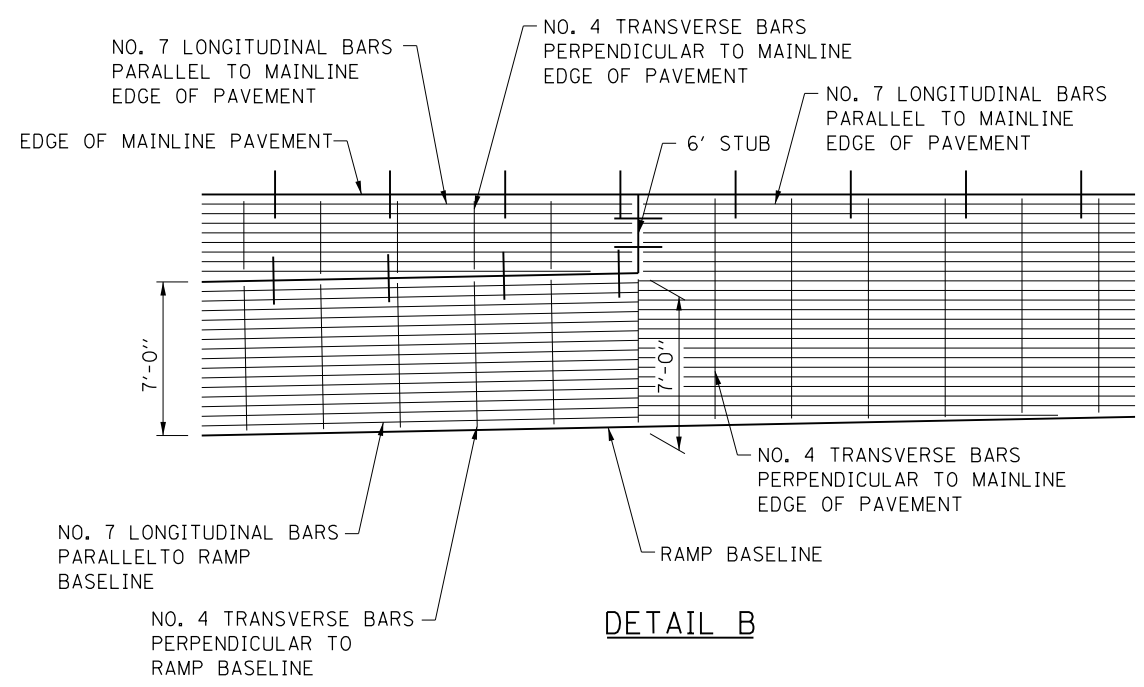
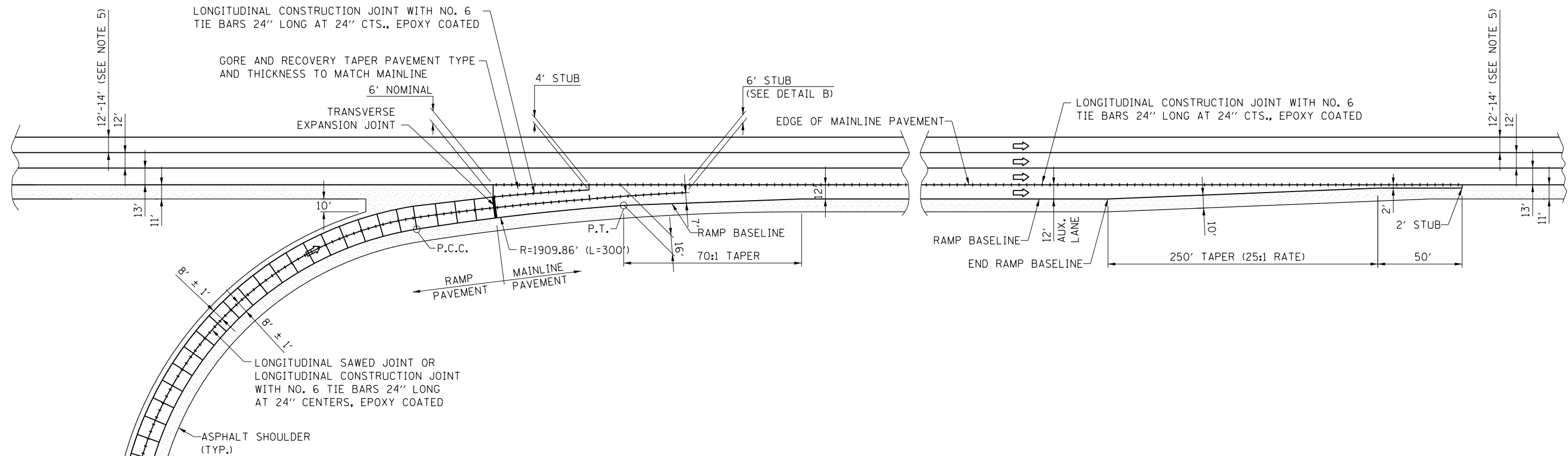
| DATE     | REVISIONS          |
|----------|--------------------|
| 3-1-2020 | UPDATED DIMENSIONS |
|          |                    |
|          |                    |
|          |                    |

JOINTING PLAN  
ENTRANCE RAMP TERMINAL  
WITH AUXILIARY LANE

STANDARD A12-01

APPROVED: *Paul Kovacs*  
CHIEF ENGINEERING OFFICER DATE: 3-1-2019

JOINTED PCC RAMP ADJACENT TO JOINTED PCC MAINLINE PAVEMENT




**DETAIL B**

**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 ILLINOIS TOLLWAY SPECIAL PROVISION, BONDED PREFORMED JOINT SEAL.
2. SEE PROJECT PLANS AND CONTRACT DOCUMENTS FOR DETAILS OF PAVEMENT REINFORCEMENT.
3. TYPICAL PCC PAVEMENT JOINT SPACING SHALL BE 15'.
4. AS ADDITIONAL RAMP LANES ARE ADDED, THE MAXIMUM JOINT SPACING SHALL BE 15' LONG BY 15' WIDE. TYPICAL SPACING IS 15' LONG BY 12' WIDE. LONGITUDINAL JOINT LOCATIONS IN THE WHEEL PATH SHALL BE MINIMIZED.
5. DIMENSION OF LANE 1 SHALL BE AS SHOWN ON THE PLANS.

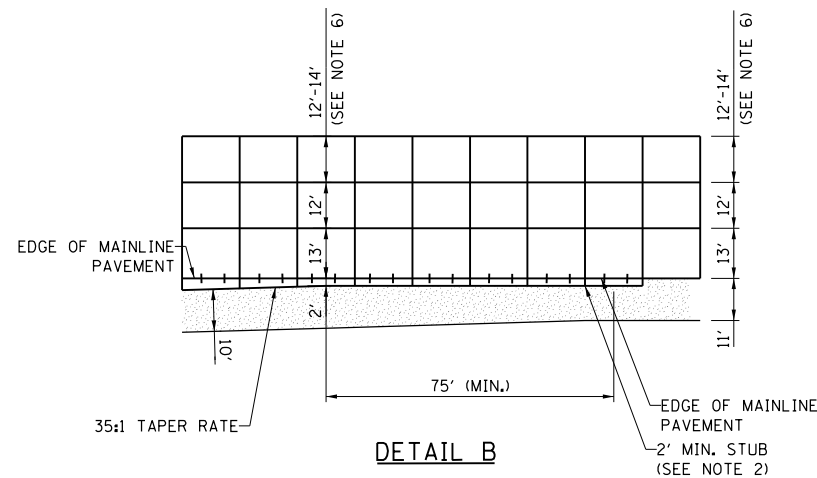
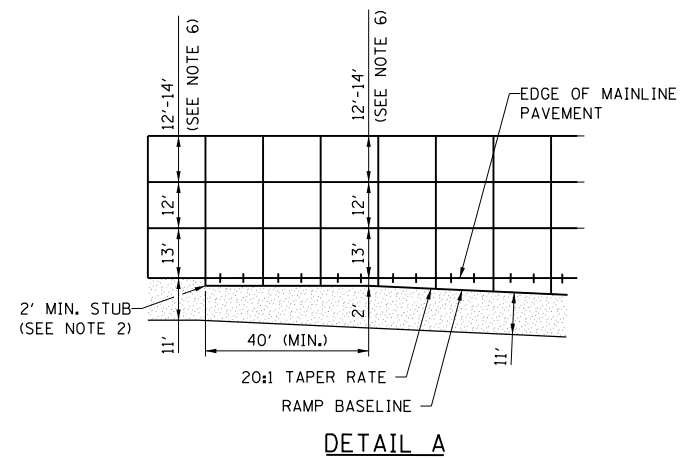
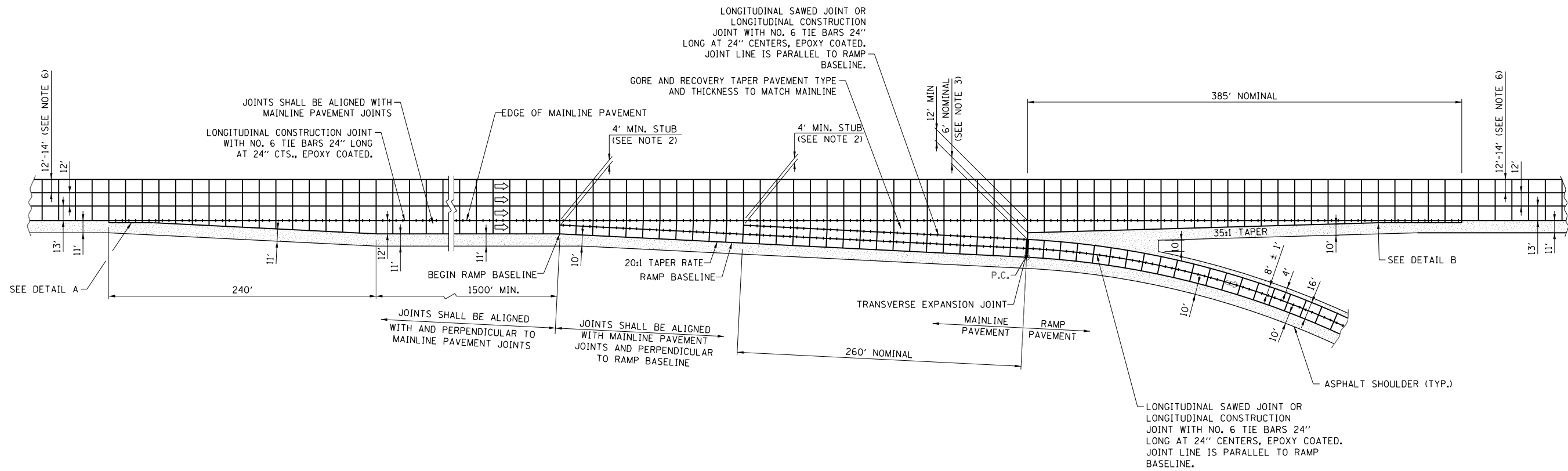
  
 APPROVED, CHIEF ENGINEERING OFFICER      DATE 3-1-2019

**JOINTED PCC RAMP ADJACENT TO C.R.C. MAINLINE PAVEMENT**



JOINTING PLAN  
 ENTRANCE RAMP TERMINAL  
 WITH AUXILIARY LANE

STANDARD A12-01



- NOTES:**
1. ALL TRANSVERSE CONSTRUCTION AND EXPANSION PAVEMENT JOINTS SHALL BE DETAILED AS SHOWN ON ILLINOIS TOLLWAY STANDARD DRAWING A7. ALL OTHER PAVEMENT JOINTS SHALL BE DETAILED AS SHOWN ON IDOT HIGHWAY STANDARD 420001.
  2. STUBS SHALL BE THE MINIMUM DIMENSION AS SHOWN AND ALIGNED WITH A MAINLINE TRANSVERSE JOINT.
  3. 6' NOSE LOCATION SHALL BE ADJUSTED TO BE ALIGNED WITH A MAINLINE TRANSVERSE JOINT.
  4. TYPICAL P.C.C. 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 SPACING IS 15' LONG BY 12' WIDE. LONGITUDINAL JOINT LOCATIONS IN THE WHEEL PATH SHALL BE MINIMIZED.
  6. DIMENSIONS OF LANE 1 SHALL BE AS SHOWN ON THE PLANS.



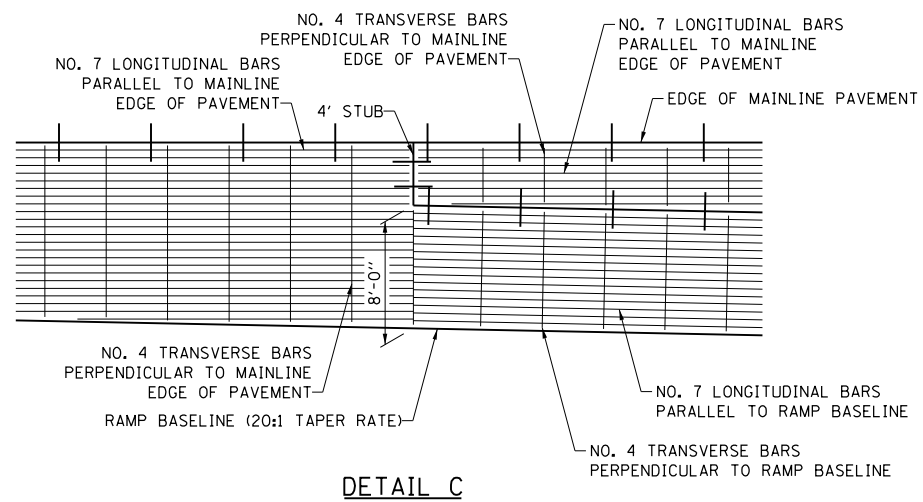
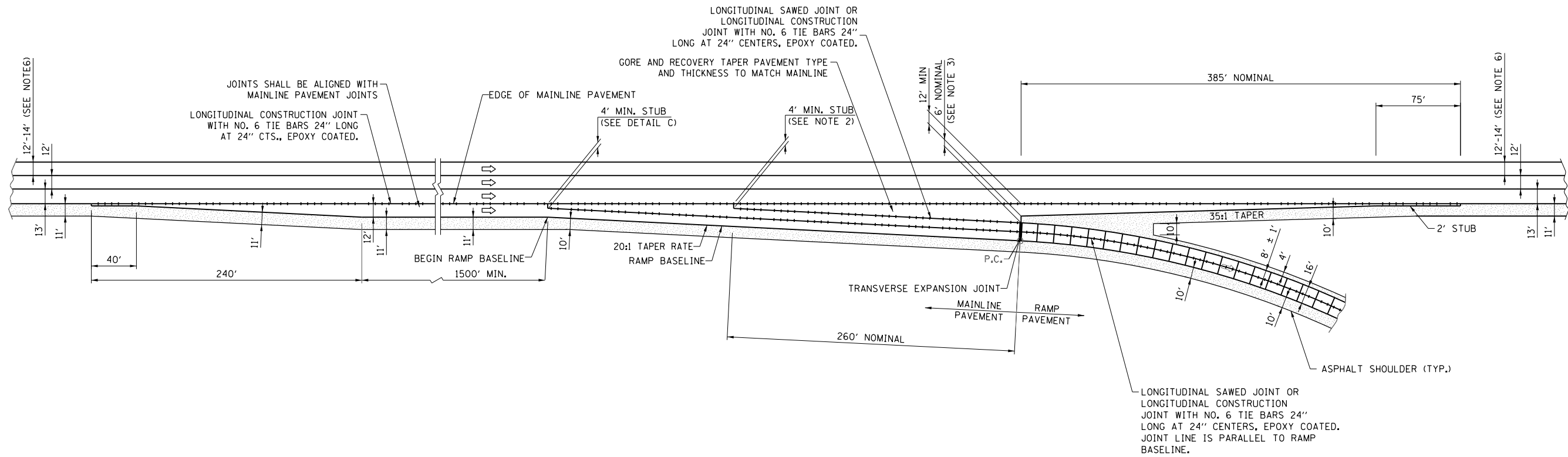
JOINTED PCC RAMP ADJACENT TO JOINTED PCC MAINLINE PAVEMENT

APPROVED *Paul Kovacs* CHIEF ENGINEERING OFFICER DATE 3-31-2017

| DATE      | REVISIONS               |
|-----------|-------------------------|
| 3-01-2018 | MOVED RAMP PAVEMENT     |
| 3-01-2019 | MODIFIED DETAILS        |
|           | ADDED PCC ADJ TO CRC    |
| 3-01-2020 | UPDATED 12' MIN AT GORE |

JOINTING PLAN  
EXIT RAMP TERMINAL  
WITH AUXILIARY LANE

STANDARD A13-03



**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 ILLINOIS TOLLWAY SPECIAL PROVISION, BONDED PREFORMED JOINT SEAL.
2. SEE PROJECT PLANS AND CONTRACT DOCUMENTS FOR DETAILS OF PAVEMENT REINFORCEMENT.
3. TYPICAL PCC PAVEMENT JOINT SPACING SHALL BE 15'.
4. AS ADDITIONAL RAMP LANES ARE ADDED, THE MAXIMUM JOINT SPACING SHALL BE 15' LONG BY 15' WIDE. TYPICAL JOINT SPACING IS 15' LONG BY 12' WIDE. LONGITUDINAL JOINT LOCATIONS IN THE WHEEL PATH SHALL BE MINIMIZED.
5. DIMENSIONS OF LANE 1 SHALL BE AS SHOWN ON THE PLANS.

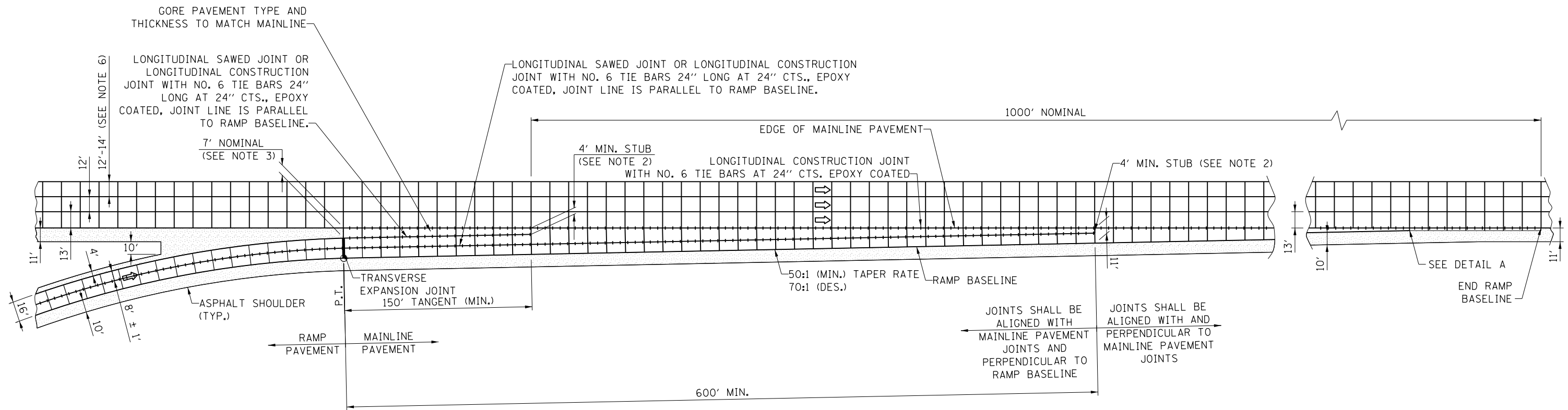
**JOINTED PCC RAMP ADJACENT TO C.R.C MAINLINE PAVEMENT**



JOINTING PLAN  
EXIT RAMP TERMINAL  
WITH AUXILIARY LANE

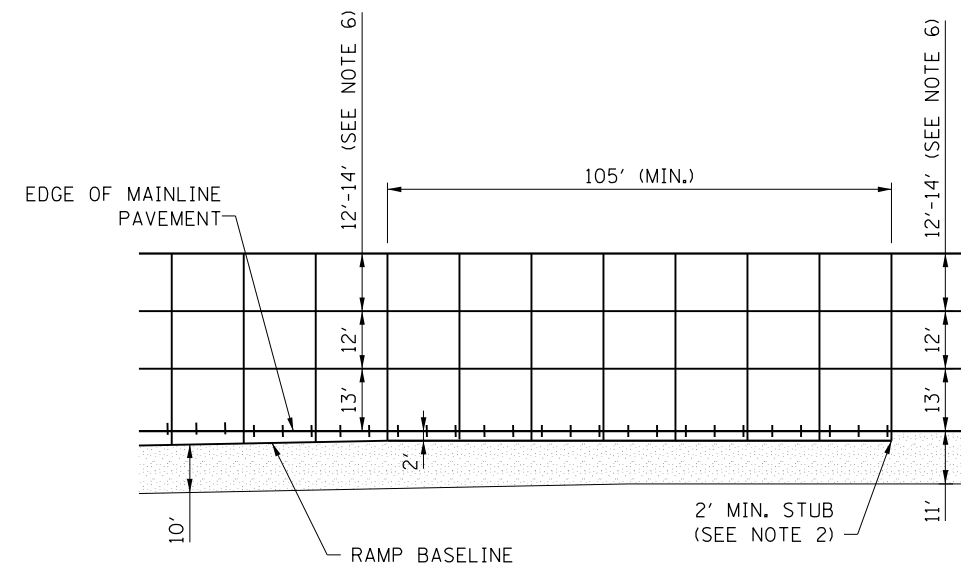
STANDARD A13-03

APPROVED *Paul Kovacs*  
CHIEF ENGINEERING OFFICER DATE 3-1-2019



**NOTES:**

1. ALL TRANSVERSE CONSTRUCTION AND EXPANSION PAVEMENT JOINTS SHALL BE DETAILED AS SHOWN ON ILLINOIS TOLLWAY STANDARD DRAWING A7. ALL OTHER PAVEMENT JOINTS SHALL BE DETAILED AS SHOWN ON IDOT HIGHWAY STANDARD 420001.
2. STUBS SHALL BE THE MINIMUM DIMENSION AS SHOWN AND ALIGNED WITH A MAINLINE TRANSVERSE JOINT.
3. 7' NOSE LOCATION SHALL BE ADJUSTED TO BE ALIGNED WITH A MAINLINE TRANSVERSE JOINT.
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 SPACING IS 15' LONG BY 12' WIDE. LONGITUDINAL JOINT LOCATION IN THE WHEEL PATH SHALL BE MINIMIZED.
6. DIMENSION OF LANE 1 SHALL BE AS SHOWN ON THE PLANS.



**DETAIL A**

**JOINTED PCC RAMP ADJACENT TO JOINTED PCC MAINLINE PAVEMENT**

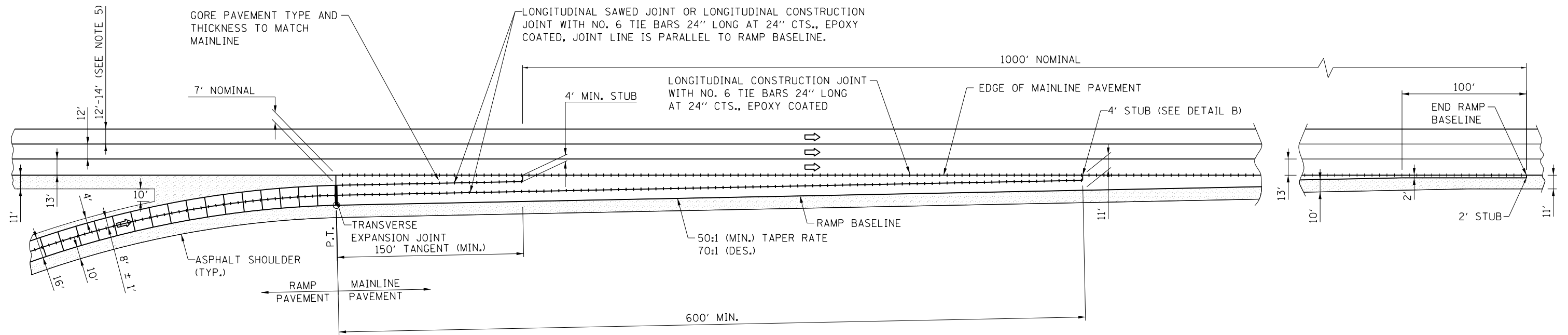
*Paul Kovacs*  
 APPROVED, CHIEF ENGINEERING OFFICER  
 DATE: 1-31-2015

| DATE      | REVISIONS               |
|-----------|-------------------------|
| 3-01-2018 | MOVED RAMP PAVEMENT     |
| 3-1-2019  | UPDATED TAPER DESIRED   |
| 3-1-2020  | REVISED WITH EPOXY BARS |
|           |                         |
|           |                         |

**Illinois Tollway**

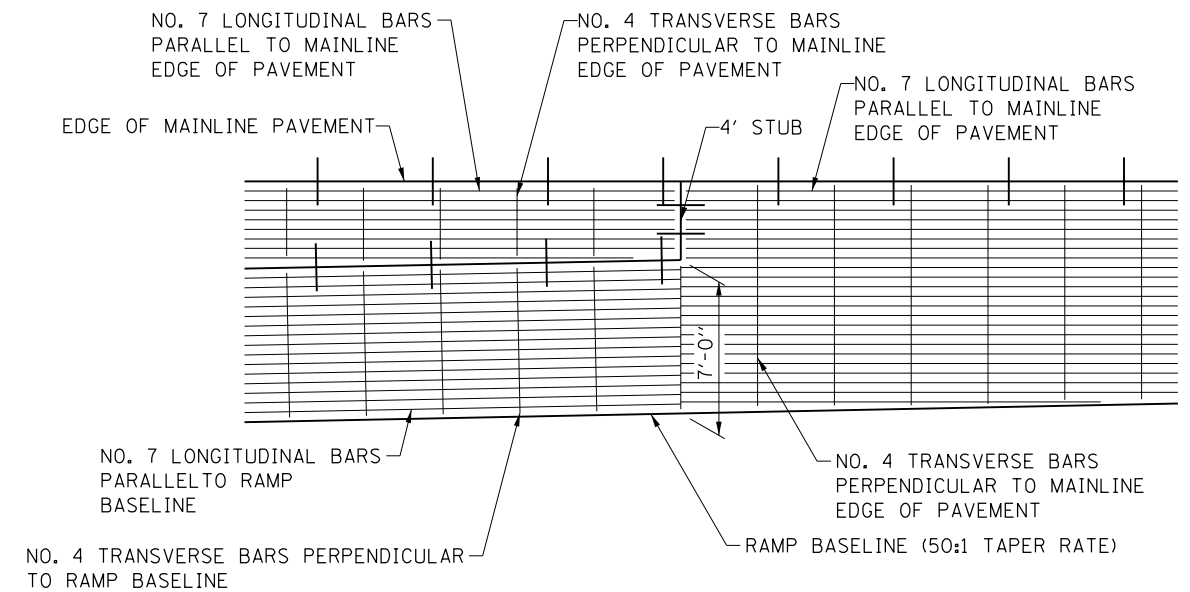
JOINTING PLAN  
ENTRANCE RAMP TERMINAL

STANDARD A14-06



**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 ILLINOIS TOLLWAY SPECIAL PROVISION, BONDED PREFORMED JOINT SEAL.
2. SEE PROJECT PLANS AND CONTRACT DOCUMENTS FOR DETAILS OF PAVEMENT REINFORCEMENT.
3. TYPICAL PCC PAVEMENT JOINT SPACING SHALL BE 15'.
4. AS ADDITIONAL RAMP LANES ARE ADDED, THE MAXIMUM JOINT SPACING SHALL BE 15' LONG BY 15' WIDE. TYPICAL JOINT SPACING IS 15' LONG BY 12' WIDE. LONGITUDINAL JOINT LOCATIONS IN THE WHEEL PATH SHALL BE MINIMIZED.
5. DIMENSIONS OF LANE 1 SHALL BE AS SHOWN ON THE PLANS.



**DETAIL B**

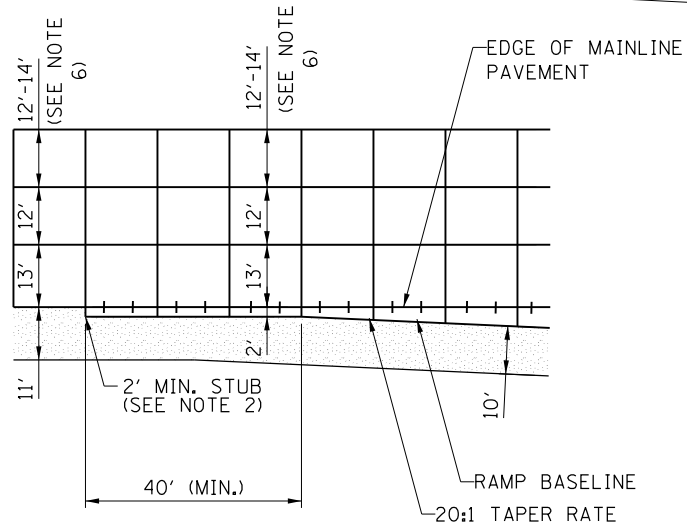
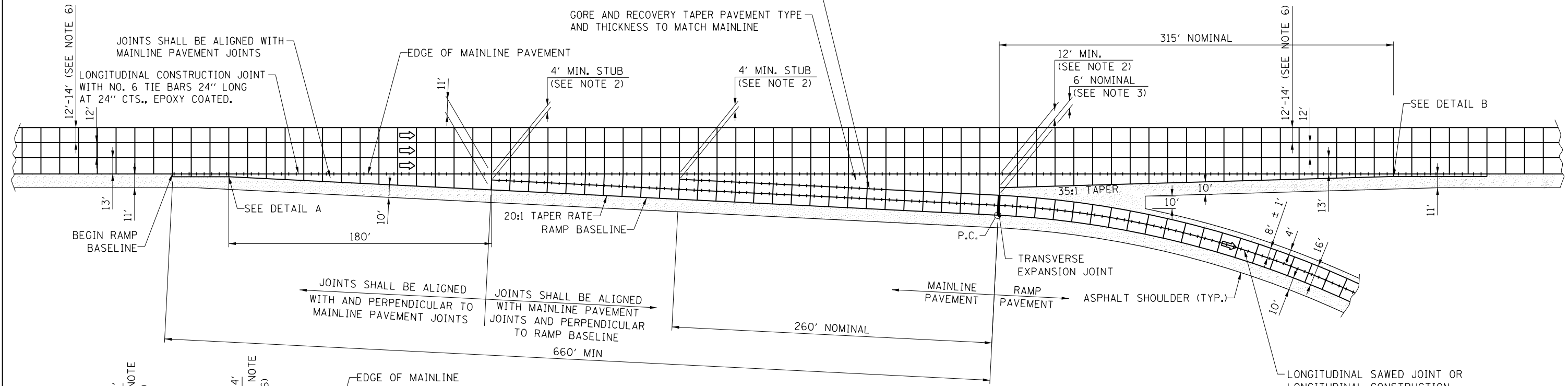
**JOINTED PCC RAMP ADJACENT TO JOINTED C.R.C. MAINLINE PAVEMENT**



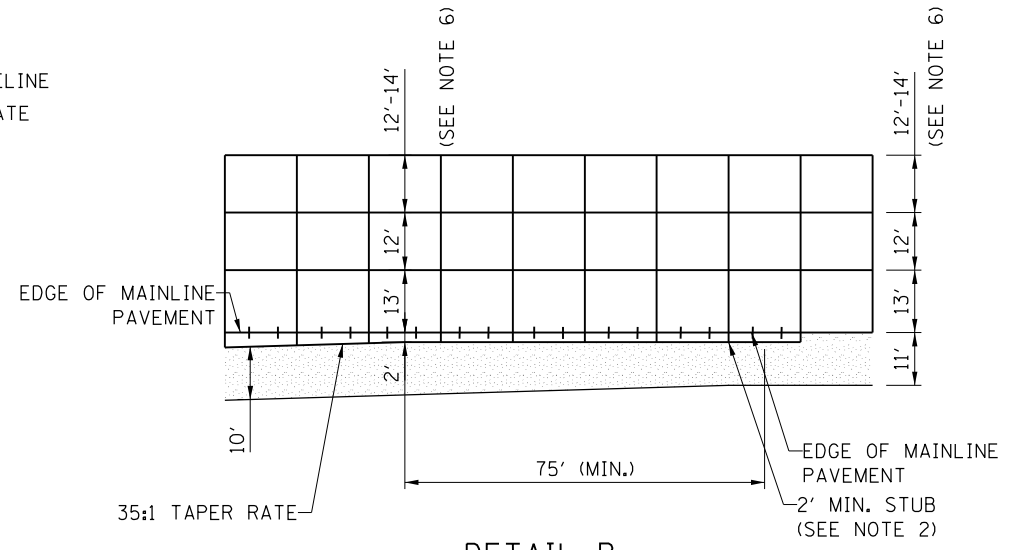
  
 APPROVED, CHIEF ENGINEERING OFFICER      DATE: 1-31-2015

LONGITUDINAL SAWED JOINT OR LONGITUDINAL CONSTRUCTION JOINT WITH NO. 6 TIE BARS 24" LONG AT 24" CENTERS, EPOXY COATED. JOINT LINE IS PARALLEL TO RAMP BASELINE.

GORE AND RECOVERY TAPER PAVEMENT TYPE AND THICKNESS TO MATCH MAINLINE



DETAIL A



DETAIL B

**NOTES:**

1. ALL TRANSVERSE CONSTRUCTION AND EXPANSION PAVEMENT JOINTS SHALL BE DETAILED AS SHOWN ON ILLINOIS TOLLWAY STANDARD DRAWING A7. ALL OTHER PAVEMENT JOINTS SHALL BE DETAILED AS SHOWN ON IDOT HIGHWAY STANDARD 420001.
2. STUBS SHALL BE THE MINIMUM DIMENSION AS SHOWN AND ALIGNED WITH A MAINLINE TRANSVERSE JOINT.
3. 6' NOSE LOCATION SHALL BE ADJUSTED TO BE ALIGNED WITH A MAINLINE TRANSVERSE JOINT.
4. TYPICAL P.C.C. 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 SPACING IS 15' LONG BY 12' WIDE. LONGITUDINAL JOINT LOCATIONS IN THE WHEEL PATH SHALL BE MINIMIZED.
6. DIMENSIONS OF LANE 1 SHALL BE AS SHOWN ON THE PLANS.



| DATE      | REVISIONS               |
|-----------|-------------------------|
| 3-01-2018 | MOVED RAMP PAVEMENT     |
| 3-01-2019 | UPDATE DETAIL B         |
|           | UPDATE 11' MIN STUB     |
| 3-01-2020 | UPDATE 12' MIN. AT GORE |

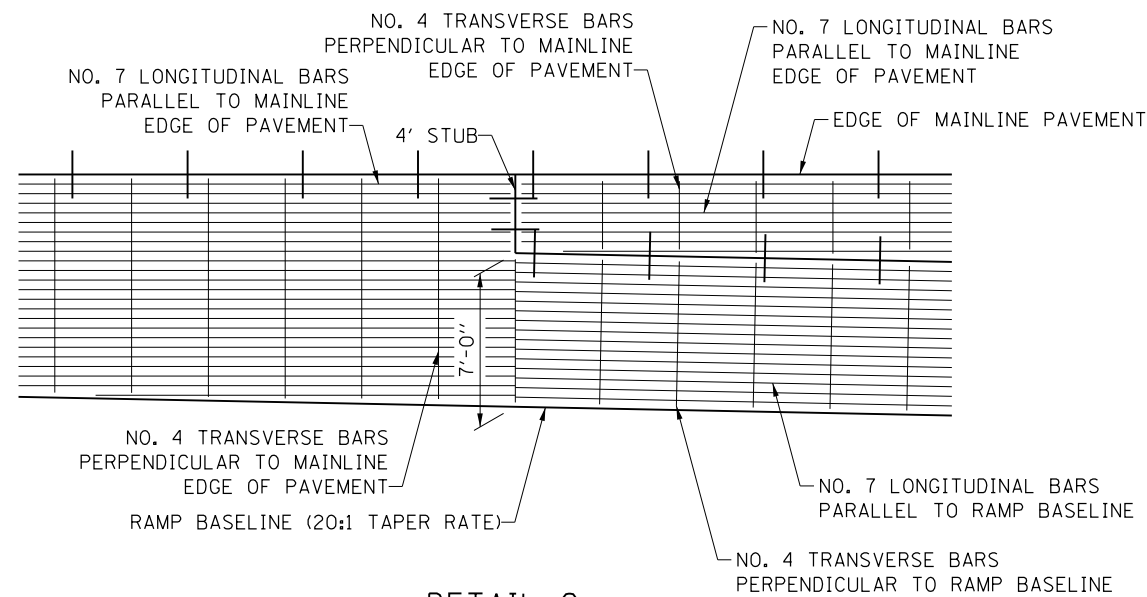
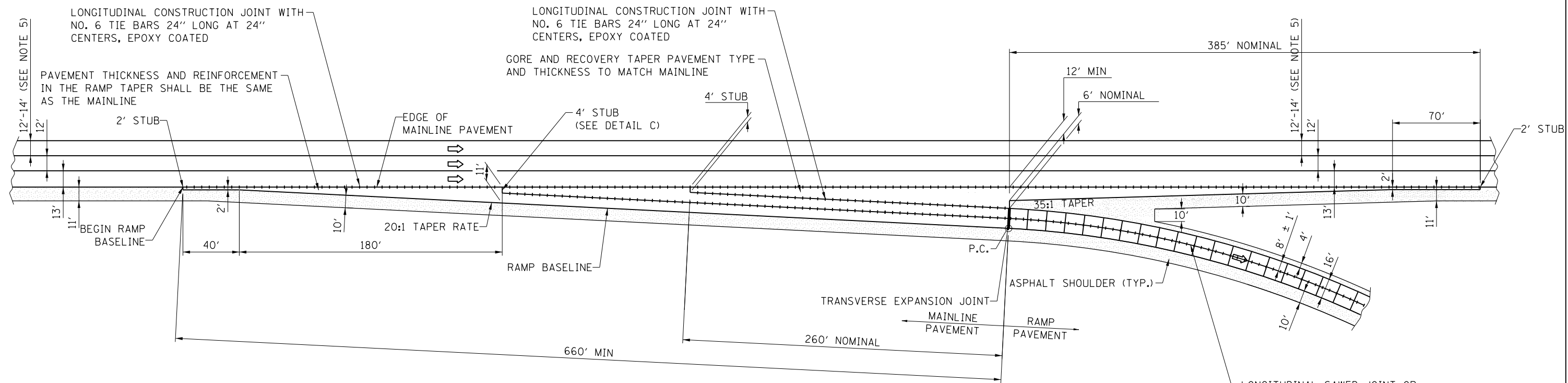
JOINTING PLAN  
EXIT RAMP TERMINAL

STANDARD A15-06

APPROVED: *Paul Kovacs*  
CHIEF ENGINEERING OFFICER  
DATE: 1-31-2015

JOINTED PCC RAMP ADJACENT TO JOINTED PCC MAINLINE PAVEMENT





DETAIL C

**NOTES:**

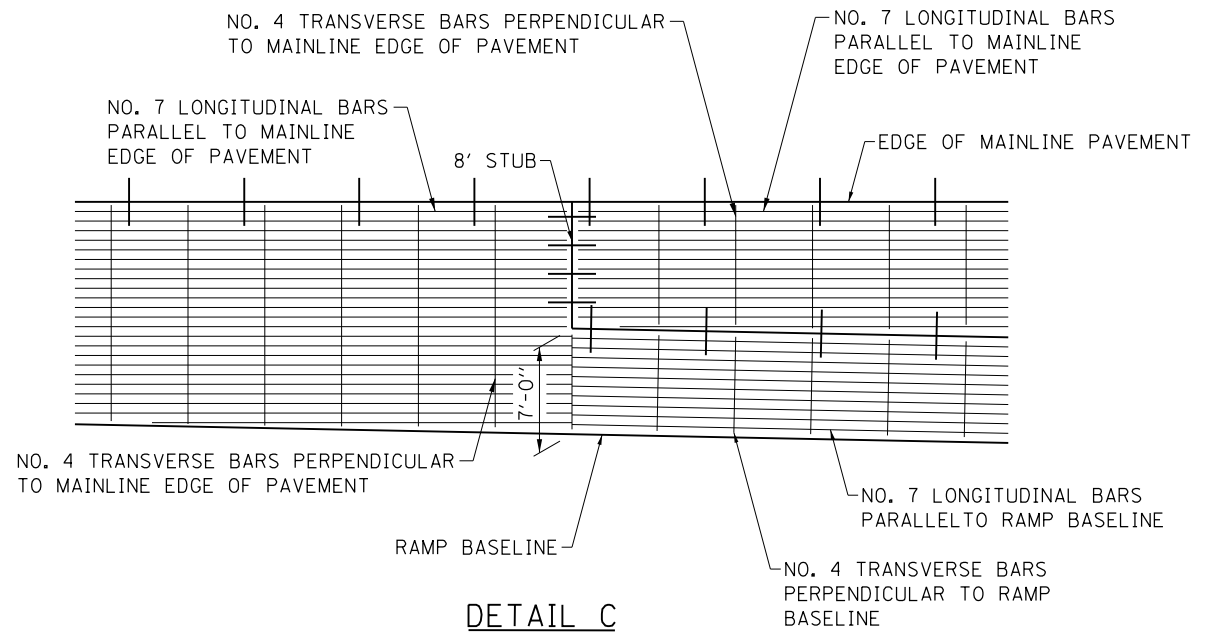
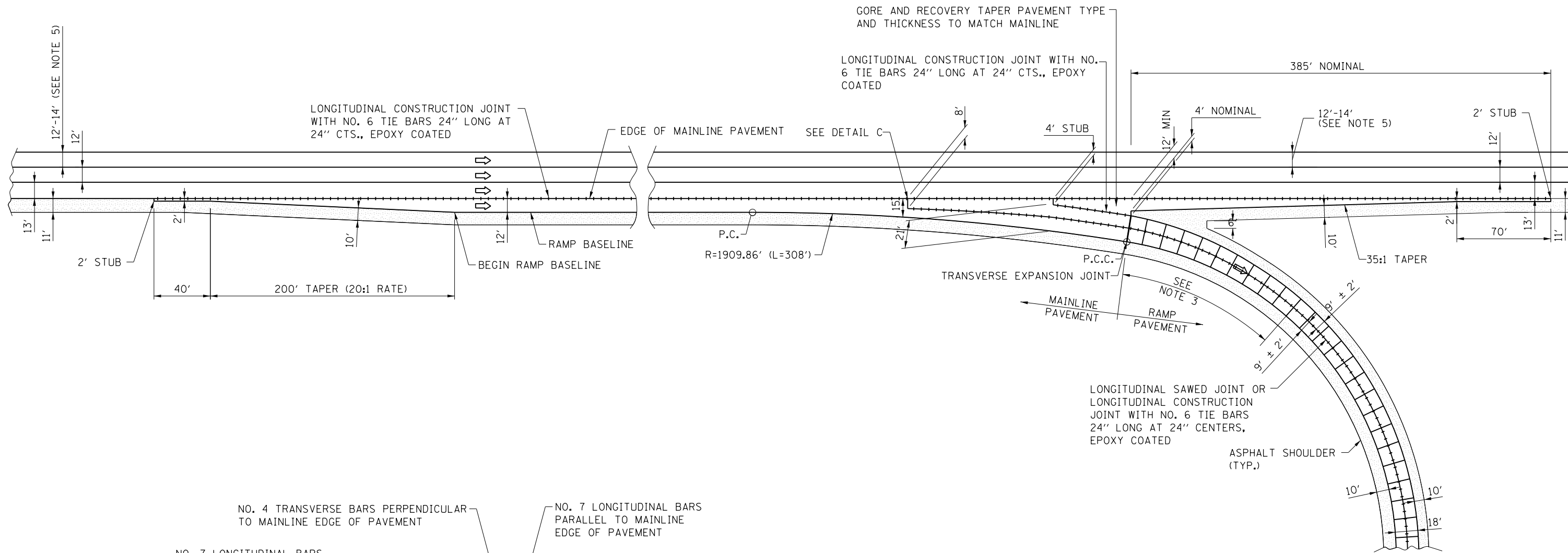
1. ALL PAVEMENT JOINTS SHALL BE DETAILED AS SHOWN ON ILLINOIS TOLLWAY STANDARD DRAWING A7 AND IDOT HIGHWAY STANDARD 420001, EXCEPT EXPANSION JOINT SEALS SHALL BE AS DESCRIBED IN THE ILLINOIS TOLLWAY SPECIAL PROVISION, BONDED PREFORMED JOINT SEAL.
2. SEE PROJECT PLANS AND CONTRACT DOCUMENTS FOR DETAILS OF PAVEMENT REINFORCEMENT.
3. TYPICAL P.C.C. PAVEMENT JOINT SPACING SHALL BE 15'.
4. AS ADDITIONAL RAMP LANES ARE ADDED, THE MAXIMUM JOINT SPACING SHALL BE 15' LONG BY 15' WIDE. TYPICAL SPACING IS 15' LONG BY 12' WIDE. LONGITUDINAL JOINT LOCATIONS IN THE WHEEL PATH SHALL BE MINIMIZED.
5. DIMENSIONS OF LANE 1 SHALL BE AS SHOWN ON THE PLANS.

APPROVED: *Paul Kovacs*  
 CHIEF ENGINEERING OFFICER DATE: 1-31-2015

JOINTED PCC RAMP ADJACENT TO C.R.C. 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 ILLINOIS TOLLWAY SPECIAL PROVISION, BONDED PREFORMED JOINT SEAL.
2. TYPICAL P.C.C. PAVEMENT JOINT SPACING SHALL BE 15'.
3. RAMP NARROWS FROM 21' TO 18' IN 150'.
4. AS ADDITIONAL RAMP LANES ARE ADDED, THE MAXIMUM JOINT SPACING SHALL BE 15' LONG BY 15' WIDE. TYPICAL SPACING IS 15' LONG BY 12' WIDE. LONGITUDINAL JOINT LOCATIONS IN THE WHEEL PATH SHALL BE MINIMIZED.
5. DIMENSION OF LANE 1 SHALL BE AS SHOWN ON THE PLANS.
6. SEE PROJECT PLANS AND CONTRACT DOCUMENTS FOR DETAILS OF PAVEMENT REINFORCEMENT.

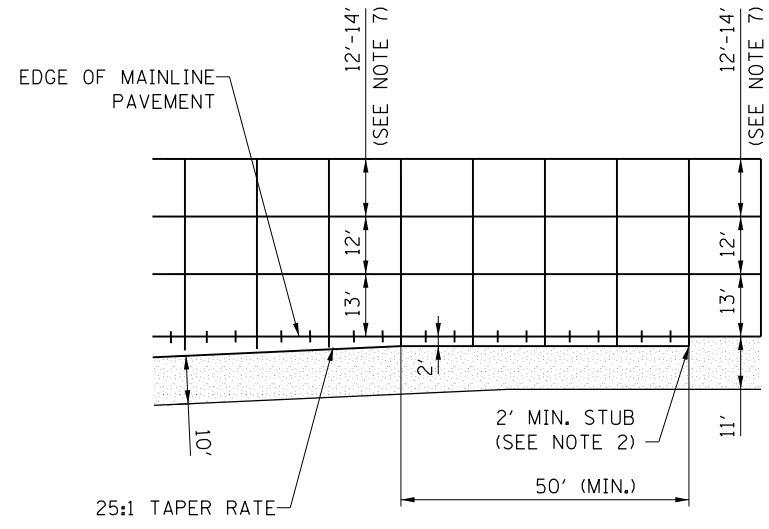
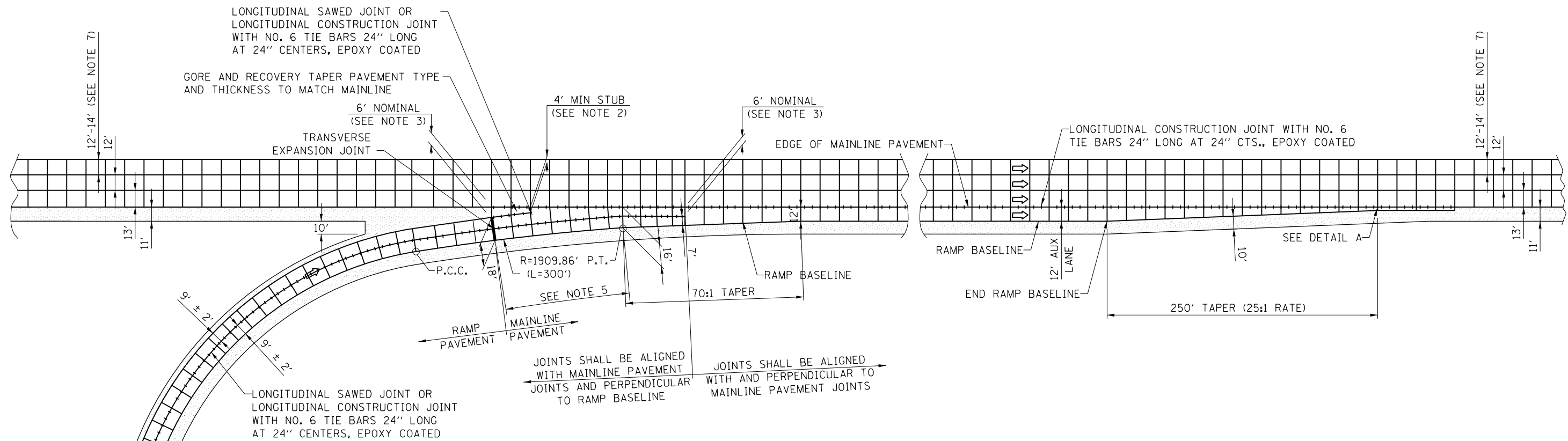


JOINTING PLAN  
PARALLEL EXIT RAMP TERMINAL  
LOOP RAMP ONLY

STANDARD A16-06

APPROVED: *Paul Kovacs*  
CHIEF ENGINEERING OFFICER DATE: 1-31-2015

JOINTED PCC RAMP ADJACENT TO C.R.C. MAINLINE PAVEMENT



DETAIL A

**NOTES:**

1. ALL TRANSVERSE CONSTRUCTION AND EXPANSION PAVEMENT JOINTS SHALL BE DETAILED AS SHOWN ON ILLINOIS TOLLWAY STANDARD DRAWING A7. ALL OTHER PAVEMENT JOINTS SHALL BE DETAILED AS SHOWN ON IDOT HIGHWAY STANDARD 420001.
2. STUBS SHALL BE THE MINIMUM DIMENSION AS SHOWN AND ALIGNED WITH A MAINLINE TRANSVERSE JOINT.
3. 6' NOSE LOCATION SHALL BE ADJUSTED TO BE ALIGNED WITH A MAINLINE TRANSVERSE JOINT.
4. TYPICAL PCC PAVEMENT JOINT SPACING SHALL BE 15'.
5. RAMP NARROWS FROM 18' TO 16'.
6. AS ADDITIONAL RAMP LANES ARE ADDED, THE MAXIMUM JOINT SPACING SHALL BE 15' LONG BY 15' WIDE. TYPICAL SPACING IS 15' LONG BY 12' WIDE. LONGITUDINAL JOINT LOCATIONS IN THE WHEEL PATH SHALL BE MINIMIZED.
7. DIMENSION OF LANE 1 SHALL BE AS SHOWN ON THE PLANS.



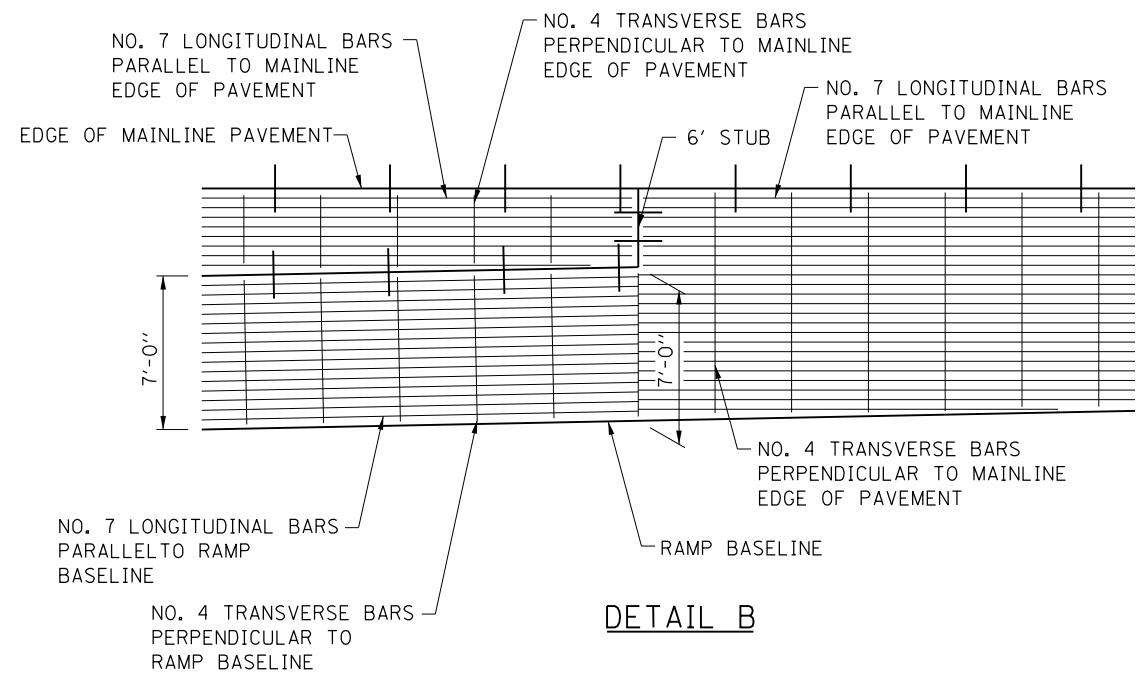
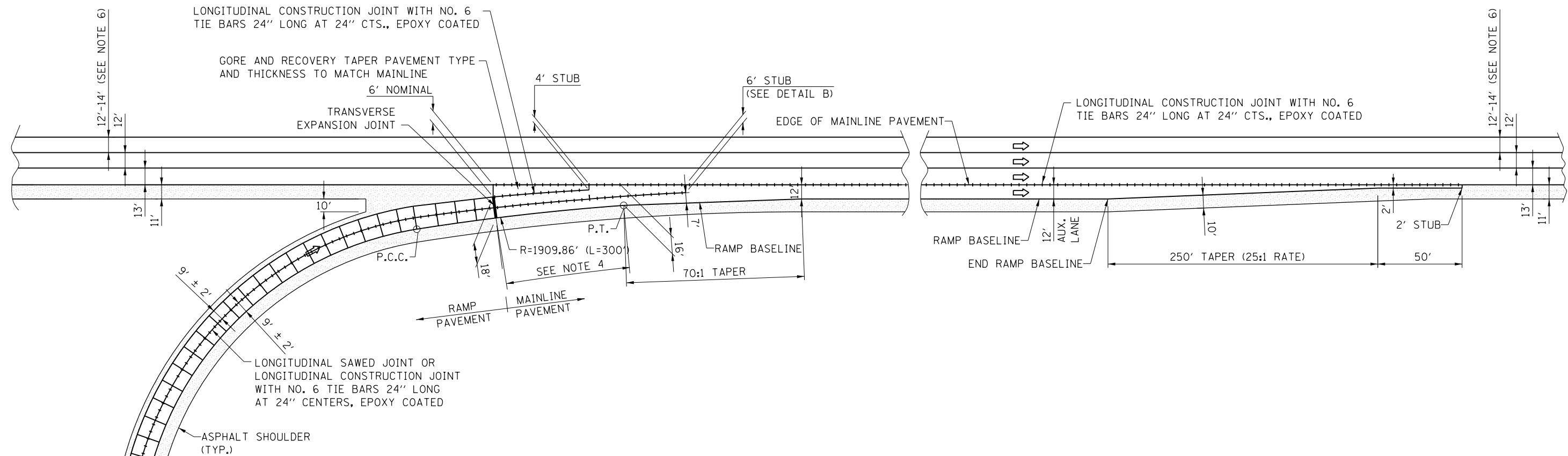
APPROVED: *Paul Kovacs*  
CHIEF ENGINEERING OFFICER DATE: 1-31-2015

JOINTED PCC RAMP ADJACENT TO JOINTED PCC MAINLINE PAVEMENT

| DATE      | REVISIONS                 |
|-----------|---------------------------|
| 3-11-2015 | MODIFIED JOINT SPACING    |
| 3-31-2016 | UPDATED NOTES & CALL-OUTS |
| 3-31-2017 | UPDATED NOTES.            |
| 3-01-2018 | MOVED RAMP PAVEMENT       |
| 3-01-2019 | ENTRANCE LAYOUT UPDATE    |
| 3-01-2020 | UPDATED DIMENSION         |

JOINTING PLAN PARALLEL ENTRANCE RAMP TERMINAL LOOP RAMP ONLY

STANDARD A17-06



**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 ILLINOIS TOLLWAY SPECIAL PROVISION, BONDED PREFORMED JOINT SEAL.
2. SEE PROJECT PLANS AND CONTRACT DOCUMENTS FOR DETAILS OF PAVEMENT REINFORCEMENT.
3. TYPICAL PCC PAVEMENT JOINT SPACING SHALL BE 15'.
4. RAMP TAPERS FROM 18' TO 16'.
5. AS ADDITIONAL RAMP LANES ARE ADDED, THE MAXIMUM JOINT SPACING SHALL BE 15' LONG BY 15' WIDE. TYPICAL SPACING IS 15' LONG BY 12' WIDE. LONGITUDINAL JOINT LOCATIONS IN THE WHEEL PATH SHALL BE MINIMIZED.
6. DIMENSION OF LANE 1 SHALL BE AS SHOWN ON THE PLANS.

**DETAIL B**

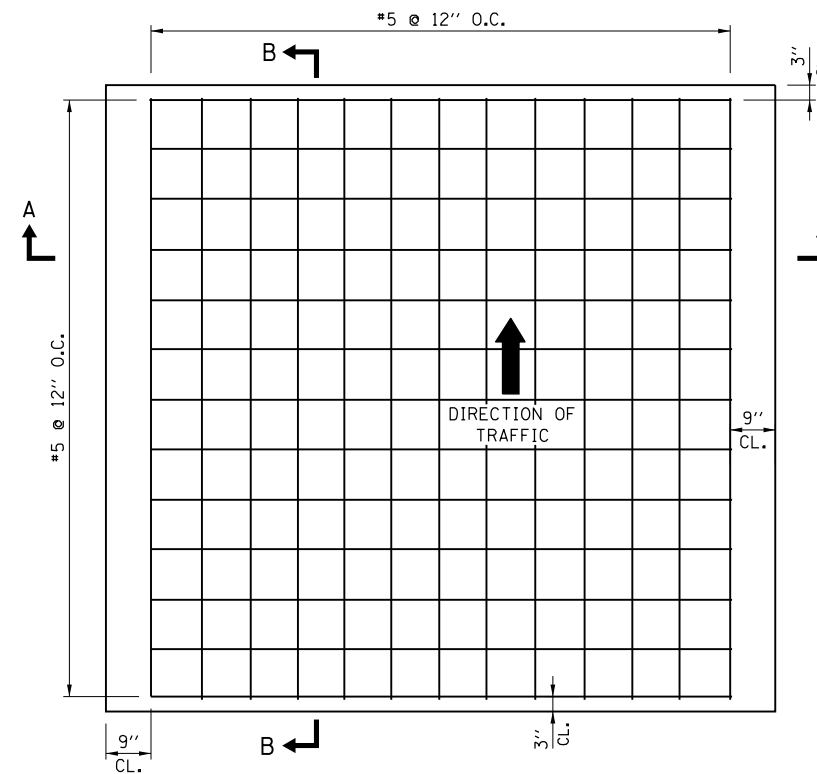


JOINTING PLAN PARALLEL  
ENTRANCE RAMP TERMINAL  
LOOP RAMP ONLY

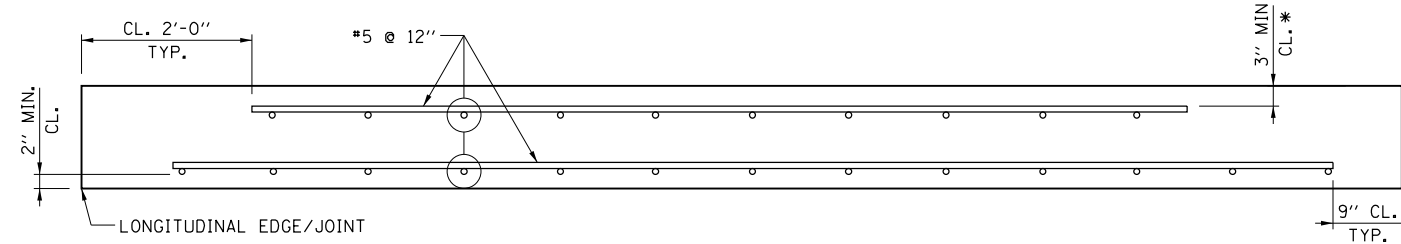
STANDARD A17-06

APPROVED: *Paul Kovacs*  
CHIEF ENGINEERING OFFICER DATE: 1-31-2015

**JOINTED PCC RAMP ADJACENT TO C.R.C. MAINLINE PAVEMENT**

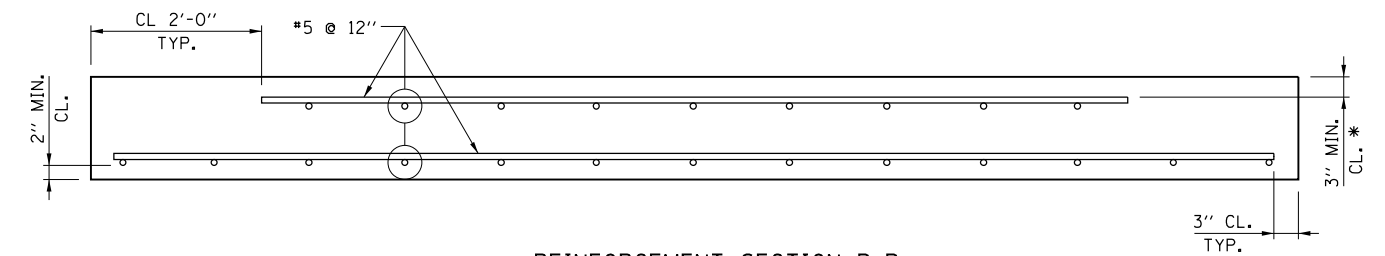


TYPICAL REINFORCEMENT DETAIL FOR STANDARD SLABS



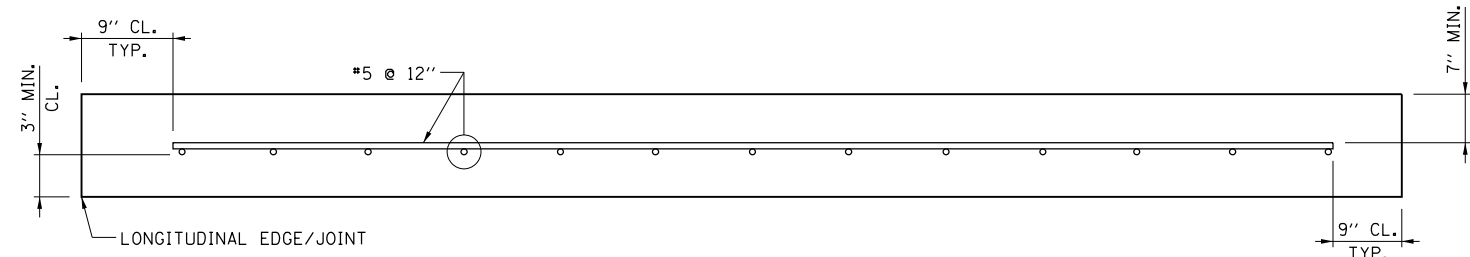
REINFORCEMENT SECTION A-A

TWO MATS 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  
ALL BARS ARE TRIMMED TO FIT #5 BAR  
SAW CUTS OFF LONGITUDINAL EDGES SHALL BE NO MORE THAN 6" OFF THE EDGES



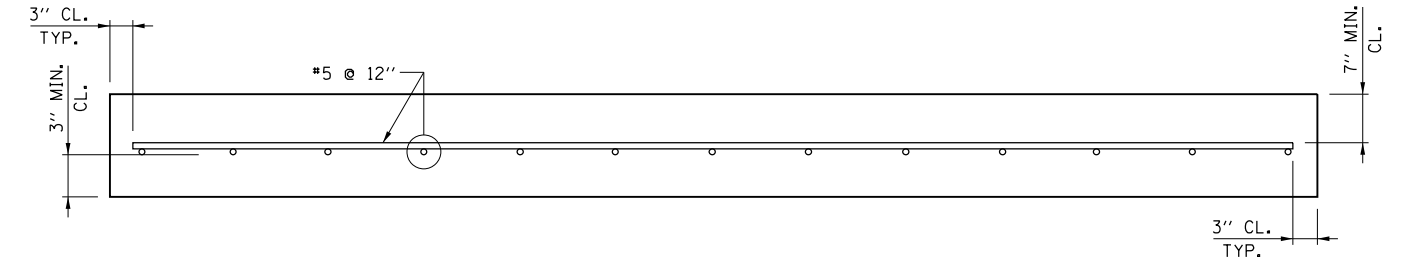
REINFORCEMENT SECTION B-B

TWO MATS 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  
ALL BARS ARE TRIMMED TO FIT #5 BAR



REINFORCEMENT SECTION A-A

ONE MAT OF REINFORCEMENT SHALL BE FOR APPLICATION TO ALL STANDARD SLABS AND FOR ANY CUSTOM SLABS GREATER THAN 6 FT. LONGITUDINAL LENGTH TO BE OPENED TO TRAFFIC ONLY AFTER GROUTING IS COMPLETED.  
ALL BARS ARE TRIMMED TO FIT #5 BAR  
SAW CUTS OFF LONGITUDINAL EDGES SHALL BE NO MORE THAN 6" OFF THE EDGES



REINFORCEMENT SECTION B-B

ONE MAT OF REINFORCEMENT SHALL BE FOR APPLICATION TO ALL STANDARD SLABS AND FOR ANY CUSTOM SLABS GREATER THAN 6 FT. LONGITUDINAL LENGTH TO BE OPENED TO TRAFFIC ONLY AFTER GROUTING IS COMPLETED.  
ALL BARS ARE TRIMMED TO FIT #5 BAR

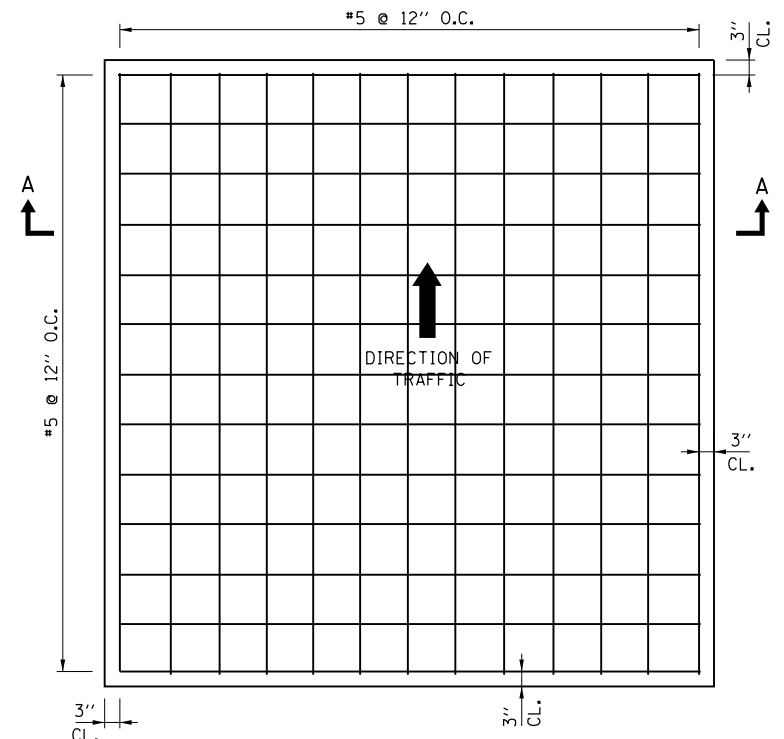


| DATE      | REVISIONS  |
|-----------|--|
| 02-07-12  | SEE A18-01 FOR REVISIONS   |
|           | PER THIS DATE  |
| 11-01-12  | REVISED NOTES  |
| 3-31-2016 | REVISED NOTES; UPDATED CALLOUTS                                  |
| 3-1-2018  | REVISED TEXT   |
| 3-1-2019  | REMOVED SHEETS 1,9,10,13,14,15,16<br>UPDATED NOTES 4,5,6,8,11,12 |

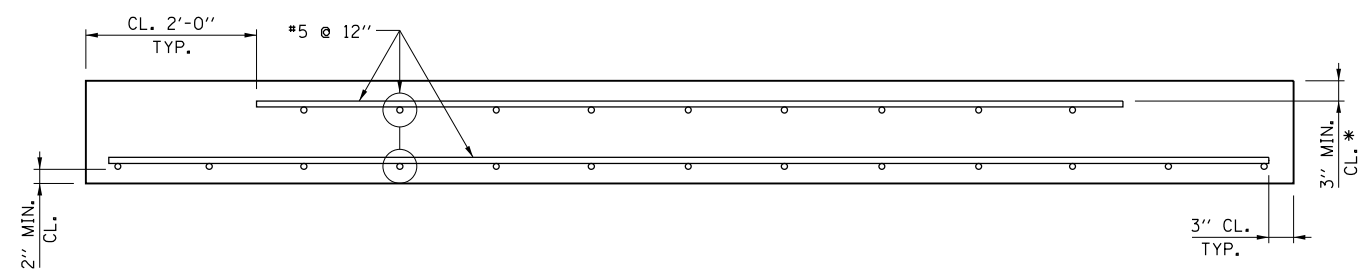
NOTE:

\* MIN. CLEARANCE FOR TOP REINFORCEMENT SHALL BE ADJUSTED FOR PLAZA SLAB TO FIT TREADLE FRAMES OR INSERTED HARDWARE.

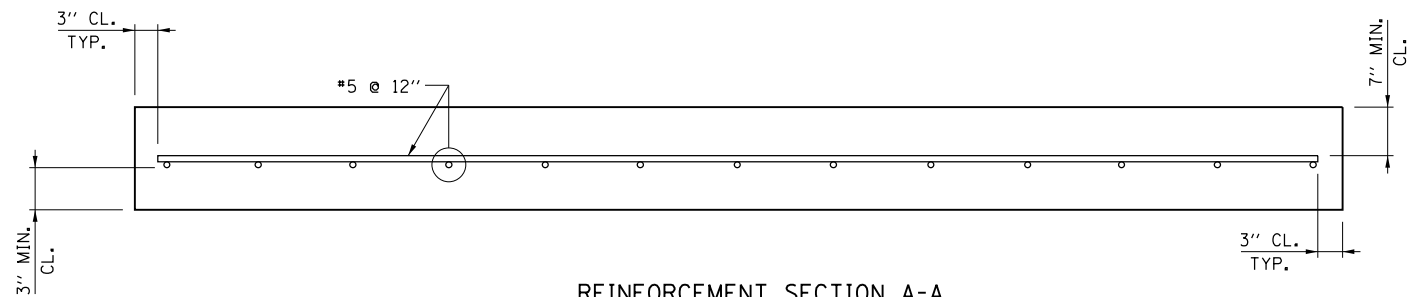
APPROVED: *Paul Kovacs* CHIEF ENGINEERING OFFICER DATE 5-1-2009



TYPICAL REINFORCEMENT DETAIL FOR CUSTOM SLABS



**REINFORCEMENT SECTION A-A**  
 TWO MATS 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  
 ALL BARS ARE TRIMMED TO FIT #5 BAR



**REINFORCEMENT SECTION A-A**  
 ONE MAT OF REINFORCEMENT SHALL BE FOR APPLICATION TO ALL STANDARD SLABS AND FOR ANY CUSTOM SLABS GREATER THAN 6 FT. LONGITUDINAL LENGTH TO BE OPENED TO TRAFFIC ONLY AFTER GROUTING IS COMPLETED.  
 ALL BARS ARE TRIMMED TO FIT #5 BAR

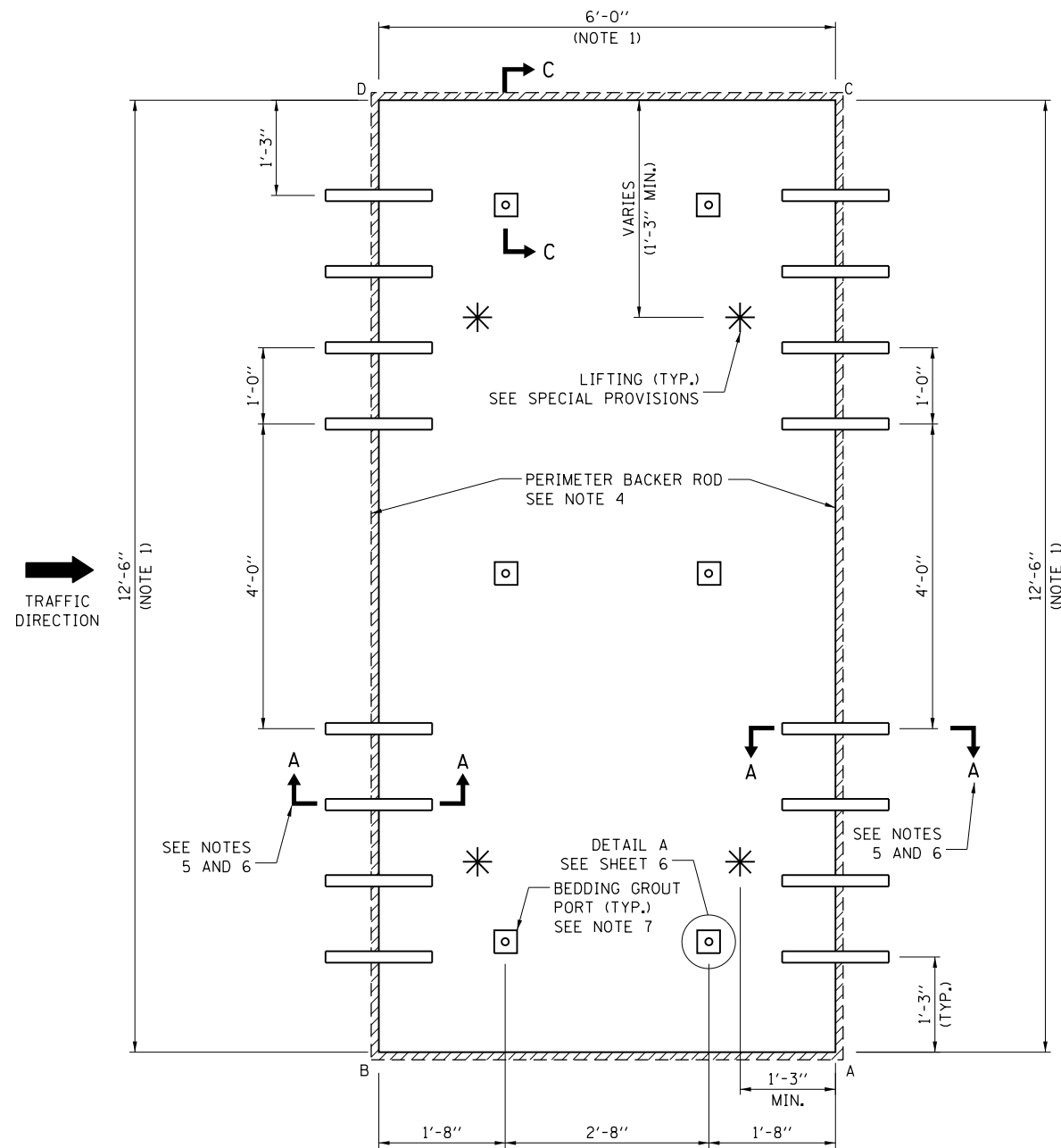
**NOTE:**  
 FOR ALL CUSTOM SLABS OF TRAPEZOID SHAPES, REINFORCEMENT SHALL BE LAID OUT IN A PERPENDICULAR GRID PATTERN, NOT SKEWED.  
 \* MIN. CLEARANCE FOR TOP REINFORCEMENT SHALL BE ADJUSTED FOR PLAZA SLAB TO FIT TREADLE FRAMES OR INSERTED HARDWARE.



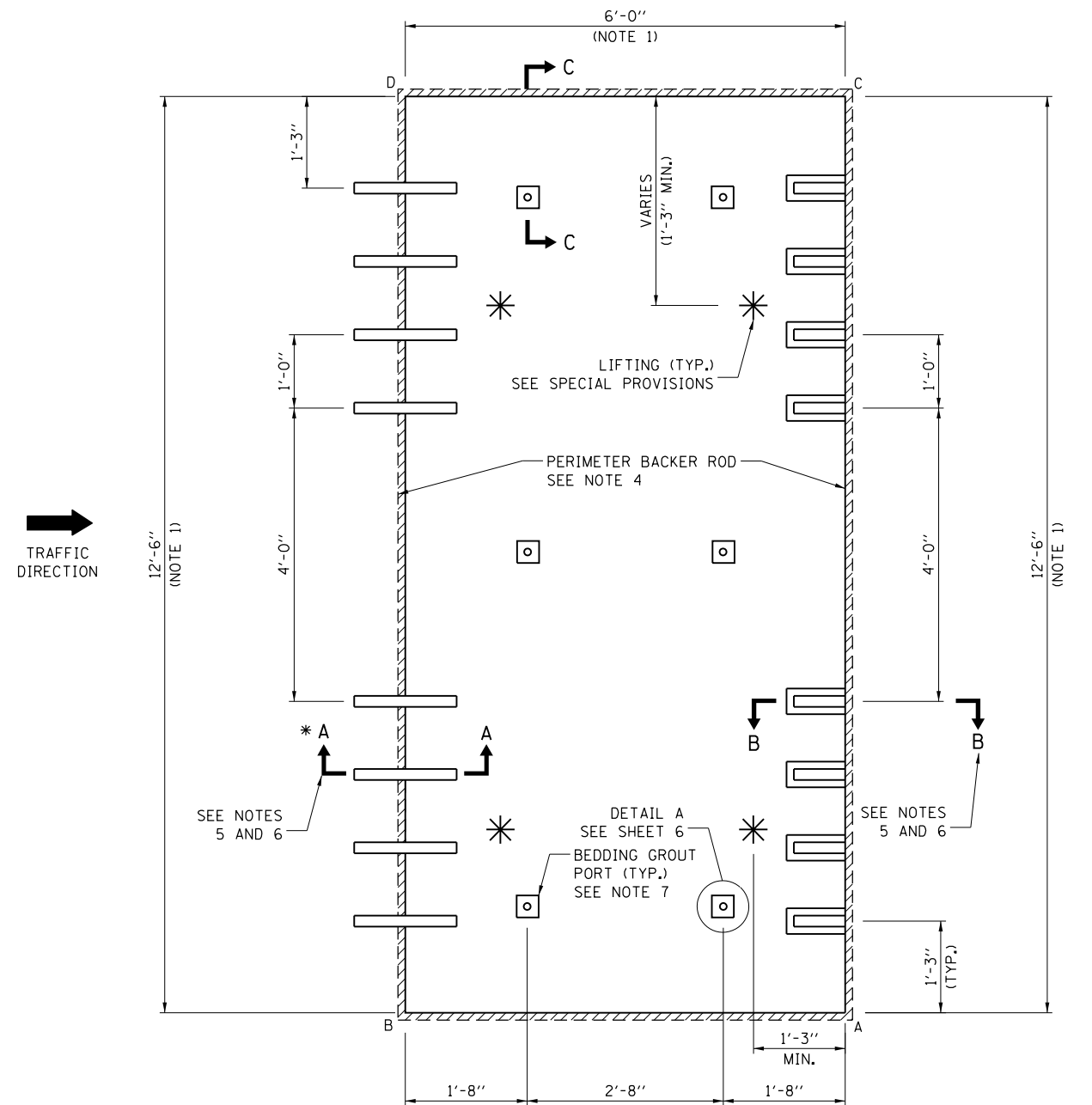
PRECAST PAVEMENT SLABS

STANDARD A18-05

*Paul Kovacs*  
 APPROVED, CHIEF ENGINEERING OFFICER DATE 5-1-2009



STANDARD 12'-6" WIDE PANEL LAYOUT FOR ISOLATED PLACEMENT  
WITH EMBEDDED DOWELS FOR PRECAST WIDE MOUTH  
SLOTS IN ADJACENT PAVEMENT



STANDARD 12'-6" WIDE PANEL LAYOUT FOR CONSECUTIVE PLACEMENT

\* FOR INTERNAL CONSECUTIVE SLABS, PREFORMED SLOTS IN ACCORDANCE WITH SECTION B-B OF SHEET 4 MAY BE USED IN PLACE OF EMBEDDED DOWELS OR OF FIELD RETROFITTED DOWEL BARS WITH SAWCUT SLOTS. ALL PREFORMED SLOTS MUST BE FILLED BEFORE BEING OPENED TO TRAFFIC.

**NOTES:**

1. THE WIDTH AND LENGTH OF PRODUCED SLABS SHALL BE THE INDICATED DIMENSIONS  $\pm 1/8"$ .
2. FOR MIDDLE LANE SLAB OPENINGS/PATCHES LESS THAN 12'-6" IN WIDTH AND GREATER THAN 11'-6" IN WIDTH, THE 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 PRESURVEYED BY THE CONTRACTOR AND THE SLAB FABRICATED AS A CUSTOM SLAB.
3. SLAB THICKNESS SHALL BE  $11\frac{1}{2}" \pm 1/8"$ .
4. A FOAM 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 GROUT OR POLYURETHANE LEVELING FILL IS APPLIED. THE BACKER ROD SHALL NOT BE REQUIRED WHEN ANY SLAB IS LEVELED WITH FLOWABLE FILL.
5. SEE SHEET 6 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 13. THE CONTRACTOR SHALL USE AN APPROVED TEMPLATE TO LOCATE THE SAW CUTS REQUIRED FOR PROPER SPACING AND RETROFITTING OF THE DOWEL BARS IN ACCORDANCE WITH THESE DRAWINGS. DIAMOND BLADED GANG SAWS SHALL BE USED TO MAKE SAW CUTS PERPENDICULAR TO THE TRANSVERSE (NON-SKEWED) JOINT LINE TO ALLOW FOR DOWEL BAR PLACEMENTS WITHIN THE SPECIFIED TOLERANCES.
7. SEE "PRECAST REPLACEMENT OF CONCRETE PAVEMENT SLABS" (ILLINOIS TOLLWAY) SPECIAL PROVISION FOR LOCATING BEDDING GROUT PORTS.

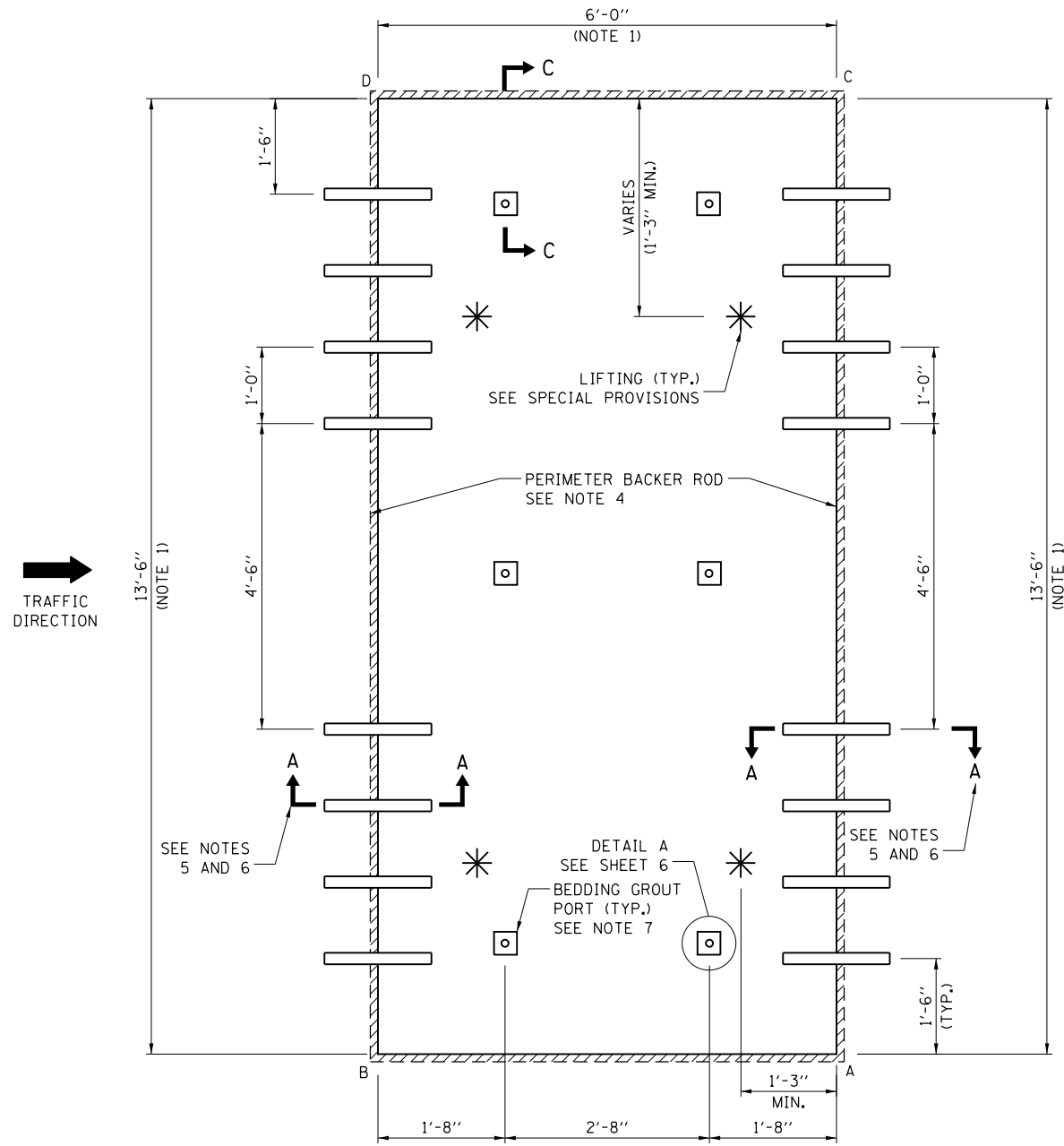


PRECAST PAVEMENT SLABS

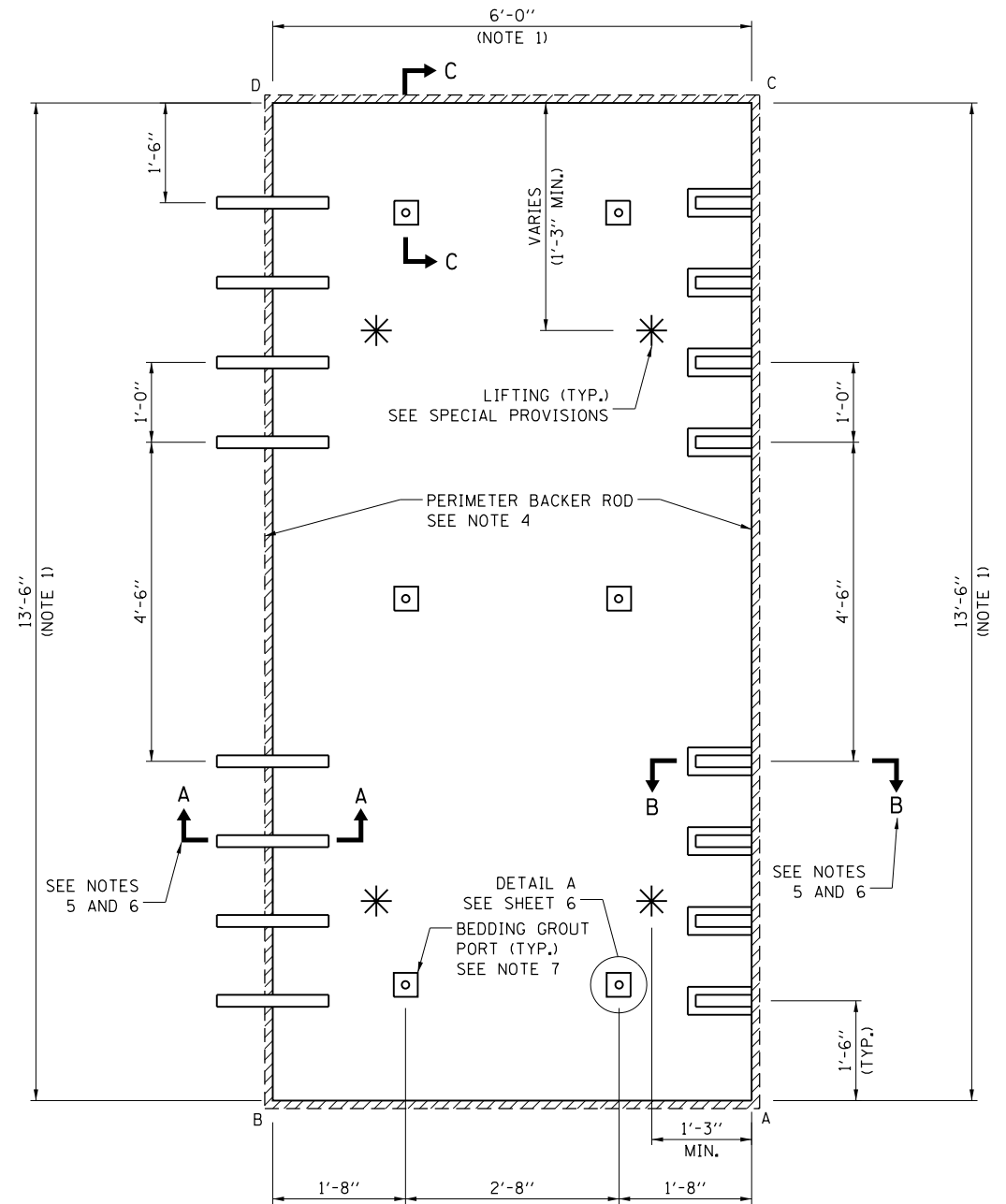
STANDARD A18-05

APPROVED: *Paul Kovacs*  
CHIEF ENGINEERING OFFICER DATE: 5-1-2009





STANDARD 13'-6" WIDE PANEL LAYOUT FOR ISOLATED PLACEMENT WITH EMBEDDED DOWELS FOR PRECUT WIDE MOUTH SLOTS IN ADJACENT PAVEMENT.



STANDARD 13'-6" WIDE PANEL LAYOUT FOR CONSECUTIVE PLACEMENT

\* FOR INTERNAL CONSECUTIVE SLABS, PREFORMED SLOTS IN ACCORDANCE WITH SECTION B-B OF SHEET 4 MAY BE USED IN PLACE OF EMBEDDED DOWELS OR OF FIELD RETROFITTED DOWEL BARS WITH SAWCUT SLOTS. ALL PREFORMED SLOTS MUST BE FILLED BEFORE BEING OPENED TO TRAFFIC.

**NOTES:**

1. THE WIDTH AND LENGTH OF PRODUCED SLABS SHALL BE THE INDICATED DIMENSIONS  $\pm 1/8"$ .
2. FOR MIDDLE LANE SLAB OPENINGS/PATCHES LESS THAN 13'-6" IN WIDTH AND GREATER THAN 12'-6" IN WIDTH, THE 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 PRESURVEYED BY THE CONTRACTOR AND THE SLAB FABRICATED AS A CUSTOM SLAB.
3. SLAB THICKNESS SHALL BE  $11\frac{1}{2}" \pm 1/8"$ .
4. A FOAM 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 GROUT OR POLYURETHANE LEVELING FILL IS APPLIED. THE BACKER ROD SHALL NOT BE REQUIRED WHEN ANY SLAB IS LEVELED WITH FLOWABLE FILL.
5. SEE SHEET 6 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 13. THE CONTRACTOR SHALL USE AN APPROVED TEMPLATE TO LOCATE THE SAW CUTS REQUIRED FOR PROPER SPACING AND RETROFITTING OF THE DOWEL BARS IN ACCORDANCE WITH THESE DRAWINGS. DIAMOND BLADED GANG SAWS SHALL BE USED TO MAKE SAW CUTS PERPENDICULAR TO THE TRANSVERSE (NSKEWED) JOINT LINE TO ALLOW FOR DOWEL BAR PLACEMENTS WITHIN THE SPECIFIED TOLERANCES.
7. SEE "PRECAST REPLACEMENT OF CONCRETE PAVEMENT SLABS" (ILLINOIS TOLLWAY) SPECIAL PROVISION FOR LOCATING BEDDING GROUT PORTS.

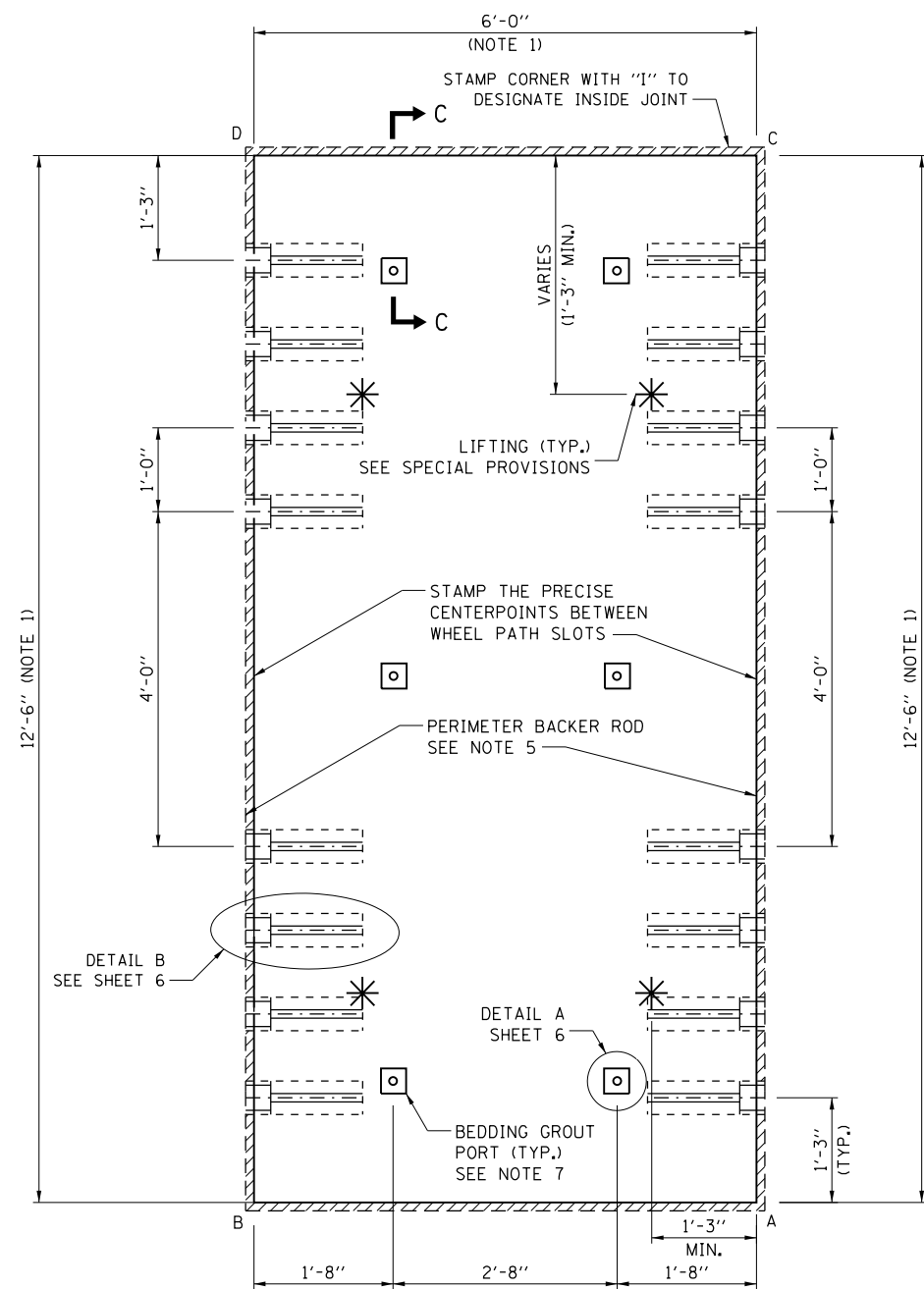


PRECAST PAVEMENT SLABS

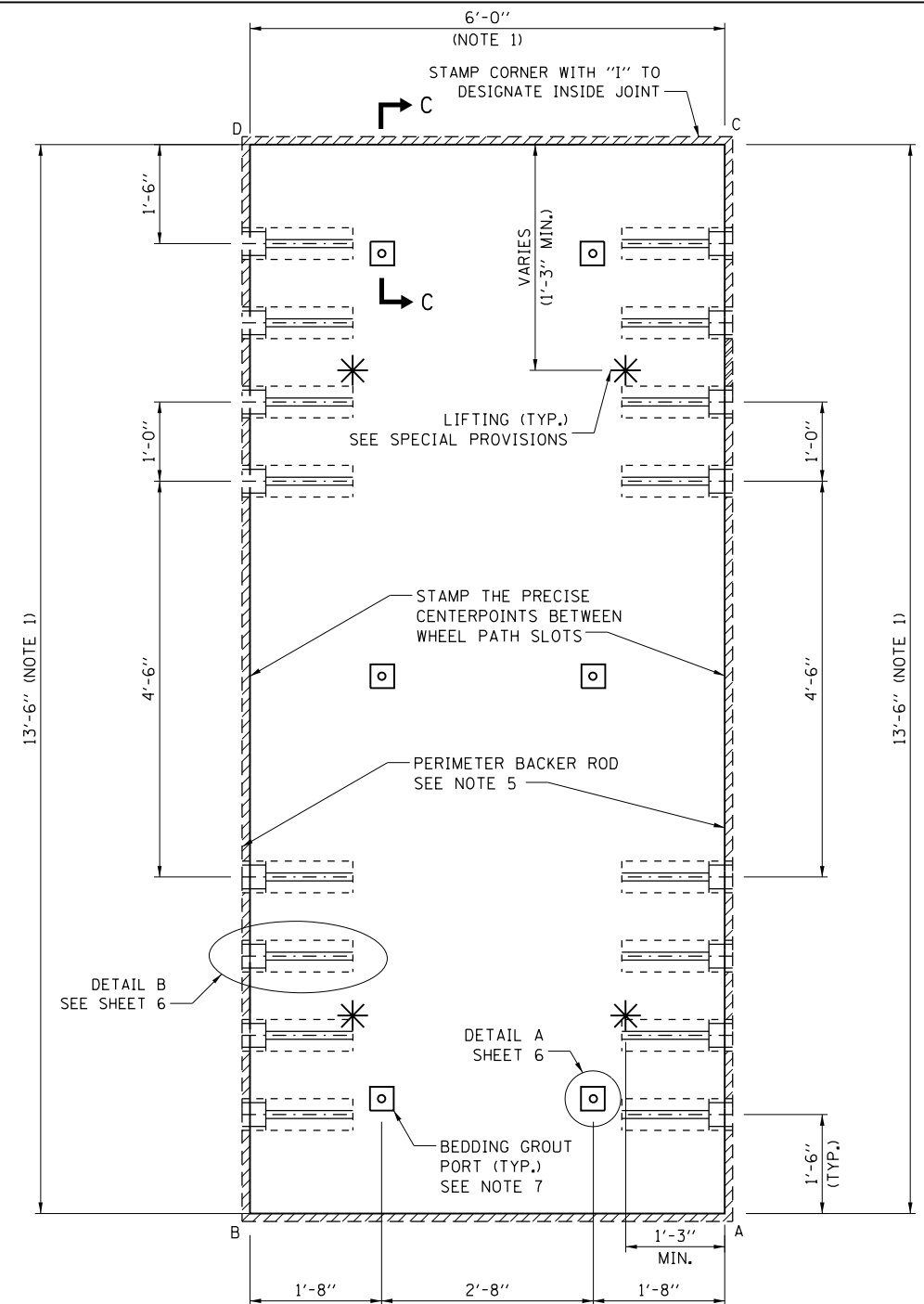
STANDARD A18-05

APPROVED: *Paul Kovacs*  
CHIEF ENGINEERING OFFICER DATE: 5-1-2009

TRAFFIC DIRECTION



TRAFFIC DIRECTION



STANDARD 12'-6" WIDE PANEL LAYOUT FOR ISOLATED PLACEMENT WITH NARROW MOUTH PREFORMED DOWEL SLOTS TO ALIGN WITH PREDRILLED HOLES IN ADJACENT PAVEMENT.

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

**NOTES:**

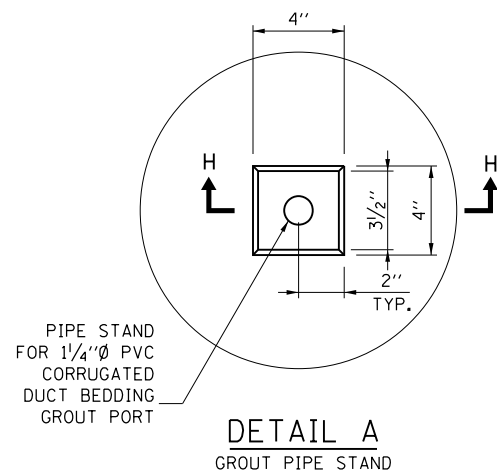
1. THE WIDTH AND LENGTH OF PRODUCED SLABS SHALL BE THE INDICATED DIMENSIONS  $\pm 1/8"$ .
2. FOR MIDDLE LANE SLAB OPENINGS/PATCHES LESS THAN 12'-6" IN WIDTH AND GREATER THAN 11'-6" IN WIDTH, THE 12'-6" WIDE STANDARD PRECAST SLAB CAN BE SAW CUT ON-SITE TO FIT THE OPENING AND TO MAINTAIN ALIGNMENT WITH EXISTING LONGITUDINAL JOINTS. OTHERWISE, THE SLAB PATCH LOCATION MUST BE PRESURVEYED BY THE CONTRACTOR AND THE SLAB FABRICATED AS A CUSTOM SLAB.
3. FOR MIDDLE LANE SLAB OPENINGS/PATCHES LESS THAN 13'-6" IN WIDTH AND GREATER THAN 12'-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 PRESURVEYED BY THE CONTRACTOR AND THE SLAB FABRICATED AS A CUSTOM SLAB.
4. SLAB THICKNESS SHALL BE  $11\frac{1}{2}" \pm 1/8"$ .
5. A FOAM 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 GROUT OR POLYURETHANE LEVELING FILL IS APPLIED. THE BACKER ROD SHALL NOT BE REQUIRED WHEN ANY SLAB IS LEVELED WITH FLOWABLE FILL.
6. SEE SHEET 6 FOR SECTION DETAILS.
7. SEE "PRECAST REPLACEMENT OF CONCRETE PAVEMENT SLABS" (ILLINOIS TOLLWAY) SPECIAL PROVISION FOR LOCATING BEDDING GROUT PORTS.



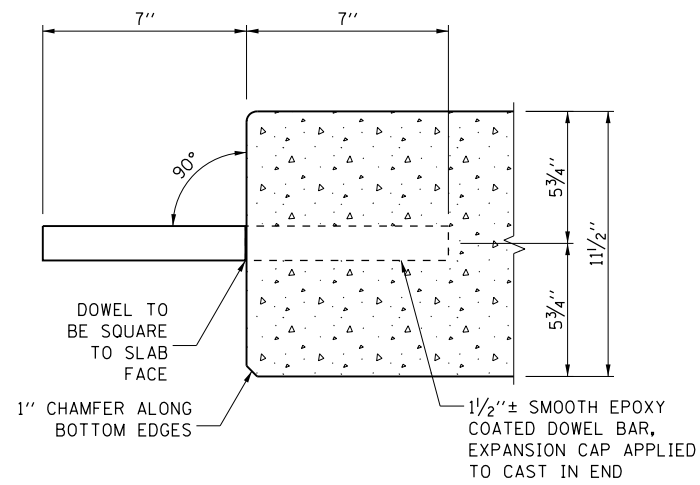
PRECAST PAVEMENT SLABS

STANDARD A18-05

APPROVED: *Paul Kovacs*  
CHIEF ENGINEERING OFFICER DATE: 5-1-2009

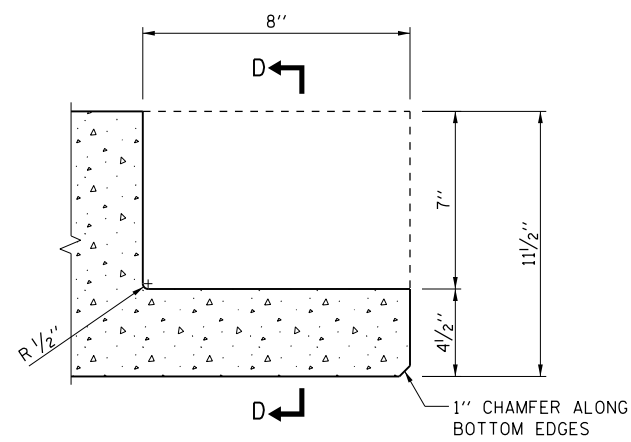


**DETAIL A**  
GROUT PIPE STAND



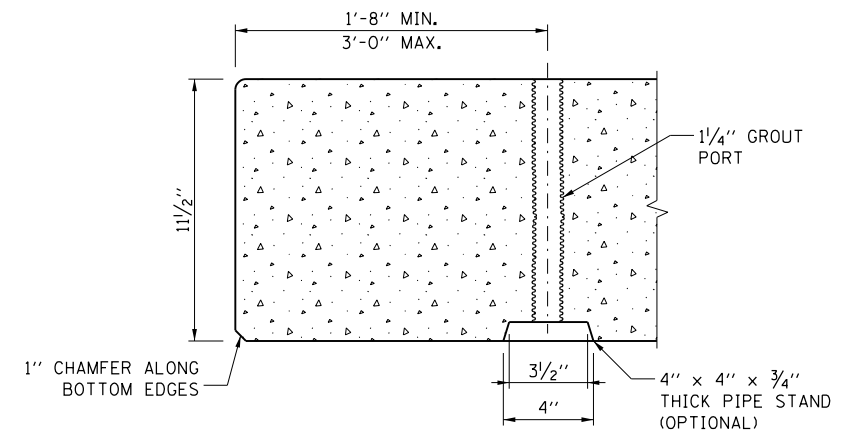
**SECTION A-A**

TRANSVERSE JOINT DOWEL BAR (EMBEDDED INTO STANDARD PRECAST PAVEMENT SLAB FOR BOTH ISOLATED AND CONSECUTIVE PLACEMENT TYP.)



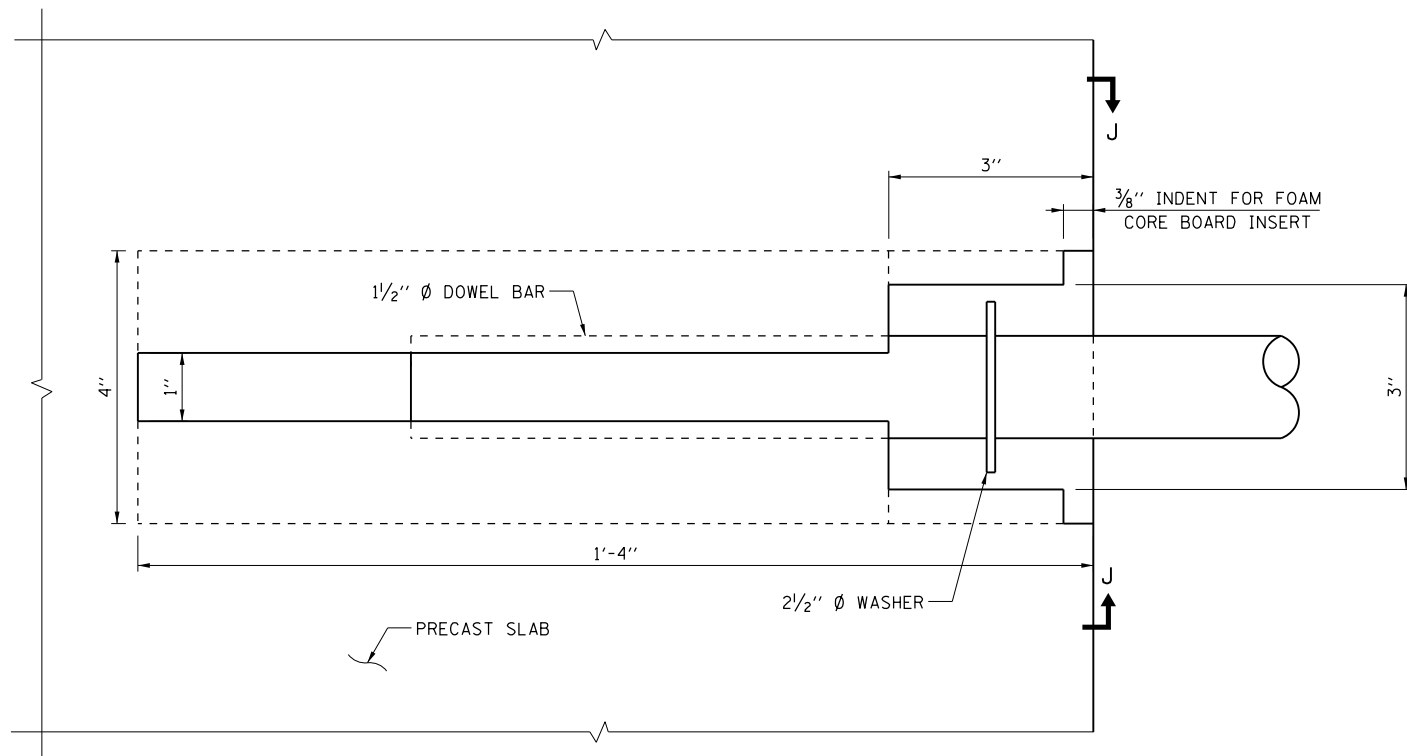
**SECTION B-B**

TRANSVERSE WIDE MOUTH OPEN SLOT DETAIL FOR CONSECUTIVE STANDARD SLABS



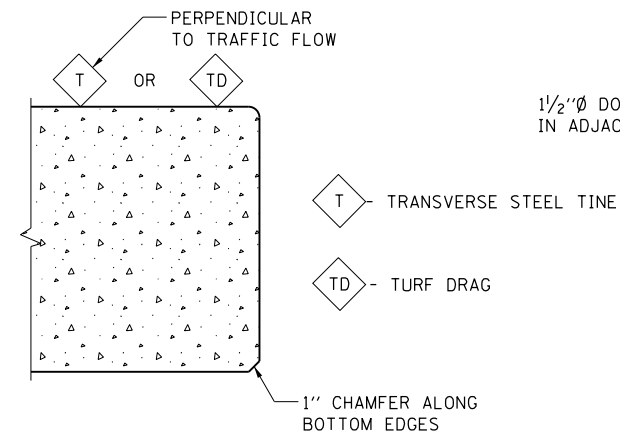
**SECTION C-C**

GROUT CHANNEL & PORT LOCATION

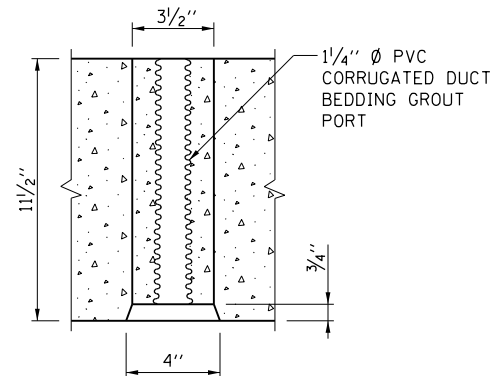


**DETAIL B**

TRANSVERSE NARROW MOUTH SLOT DETAIL FOR ISOLATED SLABS

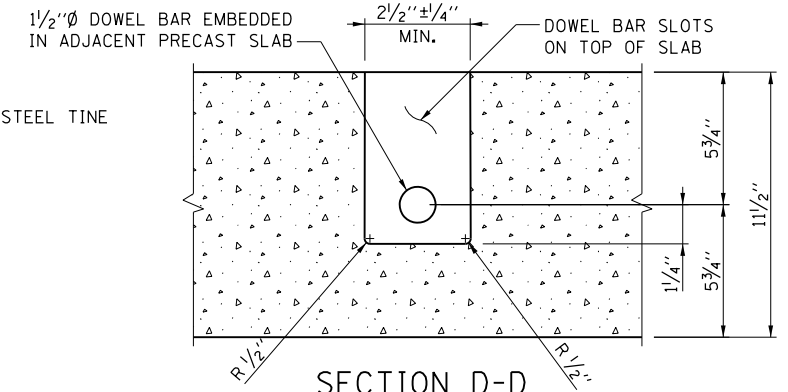


**FINISH SCHEDULE**



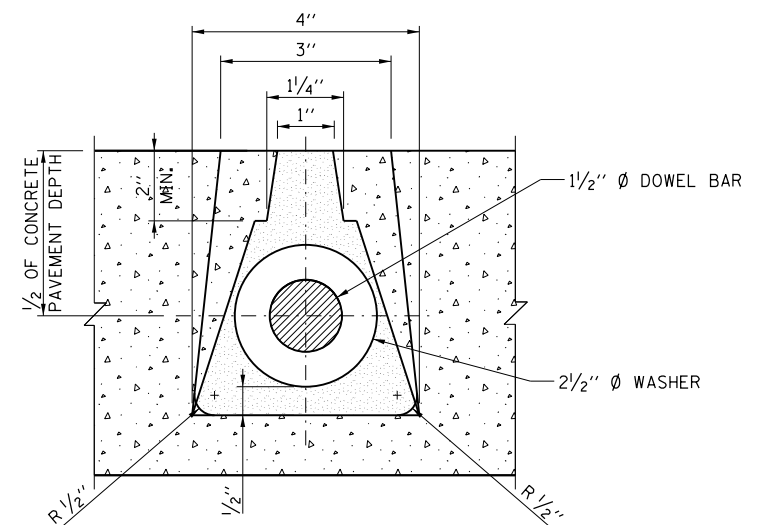
**SECTION H-H**

PIPE STAND ELEVATION



**SECTION D-D**

DOWEL BAR SECTION FOR WIDE MOUTH OPEN SLOTS



**SECTION J-J**

3" TAPER TO 4"x16" LONG DOWEL SLOT

**FABRICATION DETAILS**

APPROVED *Paul Kovacs* CHIEF ENGINEERING OFFICER DATE 5-1-2009



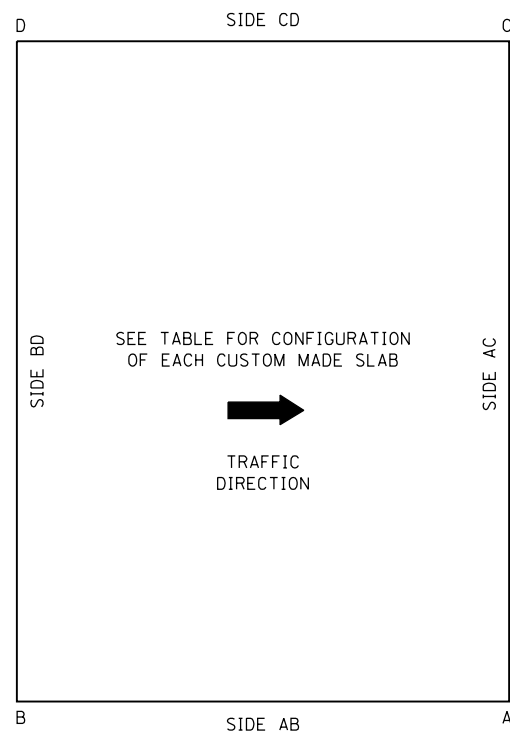
FOR NON-STANDARD SLABS, UPON COMPLETION BY THE CONTRACTOR A SLAB LAYOUT WILL BE ADDED WITH SLAB DIMENSIONS TO INCLUDE BUT NOT BE LIMITED TO THE TABLE SHOWN BELOW.

| EXAMPLE | CORRIDOR | STATION NUMBER | MAINLINE LANE NO. | RAMP ID. | RAMP LANE NO. | PLAZA NO. | PLAZA LANE NO. | MARK NO. | LANE TYP. | VARIABLES (FT.) |          |          |          | AB* SIDE | BD* SIDE | CD* SIDE | AC* SIDE | AREA (SQ.FT.) | VOLUME (CU. FT.) | WEIGHT (TONS) | DIAGONALS (FT.) |    |
|---------|----------|----------------|-------------------|----------|---------------|-----------|----------------|----------|-----------|-----------------|----------|----------|----------|----------|----------|----------|----------|---------------|------------------|---------------|-----------------|----|
|         |          |                |                   |          |               |           |                |          |           | AB (FT.)        | AC (FT.) | BD (FT.) | CD (FT.) |          |          |          |          |               |                  |               | AD              | BC |
|         |          |                |                   |          |               |           |                |          |           |                 |          |          |          |          |          |          |          |               |                  |               |                 |    |

MAINLINE LANE NO.: LANE NO 1 IS ADJACENT TO MEDIAN SHOULDER.  
 RAMP LANE NO.: LANE NO 1 IS ADJACENT TO THE BUILDING  
 PLAZA LANE NO.: LANE NO 1 IS ADJACENT TO THE BUILDING  
 MARK NO.: EACH PANEL SHALL BE INDIVIDUALLY MARKED FOR CORRECT PLACEMENT.  
 LANE TYP.: "OUT" IN THIS COLUMN INDICATES OUTSIDE LANE.  
 "MID" IN THIS COLUMN INDICATES MIDDLE LANE.  
 "IN" IN THIS COLUMN INDICATES INSIDE LANE  
 "PLAZA" IN THIS COLUMN INDICATES PLAZA LANE.

**LEGEND**

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

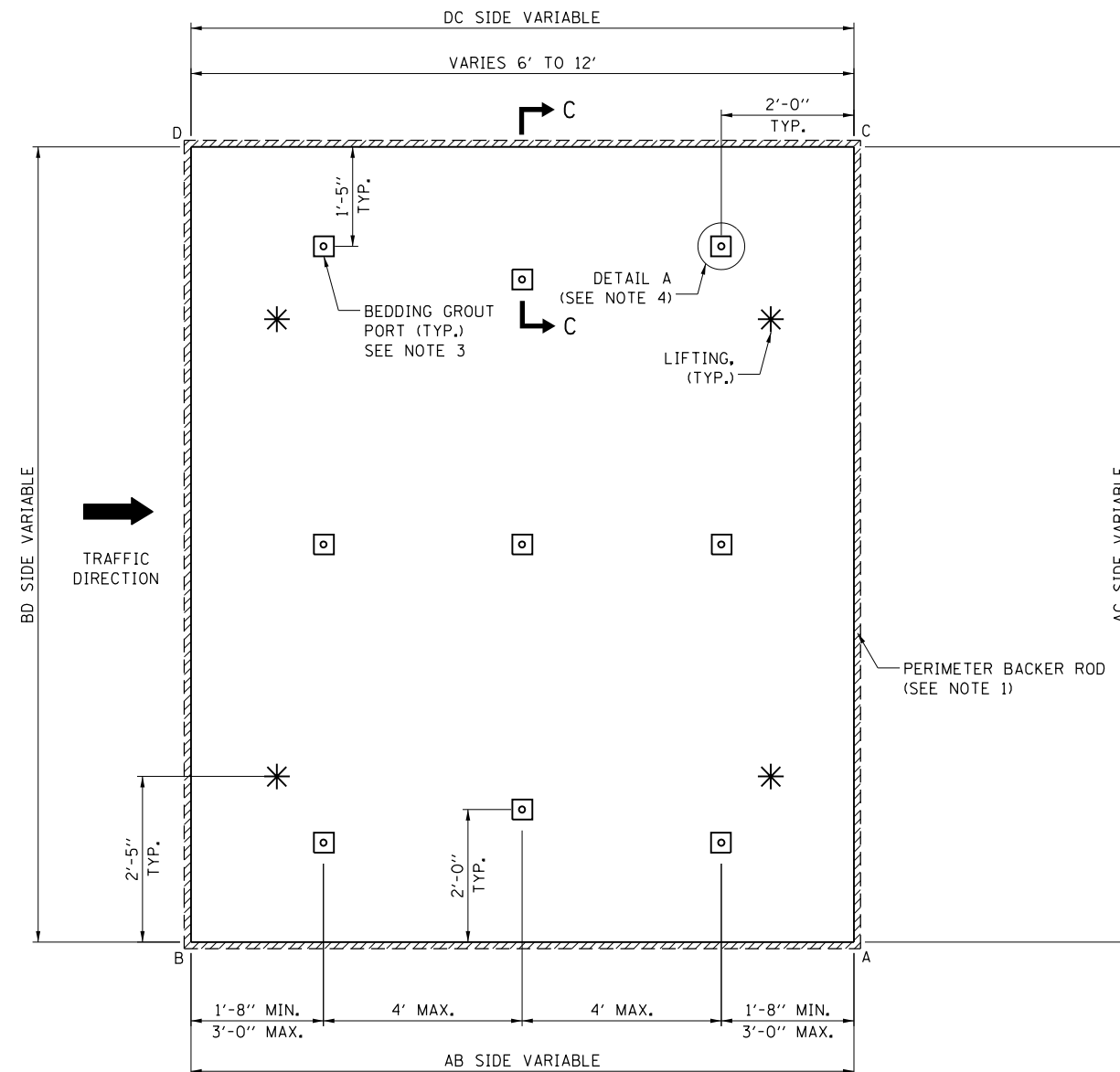


**LAYOUT FOR CUSTOM SLABS**

LAYOUT KEY

**NOTES:**

1. A FOAM 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 GROUT OR POLYURETHANE LEVELING FILL IS APPLIED. THE BACKER ROD SHALL NOT BE REQUIRED WHEN ANY SLAB IS LEVELED WITH A FLOWABLE FILL.
2. EITHER SINGLE DIAMOND BLADED SAWS OR DIAMOND BLADED GANG SAWS SHALL BE USED TO MAKE THE SAW CUTS PERPENDICULAR TO THE TRANSVERSE (NON-SKEWED) JOINT LINE TO ALLOW FOR DOWEL BAR PLACEMENTS WITHIN THE SPECIFIED TOLERANCES.
3. SEE "PRECAST REPLACEMENT OF CONCRETE PAVEMENT SLABS" (ILLINOIS TOLLWAY) SPECIAL PROVISION FOR LOCATING BEDDING GROUT PORTS.
4. SEE SHEET 6 FOR SECTION DETAILS.



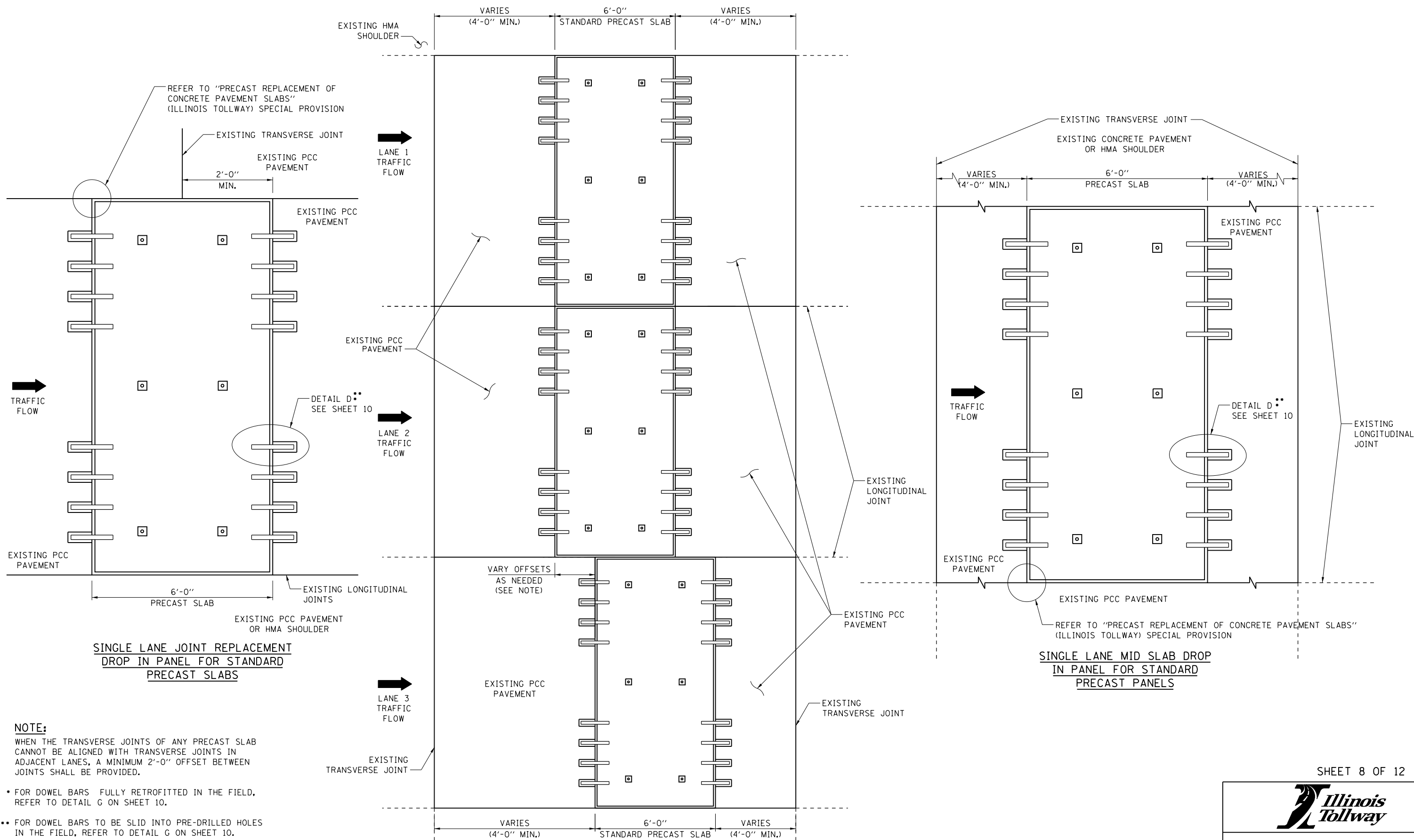
**LAYOUT DETAIL FOR CUSTOM SLABS 6'-12' IN LENGTH (VARIED WIDTH \*\*)**

\*\*FOR TRAPEZOID SLABS MINIMUM WIDTH IS 2 FT. WITH MAXIMUM WIDTH OF 16 FT.

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 CHIEF ENGINEERING OFFICER DATE: 5-1-2009



# INSTALLATION OF ISOLATED STANDARD PRECAST SLABS



**SINGLE LANE JOINT REPLACEMENT  
DROP IN PANEL FOR STANDARD  
PRECAST SLABS**

**SINGLE LANE MID SLAB DROP  
IN PANEL FOR STANDARD  
PRECAST PANELS**

**MULTIPLE LANE MID SLAB DROP IN PANEL  
FOR STANDARD PRECAST PANELS**

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

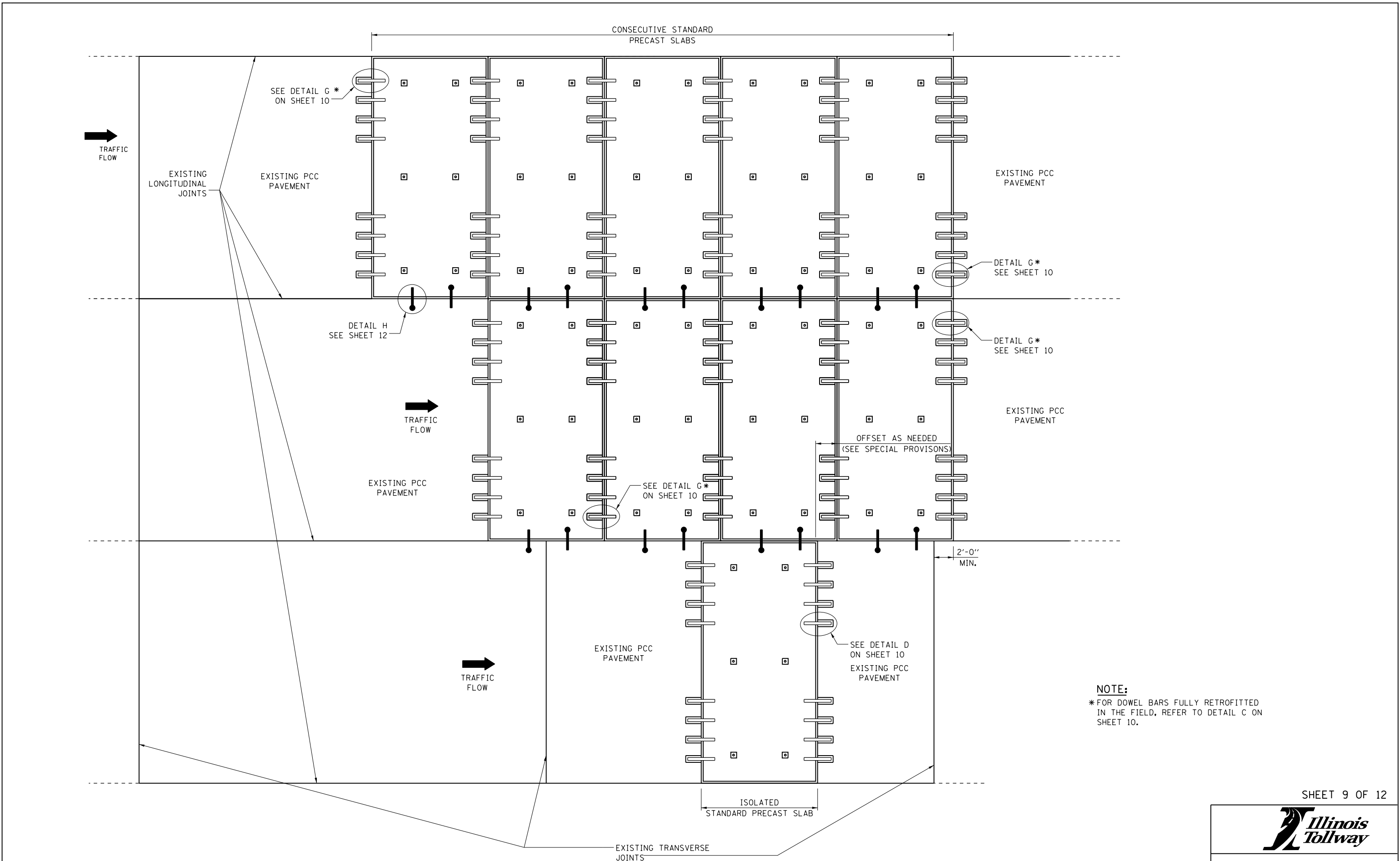
- FOR DOWEL BARS FULLY RETROFITTED IN THE FIELD, REFER TO DETAIL G ON SHEET 10.
- FOR DOWEL BARS TO BE SLID INTO PRE-DRILLED HOLES IN THE FIELD, REFER TO DETAIL G ON SHEET 10.

*Paul Kovacs*  
APPROVED, CHIEF ENGINEERING OFFICER DATE 5-1-2009

SHEET 8 OF 12

PRECAST PAVEMENT SLABS

STANDARD A18-05



**NOTE:**  
 \* FOR DOWEL BARS FULLY RETROFITTED  
 IN THE FIELD, REFER TO DETAIL C ON  
 SHEET 10.

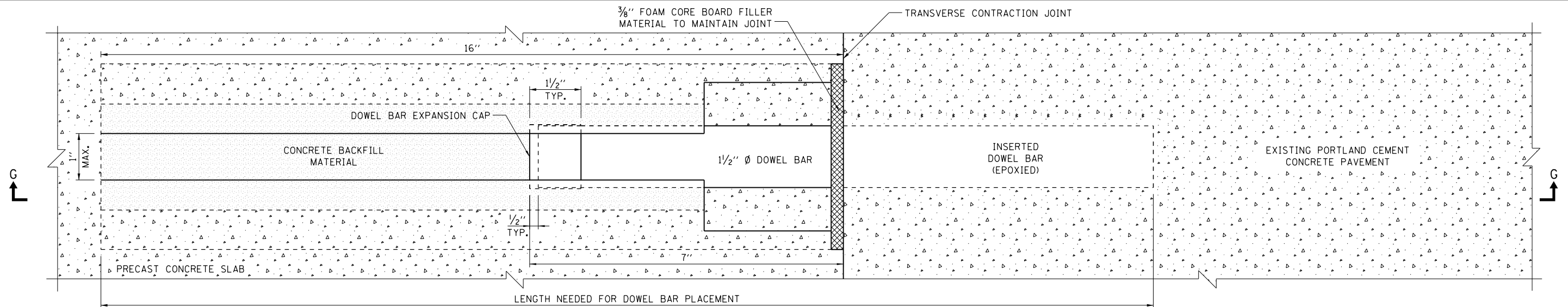


PRECAST PAVEMENT SLABS

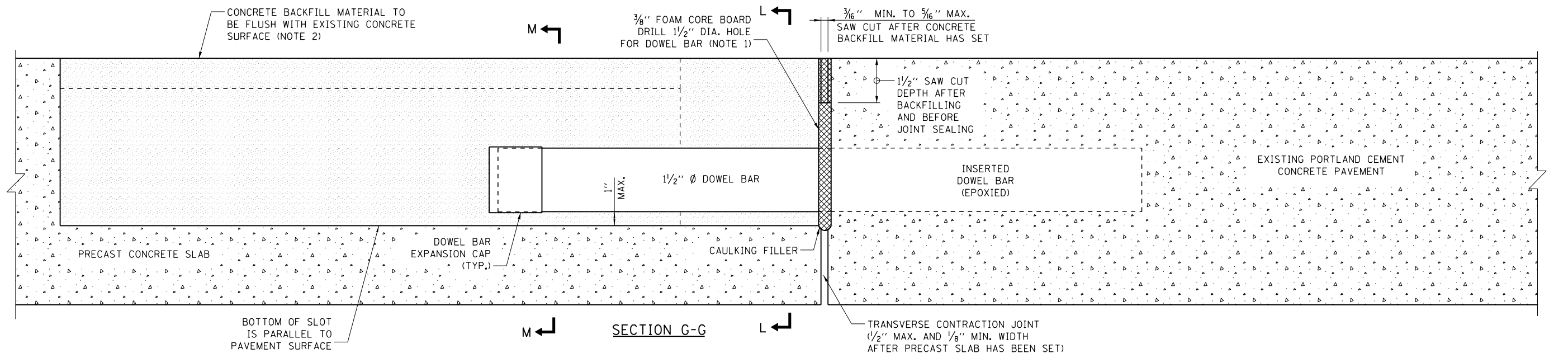
STANDARD A18-05

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 APPROVED, CHIEF ENGINEERING OFFICER  
 DATE 5-1-2009

INSTALLATION OF CONSECUTIVE STANDARD PRECAST SLABS



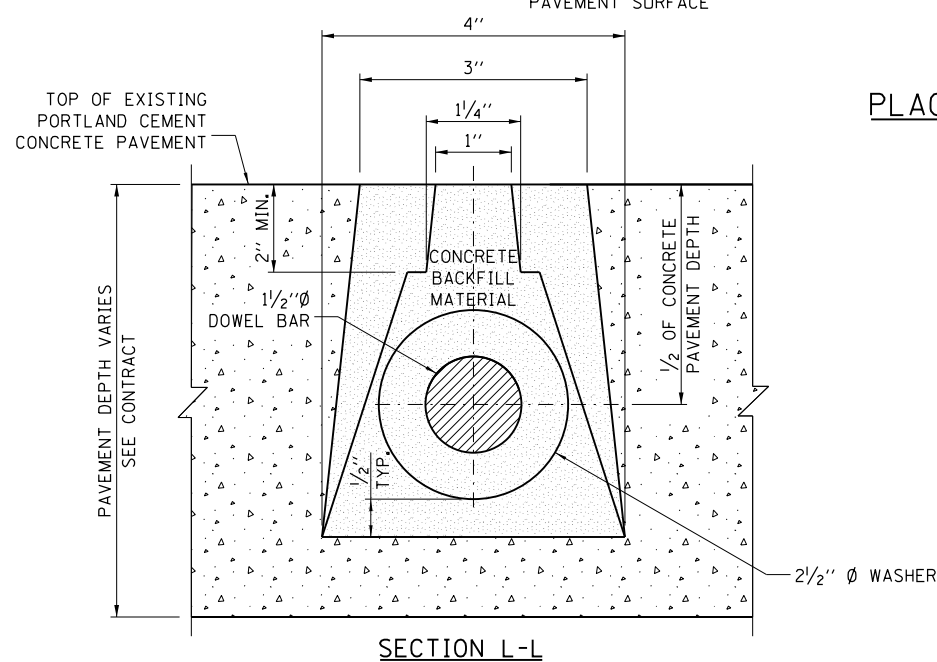
PLAN VIEW



SECTION G-G

**DETAIL G - NARROW MOUTH DOWEL BAR  
PLACEMENT DETAIL FOR ISOLATED PRECAST PANELS**

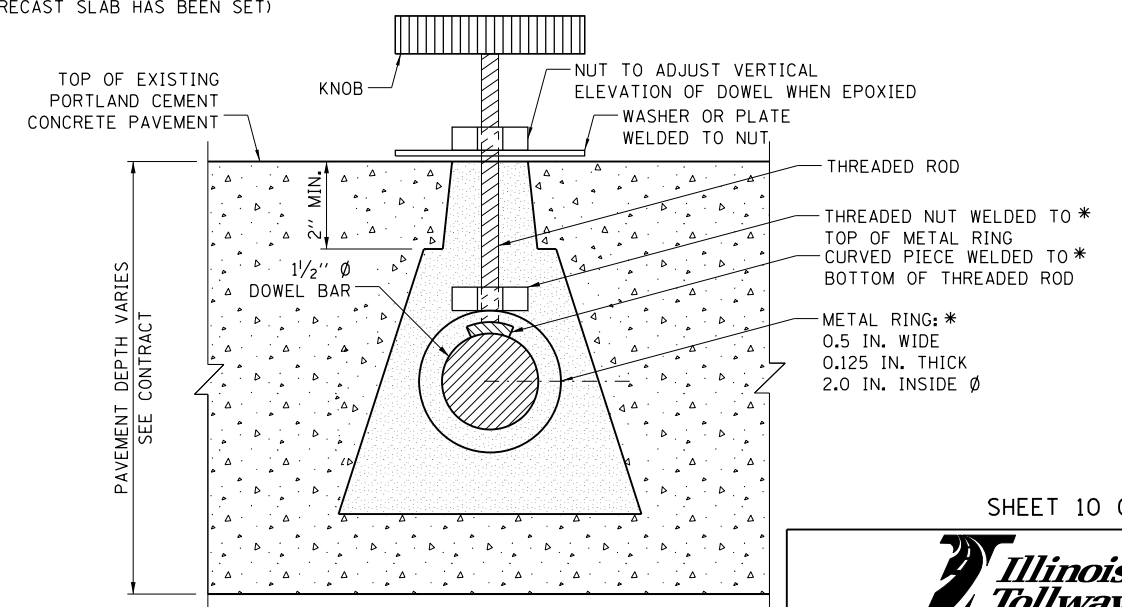
(FOR OPTIONAL APPLICATION WITH ALL ISOLATED  
SLABS IN PLACE OF FULL RETROFITS)



SECTION L-L

**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 M-M

**CLAMP DETAIL FOR SLIDING DOWEL BAR SLOTS**

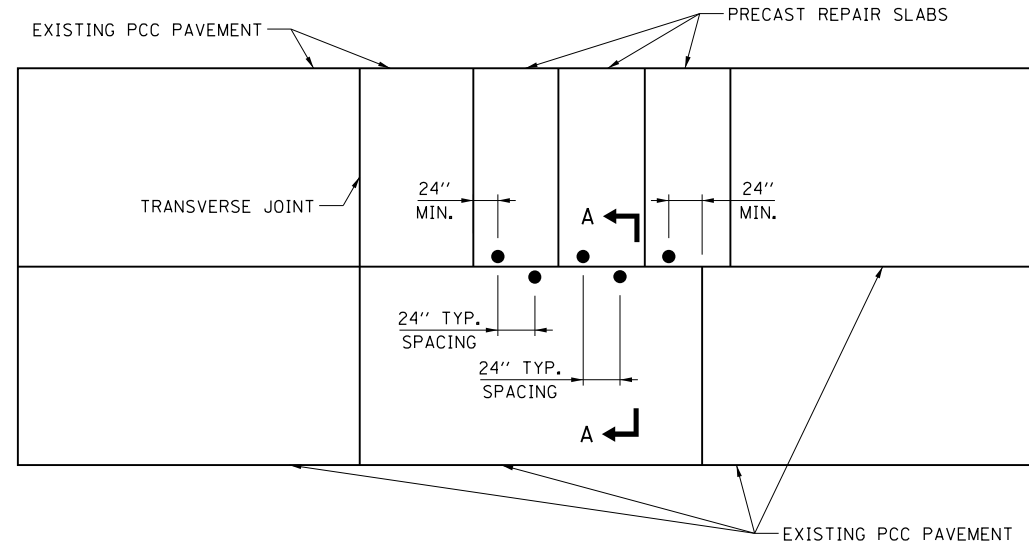
\*METAL RING MAY BE REPLACED WITH A STRONG MAGNET WELDED TO THE THREADED ROD. AT LEAST ONE CLAMP WILL BE NEEDED FOR EACH INSERTED DOWEL BAR TO MAINTAIN ALIGNMENT.

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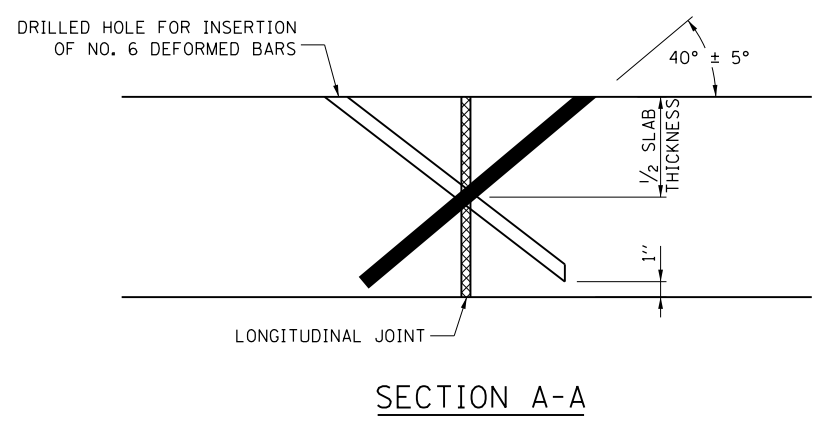








**DETAIL H - LONGITUDINAL TIE BAR  
STITCHING FOR PRECAST PANELS**



**NOTES FOR TIE BAR STITCHING:**

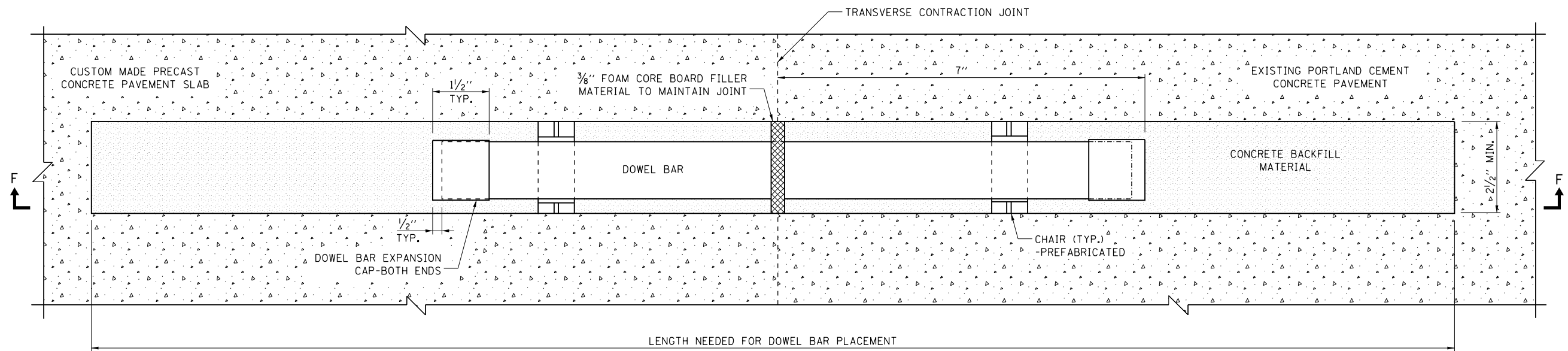
1. DRILL HOLES THAT ARE ORIENTED AT  $40^\circ \pm 5^\circ$  ANGLE TO THE PAVEMENT SURFACE SO THAT THEY INTERSECT THE LONGITUDINAL CRACK OR JOINT AT ABOUT MID-DEPTH. (IT IS IMPORTANT TO START DRILLING THE HOLE AT A CONSISTENT DISTANCE FROM THE JOINT, IN ORDER TO CONSISTENTLY CROSS AT THE MID-DEPTH OF 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 HYDRAULIC 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 TIE 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. INJECT ADHESIVE INTO THE HOLE, LEAVING SOME VOLUME FOR THE BAR TO OCCUPY THE HOLE. (POURING THE ADHESIVE IS ACCEPTABLE FOR SMALL QUANTITIES.)
8. INSERT THE NO. 6 EPOXY COATED DEFORMED TIE BAR INTO THE HOLE, LEAVING ABOUT 1 IN. FROM THE TOP OF BAR TO THE PAVEMENT SURFACE. DEFORMED TIE BARS SHALL BE EPOXY COATED.
9. REMOVE EXCESS ADHESIVE AND FINISH FLUSH WITH THE PAVEMENT SURFACE.



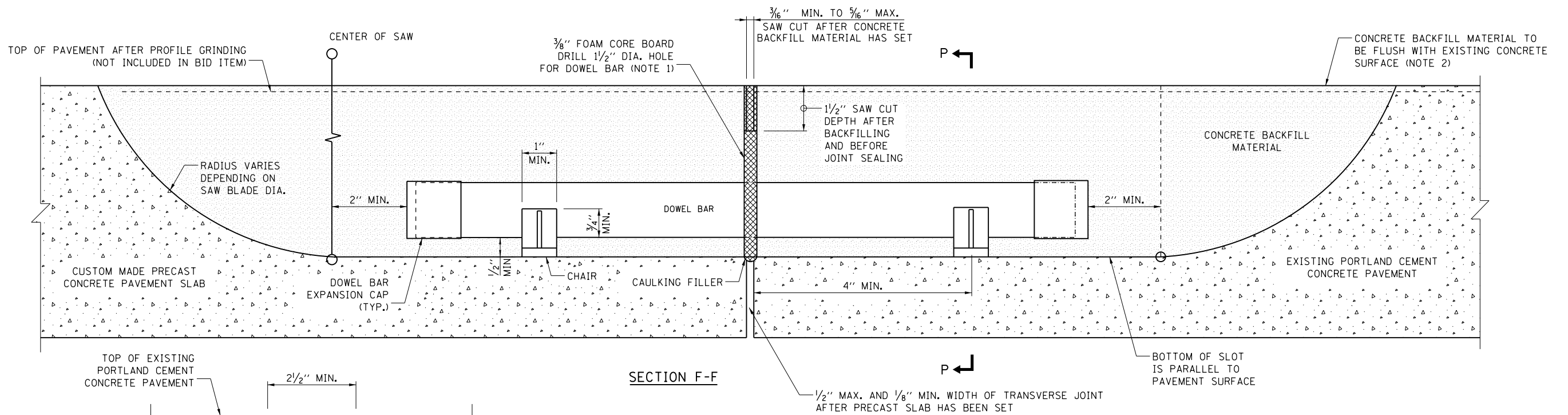
PRECAST PAVEMENT SLABS

STANDARD A18-05

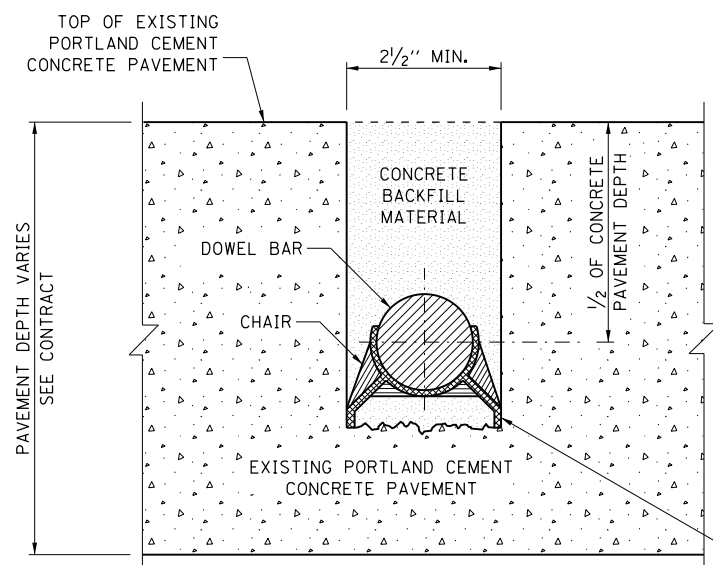
*Paul Kovacs*  
APPROVED, CHIEF ENGINEERING OFFICER DATE 5-1-2009



PLAN VIEW

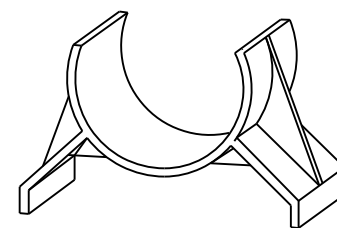


SECTION F-F

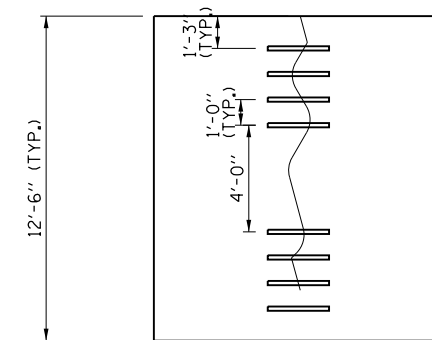


SECTION P-P

**DETAIL C - WIDE MOUTH DOWEL BAR PLACEMENT DETAIL FOR ALL CUSTOM MADE PRECAST PANELS AND OPTIONAL FOR STANDARD SLABS**



CHAIR DETAIL



DOWEL BAR RETROFIT (PLAN VIEW)

**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.

