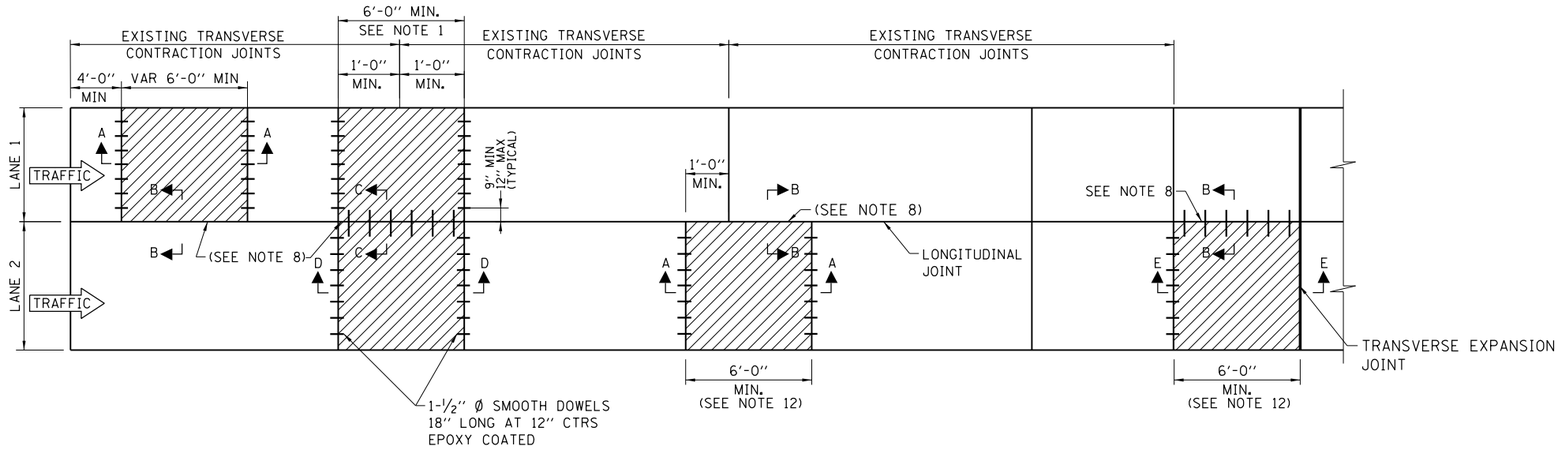
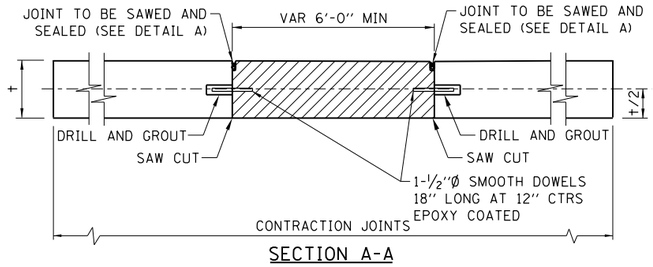
Illinois Tollway Standard Drawing Revisions

Section A	Roadway Pavement	
	Standard	**Modification Summary** **Effective: 03-01-2021**
	A1-09	**CONCRETE PAVEMENT REPAIR FULL DEPTH**
		Updated note 1 to be F-F not E-E.
	A2-08	**ASPHALT OVERLAY REPAIR**
		Updated the min pavement patches lengths and widths. Match updated SP.
	A5-07	**J.P.C. PAVEMENT**
		Updated note 5 to reflect the 18" offset start
	A7-05	**PAVEMENT JOINTS**
		Updated transverse construction joint notes and dimension location left justified of header board.
	A12-02	**JOINTING PLAN ENTRANCE RAMP TERMINAL WITH AUXILIARY LANE**
		Longitudinal construction joint tie bar spacing changed from 24" to 36" centers
		Added sleeper slab call out
		Updated mainline shoulder width from 10' to 11' to the ramp
	A13-04	**JOINTING PLAN EXIT RAMP TERMINAL WITH AUXILIARY LANE**
		Longitudinal construction joint tie bar spacing changed from 24" to 36" centers
		Added sleeper slab call out
		Updated mainline shoulder width from 10' to 11' to the ramp
	A14-07	**JOINTING PLAN ENTRANCE RAMP TERMINAL**
		Updated 12' at mainline.
		Longitudinal construction joint tie bar spacing changed from 24" to 36" centers
		Added sleeper slab call out
		Updated Detail B.
	A15-07	**JOINTING PLAN EXIT RAMP TERMINAL**
		Updated 12' at mainline.
		Updated Detail C.
		Longitudinal construction joint tie bar spacing changed from 24" to 36" centers
		Added sleeper slab call out
	A16-07	**JOINTING PLAN PARALLEL EXIT RAMP TERMINAL LOOP RAMP ONLY**
		Longitudinal construction joint tie bar spacing changed from 24" to 36" centers
		Added sleeper slab call out
		Updated mainline shoulder width from 10' to 11' to the ramp
	A17-07	**JOINTING PLAN PARALLEL ENTRANCE RAMP TERMINAL LOOP RAMP ONLY**
		Longitudinal construction joint tie bar spacing changed from 24" to 36" centers
		Added sleeper slab call out
		Updated mainline shoulder width from 10' to 11' to the ramp

New Sheet Retired Standard

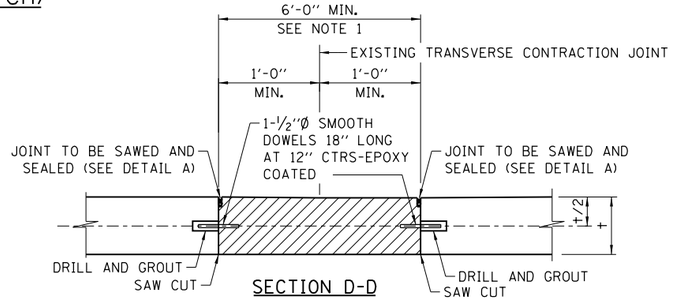


PROPOSED CONCRETE PAVEMENT FULL DEPTH REPAIR TYPICAL ROADWAY PLAN (PAID AS CLASS B PATCH)



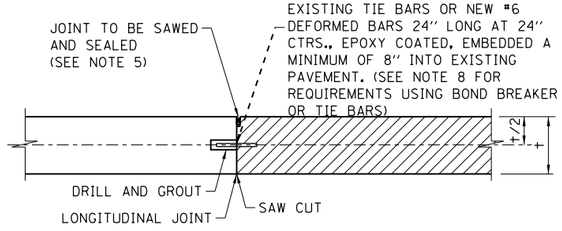
SECTION A-A

REPAIR - FULL DEPTH, ONE LANE



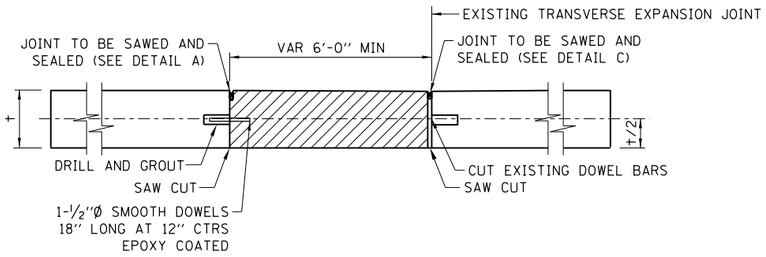
SECTION D-D

REPAIR AT CONTRACTION JOINT



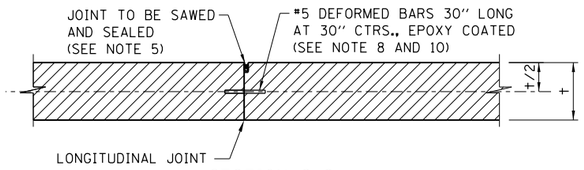
SECTION B-B

REPAIR ALONG LONGITUDINAL JOINT



SECTION E-E

REPAIR - FULL DEPTH, ONE LANE TRANSVERSE EXPANSION JOINT



SECTION C-C

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 F-F). 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 ½ THEIR LENGTH INTO THE EXISTING CONCRETE USING CHEMICAL ADHESIVE AS SPECIFIED.
4. UNLESS OTHERWISE NOTED, TIE BARS SHALL BE EMBEDDED ⅓ 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
- t = CONCRETE PAVEMENT THICKNESS

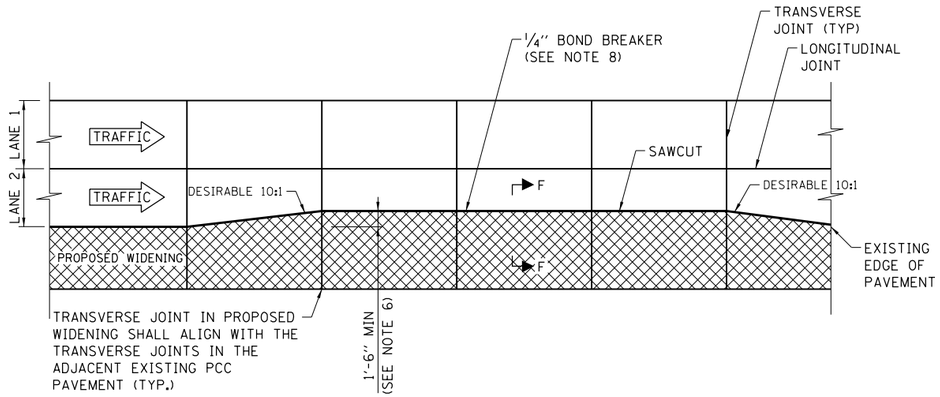
Paul Kovacs
APPROVED ..... DATE 5-1-2009
CHIEF ENGINEERING OFFICER

DATE	REVISIONS
3-1-2018	REMOVED TIE BARS & REVISED NOTES
	TAPER SAW CUT
3-1-2019	
3-1-2020	ADDED TRANSVERSE EXPANSION JOINT
3-1-2021	REVISED NOTES

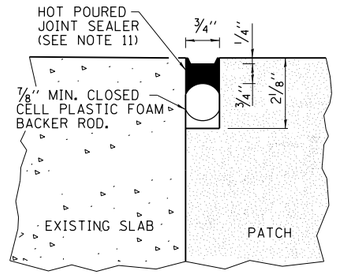
Illinois Tollway

CONCRETE PAVEMENT REPAIR FULL DEPTH

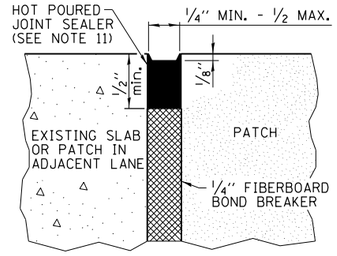
STANDARD A1-09



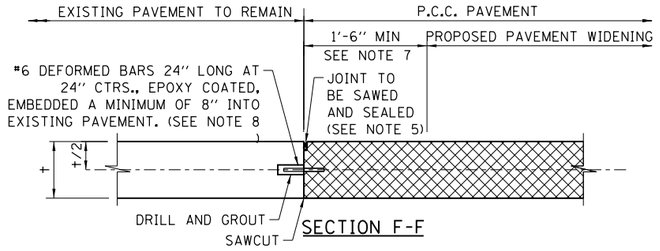
REPLACEMENT OF DETERIORATED PAVEMENT EDGES ADJACENT TO PROPOSED WIDENING (PAID AS PART OF WIDENING)



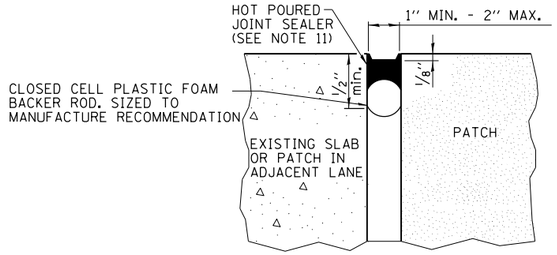
DETAIL A
(TRANSVERSE JOINT)



DETAIL B
(LONGITUDINAL JOINT)



REPLACEMENT OF DETERIORATED PAVEMENT EDGES ADJACENT TO PROPOSED WIDENING



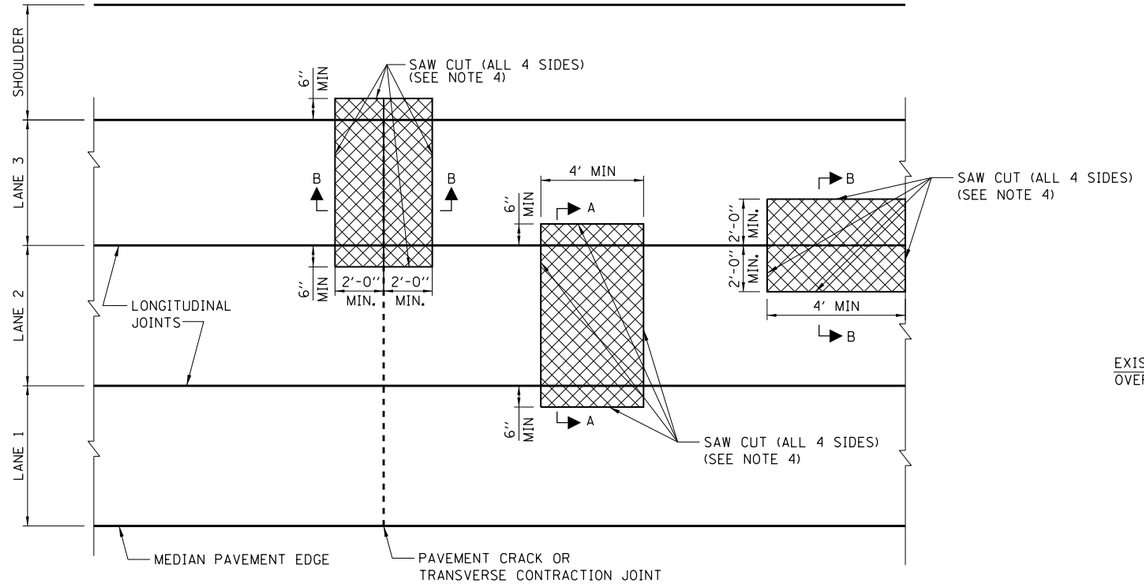
DETAIL C
(TRANSVERSE EXPANSION JOINT)

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

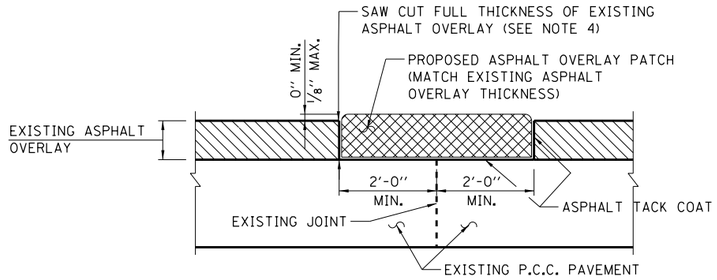
Illinois Tollway

CONCRETE PAVEMENT REPAIR
FULL DEPTH

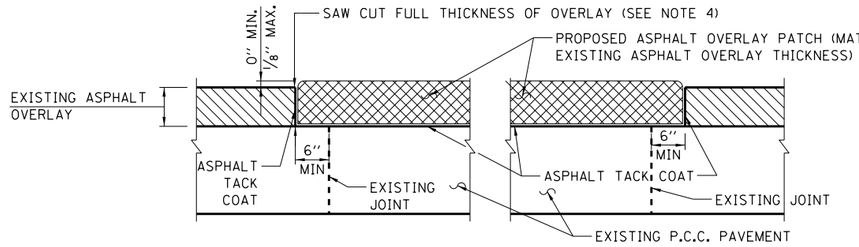
STANDARD A1-09



PROPOSED ASPHALT OVERLAY REPAIR
TYPICAL ROADWAY PLAN



SECTION B-B



SECTION A-A
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

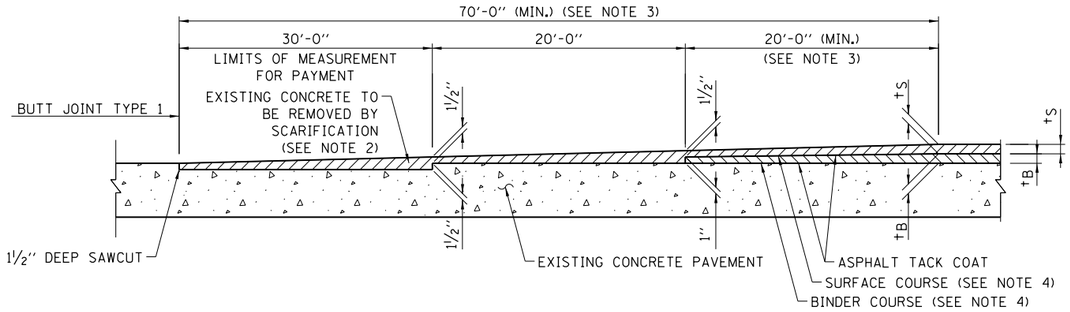
Paul Kovacs
APPROVED ..... CHIEF ENGINEER
DATE 5-1-2009

DATE	REVISIONS
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
3-1-2021	UPDATED MIN PAVEMENT DIMENSIONS

Illinois Tollway

ASPHALT OVERLAY REPAIR

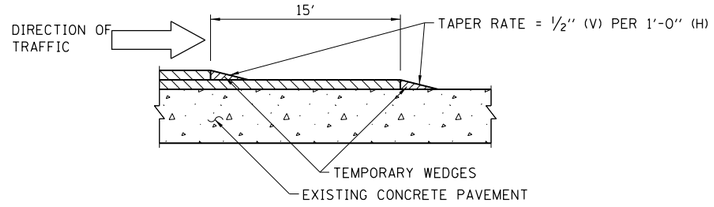
STANDARD A2-08



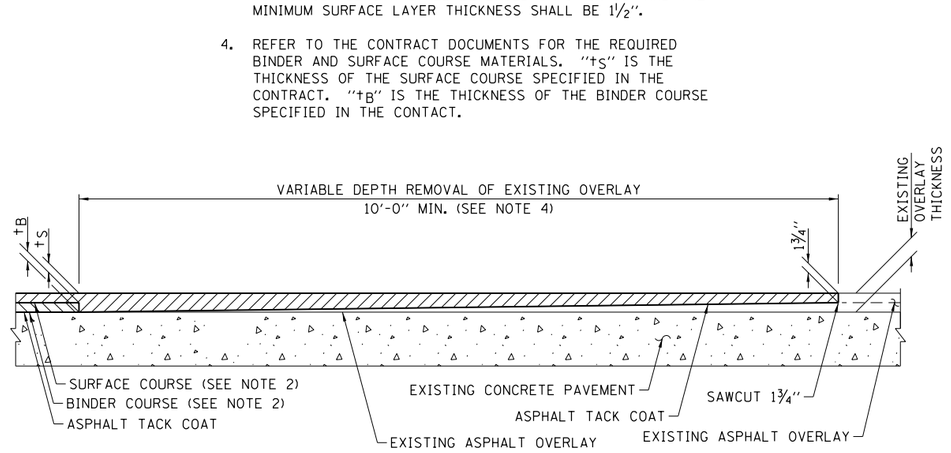
DETAIL OF BUTT JOINT, TYPE 1

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 1½''.
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.



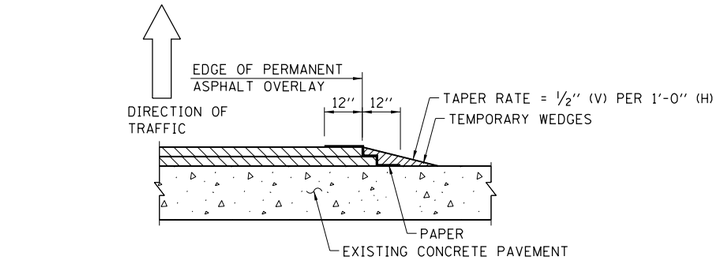
TEMPORARY ASPHALT WEDGE - TRANSVERSE



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 1¾''.



TEMPORARY ASPHALT WEDGE - LONGITUDINAL

NOTES FOR TEMPORARY ASHPHALT 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.

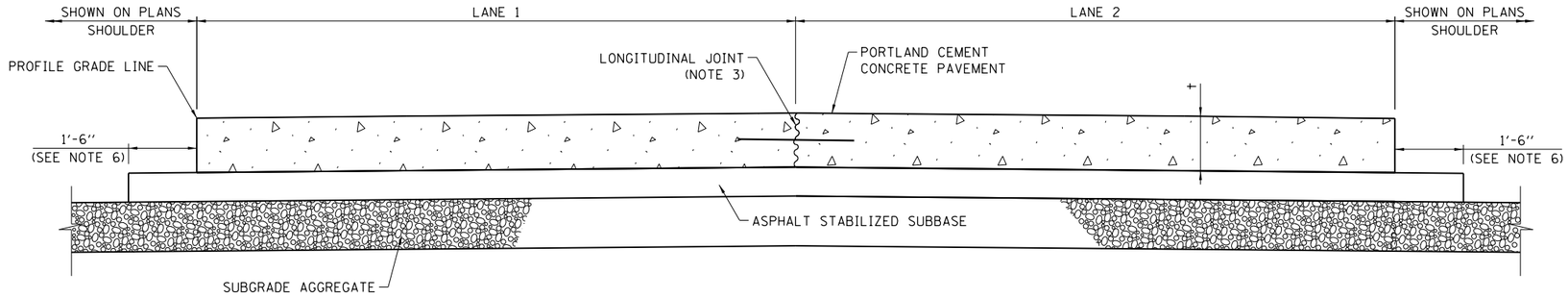
Paul Kovacs
APPROVED ..... DATE 5-1-2009
CHIEF ENGINEERING OFFICER

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

Illinois Tollway

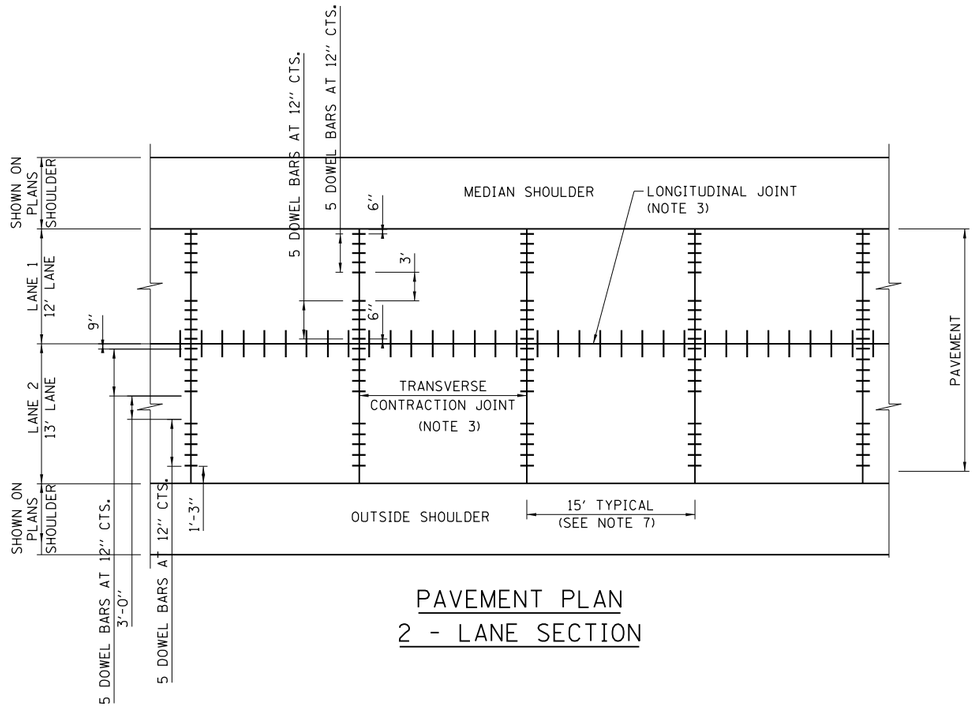
BUTT JOINTS AND TEMPORARY ASPHALT WEDGE

STANDARD A4-05



PAVEMENT CROSS - SECTION (2 LANES)

t= 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 18" 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" FROM DOWEL BARS.

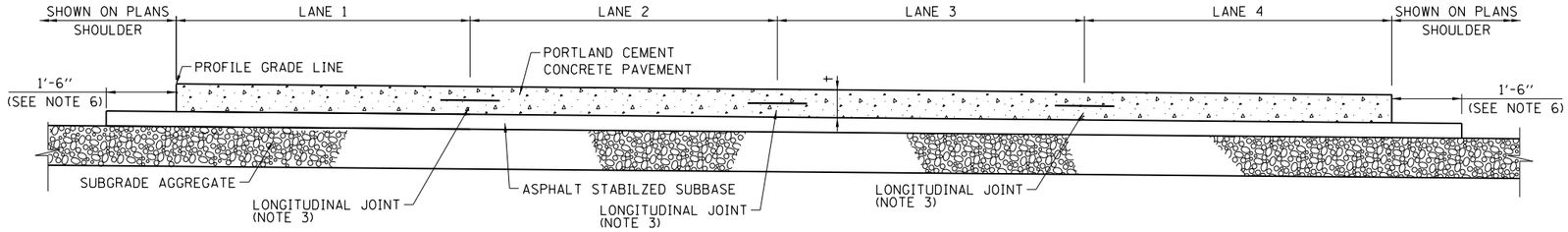
Paul Kovacs
APPROVED ..... DATE 5-1-2009
CHIEF ENGINEERING OFFICER

DATE	REVISIONS
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
03-01-21	UPDATED NOTES

Illinois Tollway

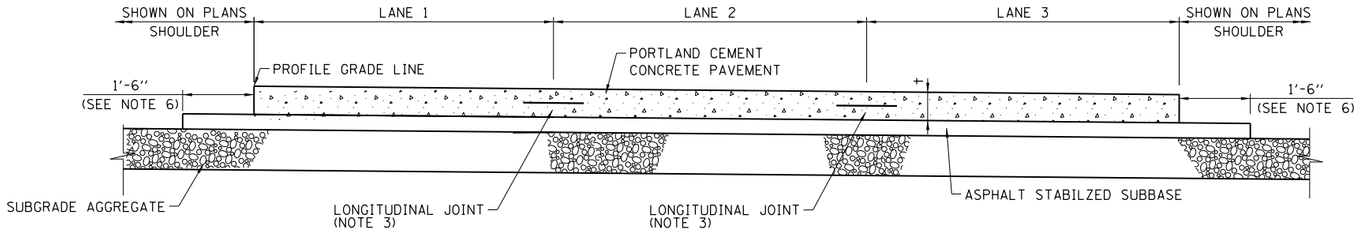
J.P.C. PAVEMENT

STANDARD A5-07

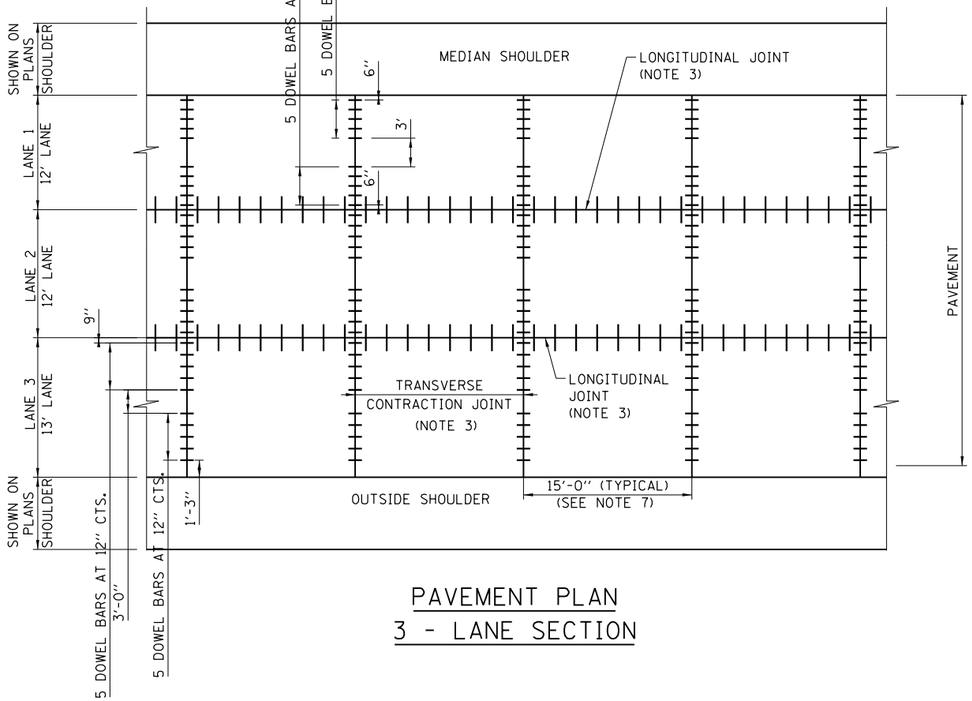


PAVEMENT CROSS - SECTION (4 LANES)

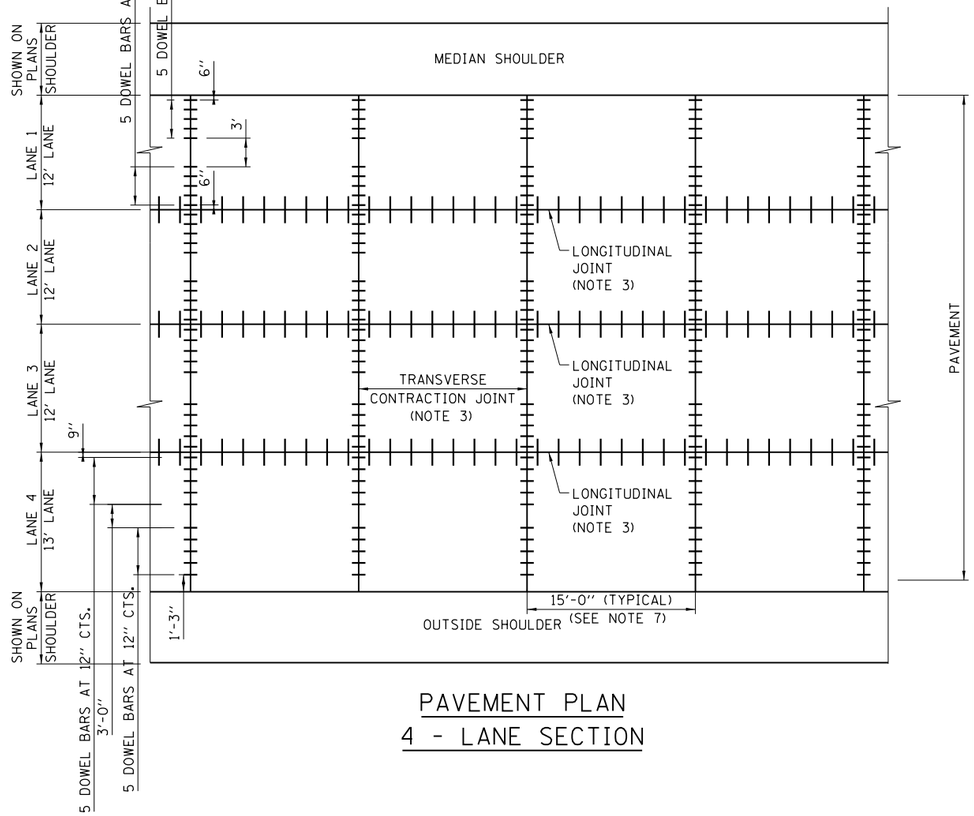
†=CONCRETE PAVEMENT THICKNESS



PAVEMENT CROSS - SECTION (3 LANES)



PAVEMENT PLAN
3 - LANE SECTION



PAVEMENT PLAN
4 - LANE SECTION

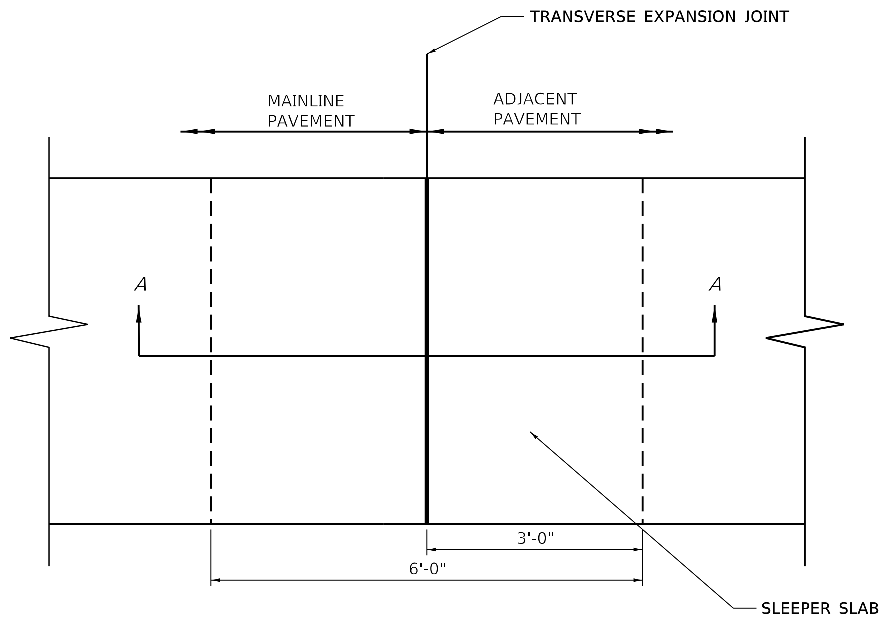
SEE SHEET 1 IN THIS SERIES FOR GENERAL NOTES.

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

Illinois Tollway

J.P.C. PAVEMENT

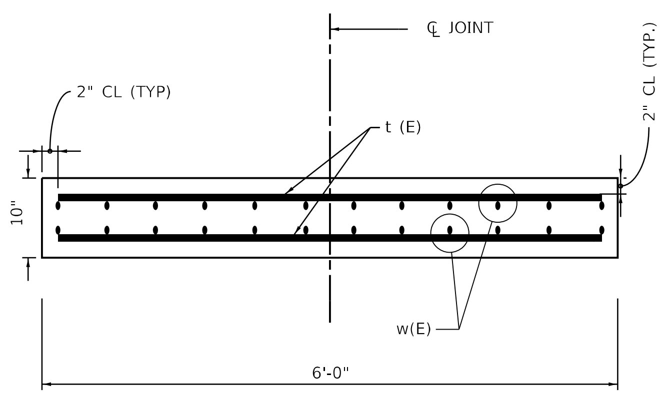
STANDARD A5-07



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.

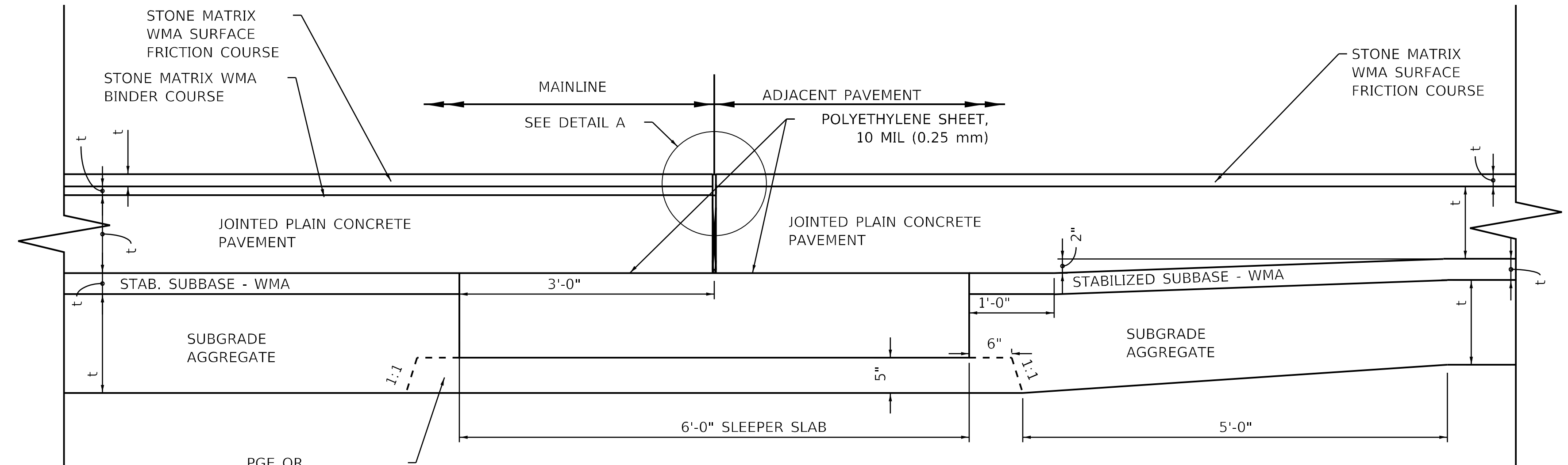


SLEEPER SLAB SECTION

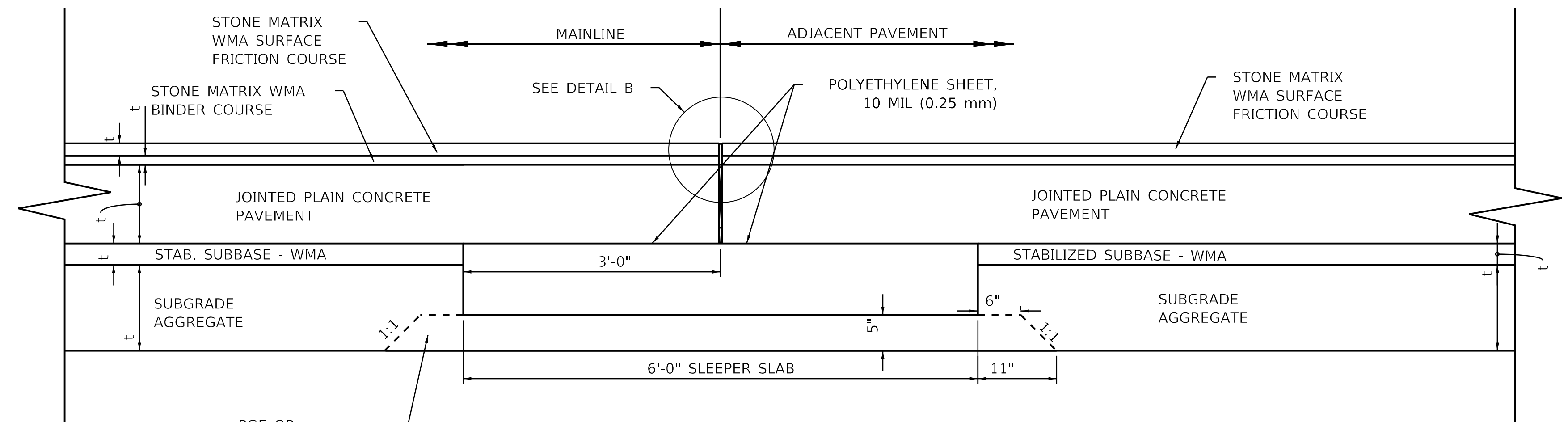
Bar	No.	Size	Length
t(E)	XX	#4	5'-8"
w(E)	XX	#5	XX

SLEEPER SLAB SECTION NOTES

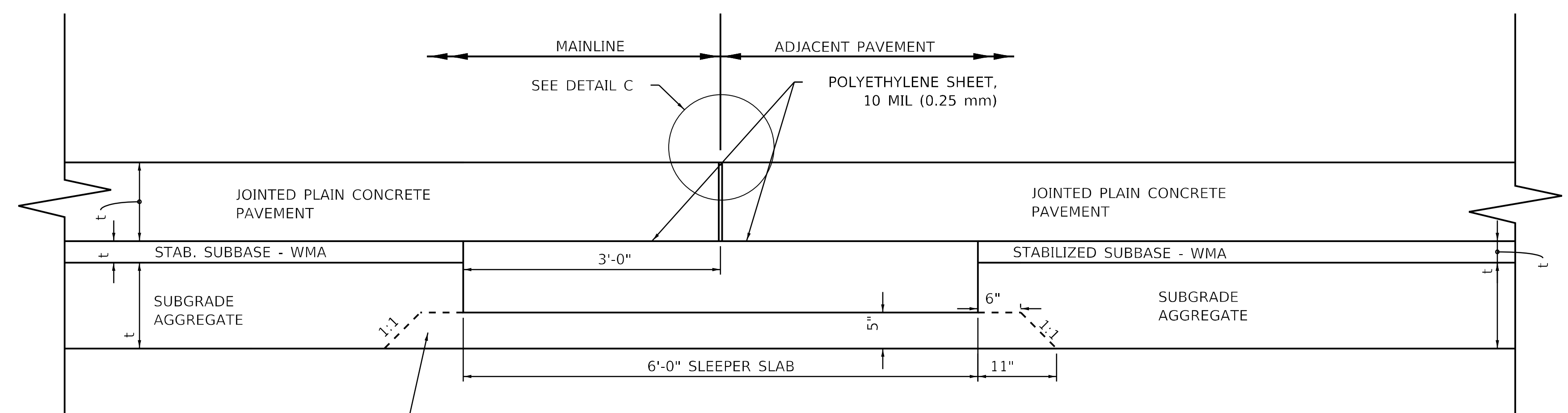
1. t(E) BARS SHALL BE PLACED AT 12" CTS.
2. w(E) NUMBER AND LENGTH DEPEND ON WIDTH OF ROADWAY.
3. USE 2'-8" MIN LAP FOR #4 BARS. USE 4-0" MIN. LAP FOR #5 BARS.



SECTION A-A
PAVEMENT TRANSITION



SECTION A-A
ASPHALT OVERLAY



SECTION A-A
CONCRETE

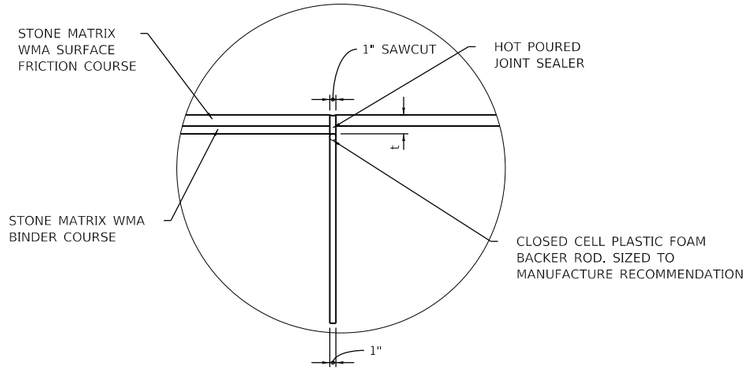
APPROVED BY: Paul Kovacs
CHIEF ENGINEERING OFFICER
DATE: 02/17/2019

REVISIONS	
DATE	DESCRIPTION
3-01-2021	UPDATED NOTES
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

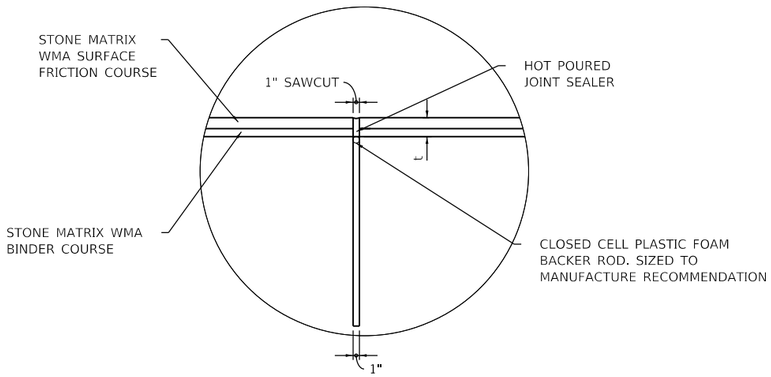
Illinois Tollway

PAVEMENT JOINTS

VERSION: 2021-03 | STANDARD: A7-05 | SHEET: 1 OF 2



DETAIL A



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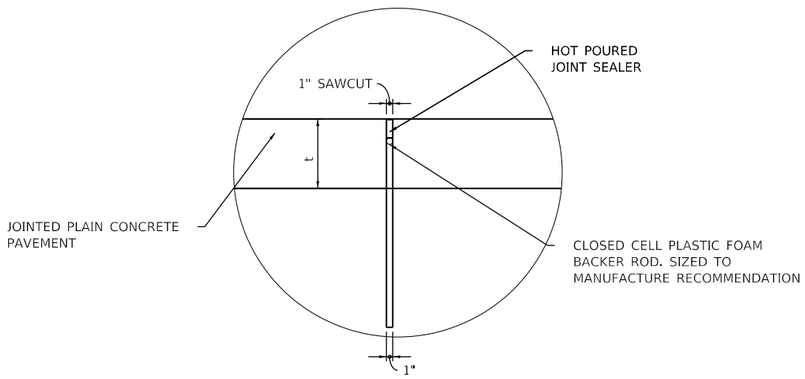
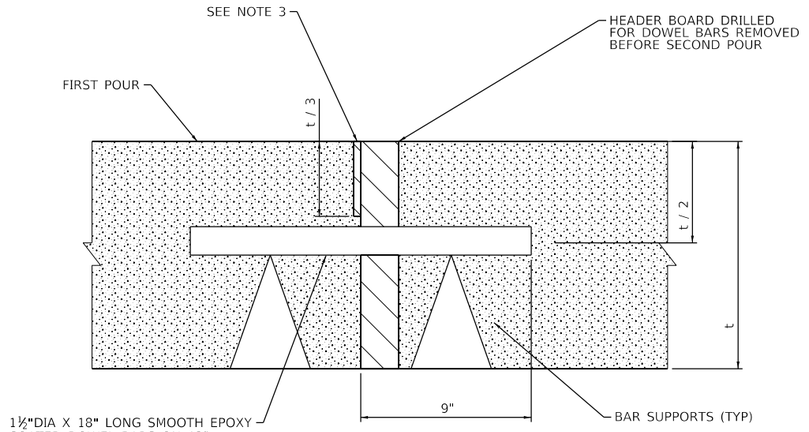


DETAIL C



TRANSVERSE CONSTRUCTION JOINT
(JOINTED PLAIN CONCRETE PAVEMENT)

GENERAL NOTES:

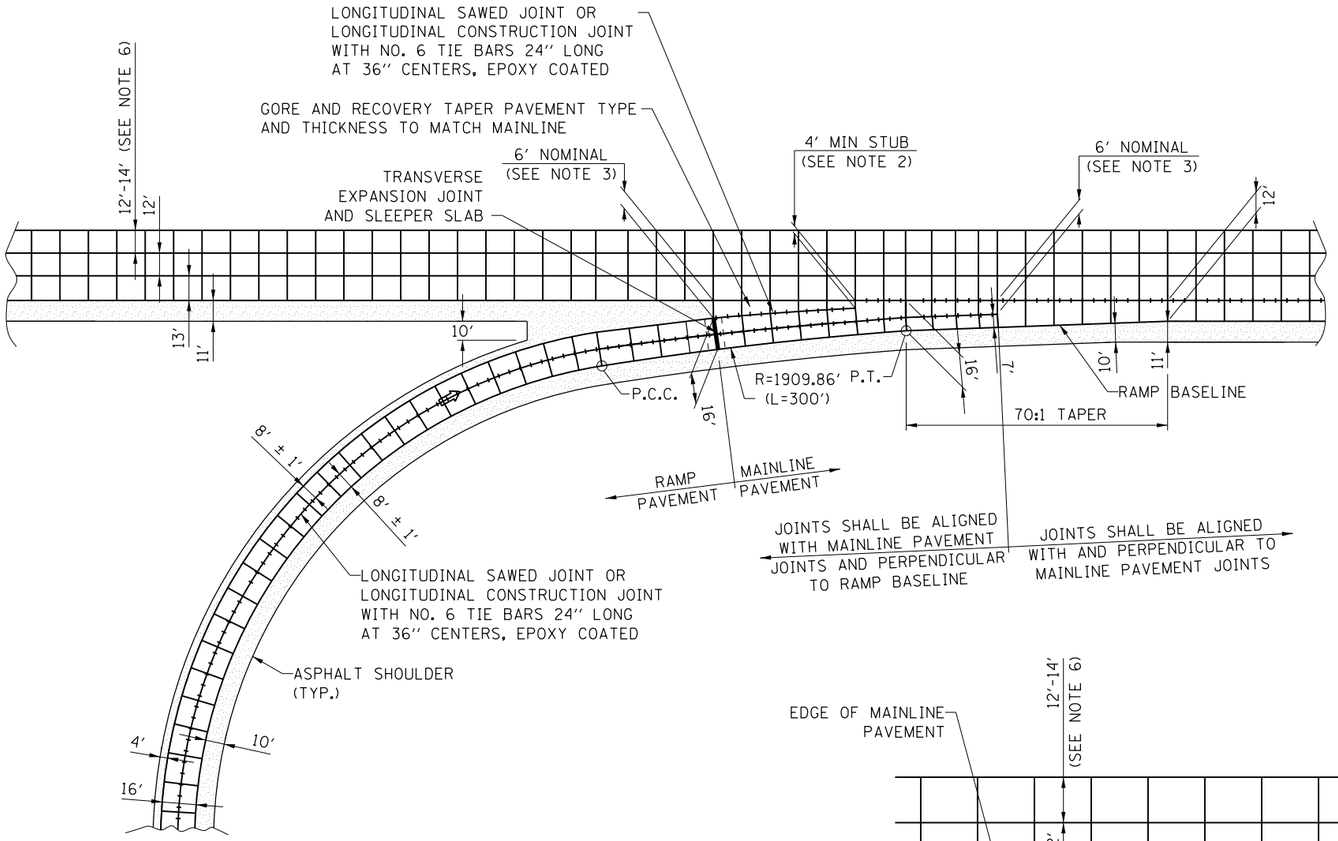
1. ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SHOWN.
2. t = PAVEMENT THICKNESS.
3. A ⅜" WIDE SAW CUT SHALL BE PROVIDED AFTER THE SECOND POUR FOR PAVEMENT CRACK CONTROL. MINIMUM DEPTH SHALL BE t/3.

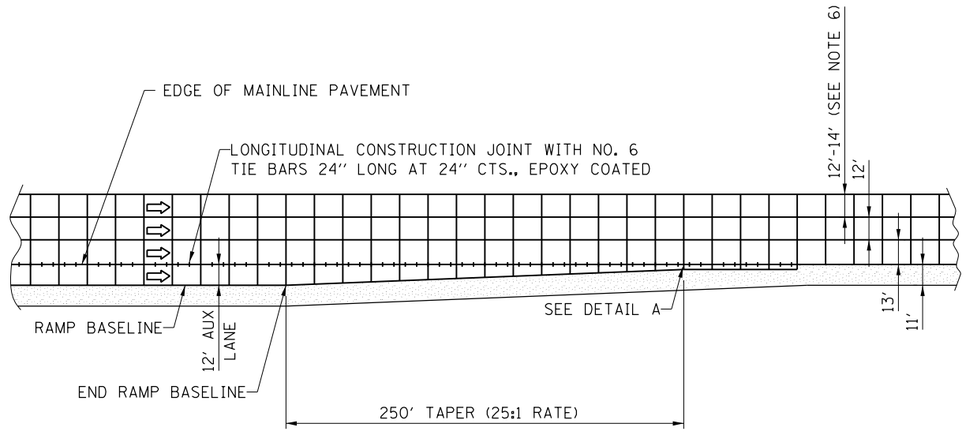
APPROVED BY: Paul Kovacs
CHIEF ENGINEERING OFFICER
DATE: 02/17/2019

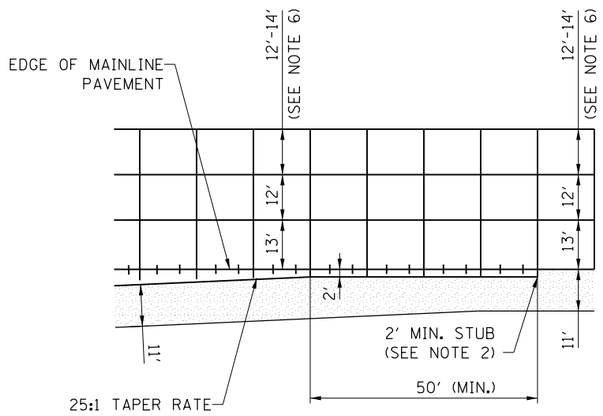
Illinois Tollway

PAVEMENT JOINTS

VERSION:	STANDARD:	SHEET:
2021-03	A7-05	2 OF 2







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.

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

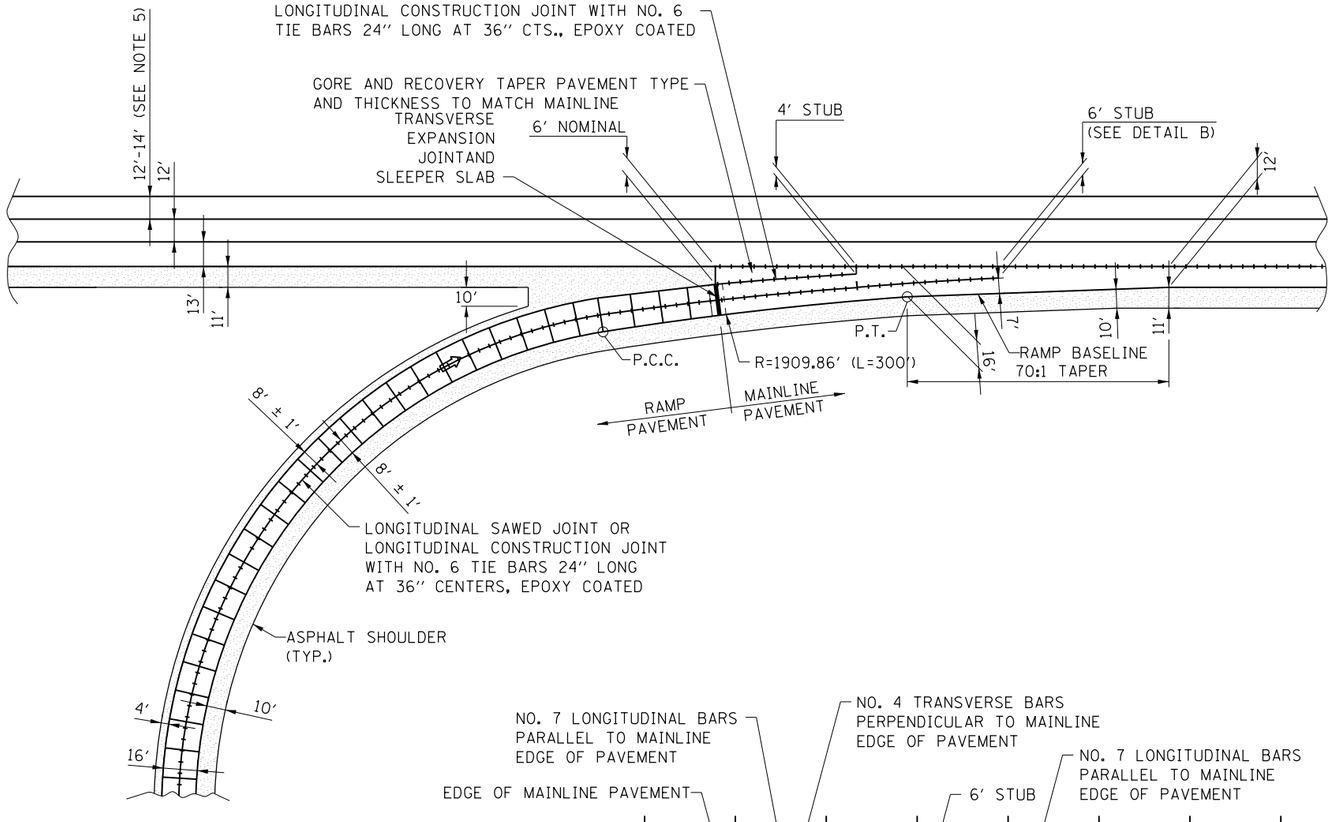
JOINTED PCC RAMP ADJACENT TO JOINTED PCC MAINLINE PAVEMENT

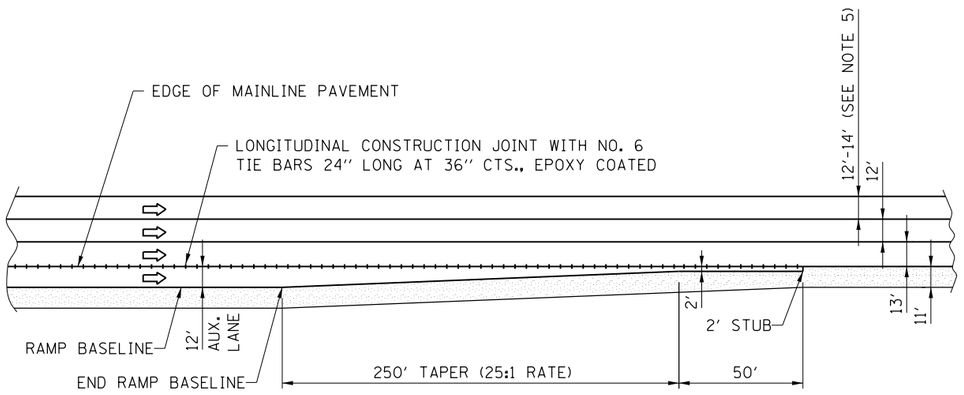
DATE	REVISIONS
3-1-2020	UPDATED DIMENSIONS
3-1-2021	TIE BARS AT 36" CENTERS
	UPDATED SHOULDER TO 11'

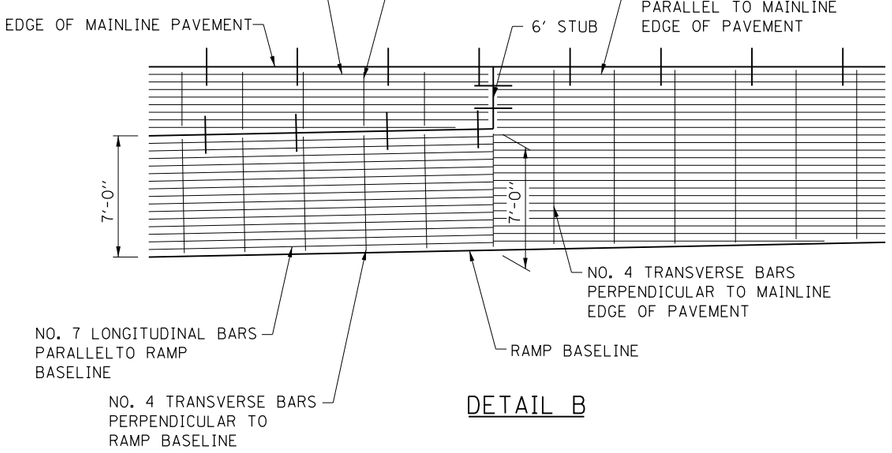
Illinois Tollway

JOINTING PLAN
ENTRANCE RAMP TERMINAL
WITH AUXILIARY LANE

STANDARD A12-02







DETAIL B

NOTES:

1. ALL PAVEMENT JOINTS SHALL BE DETAILED AS SHOWN ON ILLINOIS TOLLWAY STANDARD DRAWING A7 AND IDOT HIGHWAY STANDARD 420001.
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.

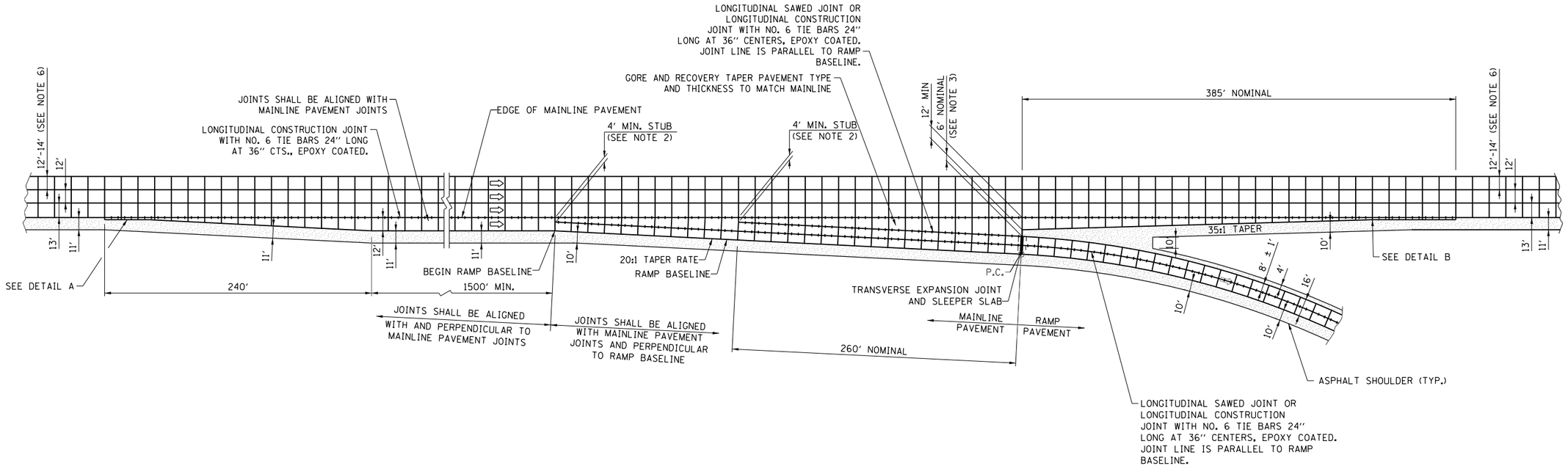
Paul Kovacs
APPROVED ..... DATE 3-1-2019
CHIEF ENGINEERING OFFICER

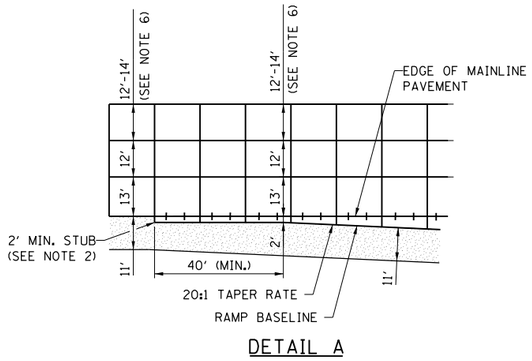
JOINTED PCC RAMP ADJACENT TO C.R.C. MAINLINE PAVEMENT

Illinois Tollway

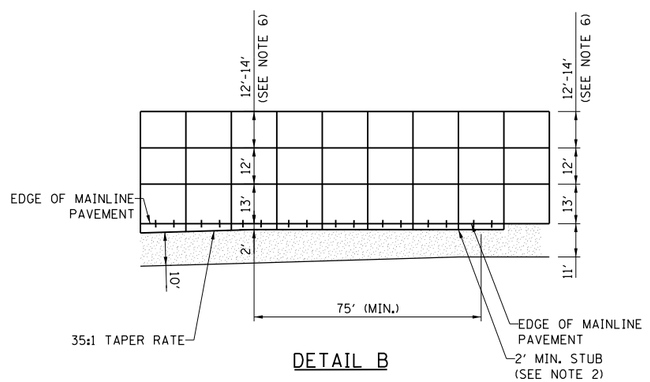
JOINTING PLAN
ENTRANCE RAMP TERMINAL
WITH AUXILIARY LANE

STANDARD A12-02





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.

JOINTED PCC RAMP ADJACENT TO JOINTED PCC MAINLINE PAVEMENT

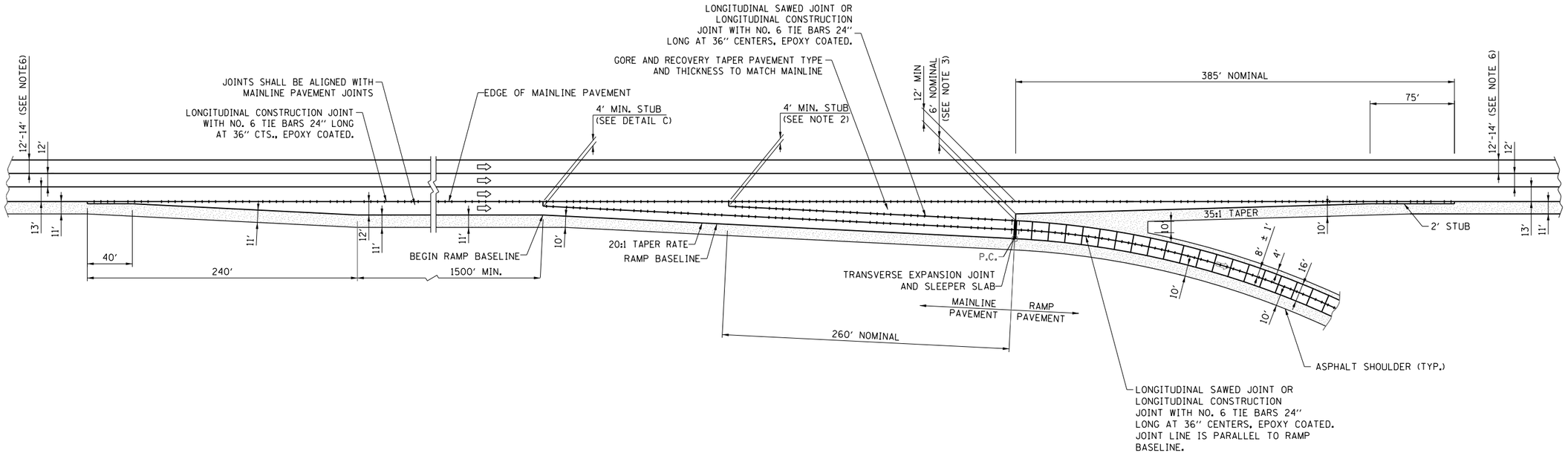
Illinois Tollway

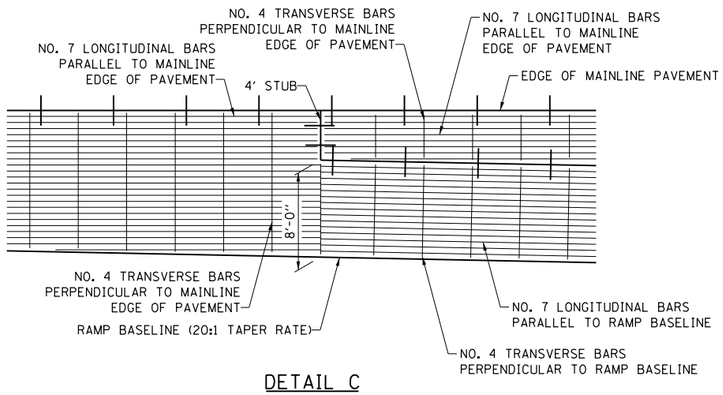
DATE	REVISIONS
3-01-2018	MOVED RAMP PAVEMENT
3-01-2019	MODIFIED DETAILS
	ADDED PCC ADJ TO CRC
3-01-2020	UPDATED 12' MIN AT GORE
3-01-2021	TIE BARS AT 36" CENTERS

JOINTING PLAN
EXIT RAMP TERMINAL
WITH AUXILIARY LANE

STANDARD A13-04

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





DETAIL C

NOTES;

1. ALL PAVEMENT JOINTS SHALL BE DETAILED AS SHOWN ON ILLINOIS TOLLWAY STANDARD DRAWING A7 AND IDOT HIGHWAY STANDARD 420001.
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.

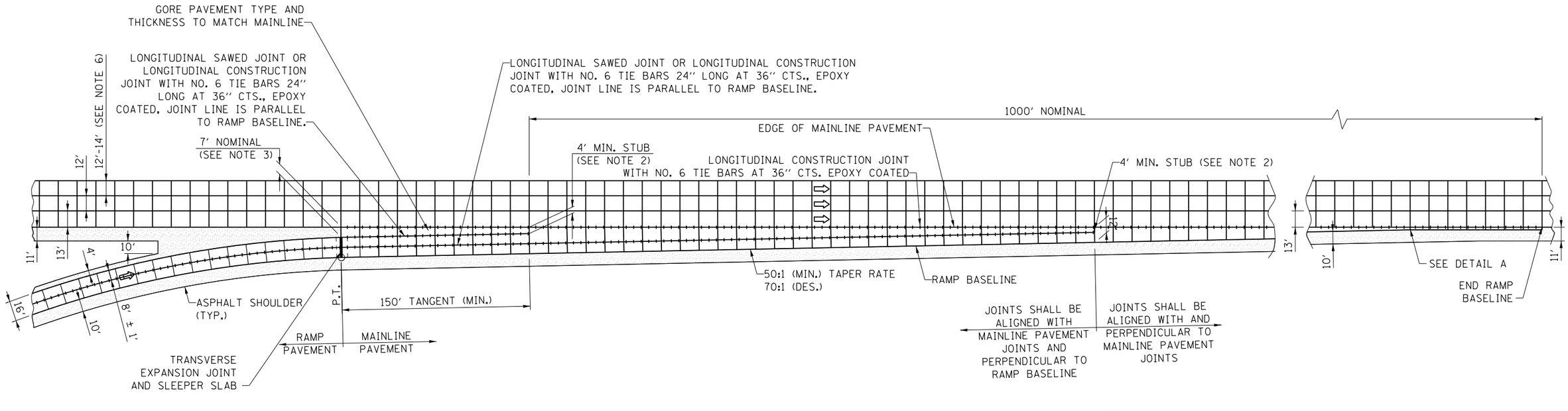
JOINTED PCC RAMP ADJACENT TO C.R.C MAINLINE PAVEMENT

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

Illinois Tollway

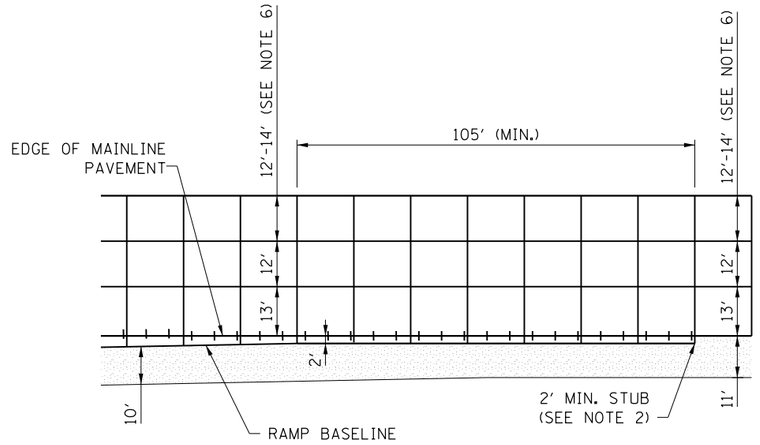
JOINTING PLAN
EXIT RAMP TERMINAL
WITH AUXILIARY LANE

STANDARD A13-04



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

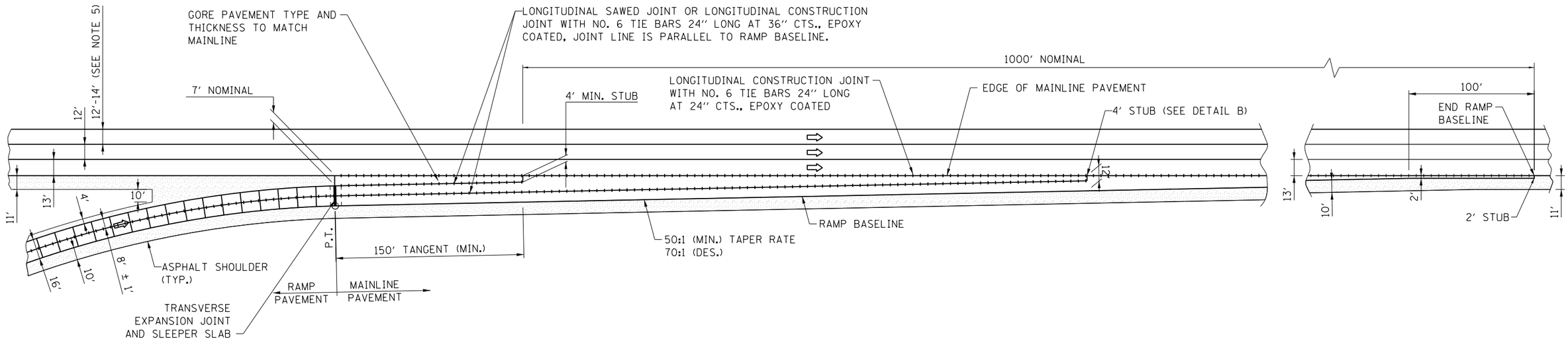
Paul Kovacs
APPROVED ..... DATE 1-31-2015
CHIEF ENGINEERING OFFICER

Illinois Tollway

DATE	REVISIONS
3-01-2018	MOVED RAMP PAVEMENT
3-1-2019	UPDATED TAPER DESIRED
3-1-2020	REVISED WITH EPOXY BARS
3-1-2021	UPDATE DETAIL B
	UPDATE 12' AT MAINLINE
	TIE BARS AT 36'' CENTERS

JOINTING PLAN
ENTRANCE RAMP TERMINAL

STANDARD A14-07



NOTES:

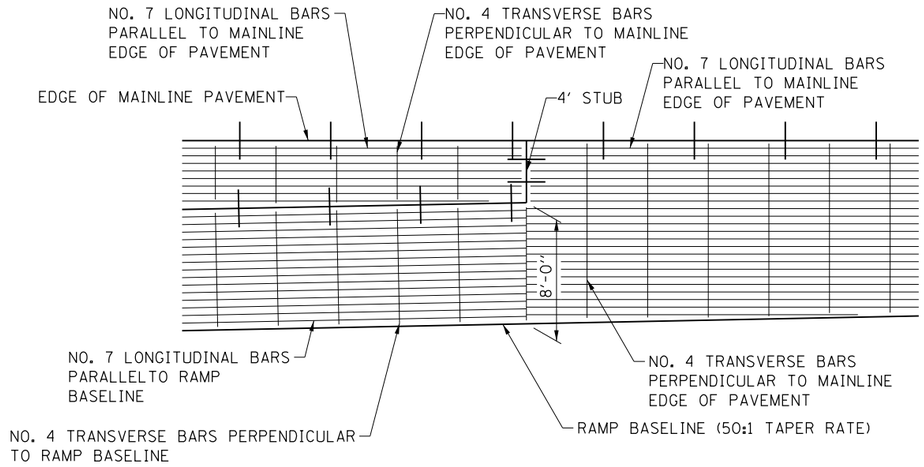
1. ALL PAVEMENT JOINTS SHALL BE DETAILED AS SHOWN ON ILLINOIS TOLLWAY STANDARD DRAWING A7 AND IDOT HIGHWAY STANDARD 420001, EXCEPT EXPANSION JOINT SEALS SHALL BE AS DESCRIBED IN THE ILLINOIS TOLLWAY SPECIAL PROVISION, BONDED PREFORMED JOINT SEAL.

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

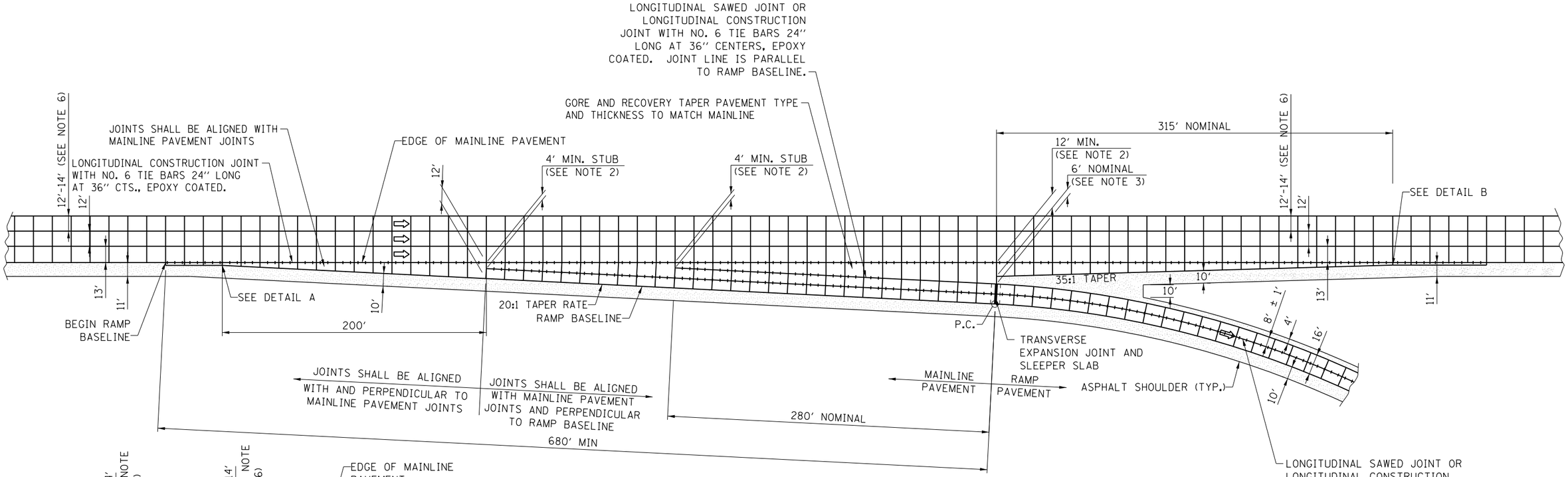
JOINTED PCC RAMP ADJACENT TO JOINTED C.R.C. MAINLINE PAVEMENT

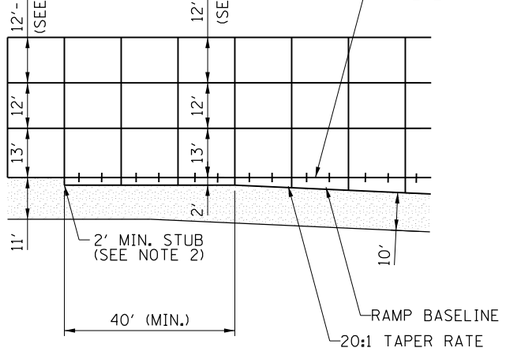
Paul Kovacs
APPROVED. CHIEF ENGINEERING OFFICER DATE 1-31-2015

Illinois Tollway

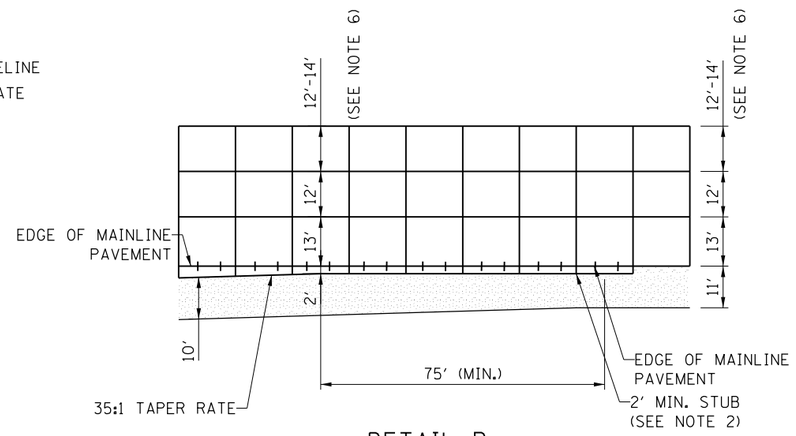
JOINTING PLAN
ENTRANCE RAMP TERMINAL

STANDARD A14-07





DETAIL A



DETAIL B

JOINTED PCC RAMP ADJACENT TO JOINTED PCC MAINLINE PAVEMENT

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.

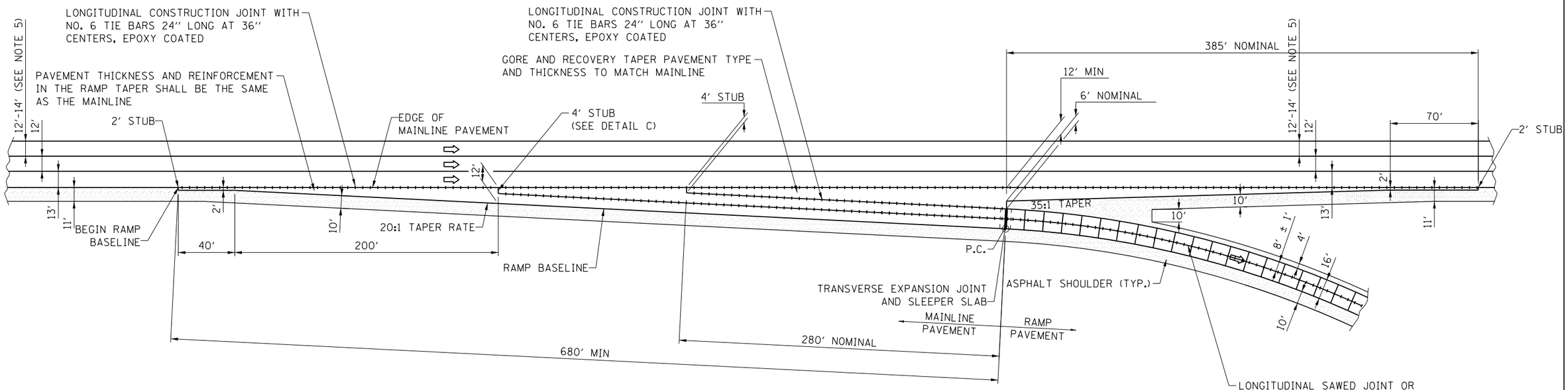
Illinois Tollway

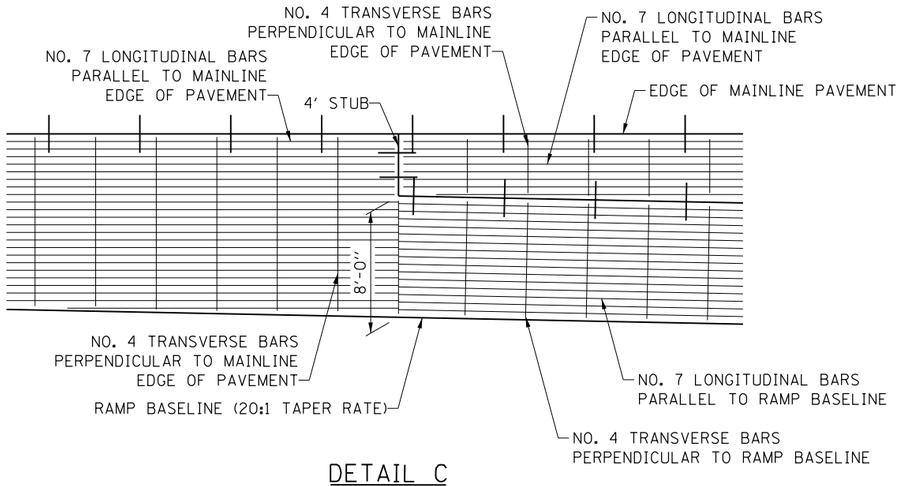
DATE	REVISIONS
3-01-2018	MOVED RAMP PAVEMENT
3-01-2019	UPDATE DETAIL B
	UPDATE 11' MIN STUB
3-01-2020	UPDATE 12' MIN. AT GORE
3-01-2021	UPDATE 12' AT MAINLINE
	TIE BARS AT 36" CENTERS

JOINTING PLAN
EXIT RAMP TERMINAL

STANDARD A15-07

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





DETAIL C

NOTES:

1. ALL PAVEMENT JOINTS SHALL BE DETAILED AS SHOWN ON ILLINOIS TOLLWAY STANDARD DRAWING A7 AND IDOT HIGHWAY STANDARD 420001.
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.

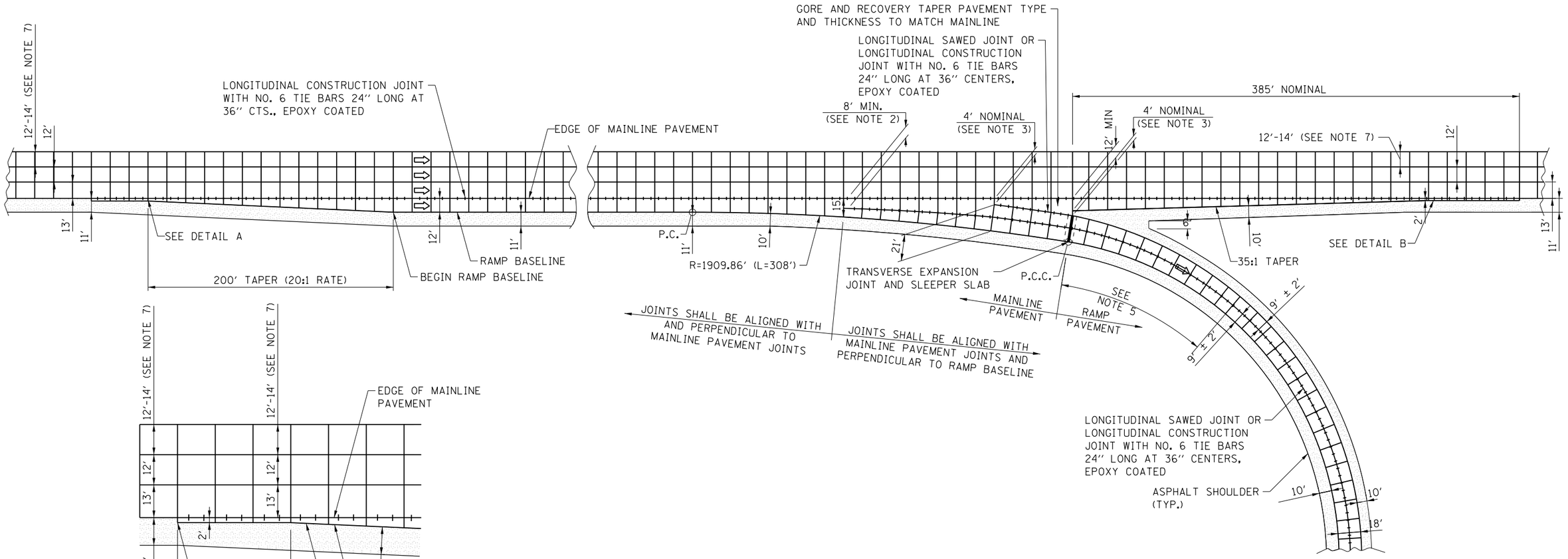
Paul Kovacs
APPROVED ..... DATE 1-31-2015
CHIEF ENGINEERING OFFICER

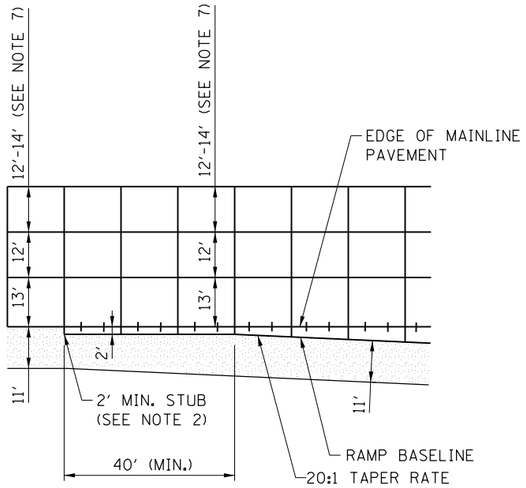
JOINTED PCC RAMP ADJACENT TO C.R.C. MAINLINE PAVEMENT

Illinois Tollway

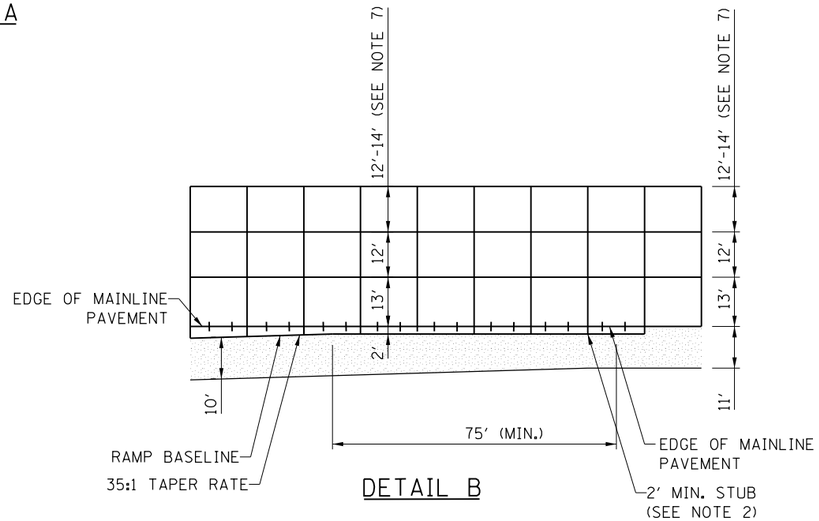
JOINTING PLAN
EXIT RAMP TERMINAL

STANDARD A15-07





DETAIL A



DETAIL B

JOINTED PCC RAMP ADJACENT TO JOINTED PCC MAINLINE PAVEMENT

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. 4' 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. RAMP NARROWS FROM 21' TO 18' IN 150'.
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.

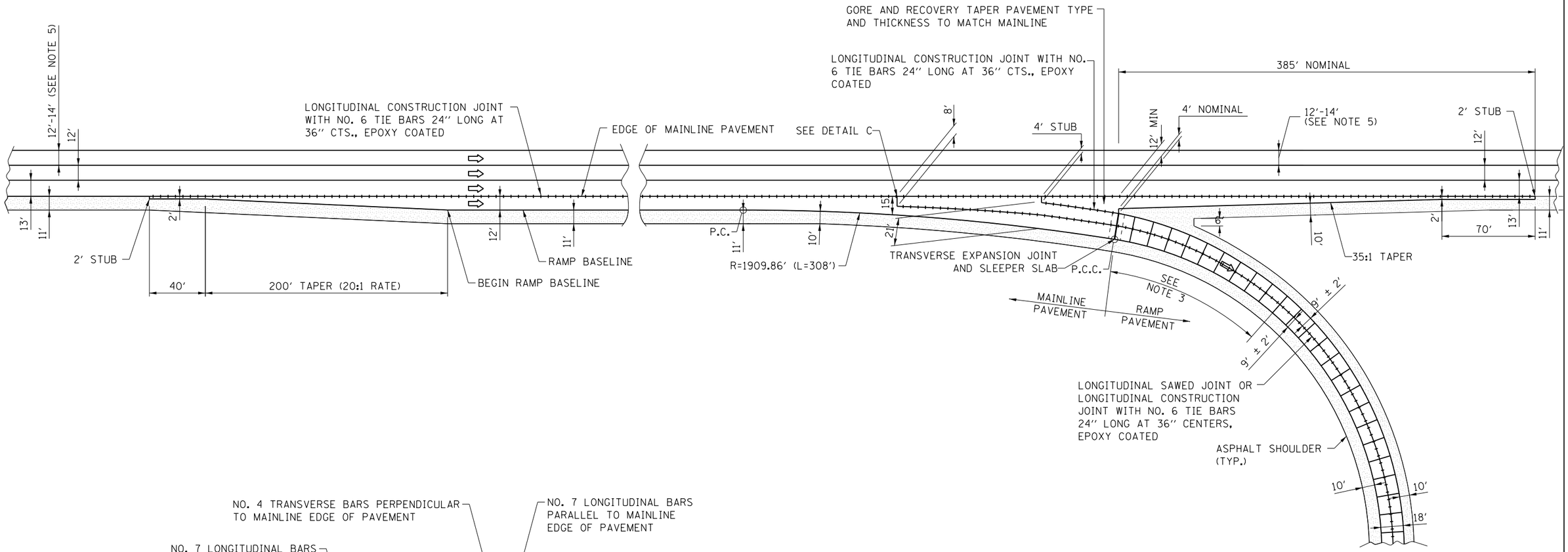
Paul Kovacs
APPROVED ..... DATE 1-31-2015
CHIEF ENGINEERING OFFICER

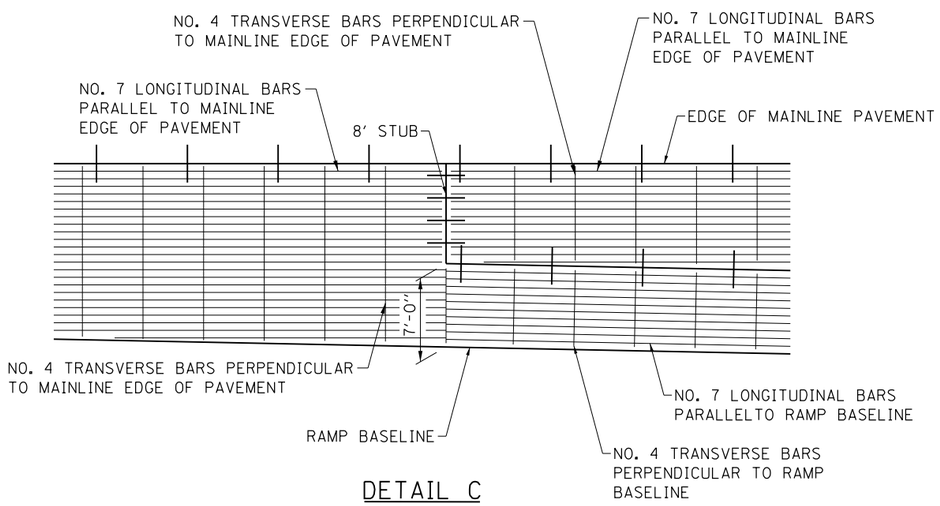
DATE	REVISIONS
3-31-2017	UPDATED NOTES AND REVISED
	RECOVERY TAPER.
	REVISED NOTES
3-01-2018	MOVED RAMP PAVEMENT
3-01-2019	UPDATED DETAIL A AND B
	ADDED 150' TAPER
3-01-2020	UPDATED 12' MIN AT GORE
3-01-2021	TIE BARS AT 36" CENTERS
	UPDATED SHOULDER TO 11'

Illinois Tollway

JOINTING PLAN
PARALLEL EXIT RAMP TERMINAL
LOOP RAMP ONLY

STANDARD A16-07





DETAIL C

NOTES:

1. ALL PAVEMENT JOINTS SHALL BE DETAILED AS SHOWN ON ILLINOIS TOLLWAY STANDARD DRAWING A7 AND IDOT HIGHWAY STANDARD 420001.
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.

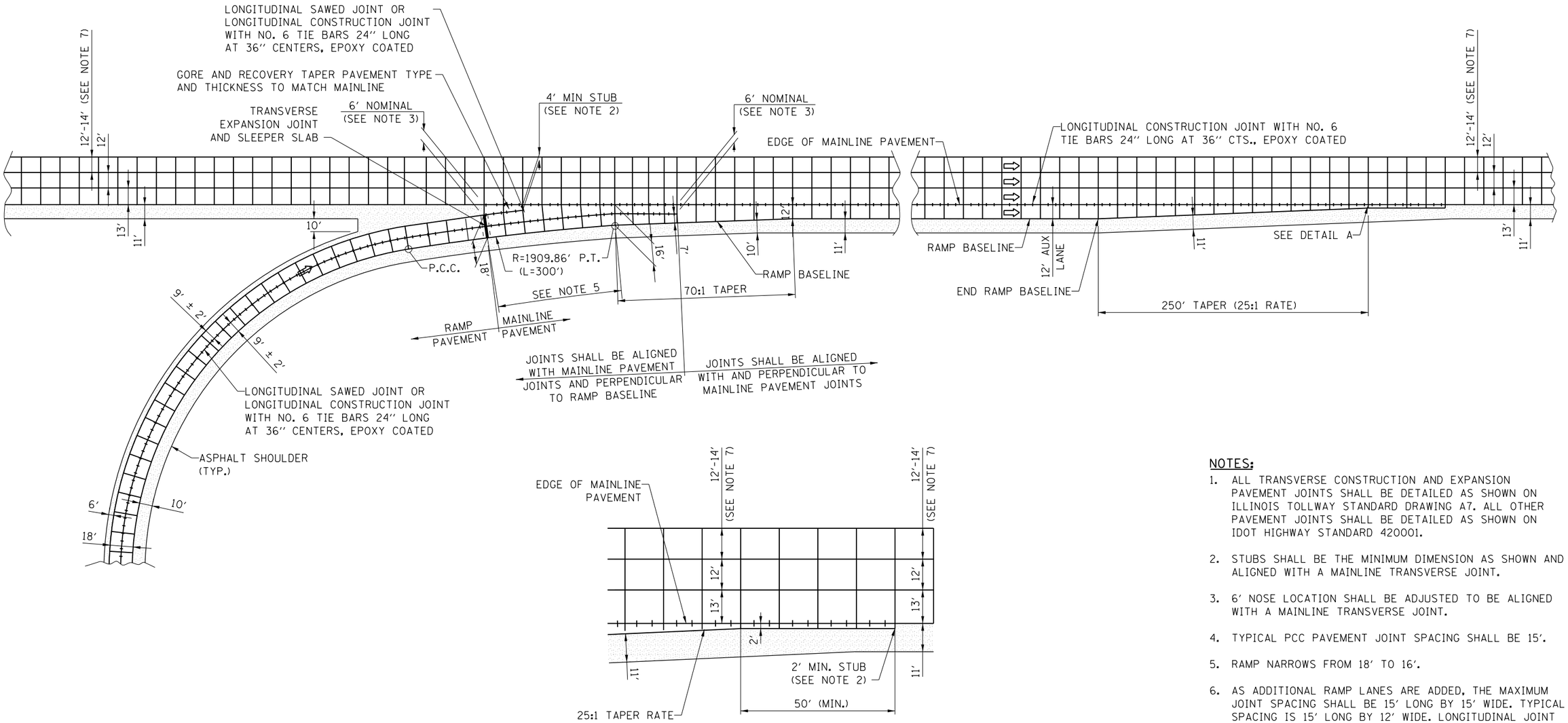
JOINTED PCC RAMP ADJACENT TO C.R.C. MAINLINE PAVEMENT

Paul Kovacs
APPROVED ..... DATE 1-31-2015
CHIEF ENGINEERING OFFICER

Illinois Tollway

JOINTING PLAN
PARALLEL EXIT RAMP TERMINAL
LOOP RAMP ONLY

STANDARD A16-07



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.

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

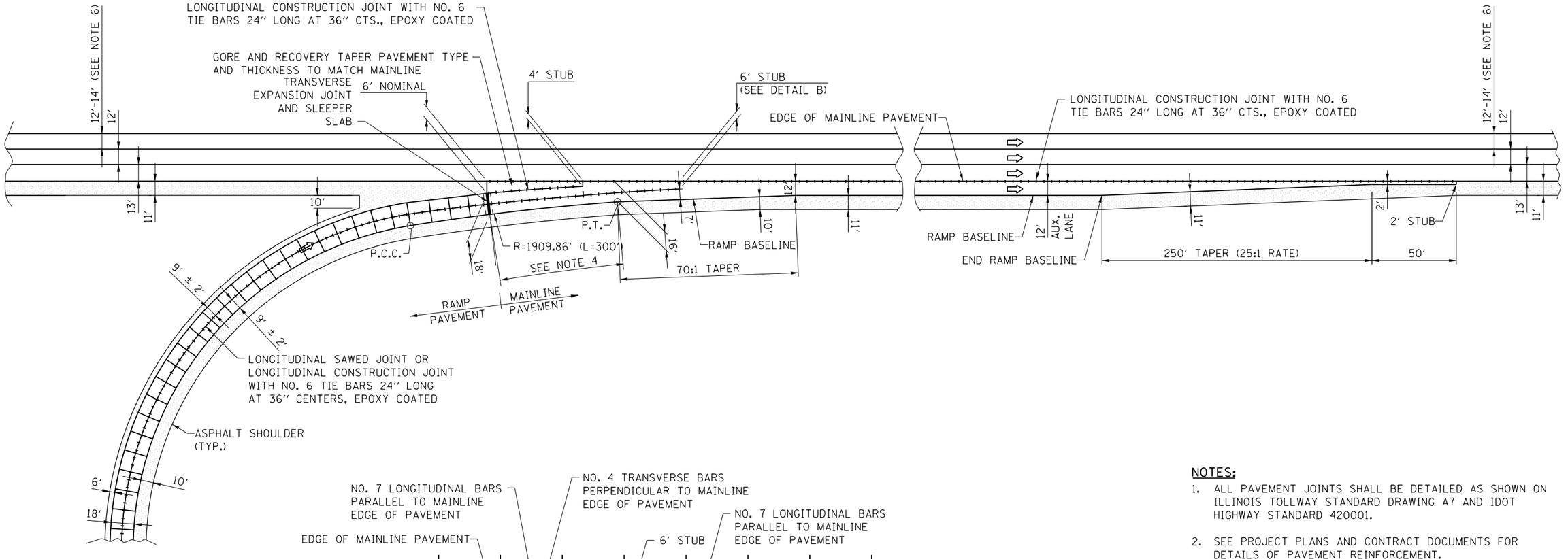
JOINTED PCC RAMP ADJACENT TO JOINTED PCC MAINLINE PAVEMENT

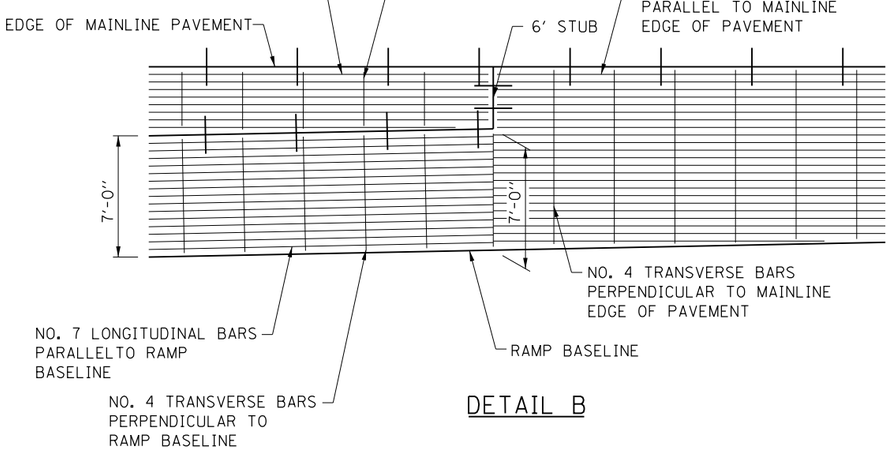
DATE	REVISIONS
3-31-2016	UPDATED NOTES & CALL-OUTS
3-31-2017	UPDATED NOTES.
3-01-2018	MOVED RAMP PAVEMENT
3-01-2019	ENTRANCE LAYOUT UPDATE
3-01-2020	UPDATED DIMENSION
3-01-2021	TIE BARS AT 36" CENTERS
	UPDATED SHOULDER TO 11'

Illinois Tollway

JOINTING PLAN PARALLEL
ENTRANCE RAMP TERMINAL
LOOP RAMP ONLY

STANDARD A17-07





DETAIL B

NOTES:

1. ALL PAVEMENT JOINTS SHALL BE DETAILED AS SHOWN ON ILLINOIS TOLLWAY STANDARD DRAWING A7 AND IDOT HIGHWAY STANDARD 420001.
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.

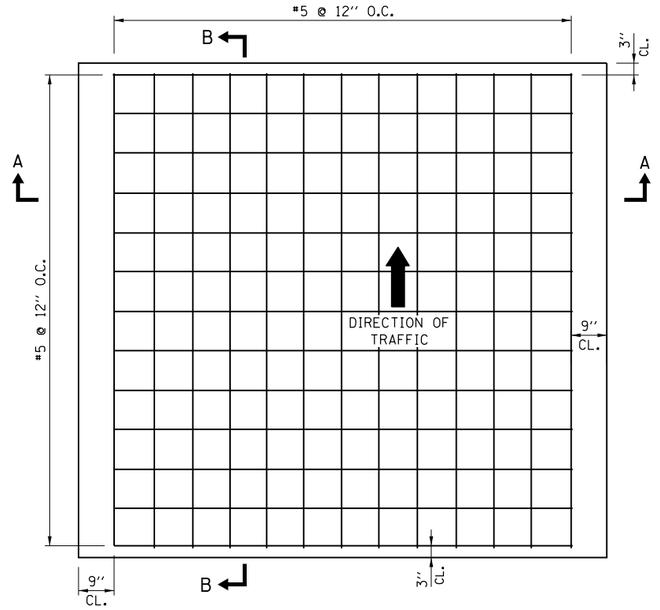
Paul Kovacs
APPROVED CHIEF ENGINEERING OFFICER
DATE 1-31-2015

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

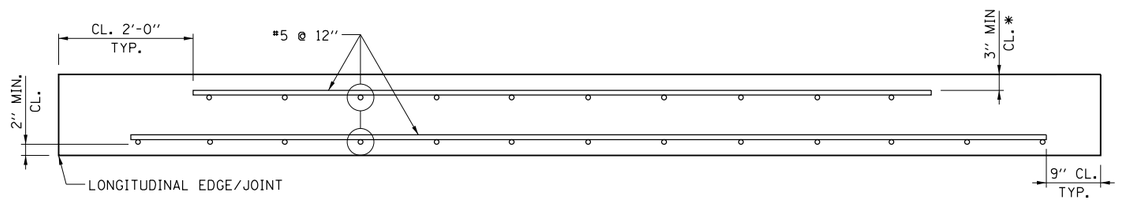
Illinois Tollway

JOINTING PLAN PARALLEL ENTRANCE RAMP TERMINAL LOOP RAMP ONLY

STANDARD A17-07



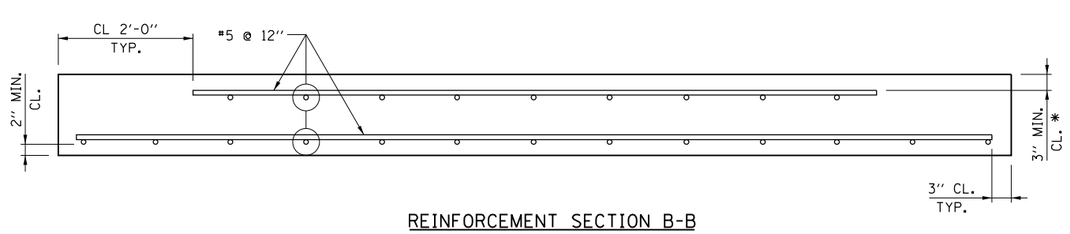
TYPICAL REINFORCEMENT DETAIL FOR STANDARD SLABS



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

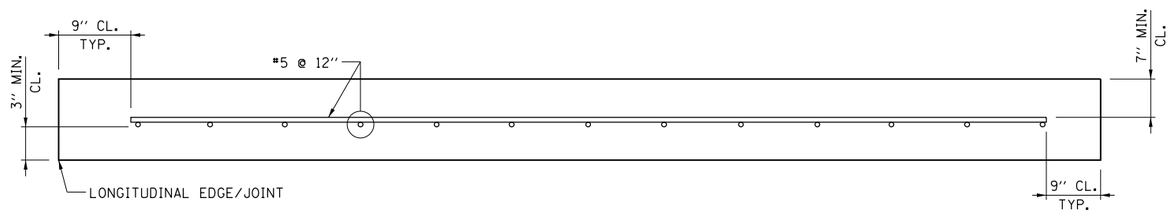
ALL BARS ARE TRIMMED TO FIT #5 BAR
SAW CUTS OFF LONGITUDINAL EDGES SHALL BE NO MORE THAN 6'' OFF THE EDGES



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

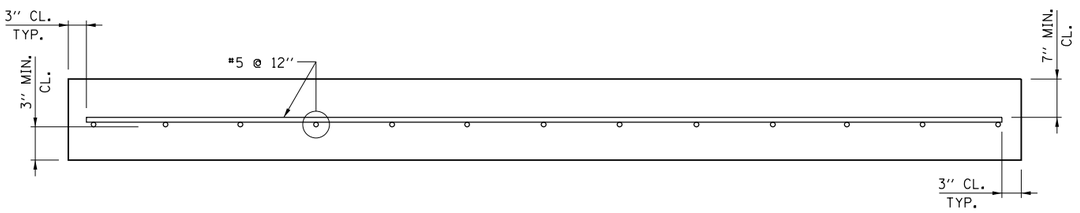
ALL BARS ARE TRIMMED TO FIT #5 BAR



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

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

NOTE:

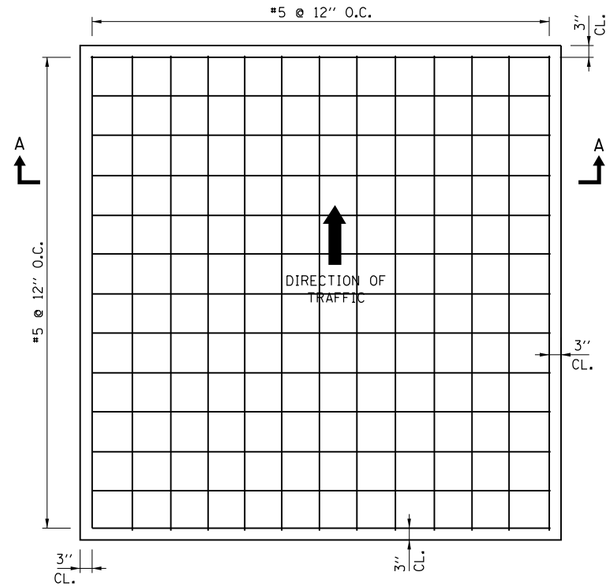
* MIN. CLEARANCE FOR TOP REINFORCEMENT SHALL BE ADJUSTED FOR PLAZA SLAB TO FIT TREADLE FRAMES OR INSERTED HARDWARE.

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 UPDATED NOTES 4,5,6,8,11,12

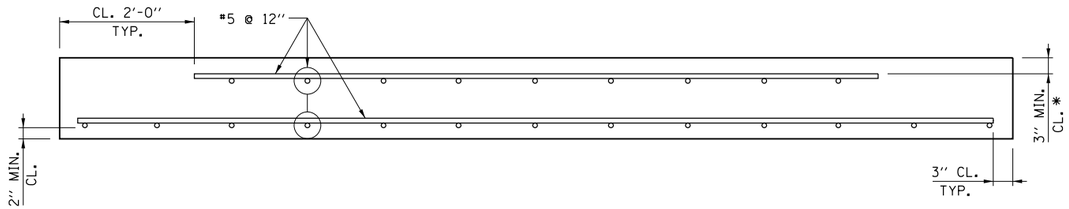
Illinois Tollway

PRECAST PAVEMENT SLABS

STANDARD A18-05



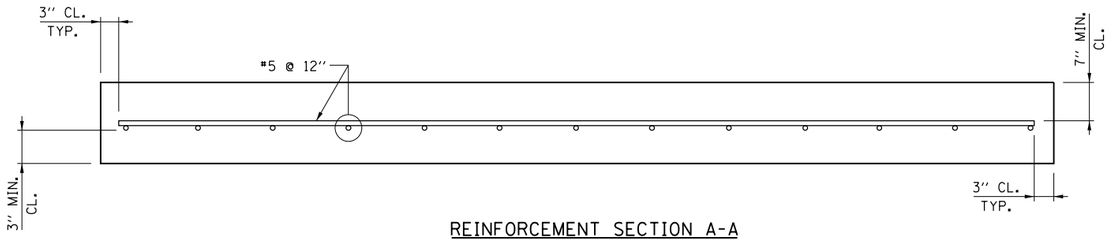
TYPICAL REINFORCEMENT DETAIL FOR CUSTOM SLABS



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.

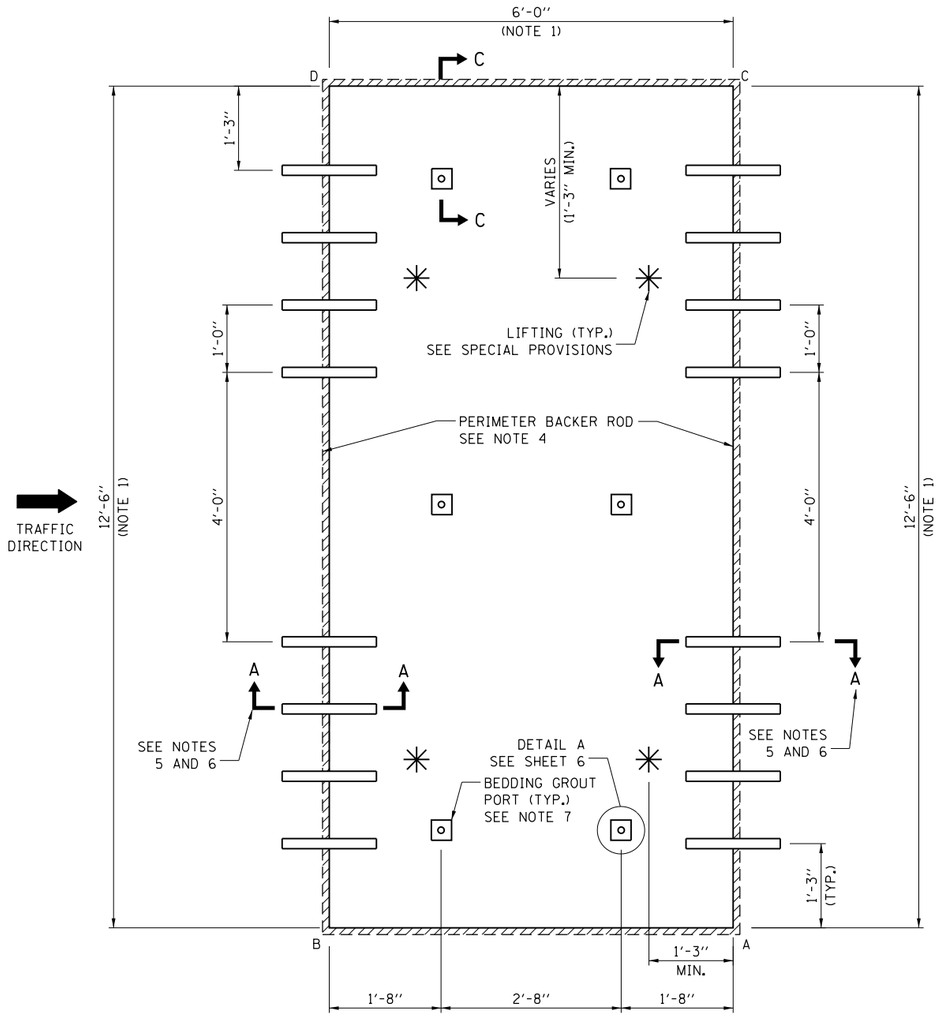
* MIN. CLEARANCE FOR TOP REINFORCEMENT SHALL BE ADJUSTED FOR PLAZA SLAB TO FIT TREADLE FRAMES OR INSERTED HARDWARE.

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

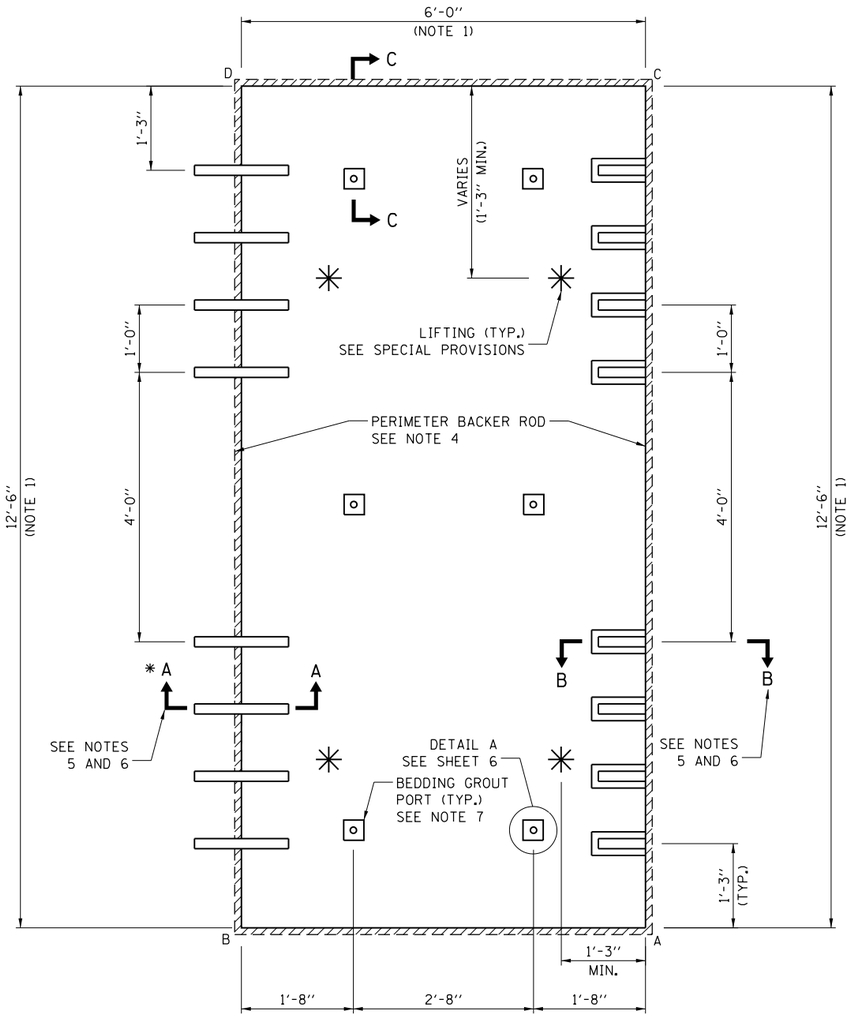
Illinois Tollway

PRECAST PAVEMENT SLABS

STANDARD A18-05



STANDARD 12'-6" WIDE PANEL LAYOUT FOR ISOLATED PLACEMENT WITH EMBEDDED DOWELS FOR PRECUT 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:

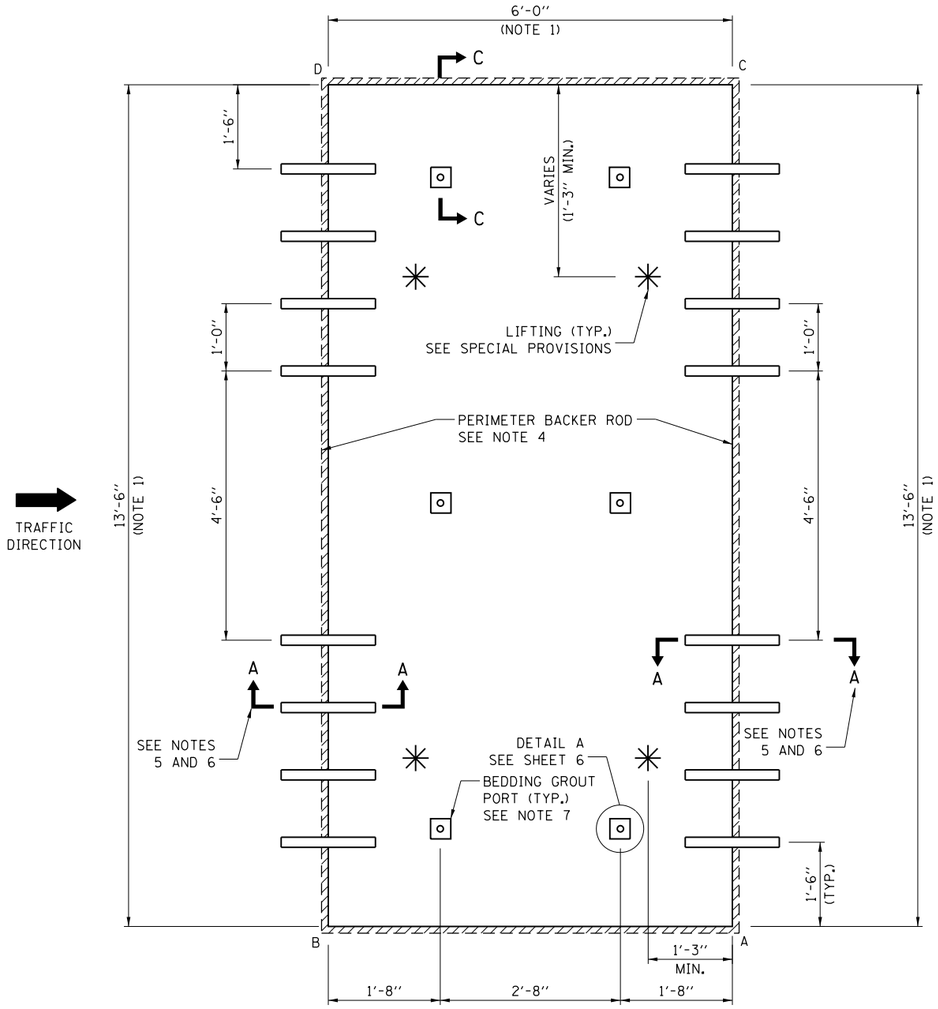
1. THE WIDTH AND LENGTH OF PRODUCED SLABS SHALL BE THE INDICATED DIMENSIONS ±1/8".
2. FOR MIDDLE LANE SLAB OPENINGS/PATCHES LESS THAN 12'-6" IN WIDTH AND GREATER THAN 11'-6" IN WIDTH, THE STANDARD PRECAST SLAB CAN BE SAW CUT ON-SITE TO FIT THE OPENING AND TO MAINTAIN ALIGNMENT WITH EXISTING LONGITUDINAL 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 11½" ± 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 (NONSKEWED) 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.

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

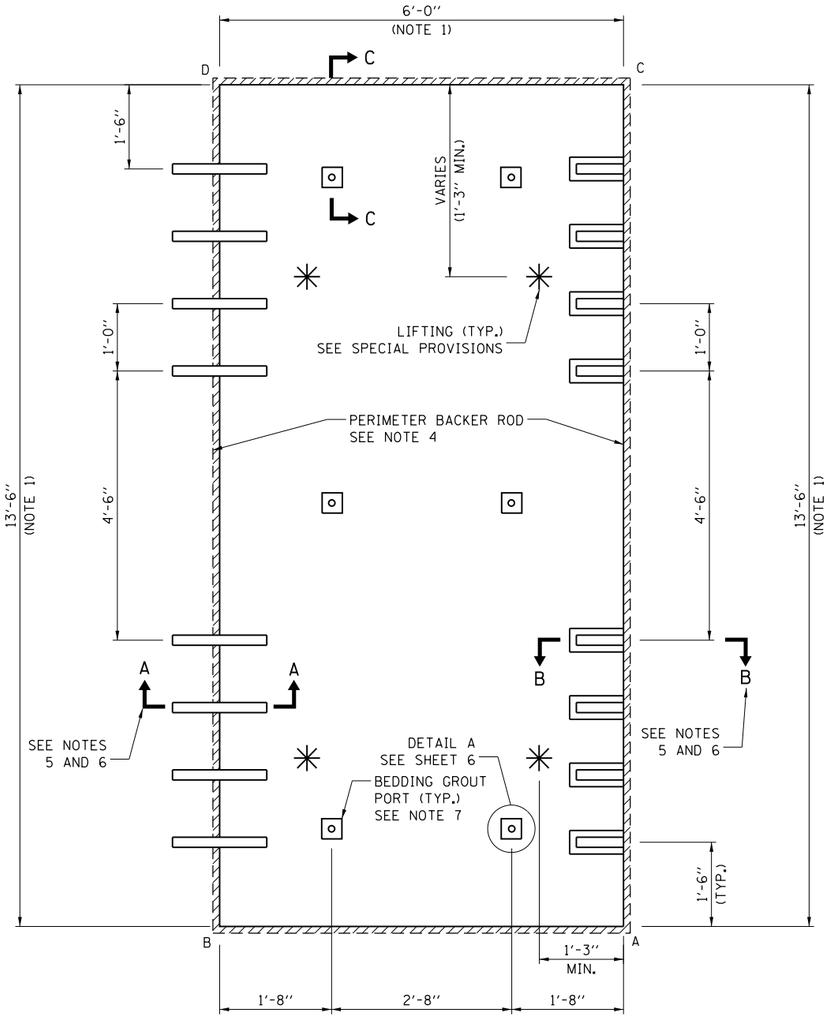
Illinois Tollway

PRECAST PAVEMENT SLABS

STANDARD A18-05



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:

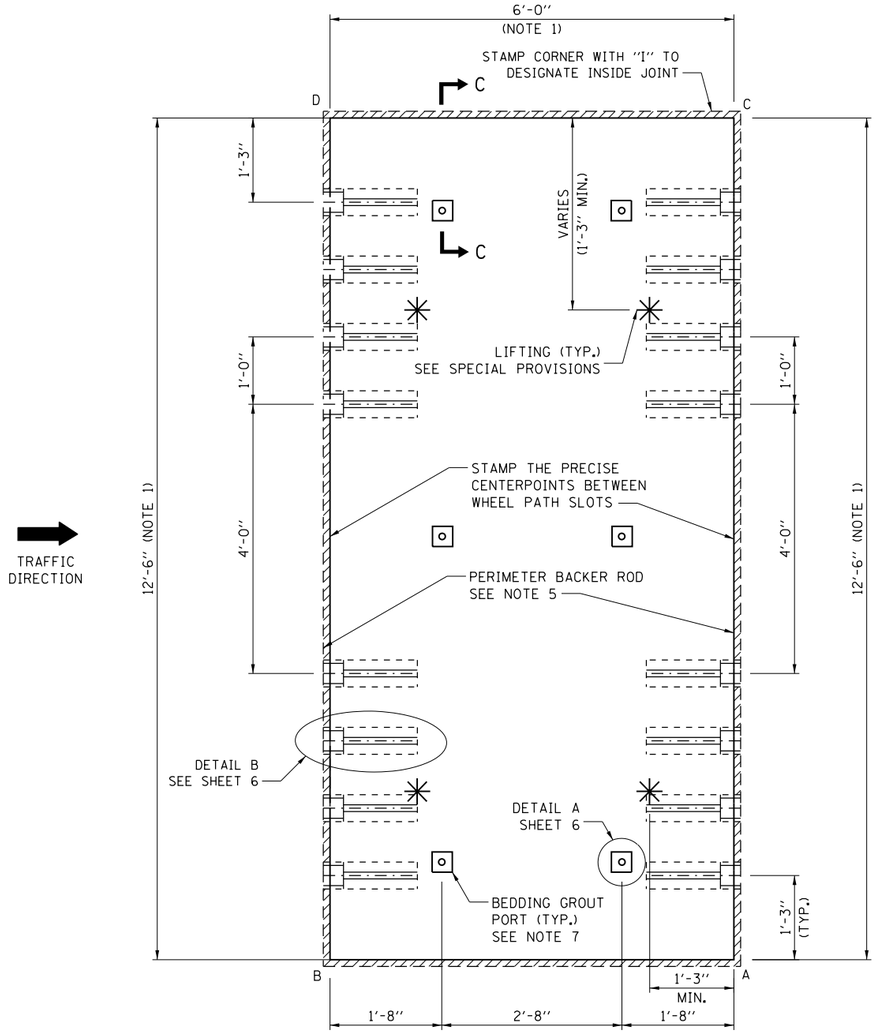
1. THE WIDTH AND LENGTH OF PRODUCED SLABS SHALL BE THE INDICATED DIMENSIONS ±1/8".
2. FOR MIDDLE LANE SLAB OPENINGS/PATCHES LESS THAN 13'-6" IN WIDTH AND GREATER THAN 12'-6" IN WIDTH, THE STANDARD PRECAST SLAB CAN BE SAW CUT ON-SITE TO FIT THE OPENING AND TO MAINTAIN ALIGNMENT WITH EXISTING LONGITUDINAL 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 11½" ± 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 (NONSKEWED) 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.

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

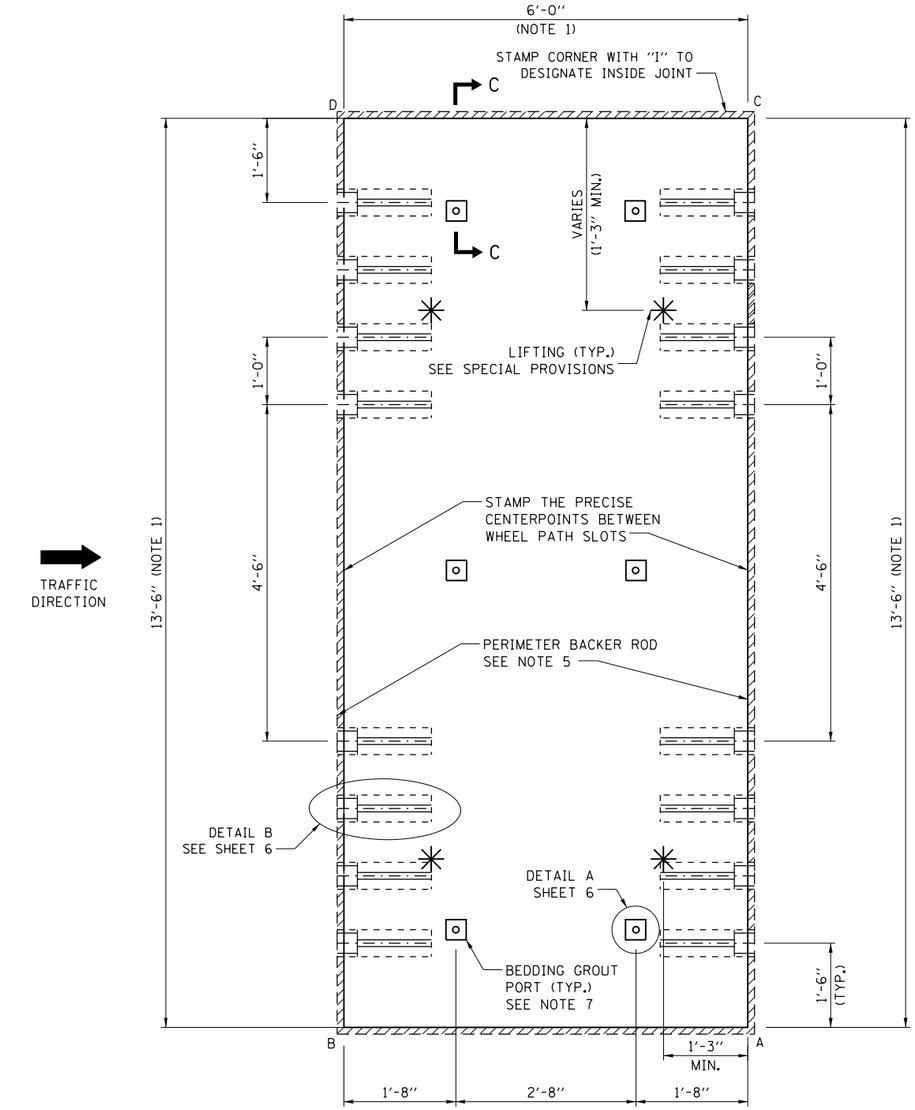
Illinois Tollway

PRECAST PAVEMENT SLABS

STANDARD A18-05



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:

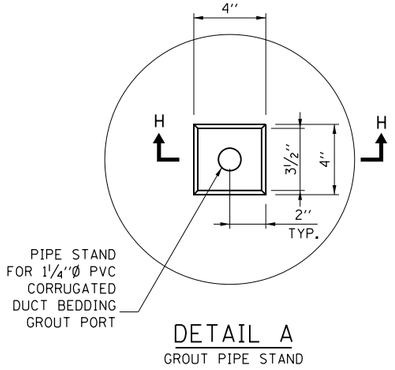
1. THE WIDTH AND LENGTH OF PRODUCED SLABS SHALL BE THE INDICATED DIMENSIONS ± 1/8".
2. FOR MIDDLE LANE SLAB OPENINGS/PATCHES LESS THAN 12'-6" IN WIDTH AND GREATER THAN 11'-6" IN WIDTH, THE 12'-6" WIDE STANDARD PRECAST SLAB CAN BE SAW CUT ON-SITE TO FIT THE OPENING AND TO MAINTAIN ALIGNMENT WITH EXISTING 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 1/2" ±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.

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

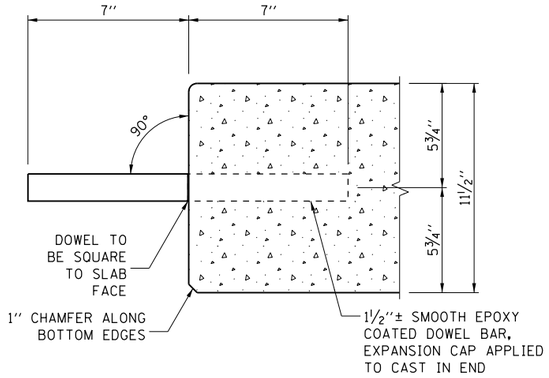
Illinois Tollway

PRECAST PAVEMENT SLABS

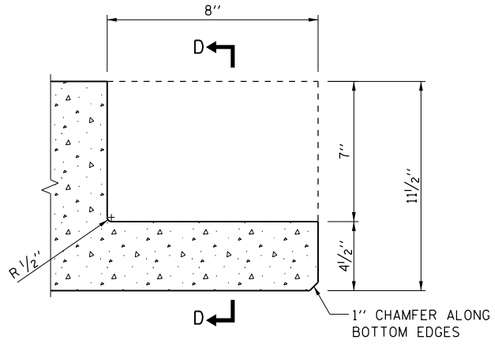
STANDARD A18-05



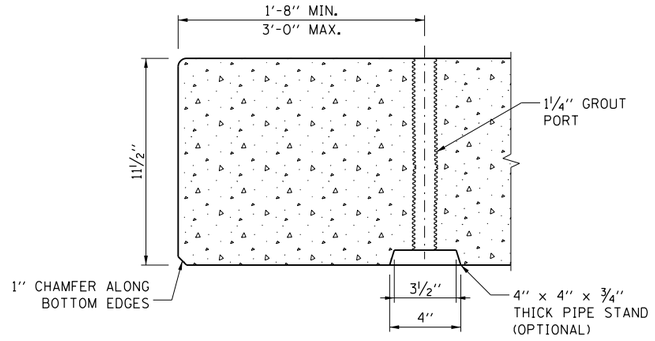
DETAIL A
GROUT PIPE STAND



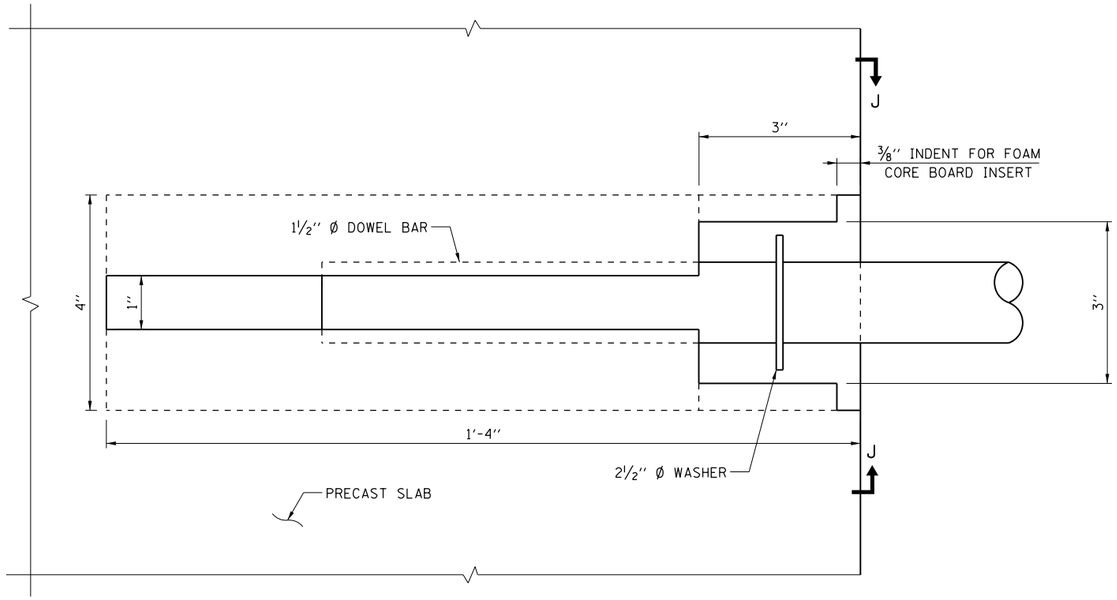
SECTION A-A
TRANSVERSE JOINT DOWEL BAR (EMBEDDED INTO STANDARD PRECAST PAVEMENT SLAB FOR BOTH ISOLATED AND CONSECUTIVE PLACEMENT TYP.



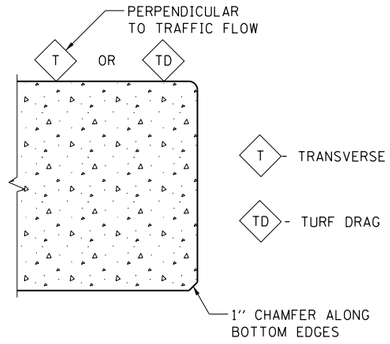
SECTION B-B
TRANSVERSE WIDE MOUTH OPEN SLOT DETAIL FOR CONSECUTIVE STANDARD SLABS



SECTION C-C
GROUT CHANNEL & PORT LOCATION



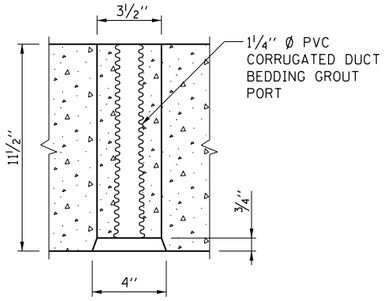
DETAIL B
TRANSVERSE NARROW MOUTH SLOT DETAIL FOR ISOLATED SLABS



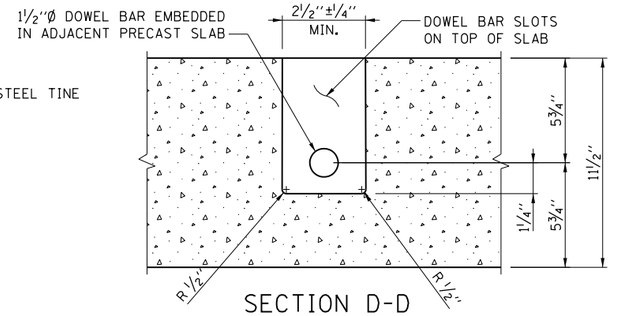
T - TRANSVERSE STEEL TINE

TD - TURF DRAG

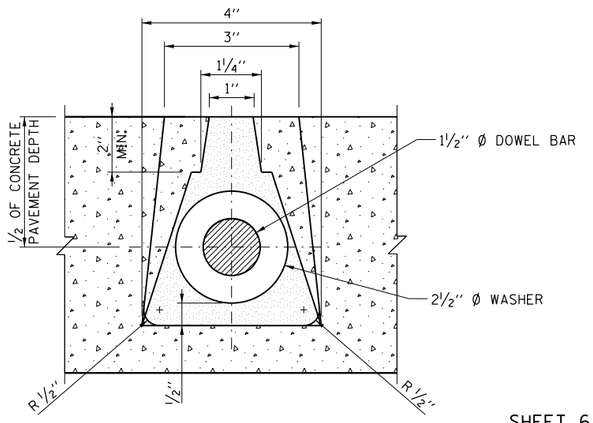
FINISH SCHEDULE



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

Illinois Tollway

PRECAST PAVEMENT SLABS

STANDARD A18-05

FABRICATION DETAILS

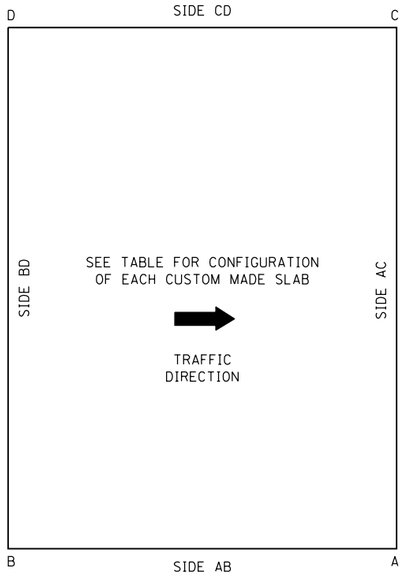
Paul Kovacs
APPROVED
CHIEF ENGINEERING OFFICER
DATE 5-1-2009

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.

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

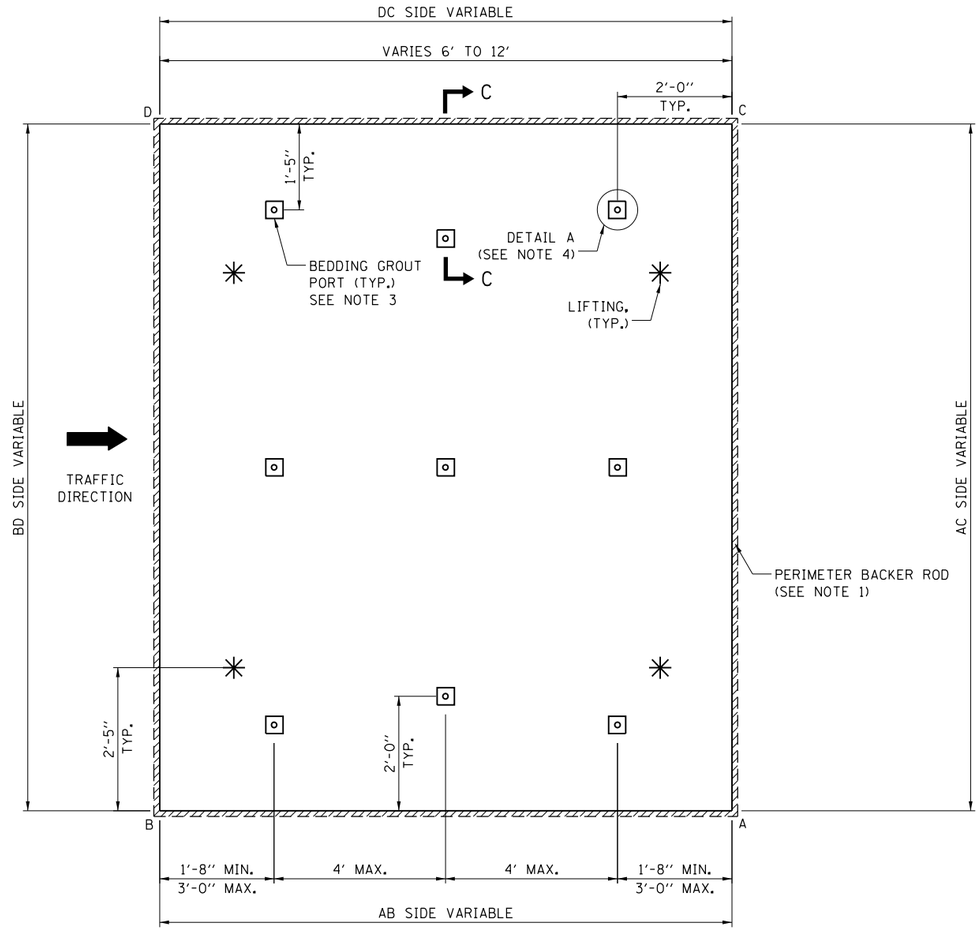
MAINLINE LANE NO.: LANE NO 1 IS ADJACENT TO MEDIAN SHOULDER.
RAMP LANE NO.: LANE NO 1 IS ADAJACENT TO THE BUILDING
PLAZA LANE NO.: LANE NO 1 IS ADAJACENT TO THE BUILDING
MARK NO.: EACH PANEL SHALL BE INDIVIDUALLY MARKED FOR CORRECT PLACEMENT.
LANE TYP.: "OUT" IN THIS COLUMN INDICATES OUTSIDE LANE.
"MID"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



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.

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 (NONSKEWED) 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.

Paul Kovacs
APPROVED ..... DATE 5-1-2009
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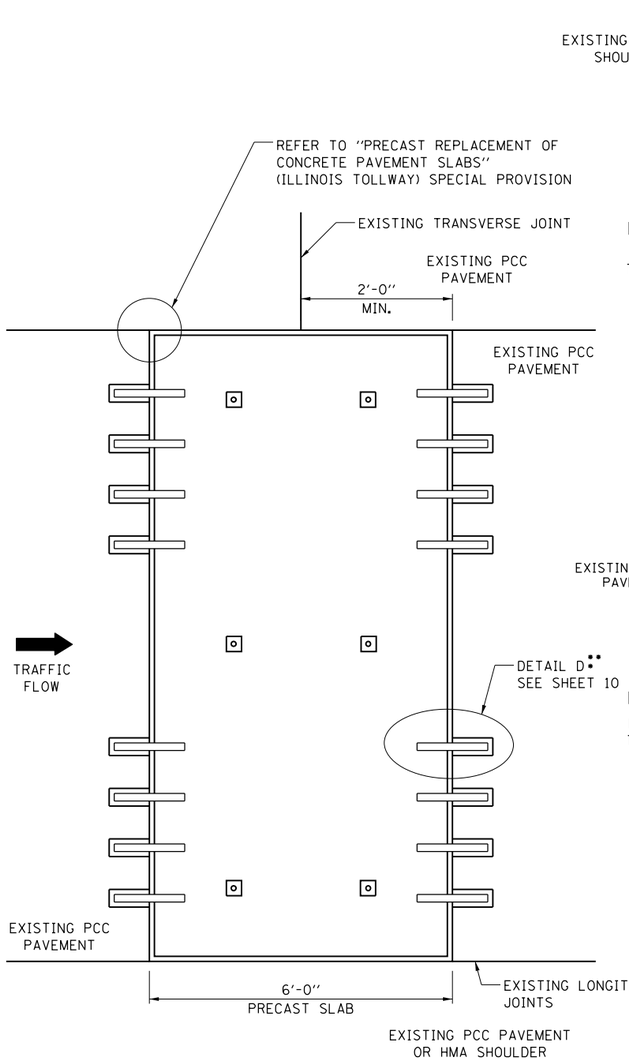
Illinois Tollway

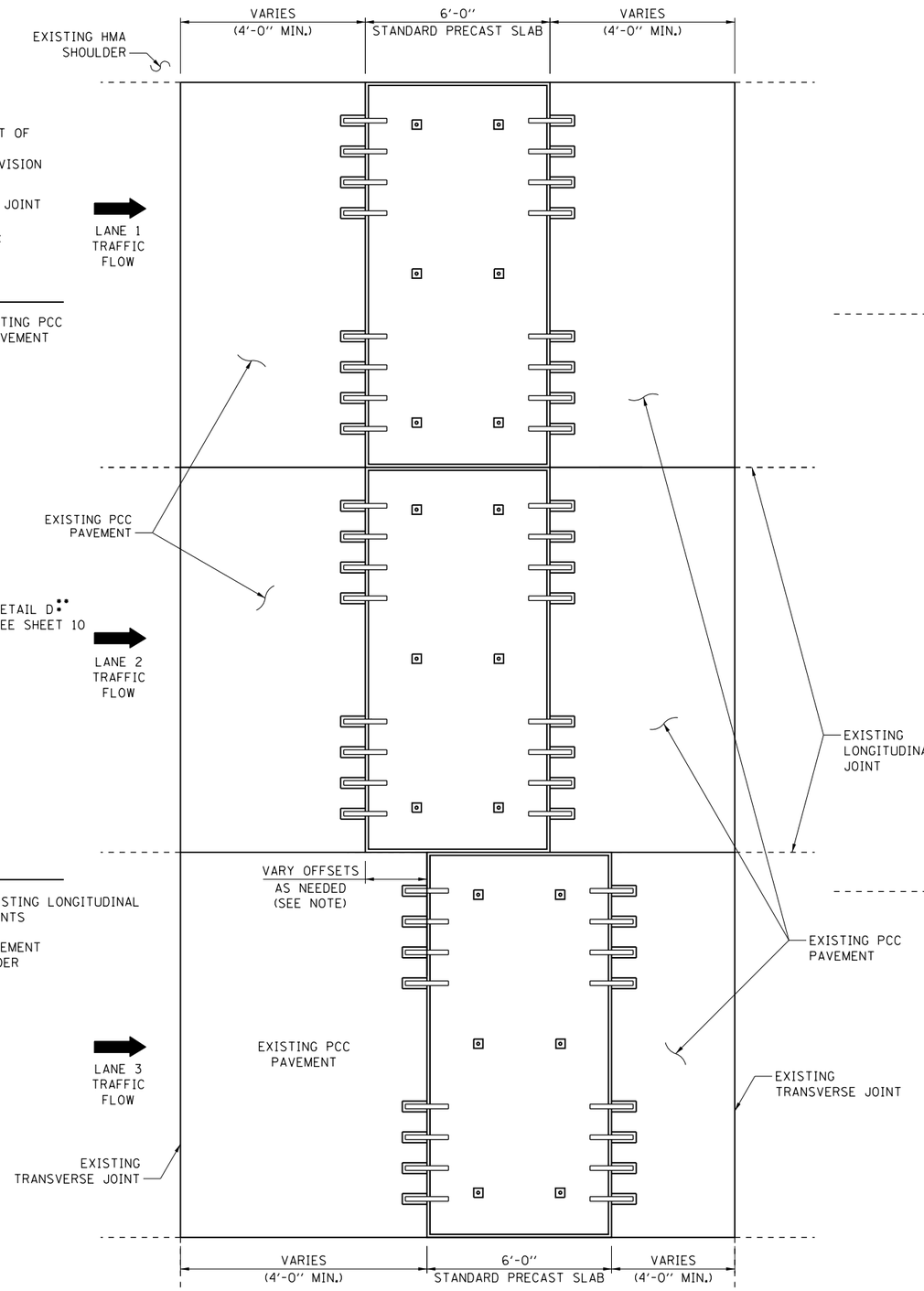
PRECAST PAVEMENT SLABS

STANDARD A18-05

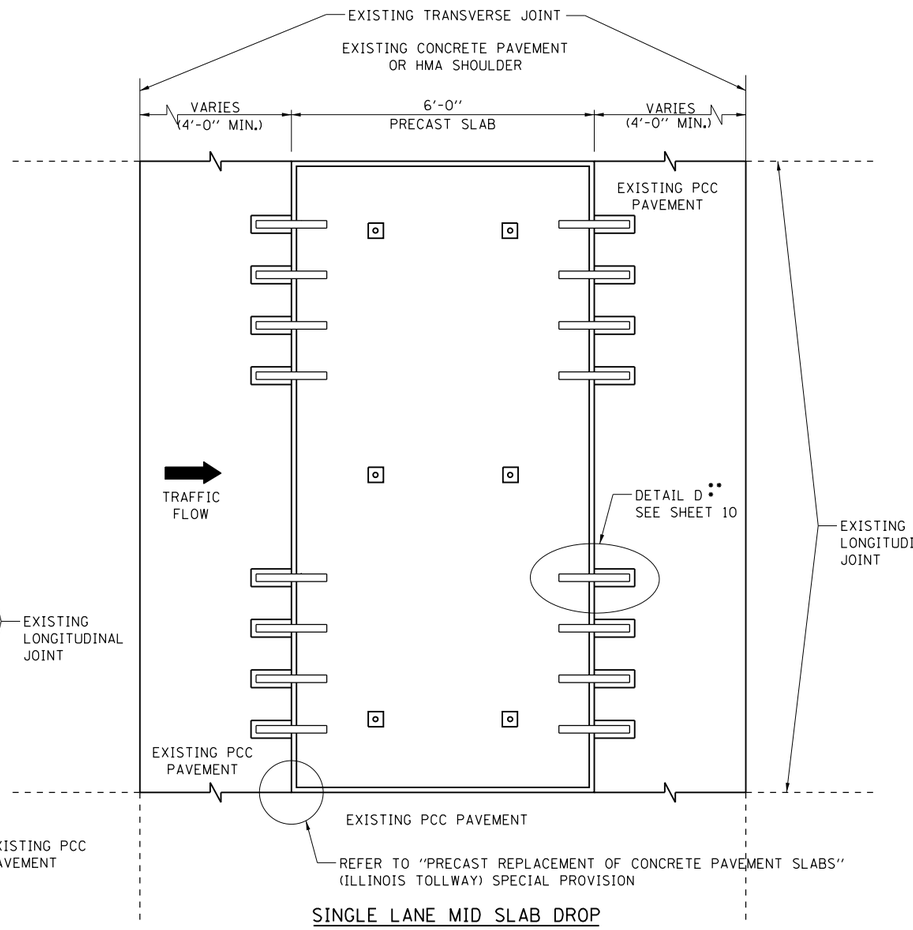
INSTALLATION OF ISOLATED STANDARD PRECAST SLABS



SINGLE LANE JOINT REPLACEMENT DROP IN PANEL FOR STANDARD PRECAST SLABS



MULTIPLE LANE MID SLAB DROP IN PANEL FOR STANDARD PRECAST PANELS



SINGLE 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.

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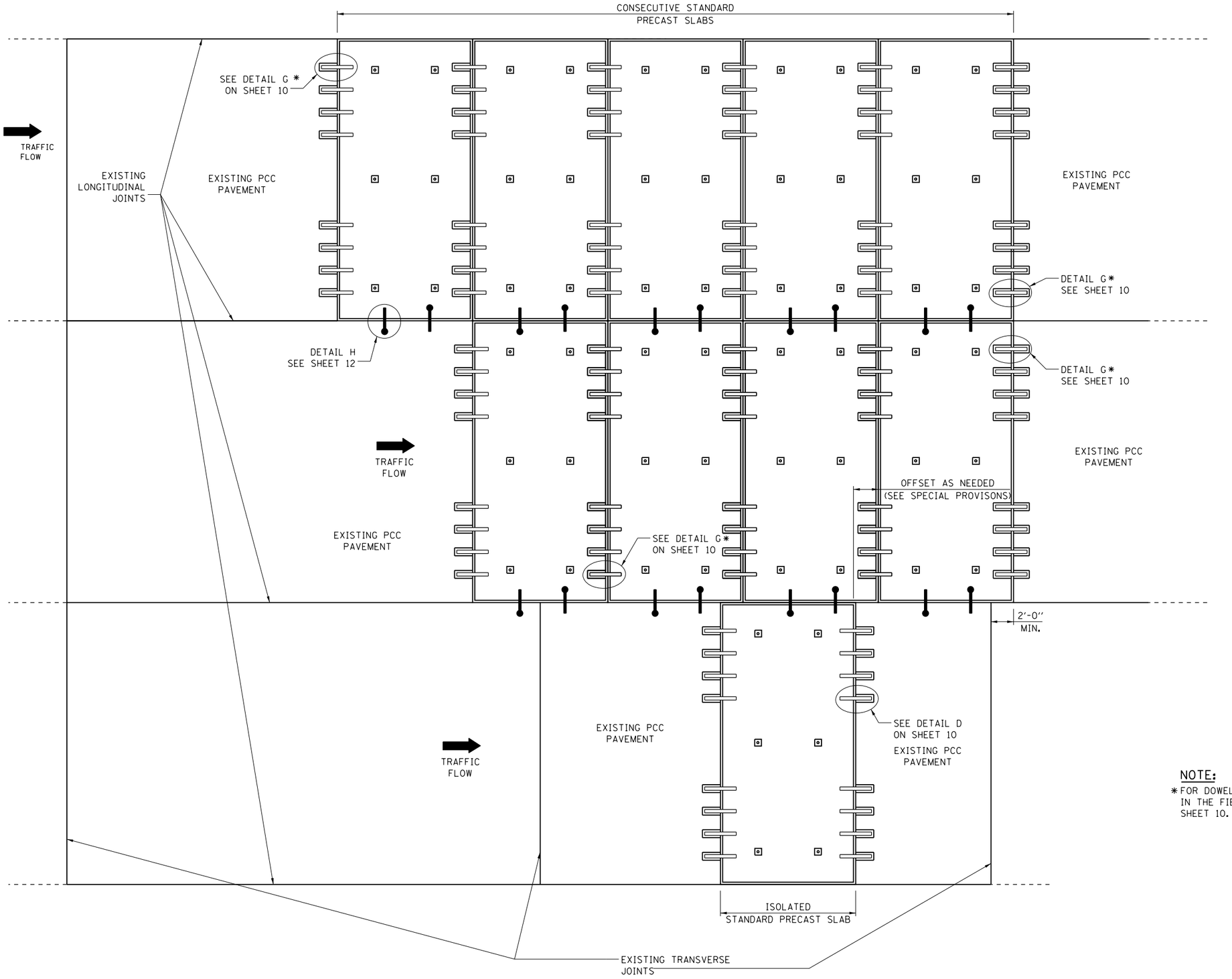
PRECAST PAVEMENT SLABS

STANDARD A18-05



NOTE:

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

INSTALLATION OF CONSECUTIVE STANDARD PRECAST SLABS

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DATE 5-1-2009

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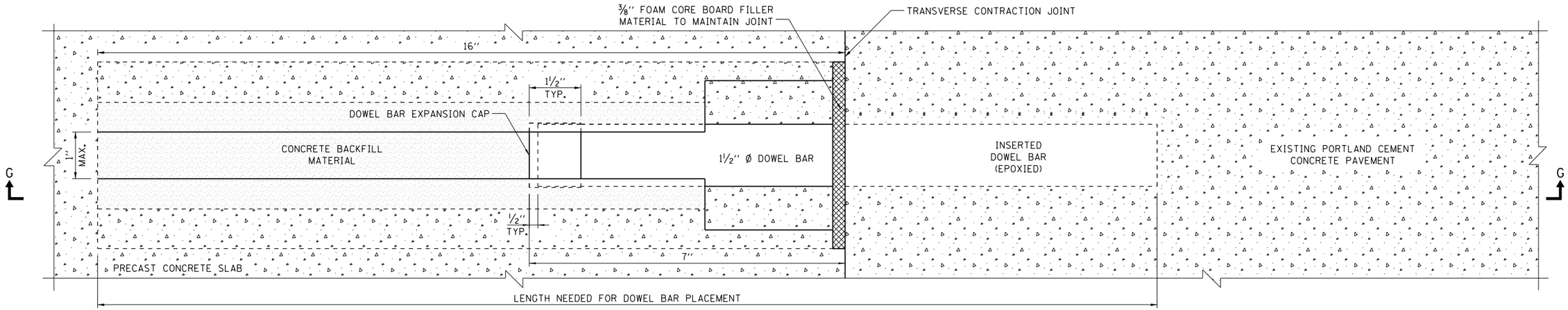
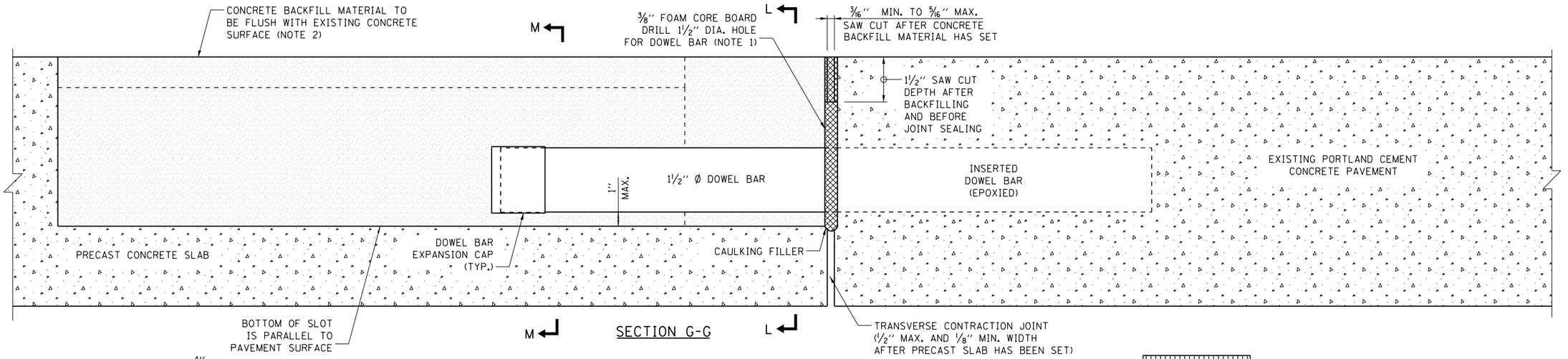
PRECAST PAVEMENT SLABS

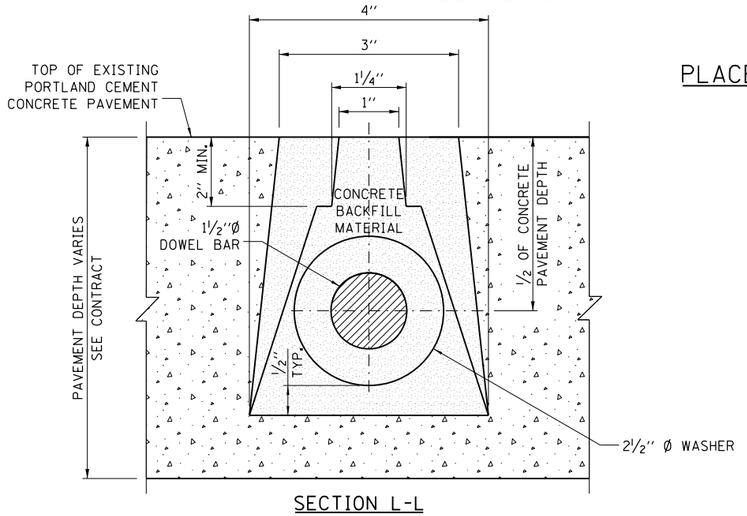
STANDARD A18-05



PLAN VIEW



SECTION G-G



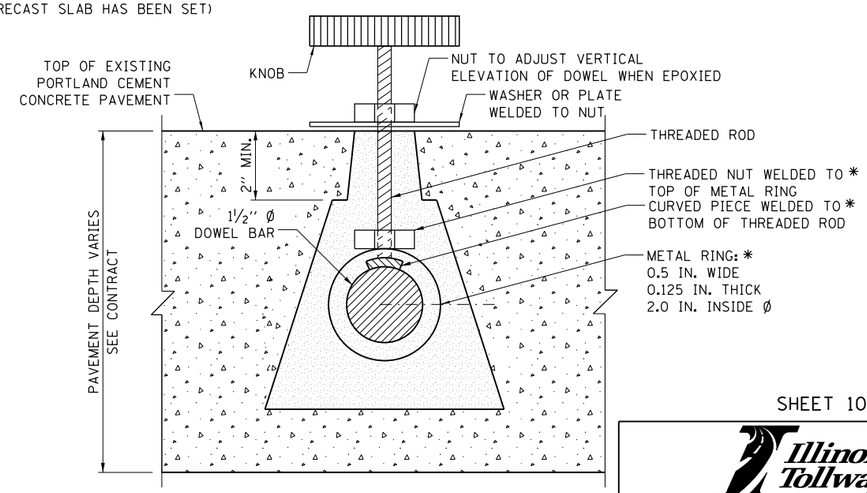
SECTION L-L

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

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

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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APPROVED ..... DATE 5-1-2009
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Illinois Tollway

PRECAST PAVEMENT SLABS

STANDARD A18-05

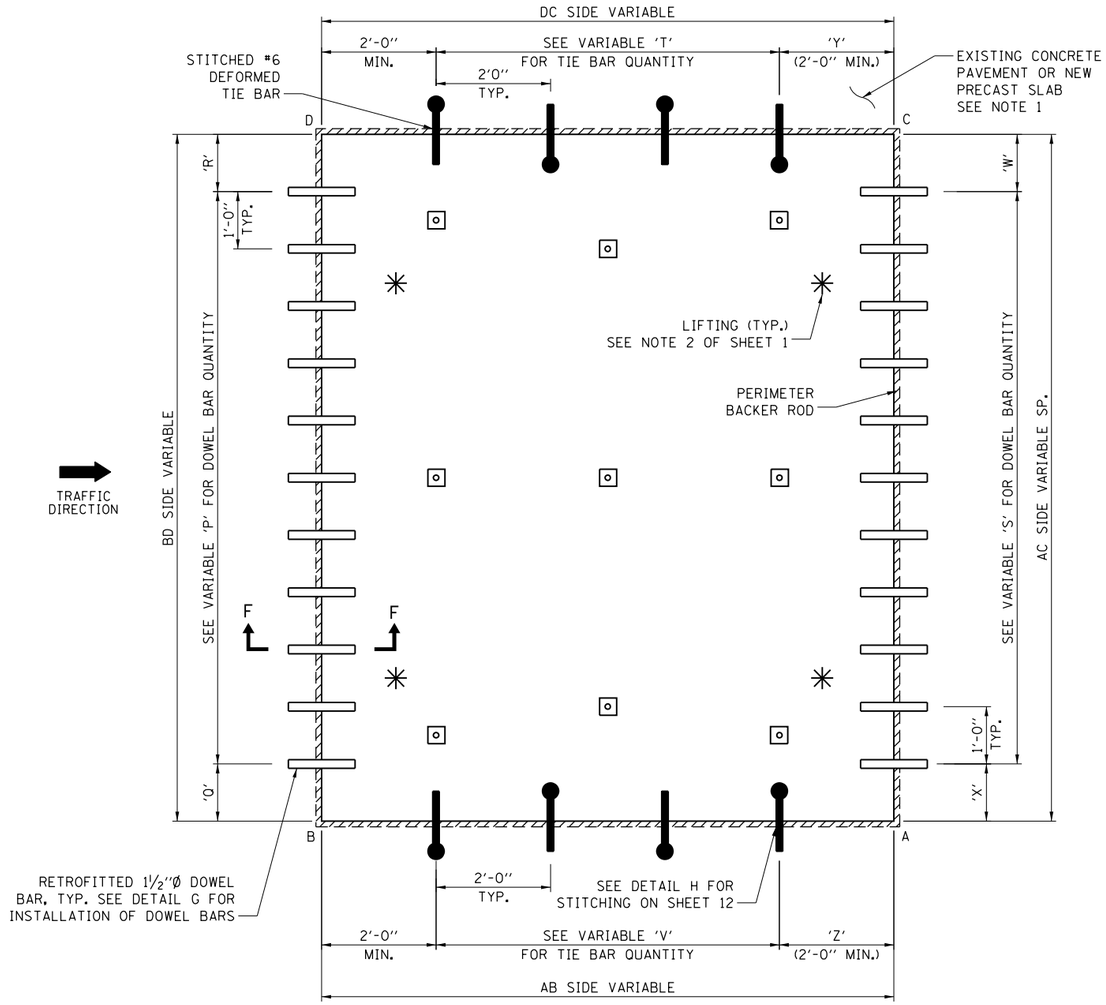
FOR NON-STANDARD SLABS, UPON COMPLETION BY THE CONTRACTOR A SLAB LAYOUT WILL BE ADDED WITH SLAB DIMENSIONS TO INCLUDE BUT NOT BE LIMITED TO THE TABLE SHOWN BELOW.

	CORRIDOR	STATION NUMBER	MAINLINE LANE NO.	RAMP ID.	RAMP LANE NO.	PLAZA NO.	PLAZA LANE NO.	MARK NO.	LANE TYP.	VARIABLES														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.)	P (NO.)	Q (FT.)	R (FT.)	S (NO.)	T (NO.)	V (NO.)	W (FT.)	X (FT.)	Y (FT.)	Z (FT.)								AD	BC
EXAMPLE																															

MAINLINE LANE NO.: LANE NO. 1 IS ADJACENT TO MEDIAN SHOULDER.
RAMP LANE NO.: LANE NO. 1 IS ADAJACENT TO THE BUILDING
PLAZA LANE NO.: LANE NO. 1 IS ADAJACENT 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



INSTALLATION DETAIL FOR CUSTOM SLABS

NOTES:

1. NO STITCHING OF DEFORMED TIE BARS IS REQUIRED WHEN PRECAST SLAB IS PLACED ADJACENT TO HMA SHOULDER OR PLAZA ISLAND.
2. TIE 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.

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APPROVED CHIEF ENGINEERING OFFICER DATE 5-1-2009

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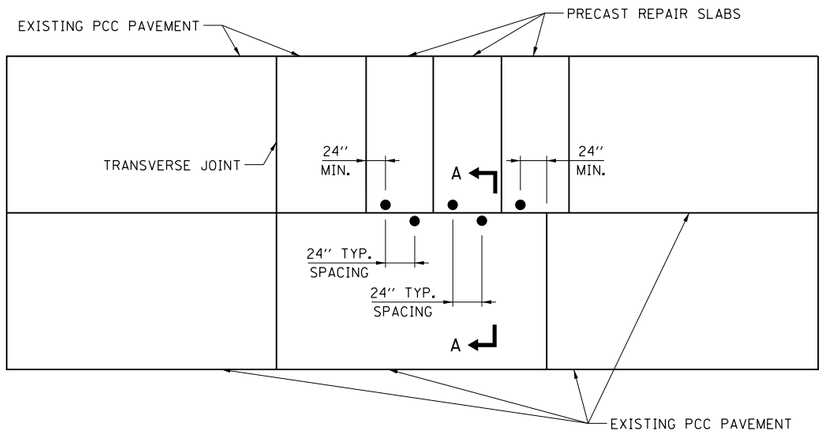
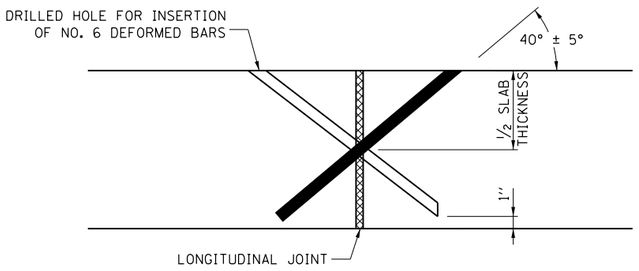
PRECAST PAVEMENT SLABS

STANDARD A18-05



DETAIL H - LONGITUDINAL TIE BAR STITCHING FOR PRECAST PANELS



SECTION A-A

NOTES FOR TIE BAR STITCHING:

1. DRILL HOLES THAT ARE ORIENTED AT 40° ± 5° 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.

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DATE 5-1-2009

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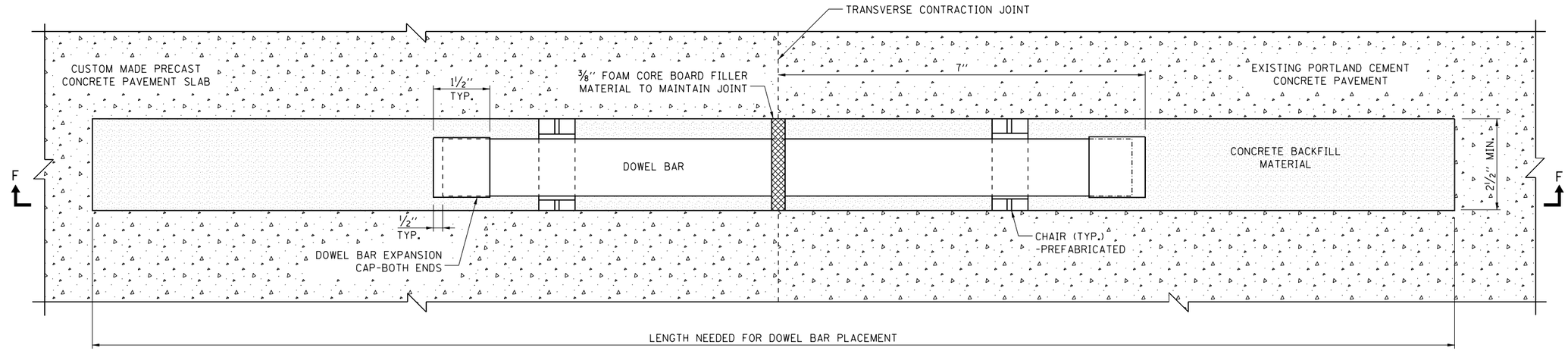
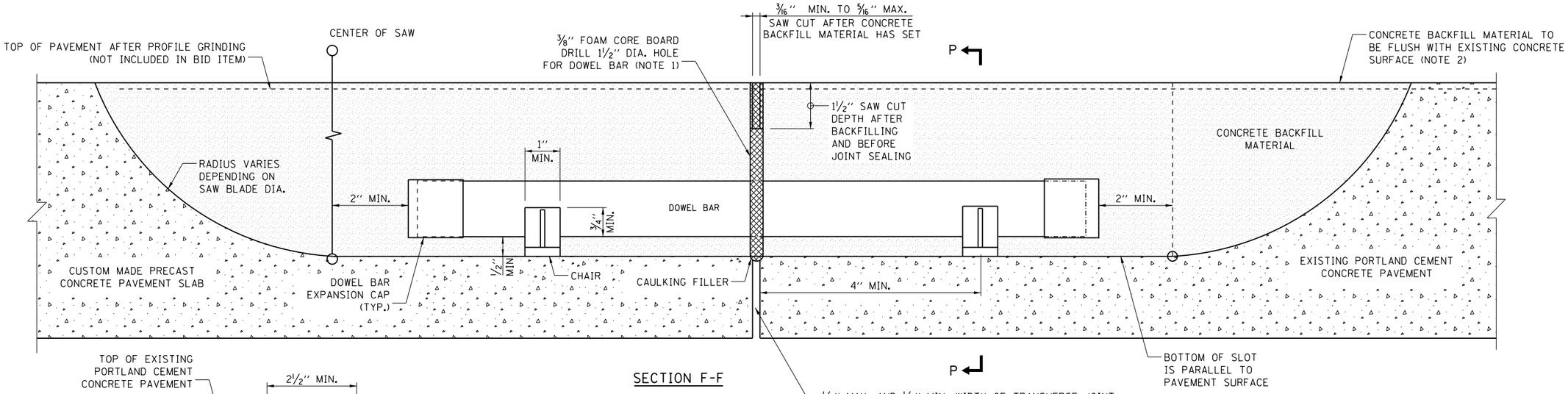
PRECAST PAVEMENT SLABS

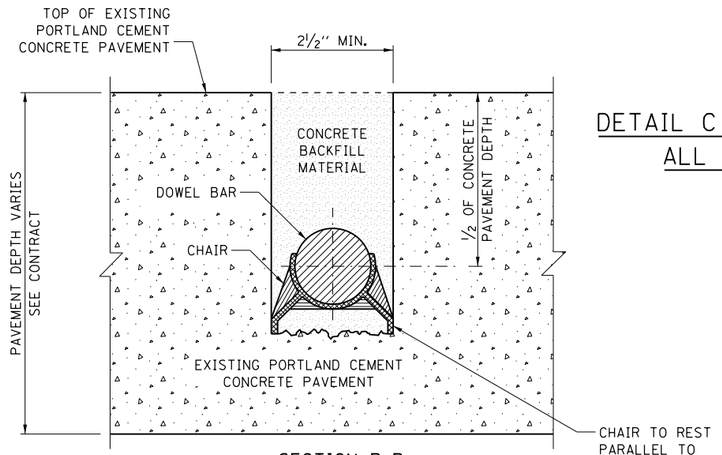
STANDARD A18-05



PLAN VIEW

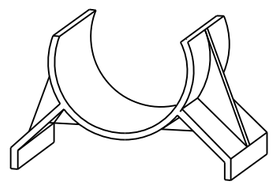


SECTION F-F

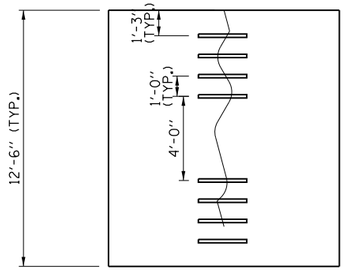


SECTION P-P

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.

SHEET 1 OF 1

Illinois Tollway

DOWEL BAR RETROFIT

STANDARD A19-00

Paul Kovacs
APPROVED ..... DATE 3-1-2019
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