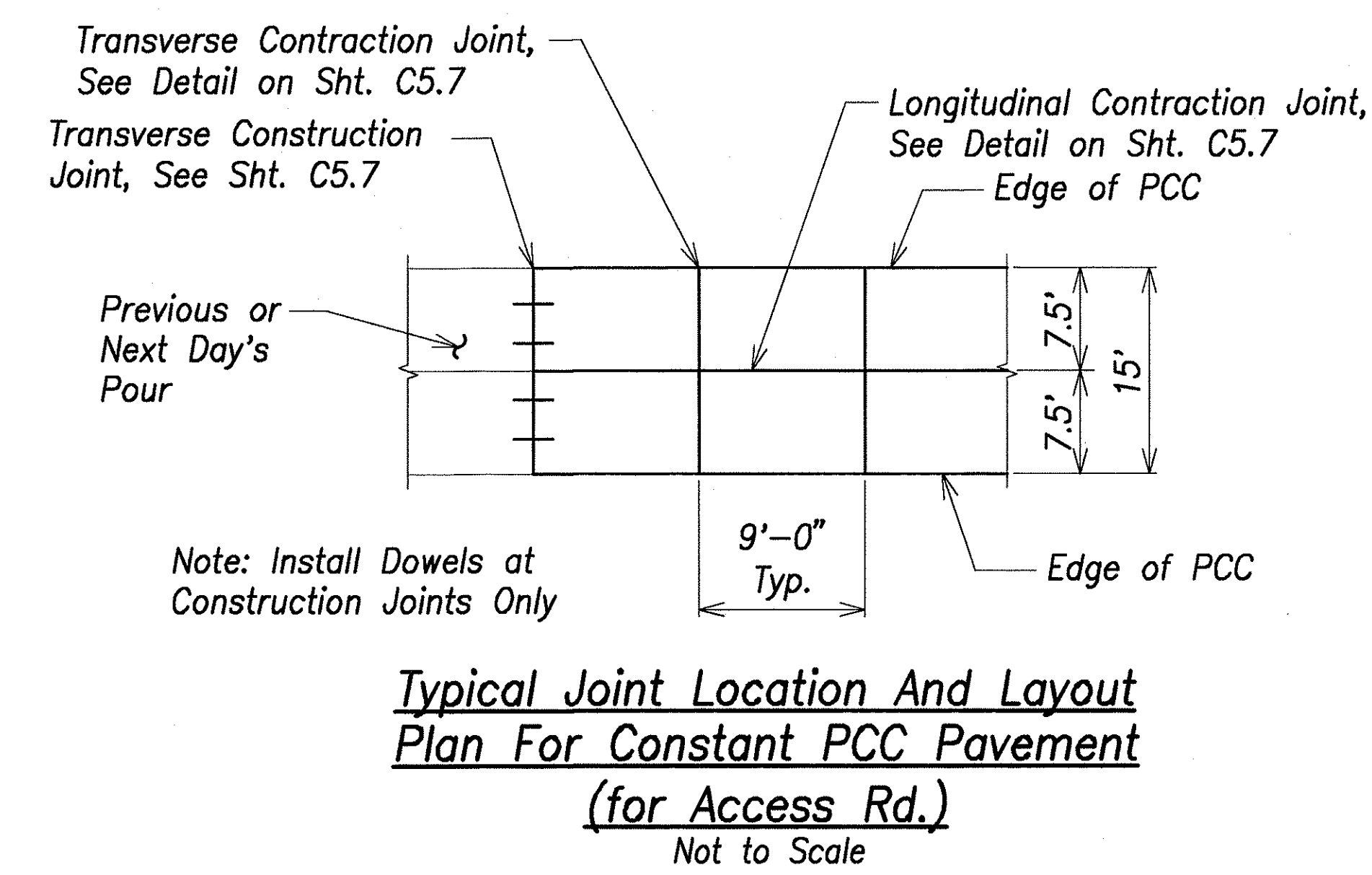
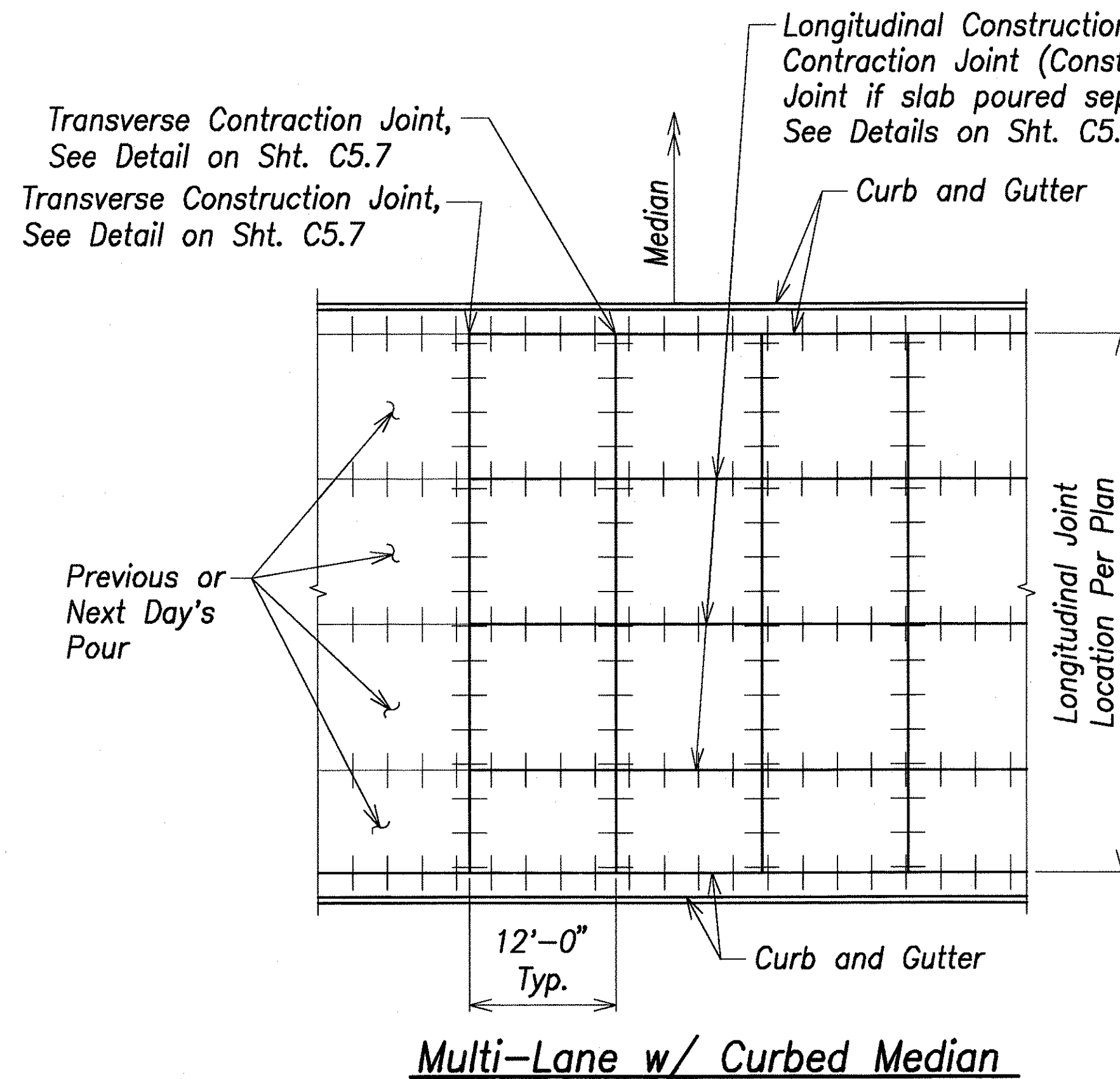
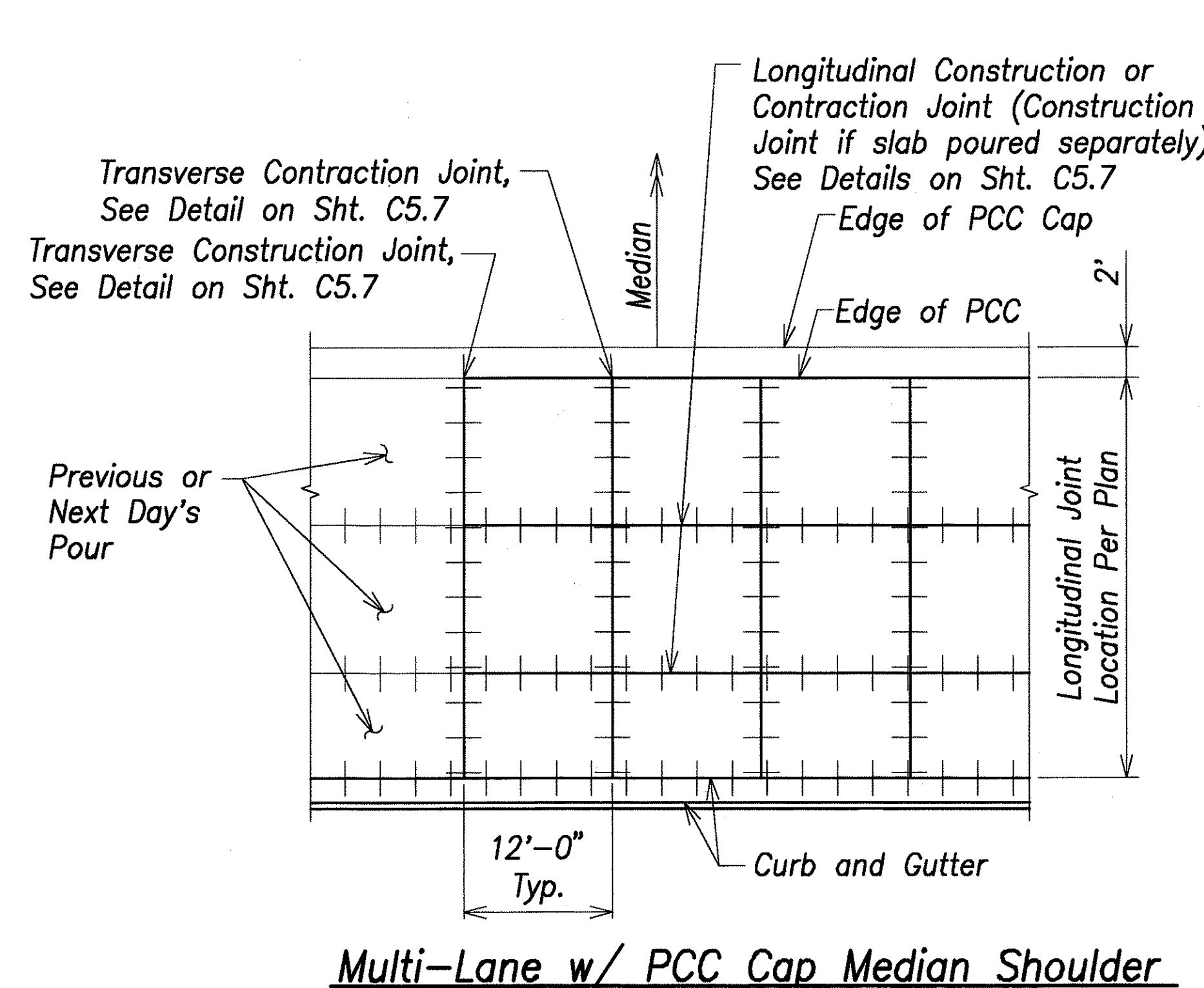


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-8930(2)	2007	ADD. 76	331

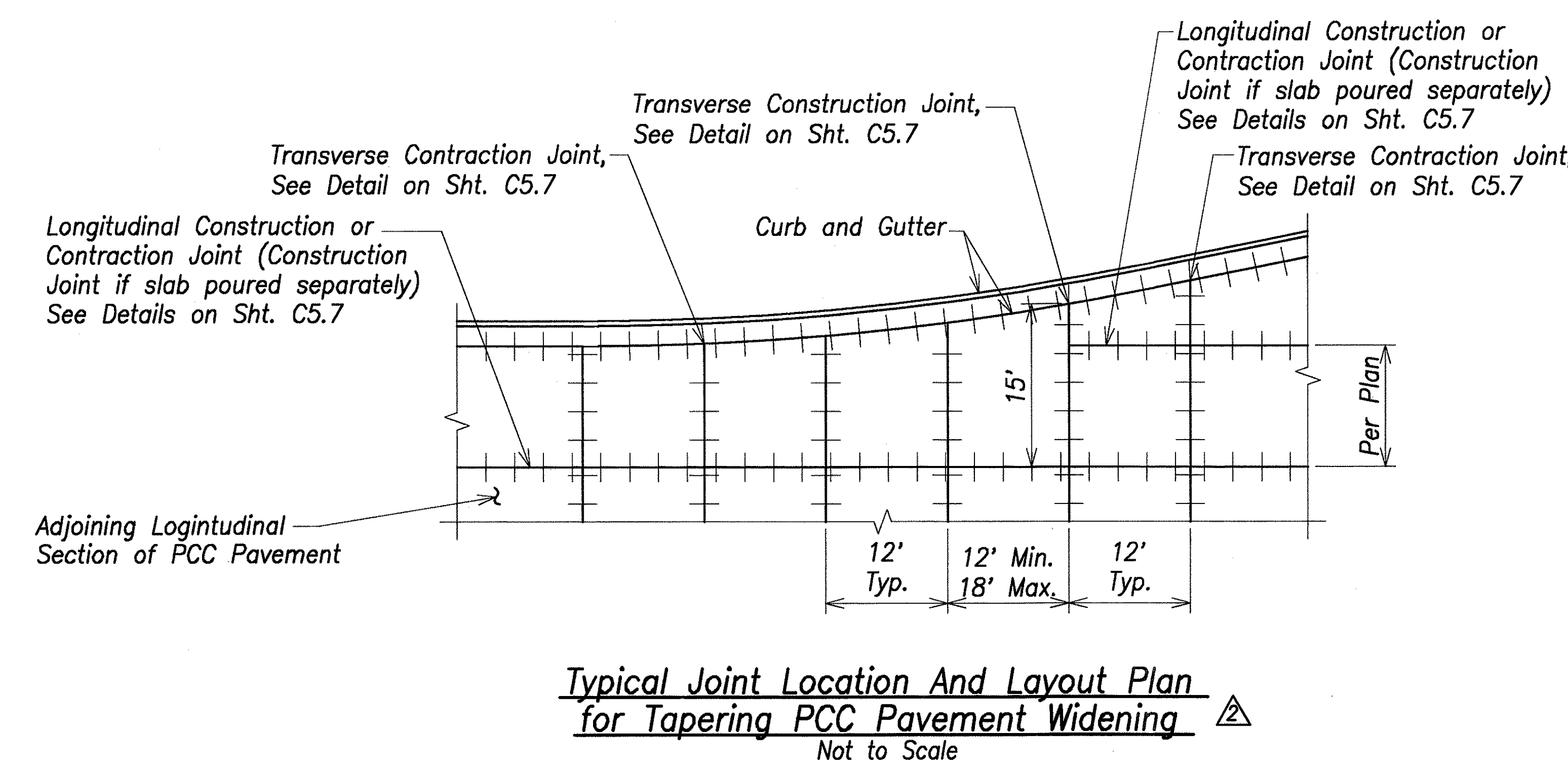


Typical Joint Location And Layout Plan For Constant PCC Pavement

Not to Scale

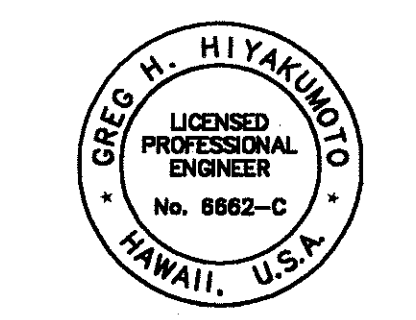
Jointing Notes:

1. All new PCC pavements shall be provided with permeable base course with longitudinal underdrains.
2. Space transverse joint at successive intervals as shown on the plan.
3. Locate transverse construction joints at the planned transverse contraction joint as shown on the jointing plan.
4. Provide shop drawings for joint layout a minimum of 2-weeks prior to work where obstructions such as manholes are encountered, gore areas, termination of concrete with triangular or odd shaped slabs, and at intersections with other streets.
 - a. Longitudinal & transverse joint spacing shall have a ratio of no more than 1.25:1.
 - b. Reinforcement along longitudinal joints shall be provided as shown in the details on sht. C5.7 for Longitudinal Construction or Longitudinal Contraction Joints and as specified in Longitudinal Joint Notes on sht. C5.7.
 - c. Reinforcement along transverse joints shall be provided as shown in the details on sht. C5.7 for Transverse Construction or Transverse Contraction Joints and as specified in Transverse Joint Notes on sht. C5.7.
 - d. See Sht. C5.8 for additional reinforcement details for odd shaped PCC pours.
5. For other joint requirements, see Section 411 – Portland Cement Concrete Pavement.
6. For locations of Longitudinal Joints, see Pavement Jointing Plans.



Typical Joint Location And Layout Plan for Tapering PCC Pavement Widening

Not to Scale



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
 DATE OF SIGNATURE: 5/11/07
 DATE OF LICENSE EXPIRY: APR 30, 2008

5/11/07	Revised/Added Details, Added notes
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION PAVEMENT DETAILS – 1 North-South Road Phase 1B F.A.I. Proj. No. STP-8930(2)	
Not to Scale Date: Feb 21, 2007 SHEET No. C5.6 OF 150 SHEETS	

ORIGINAL PLAN	DATE
NO. 1	5/11/07
NO. 2	
NO. 3	
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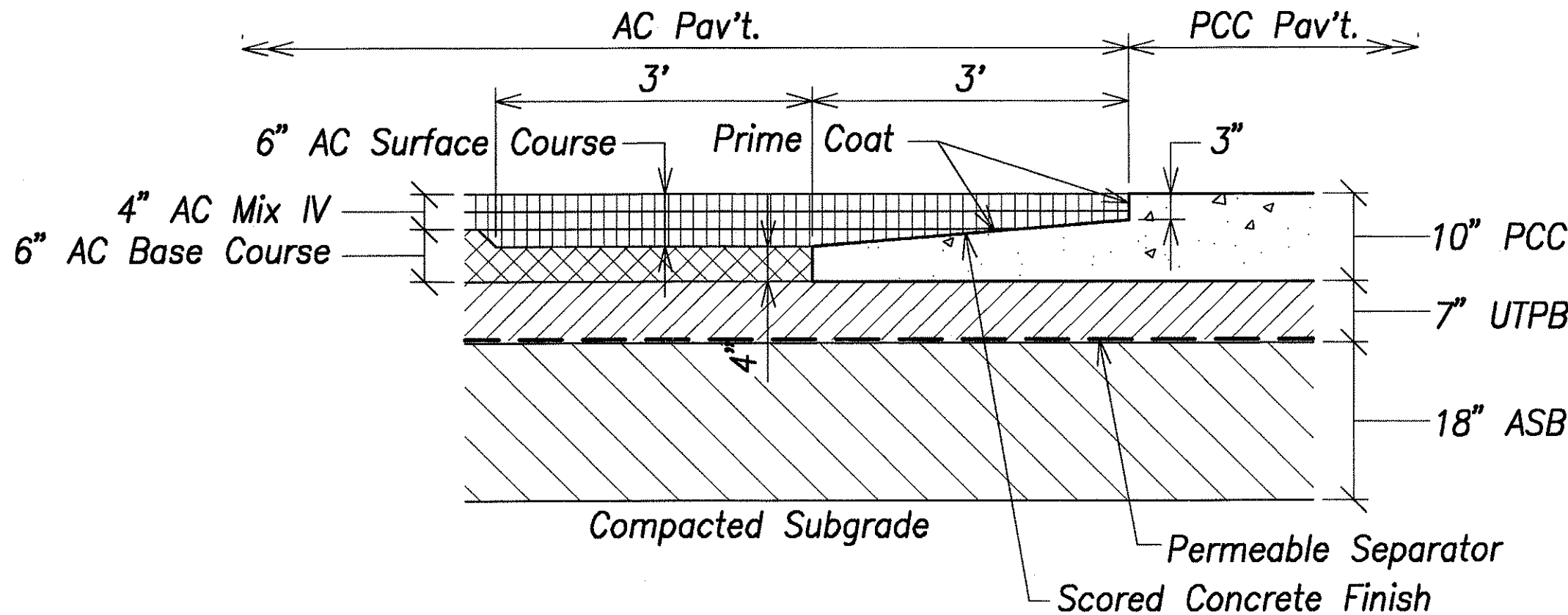
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-8930(2)	2007	ADD. 77	331

Longitudinal Joint Notes:

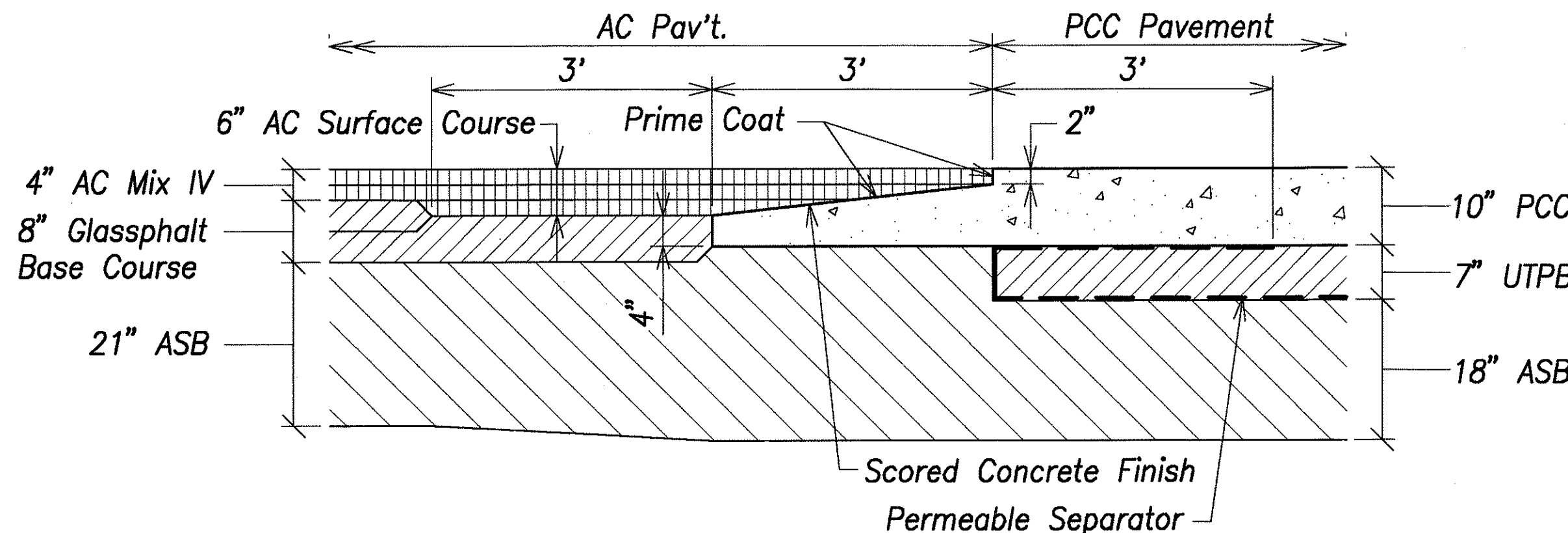
- 1. Epoxy-Coated Deformed Bars shall conform to ASTM A775/A775M-00 Grade 40.
- 2. Tiebars are to be located a minimum distance of 15 inches from a Transverse Joint. Tiebars closer to the transverse joint may interfere with joint movement.
- 3. The Contractor shall not damage the epoxy coating on the deformed bars in any way during shipment, handling, placement or rebending. Damaged epoxy-coated deformed bars shall be replaced at no cost to the State.

Transverse Joint Notes:

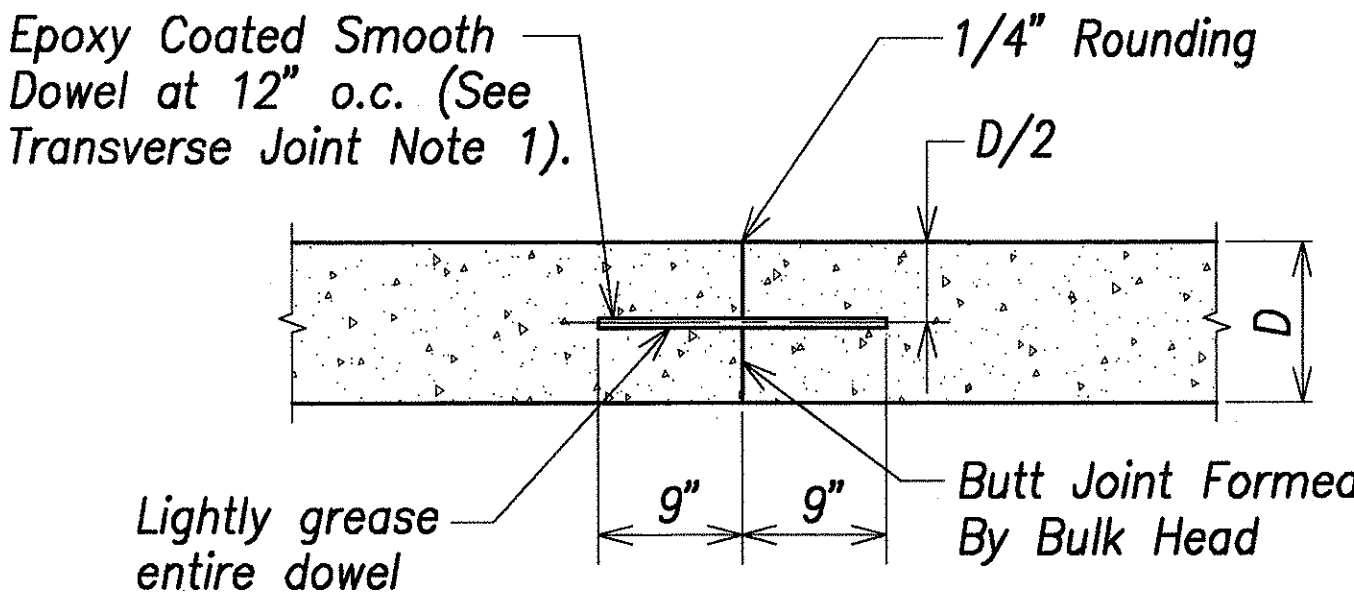
- 1. Epoxy-Coated Dowels shall conform to AASHTO M 284/M 284M Grade 60. For pavements with D < 10", use 1-1/4" ø x 1'-6" long dowels. For pavements with D ≥ 10", use 1-1/2" ø x 1'-6" long dowels.
- 2. Locate Transverse Construction Joints at the nearest planned Transverse Contraction Joint as shown on the jointing plans. Joint shall be perpendicular to paving lane.
- 3. It is critical that dowels be positioned in place parallel to the pavement surface and paving lane direction to avoid future cracks in the PCC pavement. The ends of the dowels shall not deviate more than 0.012' from the parallel in 9" length.
- 4. See Sht. C5.6 for Typical Transverse Joint spacing.
- 5. The Contractor shall not damage the epoxy coating on the dowel in any way during shipment, handling or placement. Damaged epoxy-coated dowels or rebar shall be replaced at no cost to the State.



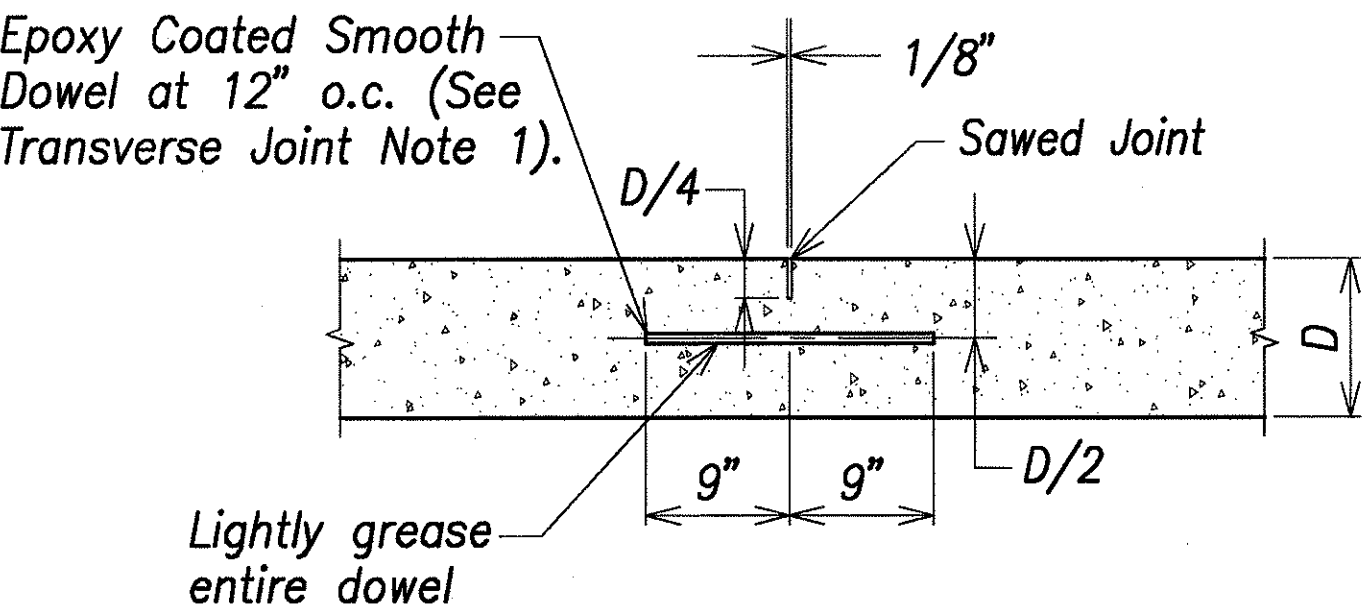
PCC-AC Transverse Transition Detail
Not To Scale



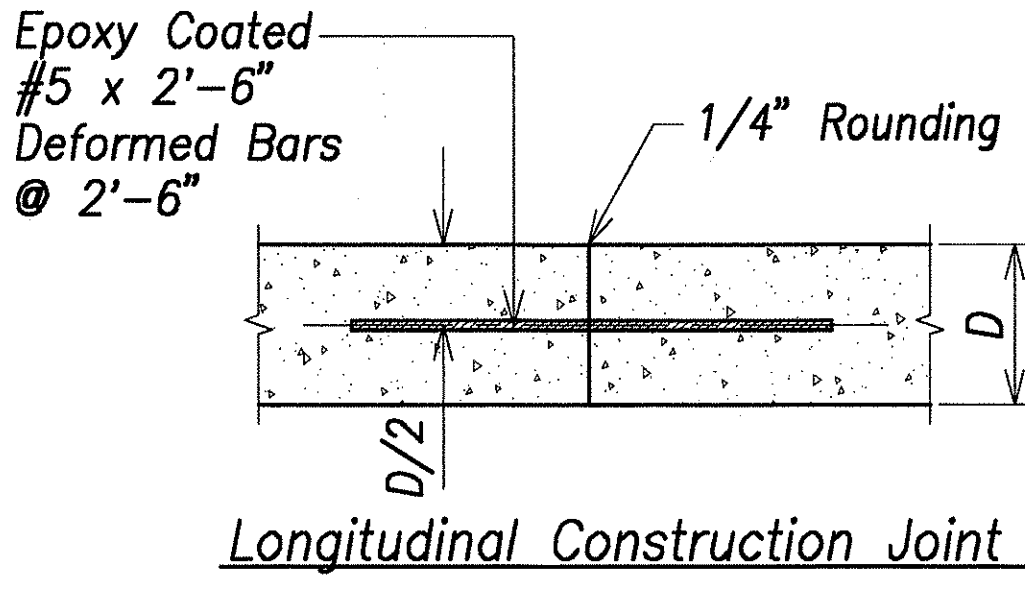
PCC-AC Transverse Transition Detail on Kapolei Parkway
Not To Scale



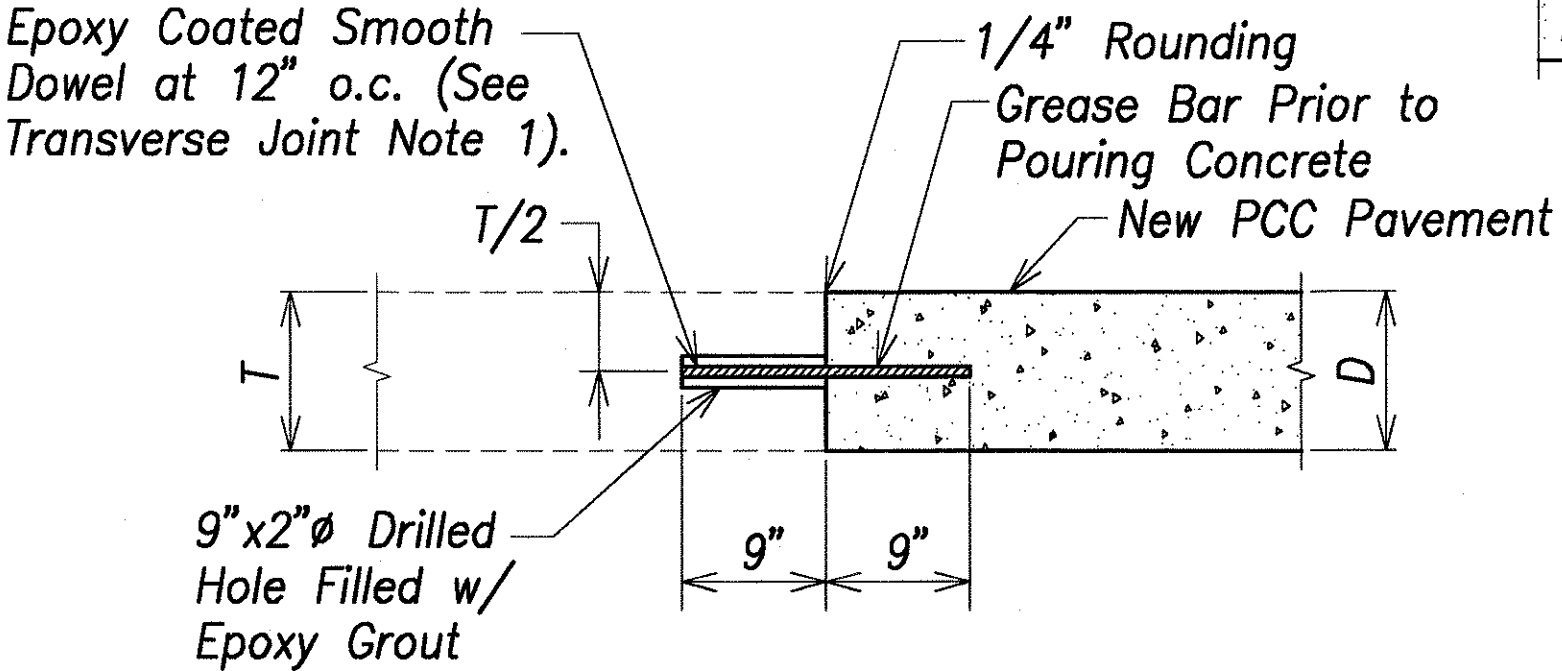
Transverse Construction Joint (Contact Joint)



Transverse Contraction Joint

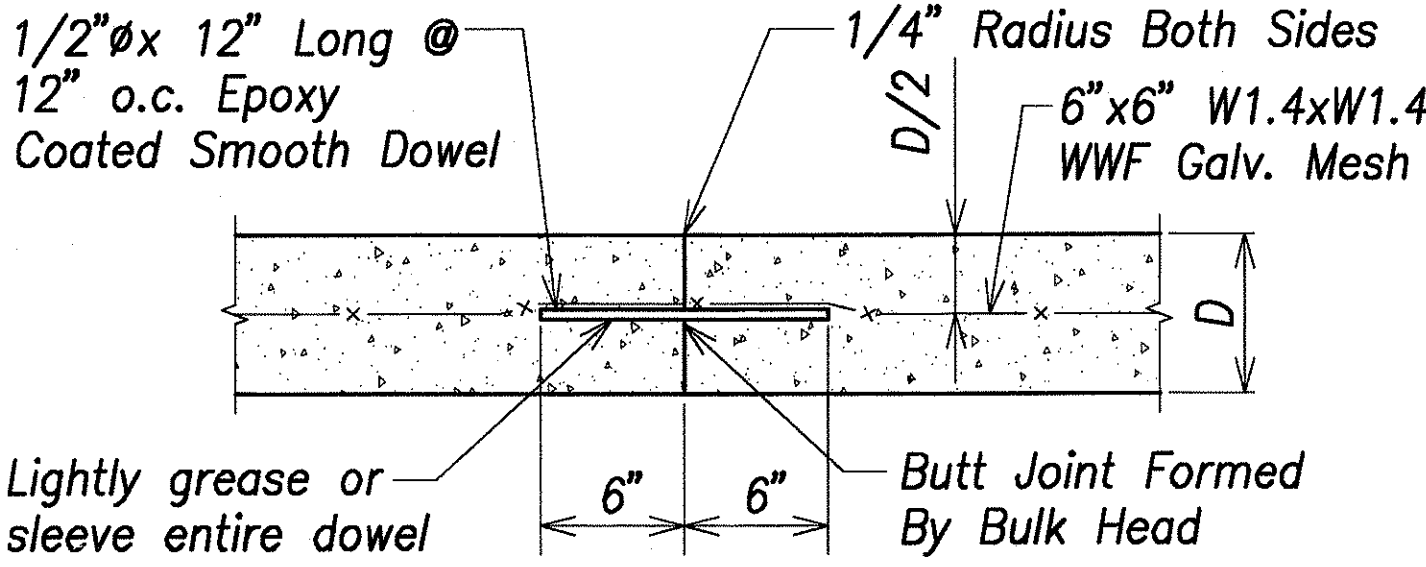


Longitudinal Construction Joint

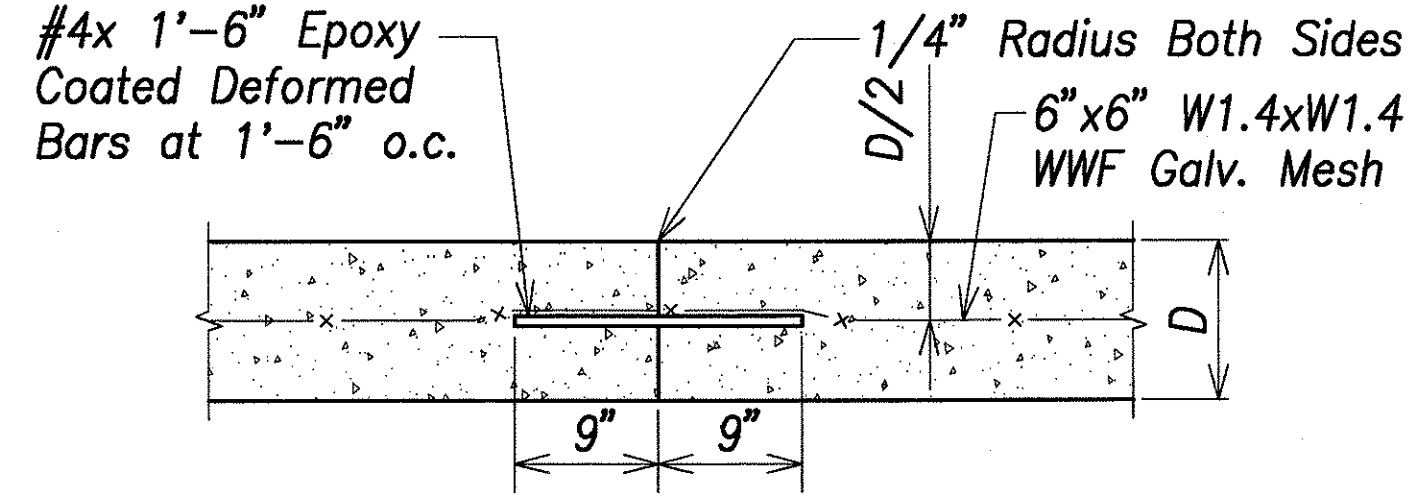


Transverse Construction Joint at Existing PCC Pavement

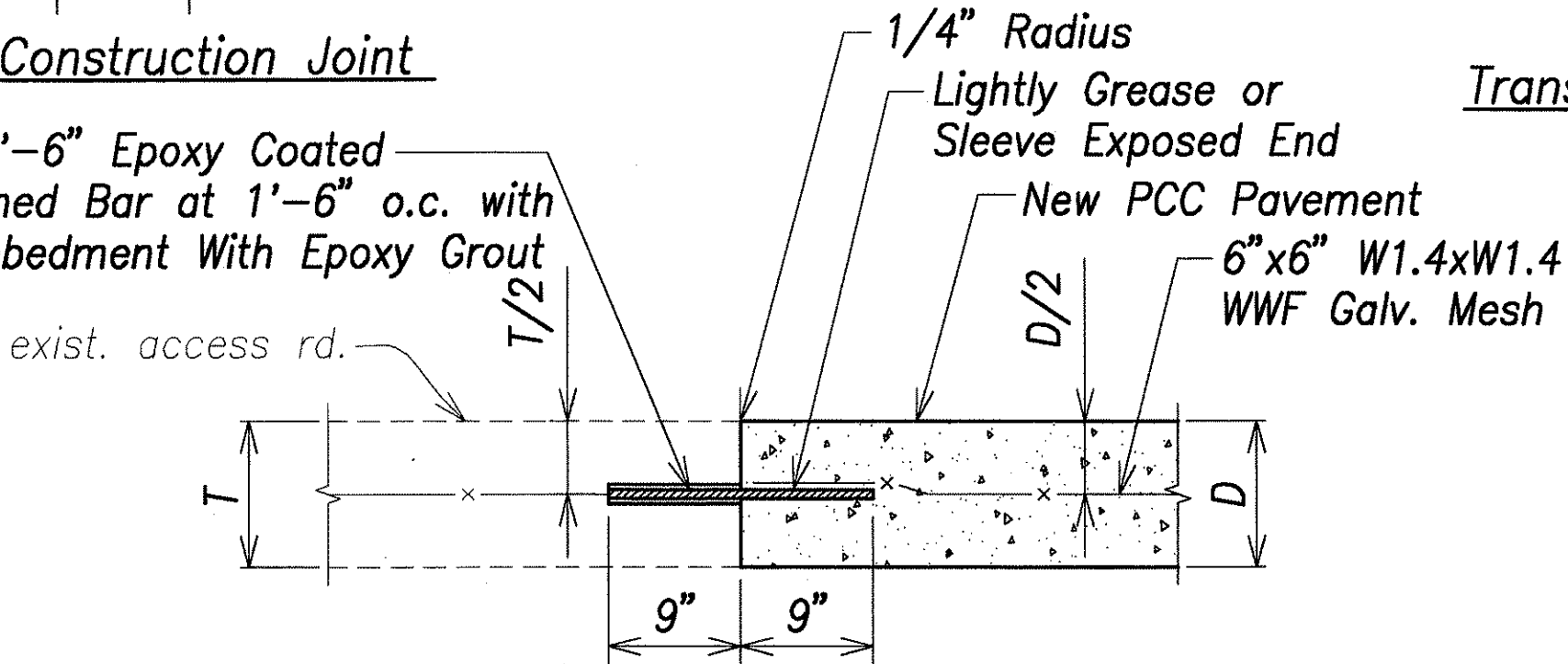
Longitudinal & Transverse Joint Details for Roadway
Not To Scale



Transverse Construction Joint

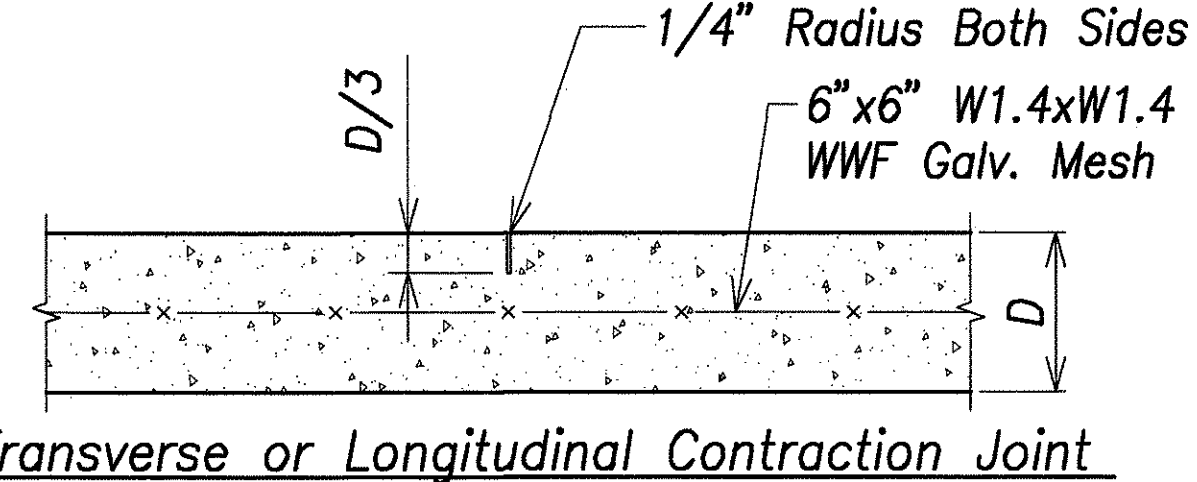


Longitudinal Construction Joint

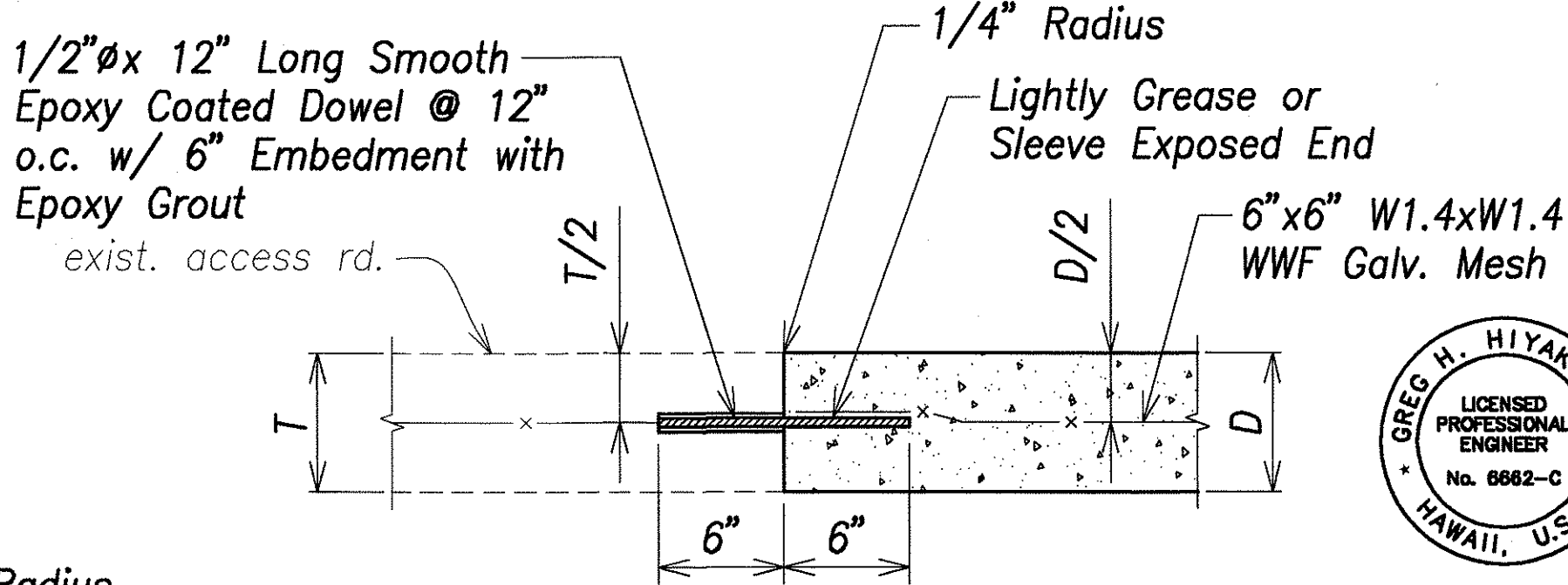


Longitudinal Construction Joint at Exist. PCC Pavement

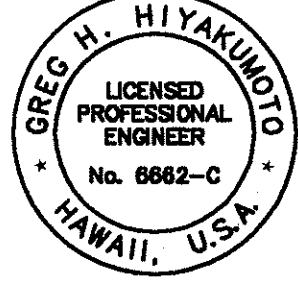
Longitudinal & Transverse Joint Details for Access Rd.
Not To Scale



Transverse or Longitudinal Contraction Joint



Transverse Construction Joint at Exist. PCC Pavement



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DATE OF LICENSE EXPIRY

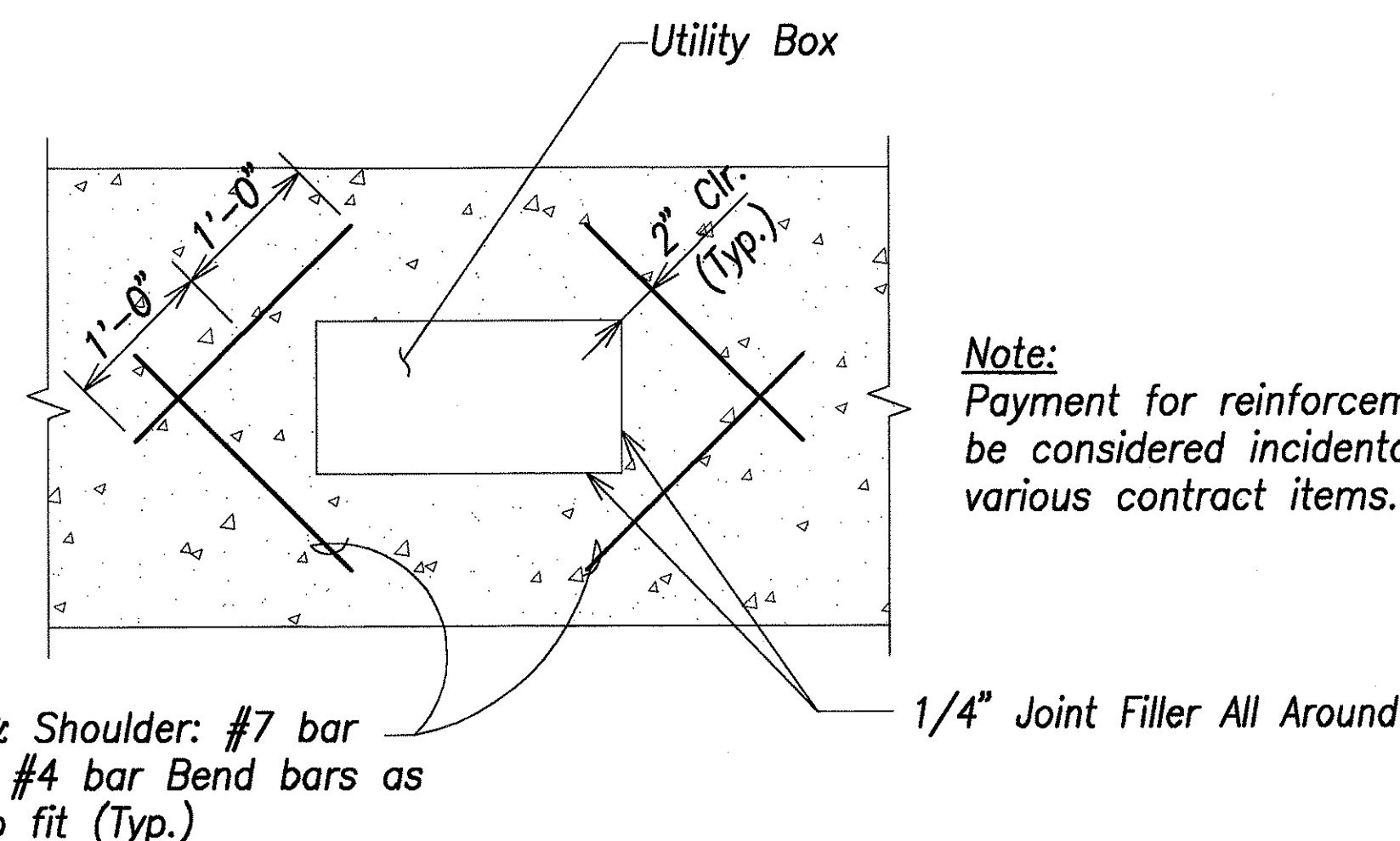
5/11/07	Revised Details
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION PAVEMENT DETAILS - 2 North-South Road Phase 1B F.A.I. Proj. No. STP-8930(2)	
Not to Scale	
Date: Feb 21, 2007	
SHEET No. C5.7 OF 150 SHEETS	

DATE
SURVEY PLOTTED BY
DRAWN BY
DESIGNED BY
CHECKED BY
ORIGINAL PLAN
NOTE BOOK
No.

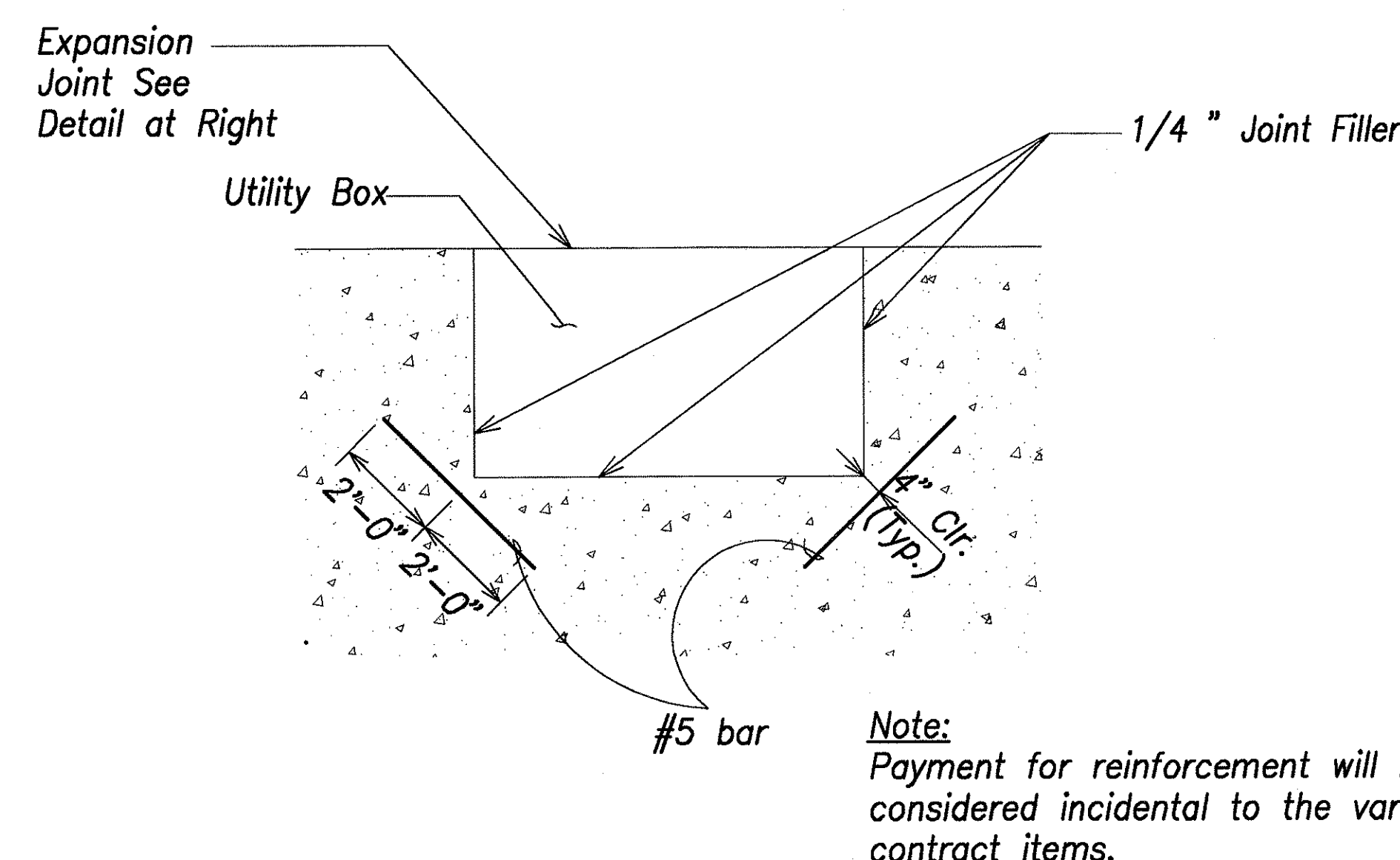
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-8930(2)	2007	ADD. 78	331

Notes:

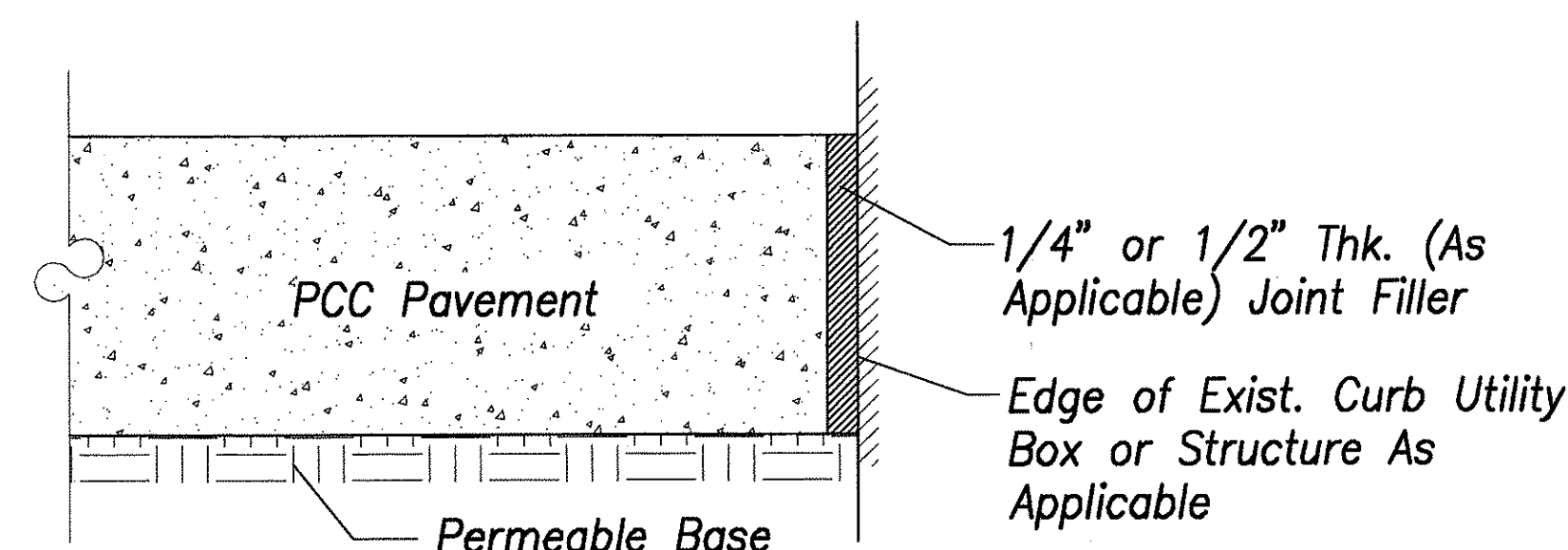
1. Install Isolation Joints to allow the slab to move independently of objects that will not move evenly with the slab to minimize stress in the slab.
2. Minimize the amount of openings within the slab to minimize the areas from which cracking can occur. Listed below are considerations that can minimize cracking from openings in the slab.
 - a. Install reinforcing bars at the corners as shown below.
 - b. Use circular openings.
 - c. Install the openings along a joint.
3. Locate openings in the slab that require access in a manner that minimizes the number of travelway lanes that need to be shut down when accessing the openings.
4. Locate openings along joints and configured to minimize the amount of corners within the slab.
5. Avoid locating access openings along or near the longitudinal joints that separate two travelway lanes.
6. Concrete for odd-shaped PCC pours shall contain a minimum of 7.5 lbs./cy of synthetic structural fiber and conform to ASTM C1116 and ACI 544.
7. Top bar clear = 2"
8. Bottom bar clear = 3"



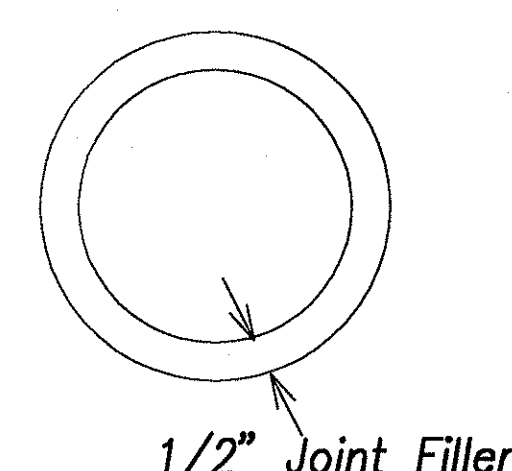
Typical Reinforcement Around Utility Box In PCC Pavement & Sidewalk



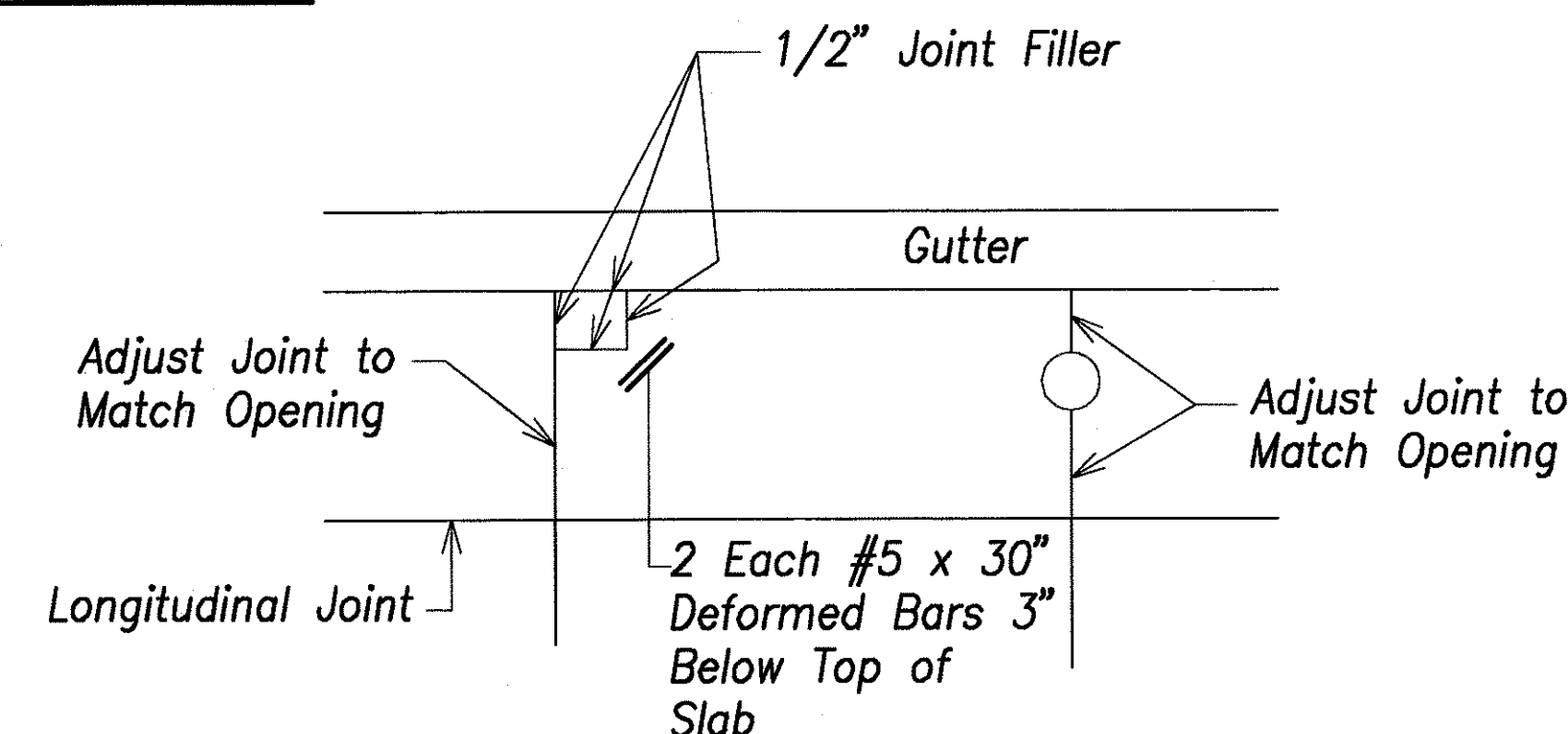
Typical Reinforcement Around Utility Box In PCC Pavement & Sidewalk



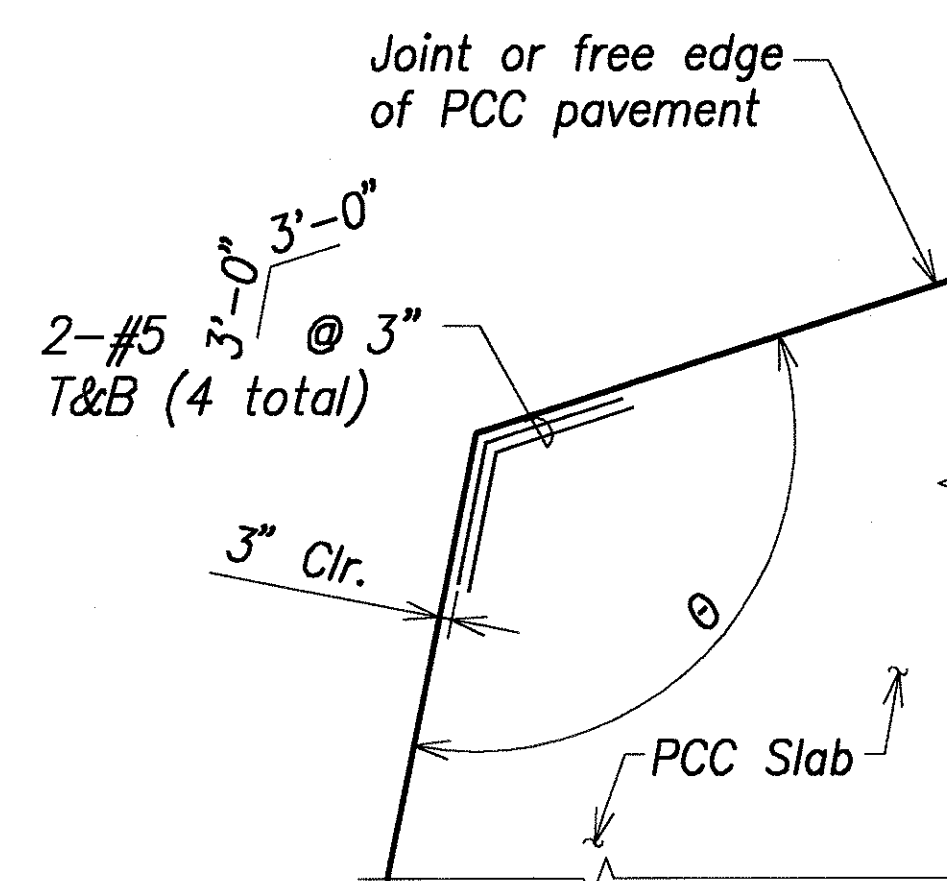
Expansion Joint Detail



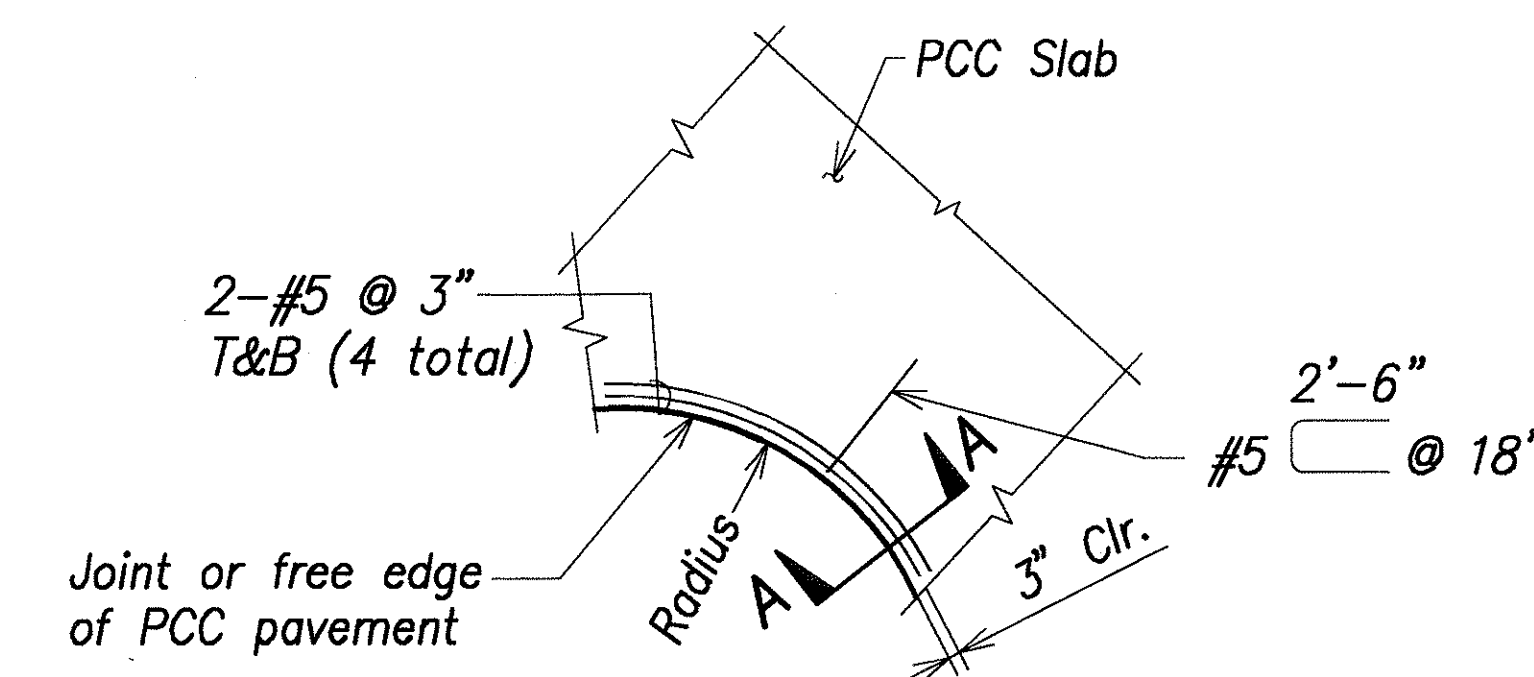
Circular Opening Detail



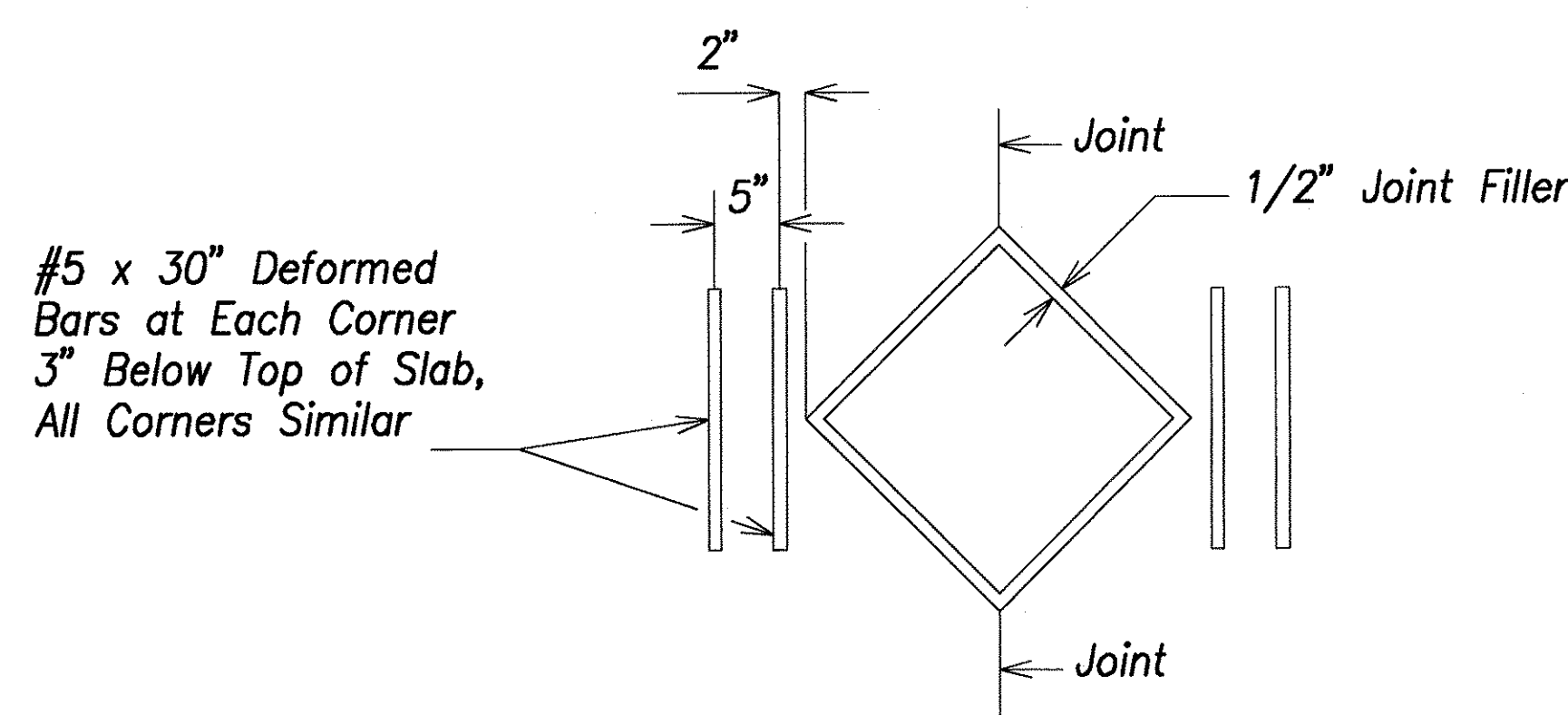
Openings Near Joints Detail



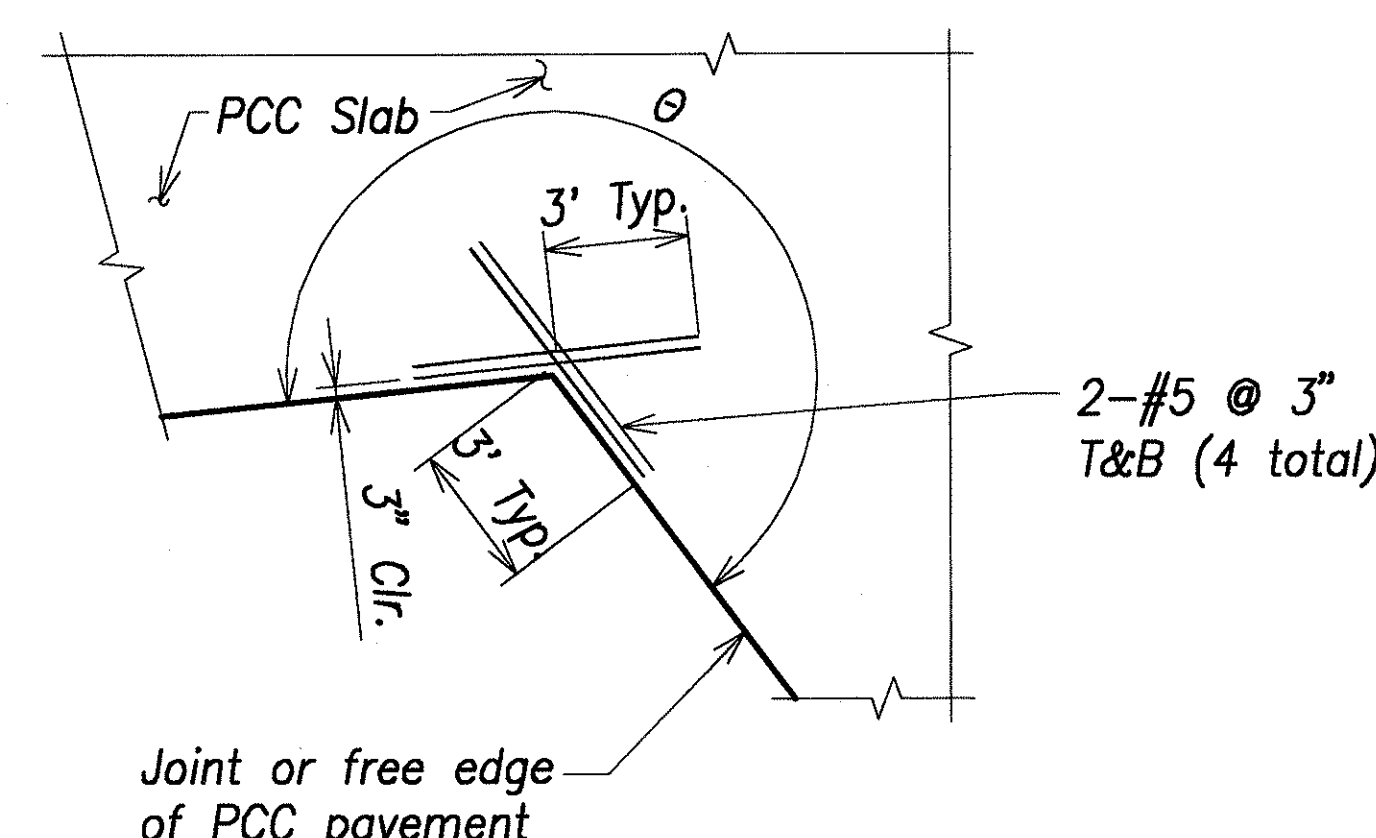
Added Reinforcement at Odd-Shaped PCC Pours for 0°-180° PCC Edge



Added Reinforcement at Odd-Shaped PCC Pours for Curved PCC Edge

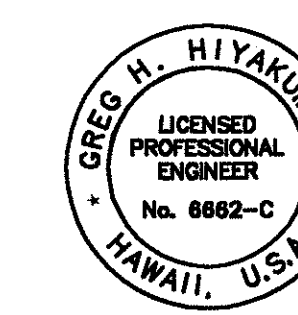


Openings With Corners-Corners At A Joint Detail



Added Reinforcement at Odd-Shaped PCC Pours for 180°-359° PCC Edge

DATE	_____
DESIGNED BY	_____
CHECKED BY	_____
NO.	_____



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

SIGNATURE: *[Signature]* DATE: APR 30, 2008

5/11/07	Added details and notes
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION PAVEMENT DETAILS - 3 North-South Road Phase 1B F.A.I. Proj. No. STP-8930(2)	
Not to Scale Date: Feb 21, 2007 SHEET No. C5.8 OF 150 SHEETS	