

Transverse Contraction Joint. See Detail on Sht. C5.7 Longitudinal Contraction Joint, Transverse Construction See Detail on Sht. C5.7 Joint, See Sht. C5.7 Edge of PCC 7.5 Previous or Next Day's 15, Pour 7.5' 9'-0' Note: Install Dowels at Edge of PCC Тур. Construction Joints Only

FED. ROAD DIST. NO.

PROJ. NO.

STP-8930(2)

FISCAL SHEET TOTAL

2007 ADD. 76

YEAR

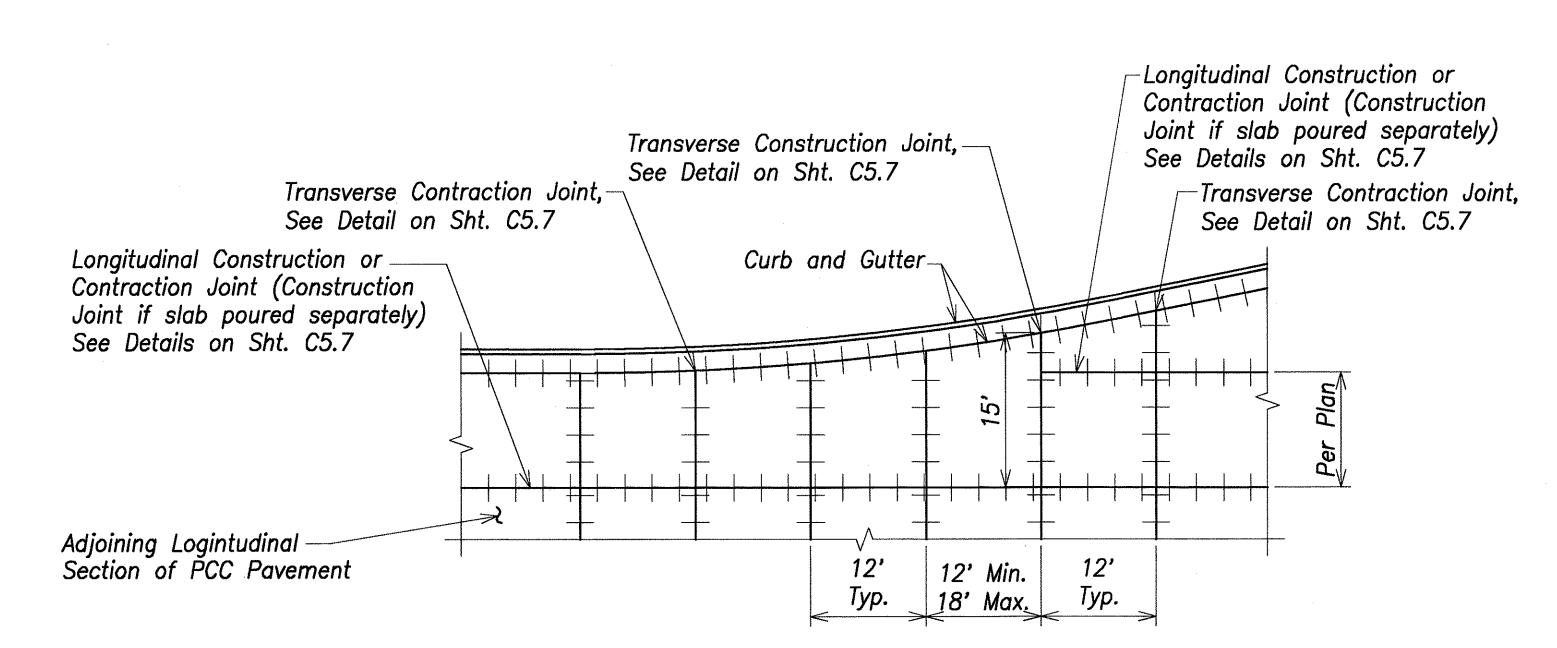
Typical Joint Location And Layout Plan For Constant PCC Pavement (for Access Rd.)

Not to Scale

Multi-Lane w/ Curbed Median

Typical Joint Location And Layout Plan For Constant PCC Pavement

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Typical Joint Location And Layout Plan for Tapering PCC Pavement Widening

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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.
- <u>a. Longitudinal & transverse joint spacing shall have a ratio of no more than 1.25:1.</u>
- 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.



THIS WORK WAS PREPARED ME OR UNDER MY SUPERVIS

SIGNATURE CULT DATE OF LICENSE EXPIRY

5/11/07 Revised/Added Details, Added notes

DATE REVISION

DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PAVEMENT DETAILS - 1

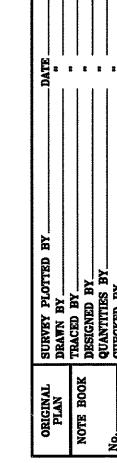
<u>North—South Road</u> <u>Phase 1B</u> <u>F.A.I. Proj. No. STP—8930(2)</u>

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Date: Feb 21, 2007

SHEET No. C5.6 OF 150 SHEETS

ADD. 76



FED. ROAD FISCAL SHEET FED. AID -1/4" Rounding **Epoxy Coated** Epoxy Coated Smooth DIST. NO. **Longitudinal Joint Notes:** PROJ. NO. YEAR #5 x 2'-6" Dowel at 12" o.c. (See 2007 ADD. 77 STP-8930(2) 1/4" Rounding -D/2Deformed Bars Transverse Joint Note 1). Epoxy-Coated Deformed Bars shall conform to ASTM A775/A775M-00 Grade 40. @ 2'-6" 1/8" to 3/16" -Sawed Joint 2. Tiebars are to be located a minimum distance of 15 inches from a Transverse Lightly grease Epoxy Coated Joint. Tiebars closer to the transverse joint may interfere with joint movement. entire dowel #5 x 2'-6" Deformed Bars @ D/4-D/23. The Contractor shall not damage the epoxy coating on the deformed bars in any - Butt Joint Formed 2'-6" o.c. way during shipment, handling, placement or rebending. Damaged epoxy-coated Lightly grease By Bulk Head Longitudinal Construction Joint deformed bars shall be replaced at no cost to the State. entire dowel Epoxy Coated Smooth Transverse Joint Notes: Transverse Construction Joint (Contact Joint) -1/4" Rounding Dowel at 12" o.c. (See -Grease Bar Prior to Longitudinal Contraction Joint Epoxy-Coated Dowels shall conform to AASHTO M 284/M 284M Grade 60. For Epoxy Coated Smooth -Transverse Joint Note 1). Pouring Concrete pavements with D < 10", use 1-1/4" \emptyset x 1'-6" long dowels. For pavements Dowel at 12" o.c. (See New PCC Pavement with $D \ge 10$ ", use 1-1/2" $\emptyset \times 1'-6$ " long dowels. Sawed Joint Transverse Joint Note 1).\ Locate Transverse Construction Joints at the nearest planned Transverse D=10" (for Roadway) Contraction Joint as shown on the jointing plans. Joint shall be perpendicular to T=10" (for Roadway) paving lane. (for Access Road) 9"x2"ø Drilled (for Access Road) < 9" >< D/2Hole Filled w/ 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 **Epoxy Grout** ends of the dowels shall not deviate more than 0.012' from the parallel in 9" entire dowel Transverse Construction Joint at Transverse Contraction Joint length. Existing PCC Pavement 4. See Sht. C5.6 for Typical Transverse Joint spacing. Longitudinal & Transverse Joint Details for Roadway Not To Scale The Contractor shall not damage the epoxy coating on the dowel in any way -1/4" Radius Both Sides 1/4" Radius Both Sides 1/2"øx 12" Long @during shipment, handling or placement. Damaged epoxy—coated dowels or rebar 12" o.c. Epoxy shall be replaced at no cost to the State. -6"x6" W1.4xW1.4 -6"x6" W1.4xW1.4 Coated Smooth Dowel WWF Galv. Mesh WWF Galv. Mesh PCC Pav't. AC Pav't. Prime Coat 6" AC Surface Course— 4" AC Mix IV Transverse or Longitudinal Contraction Joint -Butt Joint Formed -10" PCC Lightly grease or 6" AC Base Course By Bulk Head -1/4" Radius sleeve entire dowel 1/2"øx 12" Long Smooth -7" UTPB -Lightly Grease or Transverse Construction Joint Epoxy Coated Dowel @ 12" Sleeve Exposed End o.c. w/ 6" Embedment with $\#4x \ 1'-6"$ Epoxy 1/4" Radius Both Sides -18" ASB Epoxy Grout -6"x6" W1.4xW1.4 Coated Deformed -6"x6" W1.4xW1.4 exist. access rd. — Bars at 1'-6" o.c. WWF Galv. Mesh WWF Galv. Mesh Compacted Subgrade Permeable Separator PROFESSIONAL PROFESSIONAL ENGINEER -Scored Concrete Finish PCC-AC Transverse Transition Detail Not To Scale -1/4" Radius Longitudinal Construction Joint THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION Transverse Construction Joint at PCC Pavement -Lightly Grease or AC Pav't. Sleeve Exposed End Exist. PCC Pavement #4x 1'-6" Epoxy Coated SIGNATURE GLULY DATE OF LICENSE EXPIRY Deformed Bar at 1'-6" o.c. with New PCC Pavement Prime Coat 6" AC Surface Course 9" Embedment With Epoxy Grout -6"x6" W1.4xW1.4 WWF Galv. Mesh 4" AC Mix IV exist. access rd.— 10" PCC 5/11/07 /2 Revised Details 8" Glassphalt Base Course DATE REVISION -7" UTPB DEPARTMENT OF TRANSPORTATION 21" ASB 18" ASB PAVEMENT DETAILS - 2 Longitudinal Construction Joint at Exist. PCC Pavement Scored Concrete Finish North-South Road

Longitudinal & Transverse Joint Details for Access Rd.

Not To Scale

Permeable Separator $\!-\!\!\!\!\!-$

PCC-AC Transverse Transition Detail on Kapolei Parkway

Not To Scale

ORIGINAL SURVEY PLOTTED BY
PLAN DRAWN BY
TRACED BY
DESIGNED BY

ADD. 77

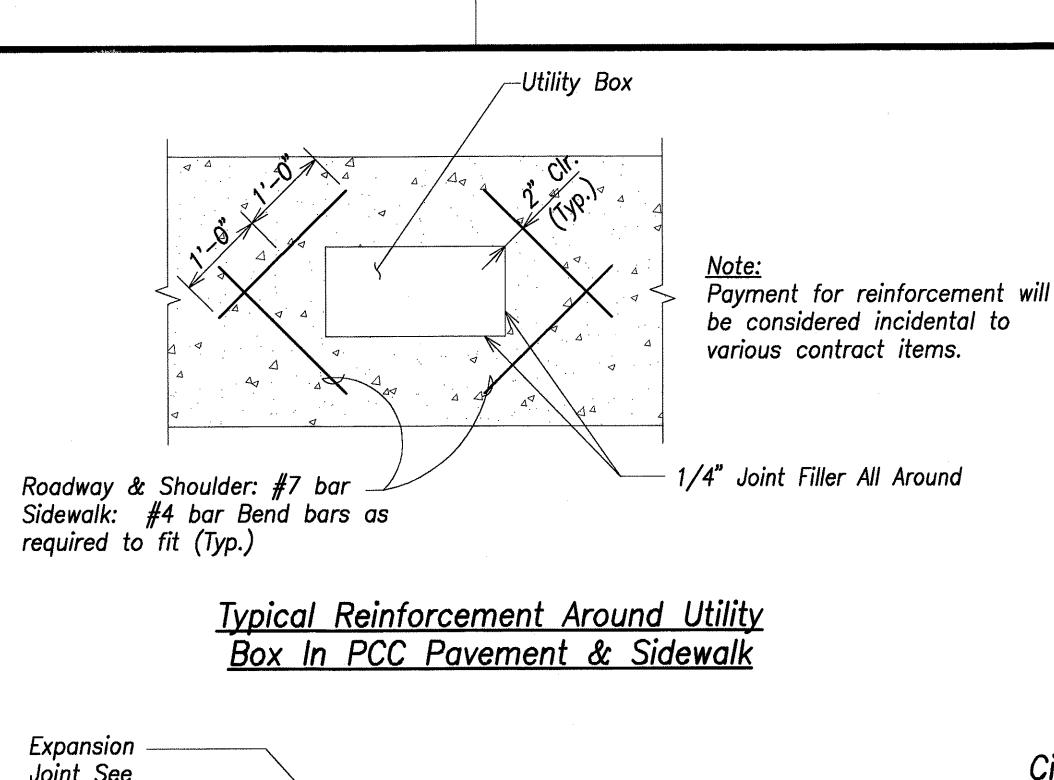
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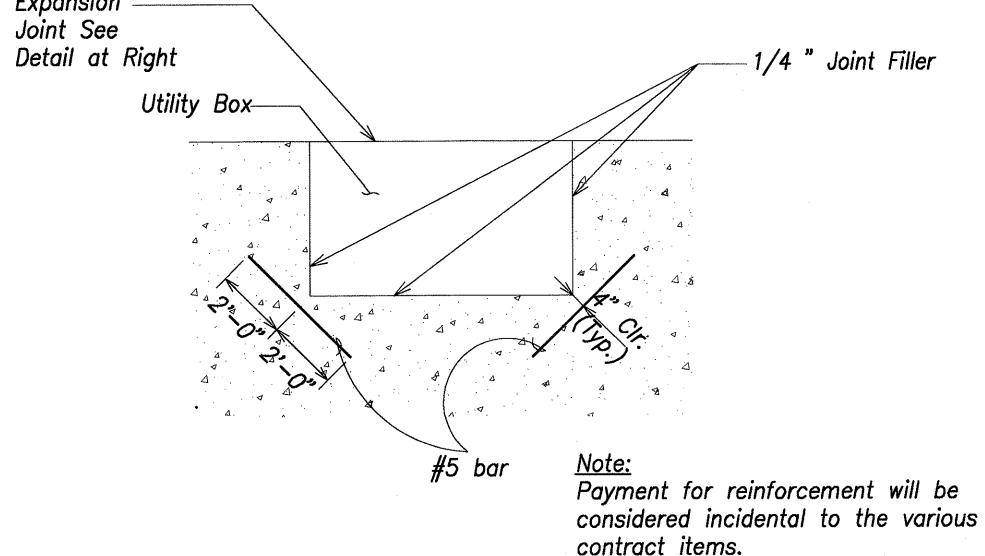
Phase 1B

F.A.I. Proj. No. STP-8930(2)

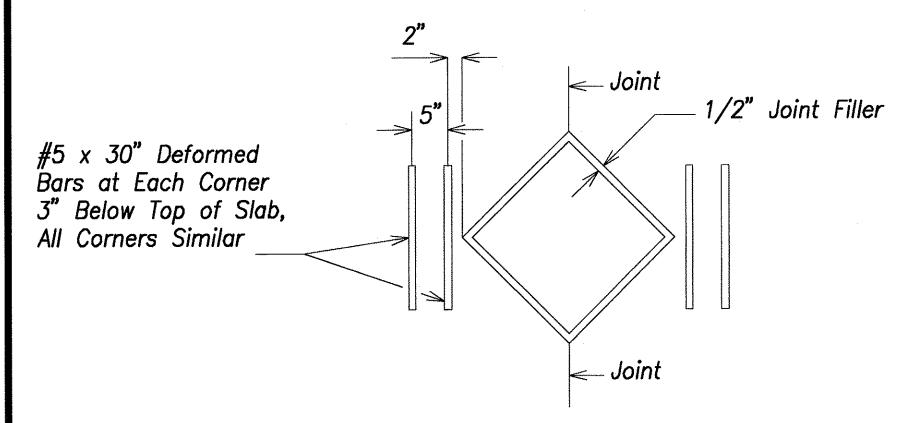
SHEET No. C5.7 OF 150 SHEETS

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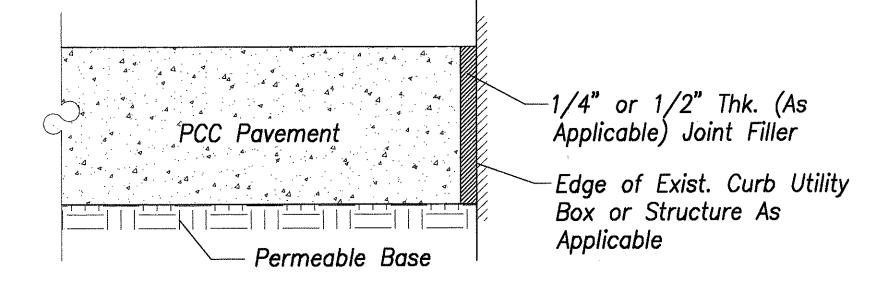


Typical Reinforcement Around Utility Box In PCC Pavement & Sidewalk



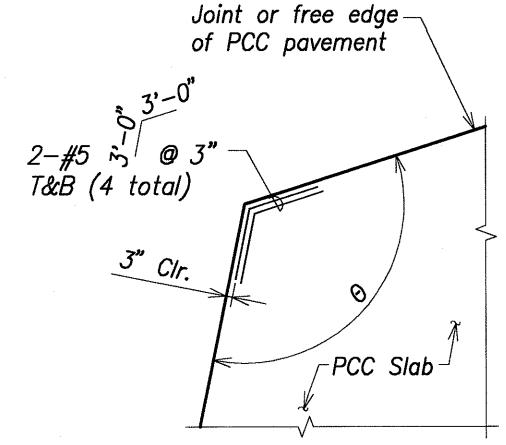
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Openings With Corners-Corners At A Joint Detail

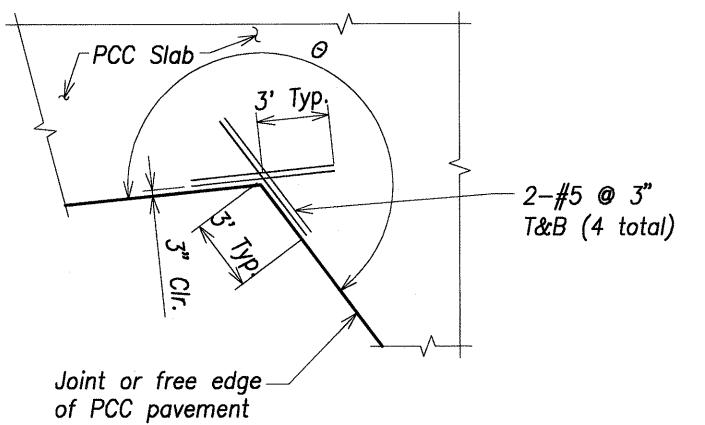


Expansion Joint Detail 1/2" Joint Filler Gutter Adjust Joint to — Adjust Joint to Match Opening Match Opening 1/2" Joint Filler _2 Each #5 x 30" Longitudinal Joint -Deformed Bars 3" <u>Circular Opening Detail</u> Below Top of

Openings Near Joints Detail



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



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

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.

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- 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
 - a. Install reinforcing bars at the corners as shown below.

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PROJ. NO.

STP-8930(2)

FISCAL SHEET

2007 ADD. 78

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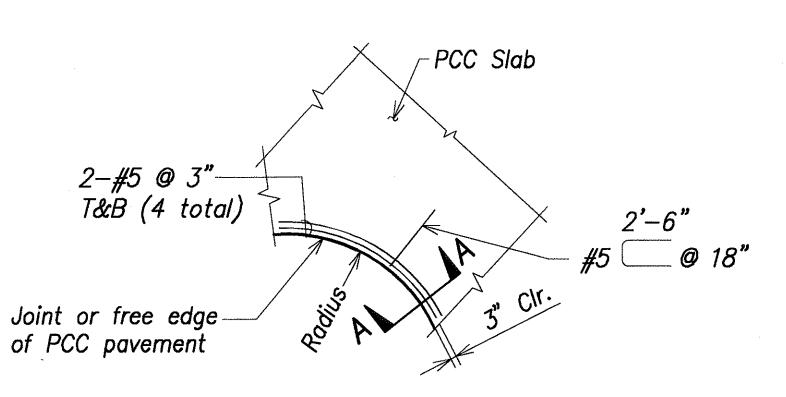
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- b. Use circular openings.
- c. Install the openings along a joint.

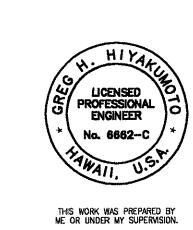
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- 3. Locate openings in the slab that require access in a manner that minimizes the number of travelway lanes that need to be shut down when accessing the openings.
- 4. Locate openings along joints and configured to minimize the amount of corners within the slab.
- 5. Avoid locating access openings along or near the longitudinal joints that separate two travelway lanes.
- 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.
- 2 7. Top bar clear = 2"
- 2 8. Bottom bar clear = 3"



Added Reinforcement at Odd-Shaped PCC Pours 2 for Curved PCC Edge



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Added details and notes REVISION DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PAVEMENT DETAILS - 3

North-South Road <u>Phase 1B</u> F.A.I. Proj. No. STP-8930(2)

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SHEET No. C5.8 OF 150 SHEETS