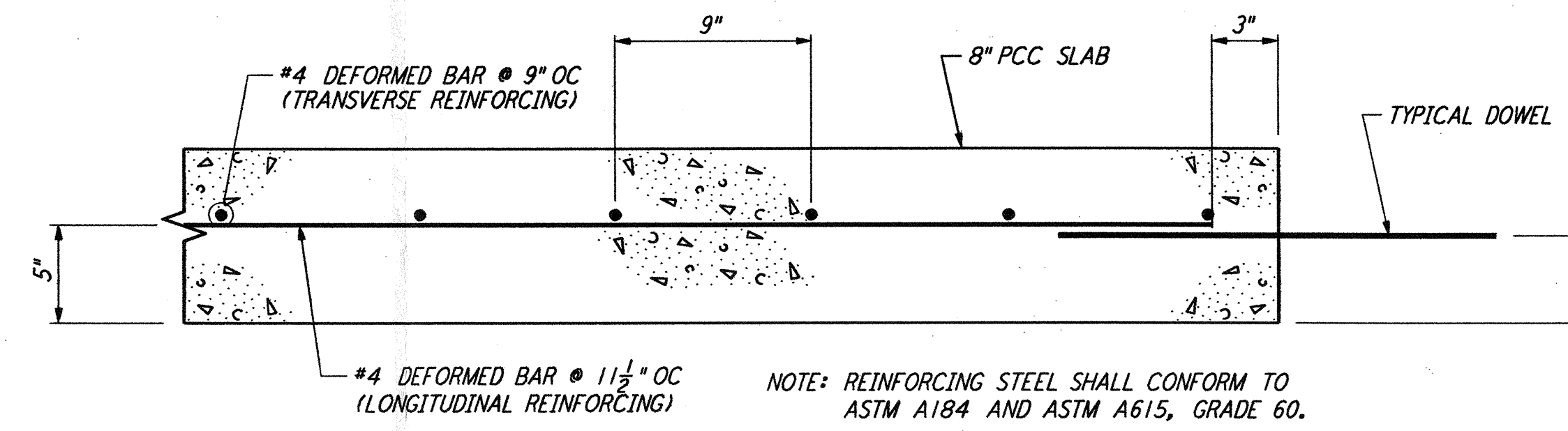
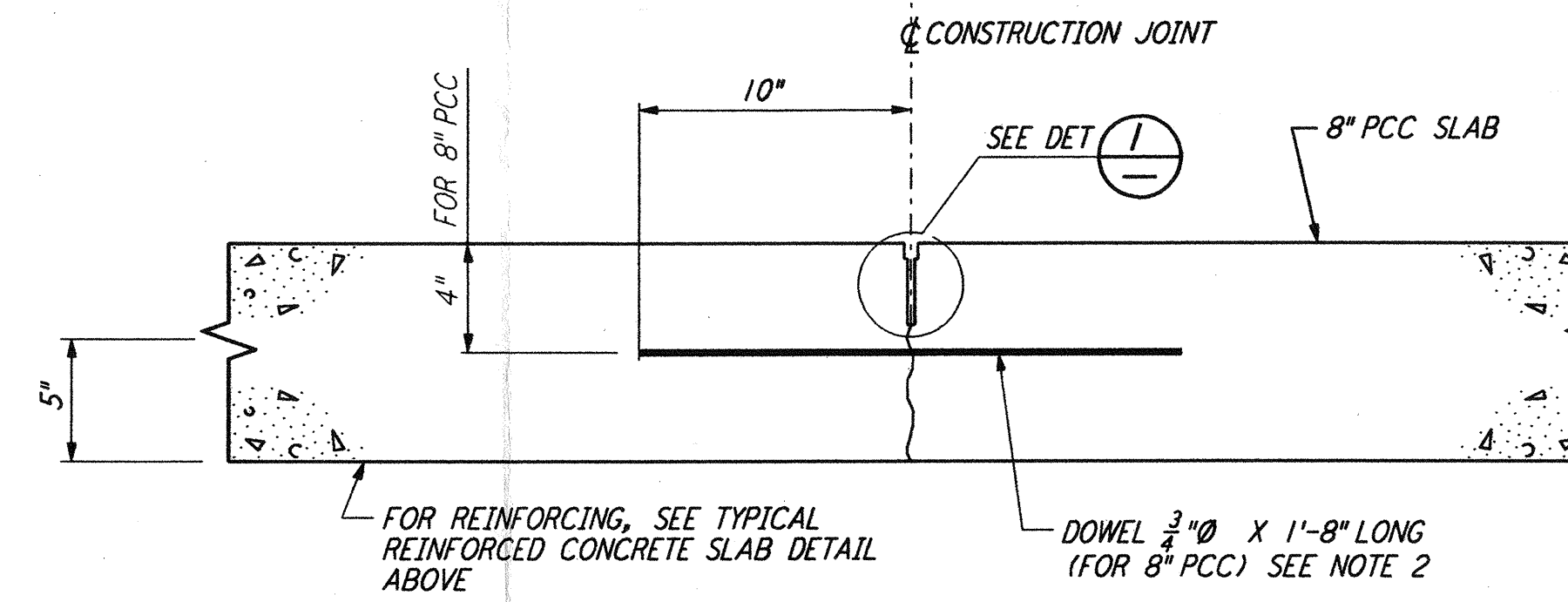


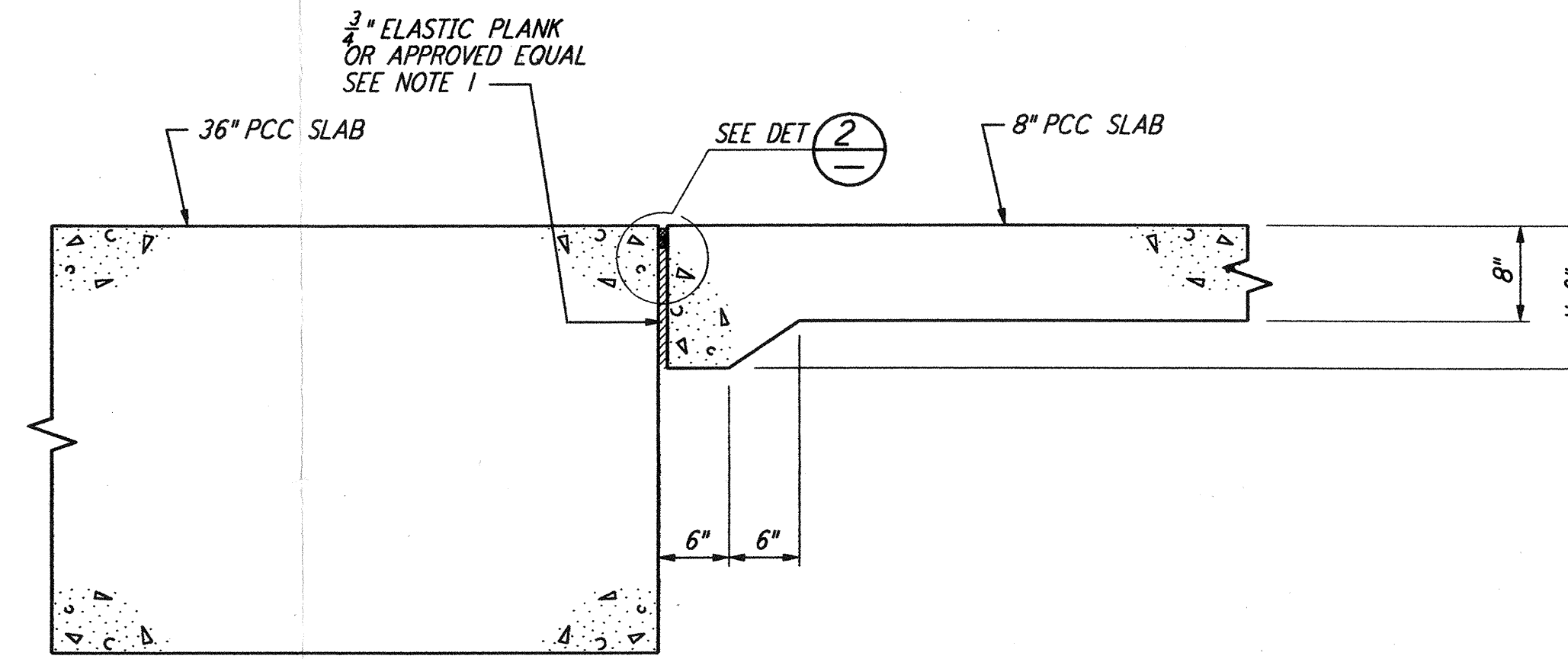
**TYPICAL DOWEL PLACEMENT**  
 NO SCALE



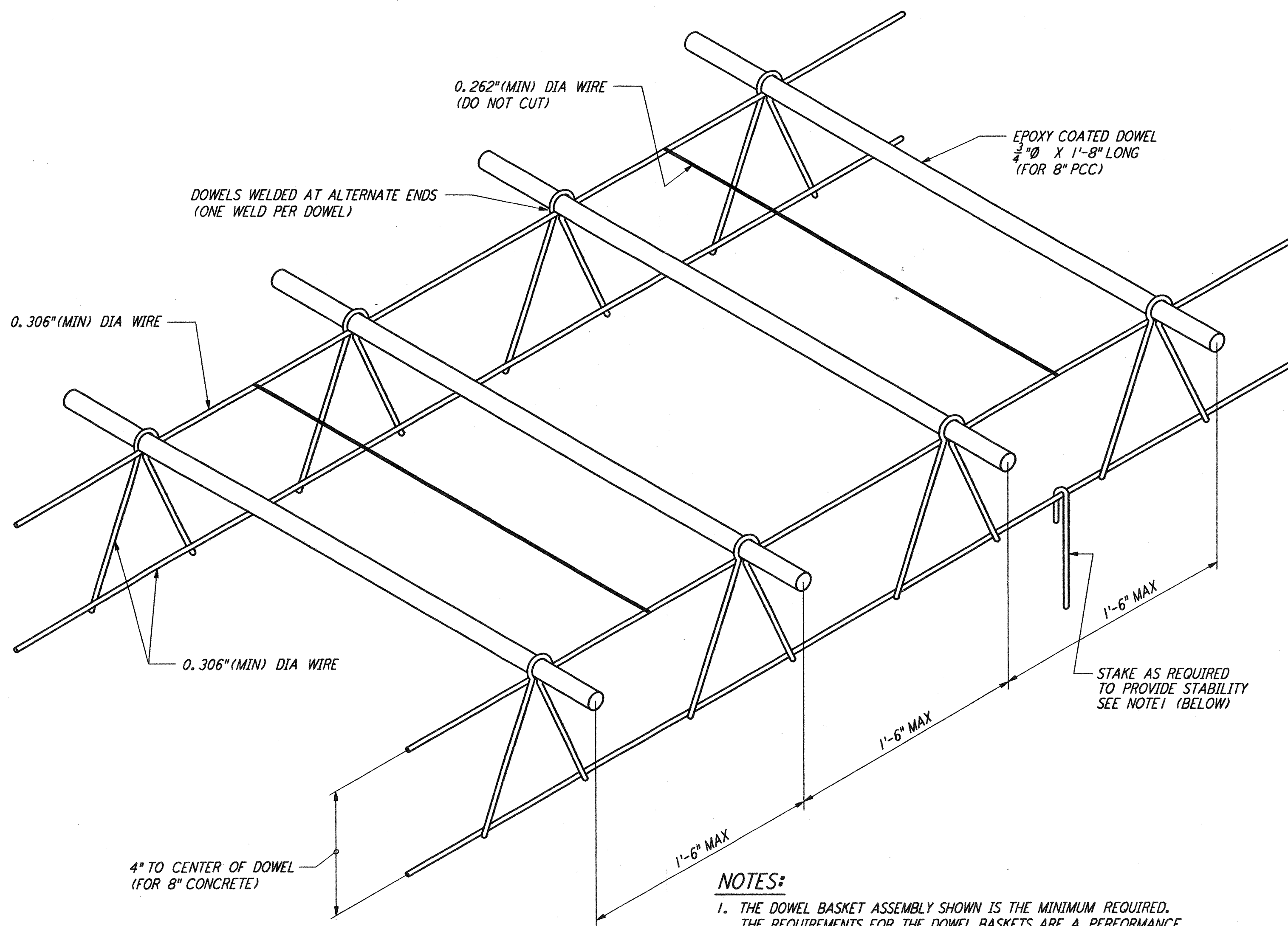
**TYPICAL REINFORCED CONCRETE SLAB**  
 NO SCALE



**CONSTRUCTION JOINT (DOWELLED SAWED JOINT) - TYPE B**  
 NO SCALE

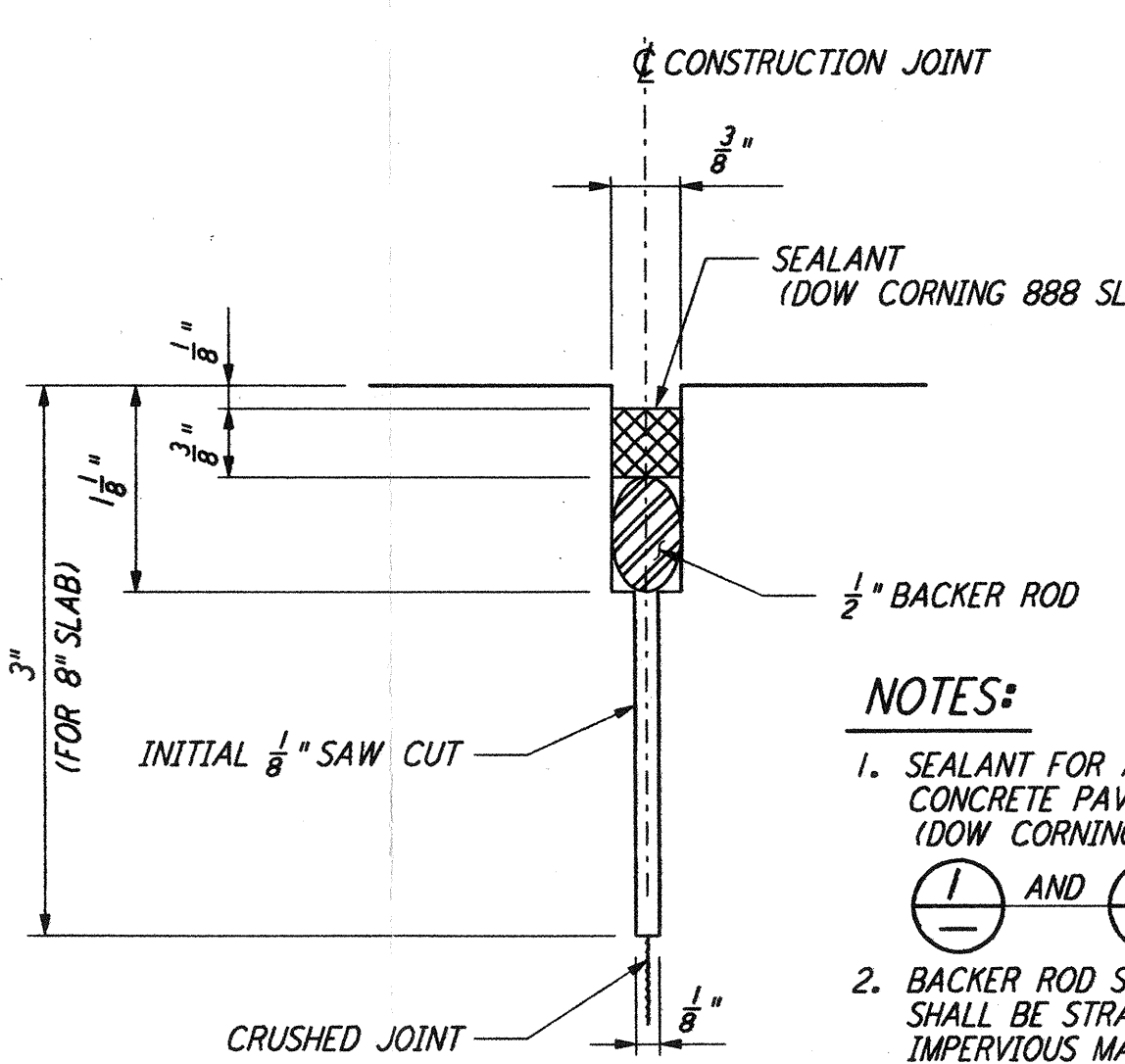


**EXPANSION JOINT - TYPE A**  
 NO SCALE

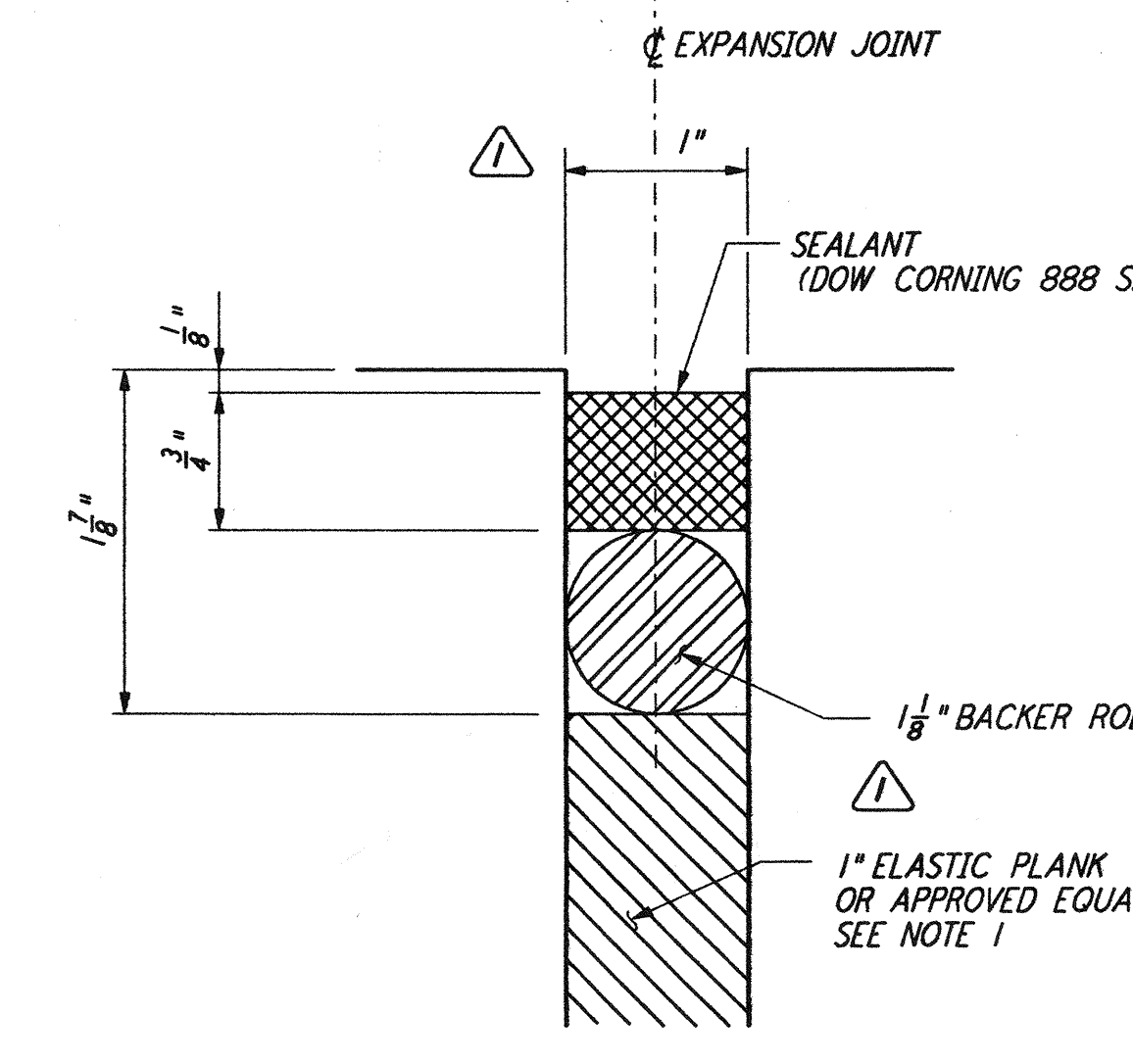


- NOTES:**
1. THE DOWEL BASKET ASSEMBLY SHOWN IS THE MINIMUM REQUIRED. THE REQUIREMENTS FOR THE DOWEL BASKETS ARE A PERFORMANCE SPECIFICATION AND IT WILL BE REQUIRED THAT THE CONTRACTOR PROVIDE SUFFICIENT SUPPORT, BRACING AND ANCHORAGE SO THAT THE AS CONSTRUCTED DOWELS WILL MEET THE TOLERANCE SPECIFICATIONS.
  2. DOWELS TO MEET ASTM A617-GR-60.
  3. DOWELS TO BE EPOXY COATED TO MEET AASHTO M-254-B, 7.0 MILS MIN.
  4. DOWELS TO BE EPOXY COATED, INCLUDING THE ENDS.
  5. DOWELS TO BE LUBRICATED IN THE FIELD.
  6. DOWEL ASSEMBLY LENGTH AS REQUIRED.

**DOWEL BASKET ASSEMBLY**  
 NO SCALE SEE NOTE 1 (ABOVE)



**DETAIL 1**  
 NO SCALE



**DETAIL 2**  
 NO SCALE

- NOTES:**
1. SEALANT FOR ALL TRANSVERSE JOINTS IN THE CONCRETE PAVEMENT SHALL BE LIQUID SEALANT (DOW CORNING 888 SL). TYPICAL FOR DETAILS 1 AND 2.
  2. BACKER ROD SHALL BE OF THE SIZE SHOWN AND SHALL BE STRANDED ROPE MADE OF SYNTHETIC IMPERVIOUS MATERIAL (NYLON OR APPROVED EQUAL) WHICH WILL NOT ABSORB SEALANT OR PERMIT THE SEALANT TO FLOW PAST THE ROPE. BACKER ROD SHALL BE HBR-XL AS MANUFACTURED BY HERCULES INC. OR APPROVED EQUAL.

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- NOTES:**
1. THE ELASTIC PLANK SHALL BE A PREMOLDED JOINT FILLER. THIS PREMOLDED JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF ASTM D 1751. THE JOINT FILLER SHALL BE FURNISHED IN A SINGLE PIECE FOR THE FULL DEPTH AND WIDTH REQUIRED FOR THE JOINT UNLESS OTHERWISE APPROVED BY THE ENGINEER. WHEN MORE THAN ONE PIECE IS AUTHORIZED FOR A CONTINUOUS JOINT, THE ABUTTING ENDS SHALL BE FASTENED SECURELY AND HELD ACCURATELY TO SHAPE BY STAPLING OR OTHER APPROVED POSITIVE FASTENING MEANS.
  2. DOWELS SHALL BE SMOOTH, ROUND STEEL BARS CONFORMING TO ASTM A 617, GRADE 60, FREE FROM BURRS, BENDS OR OTHER DEFORMATIONS. DOWEL BARS SHALL BE EPOXY-COATED FOR THEIR FULL LENGTH, INCLUDING THE CUT ENDS, WITH A RUST PREVENTATIVE EPOXY FOR A MINIMUM THICKNESS OF 7.0 MILS. PRIOR TO PLACEMENT NOT LESS THAN ONE HALF (1/2) THE LENGTH OF THE DOWEL SHALL BE LUBRICATED.
  3. DOWELS SHALL BE PLACED PARALLEL TO THE FINISHED CONCRETE SURFACE FOR VERTICAL ALIGNMENT AND PERPENDICULAR TO THE JOINT FOR HORIZONTAL ALIGNMENT. THE ALLOWABLE TOLERANCES IS 1/4 INCH FOR FULL LENGTH OF THE DOWEL.
  4. ALL DOWELS WHICH ARE PLACED SHALL BE SECURELY SUPPORTED IN PLACE BY DOWEL BASKETS. DOWEL BASKETS SHALL HAVE PRIOR APPROVAL FOR USE BY THE ENGINEER.
  5. TIE BARS SHALL BE DEFORMED STEEL BARS CONFORMING TO ASTM A 615, GRADE 60.
  6. ALL SAW CUT JOINTS SHALL HAVE INITIAL CUT 1/8 INCH WIDE TO THE DEPTH AS SHOWN AS SOON AS POSSIBLE AFTER THE CONCRETE HAS BEEN PLACED. THE SAW CUT SHALL NOT BE WIDENED UNTIL A MINIMUM OF THREE DAYS AFTER PLACING. AFTER THE INITIAL SAW CUT A ROPE OR REMOVABLE FILLER OF APPROPRIATE SIZE SHALL BE PLACED IN THE SAW CUT TO PREVENT DAMAGE TO THE JOINT. THIS ROPE OR FILLER SHALL BE REMOVED PRIOR TO WIDENING THE SAW CUT.
  7. CONSTRUCTION JOINTS AS SHOWN ON THE PLANS SHALL BE FORMED AT THE END OF EACH DAYS POUR. IF WORK IS INTERRUPTED FOR A LONG PERIOD OF TIME AS DETERMINED BY THE ENGINEER, THE CONCRETE SHALL BE REMOVED BACK TO THE NEAREST JOINT AND A CONSTRUCTION JOINT INSTALLED. NO INTERMEDIATE JOINTS WILL BE PERMITTED.

NO.	DATE	BY	CHKD	ENGR	PROJ	DESCRIPTION
2	1-15-99	MEI	--	--	MDW	ISSUED FOR AS BUILT
1	2-28-97	RM				REV JOINT AT DET 2

NO.	DATE	BY	CHKD	ENGR	PROJ	DESCRIPTION
ISSUED FOR CONSTRUCTION						
		MCS				11-15-96
		DDM				11-15-96
		BP				11-15-96
		TDM				11-15-96

**AS-BUILT DRAWINGS**

**PARSONS**  
 100 WEST WALNUT STREET  
 PASADENA, CALIFORNIA

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 MASSACHUSETTS INSTITUTE OF TECHNOLOGY

**LIGO-D961296-02-0**

LASER INTERFEROMETER  
 GRAVITATIONAL-WAVE OBSERVATORY  
 BEAM TUBE ENCLOSURE - LIVINGSTON, LA

TITLE	SCALE	CONTRACT NUMBER	PROJECT NUMBER
STRUCTURAL BEAM TUBE ENCLOSURE CONCRETE SLAB & JOINT DETAILS	NONE	PPI50969	8094
SHEET NUMBER			REVISIONS
LA-S-508			