

DOUBLE MAT

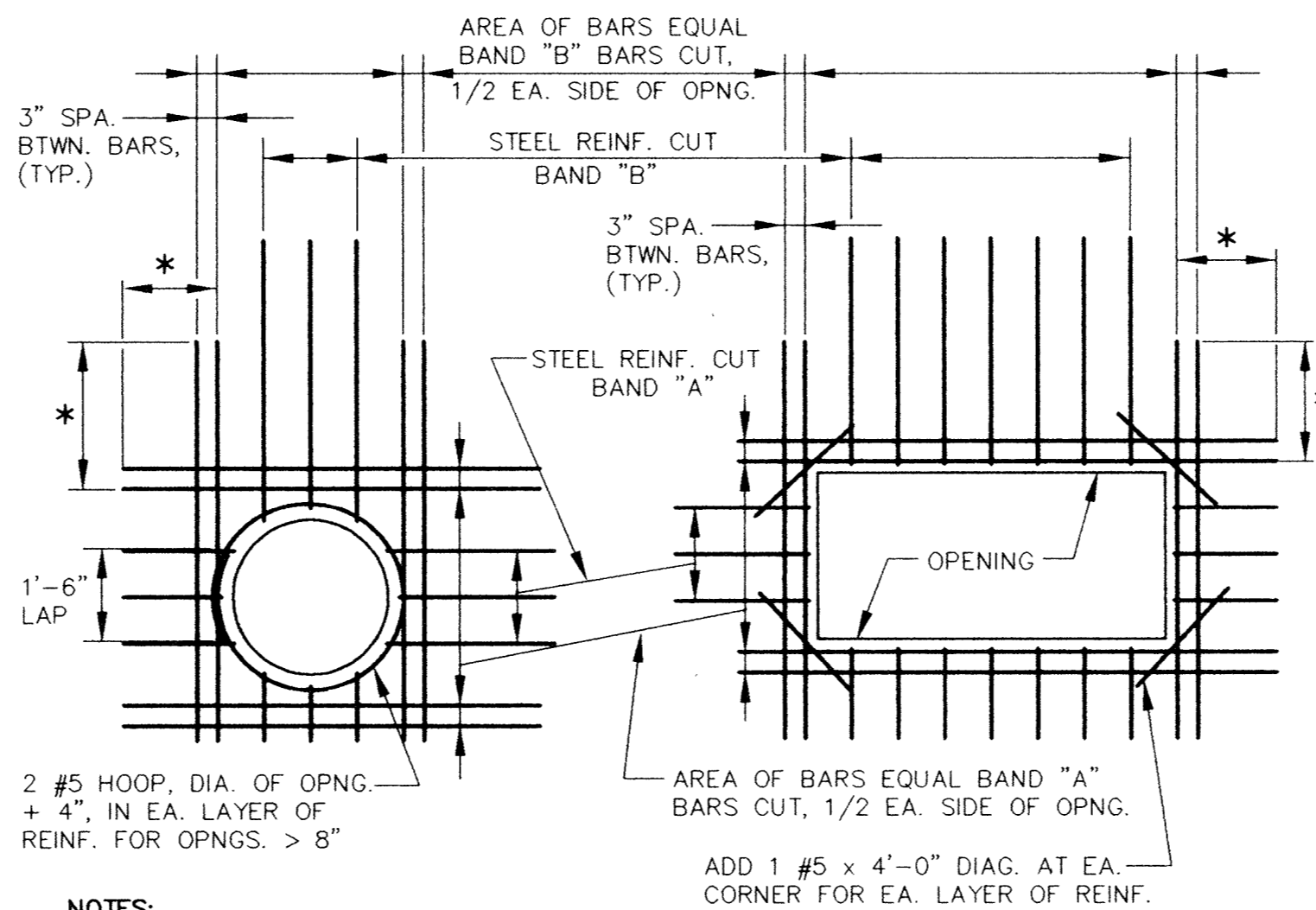
NOTES:

- 90° HOOK SHALL BE OF SUFFICIENT LENGTH TO PROVIDE THE HORIZONTAL BAR LAP LENGTH SHOWN IN THE SPLICE LAP TABLE AT RIGHT.
- TYP. FOR ALL CORNERS UNLESS OTHERWISE SHOWN ON THE PLANS.

CONCRETE WALL CORNER DETAIL (1)

No Scale

S13



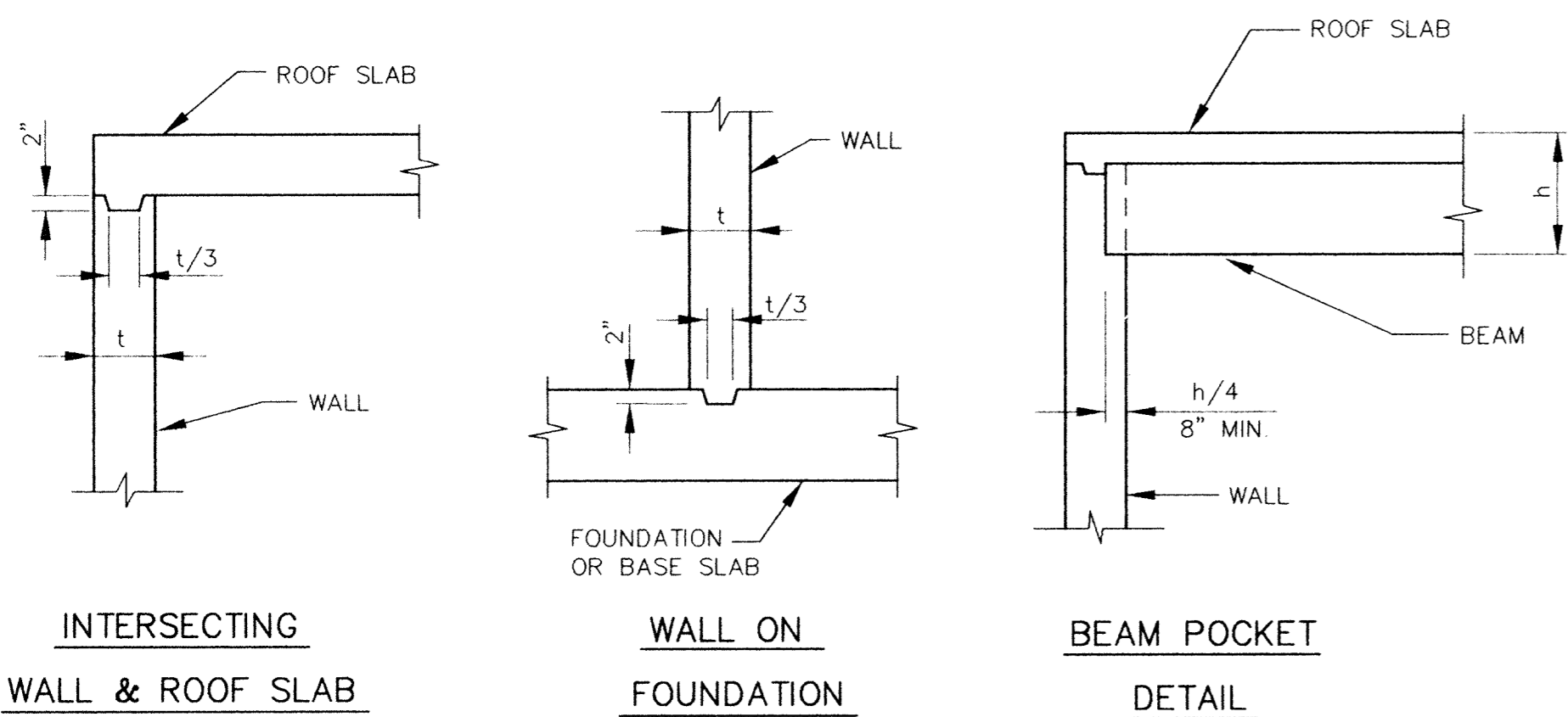
NOTES:

- * 42 BAR DIAMETERS UNLESS NOTED OTHERWISE ON PLANS.
- DO NOT WELD REINF. TO PIPE SLEEVES AND INSERTS.
- TYP. FOR ALL OPNGS. IN CONC. WALLS AND SLABS UNLESS INDICATED OTHERWISE ON PLANS.

OPENING REINFORCING DETAIL (2)

No Scale

S13



CONSTRUCTION JOINT DETAILS (4)

No Scale

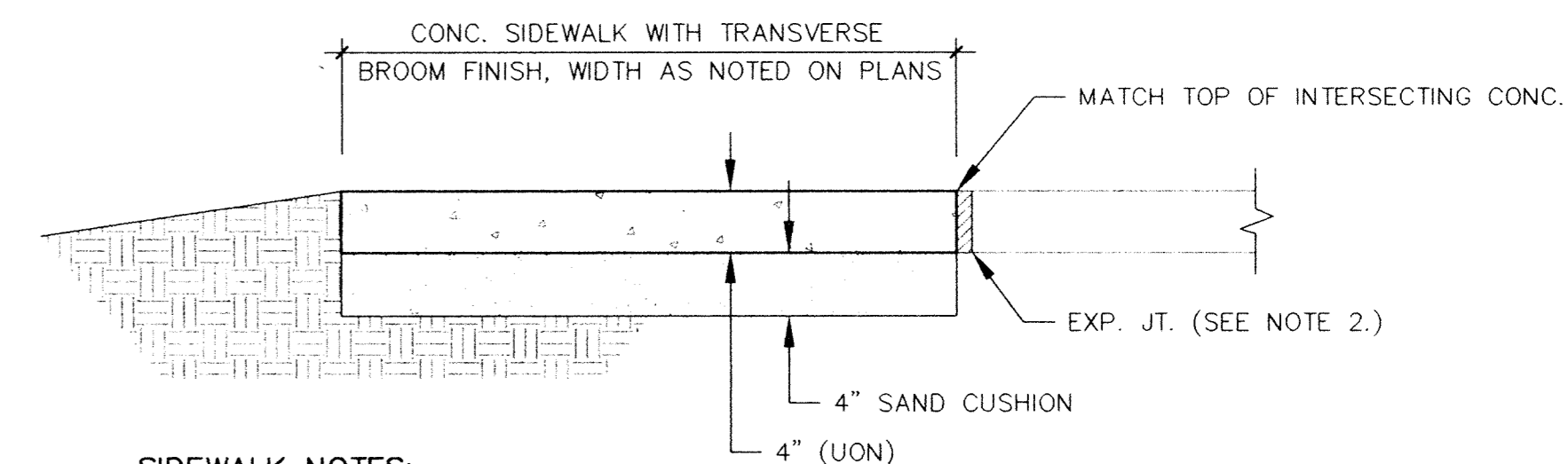
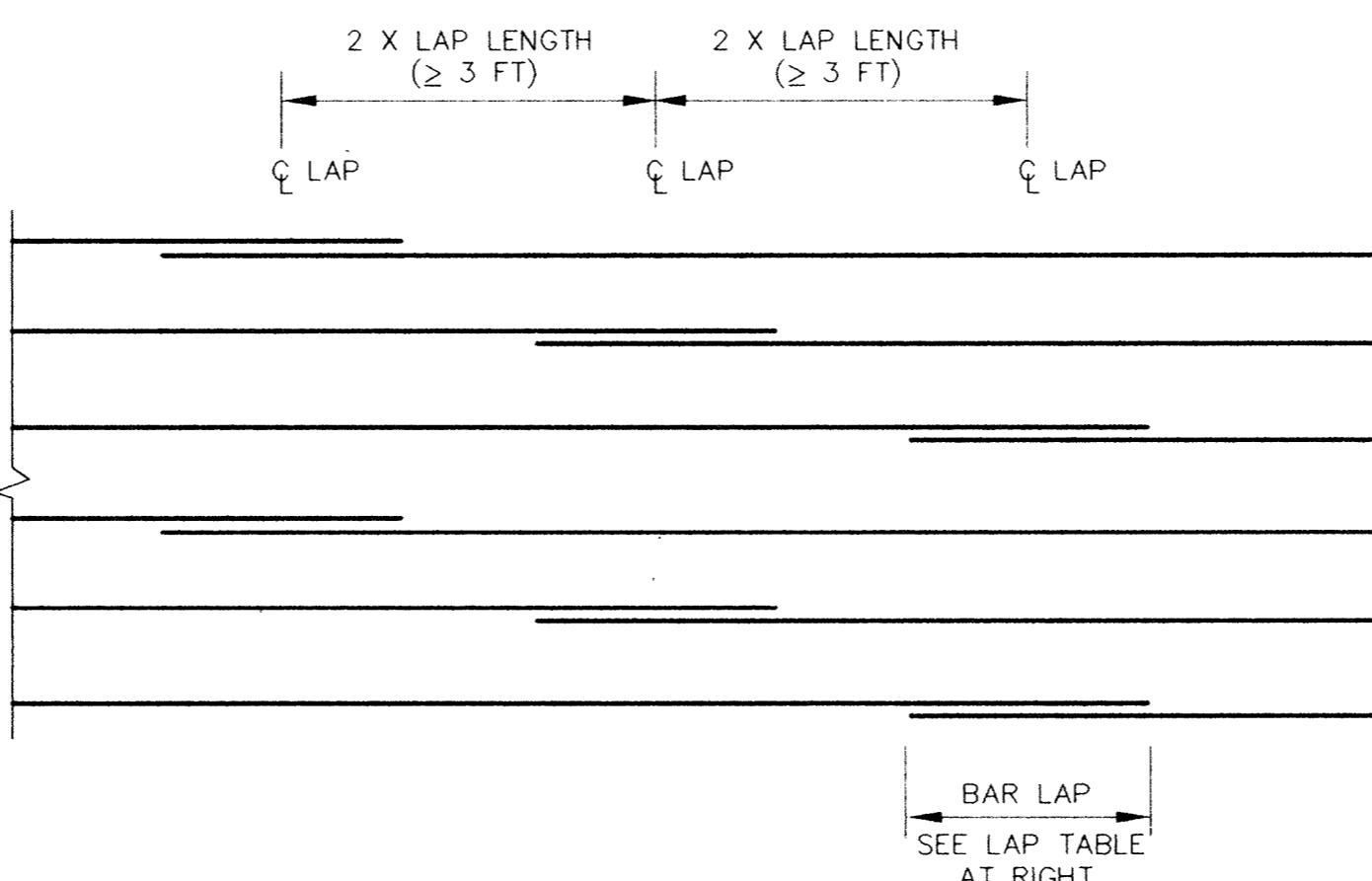
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HORIZ. STAGGERED BAR LAP DETAIL (5)

No Scale

TYPICAL CIRCULAR WALLS U.O.N.

S13



SIDEWALK NOTES:

- SIDEWALK SIDESLOPE SHALL BE 1/4" PER FT. FROM CENTERLINE OF SIDEWALK WHEN LONGITUDINAL SLOPE IS < 0.5%, 1/4" PER FT. FROM SIDE TO SIDE WHEN ABUTTING STRUCTURE OR ON CROSS SLOPE, AND FLAT WHEN LONGITUDINAL SLOPE IS > 0.5%.
- EXPANSION JOINTS SHALL BE 3/4" ASPHALT FIBER JOINT MATERIAL WITH JOINT SEALANT PLACED AT INTERSECTION OF BUILDINGS, STRUCTURES, OR PERPENDICULAR SIDEWALKS, EXISTING SIDEWALKS OR SLABS, AND AT 50' MAX. LONGITUDINAL SPACING.
- CONTROL JOINTS SHALL BE 1/8" SAWCUT OR TOOLED JOINTS 1" DEEP EQUIDISTANT AT 6'-0" MAX. SPACING.
- SAW CUTTING AND CURING COMPOUND APPLICATION SHALL BE COMPLETED BEFORE THE INITIAL SHRINKAGE TAKES PLACE AS DETERMINED BY THE ENGINEER.

CONCRETE SIDEWALK SECTION (6)

No Scale

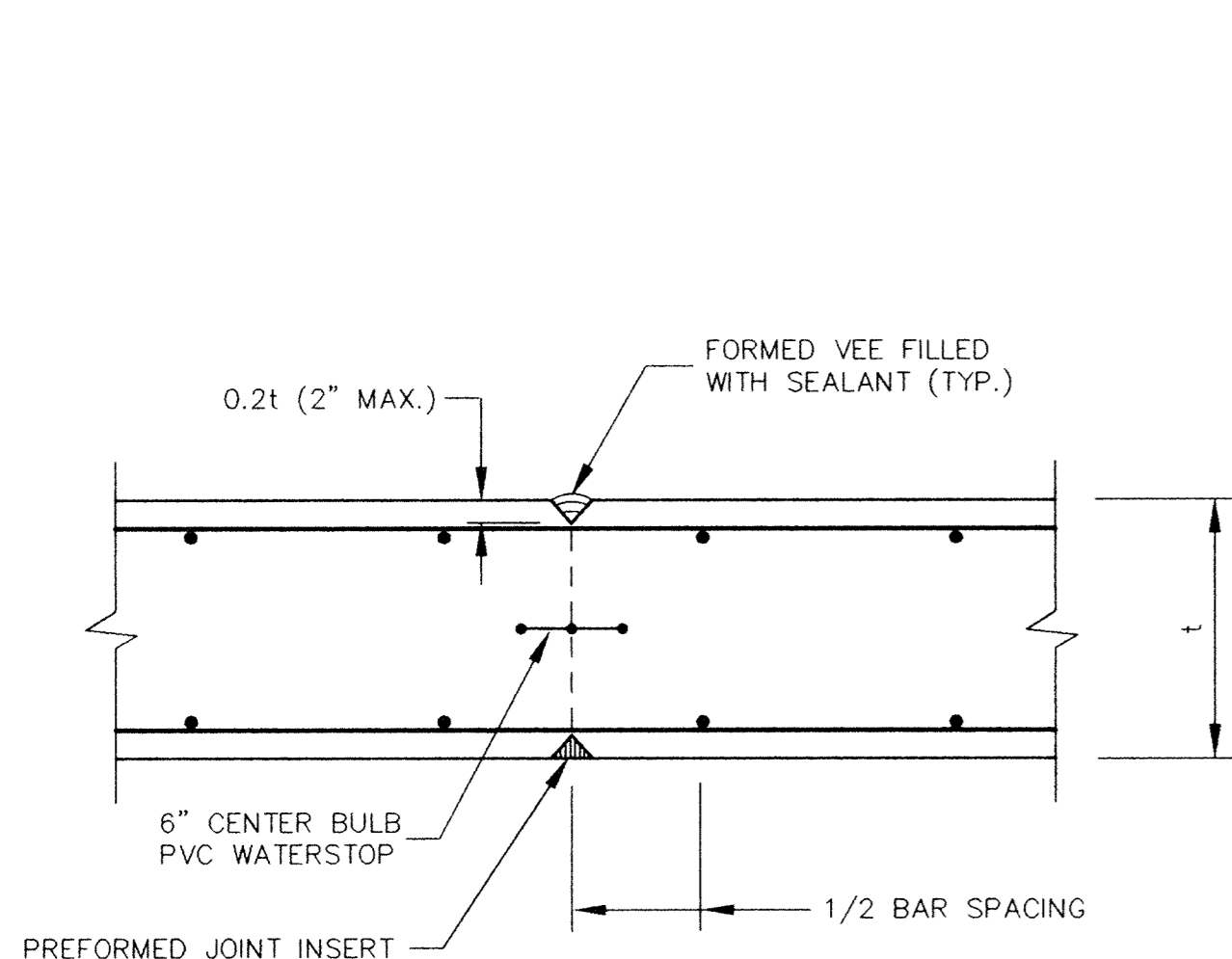
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REINFORCING BAR LAP TABLE

BAR SIZE	MINIMUM BAR LAP LENGTH	
	TOP BARS	OTHER BARS
#3	1'-6"	1'-2"
#4	2'-0"	1'-7"
#5	2'-6"	1'-11"
#6	3'-0"	2'-4"
#7	3'-6"	2'-9"
#8	4'-0"	3'-1"

NOTES:

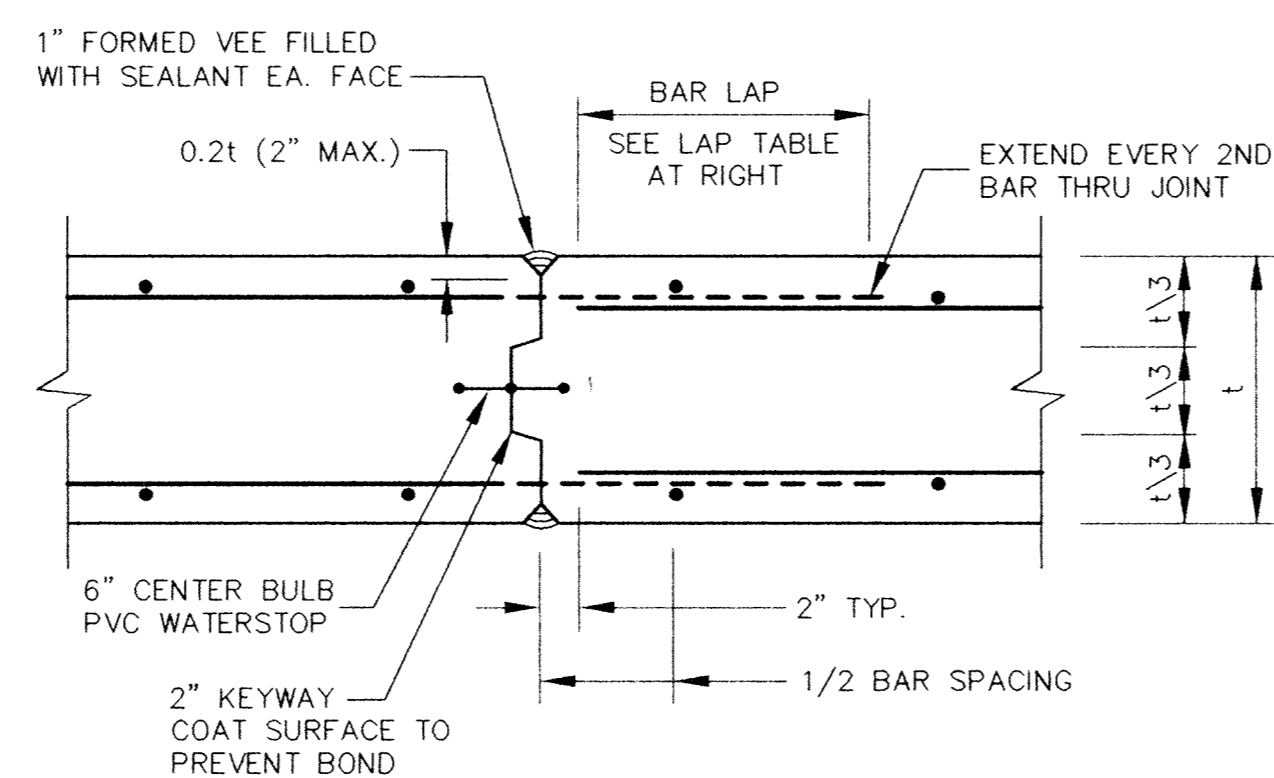
- LAPS SHOWN ARE BASED ON $f_c = 4000$ P.S.I., NORMAL WEIGHT CONCRETE, LAP CLASS B AND NON-EPOXY COATED REINFORCEMENT WITH COVER $\geq 2d$ AND BAR SPACING $\geq 3d$ O.C. FOR ALL OTHER CONDITIONS, PROVIDE BAR LAP LENGTH AS REQUIRED BY A.C.I. 318-89.
- TOP BARS REFERRED TO IN THE TABLE ABOVE ARE HORIZONTAL BARS WITH $\geq 12"$ OF CONCRETE CAST BELOW THE BAR. HORIZONTAL BARS IN WALLS SHALL REQUIRE LAPS AS INDICATED FOR TOP BARS.
- ALL BAR LAPS SHALL BE CONTACT SPLICES UNLESS OTHERWISE NOTED.
- USE LAP LENGTH FOR THE SMALLER BAR WHEN LAPPING DIFFERENT SIZE BARS.
- ALL REINFORCING BAR LAP LENGTHS SHALL BE AS SHOWN IN THE TABLE ABOVE UNLESS OTHERWISE NOTED.



SLAB CONTROL JOINT DETAIL (7)

No Scale

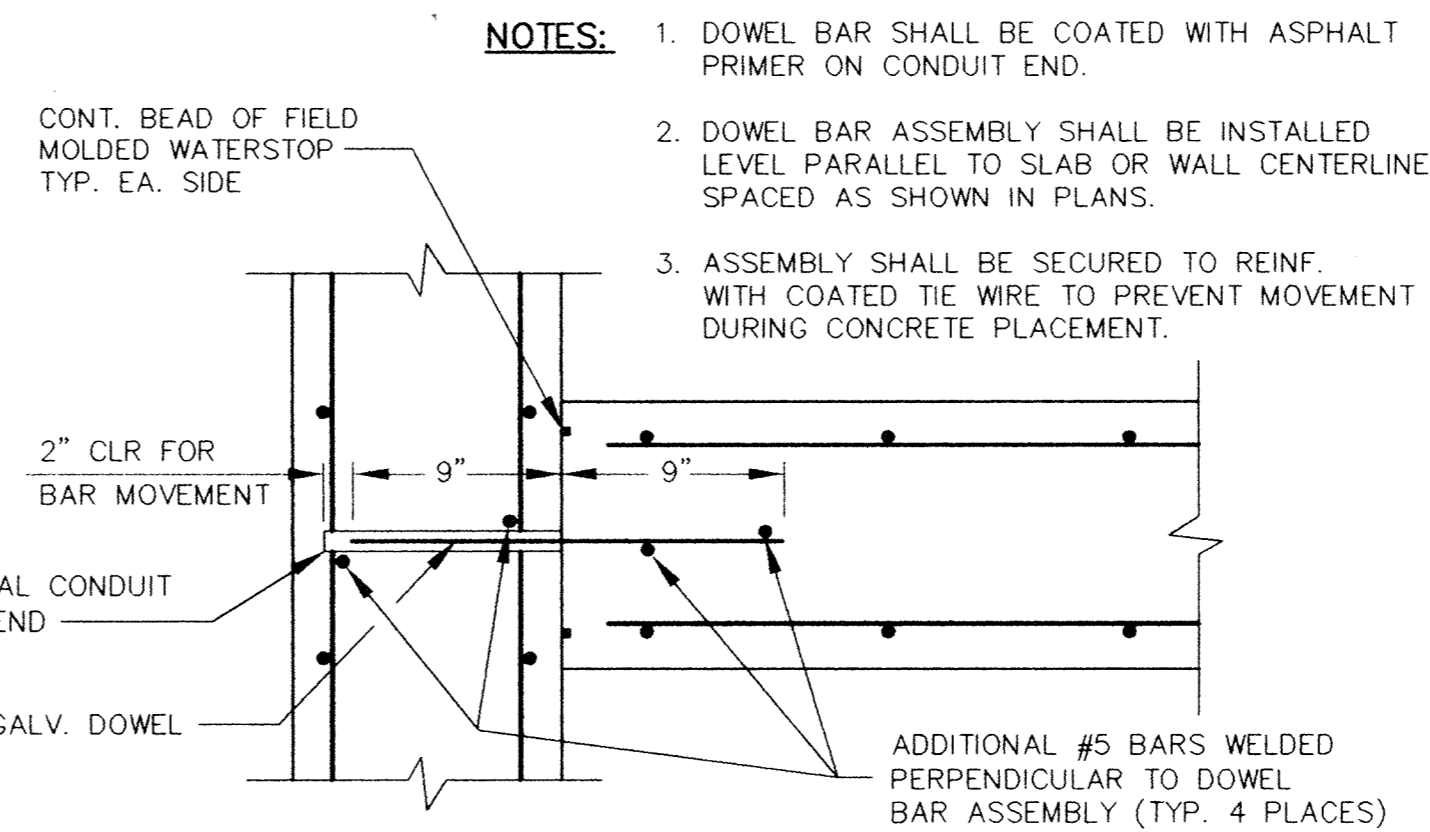
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WALL CONTROL JOINT DETAIL (8)

No Scale

S13



DOWEL BAR JOINT DETAIL (9)

No Scale

S13

NOTES:

- DOWEL BAR SHALL BE COATED WITH ASPHALT PRIMER ON CONDUIT END.
- DOWEL BAR ASSEMBLY SHALL BE INSTALLED LEVEL PARALLEL TO SLAB OR WALL CENTERLINE SPACED AS SHOWN IN PLANS.
- ASSEMBLY SHALL BE SECURED TO REINF. WITH COATED TIE WIRE TO PREVENT MOVEMENT DURING CONCRETE PLACEMENT.

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
David J. Cull
 DATE: 3/27/94 REG. NO. 27272



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DATE	DESCRIPTION	DESIGNED	DLC
		CHECKED	LJL
		DRAWN	TB GG
		GRAPHIC SCALE	
		0 HORIZ.	4
		0 VERT.	4

CITY OF ELK RIVER
WASTEWATER TREATMENT FACILITIES
TYPICAL STRUCTURAL CONCRETE DETAILS

S13

5/11 FEB 26 12:03:14 1994

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