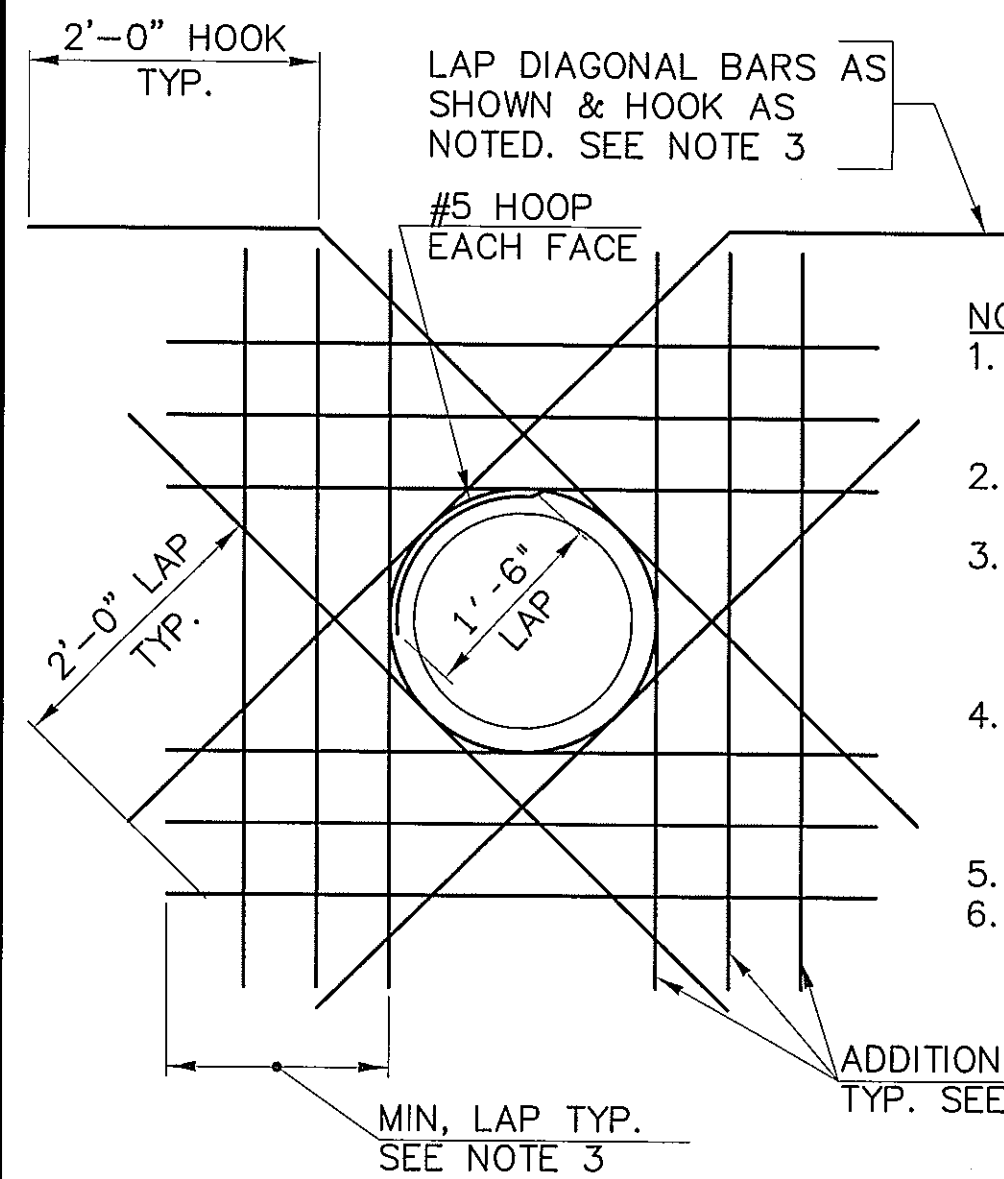
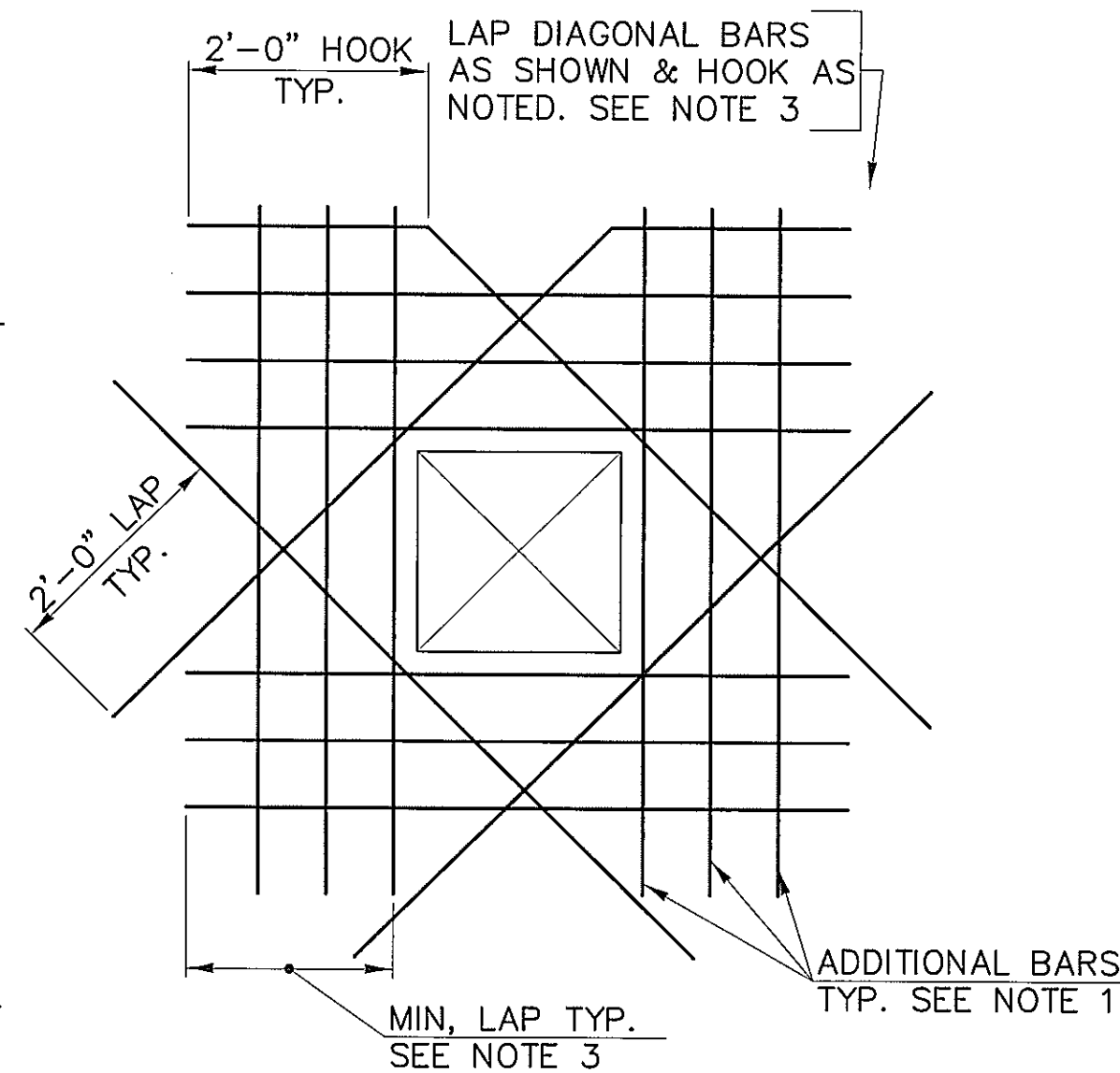


APPROVAL			REVISIONS		
W.W.			NO.	DESCRIPTION	DATE
C.&P.	/	/			
G.&E.	/	/			
COND.	/	/			



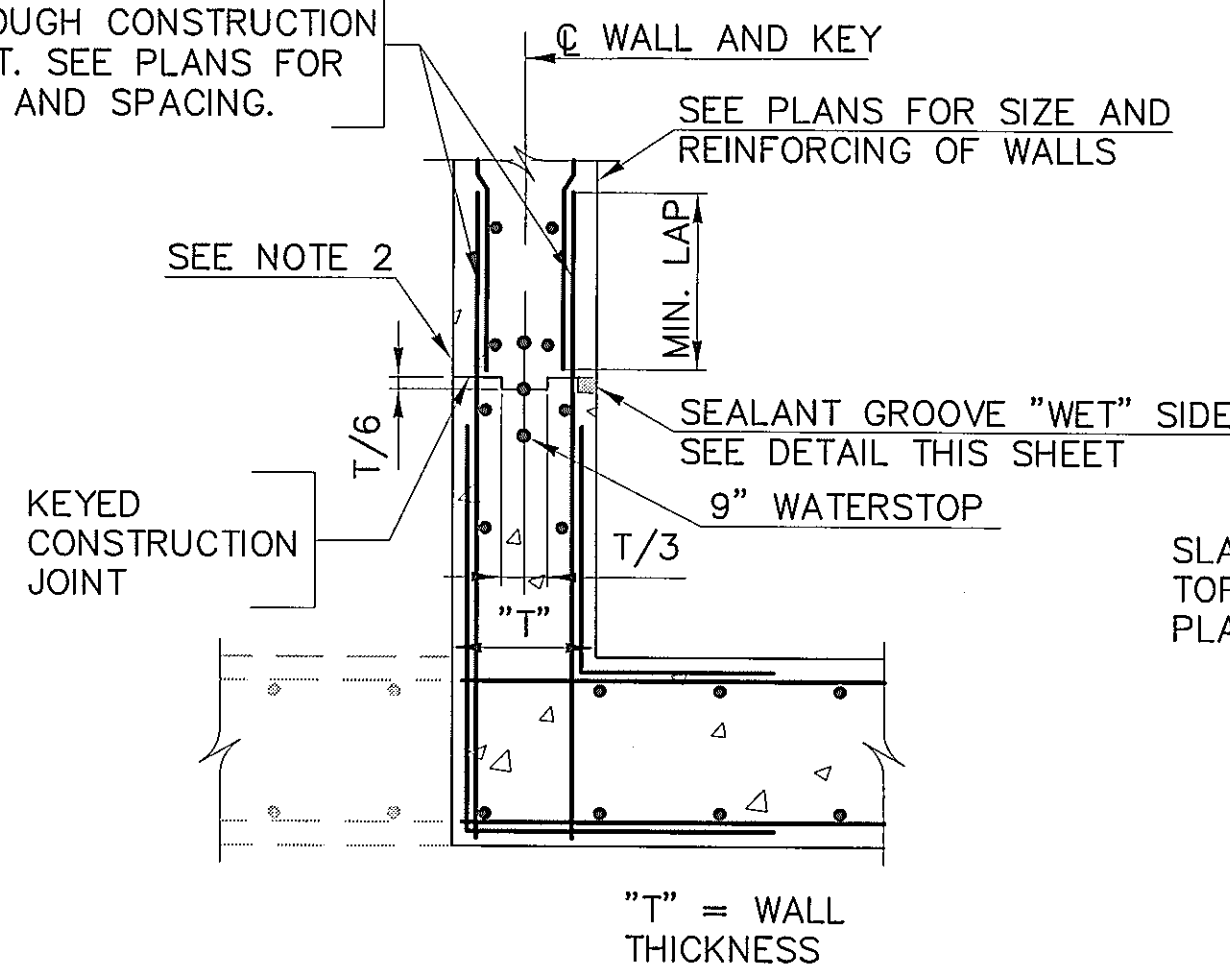
NOTES:

1. NUMBER OF ADDITIONAL REINFORCING BARS AT EACH SIDE OF OPENING SHALL EQUAL HALF THE NUMBER OF INTERRUPTED BARS IN EACH LAYER OF REINFORCING.
2. SIZE OF ADDITIONAL REINFORCING BARS TO EQUAL SIZE OF INTERRUPTED REINFORCING BARS.
3. PROVIDE STANDARD HOOK BARS IF LAP LENGTH EXTENSION CANNOT BE OBTAINED AT JOINTS OR OTHER OBSTRUCTIONS. PLACE ADDITIONAL BARS IN SAME PLANES AS INTERRUPTED REINFORCING.
4. SIZE OF DIAGONAL BARS SHALL BE THE SIZE OF THE LARGEST NORMAL REINFORCING BAR CUT, UNLESS OTHERWISE NOTED. LOCATE DIAGONALS IN EACH LAYER OF REINFORCING.
5. PLACE DIAGONAL BARS INSIDE NORMAL REINFORCING.
6. ALL REINFORCING TO CLEAR OPENING OR FLANGE COLLARS BY 2".

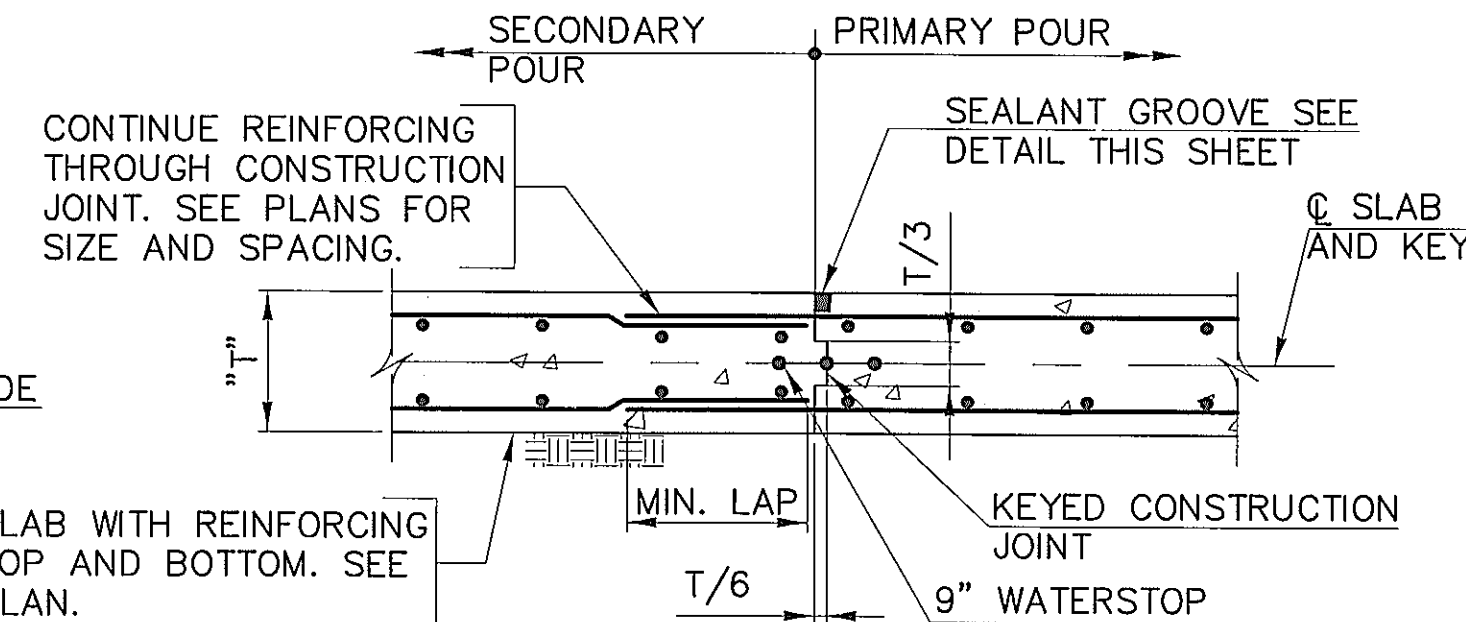


ADDITIONAL REINFORCING BAR DETAILS
NO SCALE

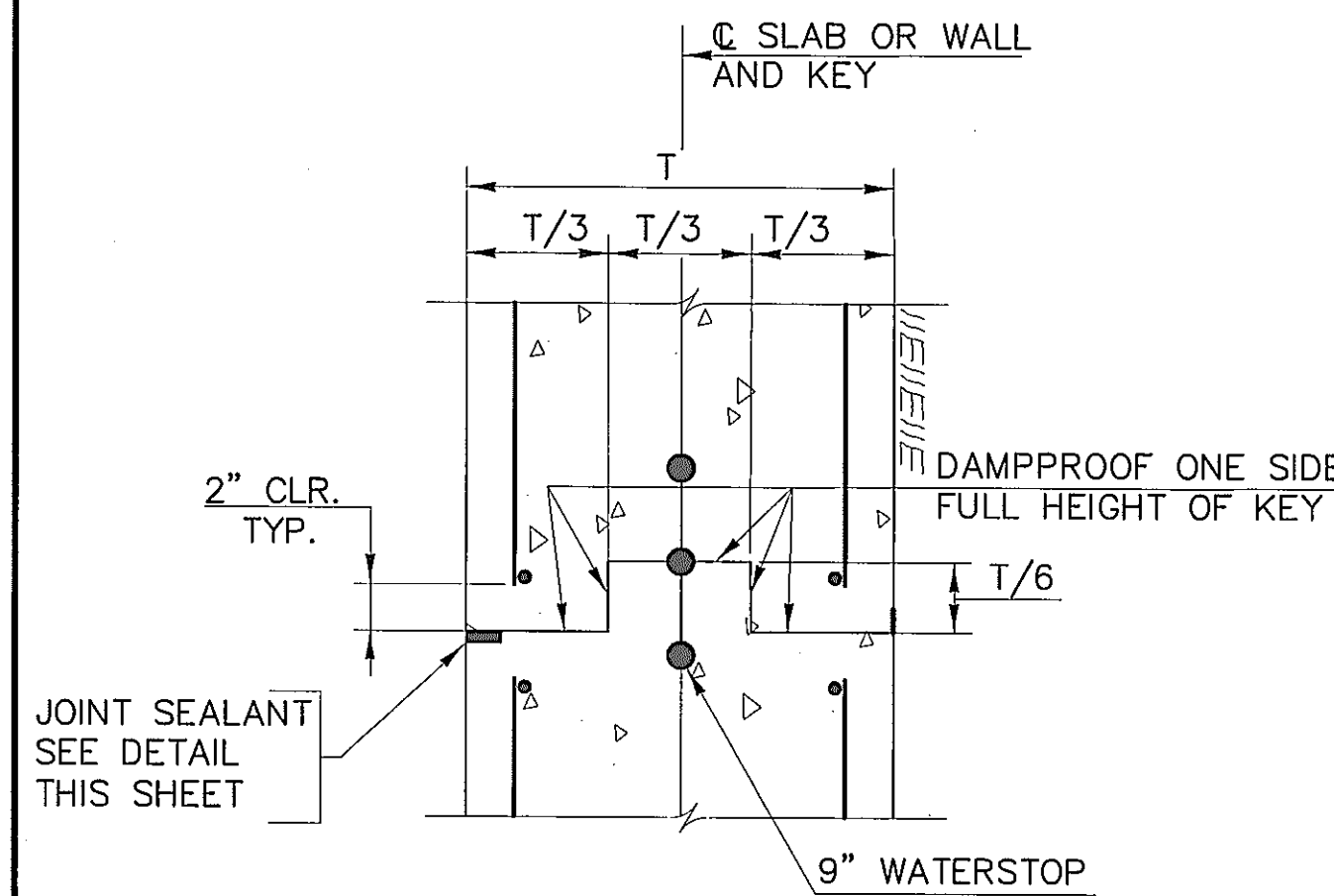
CONTINUE REINFORCING THROUGH CONSTRUCTION JOINT. SEE PLANS FOR SIZE AND SPACING.



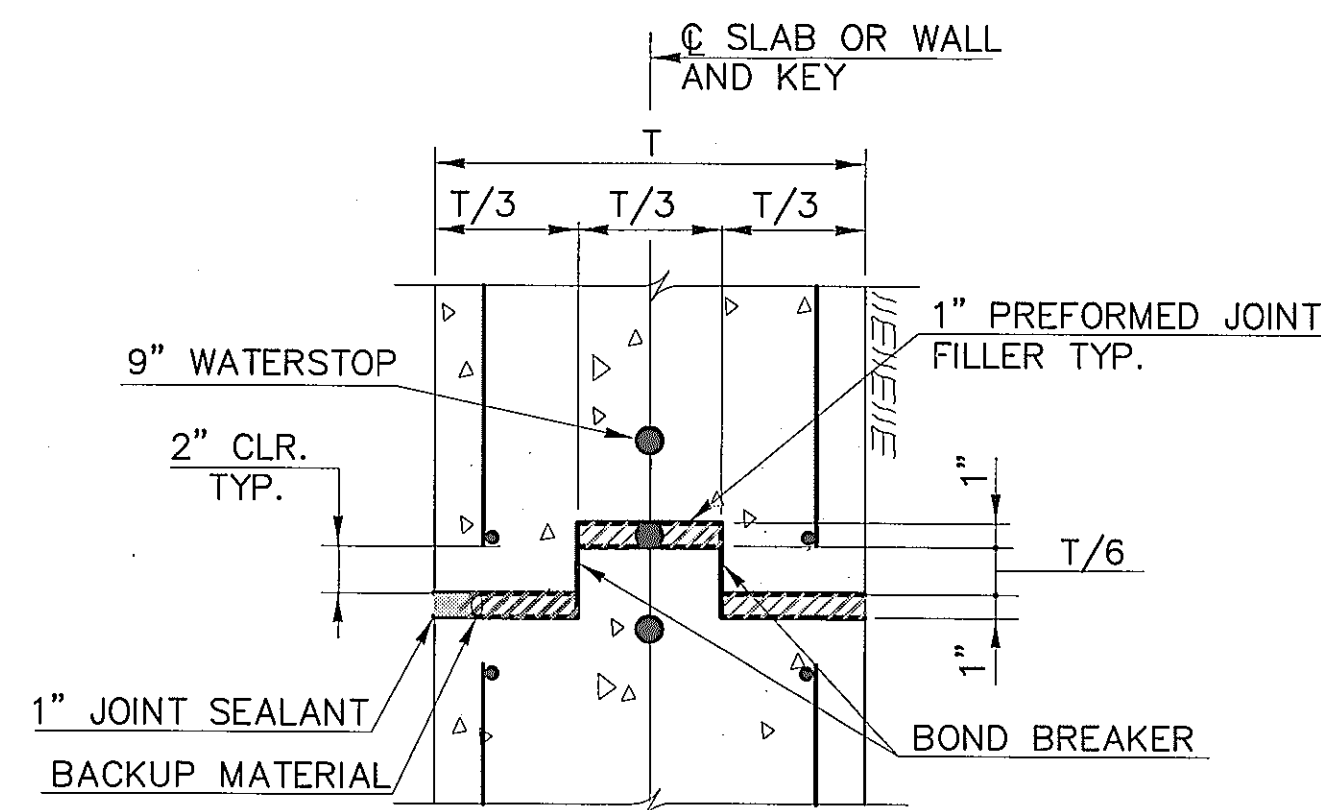
CONSTRUCTION JOINT-WALL TO WALL
NO SCALE



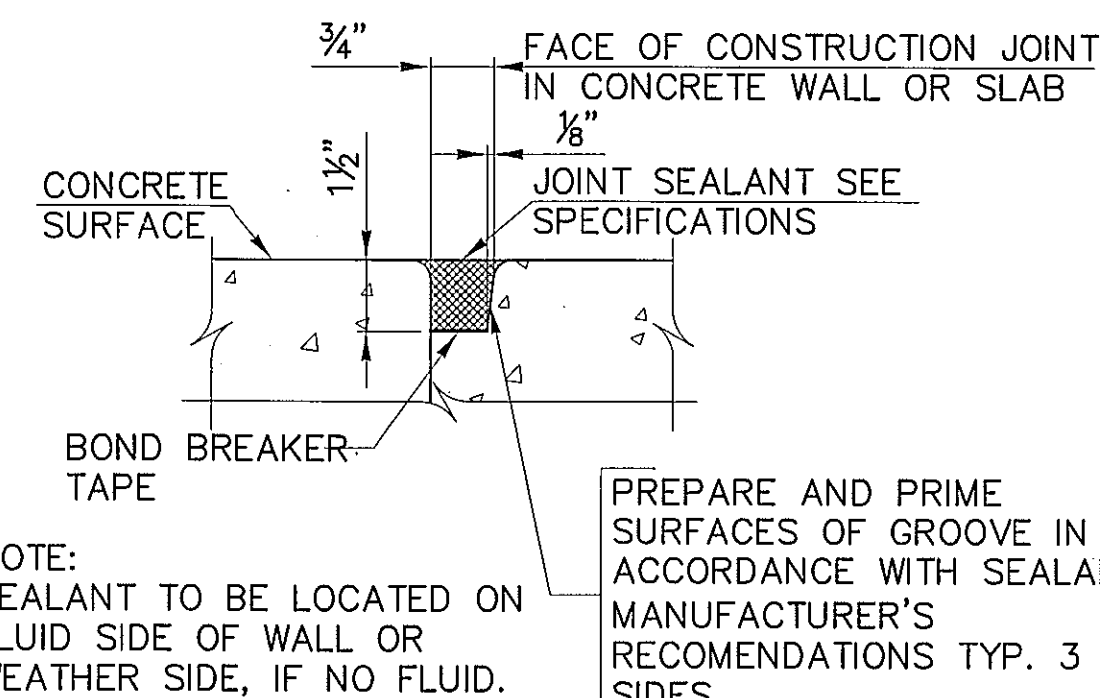
FOUNDATION CONSTRUCTION JOINT
NO SCALE



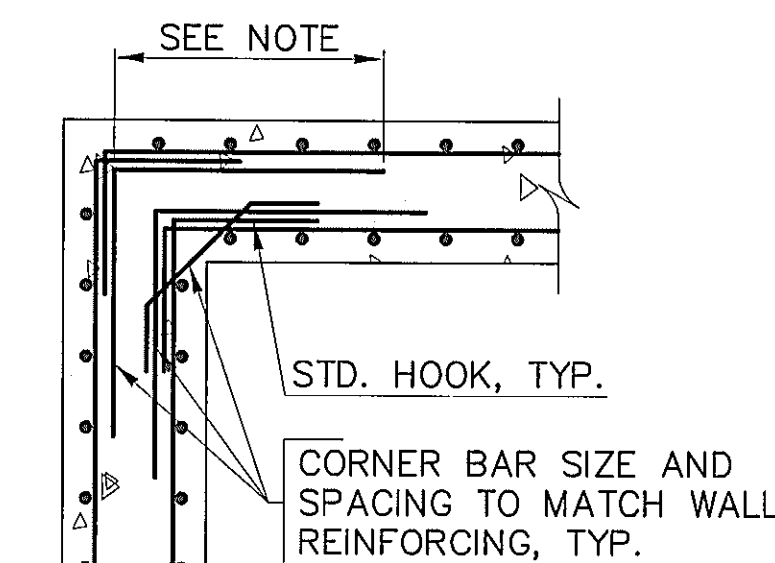
CONTRACTION JOINT DETAIL
NO SCALE



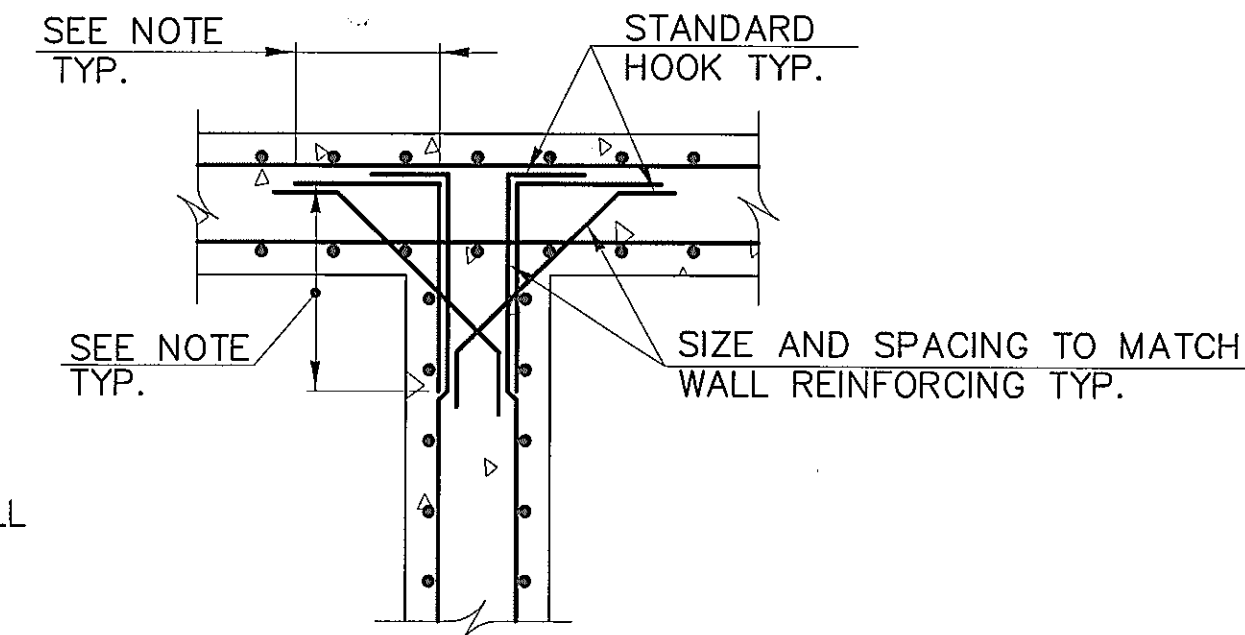
EXPANSION JOINT DETAIL
NO SCALE



JOINT SEALANT
NO SCALE



CORNER REINFORCING DETAIL
NO SCALE

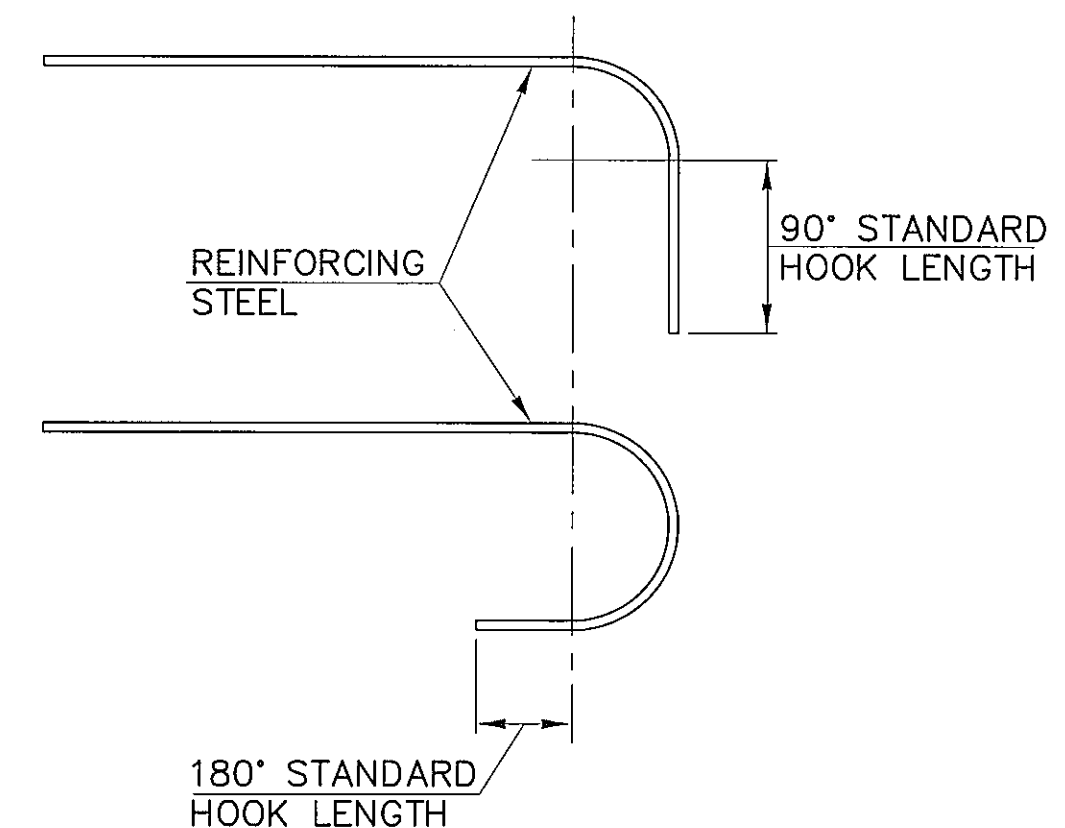


WALL INTERSECTION DETAIL
NO SCALE

REINFORCEMENT SIZE	DEVELOPMENT LENGTH	LAP SPLICE LENGTH		90° STANDARD HOOK LENGTH	180° STANDARD HOOK LENGTH
		TOP BARS	OTHER BARS		
#3	1'-0"	1'-2"	1'-0"	5"	3"
#4	1'-0"	1'-7"	1'-3"	6"	3"
#5	1'-2"	1'-11"	1'-7"	8"	3"
#6	1'-5"	2'-4"	1'-11"	9"	3"
#7	2'-0"	3'-4"	2'-8"	11"	4"
#8	2'-3"	3'-10"	3'-0"	1'-0"	4"
#9	2'-10"	4'-9"	3'-9"	1'-2"	5"
#10	3'-6"	5'-10"	4'-7"	1'-4"	6"
#11	4'-2"	7'-0"	5'-5"	1'-5"	6"

REINFORCING DEVELOPMENT AND LAP LENGTH
NO SCALE

NOTE: TOP BARS ARE DEFINED AS HAVING MORE THAN 12" OF FRESH CONCRETE CAST BELOW.



RK&K

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PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 19546 EXPIRATION DATE: 2/18/2010

STATE OF MARYLAND
PROFESSIONAL ENGINEER

CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS
BUREAU OF WATER & WASTEWATER
WATER AND WASTEWATER ENGINEERING DIVISION

SANITARY CONTRACT NO. 852R

DENITRIFICATION FILTERS AND RELATED WORK
FOR THE ENHANCED NUTRIENT REMOVAL FACILITIES
AT THE PATAPSCO WASTEWATER TREATMENT PLANT

STRUCTURAL STANDARD DETAILS

SCALE: AS NOTED
DRAWING NO.: SD-1

DATE: OCTOBER 2009
SHEET 331 OF 615