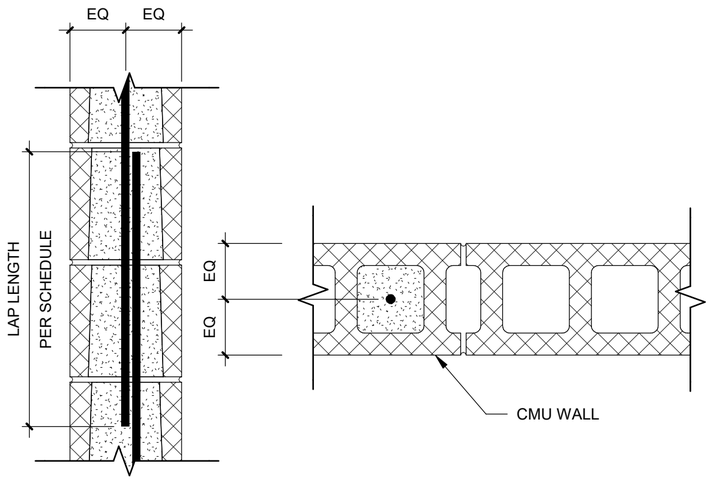


LAP SPLICE & DEVELOPMENT LENGTH (IN.)[1,2,3,4], CENTERED BAR						
BAR SIZE	CONCRETE MASONRY NOMINAL THICKNESS					
	6-INCH	8-INCH	10-INCH	12-INCH	14-INCH	16-INCH
#3	12	12	12	12	12	12
#4	18	13	12	12	12	12
#5	28	20	16	13	13	13
#6	53	38	29	24	20	20
#7	-	52	40	33	28	28
#8	-	79	61	50	42	42
#9	-	-	79	64	54	54

NOTES:

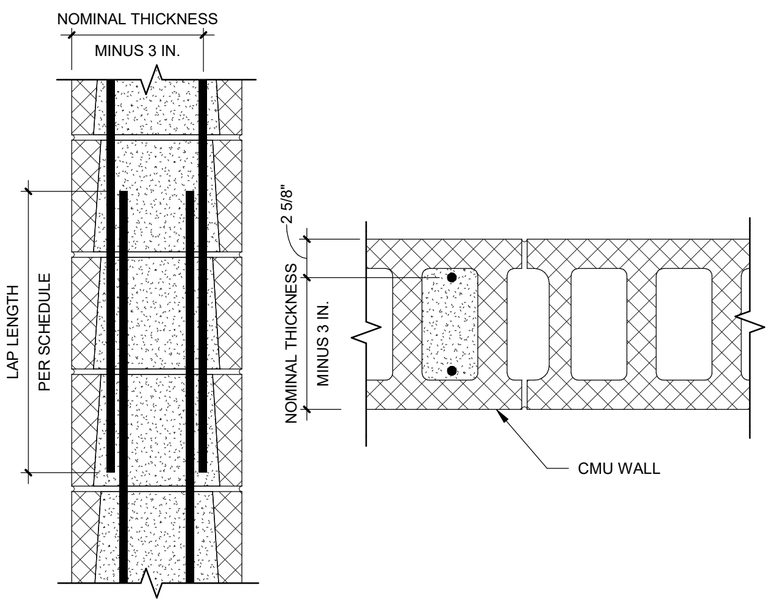
1. LENGTHS ARE CALCULATED BASED ON A SPECIFIED COMPRESSIVE STRENGTH OF CONCRETE MASONRY (f'_m) OF 2000 PSI AND A SPECIFIED YIELD STRENGTH OF 60,000 PSI FOR STEEL REINFORCEMENT.
2. DEVELOPMENT AND LAP LENGTH OF EPOXY-COATED BARS SHALL BE TAKEN AS 150 PERCENT OF THE LENGTH SHOWN.
3. MECHANICAL SPLICES SHALL HAVE THE BARS CONNECTED TO DEVELOP AT LEAST 125 PERCENT OF THE SPECIFIED YIELD STRENGTH OF THE BAR.
4. IF THE SPACING BETWEEN ADJACENT SPLICES IS LESS THAN $9d_b$ AND THE MINIMUM MASONRY COVER, STAGGER LAP SPLICES.

DESIGNER NOTES:

CODE REQUIREMENTS
1. REINFORCEMENT BAR SIZE WAS LIMITED TO #9 BASED ON STRENGTH DESIGN PROVISIONS, THOUGH LARGER BAR SIZES ARE POSSIBLE IF ALLOWABLE STRESS DESIGN PROVISIONS ARE USED.
2. CELLS WITH "-" INDICATE LOCATIONS WHERE THE REINFORCEMENT SIZE IS LIMITED BY CELL WIDTH, CLEAR SPACE, AREA OF VERTICAL REINFORCEMENT, OR BAR DIAMETER. REFERNECE TMS 402 SECTION 6.1 FOR ADDITIONAL INFORMATION.

CALCULATIONS
1. LAP SPLICE LENGTHS ARE CALCULATED BASED ON 2016 TMS 402 EQUATION 6-1, AND A REFERENCE EXCEL SPREADSHEET IS AVAILABLE THROUGH THE BDC FOR DESIGNERS. IN EARLIER EDITIONS OF THE CODE, THE EQUATIONS WERE INCLUDED IN THE ALLOWABLE STRESS DESIGN AND STRENGTH DESIGN CHAPTERS.

ASSUMPTIONS
1. A MAXIMUM EFFECTIVE DEPTH OF THE NOMINAL WIDTH MINUS 3" WAS USED FOR OFFSET REINFORCEMENT BASED ON ANECDOTAL INFORMATION. IN SOME MARKETS, DEPENDING ON THE FACE SHELL WIDTH, A LARGER EFFECTIVE DEPTH MAY BE POSSIBLE. CONSULT THE BDC OR A LOCAL MASONRY ASSOCIATION FOR MORE INFORMATION.



LAP SPLICE & DEVELOPMENT LENGTH (IN.)[1,2,3,4], OFFSET BAR						
BAR SIZE	CONCRETE MASONRY NOMINAL THICKNESS					
	6-INCH	8-INCH	10-INCH	12-INCH	14-INCH	16-INCH
#3	-	-	12	12	12	12
#4	-	-	19	19	19	19
#5	-	-	30	30	30	30
#6	-	-	57	57	57	57
#7	-	-	-	80	80	80
#8	-	-	-	-	-	124
#9	-	-	-	-	-	-

NOTES:

1. LENGTHS ARE CALCULATED BASED ON A SPECIFIED COMPRESSIVE STRENGTH OF CONCRETE MASONRY (f'_m) OF 2000 PSI AND A SPECIFIED YIELD STRENGTH OF 60,000 PSI FOR STEEL REINFORCEMENT.
2. DEVELOPMENT AND LAP LENGTH OF EPOXY-COATED BARS SHALL BE TAKEN AS 150 PERCENT OF THE LENGTH SHOWN.
3. MECHANICAL SPLICES SHALL HAVE THE BARS CONNECTED TO DEVELOP AT LEAST 125 PERCENT OF THE SPECIFIED YIELD STRENGTH OF THE BAR.
4. IF THE SPACING BETWEEN ADJACENT SPLICES IS LESS THAN $9d_b$ AND THE MINIMUM MASONRY COVER, STAGGER LAP SPLICES.

1 LAP SPLICE LENGTHS (f'm = 2000 psi)

SCALE: 1 1/2" = 1'-0"

THE BEAUTY OF BLOCK DESIGN COLLECTIVE