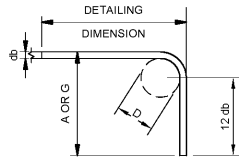
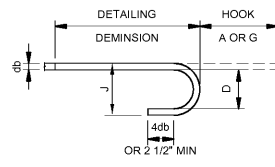


RECOMMENDED END HOOKS					HOOK MIN. DEVELOPMENT LENGTHS (IN)		
BAR SIZE	FINISHED BEND DIAMETER D (IN)	180 DEG HOOKS		90 DEG HOOKS	NORMAL WT CONCRETE		
		A OR G (IN)	J (IN)	A OR G (IN)	3000	4000	5000
#3	2 1/4	5	4	6	9	8	7
#4	3	6	4	8	11	10	9
#5	3 3/4	7	6	10	14	12	11
#6	4 1/2	8	4	12	17	15	13
#7	5 1/4	10	4	14	20	17	15
#8	6	11	6	16	22	19	17
#9	9 1/2	15	11 3/4	19	25	22	20
#10	10 3/4	17	13 1/4	22	28	25	22
#11	12	19	14 3/4	24	31	27	24

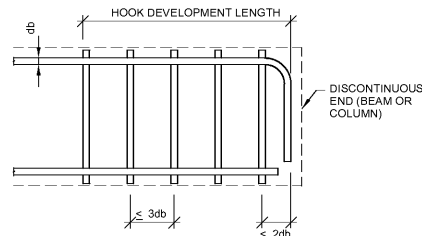


90 DEG. HOOK



180 DEG. HOOK

END HOOK TYPES

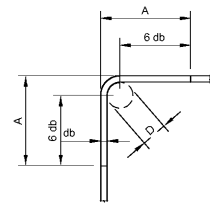


TIES OR STIRRUPS REQUIREMENTS AT DISCONTINUOUS END

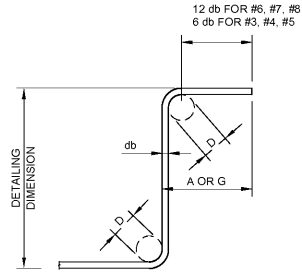
D = INSIDE BEND OF DIAMETER
 1. HOOK EMBEDMENT LENGTHS IN TABLE SHALL BE FACTORED FOR THE FOLLOWING CONDITIONS:
 LIGHTWEIGHT CONCRETE: 1.3 x TABLE LENGTH
 EPOXY COATED BARS: 1.2 x TABLE LENGTH

STIRRUP & TIE HOOK SCHEDULE			
BAR SIZE	D (IN)	90° HOOK A OR G (IN)	135° HOOK A OR G (IN)
#3	1 1/2	4	4
#4	2	4 1/2	4 1/2
#5	2 1/2	6	5 1/2

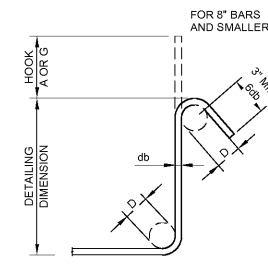
D = INSIDE BEND OF DIAMETER



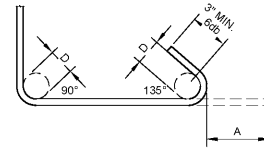
CORNER TIE HOOK



90° HOOK



135° HOOK



CROSS TIE

1 STIRRUP AND TIE HOOK TYPES DETAIL

N.T.S.

REINFORCING BAR LAP LENGTH SCHEDULE (CLASS B)					
BAR	SLABS & HORIZONTAL WALL REIN.		FOOTINGS & RETAINING WALLS		BAR
	4000 PSI	5000 PSI	3000 PSI	4000 PSI	
#3	1'-4"	1'-4"	1'-4"	1'-4"	#3
#4	1'-7"	1'-5"	1'-6"	1'-4"	#4
#5	2'-4"	2'-1"	1'-10"	1'-7"	#5
#6	3'-1"	2'-10"	2'-2"	1'-11"	#6
#7	5'-0"	4'-6"	3'-7"	3'-1"	#7
#8	6'-2"	5'-7"	4'-6"	3'-11"	#8
#9	7'-6"	6'-9"	5'-6"	4'-10"	#9
#10	9'-0"	8'-1"	6'-9"	5'-10"	#10
#11	10'-7"	9'-6"	8'-1"	7'-0"	#11

- NOTES
- FOR DEVELOPMENT LENGTHS, DIVIDE THE TABULATED VALUES BY 1.3
 - PROVIDE CONTINUOUS REINFORCEMENT WHEREVER POSSIBLE; SPLICE ONLY AS SHOWN OR APPROVED.
 - DOWELS SHALL MATCH THE SIZE AND SPACING OF THE SPECIFIED REINFORCEMENT AND SHALL BE LAP SPICED WITH CLASS B SPLICES.
 - UNLESS NOTED OTHERWISE LAP LENGTHS SHALL BE OF LENGTHS TABULATED AND AS MODIFIED BY THESE NOTES.
 - WHERE HORIZONTAL REINFORCEMENT IS PLACED SUCH THAT MORE THAN 12" OF FREE CONCRETE IS AT OR BELOW THE SPLICE, MULTIPLY TABULATED VALUES BY 1.3.
 - FOR EPOXY OR ZINC DUAL-COATED REINFORCING, MULTIPLY TABULATED VALUES BY THE COVER OF BARS FOLLOWING THE MULTIPLY:
 - 1.5 FOR REINFORCING HAVING A CLEAR COVER LESS THAN 3 BAR DIAMETERS OR FOR REINFORCING HAVING A CLEAR SPACING LESS THAN 6 BAR DIAMETERS
 - 1.2 FOR REINFORCING HAVING A CLEAR COVER OF 3 BAR DIAMETERS OR MORE OR FOR REINFORCING HAVING A CLEAR SPACING OF 6 BAR DIAMETERS OR MORE
 - THE FACTORS FROM NOTES 5 AND 6, WHEN MULTIPLIED TOGETHER, NEED NOT BE GREATER THAN 1.7.
 - FOR LIGHTWEIGHT AND SEMI-LIGHTWEIGHT CONCRETE, MULTIPLY THE TABULATED VALUES BY 1.3.
 - FOR 75 KSI REINFORCING, MULTIPLY THE TABULATED VALUES BY 1.25 (VALUES BASED ON 60 KSI).
 - COLUMNS THAT HAVE #11 BARS SPLICED TO #14 OR #18 BARS SHALL USE LAP LENGTHS LISTED FOR #11 BARS.
 - SPLICES BETWEEN #14 AND #18 BARS REQUIRE MECHANICAL COUPLERS, SEE RELEVANT DETAILS OR SPECIFICATIONS.
 - IN THE CASE OF SPLICES BETWEEN TWO DIFFERENT BAR SIZES, PROVIDE LAP BASED ON SMALLER BAR SIZE OR CLASS 'A' OF LARGER BAR, WHICHEVER IS GREATER.
 - UNLESS NOTED OTHERWISE ALL REINFORCING BARS SHALL BE ROUNDED CORNERS.
 - FOR VERTICAL WALL REINFORCING AND HORIZONTAL WALL REINFORCING FOR SPECIAL CONCRETE SHEAR WALLS, TABULATED VALUES SHALL BE MULTIPLIED BY 1.25 TO INSURE DUCTILITY. TABULATED VALUES FOR SPECIAL CONCRETE SHEAR WALLS HAVE ALREADY BEEN MULTIPLIED BY 1.25.
 - ALL FACTORS ARE CUMULATIVE AND NOT MUTUALLY EXCLUSIVE.
 - FOR CONCRETE STRENGTHS NOT LISTED, USE THE NEXT SMALLEST CONCRETE STRENGTH LISTED IN THE TABLE TO CALCULATE THE REQUIRED BAR LAP.

- BASES OF DESIGN TABLE
- SITUATIONS NOT CONFORMING TO THE FOLLOWING NOTES SHALL BE REVIEWED BY A CASE BY CASE BASIS
 - SLABS AND HORIZONTAL WALL REINFORCING: 1" (MIN.) COVER AND 1 1/2" (MIN.) CLEAR SPACING BETWEEN BARS
 - BEAMS: 1 1/2" (MIN.) COVER WITH #3 STIRRUP AND #3 TIES AT 12" OC (MIN.) AND 3" (MIN.) CLEAR SPACING BETWEEN BARS
 - FOOTINGS AND RETAINING WALLS: 3" (MIN.) COVER FOR GRADE BEAMS, PILE CAPS OR FOOTINGS AND 2" (MIN.) CLEAR FOR RETAINING WALLS AND 3" (MIN.) CLEAR SPACING BETWEEN BARS
 - VERTICAL WALL REINFORCING: 3/4" (MIN.) COVER WITH HORIZONTAL #4 BAR (MIN.) AND 4" (MIN.) SPACING BETWEEN BARS
 - COLUMNS: 1" (MIN.) COVER WITH #3 TIES AT 12" OC (MIN.) AND 3" (MIN.) CLEAR SPACING BETWEEN BARS
 - SPECIAL BOUNDARY ELEMENTS: 3/4" (MIN.) COVER WITH HORIZONTAL #4 BAR (MIN.) AND CONFINEMENT PER TYPICAL DETAILS AND 4" (MIN.) SPACING BETWEEN BARS

2 REINFORCING BAR LAP LENGTH SCHEDULE

N.T.S.

BRITT, PETERS AND ASSOCIATES INC. consulting engineers
 101 Falls Blvd. Dr. Suite 601 Greenville, SC 29601 (864) 771-8869
 www.britt-peters.com BPA Job # 190700 FL BOA No. 27497

THE AUTO CLUB GROUP
AAA - CAR CARE CENTER
TAMPA, FL 33607
 1701 NORTH WESTSHORE BLVD.



ISSUANCE

REVISIONS

NO.	DATE	DESCRIPTION

FILE NUMBER: 79890009
 PROJECT MANAGER:
 PROFESSIONAL:
 DRAWN BY: Author
 CHECKED BY: Checker

TYP CONCRETE DETAILS
S-304

WWW.LDILine.com

THIS DOCUMENT HAS BEEN PREPARED BY BRITT, PETERS AND ASSOCIATES, INC. AS AN INSTRUMENT OF SERVICE AND BPA SHALL RETAIN ALL COMMON LAW, STATUTORY AND OTHER RESERVED RIGHTS, INCLUDING THE COPYRIGHT THEREIN.

PROGRESSIVE ARCHITECTURE ENGINEERING, P.C.
 810 South 13th Street, Suite 1001, Tallahassee, FL 32302-1703, Tel: 904-771-8867, www.progressiveaee.com