

- 1.0.0 GENERAL
1.1.0 SCOPE
THIS STANDARD DRAWING COVERS THE GENERAL REQUIREMENTS AND CONDITIONS FOR DESIGN OF REINFORCED CONCRETE WORK.
1.2.0 UNIT OF MEASUREMENT
UNIT OF LENGTH INDICATED HEREINAFTER SHALL BE MILLIMETER.
1.3.0 ALL OF REINFORCED BAR ARRANGEMENT WORK, INCLUDING DEVELOPMENT AND SPLICE, SHALL BE ACCORDANCE WITH ACI 318-05 CHAPTER 7.12

- 2.0.0 SPECIFICATION OF REINFORCED CONCRETE
2.1.0 DEVELOPMENT LENGTH

NOMINAL BAR SIZE	TENSION BARS			COMPRESSION BAR (l _{dc})
	OTHER THAN TOP BAR (l _{dt}), NOTE3	TOP BAR (l _{dt}), NOTE2	STANDARD HOOK (l _{dh})	
D10	360(390)	470(510)	190(200)	190(200)
D12	460(490)	590(640)	230(250)	230(250)
D13	490(520)	630(680)	250(270)	250(270)
D14	530(580)	690(750)	270(290)	270(290)
D16	610(650)	790(850)	310(330)	310(330)
D18	690(740)	890(960)	350(380)	350(380)
D19	730(780)	940(1,020)	370(400)	370(400)
D20	940(1,010)	1,220(1,320)	390(420)	390(420)
D22	1,040(1,120)	1,350(1,460)	430(460)	430(460)
D25	1,190(1,290)	1,550(1,670)	490(530)	490(530)
D28	1,310(1,420)	1,700(1,840)	540(580)	540(580)
D29	1,340(1,450)	1,750(1,890)	550(600)	550(600)
D32	1,510(1,630)	1,970(2,120)	620(670)	620(670)
D36	1,680(1,810)	2,180(2,350)	690(740)	690(740)
D40	1,870(2,020)	2,430(2,630)	770(830)	770(830)

NOTE : () : SUPER STRUCTURE

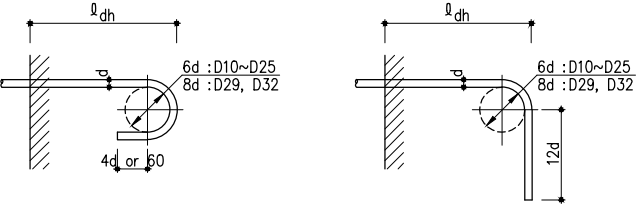
2.2.0 LAP SPLICE LENGTH

NOMINAL BAR SIZE	TENSION BARS(CLASS B)		COMPRESSION BAR (l _{sc})
	OTHER THAN TOP BAR (l _s), NOTE3	TOP BAR (l _{st}), NOTE2	
D10	470(510)	620(670)	290(290)
D12	600(640)	770(840)	360(360)
D13	640(680)	820(890)	380(380)
D14	690(760)	900(980)	420(420)
D16	800(850)	1,030(1,110)	480(480)
D18	900(970)	1,160(1,250)	540(540)
D19	950(1,020)	1,230(1,330)	570(570)
D20	1,230(1,320)	1,590(1,720)	600(600)
D22	1,360(1,460)	1,760(1,900)	670(670)
D25	1,550(1,680)	2,020(2,180)	760(760)
D28	1,710(1,850)	2,210(2,400)	840(840)
D29	1,750(1,890)	2,280(2,460)	860(860)
D32	1,970(2,120)	2,570(2,760)	970(970)
D36	2,190(2,360)	2,840(3,060)	1,070(1,070)
D40	2,440(2,630)	3,160(3,420)	1,200(1,200)

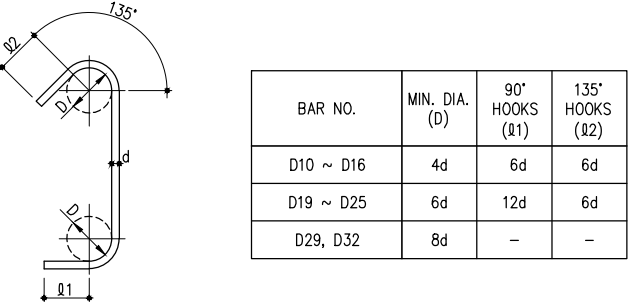
NOTE : () : SUPER STRUCTURE

- NOTES :
- MINIMUM STRENGTH OF MATERIAL SHALL BE IN ACCORDANCE WITH FOLLOWING SCHEDULE UNLESS OTHERWISE NOTED.
CONCRETE : f_c = 24 MPa (FOR SUPER STRUCTURE)
f_c = 28 MPa (FOR SUB STRUCTURE)
RE-BAR : f_y = 420 MPa
 - HORIZONTAL REINFORCEMENT SO PLACED THAT MORE THAN 300mm OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE DEVELOPMENT LENGTH OR SPLICE.
 - OTHER THAN NOTE2.
 - SPLICE LENGTH OF WELDED WIRE FABRIC SHALL BE APPLIED WITH MIN.150mm UNLESS SHOWN OTHERWISE ON THE DRAWING.

- 2.3.0 STANDARD HOOKS
2.3.1 STANDARD HOOKS FOR MAIN BAR

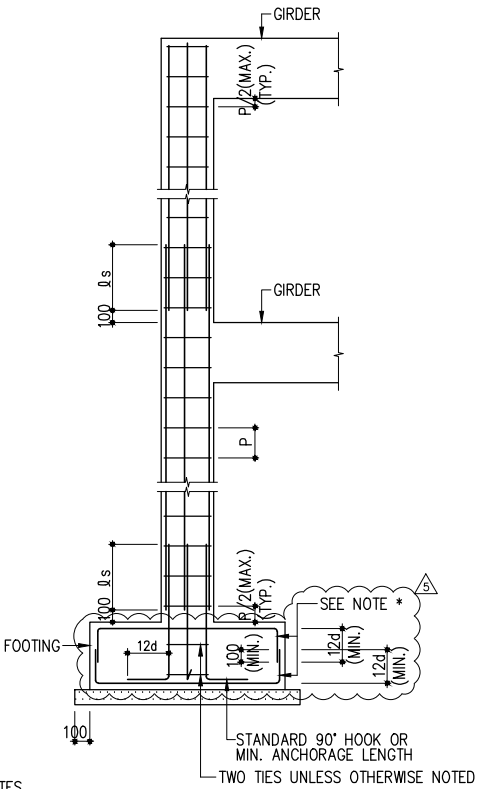


- 2.3.2 STANDARD HOOKS FOR STIRRUP, TIE AND HOOP



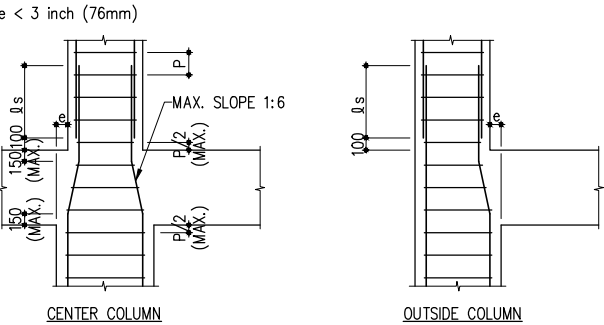
BAR NO.	MIN. DIA. (D)	90° HOOKS (l ₁)	135° HOOKS (l ₂)
D10 ~ D16	4d	6d	6d
D19 ~ D25	6d	12d	6d
D29, D32	8d	-	-

- 3.0.0 STANDARD BAR ARRANGEMENT
3.1.0 COLUMN AND FOOTING
3.1.1 STANDARD BAR ARRANGEMENT

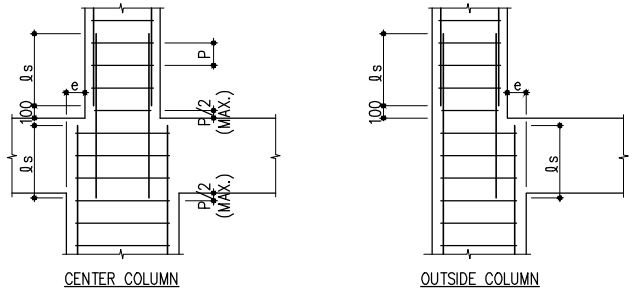


- NOTES
- l_d : DEVELOPMENT LENGTH (REFER TO 2.1.0)
l_s : LAP SPLICE LENGTH (REFER TO 2.2.0)
P : DISTANCE OF HOOPS OR TIES (TO BE SPECIFIED ON DETAIL DWG.)
- * STANDARD 90° HOOK TO BE USED FOR FOOTING TOP & BOTTOM BARS UNLESS SPECIFIED OTHERWISE ON DESIGN DRAWINGS

- 3.1.2 COLUMN OFFSET

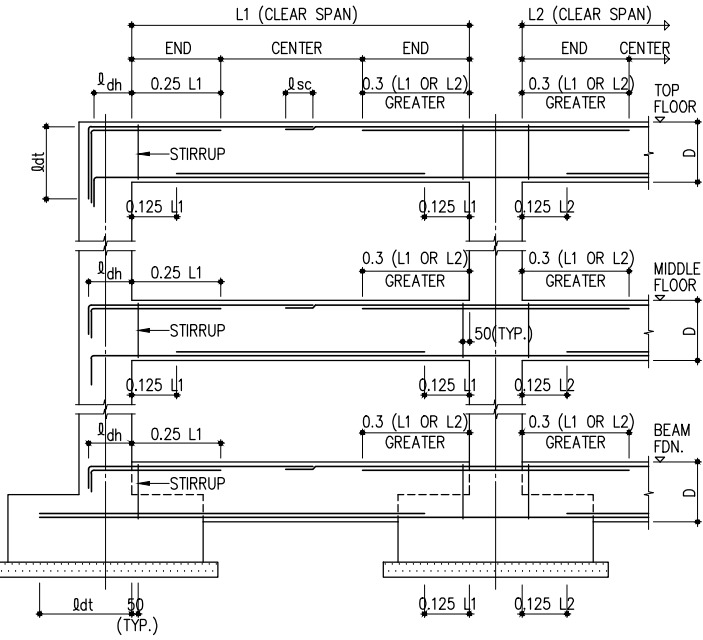


- e > 3 inch (76mm)

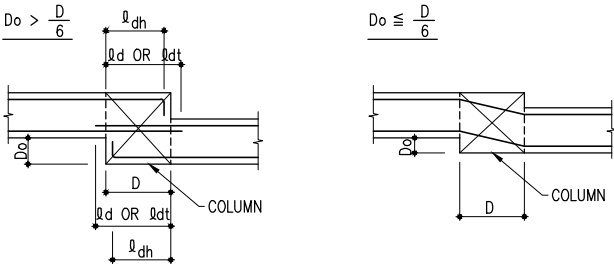


- NOTES
- l_s : LAP SPLICE LENGTH (REFER TO 2.2.0)
P : DISTANCE OF HOOPS OR TIES (TO BE SPECIFIED ON DETAIL DWG.)

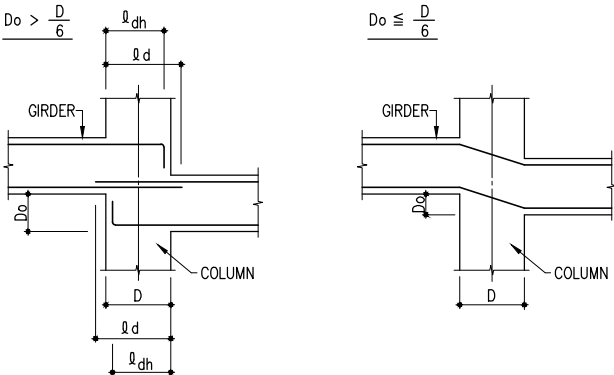
- 3.2.0 BEAMS AND GIRDER
3.2.1 STANDARD BAR ARRANGEMENT



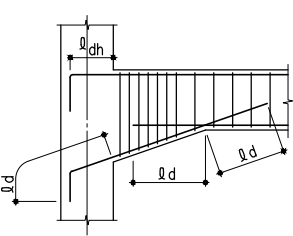
- 3.2.2 DIFFERENCE IN GIRDER CENTER
1) HORIZONTAL DIFFERENCE



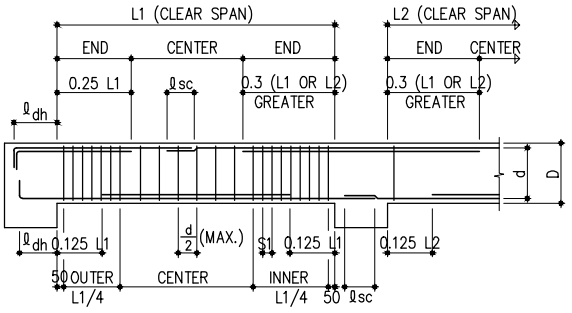
- 2) VERTICAL DIFFERENCE



- 3.2.3 GIRDER W/HAUNCH BAR ARRANGEMENT

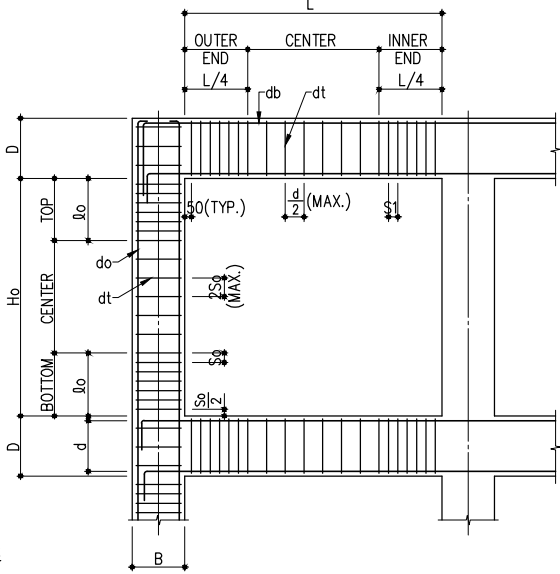


- 3.2.4 GIRDER TO BEAM BAR ARRANGEMENT



- NOTES
1. REFER TO NOTE ON 3.2.1

- 3.3.0 TIE AND STIRRUP



- NOTES
1. S₀ ≦ B/2 AND 8d₀ AND 24dt AND 300mm, U.N.O
2. l₀ ≦ H₀/6 AND B AND 460mm, U.N.O
3. S₁ ≦ d/4 AND 8db AND 24dt AND 300mm, U.N.O

REV	DATE	DESCRIPTION	PREP	CHKD	APRD	APRD
09 Apr.2015		ADDED FOOTING RE-BAR	S.Y.KWON	J.S.YANG	C.R.HONG	Y.H.KIM
16 Dec.2014		ADDED NOTE FOR SPLICE LENGTH OF W.W.F	S.Y.KWON	J.S.YANG	C.R.HONG	Y.H.KIM
03 Sep.2014		REVISED AS PER MARK	S.Y.KWON	J.S.YANG	C.R.HONG	Y.H.KIM
09 Jun.2014		REVISED AS PER MARKED	S.Y.KWON	J.S.YANG	C.R.HONG	Y.H.KIM
13 Sep.2013		FOR CONSTRUCTION	S.Y.KWON	J.S.YANG	C.R.HONG	Y.H.KIM

STANDARD CONCRETE DETAILS RE-BAR ARRANGEMENT DETAILS-1						
FUNCTION	NAME	SIGN	DATE			
DRWN	S.Y. KWON		09 Apr.2015			
CHKD	J.S. YANG		09 Apr.2015			
APPD	C.R. HONG		09 Apr.2015			
APPD	Y.H. KIM		09 Apr.2015			
DRAWING NO	108 NO.	110180	SCALE	NONE	REV.NO.	