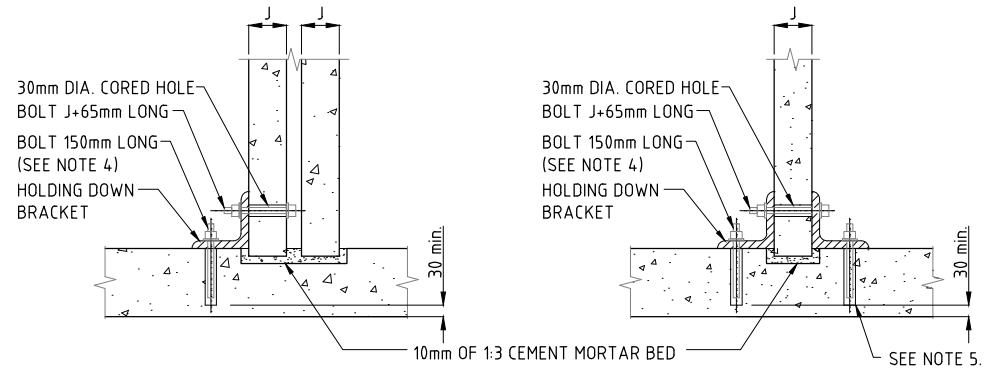
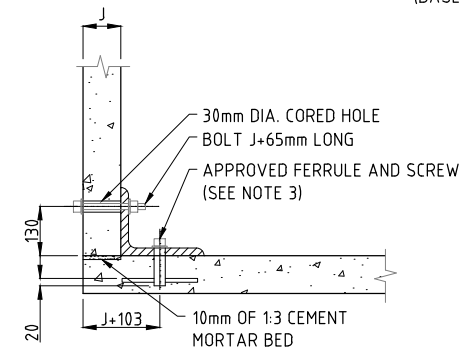


HOLDING DOWN ANCHORS
(BASES WITHOUT RECESSES)

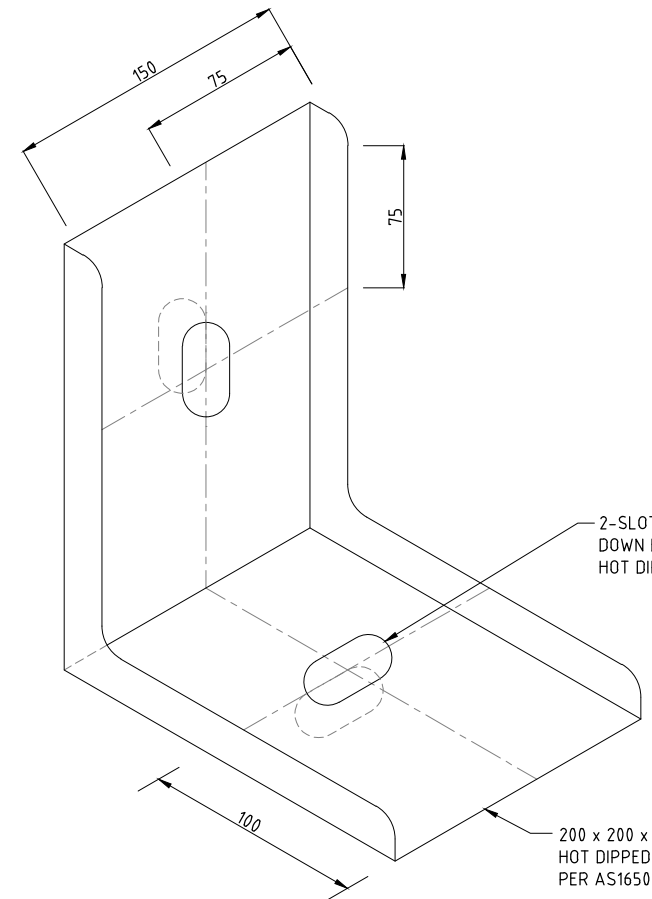


HOLDING DOWN ANCHORS
(BASES WITH RECESSES)



PRECAST BASE UNIT

"J" = WIDTH OF CELL LEG



HOLDING DOWN BRACKET
NOT TO SCALE

2-SLOTTED HOLES 50 x 25, FOR HOLDING DOWN BOLTS, ORIENTATED AS SHOWN. HOT DIPPED GALV, AS PER AS1650.

200 x 200 x 16 ANGLE. HOT DIPPED GALV, AS PER AS1650.

NOTE:

1. HEXAGONAL BOLTS AND SCREWS M20 GRADE 4.6 TO AS 1111-2015 WITH M20 NUTS AND WASHERS GRADE 5 TO AS 1112-2015 AND AS 1237.1-2002, HOT DIPPED GALVANISED TO AS 1214-2016.
2. STEEL BRACKETS SHALL BE GRADE 250 TO AS 3679.1-2016. BRACKETS TO BE HOT DIPPED AFTER FABRICATION TO AS 4534-2006, AS 4680-2006 AND AS 4792-2006.
3. APPROVED MILD STEEL FERRULE WITH CROSS BAR FOR USE IN PRECAST BASE SLABS:
 - 3.1. LENGTH 65, THREAD DEPTH 32, FOR P.C. BASE SLABS 80 THICK OR GREATER.
 - 3.2. TO TAKE HEXAGONAL SCREW M20 X 45 TO AS 1111-2015.
 - 3.3. CROSS HOLED TO TAKE 12 X 250 M.S. BAR.
 - 3.4. FERRULE AND CROSS BAR TO BE HOT DIPPED GALVANISED TO AS 1214-2016.
 - 3.5. FERRULE LOCATED 300 FROM ENDS TO MATCH CORED HOLES IN CROWN UNITS.
 - 3.6. IF PRECAST BASE UNITS ARE LESS THAN 80MM THICK, THE FERRULES LENGTH, THREAD DEPTH AND SCREW LENGTH ARE TO BE REDUCED IN ORDER TO MAINTAIN CLEAR COVER OF 15.
4. HOLDING DOWN BOLTS TO BE PLACED IN DRILLED 30 DIA. HOLES AND GROUTED WITH 1:2 CEMENT SAND GROUT AFTER PLACING CROWNS. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
5. STANDARD DRAWING REFERENCES:
 - 5.1. CS3100 - CULVERT GENERAL NOTES AND USE OF THE HOLDING DOWN ANCHORS
 - 5.2. CS3107 - RCBC SETOUT DETAILS
 - 5.3. CS3108 - CROWN UNIT AND LINK SLAB INSTALLATION DETAILS, AND USE OF HOLDING DOWN ANCHORS
 - 5.4. CS3109 & CS3110 - WINGWALL AND HEADWALL DETAIL FOR RCBC / SLBC
 - 5.5. CS3111 - RCBC BASE SLABS WITH NIBS AND APRONS
 - 5.5. CS3112 - RCBC BASE SLABS WITH RECESSES AND APRONS
6. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.

THIS DRAWING IS DERIVED FROM QUEENSLAND MAIN ROADS STANDARD DRAWING SET 1250 AND ADOPTED FOR THE NT CONDITIONS.

No.	DESCRIPTION	DATE	NAME	DEPT./COMPANY
1	DESIGN NOTES ADDED	APR 2023	J. COOK	TCS / DIPL
0	ISSUED AS A STANDARD DRAWING	SEPT 2017	J.LEESON	EES/DIPL
AMENDMENTS				

WARNING
BEWARE OF UNDERGROUND SERVICES. THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.

DRAWN	A.R	CHECKED	L.Mc
DATE	DEC 2012	DATE	DEC 2012
DESIGNED	QLD	CHECKED	QLD
DATE		DATE	
DESIGN LEADER	S.HATZI	DESIGN DIRECTOR	S.JACKSON
DATE	1/09/2017	DATE	1/09/2017



STANDARD DRAWINGS DRAINAGE				
REINFORCED CONCRETE BOX CULVERT (RCBC) CROWN UNIT HOLDING DOWN ANCHORS				
FILE No.	ASSET No.	SHEET No.	DRAWING No.	AMEND.
-	-	7 OF 7	CS3113	1
				SHEET SIZE A1