GENERAL

1. STRUCTURAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE SPECIFICATION, CIVIL AND ENGINEERING SERVICES DOCUMENTS.
2. UNLESS OTHERWISE NOTED, ALL LEVELS ARE METRES, AND ALL DIMENSIONS ARE IN MILLIMETRES.
3. DIMENSIONS SHALL NOT BE OBTAINED BY SCALING FROM DRAWINGS.
4. ALL DISCREPANCIES SHALL BE REFERRED TO THE DESIGN ENGINEER FOR RESOLUTION BEFORE PROCEEDING WITH THE WORK.
5. THE STABILITY OF THE STRUCTURE DURING CONSTRUCTION IS THE RESPONSIBILITY OF THE CONTRACTOR.
6. ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE CURRENT NEW ZEALAND STANDARDS EXCEPT WHERE VARIED BY THE SPECIFICATION AND/OR DRAWINGS.
7. WHERE PROPRIETRY PRODUCTS ARE SPECIFIED IN THE DOCUMENTS THE CONTRACTOR MUST SUBMIT ALL ALTERNATIVE PRODUCTS FOR APPROVAL IF WISHING TO CHANGE.
8. CONTRACTOR TO CHECK LOCATION OF EXISTING SERVICES PRIOR TO ANY EXCAVATION WORK. NOTIFY ENGINEER OF ANY CONFLICTS AND AWAIT APPROVAL BEFORE PROCEEDING.
9. D&E INDICATES DRILL & EPOXY WITH EPCON C6 (UNLESS NOTED OTHERWISE).

CONCRETE

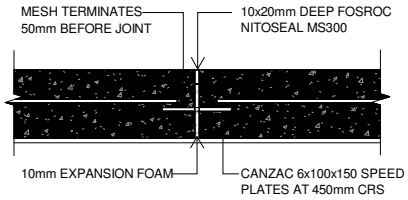
1. MINIMUM CONCRETE STRENGTHS SHALL BE AS FOLLOWS, UNLESS NOTED OTHERWISE ON DRAWINGS.

ELEMENT	MPa
FOUNDATION	30
FLOOR	30
PRECAST	30

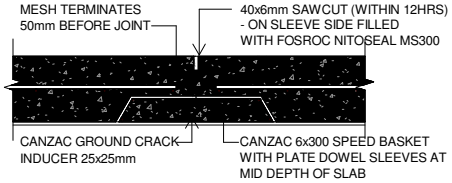
2. SIZES OF CONCRETE ELEMENTS DO NOT INCLUDE THICKNESS OF APPLIED FINISHES.
3. CONSTRUCTION JOINTS WHERE NOT SHOWN ON DRAWINGS SHALL BE LOCATED TO THE APPROVAL OF THE ENGINEER.
4. NO PENETRATIONS, CHASES OR EMBEDMENT OF PIPES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE IN ON CONCRETE MEMBERS WITHOUT THE PRIOR APPROVAL OF THE ENGINEER.
5. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF ALL PRECAST UNITS FOR APPROVAL PRIOR TO COMMENCEMENT OF WORK.
6. TOLERANCES AND FINISHES TO BE AS PER SPECIFICATION.
7. SCHEDULES OF SURFACE FINISHES: NZS3114:1987.

ELEMENT	FINISH
EXPOSED CONCRETE FACES OF ABUTMENTS AND PILES	F5
CONCEALED FOUNDATION SURFACES	U1
TOP SURFACES OF FOUNDATIONS BEAMS AND PADS	U3
VISIBLE FOUNDATION SURFACES	F5
CONCRETE NOT EXPOSED IN FINISHED STRUCTURE (FORMED)	F1
CONCRETE NOT EXPOSED IN FINISHED STRUCTURE (UNFORMED)	U3
ALL PRECAST SURFACES EXPOSHED IN THE FINISHED JOB	F5

*OFF A STEEL FORM



TYPICAL CONTROL JOINT DETAIL



TYPICAL SAWCUT DETAIL

PRECAST WALLS

1. PROP WALLS FULLY DURING CONSTRUCTION UNTIL FOUNDATIONS REACH FULL STRENGTH.

REINFORCEMENT

1. REINFORCING DESIGNATION AS FOLLOWS:

   NOTE: DH BARS ARE NOT TO BE REBENT .

SYMBOL	TYPE
R	PLAIN BARS GRADE 300 TO AS/NZS 4671 (300 MPa)
RH	PLAIN BARS GRADE 500 TO AS/NZS 4671 (500 MPa)
D	DEFORMED BARS GRADE 300 TO AS/NZS 4671 (300 MPa)
DH	DEFORMED BARS GRADE 500 TO AS/NZS 4671 (500 MPa)
M	MESH TO NZS 3422
RB	DEFORMED REIDBAR GRADE 500 MPa

2. CLEAR COVER TO ALL REINFORCEMENT, INCLUDING STIRRUPS, TIES ETC SHALL BE AS FOLLOWS, UNLESS NOTED OTHERWISE ON THE DRAWINGS AND SPECIFICATION.

   NZS 3101:2006

   EXPOSURE CLASSIFICATION (TABLE 3.1) = A2

   (REF. - FIG. 3.1 (A) NZS 3101:2006 NORTH ISLAND) TAURANGA

TABLE 3.6 - MINIMUM REQUIRED COVER FOR A SPECIFIED INTENDED LIFE OF 50 YEARS

EXPOSURE CLASSIFICATION	CEMENT BINDER TYPE	SPECIFIED COMPRESSIVE STRENGTH (MPa)						
		25	30	35	40	45	50	60-100
		MINIMUM REQUIRED COVER (mm)						
A1	GP, GB OR HE	25	20	20	20	20	20	20
A2	GP, GB OR HE	35	30	30-	25	25	25	20
B1	GP, GB OR HE	40	35	35	30	30	30	25
B2	GP, GB OR HE	-	45	40	35	30	30	25
C (I)	30 % FA	-	-	-	60	60	60	55
C (I)	65 % GBS	-	-	-	-	50	50	50
C (I)	8 % MS	-	-	-	-	60	50	50

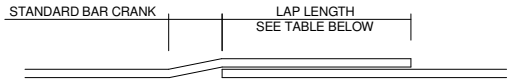
NOTE:

FOR ZONE C THE TOTAL BINDER CONTENT SHALL BE EQUAL TO OR GREATER THAN 350kg/m³ AND WATER TO BINDER RATIO SHALL NOT EXCEED 0.45
THE MINIMUM COVER FOR THE C ZONE SHALL BE 50mm

3.11.3.3 CASTING AGAINST GROUND:
WHERE CONCRETE IS CAST ON OR AGAINST GROUND AND COMPACTED IN ACCORDANCE WITH NZS 3109, THE MINIMUM COVER FOR A SURFACE IN CONTACT WITH THE GROUND SHALL BE 75MM, OR 50MM IF USING A DAMP-PROOF MEMBRANE BETWEEN THE GROUND AND THE CONCRETE TO BE CAST.

3. NO REINFORCEMENT SPLICES SHALL BE MADE OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS WITHOUT THE PRIOR APPROVAL OF THE ENGINEER.
   REINFORCEMENT LAPS IN CONCRETE TO COMPLY WITH THE TABLE BELOW: SPLICE LAP LENGTHS FOR DEFORMED BARS (IN MM) NZS3101:2006 8.6.3 (EQN 8.2).

LAPS

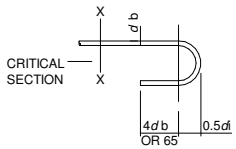


LAP LENGTHS

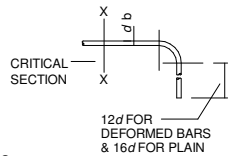
HOOK BARS	12 Ø
D BARS	40 Ø
DH BARS	50 Ø

THE DEVELOPMENT OF PLAIN BARS SHALL RELY ON HOOKS.

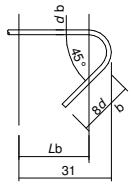
4. EPOXY GROUTING OF REINFORCING BARS INTO CONCRETE:
   HOLES FOR VERTICAL BARS SHALL BE VERTICAL. HOLES FOR HORIZONTAL STARTERS SHALL SLOPE DOWN AT 15 DEGREES.
5. WELDING OF REINFORCEMENT IS NOT PERMITTED.
6. TOP AND BOTTOM REINFORCEMENT IN SLABS SHALL BE ADEQUATELY SUPPORTED TO ENSURE ALL REINFORCEMENT STAYS IN PLACE DURING CONCRETE POURING.
7. STANDARD HOOKS AND BENDS. NZS3101:8.6.



(a) Semi-Circular Hook



(b) 90° Hook



(c) Stirrup Hook

R0	Building Consent Issue	01/02/2017			

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