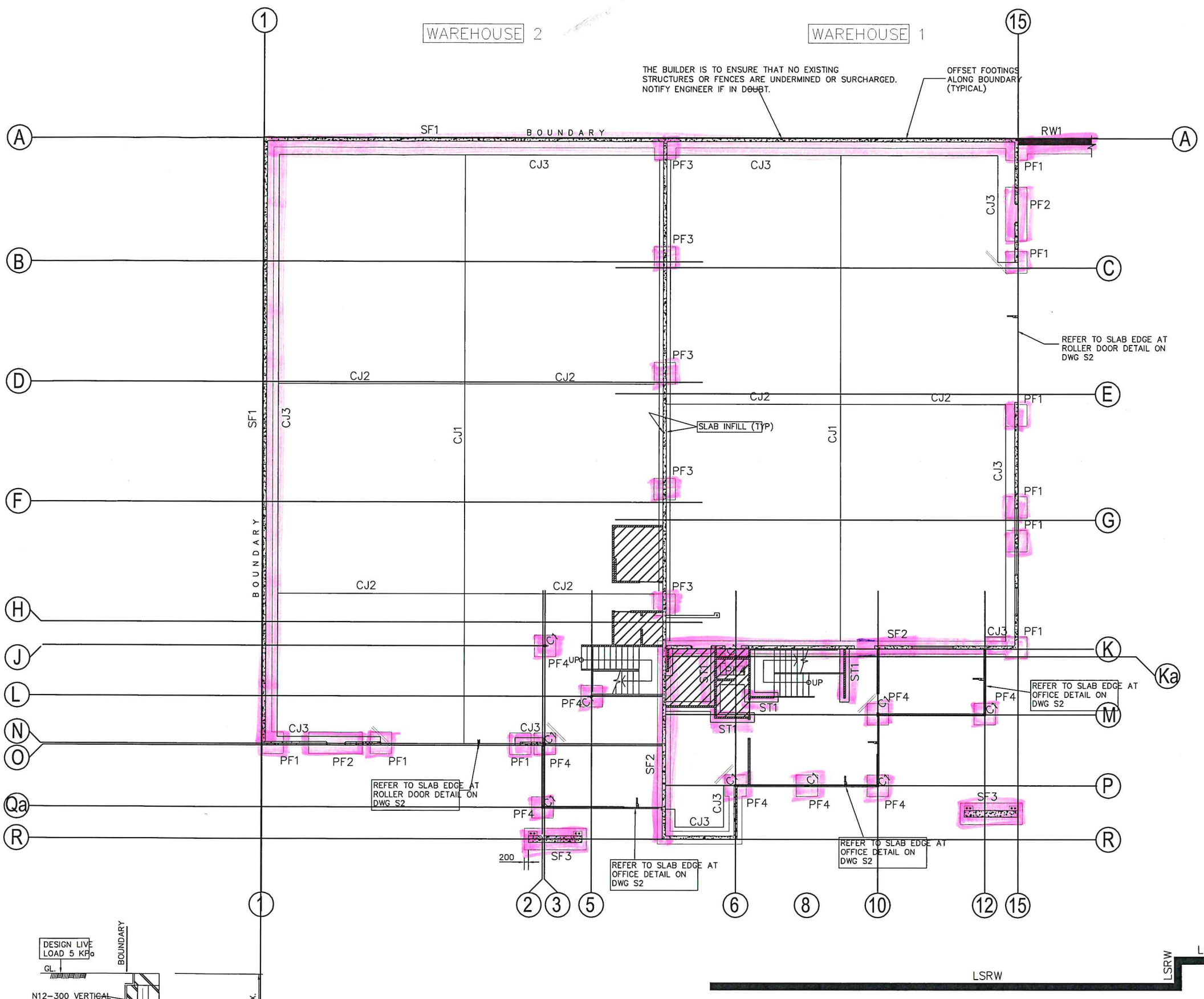




BRICK RETAINING WALL NOTES

1. COMPACT ALL GROUND UNDER AND IN FRONT OF RETAINING WALLS TO RESIST 7 BLOWS PER 300mm (STANDARD PERTH SAND PENETROMETER TEST).

2. CONCRETE TO COMPLY WITH AS 3600 & SHALL BE PRE-MIXED FROM AN APPROVED SUPPLIER.

3. ALL STEEL REINFORCEMENT TO COMPLY WITH AS 1302 & 1303.

4. PROVIDE WALL TIES ACROSS CAVITY AT 345mm (VERTICAL SPACING) x 600 mm (HORIZONTAL SPACING) WITH 75mm MINIMUM EMBEDMENT INTO EACH LEAF. FIX WALL REINFORCEMENT TO TIES TO PREVENT DISPLACEMENT DURING POUR.

5. POUR CONCRETE TO CAVITY IN LIFTS NOT EXCEEDING 500mm TO REQUIRED HEIGHT AND COMPACT BY THOROUGH RODDING OR LIGHT VIBRATION.

6. DO NOT BACKFILL WALL UNTIL WALL HAS BEEN POURED FOR 10 DAYS MIN.

7. PROP RETAINING WALLS DURING BACKFILLING AND COMPACTING. PROPS FOR 3 DAYS MINIMUM AFTER SLAB POUR WHERE SLAB OVER OCCURS.

8. BUILDER TO PROVIDE ADEQUATE DRAINAGE AND WATERPROOFING TO REAR OF RETAINING WALLS.

9. NO PERMANENT DEAD LOADS/CHARGE ON RETAINING WALL IS ASSUMED i.e. HORIZONTAL BACKFILL ONLY WITH NO STRUCTURE OR TRAFFIC LOADS TO BE CLOSER THAN THE RETAINING HEIGHT AWAY FROM THE WALL.

10. MAX DESIGN LIVE LOAD BEHIND WALL IS 3.0kPa (UNIFORMLY DISTRIBUTED).

11. RETURN REINFORCEMENT AROUND ALL CORNERS 450 mm MINIMUM.

12. PROVIDE VERTICAL CONTROL JOINTS TO EXTERNAL RETAINING WALLS AT TWELVE METRE CENTRES (MAX.).

13. THESE DETAILS ARE APPLICABLE TO CLASS A STABLE SUBGRADES. NOTIFY ENGINEER IF SOIL CONDITION IS OTHERWISE.

14. NOTIFY THE ENGINEER IF A FENCE IS TO BE BUILT ALONG TOP OF WALL. WALL DIMENSIONS AND REINFORCEMENT MAY NEED TO BE INCREASED.

15. MASONRY SHALL COMPLY WITH A.S. 3700.

16. MASONRY UNITS SHALL HAVE A MINIMUM UNCONFINED CHARACTERISTIC COMPRESSIVE STRENGTH (f_{cu}) OF 12 MPa U.N.O. (SEE GENERAL NOTES 6.2).

17. MORTAR MIX PROPORTIONS (BY VOLUME) SHALL BE: C1 : L1 : S6.

18. CONFIRM RETAINING WALL HEIGHTS AND LOCATIONS WITH ARCHITECTURAL DRAWINGS AND ON SITE PRIOR TO COMMENCEMENT OF WORKS.

19. BOND BRICKWORK LEAVES EITHER BY:

1. HEADER BRICKS AT EACH STEPPED INTERVAL IN WHICH EACH ALTERNATE BRICK IS A HEADER, OR

2. WALL TIES AT EACH STEPPED INTERVAL AT 400 CTS. MAX. HORIZ.

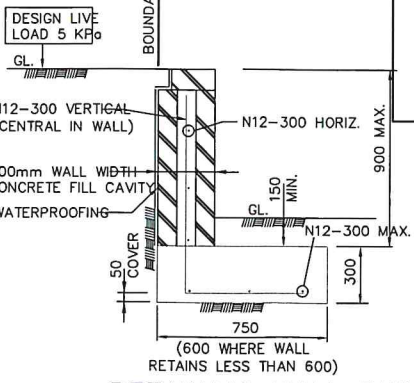
- NOTES**
- 1.0 GENERAL
- 1.1 THESE NOTES TO BE READ IN CONJUNCTION WITH SPECIFIC NOTES ON RELEVANT DRAWINGS. ALL NOTES MANDATORY.
- 1.2 ALL DIMENSIONS TO BE CHECKED ON SITE.
- 1.3 THESE DRAWINGS TO BE READ IN CONJUNCTION WITH ARCHITECTURAL AND OTHER CONSULTANT SERVICES DRAWINGS. ANY ALTERATIONS OR REVISIONS TO THE ARCHITECTURAL OR OTHER CONSULTANTS DRAWINGS (INCLUDING DURING THE DOCUMENTATION PERIOD), WHICH AFFECT THE STRUCTURE ARE TO BE SPECIFICALLY BROUGHT TO THE ATTENTION OF THE ENGINEER.
- 1.4 DO NOT SCALE FROM DRAWINGS.
- 1.5 USE LATEST CODES OR AMENDMENTS.
- 1.6 SITE VISITS NOT INCLUDED IN DOCUMENTATION FEE UNLESS SPECIFIED IN WRITING.
- 1.7 ALL TIMBER WORKS & ROOF ANCHORAGE TO BE IN ACCORDANCE WITH THE NATIONAL TIMBER FRAMING CODE AS 1684 & BCA.
- 1.8 WHO DESIGN BASED ON TC 13 RECORD A TO A.S. 1170.2 - BUILDER TO CONFIRM WITH LOCAL AUTHORITY & NOTIFY ENGINEER IF OTHERWISE.
- 1.9 IF GROUND SLAB IS TO BE USED AS PART OF TIE-BARRIER SYSTEM, BUILDER MUST INSPECT SLAB AT 28 DAYS AFTER POUR TO ENSURE NO CRACKS WIDER THAN 0.5mm HAVE OCCURRED. ANY CRACKS EXCEEDING 0.5mm IN WIDTH ARE TO BE REPAIRED USING THERMITE-PROOF EPOXY GROUT. THERMITE BARRIER TO BE IN ACCORDANCE WITH AS3660.1.
- 1.10 DURING CONSTRUCTION, BUILDER TO ENSURE STRUCTURE REMAINS STABLE AND NO PART IS OVER STRESSED.
- 1.11 MAKE DUE ALLOWANCE IN FINISHES FOR DIRECTIONAL MOVEMENT AT JOINTS OR WHERE DIFFERING MATERIALS OF CONSTRUCTION ARE IN CONTACT.
- 2.0 FOOTINGS
- 2.1 FOOTINGS AND SLABS ON GROUND TO COMPLY WITH AS 2870.
- 2.2 FOOTINGS DESIGNED FOR A CLASS A STABLE SUBGRADE U.N.O. BUILDER TO NOTIFY ENGINEER IF SOIL CONDITION IS OTHERWISE.
- 2.3 FOOTINGS AT LOWEST LEVEL MUST BE FIRST FOOTINGS POURED.
- 2.4 DIFFERENCE IN FOOTING LEVELS IS NOT TO EXCEED HALF THE CLEAR DISTANCE BETWEEN THEM.
- 2.5 LOCATE FOOTINGS CENTRALLY UNDER WALLS & COLUMNS UNLESS OTHERWISE SHOWN.
- 2.6 ANY TREES STUMPS, OLD EXCAVATIONS, RUBBISH, FILL ETC. TO BE CLEARED OUT AND REPLACED WITH CLEAN, COMPACTED FILL OR CONCRETE AS REQUIRED BY ENGINEER.
- 2.7 ALL SOIL BELOW FOOTINGS AND SLABS ON GROUND SHALL BE COMPACTED FOR A MINIMUM DEPTH OF 750mm IN VIGOROUS SOIL, AND FOR THE FULL DEPTH OF ALL FILLING SAND TO GIVE PENETRATION RESISTANCE OF 8 BLOWS MINIMUM PER 300mm USING A STANDARD PERTH SAND PENETROMETER (COMPLYING WITH AS 1289.2.3).
- 2.8 OBTAIN APPROVAL OF ALL EXCAVATIONS PRIOR TO CONCRETING.
- 3.0 CONCRETE
- 3.1 ALL CONCRETE TO COMPLY WITH AS 3600 & SHALL BE PRE-MIXED FROM AN APPROVED SUPPLIER.
- 3.2 CONCRETE QUALITY:
- | LOCATION | STRENGTH GRADE | MAX. AGG. SIZE (mm) | SUMP (mm) |
|----------------------|-----------------|---------------------|-----------|
| FOOTINGS | N25 | 20 | 80 |
| GRD SLAB (WAREHOUSE) | N25 | 20 | 80 |
| GRD SLAB (OFFICE) | N25 | 20 | 80 |
| TILT-UP PANEL | REFER TO DWG S3 | | |
- 3.3 NOTIFY THE ENGINEER AT LEAST 24 HOURS BEFORE PLACING CONCRETE.
- 3.4 BUILD FORMWORK FROM ARCHITECTURAL DRAWINGS. CHECK FOR BUILT-IN FINISHES, FLASHINGS, TIES, PLUMBING AND ELECTRICAL FITTINGS, DUCTS, VENTS ETC.
- 3.5 COMPACT CONCRETE BY USING APPROVED IMMERSION VIBRATORS.
- 3.6 BEAMS AND SLABS TO BE POURED MONOLITHICALLY.
- 3.7 LOCATE COLUMNS UNDER TOP STEEL AND OVER BOTTOM STEEL.
- 3.8 ALL LOAD BEARING BRICKWORK AND BLOCKWORK TO BE BUILT HARD UP TO UNDERSIDE OF SLAB BEFORE CONCRETE POURED. USE TWO LAYERS OF P.G.I. OR OTHER APPROVED BETWEEN WALLS AND SLAB.
- 3.9 PROVIDE 2-LAYERS OF PG (OR SIMILAR APPROVED) BOND BREAKER BELOW ALL UPPER LEVEL WALLS ON SUSPENDED SLAB.
- 3.10 CURE ALL CONCRETE BY KEEPING MOIST FOR 7 DAYS MIN.
- 3.11 USE ONLY ORDINARY PORTLAND CEMENT TYPE A TO CONCRETE.
- 3.12 WHERE BRITTLE FLOOR FINISHES (E.G. TILES) ARE TO BE USED, THE BUILDER IS REFERRED TO CL 5.3.7 OF AS270 FOR EXTRA MEASURES TO BE TAKEN TO REDUCE THE EFFECT OF SLAB SHRINKAGE CRACKING.
- 3.13 GENERALLY, ALL PENETRATIONS REQUIRED IN CONCRETE ARE SHOWN ON THE STRUCTURAL DRAWINGS. THE BUILDER IS TO SEEK THE APPROVAL OF THE ENGINEER IF ANY ADDITIONAL PENETRATIONS ARE REQUIRED.
- 4.0 REINFORCEMENT
- 4.1 PLAIN ROUND BARS (R), HARD DRAWN WIRE BARS (W), HOT ROLLED RIB (S & N) ARE TO COMPLY WITH AS 4671.
- 4.2 FABRIC AND HARD DRAWN STEEL WIRE TO COMPLY WITH AS 4671.
- 4.3 MINIMUM LAPS-FABRIC: ONE SQUARE + 25MM BARS 40 x BAR DIAMETER U.N.O.
- 4.4 SUPPORT ALL REIN. ADEQUATELY AND ACCURATELY ON APPROVED CHAIRS.
- 4.5 STEEL MARKED
- UT - UPPER TOP BARS LB - UPPER BOTTOM BARS
LT - LOWER TOP BARS LB - LOWER BOTTOM BARS
- 4.6 CLEAR COVER TO REINFORCEMENT TO BE
- | | 50mm |
|----------------|---------------------------|
| SLAB ON GROUND | 25mm (TOP) (35mm EXPOSED) |
| SLABS | 20mm (30mm EXPOSED) |
| BEAMS | 30mm (30mm EXPOSED) |
| COLUMNS | 40mm (40mm EXPOSED) |
| WALL PANELS | 20mm (35mm EXPOSED) |
- 4.7 REINFORCE ALL SLAB RE-ENTRANT CORNERS WITH 2-N16 x 1500 LG. BARS IN MIDDLE OF SLAB AT 45° TO CORNER U.N.O.
- 5.0 FORMWORK
- 5.1 FORMWORK SHALL COMPLY WITH AS 3610.
- 5.2 BUILD ALL FORMWORK FROM ARCHITECTURAL DRAWINGS.
- 5.3 MINIMUM STRIPPING TIMES
- | | 3 DAYS U.N.O. | 10 DAYS U.N.O. |
|-------------------------|---------------|----------------|
| WALLS AND COLUMNS | | |
| BEAMS, SLABS AND STAIRS | | |
- 5.4 BACK PROP SLABS AND BEAMS FOR 28 DAYS MINIMUM.
- IF BRICKWORK IS TO BE BUILT ON SLAB, ALLOW CONCRETE TO REACH STRENGTH GRADE. PULL OUT ALL PROPS AND LOAD ALL BRICKS ON SLAB TO ALLOW DEFLECTION TO OCCUR BEFORE BRICKWORK COMMENCED. NO BRICKWORK TO BE BUILT ON PROPPED SLABS.
- 6.0 MASONRY
- 6.1 MASONRY SHALL COMPLY WITH AS 3700.
- 6.2 MASONRY UNITS SHALL HAVE A MINIMUM CHARACTERISTIC UNCONFINED COMPRESSIVE STRENGTH (f_{cu}) OF 12 MPa U.N.O. WITH A MORTAR CLASSIFICATION OF M3 MIN.
- 6.3 LOADING MASONRY SHALL HAVE ALL BED JOINTS AND PERPENDS FULLY BEDDED.
- 6.4 REINFORCE ALL MASONRY WALLS ON SLAB (WHERE NO WALLS UNDER) WITH 2-N16 GALV. RODS PER LEAF, 1c (80mm) UP FROM SLAB AND OVER OPENINGS, EXTENDING 500mm BEYOND OPENINGS.
- 6.5 WHERE MASONRY ADJUTS STEEL OR CONCRETE STRUCTURES THEY SHALL BE FIXED WITH APPROVED BRICK TIES EVERY:
- 4TH COURSE - STANDARD AND MODULAR BRICKS UP TO 100mm HIGH
- 2ND COURSE - MASONRY UNIT BETWEEN 100mm AND 200mm HIGH.
- 6.6 CUTTING AND CHASING OF LOAD BEARING MASONRY IS NOT PERMITTED WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- 6.7 ALL WALL TIES, CONNECTORS & ACCESSORIES, UNITS & SHELF ANGLES ARE TO BE TREATED FOR CORROSION PROTECTION IN ACCORDANCE WITH A.S. 3700 (TABLES F1 TO F6).
- 7.0 STRUCTURAL STEELWORK
- 7.1 ALL STEELWORK TO COMPLY WITH AS 4100.
- 7.2 MATERIAL - U.N.O. ALL THE MATERIAL TO BE:
- GRADE 250 HOT ROLLED PLATES COMPLYING WITH AS 3678
 - GRADE 250 HOT ROLLED FLATS, IFC, IFS, ANGLES 100/100 EA OR 125/75 UA & SMALLER COMPLYING WITH AS 3679.
 - GRADE 300 UB, IFC, IFS AND ANGLES 125/125 EA OR 150/100 UA AND LARGER
 - GRADE 300 WL, WC COMPLYING WITH AS 3679.2
 - GRADE 350 RYS, CHS COMPLYING WITH AS 1163.
- 7.3 ALL WELDING TO COMPLY WITH AS 1554 PARTS 1 AND 2.
- 7.4 ALL WELDS TO DEVELOP FULL STRENGTH OF MEMBERS JOINED. U.N.O.
- 7.5 FULLY SEAL ALL HOLLOW SECTIONS USING SAM PLATES WHERE NECESSARY.
- 7.6 PROVIDE ALL CLATS, BRACKETS, HOLES, ETC. NOT SHOWN BUT NECESSARY TO COMPLETE THE BUILDING.
- 7.7 UNLESS OTHERWISE SHOWN, ALL BOLTED CONNECTIONS ARE TO DEVELOP FULL STRENGTH OF MEMBERS JOINED.
- 7.8 STEEL BEAMS TO BE FABRICATED WITH NATURAL CAMBER UP.
- 7.9 UNLESS OTHERWISE NOTED, USE:
- (a) 10mm THICK GUSSET PLATE AND END PLATES AND 2-N16 8.8/5 BOLTS
- (b) GUN CONTINUOUS OR FILET WELD.
- 7.10 ALL BOLTED CONNECTIONS TO BE BOLTING CATEGORY 8.8/5 U.N.O.
- 7.11 PROVIDE TEMPORARY BRACING DURING ERECTION.
- 7.12 CURE 1:2 CEMENT SAND GROUT UNDER ALL SEATING AND BASE PLATES, ENSURING THE SPACE UNDER THE PLATES IS COMPLETELY FILLED.
- 7.13 WHERE MASONRY WALLS ADJUT OR ADJACENT TO STEEL COLUMNS, WELD A VERTICAL RIB ROD TO COLUMN LENGTH OF WELD TO BE 25mm EACH SIDE OF ROD EVERY 350mm. PROVIDE SAM CLEARANCE BETWEEN ROD AND COLUMN FACE.
- 7.14 ALL INTERNAL STEELWORK TO BE RESTROTTED USING A RED OXIDE ZINC PHOSPHATE PRIMER ON CLEANED SURFACES U.N.O.
- 7.15 EXTERNAL STEELWORK TREATMENT TO CONFORM WITH AS/NZS 2312 (HOT DIP GALVANISED).
- 7.16 COLORED FORMED SECTIONS TO CONFORM TO AS 1397 - G 450 (450 MPa MIN. YIELD STRESS).
- 7.17 PROVIDE EXTRA PURLINS & GRIS AS REQUIRED TO SAT PENETRATIONS AND GUTTERS.
- 7.18 ALL STEELWORK IN CONTACT WITH THE GROUND IS TO BE COATED WITH 2 COATS DULUX AMBERCOAT 385 (MIN DFT 250 MICRONS) OR SIMILAR APPROVED.
- 7.19 PURLINS/GRIS - PURLINS AND GRIS ARE TO BE BPP BUILDING PRODUCTS (BPP-BP), STRUARY, OR OTHER SECTIONS APPROVED IN WRITING BY THE ENGINEER, COMPLYING WITH AS 1397, AND A MINIMUM GALVANIZED COATING OF 2300 (350G/50M).
- CLEAR CONNECTIONS ARE TO BE IN ACCORDANCE WITH ASG STANDARDISED CONNECTIONS OR MANUFACTURER'S RECOMMENDATIONS U.N.O. BOLTING AND BRIDGING TO BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

FOOTING & GROUND SLAB PLAN

- WAREHOUSE: 125 THICK SLAB, SL72 MESH TOP, 30 COVER
- OFFICE: 100 THICK SLAB, SL62 MESH TOP, 30 COVER
- BUILDER TO CONFIRM ALL LEVELS ON SITE PRIOR TO COMMENCEMENT OF WORKS.
 - PLACE MESH ON APPROVED SUPPORT CHAIRS PRIOR TO CONCRETE PLACEMENT.
 - PROVIDE 2-N16 BARS x 1500 LONG CENTRAL IN SLAB AT ALL RE-ENTRANT CORNERS.
 - INDICATES 25mm RECESS TO WET AREAS. MAINTAIN 100 THICK SLAB. CONFIRM EXTENT WITH ARCH'L DWG'S.
 - CJ1, CJ2, CJ3 - SLAB CONTROL JOINT AS PER DWG S2

LEGEND

- COLUMNS:**
- C1 - 100 x 4 SHS
- PAD FOOTING:**
- PF1 - 1200 x 1200 x 300 DP, N12-200 CTS BOTTOM EACH WAY
- PF2 - 1200 x 2500 x 300 DP, N12-200 CTS BOTTOM EACH WAY
- PF3 - 1200 x 1200 x 300 DP, N12-200 CTS BOTTOM EACH WAY
- PF4 - 1000 x 1000 x 350 DP, N12-200 CTS BOTTOM EACH WAY
- STRIP FOOTINGS:**
- SF1 - 800 x 300 DP, L8TM TOP & BOTTOM
- SF2 - 600 x 300 DP, L8TM BOTTOM
- SF3 - 1000 x 300 DP, L8TM BOT



RETAINING WALL RW1

- CONFIRM EXTENT & LOCATION OF RETAINING WALL WITH ARCH'L DWG'S.
- REFER TO RETAINING WALL NOTES ABOVE