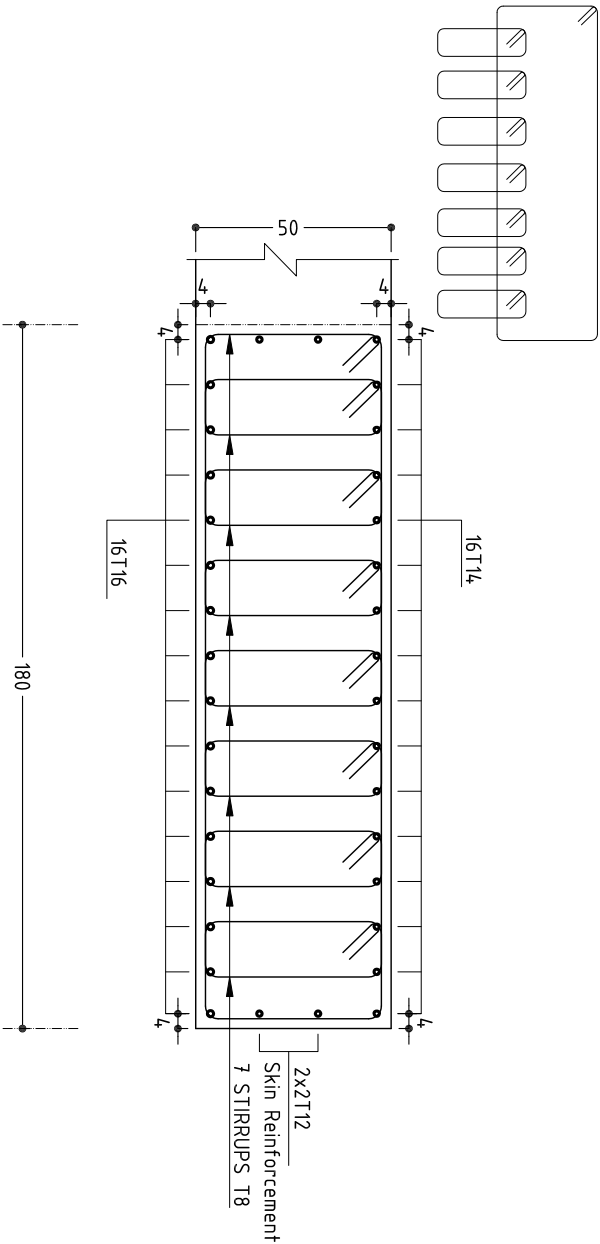
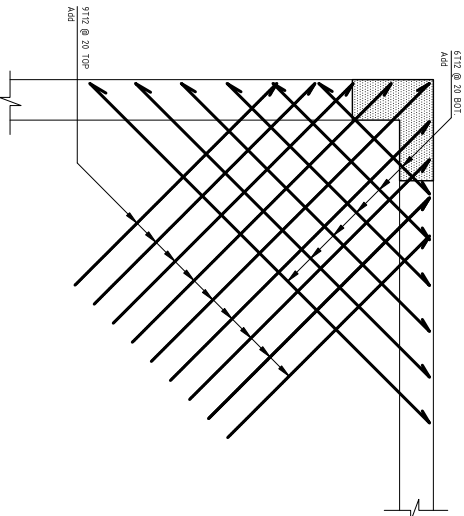


B1 (180X50)

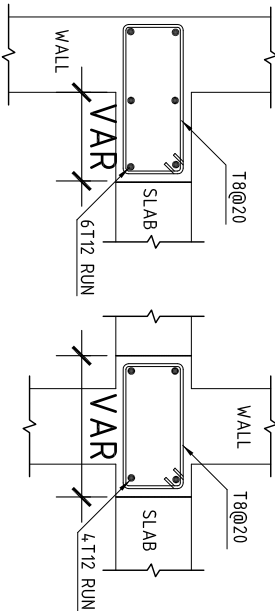
SCALE 1/20



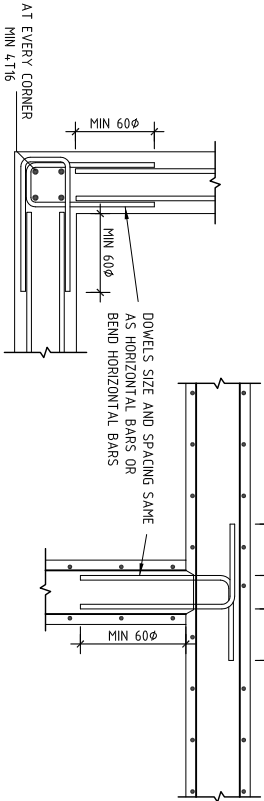
TYPICAL DETAIL AT CORNER



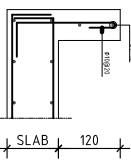
TYPICAL REINFORCEMENT DETAIL
AT INTERSECTION WALL-SLAB



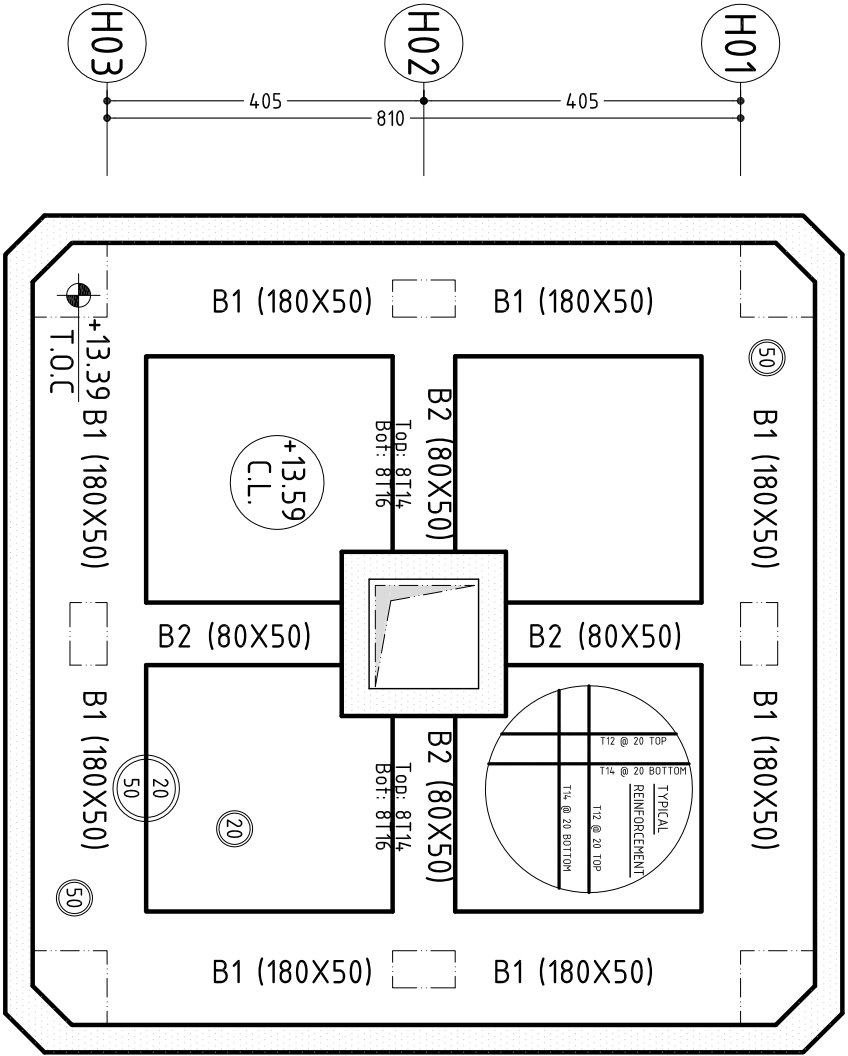
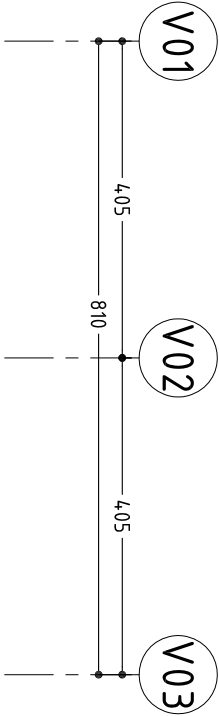
TYP WALL INTERSECTION



TYP WALL CONSTRUCTION JOINT



AT ROOF

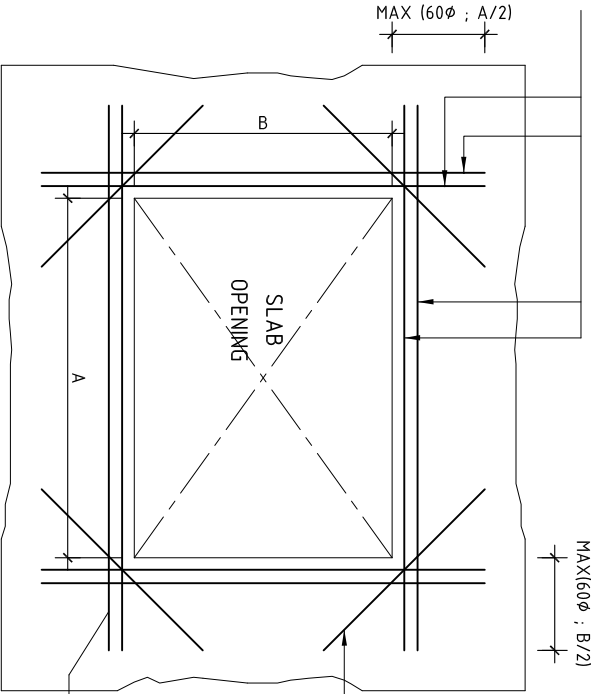


Water Tank Floor - Scale 1/100

Note that Water Tank Upper Slab is a Solid Slab without B1 and B2
Follow Typical Details for Intersection Reinforcement

TYPICAL CONCRETE OPENING DETAIL

ADDITIONAL 1/2 OF NUMBER OF BARS INTERRUPTED BY OPENING
PLUS ONE EACH SIDE @ 8cm U.N.O.



ADDITIONAL 2T16 AT
EACH CORNER FOR
OPENINGS > 3 TIMES
THICKNESS OF SLAB OR WALL

IN TWO WAY SLAB EXTEND
BARS UP TO BEAM SUPPORT
OMIT TRIMMER BARS WHERE
OPENING IS FRAMED BY BEAM



Revision Table			
Rev.	Date	By	Checked
1	2020/09/08	AS	AS
2	2020/09/08	AS	AS
3	2020/09/08	AS	AS
4	2020/09/08	AS	AS
5	2020/09/08	AS	AS
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97	2020/09/08	AS	AS
98	2020/09/08	AS	AS
99	2020/09/08	AS	AS
100	2020/09/08	AS	AS

1- CONCRETE MIXES & PLACING

- 1-1 TWO TYPES OF CONCRETE ARE SPECIFIED:
- CONCRETE FOR BLINDING AND CYCLOPEAN CONCRETE :
 - 200 KG CEMENT OF ORDINARY PORTLAND CEMENT PER CUBIC METER OF CONCRETE.
 - CONCRETE FOR INFRASTRUCTURAL ELEMENTS FOOTINGS,RAFT,PILES,PILE CAPS,SLAB ON GRADE:
 - 400 KG OF ORDINARY PORTLAND CEMENT PER CUBIC METER OF CONCRETE. MAX W/C=0.40
 - CONCRETE FOR STRUCTURAL ELEMENTS COLUMNS,BEAMS,WALLS,SLABS:
 - 400 KG OF ORDINARY PORTLAND CEMENT PER CUBIC METER OF CONCRETE. MAX W/C=0.40.
- 1-2 UNLESS OTHERWISE SPECIFIED, THE MINIMUM 28 DAYS COMPRESSIVE STRENGTHS ARE:
- ON CYLINDER
- BLINDING/LEAN CONCRETE.....f'c=15 MPa
 - COLUMNS, RETAINING WALLf'c=30 MPa
 - GROUND SLAB,SLAB & BEAMS.....f'c=30 MPa
- 1-3 ALL CONCRETE SHALL BE MOIST FOR A MINIMUM OF SEVEN CONSECUTIVE DAYS IMMEDIATELY AFTER POURING BY THE USE OF WET BURLAP, FOG SPRAYING OR OTHER APPROVED METHODS.
- 1-4 ORDINARY PORTLAND CEMENT TYPE I SHALL BE USED IN ALL INFRASTRUCTURE ELEMENTS.
- 1-5 CONCRETE SHALL BE DEPOSITED IN ITS FINAL POSITION WITHOUT SEGREGATION, RE-HANDLING OR FLOWING. NO DEPOSITING OF CONCRETE SHALL BE ALLOWED WITHOUT THE USE OF VIBRATORS, UNLESS AUTHORIZED IN WRITING BY THE DESIGNERS.
- 1-6 ALL REINFORCED CONCRETE TO BE VIBRATED.
- 1-7 SLUMP TEST: MAXIMUM 7 TO 9 CM.

2- REINFORCED CONCRETE

UNLESS NOTED ON DRAWINGS, THE FOLLOWING IS TO BE CONSIDERED AS TYPICAL AND APPLICABLE:

- ## 2-1 BASIS OF DESIGN: THE BAEL 91-MOD99 CODE

- 2-2 PARTICULAR CARE SHOULD BE GIVEN TO THE PLACING OF REINFORCEMENT, THE MIXING AND CASTING OF CONCRETE, AND ACCORDING TO THE SPECIFICATIONS FOR THIS TRADE.

- 2-3 CONCRETE POURS SHALL PREFERABLY BE CONTINUOUS BETWEEN JOINTS

- 2-4 THE MINIMUM CONCRETE PROTECTIVE COVER FOR REINFORCEMENT SHALL BE AS FOLLOWS:

- | | |
|--|--------|
| -FOR SOLID SLABS: | 2.5 cm |
| -FOR BEAMS: | 4 cm |
| EXTERNAL | |
| INTERNAL | 2.5 cm |
| -FOR COLUMNS: | 4 cm |
| -FOR INTERNAL WALLS NOT EXPOSED TO WEATHER : | 2.5 cm |
| -FOR EXTERNAL WALLS EXPOSED TO WEATHER : | 4 cm |
| -FOR WALLS EXPOSED TO EARTH: | 5 cm |
| -FOR FOOTINGS: | 7.5 cm |
| -FOR SLAB ON GRADE: | 5 cm |

- 2-5 FOR ALL ELECTROMECHANICAL RESERVATIONS IN WALLS, SLABS AND BEAMS, EXACT LOCATION TO BE COORDINATED WITH ELECTROMECHANICAL DRAWINGS.

- 2-6 OPENINGS SMALLER THAN 150mm MAY BE FORMED EITHER BY BOXING OUT OR BY CAREFUL DRILLING BY CORE CUTTER AFTER CASTING.

- 2-7 ALL CONCRETE REINFORCEMENT SHALL BE DETAILED, FABRICATED, LABELED, SUPPORTED AND SPACED IN FORMS AND SECURED IN PLACE IN ACCORDANCE WITH THE PROCEDURES AND REQUIREMENTS OUTLINED IN THE FRENCH CODE NF P 02 016

- 2-8 ALL CONSTRUCTION JOINTS SHALL BE WIRE BRUSHED AND CLEANED IMMEDIATELY PRIOR TO POURING NEW CONCRETE. THE SURFACE OF THE CONCRETE AT ALL JOINTS SHALL BE ROUGHENED MINIMUM 6mm, THOROUGHLY CLEANED AND ALL LANTANCE REMOVED PRIOR TO PLACING ADJOINING CONCRETE.

- 2-9 THE SEQUENCE OF POURING CONCRETE SHALL BE SUCH AS TO MINIMIZE SHRINKAGE

- 2-10 ALL REINFORCEMENT SHALL BE CONTINUED ACROSS CONSTRUCTION JOINTS UNLESS NOTED OTHERWISE

- 2-11 PROVIDE 2 LAYERS OF 4mm WATER PROOFING MEMBRANE BEHIND RETAINING WALLS UNDER GROUND SLAB & FOOTINGS.

- 2-12 REINFORCING STEEL TO BE BENT AND PLACED IN ACCORDANCE WITH "MANUAL OF STANDARD PRACTICE FOR DETAILING CONCRETE STRUCTURES (BAEL91-MOD99)".

- 2-13 MAXIMUM AGGREGATE SIZE TO BE 2cm.

- 2-14 PROVIDE CONTINUOUS KEYWAYS AT RETAINING WALL CONSTRUCTION JOINTS

- 2-15 ALL REINFORCING STEEL SHALL BE SECURELY WIRED IN PLACE BEFORE CONCRETE IS PLACED.

- 2-16 MAXIMUM SPACING OF BAR SUPPORTS IN SLAB ON GRADE TO BE 1.2m

- 2-17 DRILLING IN BEAMS AND COLUMNS FOR MOLDING INSTALLATION OR ANY OTHER PURPOSE, SHOULD BE DONE WITH EXTREME CARE TO AVOID CUTTING ANY OF THE STEEL REINFORCING. LOCATE BARS AND STIRRUPS BEFORE ANY DRILLING. THE CONTRACTOR TO PROVIDE INFORMATION ON HIS PROCEDURE IN WRITING TO STRUCTURAL ENGINEER BEFORE ANY DRILLING.

3- STRENGTH,SIZES USED,SPLICE LENGTH

- HIGH TENSILE STEEL
 T8 T10 T12 T16 T20 T25 T32
 MILD STEEL
 ϕ6 ϕ8
 - UNLESS OTHERWISE NOTED ON DRAWINGS, ALL REINFORCEMENT SHALL BE
 TIES AND STIRRUPS (PLAIN STEEL BAR) Fe E235
 OTHER BARS (HIGH TENSILE STEEL (MIN. YIELD STRENGTH)) Fe E500
 - UNLESS OTHERWISE NOTED, MINIMUM SPLICE LENGTH
 FOR HIGH TENSILE STEEL TO BE AS FOLLOWS:
 HTS HIGH TENSILE STEEL : 50 x BAR DIAMETER
 T8 - 40cm
 T10 - 50cm
 T12 - 60cm
 T16 - 80cm
 T20 - 100cm
 T25 - 125cm
 T32 - 160cm

[illegible]