

GENERAL NOTES

- G1 THESE NOTES SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANTS DRAWINGS AND SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTION AS ISSUED DURING THE COURSE OF THE CONTRACT. ALL DISCREPANCIES SHALL BE REFERRED TO THE ARCHITECT OR ENGINEER BEFORE PROCEEDING WITH THE WORK.
- G2 DIMENSIONS SHALL NOT BE OBTAINED BY SCALING THE STRUCTURAL DRAWINGS.
- G3 SETTING OUT DIMENSIONS SHOWN ON THE DRAWINGS SHALL BE VERIFIED BY ON-SITE MEASUREMENT.
- G4 DURING CONSTRUCTION THE STRUCTURE SHALL BE MAINTAINED IN A STABLE CONDITION AND NO PART SHALL BE OVERSTRESSED.
- G5 ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT EDITIONS OF THE SAA CODE AND THE BY-LAWS AND ORDINANCES OF THE RELATIVE BUILDING AUTHORITY.
- G6 EXCAVATIONS SHALL NOT BE PERMITTED WITHIN 2 METRES OF AN EXISTING STRUCTURE WITHOUT PRIOR APPROVAL OR RECOMMENDATIONS FOR SHORING OR UNDERPINNING PROVIDED BY ENGINEER.
- FOUNDATIONS AND FOOTINGS
- F1 FOOTINGS HAVE BEEN DESIGNED FOR AN ALLOWABLE INTENSITY OF BEARING PRESSURE OF 150kPa. THE BUILDER SHALL OBTAIN APPROVAL OF THE FOUNDATION MATERIAL BEFORE PLACING CONCRETE.
- F2 FOOTINGS SHALL BE PLACED UNDER WALLS AND COLUMNS UNLESS OTHERWISE NOTED.
- SUB-GRADE
- S6.1 UNDER ALL SLABS ON GRADE, WHETHER OR CUT OR FILL, REMOVE SOFT SPOTS AND REFILL BY COMPACTING CUT SURFACES OR FILL SURFACES IN LAYERS NOT EXCEEDING 200 mm TO 95% DRY DENSITY, ENSURING MINIMUM SETTLEMENT TO SLABS.

- CONCRETE WORK
- C1 ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 3600.
- C2 CONCRETE QUALITY SHALL BE AS TABULATED AND SHALL BE VERIFIED BY TESTS.

ELEMENT	SUMP	MAX. SIZE AGG.	CEMENT TYPE	ADMIXTURE	MPa CONCRETE GRADE
ALL	80	20	A	NIL	32

- C3 CLEAR CONCRETE COVERS TO REINFORCEMENT SHALL BE AS FOLLOWS UNLESS OTHERWISE SHOWN.

ELEMENT	CAST IN FORMS COMPLYING WITH AS 1599		
	CONDITION 1 NOT TO BE EXPOSED TO WEATHER GROUND WATER OR FRESH WATER	CONDITION 2 TO BE EXPOSED TO WEATHER GROUND WATER OR FRESH WATER	CONDITION 3 CAST AGAINST OTHER FORMWORK OR THE GROUND
PAD FOOTINGS & PILE CAPS	-	65	75
STRIP FOOTINGS	-	50	65
SOBE OR CAST PIERS	-	50	75
COLUMNS	40	50	75
WALLS, INCLUDING RETAINING WALLS	20	30	65
BEAMS	25	40	65
SLABS, INCLUDING JOISTS & HOLLOW BLOCK CONSTRUCTION	20	30	65
REINFORCEMENT ADJACENT TO HOLLOW BLOCKS INTEGRAL WITH STRUCTURE	5	-	-

- NOTE:
- SLABS POURED OVER A MEMBRANE ON THE GROUND ARE INCLUDED AS CONDITION 2.
 - SLABS EXPOSED TO CORROSIVE VAPOURS, CORROSIVE GROUND WATER, SEA WATER OR SPRAY ARE TO HAVE REINFORCEMENT COVER AS NOTED OR NOT LESS THAN AS REQUIRED FOR CONDITION 3.

- C4 SIZES OF ELEMENTS DO NOT INCLUDE THICKNESS OF APPLIED FINISHES.
- C5 CONSTRUCTION JOINTS WHERE NOT SHOWN SHALL BE TO THE APPROVAL OF THE ENGINEER.
- C6 BEAM DEPTHS ARE WRITTEN FIRST AND INCLUDE SLAB THICKNESS, IF ANY, UNO.
- C7 NO HOLES OR CHASES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE IN CONCRETE ELEMENTS WITHOUT PRIOR APPROVAL OF THE ENGINEER.
- C8 REINFORCEMENT IS REPRESENTED DIAGRAMATICALLY. IT IS NOT NECESSARILY SHOWN IN TRUE PROJECTION.
- C9 SPLICES IN REINFORCEMENT MADE IN POSITIONS OTHER THAN SHOWN, SHALL BE TO THE APPROVAL OF THE ENGINEER, WHERE THE LAP LENGTH IS NOT SHOWN IT SHALL BE SUFFICIENT TO DEVELOP THE FULL STRENGTH OF THE REINFORCEMENT.
- C10 WELDING OF REINFORCEMENT SHALL NOT BE PERMITTED UNLESS SHOWN ON THE STRUCTURAL DRAWINGS.
- C11 PIPES OR CONDUITS SHALL NOT BE PLACED WITHIN THE CONCRETE COVER TO REINFORCEMENT WITHOUT THE APPROVAL OF THE ENGINEER.
- C12 ALL REINFORCING BARS SHALL COMPLY WITH AS 1302. ALL FABRIC SHALL COMPLY WITH AS 1303 AND AS 1304 AND SHALL BE SUPPLIED IN FLAT SHEETS.
- C13 REINFORCING SYMBOLS
- | | |
|--------------|--------------------------|
| S GRADE 2305 | DEFORMED BAR |
| C GRADE 410C | COLD WORKED DEFORMED BAR |
| Y GRADE 410R | DEFORMED BAR |
| R GRADE 230R | PLAIN BAR |
| F GRADE 450 | WELDED WIRE FABRIC |
| N GRADE 500 | DEFORMED BAR |
- THE NUMBER IMMEDIATELY FOLLOWING THESE SYMBOLS IS THE BAR DIAMETER IN MILLIMETRES
- C14 FABRIC REINFORCEMENT TO BE LAPPED 300 MINIMUM AT ENDS AND SIDES UNO. LAPS IN POSITION OF MAXIMUM MOMENT ARE NOT PERMITTED.
- C15 ALL REINFORCEMENT SHALL BE FULLY SUPPORTED ON INSULATED STEEL, PLASTIC OR CONCRETE CHAIRS SPACED AT 900 AND 750 CENTRES BOTH WAYS UNDER ROD AND FABRIC REINFORCEMENT RESPECTIVELY. RODS SHALL BE TIED AT ALTERNATE INTERSECTIONS.
- C16 MINIMUM STRIPPING TIMES FOR FORMWORK SHALL BE AS RECOMMENDED IN AS 1509 OR AS DIRECTED BY ENGINEER.

CIVIL & STRUCTURAL ENGINEERING
DESIGN SERVICES PTY. LTD.

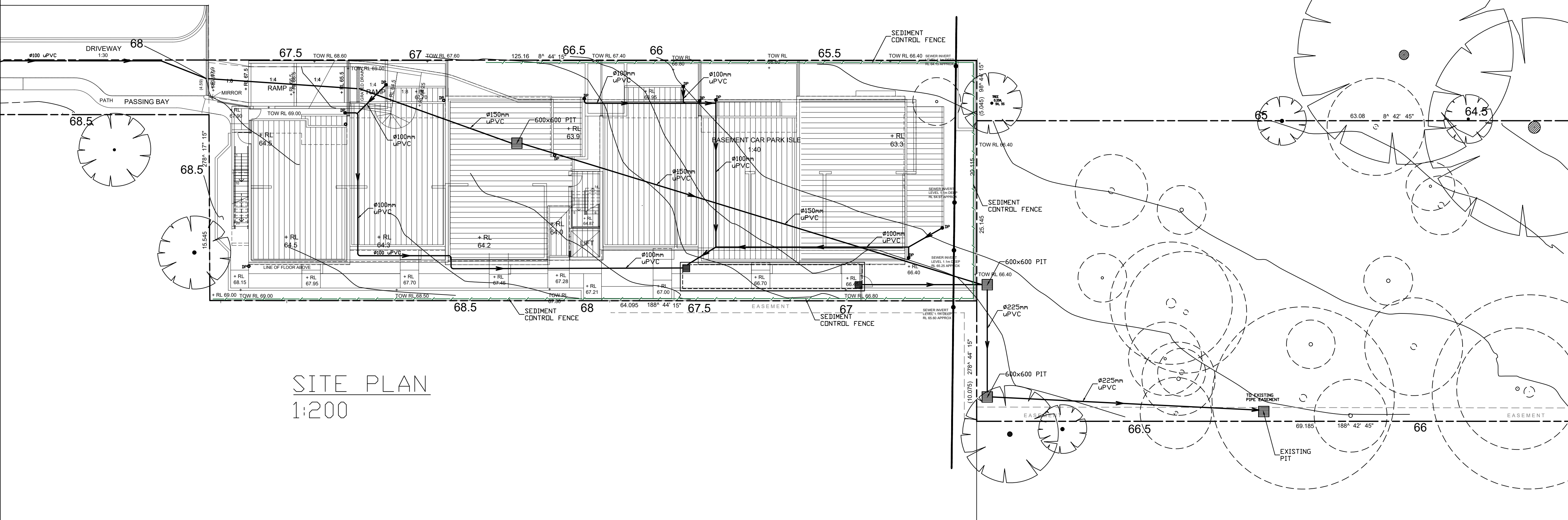
CONSULTING STRUCTURAL, CIVIL, GEOTECHNICAL & ENVIRONMENTAL ENGINEERS
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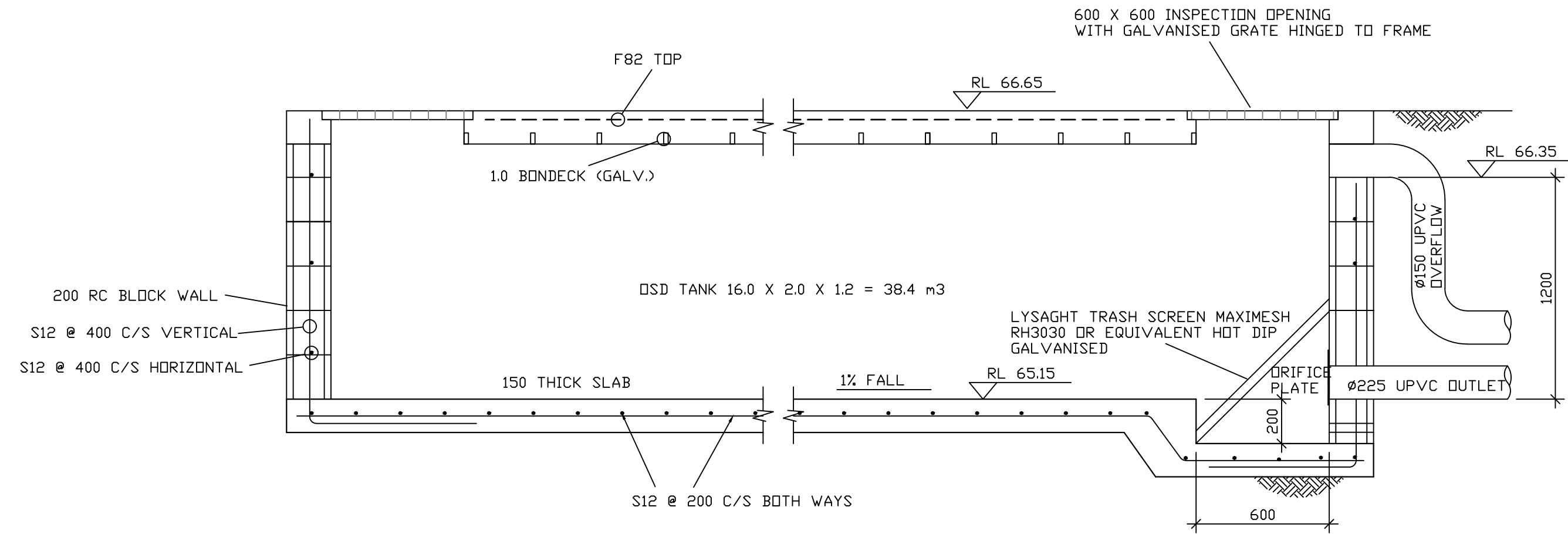
CLIENT: WHEELER HEIGHTS DEVELOPMENTS PTY LTD
PROJECT: STORMWATER MANAGEMENT PLAN FOR
RESIDENTIAL DEVELOPMENT AT 44 ROSE AVENUE
WHEELER HEIGHTS, NSW

Drawn By: SD	Scale: AS SHOWN
Checked By: E. A. BENNETT M.I.E. Aust.	Drawing No: W-11-266888-1
Date: 30/01/2019	Amendment: -

Registered Professional Engineer 198230
Mr Edward A. Bennett
MIEAust CPEng

Signature: *Edward A. Bennett* Date: 30 / 01 / 2019
Register on the NPER in the Category of
Civil/Environmental/Structural/Geotechnical
National Professional Engineers Register

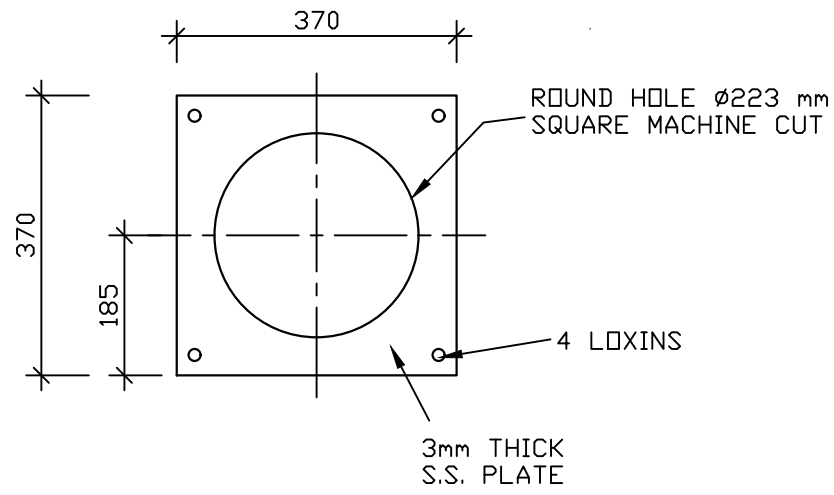
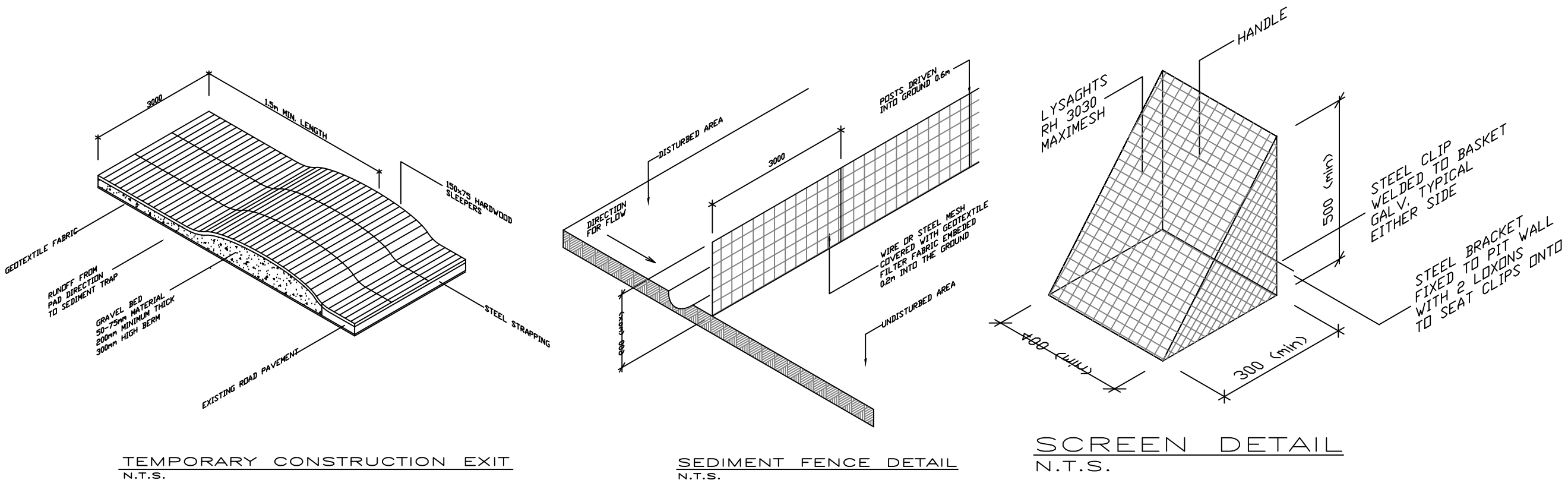




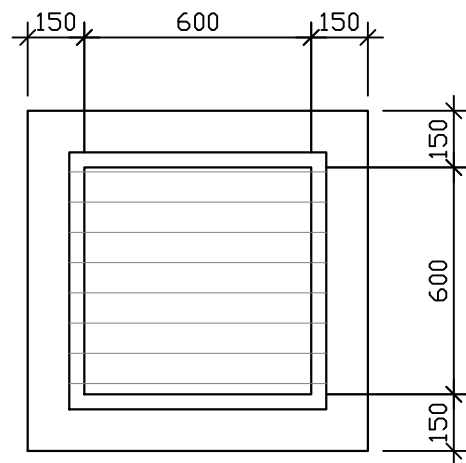
SITE PARAMETERS	
SITE AREA	1567 m ²
EXISTING IMPERVIOUS AREA	395 m ²
NEW IMPERVIOUS AREA	1020 m ²
ZONE	1
SLOPE	4
REQUIRED VOLUME	38.4 m ³
PROVIDED VOLUME	38.4 m ³
ORIFICE DIAMETER	168
5 YEAR PRE-DEV FLOW RATE	58 L/S
100 YEAR POST-DEV FLOW RATE	58 L/S

NOTE:
SITE PARAMETERS HAVE BEEN
DETERMINED FROM "DRAINS"
PROGRAM
COPY OF REPORT WILL BE
PROVIDED ON SEPARATE CD.

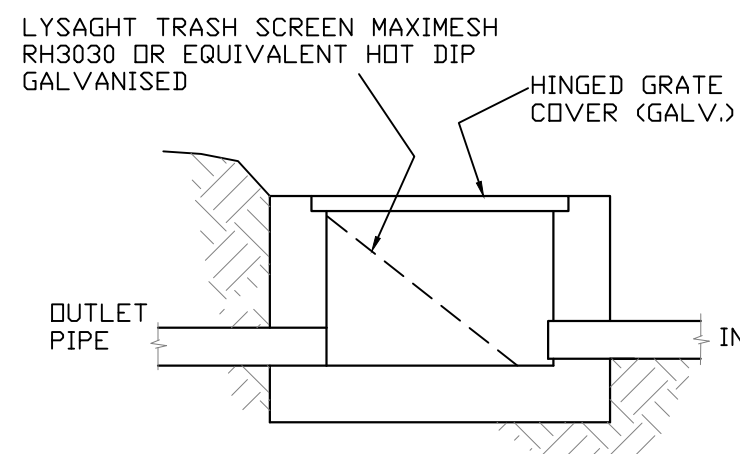
ON-SITE DETENTION TANK 1:20



ORIFICE PLATE 1:10

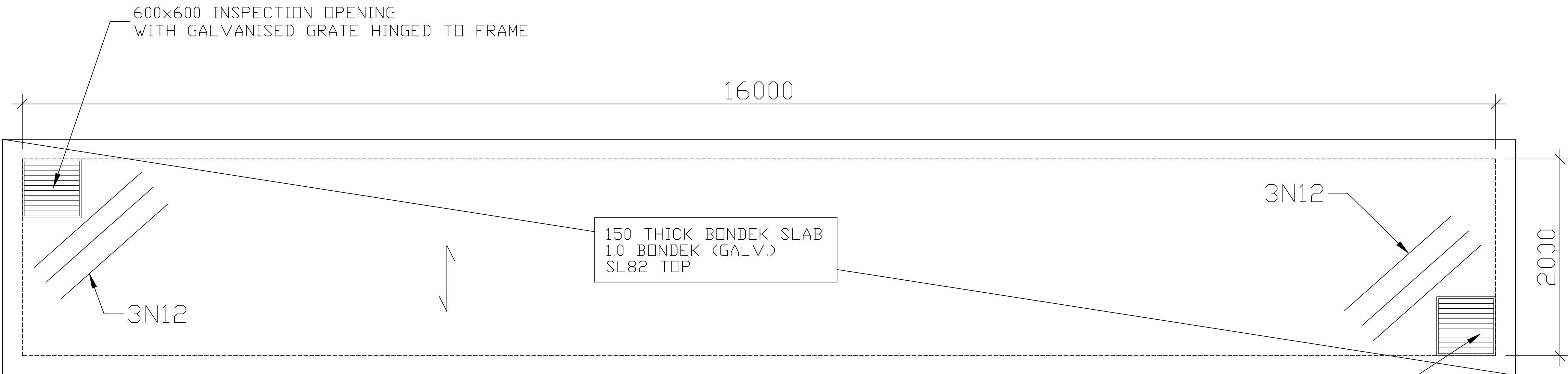


PLAN



SECTION

TYPICAL TRANSITION PIT DETAIL 1:20



PLAN OF ON-SITE DETENTION TANK 1:50

600x600 INSPECTION OPENING
WITH GALVANISED GRATE HINGED TO FRAME

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- ### SUB-GRADE
- S.G.1 UNDER ALL SLABS ON GRADE, WHETHER ON CUT OR FILL, REMOVE SOFT SPOTS AND REFILL BY COMPACTING CUT SURFACES OR FILL SURFACES IN LAYERS NOT EXCEEDING 200 mm TO 95% DRY DENSITY, ENSURING MINIMUM SETTLEMENT TO SLABS.
- ### CONCRETE WORK
- C.1 ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 3600.
- C.2 CONCRETE QUALITY SHALL BE AS TABULATED AND SHALL BE VERIFIED BY TESTS.
- | ELEMENT | SLUMP | MAX. SIZE AGG. | CEMENT TYPE | ADDMIXTURE | MPa CONCRETE GRADE |
|---------|-------|----------------|-------------|------------|--------------------|
| ALL | 80 | 20 | A | NIL | 32 |
- C.3 CLEAR CONCRETE COVERS TO REINFORCEMENT SHALL BE AS FOLLOWS UNLESS OTHERWISE SHOWN.
- | ELEMENT | CAST IN FORMS COMPLYING WITH AS 1509 | | |
|--|--|--|--|
| | CONDITION 1
NOT TO BE EXPOSED
TO WEATHER
GROUND WATER OR
FRESH WATER | CONDITION 2
TO BE EXPOSED
TO WEATHER
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CAST AGAINST
OTHER FORMWORK
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& PILE CAPS | - | 65 | 75 |
| STRIP FOOTINGS | - | 50 | 65 |
| SORE OR CAST PIERS | - | 50 | 75 |
| COLUMNS | 40 | 50 | 75 |
| WALLS, INCLUDING
RETAINING WALLS | 20 | 30 | 65 |
| BEAMS | 25 | 40 | 65 |
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| F <td>GRADE 450<td>WELDED WIRE FABRIC</td></td> | GRADE 450 <td>WELDED WIRE FABRIC</td> | WELDED WIRE FABRIC |
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