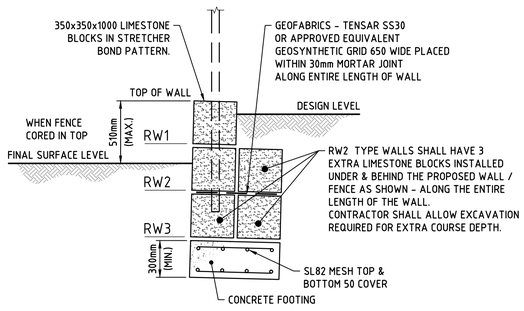
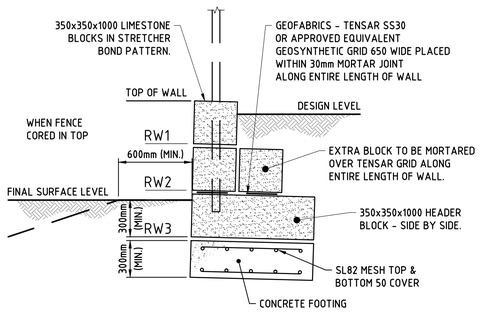
ANNEXURE D - ATTACHMENT 1



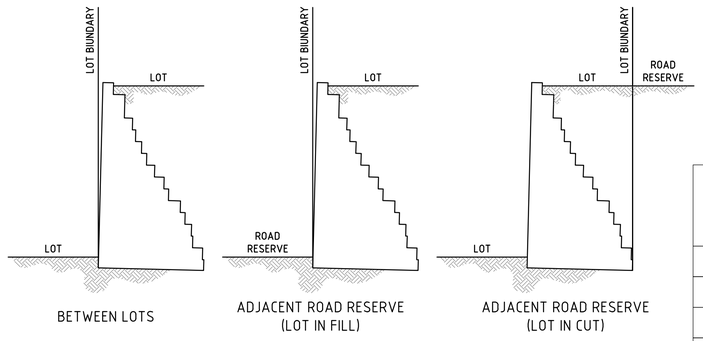
TYPE 1 RETAINING WALL
1 COURSE EXPOSED HIGH WALL
FOR CORED FENCING

3 COURSE REQUIREMENT FOR FENCE POST CORED.
SCALE 1 : 25



TYPE 2 RETAINING WALL
2 COURSE EXPOSED HIGH WALL
FOR CORED FENCING

SCALE 1 : 25



LOCATION OF LOT BOUNDARY

NOT TO SCALE

THE CONTRACTOR SHALL INSTALL THE NUMBER OF BLOCK WIDTHS FOR EACH COURSE AS SHOWN ON THESE DETAILS TO SUIT RW? TYPE REQUIRED.

RETAINING WALL REFERENCE TABLE (mm)

TOTAL DEPTH TO U/S FOOTING	RET.WALL No. OF COURSES	MIN WIDTH (mm)	TOTAL HEADER LENGTH (mm)
'H'	RW?	'W'	'Lh'
350	RW1	350	-
730	RW2	730	-
1110	RW3	1000	1000
1490	RW4	1110	1000
1870	RW5	1380	1530
2250	RW6	1490	1530
2630	RW7	1760	2030
3010	RW8	2140	2030
3390	RW9	2410	2560
3770	RW10	2630	2560

GENERAL NOTES

1. DO NOT SCALE FROM DRAWINGS.
2. CHECK DRAWING AND SITE DIMENSIONS BEFORE COMMENCING WORK. REPORT DISCREPANCIES TO THE ENGINEER AND OBTAIN A DIRECTION.
3. SPECIFICATIONS OR INSTRUCTIONS ON DRAWINGS TAKE PRECEDENCE OVER THESE NOTES.
4. ENSURE THE WALL DOES NOT SURCHARGE OR UNDERMINE ANY ADJACENT RETAINING WALLS OR STRUCTURES EITHER ON THIS OR ADJOINING PROPERTIES.
5. WALLS HAVE BEEN DESIGNED FOR SURCHARGE LOADS AS SHOWN. APPROVAL FROM AN INDEPENDENT PRACTICING STRUCTURAL ENGINEER MUST BE OBTAINED BEFORE ANY ALTERATIONS OR ADDITIONS ARE MADE TO THE WALL (INCLUDING FENCES INTERTED INTO TOP OF WALL) OR ANY CHANGES TO GROUND LEVELS IN THE VICINITY OF THE WALL.
6. WALLS HAVE BEEN DESIGNED FOR STABLE (CLASS 'A' OR 'S' TO AS2870) FOUNDATION CONDITIONS. FOR SAND BACKFILL (MAX. 5% FINES SMALLER THAN 75 MICRONS) AND FOR A WATER TABLE WHICH WILL NOT RISE ABOVE A LEVEL 600mm BELOW THE BASE OF THE WALL. THE ENGINEER MUST BE CONSULTED PRIOR TO COMMENCING CONSTRUCTION IF ANY OF THESE CONDITIONS CAN NOT BE SATISFIED.

PREPARATION

1. REMOVE UNSUITABLE SILT, CLAY, ORGANIC AND DELETERIOUS MATERIALS FROM AREAS TO BE EXCAVATED OR OCCUPIED BY STRUCTURES, PAVEMENTS, EMBANKMENTS AND THE LIKE.
2. COMPACT SOIL BASE UNDER RETAINING WALL TO AT LEAST 95% MODIFIED MAXIMUM DRY DENSITY TO A MINIMUM DEPTH OF 750mm. CONTRACTOR SHALL PROVIDE INDEPENDENT COMPACTION TEST RESULTS BY A NATA REGISTERED TESTING AUTHORITY.

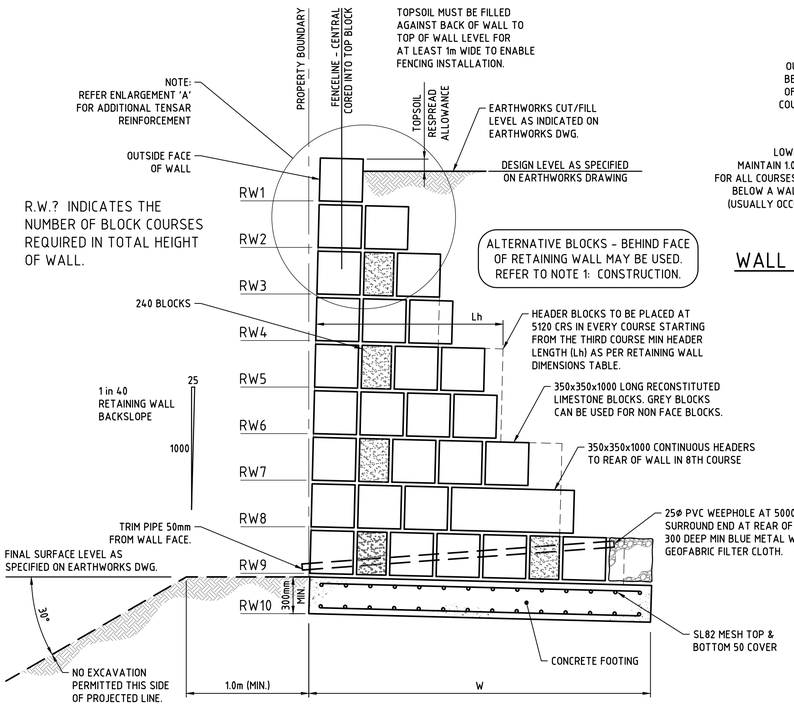
LIMESTONE WALL CONSTRUCTION

1. WALLS SHALL BE CONSTRUCTED USING BLOCKS OF RECONSTITUTED LIMESTONE. RUBBLE SHALL NOT BE USED TO FILL VOIDS UNLESS OTHERWISE NOTED. ALL BLOCKS LAID STRETCHER BOND.
2. WALLS SHALL BE CONSTRUCTED OF COURSED LIMESTONE.
3. ALL JOINTS TO BE MORTARED WITH 1 : 1 : 6 (CEMENT:LIME:SAND) 30mm THICK MORTAR U.O.N. - RUBBLE NOT TO BE USED TO FILL VOIDS. FACE OF MORTAR MIX SHALL MATCH LIMESTONE. REFER JOINT DETAIL. MORTAR THICKNESS SPECIFIED ON LAYOUT. WHEN WALL IS WITHIN 1KM OF A COAST 2:1:9 POINTING MORTAR IS REQUIRED.
4. BLOCK MATERIAL SHALL HAVE A DRY DENSITY OF AT LEAST 1800kg/m³ AND A CRUSHING STRENGTH OF AT LEAST 5MPa.
5. THE CONTRACTOR SHALL INCLUDE CONTROL JOINTS WITHIN THE RETAINING WALL AT A MAXIMUM SPACING OF 20m ALONG ANY STRAIGHT RUN.
   WHERE THE WALL CHANGES DIRECTION, A CONTROL JOINT SHALL BE INSTALLED AT A DISTANCE 'W' AS PER RETAINING WALL REFERENCE TABLE ALONG ONE OF THE WALL FACES. CONTROL JOINTS SHALL BE 15mm WIDE AND FILLED WITH Ø25 FOAM BACKING ROD COVERED WITH A 25mm DEEP MASTIC WITH COLOUR TO MATCH WALL MORTAR 1000mm WIDE BIDIM GEOFABRIC TO REAR.
6. 3 COATS OF NON-SACRIFICIAL ANTI-GRAFFITI COATING SHALL BE APPLIED TO ANY WALLS EXPOSED TO ROAD FRONTAGE. P.O.S. OR SCHOOL. CONTRACTOR SHALL PROVIDE CERTIFICATION THAT COATING HAS BEEN APPLIED AND ISSUE CLEANING SPECIFICATION TO SUPERINTENDENT FOR LODGEMENT WITH COUNCIL PRIOR TO PRACTICAL COMPLETION.

BACKFILL

1. PROVIDE APPROVED WELL GRADED AND CLEAN FILL MATERIAL WHERE REQUIRED. PLACE FILL IN LAYERS OF 300mm MAXIMUM, ADJUSTING MOISTURE CONTENT IF NECESSARY PRIOR TO COMPACTION.
2. NO BACKFILL TO BE PLACED UNTIL WALL HAS BEEN CONSTRUCTED FOR A MINIMUM OF 7 DAYS. COMPACT SELECT GRANULAR SAND BACKFILL BEHIND WALLS IN 300mm MAXIMUM LAYERS ENSURING NO TILT. BACKFILLING SHALL BE CARRIED OUT IN LAYERS OF NOT MORE THAN 300mm AND COMPACTION SHALL BE TESTED AT NO GREATER THAN 900mm FILL INCREMENTS. COMPACTION OF BACKFILL MATERIAL SHALL BE NOT LESS THAN 95% MMDD. CONTRACTOR SHALL PROVIDE INDEPENDENT COMPACTION TEST RESULTS FOR VARIOUS STAGES OF CONSTRUCTION AND BACKFILLING BY A NATA, REGISTERED TESTING AUTHORITY.
3. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO USE APPROPRIATE COMPACTING MACHINERY TO COMPACT THE BACKFILL MATERIAL BEHIND THE WALL.

W.A.P.C. No 152962

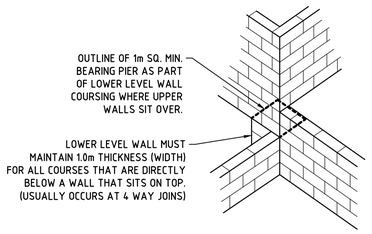


PROPERTY BOUNDARY AT OUTSIDE FACE OF BASE BLOCK.

TYPE 3 RETAINING WALL
THIS DETAIL APPLICABLE TO
4 COURSES OR MORE IN TOTAL HEIGHT. R.W.4. UPWARDS

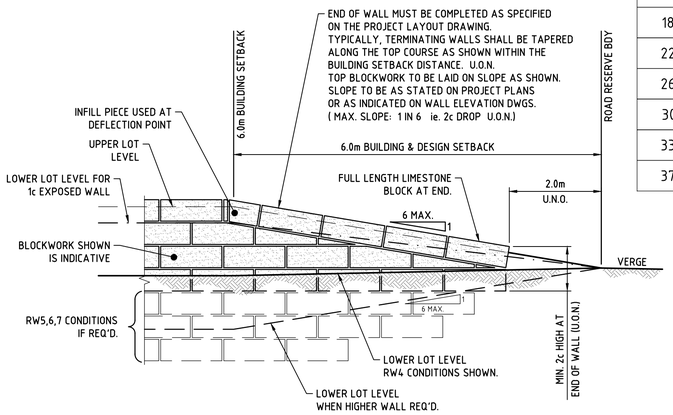
SCALE 1 : 25

THE RETAINING WALL MUST BE ENTIRELY LOCATED WITHIN THE LOT TO BE RETAINED



WALL THICKENING @ INTERSECTION

PERSPECTIVE VIEW. N.T.S.

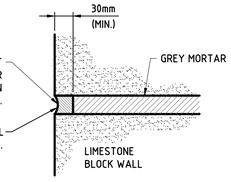


TYP. RETAINING WALL ENDING AT VERGE DETAIL

APPLICABLE WHERE INDICATED ON PLAN

SCALE 1:50

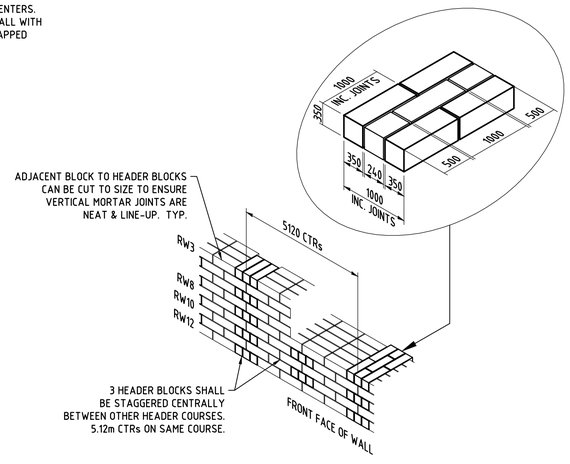
THE CONTRACTOR SHALL PROVIDE WRITTEN CERTIFICATION FROM A CERTIFIED PRACTICING STRUCTURAL ENGINEER ON COMPLETION OF THE WORKS, THAT THE WALLS HAVE BEEN CONSTRUCTED AND BACKFILLED IN ACCORDANCE WITH THE NOTES AND DETAILS ON THIS DRAWING.



BLOCK WALL MORTAR JOINT DETAIL

TYPICAL MORTAR DETAIL - FINAL JOINT FINISH TO BE AS SPECIFIED ON PROJECT PLANS

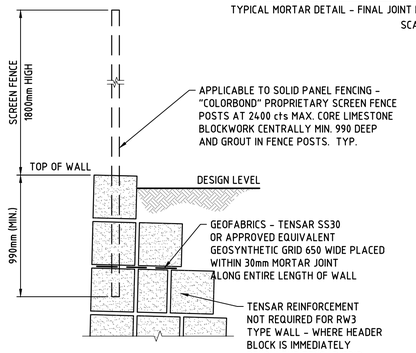
SCALE N.T.S



TYPICAL HEADER BLOCK VIEW DETAIL

APPLICABLE TO RW4 AND HIGHER WALLS.

N.T.S.



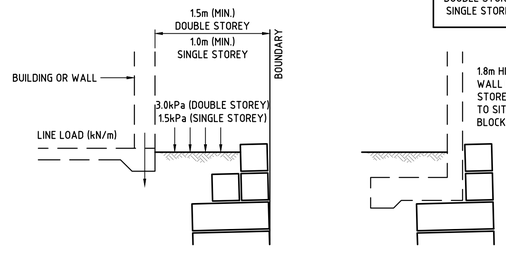
ENLARGEMENT 'A' DETAIL

SCALE 1 : 25

0 0.25 0.5 0.75 1.0 1.25m — SCALE 1:25 AT ORIGINAL SIZE

0 0.5 1.0 1.5 2.0 2.5m — SCALE 1:50 AT ORIGINAL SIZE

DOUBLE STOREY HOUSE 50 kN/m
SINGLE STOREY HOUSE 20 kN/m



PROXIMITY OF STRUCTURES TO RETAINING WALLS

WALLS DESIGNED TO CARRY THE ABOVE LOADS.

IN ADDITION TO THE AVOVE LOAD VALUES THE RETAINING WALLS HAVE BEEN DESIGNED FOR THE FOLLOWING:
- 5kPa SURCHARGE PLUS WINDLOADS ON 1.8m FENCE (WIND REGION A/TC2)
- 5kPa SURCHARGE PLUS BALLUSTRADE (OCCUPANCY TYPE C3)

STRUCTURAL ENG. CERTIFICATION: PAUL TERPKOS M.I.E. AUST: 72119

REV	REVISION	DATE	APPROVED
A	ISSUED FOR APPROVAL		

CLIENT: MOVIDA ESTATE

DRAWN	J. Barram
DESIGNED	J. Barram
CHECKED	
APPROVED	
DATE	

Urban Development Institute of Australia MEMBER 2014 WESTERN AUSTRALIA DIVISION

TITLE: MOVIDA ESTATE - STAGE 1
RETAINING WALL DETAILS

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thecivilgroup

ORIGINAL SHEET SIZE	A1
SCALE	H: 1:200 V:100
LEVEL DATUM :	AHD
SHEET	1 OF 1
DRAWING No	7881-1-C707
REV	A

DO NOT SCALE