

LEGEND

- PROPOSED RETAINING WALLS
- EXISTING RETAINING WALL
- FUTURE RETAINING WALLS
- NOISE WALL - BY OTHERS
- OPEN FENCING
- FINISHED GROUND LEVELS
- RW '202'
- RETAINING WALL REFERENCE
- LOT LEVEL

- NOTES:**
- RETAINING WALLS OVER 1.0m SHALL HAVE A 1.2m HIGH RINGLOCK AND STAR IRON PICKET FENCE INSTALLED ON TOP.
 - TO BE READ IN CONJUNCTION WITH RETAINING WALL LONGSECTION, STANDARD RETAINING WALL DETAILS AND EARTHWORKS DRAWINGS.
 - ADD EXTRA BLOCKS AS INDICATED ON ELECTRICAL DRAWING

WALL SETOUT INFORMATION

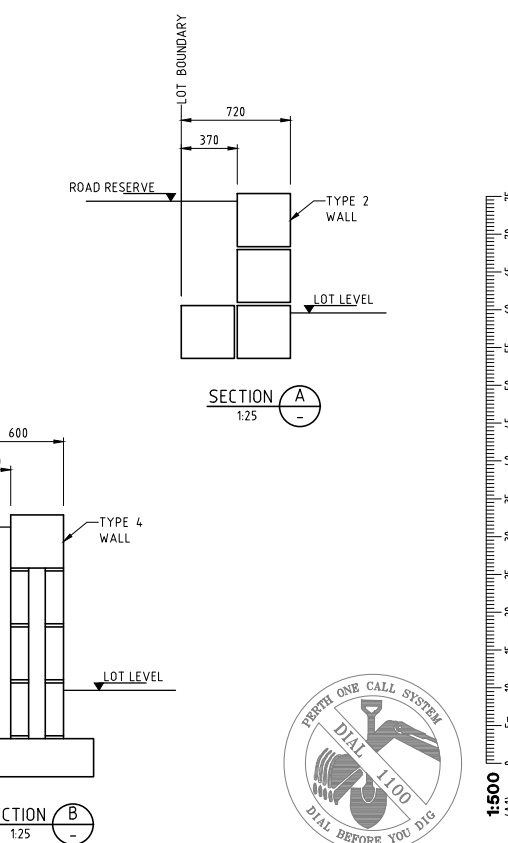
WALL No.	START VERGE RL	FRONT OF WALL RL	BACK OF WALL RL	TOP OF WALL RL	END VERGE RL	LENGTH	No. OF COURSES
203	-	28.39	28.76	28.81	28.58	28.50	2
204	-	28.76	29.13	29.18	28.95	28.50	2
205	-	29.13	29.50	29.55	29.31	28.50	2
207	-	29.50	29.87	29.92	29.70	28.50	2
216	-	26.15	26.52	26.57	25.87	28.00	2
220	-	25.78	26.52	26.57	-	20.00	3
221	-	25.78	26.15	26.20	25.71	28.00	2
223	25.35	25.41	25.78	25.83	-	28.50	2
224	25.05	25.04	25.41	25.46	-	28.50	2
225	24.64	24.67	25.04	25.09	-	28.50	2
226	24.26	24.30	24.67	24.72	-	28.50	2
227	23.89	23.93	24.30	24.35	-	28.50	2
228	23.47	23.56	23.93	23.98	-	28.50	2
232	25.76	25.48	26.59	26.64	-	28.50	4
235	-	24.74	25.11	25.16	24.62	30.26	2
236	-	24.00	24.37	24.42	23.86	26.24	2
237	24.67	24.74	25.48	25.53	-	28.50	3

REFER STANDARD WALL DETAILS FOR TYPICAL SECTION

STAIRWAY DIMENSIONS

WALL	STAIR	VERGE RL	SIDE	DIMENSIONS						
				WALL RL	LOT RL	No. RISERS	HEIGHT RISERS	No. GOINGS	LENGTH GOINGS	WALL RETURN LENGTH
201	1	29.13	LEFT	29.92	29.87	4	0.185	3	0.28	1.69
			RIGHT	29.55	29.50	2	0.185	1	0.28	1.35
	2	28.71	LEFT	29.18	29.13	3	0.140	2	0.21	1.35
			RIGHT	28.81	28.76	0	0	0	-	1.35
	3	27.83	LEFT	28.81	28.76	5	0.186	4	0.28	1.97
			RIGHT	28.44	28.39	3	0.187	2	0.28	1.41
	4	26.78	LEFT	28.44	28.39	9	0.179	8	0.27	3.01
			RIGHT	28.44	28.39	9	0.179	8	0.27	3.01

NOTE: STAIRS (EX.1000x350x250 LIMESTONE BLOCKS)



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No.	DATE	BY	REVISION
A	26/05/20	PMS	INITIAL ISSUE

CLIENT:

DEPARTMENT OF HOUSING

DEVELOPMENT ENGINEERING CONSULTANTS

SUITE 3, 123A COLIN ST. WEST PERTH, 6005 WESTERN AUSTRALIA
Ph: (08) 9481 1900 Fax: (08) 9481 1700

PROJECT:

LOT 1 YANCHEP BEACH ROAD YANCHEP JINDOWIE - STAGE 19A

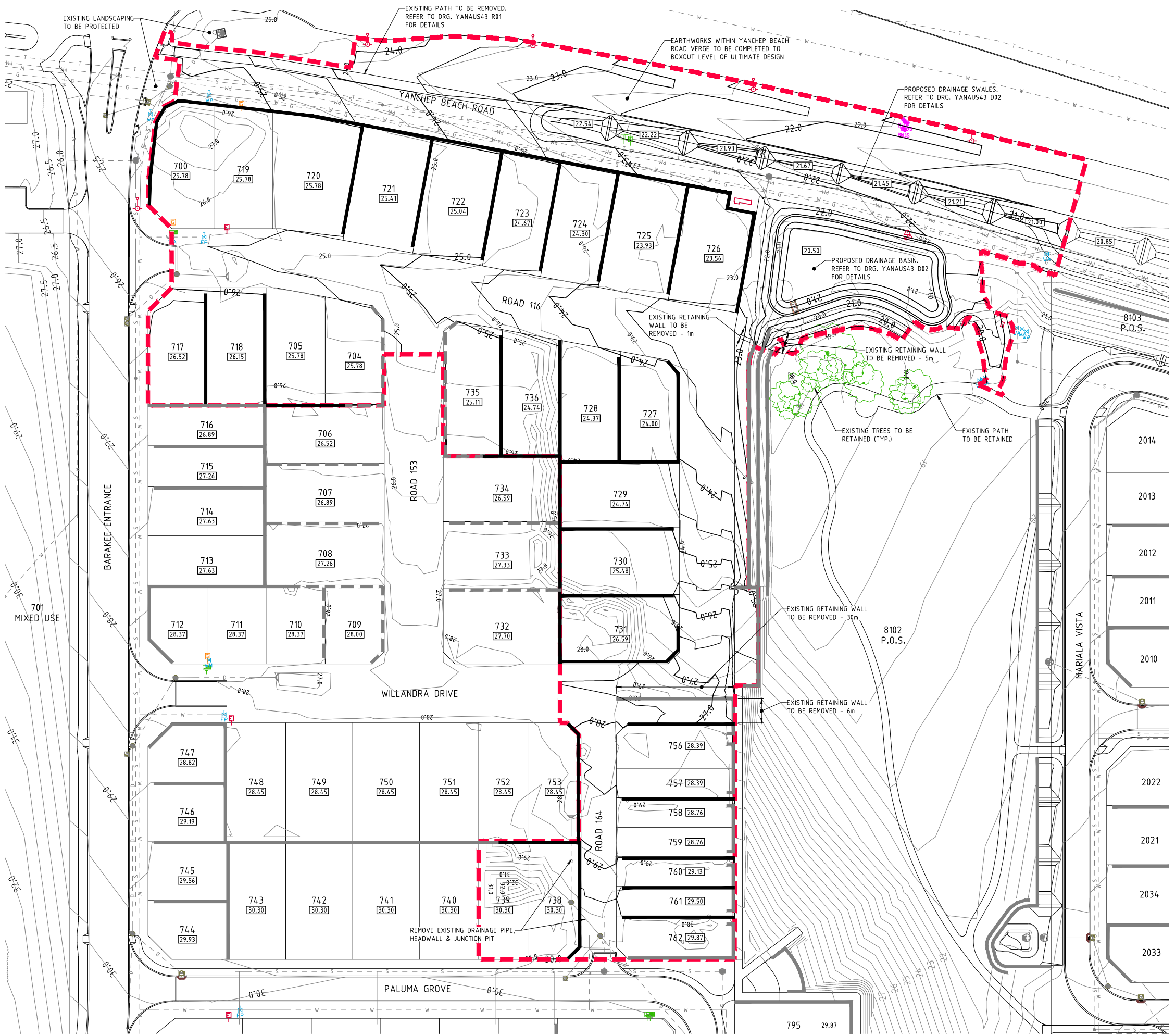
W.A.P.C. No. - 157404 (MODIFIED)

DRAWING:

EARTHWORKS RETAINING WALL LAYOUT PLAN

CAD DRAWING DO NOT MANUALLY ALTER

SCALE	DRAWN	CHECK	REV No.
1:500	PMS	RDG	A
DATE	DESIGNED	APPROVED	
MAY '20	PMS	RDG	
PROJECT NUMBER		DRAWING NUMBER	
YANAUS43 E02			



LEGEND

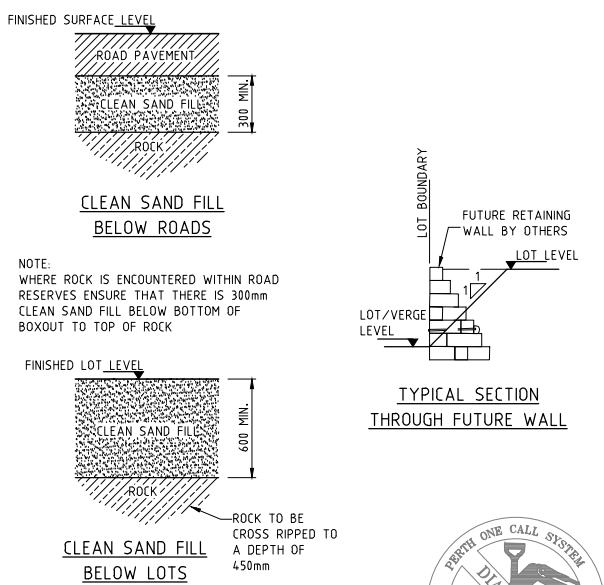
	EARTHWORKS BOUNDARY
	FINISHED SURFACE CONTOUR (0.5m INTERVAL)
	EXISTING SURFACE CONTOUR (0.5m INTERVAL)
	PROPOSED RETAINING WALL
	FUTURE RETAINING WALL
	EXISTING RETAINING WALL
	PROPOSED LOT LEVEL (FLAT LOT)
	PROPOSED AVERAGE LOT LEVEL (SLOPING LOT)

- EARTHWORKS NOTES:**
- GENERAL**
 - LEVELS ARE REDUCED FROM A.H.D
 - THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE SPECIFICATION
 - DESIGN LEVELS SHOWN ON THIS DRAWING ARE THE FINISHED SURFACE LEVELS INCLUDING 100mm TOPSOIL
 - WORKS ARE TO BE COMPLETED WITHIN THE DESIGNATED BOUNDARY ONLY AND BATTERED TO E.S.L. REFER SECTION A
 - TOPSOIL**
 - THE CONTRACTOR SHALL RETAIN ALL TREES WHERE POSSIBLE OR AS DIRECTED BY THE SUPERINTENDENT. CLEAR VEGETATION FROM THE EARTHWORKS AREA AND REMOVE TOPSOIL (100mm MIN.) TO A STOCKPILE
 - FOLLOWING THE COMPLETION OF EARTHWORKS THE CONTRACTOR SHALL RESPREAD TOPSOIL OVER THE WORKS AREA
 - EXCESS TOPSOIL SHALL BE REMOVED FROM SITE
 - EARTHWORKS**
 - THE CONTRACTOR SHALL LIMIT THE MOVEMENT OF EQUIPMENT AND MANPOWER TO THE MINIMUM AREA NECESSARY AND PROTECT ALL VEGETATION
 - THE CONTRACTOR SHALL CUT AND FILL THE SITE AS SPECIFIED
 - FOR DESIGN DETAILS OF EARTHWORKS WITHIN THE ROAD RESERVES REFER TO THE LONGITUDINAL AND CROSS SECTION DRAWINGS
 - THE CONTRACTOR SHALL GRADE EVENLY BETWEEN THE DESIGN CONTOURS AND SPOT LEVELS SHOWN
 - EXISTING ROAD VERGES ARE TO BE TRIMMED AT 2% FROM TOP OF KERB
 - DUST CONTROL**
 - THE CONTRACTOR SHALL ALLOW FOR DUST CONTROL MEASURES AS SPECIFIED
 - STABILISATION**
 - THE COMPLETED SURFACE SHALL BE STABILISED AS SPECIFIED

NOTE:
DELIVERY OF ALL MATERIAL AND ACCESS TO SITE COMPOUND MUST ONLY BE VIA YANCHEP BEACH ROAD & BARAKEE ENTRANCE

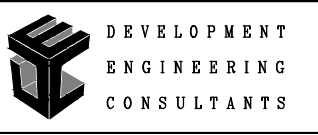
EARTHWORKS PLAN TO BE READ IN CONJUNCTION WITH ROAD PROFILE AND CROSS SECTION PLANS. CONTRACTOR TO ENSURE THAT ALL LOT LEVELS IN THIS STAGE ARE WITHIN SPECIFIED TOLERANCES

NOTE:
CONTRACTORS SITE OFFICE TO BE LOCATED WITHIN EXISTING COMPOUND AT THE INTERSECTION OF BURLEIGH BOULEVARD & BARAKEE ENTRANCE



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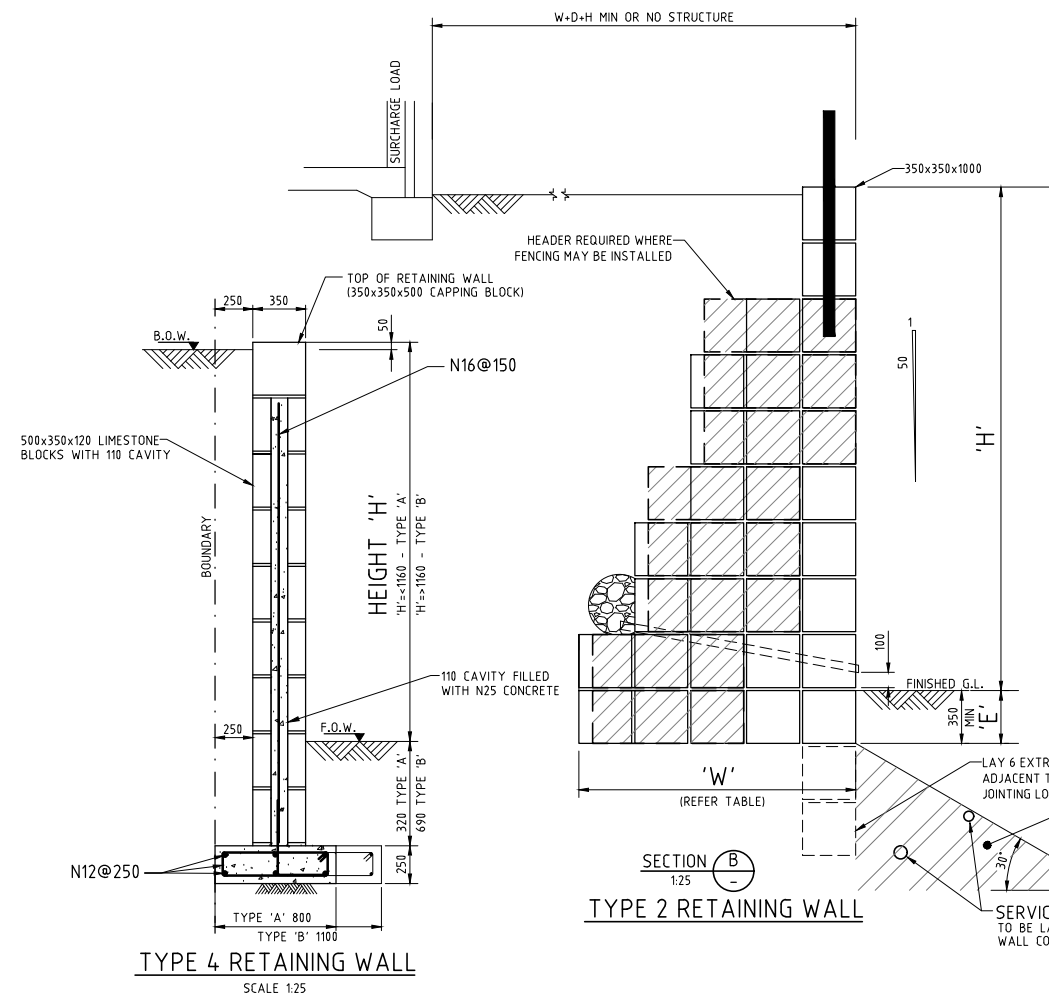
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PROJECT:
**LOT 1 YANCHEP BEACH ROAD
YANCHEP
JINDOWIE - STAGE 19A**
W.A.P.C. No. - 157404 (MODIFIED)

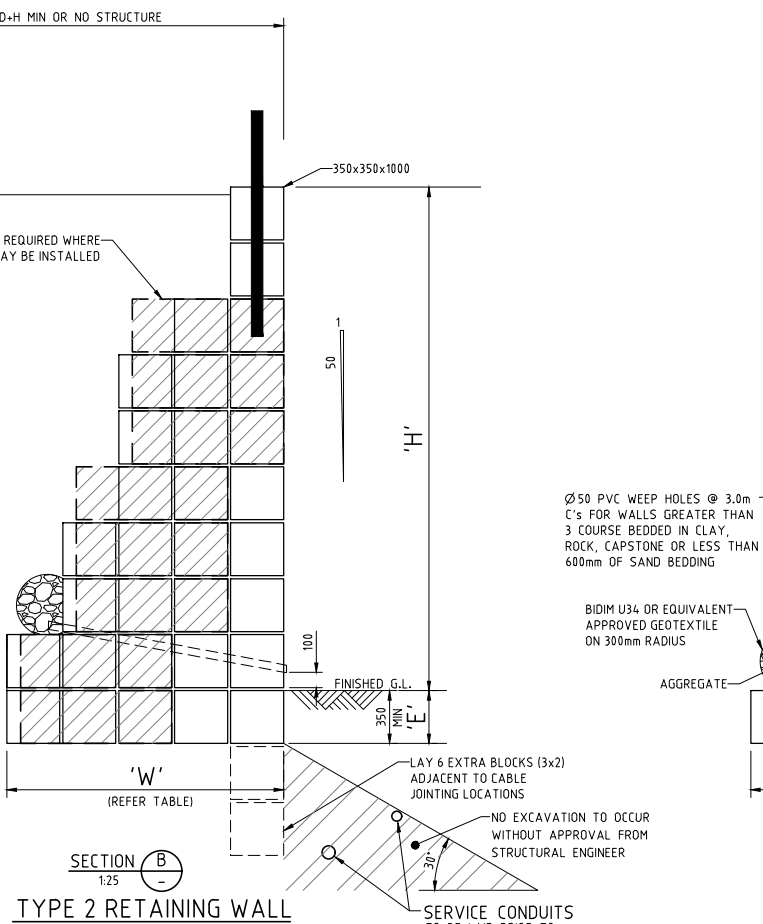
DRAWING:
**EARTHWORKS
LAYOUT PLAN**

SCALE	1:500	DRAWN	PMS	CHECK	RDG	REV No.
DATE	MAY '20	DESIGNED	PMS	APPROVED	RDG	A
PROJECT NUMBER	DRAWING NUMBER			YANAUS43 E01		

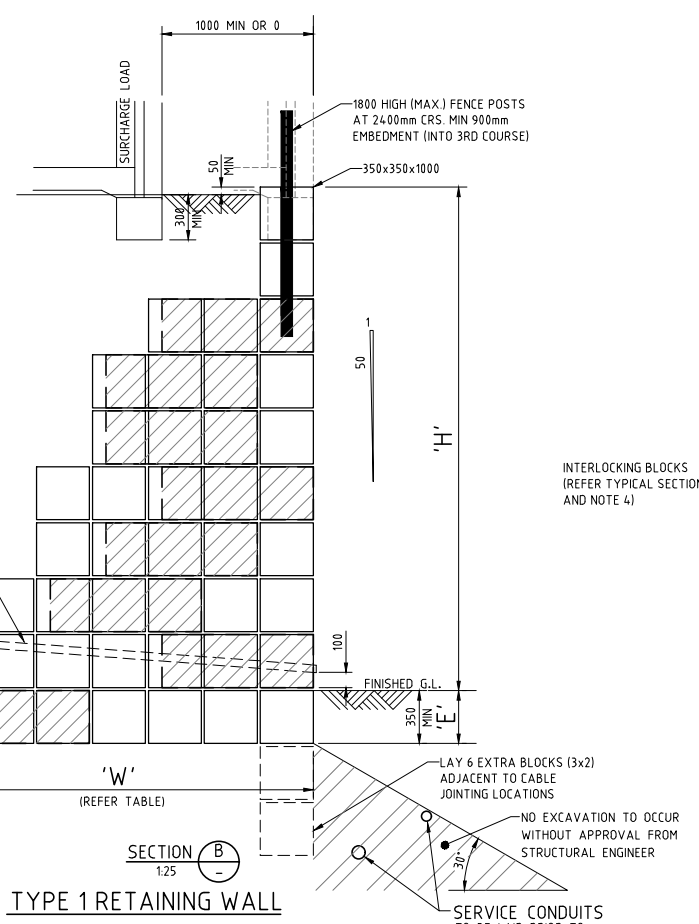
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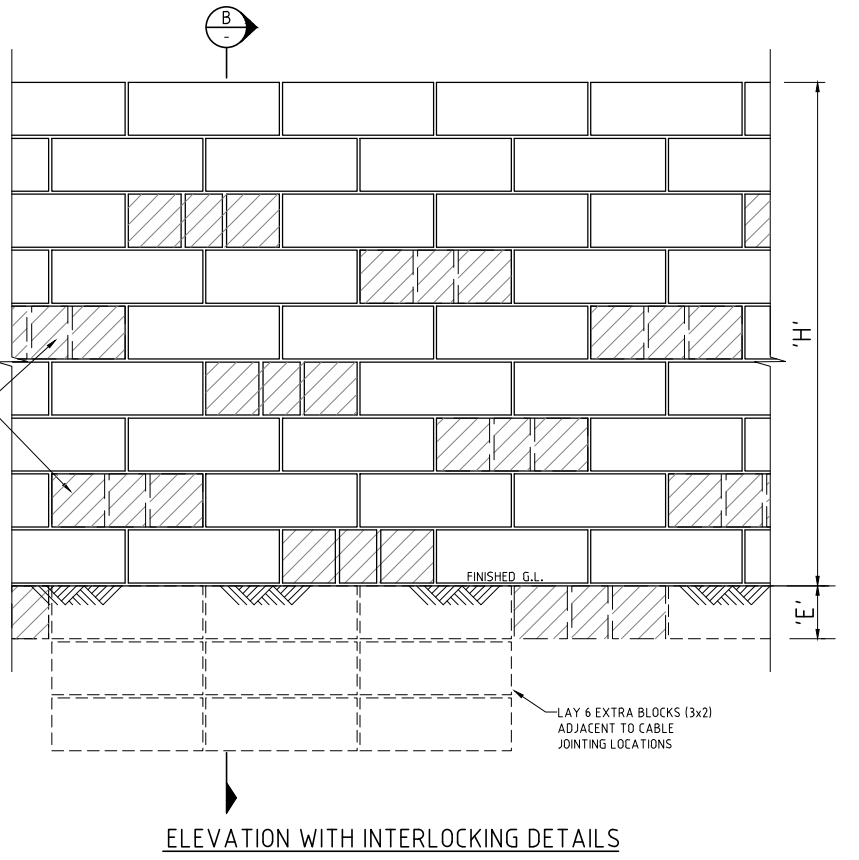
TYPE 4 RETAINING WALL
SCALE 1:25



TYPE 2 RETAINING WALL
SCALE 1:25



TYPE 1 RETAINING WALL
SCALE 1:25



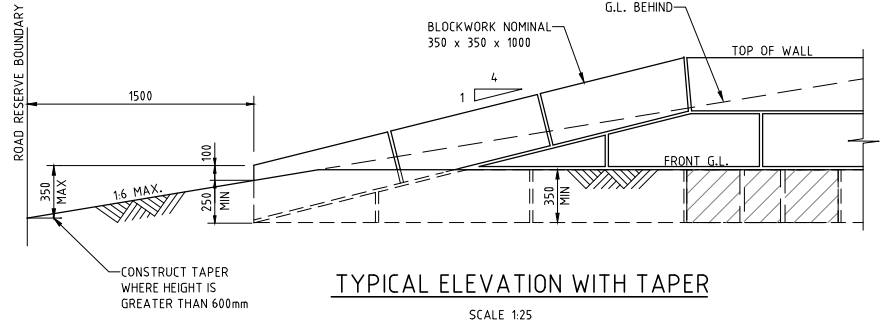
ELEVATION WITH INTERLOCKING DETAILS
(3 COURSES OR MORE)
SCALE 1:25

TYPE 1 & 2 WALL DIMENSIONS

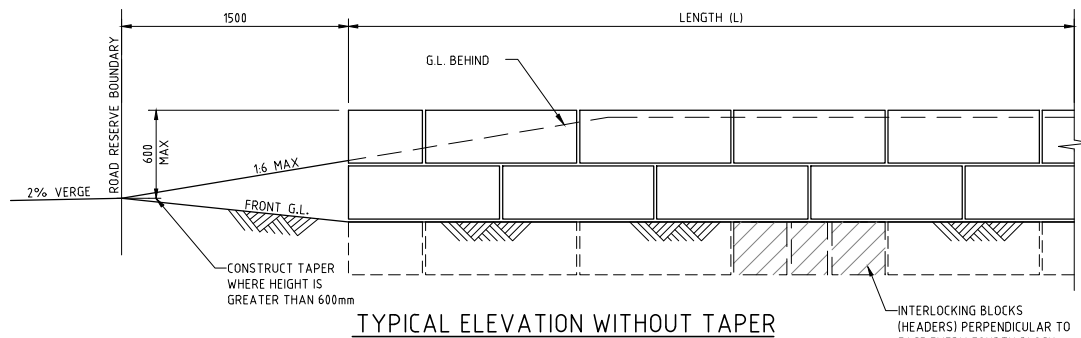
NO. OF COURSES	TOTAL HEIGHT "H" + "E"	MAX. EFFECTIVE HEIGHT "H"	MIN. BASE WIDTH "W"	
			TYPE 1	TYPE 2
2*	720	520(A)	720	350(B)
3	1090	740	1000	720
4	1460	1110	1370	1000
5	1830	1480	1740	1000
6	2200	1850	2110	1090
7	2570	2220	2480	1370
8	2940	2590	2850	1740
9	3310	2960	3220	2110
10	3680	3330	3590	2480
11	4050	3700	3960	2850
12	4420	4070	4330	3220
13	4790	4440	4700	3590
14	5160	4790	5070	3960
15	5530	5180	5440	4330
16	5900	5550	5810	4700
17	6270	5920	6180	5070
18	6640	6290	6550	5440

TYPE 1 = STRUCTURAL RETAINING WALL - STRUCTURE TO BE ON BOUNDARY OR MIN. 1.0m AWAY.

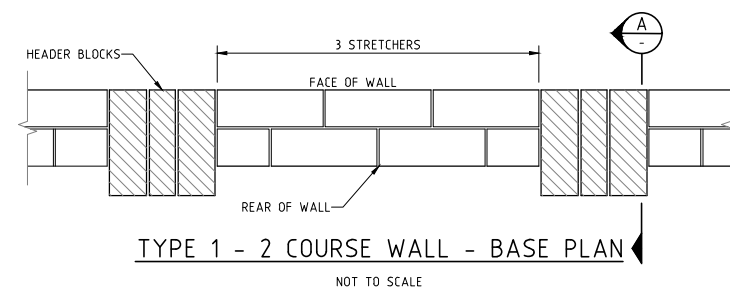
TYPE 2 = NON STRUCTURAL RETAINING WALL - NO STRUCTURE OR OFFSET MIN. OF (H + W + D)



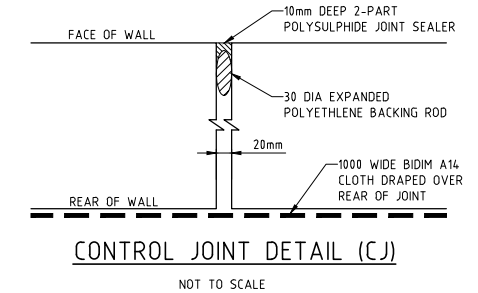
TYPICAL ELEVATION WITH TAPER
SCALE 1:25



TYPICAL ELEVATION WITHOUT TAPER
SCALE 1:25

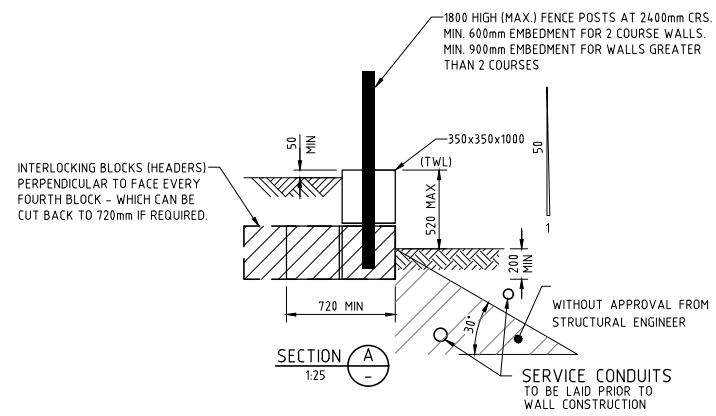


TYPE 1 - 2 COURSE WALL - BASE PLAN
NOT TO SCALE



CONTROL JOINT DETAIL (CJ)
NOT TO SCALE

***NOTE:**
(A) - ALL 2 COURSE WALLS REQUIRE ONLY 200mm MINIMUM EMBEDMENT (U.N.O.)
(B) - FOR TYPE 2 - 2 COURSE WALLS HEADER BLOCKS ARE NOT REQUIRED



SECTION A
SCALE 1:25

NOTES:

- DESIGN**
THE WALL IS DESIGNED FOR STABLE SAND (CLASS 'A1' OR SLIGHTLY REACTIVE CONDITIONS (CLASS 'S')) TO AS2870, WITH FREE DRAINING GRANULAR BACKFILL AND MIN 600mm SAND PAD BELOW BASE. FOUNDATION TO BE FREE OF DELETERIOUS MATERIAL. MAXIMUM WATER TABLE TO BE BELOW BOTTOM OF WALL. IF OTHER CONDITIONS ARE ENCOUNTERED ON SITE, CONTACT THE ENGINEER PRIOR TO CONSTRUCTION.
- WALL TYPE 1**
DEAD LOADS (INCLUDING BUILDINGS) PLACED BEHIND WALLS SHOULD BE NO CLOSER THAN 1.0m UNLESS LOCATED DIRECTLY ON TOP. MAXIMUM SURCHARGE LOAD TO BE 40kN/m WHICH ALLOWS FOR A TWO STOREY BUILDING.
- WALL TYPE 2**
ENSURE DEAD LOAD (INCLUDING BUILDINGS) PLACED BEHIND WALLS IS NO CLOSER TO THE WALL THAN A DISTANCE EQUAL TO H+E+W. MAXIMUM SURCHARGE LOAD TO BE 2.5kPa WHICH INCLUDES LIGHT VEHICLE SURCHARGE.
- COMPACTION**
COMPACT THE SOIL AT THE BASE TO 100kPa ALLOWABLE BEARING CAPACITY OR 95% MODIFIED MAXIMUM DRY DENSITY FOR A MINIMUM DEPTH OF 600mm BELOW BASE OF WALL.
- LIMESTONE**
LIMESTONE TO BE RECONSTITUTED BLOCKS (MINIMUM DENSITY OF 1800kg/m AND MINIMUM COMPRESSIVE STRENGTH OF 2MPa). FULL BLOCKS TO BE 350x350x1000, HALF BLOCKS TO BE 165x350x1000. ALTERNATIVELY 240x350x100 BLOCKS CAN BE USED TO MEET MINIMUM WALL DIMENSIONS. BLOCKS ARE TO BE LAID IN STRETCHER BOND. LIMESTONE TO BE FREE FROM SOFT POCKETS AND GENERALLY FREE FROM SURFACE DEFECTS.
- INTERLOCKING BLOCKS**
FOR WALL TYPE 1 AND/OR WHEN FENCE POSTS ARE TO BE CORE DRILLED INTO WALL, PROVIDE INTERLOCKING BLOCKS (HEADERS) AT 4m CENTRES. LOCATE AT 3c AND EACH COURSE THEREAFTER WITH INTERLOCKING SETS TO BE STAGGERED WITH ADJACENT COURSE.
- JOINTS**
ALL JOINTS ARE TO BE MORTARED WITH 1:1.6 (CEMENT:LIME:SAND). MORTAR TO BE M3 CLASSIFICATION, EXCEPT PROJECTS LOCATED WITHIN 1km OF THE OCEAN ARE TO BE M4 CLASSIFICATION. CEMENTS OTHER THAN TYPE GP PORTLAND CEMENT & 100% WHITE PORTLAND CEMENT SHALL NOT BE USED. RUBBLE NOT TO BE USED TO FILL VOIDS. ALL JOINTS ARE TO BE 20mm.
- BACKFILL**
DO NOT BACKFILL WALL UNTIL AT LEAST 7 DAYS AFTER COMPLETION. BACKFILL TO BE COMPACTED TO A 95% MODIFIED MAXIMUM DRY DENSITY OR EQUIVALENT.
- CONTROL JOINTS**
PROVIDE 20mm CONTROL JOINTS WHERE SHOWN ON DESIGN DRAWINGS OR OTHERWISE AT MAX 40m CENTRES IN STRAIGHT LENGTHS OF WALLS. WHERE WALL CHANGES DIRECTION, CONTROL JOINTS ARE LOCATED 1m FROM THE CORNER FOR WALLS TO 4c IN HEIGHT, 1.5m FOR WALLS BETWEEN 5c AND 8c IN HEIGHT, AND 2m FROM THE CORNER FOR WALLS 9c AND ABOVE. FILL JOINTS WITH 30DIA EXPANDED POLYETHYLENE BACKING ROD, COVERED WITH A 10mm 2-PART POLYSULPHIDE JOINT SEALER.
- LOCATION**
RETAINING WALLS TO BE LOCATED WHOLLY WITHIN THE RETAINED LOT. FOOTING BLOCKS SHALL BE LOCATED TO A MAXIMUM TOLERANCE OF 25mm WITHIN THE RETAINED LOT, AND 0mm OUTSIDE THE CADASTRAL BOUNDARY OF THE RETAINED LOT.
- COMPLETION**
THE CONTRACTOR SHALL PROVIDE WRITTEN CERTIFICATION OF PRACTICAL COMPLETION THAT THE WALL CONSTRUCTION AND BACKFILLING HAS BEEN CARRIED OUT IN ACCORDANCE WITH THIS DRAWING & SPECIFICATIONS. ALL WALLS FACING ROAD RESERVES, P.A.W.'S & P.O.S.'S ARE TO BE TREATED WITH A NON SACRIFICIAL ANTI-GRAFFITI COATING.

