

# PROPOSED LAND SUBDIVISION FOR INDUSTRIAL DEVELOPMENT 114-120 OLD PITTWATER ROAD, BROOKVALE, NSW, 2100 CIVIL DRAWINGS FOR DEVELOPMENT APPLICATION

DRAWING LIST:

DRAWING NO.	DRAWING TITLE
C010628.01-DA 100	DRAWING LIST, GENERAL NOTES & LOCALITY PLAN
C010628.01-DA 150	EXISTING SITE FEATURES & SERVICES
C010628.01-DA 200	EROSION & SEDIMENT CONTROL PLAN
C010628.01-DA 251	EROSION & SEDIMENT CONTROL DETAILS – SHEET 1
C010628.01-DA 252	EROSION & SEDIMENT CONTROL DETAILS – SHEET 2
C010628.01-DA 300	BULK EARTHWORKS PLAN
C010628.01-DA 301	CUT/FILL PLAN
C010628.01-DA 351	BULK EARTHWORKS SECTIONS – SHEET 1
C010628.01-DA 352	BULK EARTHWORKS SECTIONS – SHEET 2
C010628.01-DA 400	STORMWATER DRAINAGE PLAN
C010628.01-DA 451	STORMWATER DRAINAGE DETAILS – SHEET 1
C010628.01-DA 600	RETAINING WALL SETOUT PLAN
C010628.01-DA 651	RETAINING WALL DETAILS

GENERAL NOTES:

- THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANTS' DRAWINGS AND SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ANY DISCREPANCY SHALL BE REFERRED TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
- ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE RELEVANT AND CURRENT STANDARDS AUSTRALIA CODES AND WITH THE BY-LAWS AND ORDINANCES OF THE RELEVANT BUILDING AUTHORITIES EXCEPT WHERE VARIED BY THE PROJECT SPECIFICATION.
- ALL DIMENSIONS SHOWN SHALL BE VERIFIED BY THE BUILDER ON SITE. ENGINEER'S DRAWINGS SHALL NOT BE SCALED FOR DIMENSIONS. ENGINEER'S DRAWINGS ISSUED IN ANY ELECTRONIC FORMAT MUST NOT BE USED FOR DIMENSIONAL SETOUT. REFER TO THE ARCHITECT'S DRAWINGS FOR ALL DIMENSIONAL SETOUT INFORMATION.
- DURING CONSTRUCTION THE STRUCTURE SHALL BE MAINTAINED IN A STABLE CONDITION AND NO PART SHALL BE OVERSTRESSED. TEMPORARY BRACING SHALL BE PROVIDED BY THE BUILDER TO KEEP THE WORKS AND EXCAVATIONS STABLE AT ALL TIMES.
- UNLESS NOTED OTHERWISE ALL LEVELS ARE IN METRES AND ALL DIMENSIONS ARE IN MILLIMETRES.
- ALL WORKS SHALL BE UNDERTAKEN IN ACCORDANCE WITH ACCEPTABLE SAFETY STANDARDS & APPROPRIATE SAFETY SIGNS SHALL BE INSTALLED AT ALL TIMES DURING THE PROGRESS OF THE JOB.

ELECTRONIC INFORMATION NOTES:

- THE ISSUED DRAWINGS IN HARD COPY OR PDF FORMAT TAKE PRECEDENCE OVER ANY ELECTRONICALLY ISSUED INFORMATION, LAYOUTS OR DESIGN MODELS.
- THE CONTRACTOR'S DIRECT AMENDMENT OR MANIPULATION OF THE DATA OR INFORMATION THAT MIGHT BE CONTAINED WITHIN AN ENGINEER-SUPPLIED DIGITAL TERRAIN MODEL AND ITS SUBSEQUENT USE TO UNDERTAKE THE WORKS WILL BE SOLELY AT THE DISCRETION OF AND THE RISK OF THE CONTRACTOR.
- THE CONTRACTOR IS REQUIRED TO HIGHLIGHT ANY DISCREPANCIES BETWEEN THE DIGITAL TERRAIN MODEL AND INFORMATION PROVIDED IN THE CONTRACT AND/OR DRAWINGS AND IS REQUIRED TO SEEK CLARIFICATION FROM THE SUPERINTENDENT.
- THE ENGINEER WILL NOT BE LIABLE OR RESPONSIBLE FOR THE POSSIBLE ON-GOING NEED TO UPDATE THE DIGITAL TERRAIN MODEL, SHOULD THERE BE ANY AMENDMENTS OR CHANGES TO THE DRAWINGS OR CONTRACT INITIATED BY THE CONTRACTOR.



FOR DEVELOPMENT APPLICATION

ISSUED FOR DEVELOPMENT APPLICATION			09.10.25			B			ARCHITECT			CLIENT			PROJECT			CONSULT AUSTRALIA			Costin Roe Consulting Pty Ltd.			CRC			DRAWING TITLE		
ISSUED FOR INFORMATION			23.09.25			A			REID CAMPBELL			CENTENNIAL			PROPOSED LAND SUBDIVISION FOR INDUSTRIAL DEVELOPMENT			Level 4, 8 Windmill Street, Millers Point NSW 2000			PO Box N419 Sydney NSW 1220			CIVIL & STRUCTURAL ENGINEERS			DRAWING LIST, GENERAL NOTES & LOCALITY PLAN		
AMENDMENTS			DATE			ISSUE			AMENDMENTS			DATE			CHECKED			p: +61 2 9251 7699			e: mail@costinroe.com.au			w: costinroe.com.au			DRAWING No		
															XC			f: +61 2 9241 3731						COSTIN ROE CONSULTING			C010628.01-DA100		
															B1			w: costinroe.com.au						ENGINEERS			ISSUE		
															AS SHOWN												B		





EXISTING SERVICES NOTES:

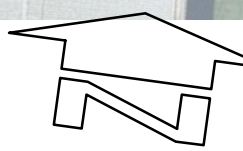
1. DURING THE EXECUTION OF WORKS, THE CONTRACTOR SHALL MAINTAIN THE INTEGRITY OF EXISTING SERVICES. THE CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED TO THE EXISTING SERVICES TO THE SATISFACTION OF THE SUPERINTENDENT AND THE RELEVANT SERVICE AUTHORITY, AT NO COST TO THE PRINCIPAL.
2. WHERE IT IS NECESSARY TO REMOVE, DIVERT OR CUT INTO ANY EXISTING SERVICE, THE CONTRACTOR SHALL GIVE AT LEAST THREE (3) DAYS NOTICE OF ITS REQUIREMENTS TO THE SUPERINTENDENT, WHO WILL ADVISE WHAT ARRANGEMENTS SHOULD BE MADE FOR THE ALTERATION OF SUCH EXISTING WORKS.
3. EXISTING SERVICES HAVE BEEN PLOTTED FROM SUPPLIED DATA. THE ACCURACY IS NOT GUARANTEED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ESTABLISH THE LOCATION AND LEVEL OF ALL EXISTING SERVICES PRIOR TO COMMENCING WORK. ALL CLEARANCES AND APPROVALS SHALL ALSO BE OBTAINED FROM THE RELEVANT SERVICE AUTHORITY PRIOR TO THE COMMENCEMENT OF WORK.
4. ALL NEW AND EXHUMED SERVICES THAT CROSS EXISTING AND FUTURE ROADS/PAVEMENTS WITHIN THE SITE SHALL BE BACKFILLED WITH DGB20 MATERIAL TO SUBGRADE LEVEL AND COMPACTED TO 98% STANDARD DENSITY RATIO. SUBJECT TO PRIOR APPROVAL FROM RELEVANT AUTHORITY.
5. ON COMPLETION OF SERVICES INSTALLATION, ALL DISTURBED AREAS SHALL BE RESTORED TO ORIGINAL, INCLUDING KERBS, FOOTPATHS, CONCRETE AREAS, GRAVEL AREAS, GRASSSED AREAS AND ROAD PAVEMENTS.
6. CARE TO BE TAKEN WHEN EXCAVATING NEAR UTILITY SERVICES. NO MECHANICAL EXCAVATION TO BE UNDERTAKEN OVER SERVICES. LIAISE WITH RELEVANT AUTHORITY.
7. THE CONTRACTOR SHALL ALLOW FOR THE CAPPING OFF, EXCAVATION AND REMOVAL IF REQUIRED OF ALL EXISTING SERVICES IN AREAS AFFECTED BY THE WORKS WITHIN THE CONTRACT AREA AS SHOWN ON THE DRAWINGS UNLESS DIRECTED OTHERWISE BY THE SUPERINTENDENT. ALL TO REGULATORY AUTHORITY STANDARDS AND APPROVAL. THE CONTRACTOR IS TO MAINTAIN EXISTING STORMWATER DRAINAGE FLOWS THROUGH THE ROADS AT ALL TIMES. MAKE DUE ALLOWANCE FOR ALL SUCH FLOWS AT ALL TIMES.
9. PRIOR TO COMMENCEMENT OF ANY WORKS THE CONTRACTOR SHALL OBTAIN THE SUPERINTENDENT'S APPROVAL OF THE PROGRAM FOR THE RELOCATION/CONSTRUCTION OF TEMPORARY SERVICES.
10. CONTRACTOR SHALL CONSTRUCT TEMPORARY SERVICES AS REQUIRED TO MAINTAIN EXISTING SUPPLY TO BUILDINGS REMAINING IN OPERATION DURING WORKS TO THE SATISFACTION AND APPROVAL OF THE SUPERINTENDENT. ONCE DIVERSION IS COMPLETE AND COMMISSIONED THE CONTRACTOR SHALL REMOVE ALL SUCH TEMPORARY SERVICES AND MAKE GOOD TO THE SATISFACTION OF THE SUPERINTENDENT.
11. INTERRUPTION TO SUPPLY OF EXISTING SERVICES SHALL BE DONE SO AS NOT TO CAUSE ANY INCONVENIENCE OR DAMAGE TO THE ADJACENT RESIDENCES. CONTRACTOR TO GAIN APPROVAL OF THE SUPERINTENDENT FOR TIME OF INTERRUPTION. THE CONTRACTOR SHALL UNDERTAKE A DIAL BEFORE YOU DIG (DBYD 1100) SERVICES SEARCH BEFORE THE COMMENCEMENT OF ANY WORKS.
- 12.

SERVICES COORDINATION NOTE:

LOCATION OF EXISTING SERVICES ARE FIGURATIVE ONLY, BASED ON 'DIAL BEFORE YOU DIG' AND SURVEY INFORMATION. THE CONTRACTOR SHALL VERIFY LOCATIONS OF ALL EXISTING SERVICES WITH THE RELEVANT AUTHORITIES BEFORE COMMENCING CONSTRUCTION. ANY COSTS ASSOCIATED WITH THE REPAIR OF DAMAGED EXISTING SERVICES SHALL BE PAID FOR BY THE CONTRACTOR. RELOCATION OF EXISTING SERVICES TO BE PERFORMED BY THE CONTRACTOR IN CONSULTATION AND IN ACCORDANCE WITH RELEVANT SERVICE PROVIDERS REQUIREMENTS AND SPECIFICATIONS.

LEGEND:

- LEVELS DATUM IS AHD.
- EXISTING SERVICES AND DETAILS BASED ON SURVEY INFORMATION PROVIDED BY LTS SURVEYORS PTY LTD REF#52517 003DT\_A DATED 08.07.25
- COMMUNICATIONS (DETECTED)
  - E0 — ELECTRICITY (DETECTED)
  - GAS (DETECTED)
  - Sx — SEWER (DETECTED)
  - STORMWATER (DETECTED)
  - SITE BOUNDARY
  - ADJOINING PROPERTY BOUNDARY
  - EASEMENT AS NOTED ON LTS SURVEYS DRAWING 52517 003DT\_A



EXISTING SITE FEATURES & SERVICES  
SCALE 1:500

FOR DEVELOPMENT APPLICATION

5m 0 10 20 30 40 50m  
SCALE 1500 AT B1 SIZE SHEET

ISSUED FOR DEVELOPMENT APPLICATION	09.10.25	B		
ISSUED FOR INFORMATION	23.09.25	A		
AMENDMENTS	DATE	ISSUE	AMENDMENTS	DATE

ARCHITECT



CLIENT



PROJECT PROPOSED LAND SUBDIVISION FOR INDUSTRIAL DEVELOPMENT 114-120 OLD PITWATER ROAD, BROOKVALE, NSW 2100					
DESIGNED TW	DRAWN JB	DATE AUG 2025	CHECKED XC	SIZE B1	SCALE AS SHOWN
CAD REF: C010628.01-DA150					



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CIVIL &  
STRUCTURAL  
ENGINEERS

DRAWING TITLE  
EXISTING SITE FEATURES & SERVICES

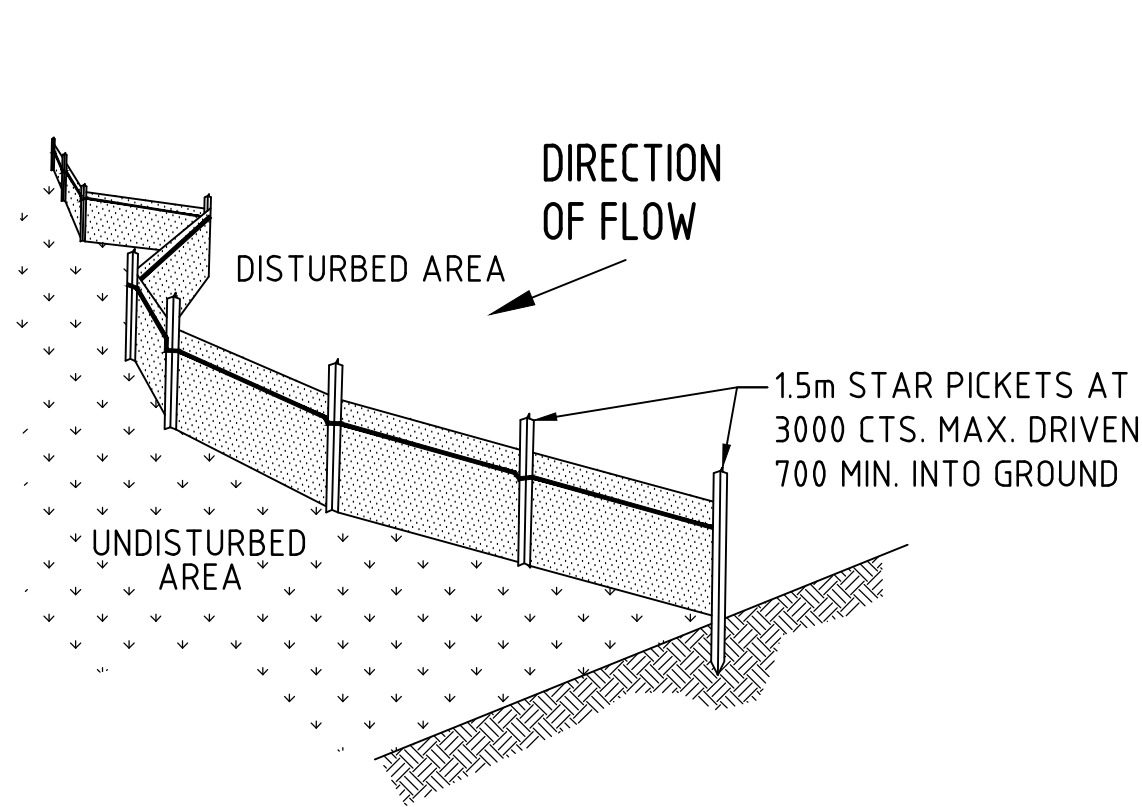
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C010628.01-DA150

ISSUE  
B





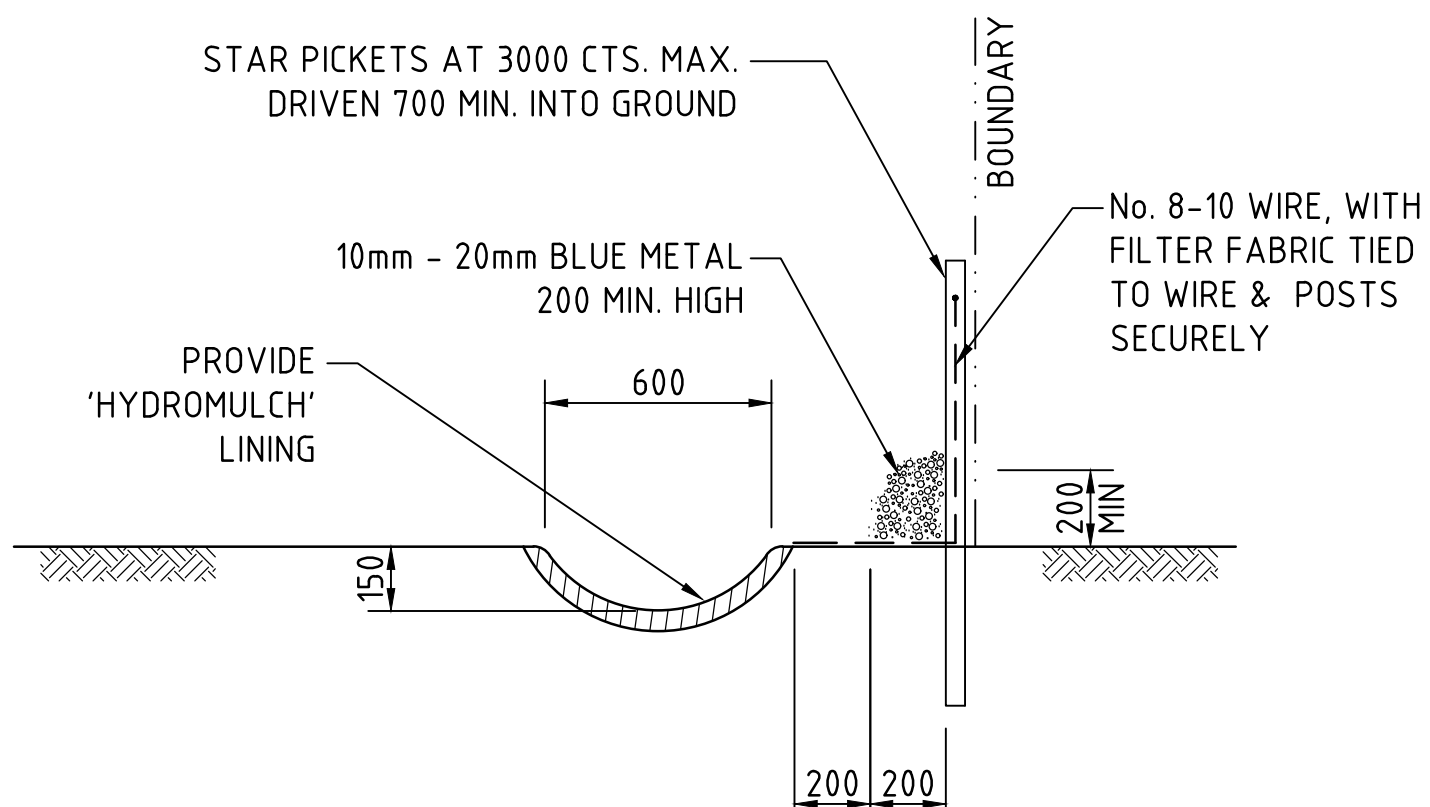




TYPICAL SILT FENCE DETAIL

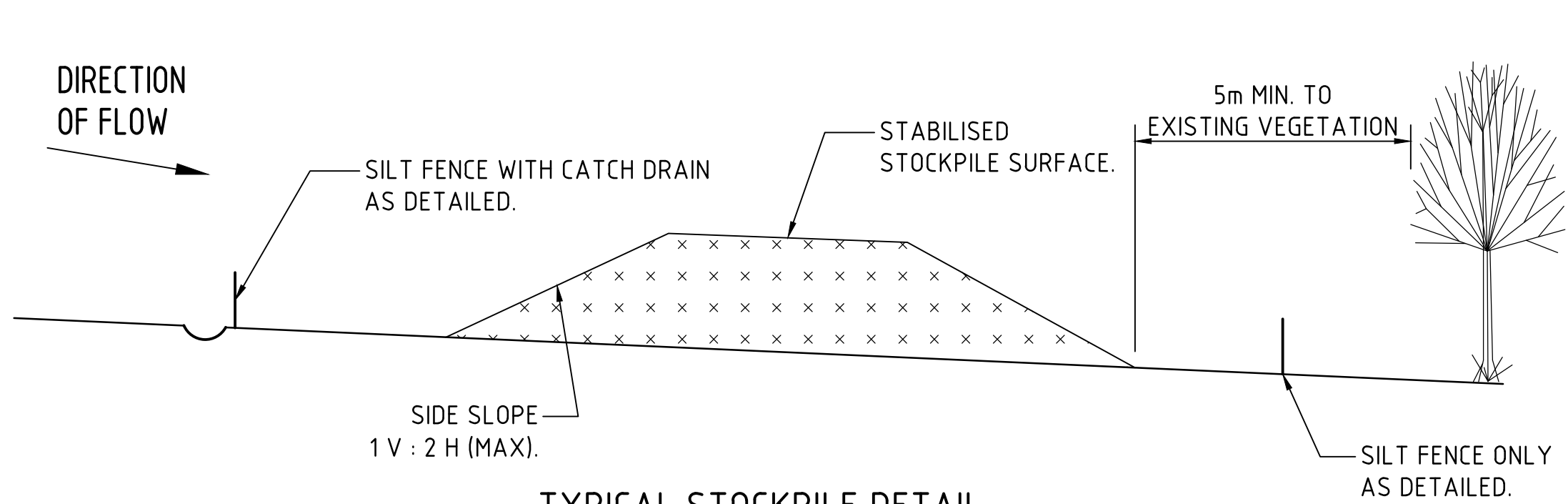
N.T.S

NOTE: PROVIDE 1m RETURNS AT 30m INTERVALS. TYPICAL



TYPICAL OPEN DRAIN & SILT FENCE

SCALE 1:20

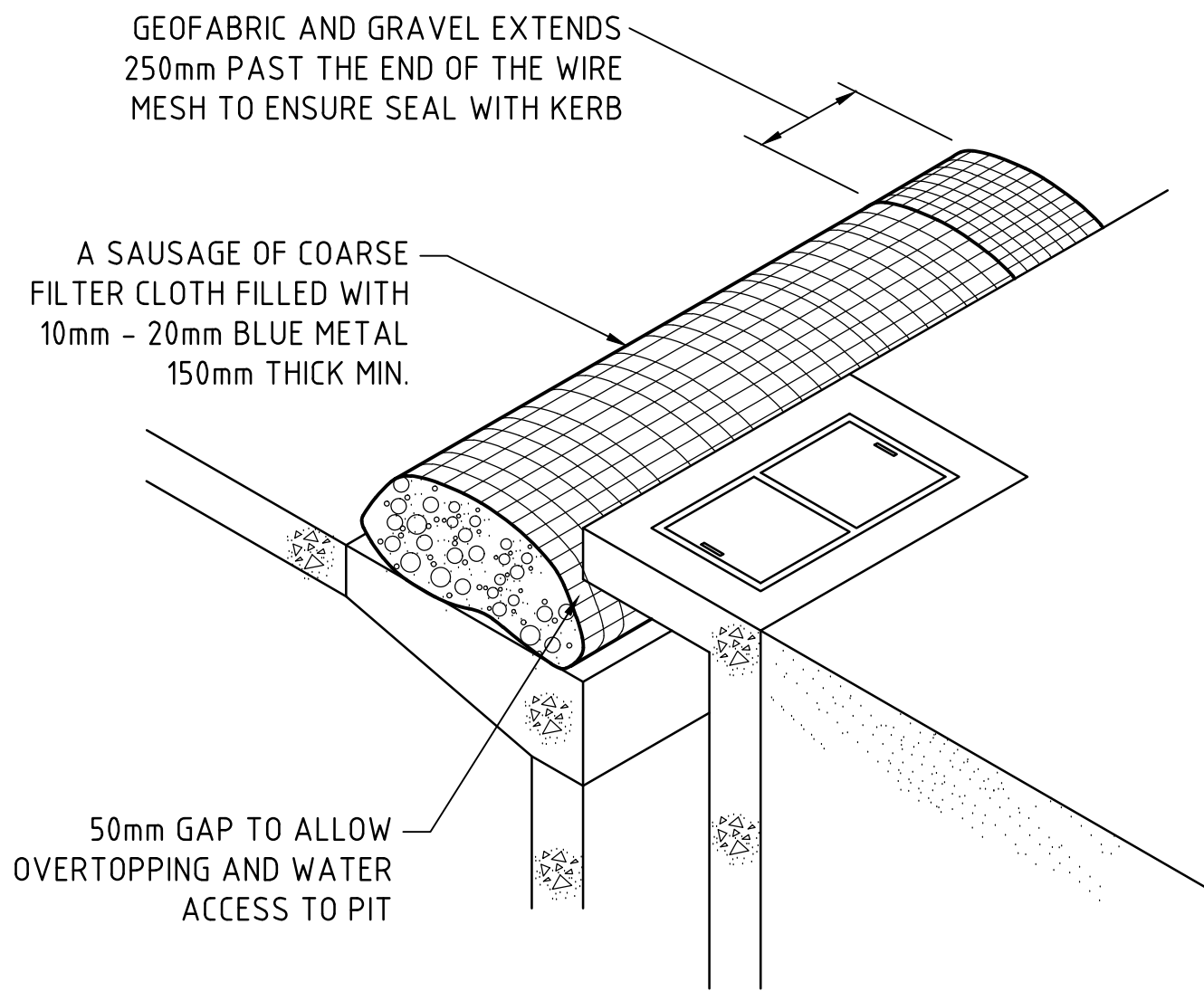


TYPICAL STOCKPILE DETAIL

N.T.S

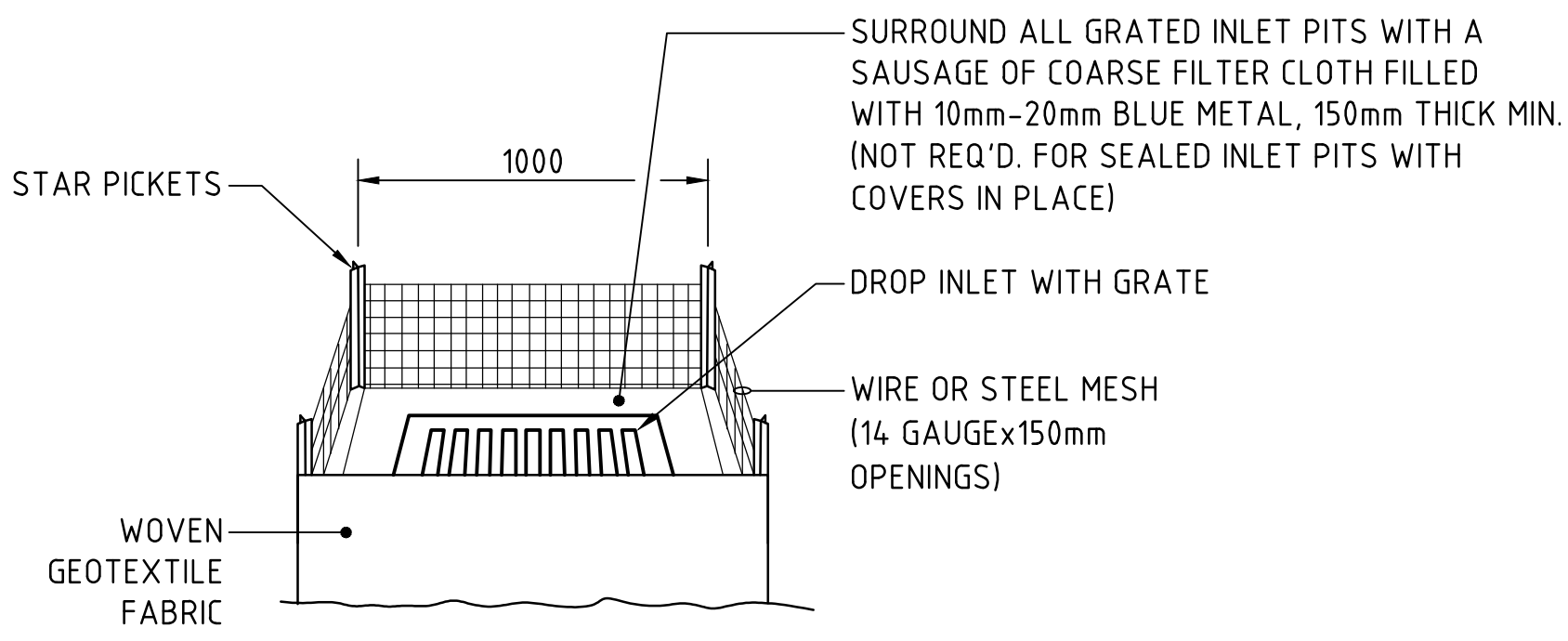
STOCKPILE NOTES

1. PLACE ALL STOCKPILES IN LOCATIONS MORE THAN 5m FROM EXISTING VEGETATION, ROADS & HAZARD AREAS.
2. CONSTRUCT ON THE CONTOUR AS LOW, FLAT ELONGATED MOUNDS. SIDE SLOPE TO BE 1 V: 2 H MAX.
3. WHERE THERE IS SUFFICIENT AREA, TOPSOIL STOCKPILES SHALL BE LESS THAN 2m IN HEIGHT.
4. WHERE STOCKPILES ARE TO BE IN PLACE FOR MORE THAN 10 DAYS, STABILISE USING WOOD CHIP MULCH - 16 TONNE/Ha.
5. CONSTRUCT SILT FENCE WITH CATCH DRAIN ON UPSLOPE SIDE TO DIVERT WATER AROUND STOCKPILES & SILT FENCE ONLY 1 TO 2m DOWNSLOPE AS SHOWN.



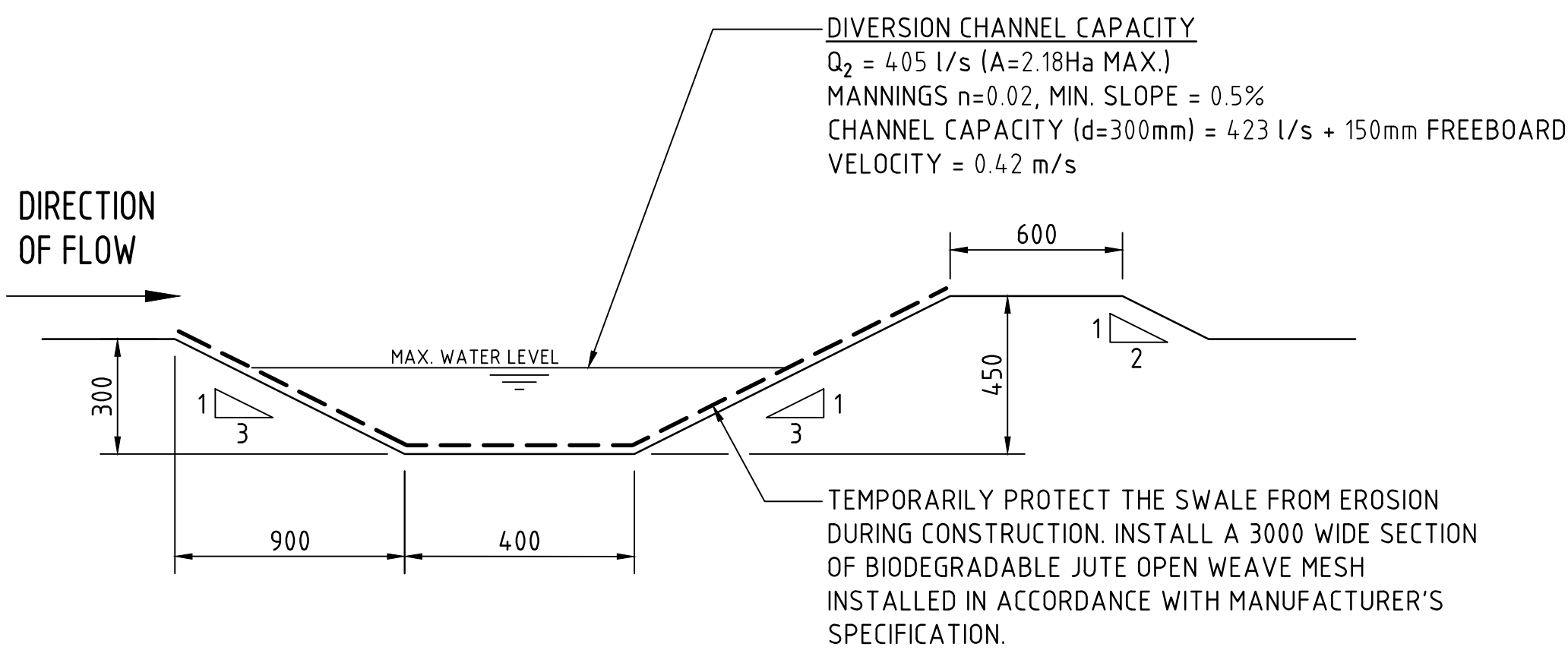
KERB INLET CONTROL

N.T.S



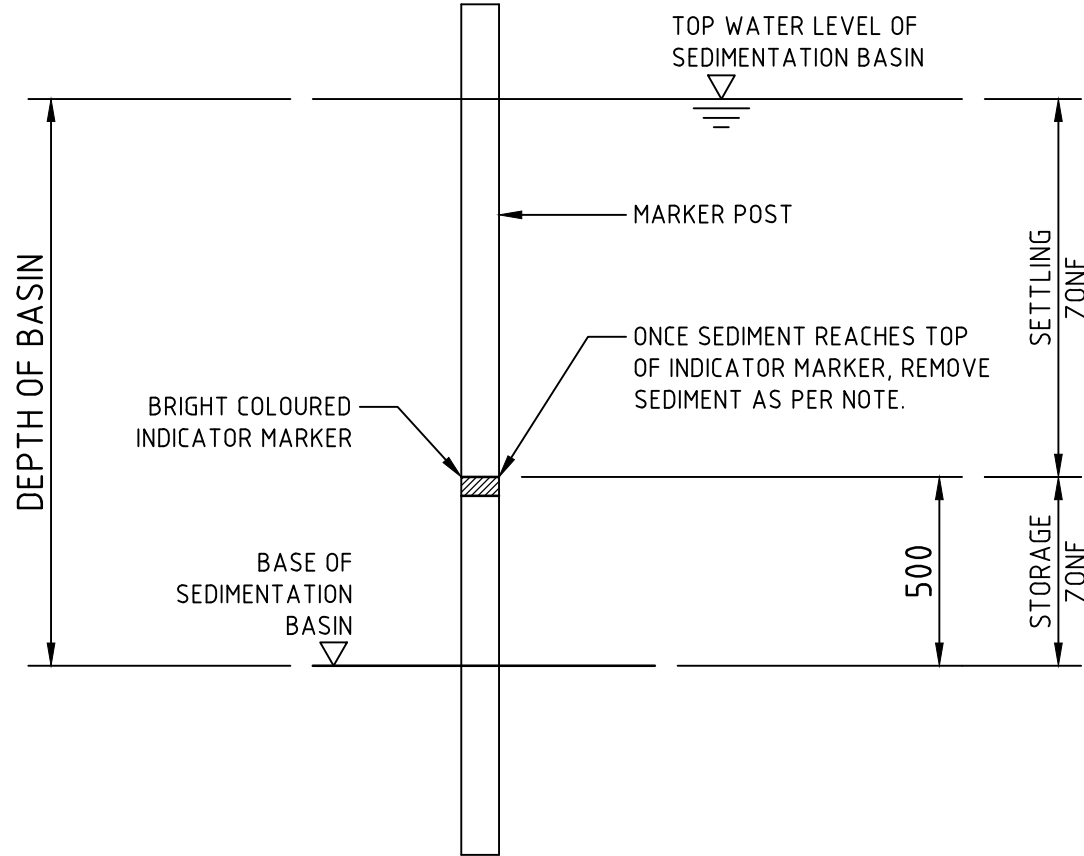
GRADED INLET PIT FILTER DETAIL

N.T.S



DIVERSION DRAIN SECTION

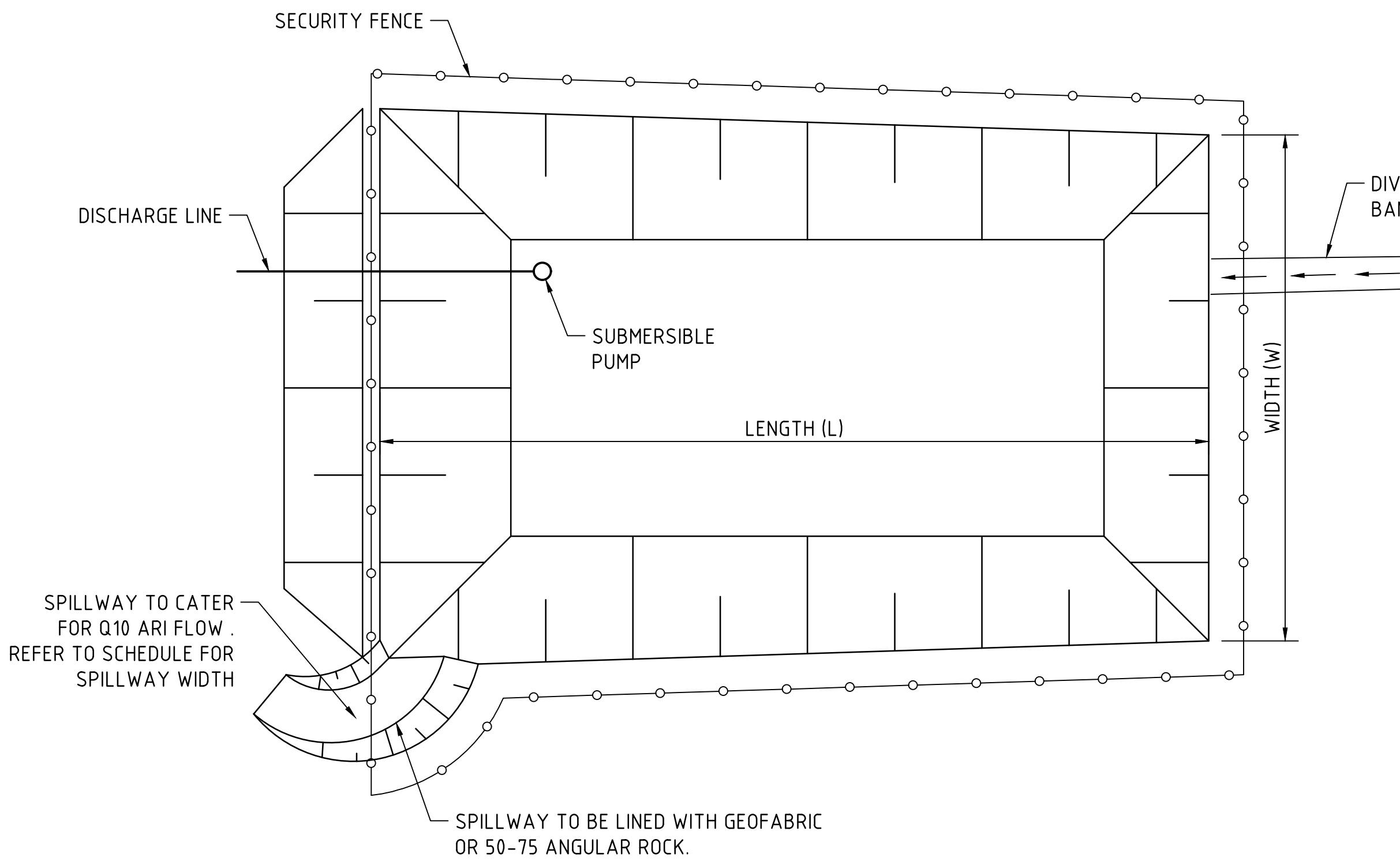
SCALE 1:20



SEDIMENT STORAGE MARKER

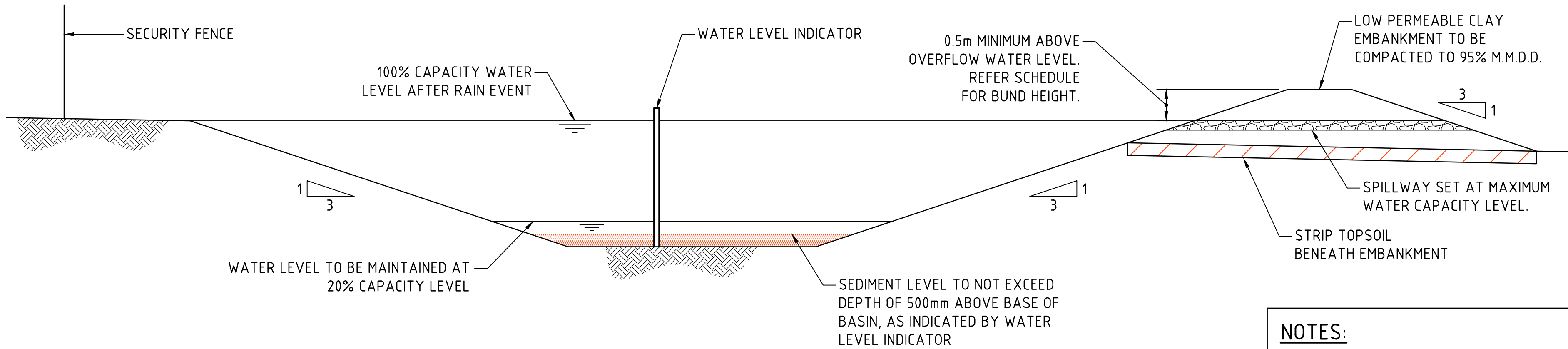
SCALE 1:20

NOTE :  
ADOPT ABOVE DETAILS AROUND ALL PITS WITHIN AREA ENCOMPASSED BY SILT FENCE & TO PITS ON THE ROAD ADJACENT TO SITE BOUNDARY.



TYPICAL SEDIMENT CONTROL POND PLAN

SCALE 1:250



TYPICAL SEDIMENT CONTROL BASIN SECTION

SCALE 1:50

SPILLWAY DETAIL & SCHEDULE					
CATCHMENT (Ha)	FLOW (m³/s)	WIDTH (mm)	FLOW DEPTH (mm)	ROCK SIZE (mm)	BUND HEIGHT ABOVE SPILLWAY (mm)
0.20	0.14	1000	200	-	600
0.5	0.2	2000	200	-	600
1	0.3	2000	200	-	700
2	0.6	4000	200	-	700
5	1.4	5000	300	200	800

- NOTES:
- ALL EROSION & SEDIMENT CONTROL MEASURES TO BE INSPECTED & MAINTAINED DAILY BY SITE MANAGER.
  - MINIMISE DISTURBED AREAS.
  - ROADS & FOOTPATHS TO BE SWEEPED DAILY.
  - 1.2m TURF TO BE PLACED BEHIND KERBS.
  - DUST MINIMISATION CONTROL BY WATERING TO BE IMPLEMENTED BY SITE MANAGER AS REQUIRED OR AS DIRECTED BY THE EPA.

2m 0 5 10 15 20 25m  
SCALE 1:250 AT B1 SIZE SHEET

500mm 0 1 2 3 4 5m  
SCALE 1:50 AT B1 SIZE SHEET

200mm 0 500 1000 1500 2000mm  
SCALE 1:20 AT B1 SIZE SHEET

FOR DEVELOPMENT APPLICATION

ISSUED FOR DEVELOPMENT APPLICATION	09.10.25	B			
ISSUED FOR INFORMATION	23.09.25	A			
AMENDMENTS	DATE	ISSUE	AMENDMENTS	DATE	ISSUE

ARCHITECT	REID CAMPBELL
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CLIENT	CENTENNIAL
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PROJECT	PROPOSED LAND SUBDIVISION FOR INDUSTRIAL DEVELOPMENT
114-120 OLD PITTVATER ROAD, BROOKVALE, NSW 2100	
DESIGNED	TW
DRAWN	JB
DATE	AUG 2025
CHECKED	XC
SIZE	B1
SCALE	AS SHOWN
CAD REF:	IC010628.01-DA251

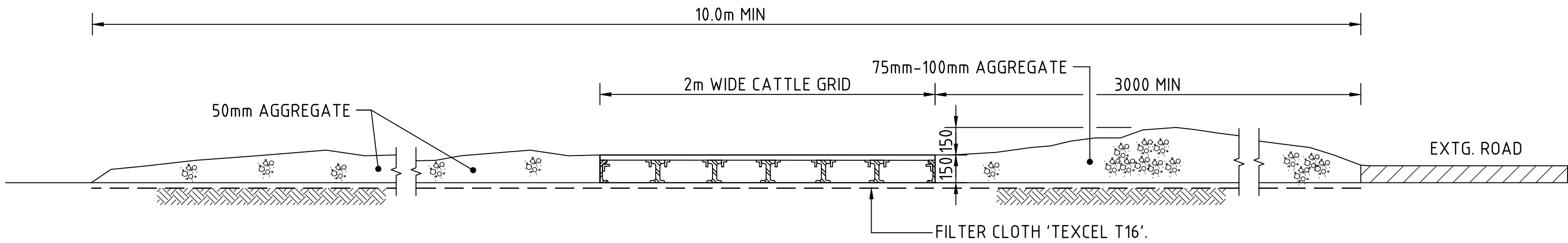
CONSULT AUSTRALIA
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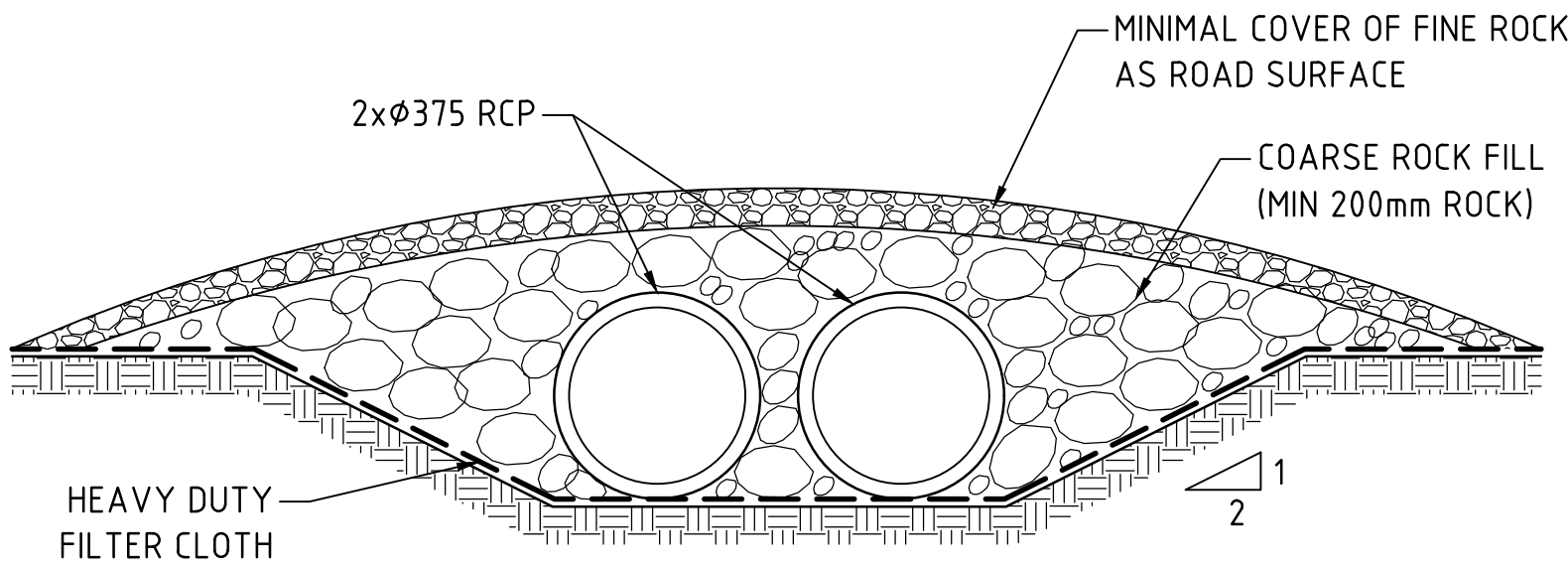
CRC	CIVIL & STRUCTURAL ENGINEERS
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DRAWING TITLE	EROSION & SEDIMENT CONTROL DETAILS SHEET 1
DRAWING No	C010628.01-DA251
ISSUE	B

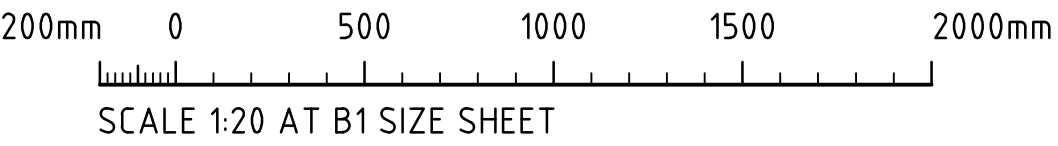




SECTION 1:20 1 : STABILISED CONSTRUCTION ENTRANCE 'TRUCK SHAKER'



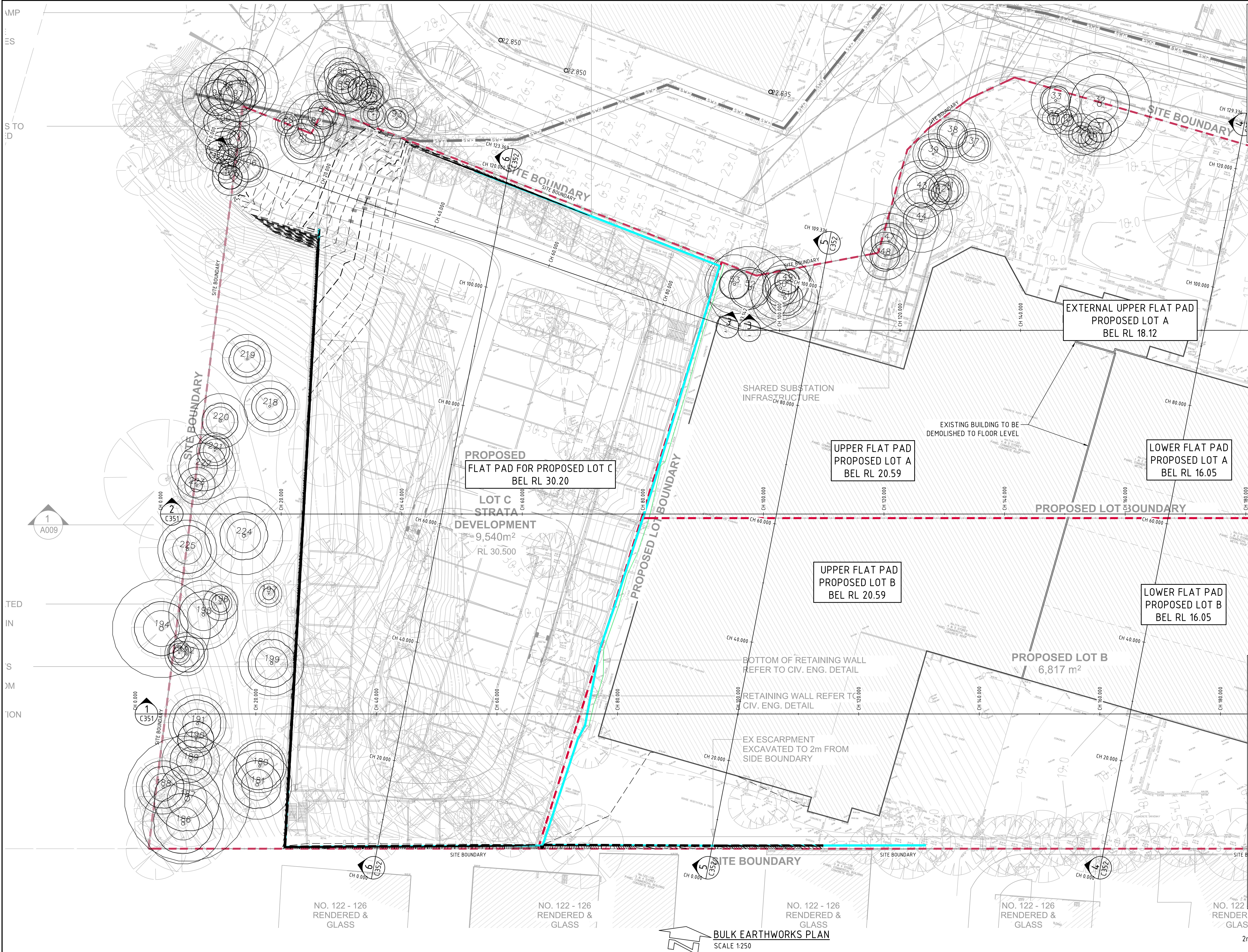
TYPICAL CROSSING OVER DIVERSION CHANNEL  
SCALE 1:20



FOR DEVELOPMENT APPLICATION

			ARCHITECT		CLIENT		PROJECT		CONSULT AUSTRALIA		Costin Roe Consulting Pty Ltd. ABN 50 003 696 446		DRAWING TITLE	
							PROPOSED LAND SUBDIVISION FOR INDUSTRIAL DEVELOPMENT				CRC COSTIN ROE CONSULTING CIVIL & STRUCTURAL ENGINEERS		EROSION & SEDIMENT CONTROL DETAILS SHEET 2	
ISSUED FOR DEVELOPMENT APPLICATION			09.10.25		B		114-120 OLD PITTWATER ROAD, BROOKVALE, NSW 2100		PO Box N419 Sydney NSW 1220		Level 4, 8 Windmill Street, Millers Point NSW 2000		DRAWING No	
ISSUED FOR INFORMATION			23.09.25		A				Level 4, 8 Windmill Street, Millers Point NSW 2000		p: +61 2 9251 7699 f: +61 2 9241 3731		C010628.01-DA252	
AMENDMENTS			DATE		ISSUE		DESIGNED TW		DRAWN JB		DATE AUG '2025		ISSUE B	
							CHECKED XC		SCALE AS SHOWN		CAD REF: C010628.01-DA252			





EARTHWORK ESTIMATES	
SITE AREA	= 2.18 Ha
SITE STRIP	= 4,000m <sup>2</sup>
CUT	= -28,400m <sup>3</sup>
FILL	= +1,550m <sup>3</sup>
ALLOWANCE FOR BASINS	= -460m <sup>3</sup>
DIFFERENCE	= -31,310m <sup>3</sup> (i.e. CUT OVER FILL)
NOTE: VOLUMES BASED ON 200mm SITE STRIP OVER THE NOMINATED AREA. EARTHWORKS VOLUMES ARE APPROXIMATE ONLY. NO ALLOWANCE HAS BEEN MADE FOR DELTERIOUS MATERIAL, EROSION AND SEDIMENT CONTROL, BULKING OR COMPACTION OF FILLED SOILS, THE REMOVAL OF UNCONTROLLED OR CONTAMINATED MATERIAL OR ANY OTHER UNSPECIFIED EXCAVATION RELATED TO CONSTRUCTION ACTIVITIES. DETAILED EXCAVATION ALLOWANCE IS APPROXIMATE ONLY AND ACCOUNTS FOR STORMWATER/SERVICES TRENCHING AND FOUNDATIONS. THE DETAILED EXCAVATION VOLUMES ARE TO BE CONFIRMED BY THE CONTRACTOR. REFER ANY CONCERNS TO ENGINEER.	

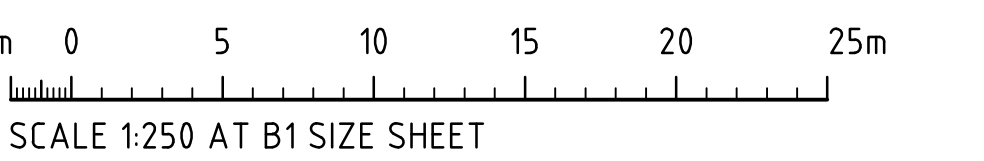
- SITE PREPARATION NOTES:**
- ALL EARTHWORKS SHALL BE COMPLETED GENERALLY IN ACCORDANCE WITH THE GUIDELINES SPECIFIED BY THE GEOTECHNICAL REPORT, 29300vnp1 PROVIDED BY JK-GEOTECHNICS DATED 13.05.2016.
  - EXISTING SERVICES AND DETAILS BASED ON SURVEY INFORMATION PROVIDED BY LTS SURVEYORS PTY LTD REF: 52517.00307 - A DATED 08.07.2025.
  - STRIP ANY TOP SOIL OR DELTERIOUS MATERIAL AND DISPOSE OF FROM SITE OR STORE AS DIRECTED. TOPSOIL BLENDING IS NOT ACCEPTABLE. ANY BLENDING PROPOSAL IS TO BE REFERRED TO THE ENGINEER.
  - COMPLETE CUT TO FILL EARTHWORKS TO ACHIEVE THE REQUIRED LEVELS AS INDICATED ON THE DRAWINGS WITHIN A TOLERANCE OF -0mm/-10mm THROUGH BUILDING PADS/PAVEMENTS AND +0mm/+20mm ELSEWHERE.
  - PREPARE STEEP BATTERS TO RECEIVE FILL BY CONSTRUCTING BENCHING TO FACILITATE FILL PLACEMENT AND COMPACTION. WHERE EXPOSED ROCK (WEATHERED SHALE OR SANDSTONE) IS ENCOUNTERED AT CUT SUBGRADE LEVEL, THE EARTHWORKS CONTRACTOR IS TO ALLOW TO RIP THE SURFACE TO A NOMINAL 0.3-0.4m DEPTH AND RECOMPACT (PER THE ENGINEERING SPEC) AS REQUIRED.
  - AREAS TO RECEIVE FILL (THAT ARE NOT ON BENCHED BATTERS) AND AREAS IN CUT SHALL BE PROOF ROLLED TO IDENTIFY ANY SOFT HEAVING MATERIAL. SOFT MATERIAL SHALL BE BOXED OUT AND REMOVED PRIOR TO FILL PLACEMENT. PROOF ROLLING TO BE INSPECTED BY A GEOTECHNICAL ENGINEER OR THE EARTHWORKS DESIGNER.
  - SITE WON FILL SHALL BE COMPACTED IN MAXIMUM 300mm LAYERS AND TO DRY OR HLF DENSITY RATIOS (STANDARD COMPACTION) OF BETWEEN 98% AND 103%. THE PLACEMENT MOISTURE VARIATION OR HLF MOISTURE VARIATION SHALL BE CONTROLLED TO BE BETWEEN 2% DRY AND 2% WET.
  - IMPORTED FILL SHALL BE COMPACTED IN MAXIMUM 300mm LAYERS AND TO DRY OR HLF DENSITY RATIOS (STANDARD COMPACTION) OF BETWEEN 98% AND 103%. THE PLACEMENT MOISTURE VARIATION OR HLF MOISTURE VARIATION SHALL BE CONTROLLED TO BE BETWEEN 2% DRY AND 2% WET.
  - ALL ENGINEERED FILL PARTICLES SHALL BE ABLE TO BE INCORPORATED WITHIN A SINGLE LAYER. FURTHER, LESS THAN 30% OF PARTICLES SHALL BE RETAINED ON THE 37.5 mm SIEVE. ENGINEERED FILL SHALL BE ABLE TO BE TESTED IN ACCORDANCE WITH THE STANDARD COMPACTION METHOD (AS1289.5.4.11) OR HLF TEST METHOD (AS1289.5.7.1). THESE METHODS REQUIRE LESS THAN 20% RETAINED ON THE 37.5 mm SIEVE. WHERE BETWEEN 20% AND 30% OF PARTICLES ARE RETAINED ON THE 37.5 mm SIEVE THE ABOVE TEST METHODS SHALL STILL BE ADOPTED AND TEST REPORTS ANNOTATED APPROPRIATELY. THESE REQUIREMENTS SHOULD BE MET BY THE MATERIAL AFTER PLACEMENT AND COMPACTION.
  - ALL EARTHWORKS SHALL BE COMPLETED UNDER LEVEL 1 CONTROL IN ACCORDANCE WITH AS 3798-2007.
  - PRIOR TO ANY EARTHWORKS, EROSION CONTROL AS OUTLINED IN THE EROSION AND SEDIMENTATION CONTROL PLAN SHALL BE COMPLETED.
  - EXISTING ROCK, IF ANY, SHALL BE REMOVED BY HEAVY ROCK BREAKING OR RIPPING.
  - MATCH EXISTING LEVELS AT BATTER INTERFACE.
  - CONTRACTOR TO MATCH EXISTING LEVELS AT THE INTERFACE OF EARTHWORKS AND EXISTING SURFACE AT BATTER LOCATIONS OR WHERE NO RETAINING WALLS ARE PRESENT. ANY DISCREPANCY BETWEEN DESIGN AND EXISTING LEVELS TO BE REFERRED TO THE ENGINEER FOR DIRECTION OR ADJUSTMENTS TO DESIGN LEVELS.
  - DURING EARTHWORKS THE CONTRACTOR IS TO ENSURE ALL AREAS ARE FREE DRAINING & WILL NOT RETAIN WATER DURING RAINFALL. PROVIDE TEMPORARY MEASURES AS REQUIRED TO ENSURE FREE FLOWING RUNOFF THROUGH MANAGED DRAINAGE PATHS, DIVERSION DRAINS OR OTHER SUITABLE DISPOSAL METHOD AS AGREED DURING THE WORKS. REFER ANY CONCERNS TO THE ENGINEER. REFER TO EROSION AND SEDIMENT CONTROL DRAWINGS AND NOTES.

**LEGEND:**  
LEVELS DATUM IS AHD.

EXISTING SITE LEVELS AND DETAILS BASED ON SURVEY INFORMATION PROVIDED BY LTS SURVEYORS DATED 08.07.2025.

- 50.00 - EXISTING CONTOUR (0.1m INTERVAL)
- 50.00 - B.E.L. CONTOUR (MAJOR 0.5m)
- 50.10 - B.E.L. CONTOUR (MINOR 0.1m)
- 50.00 - B.E.L. SPOT LEVEL
- 50.00 - TREE TO BE RETAINED PER ARBORIST REPORT (REF:250930\_1200PRB\_AIA)

**NOMINATED B.E.L. DETAIL**  
NTS







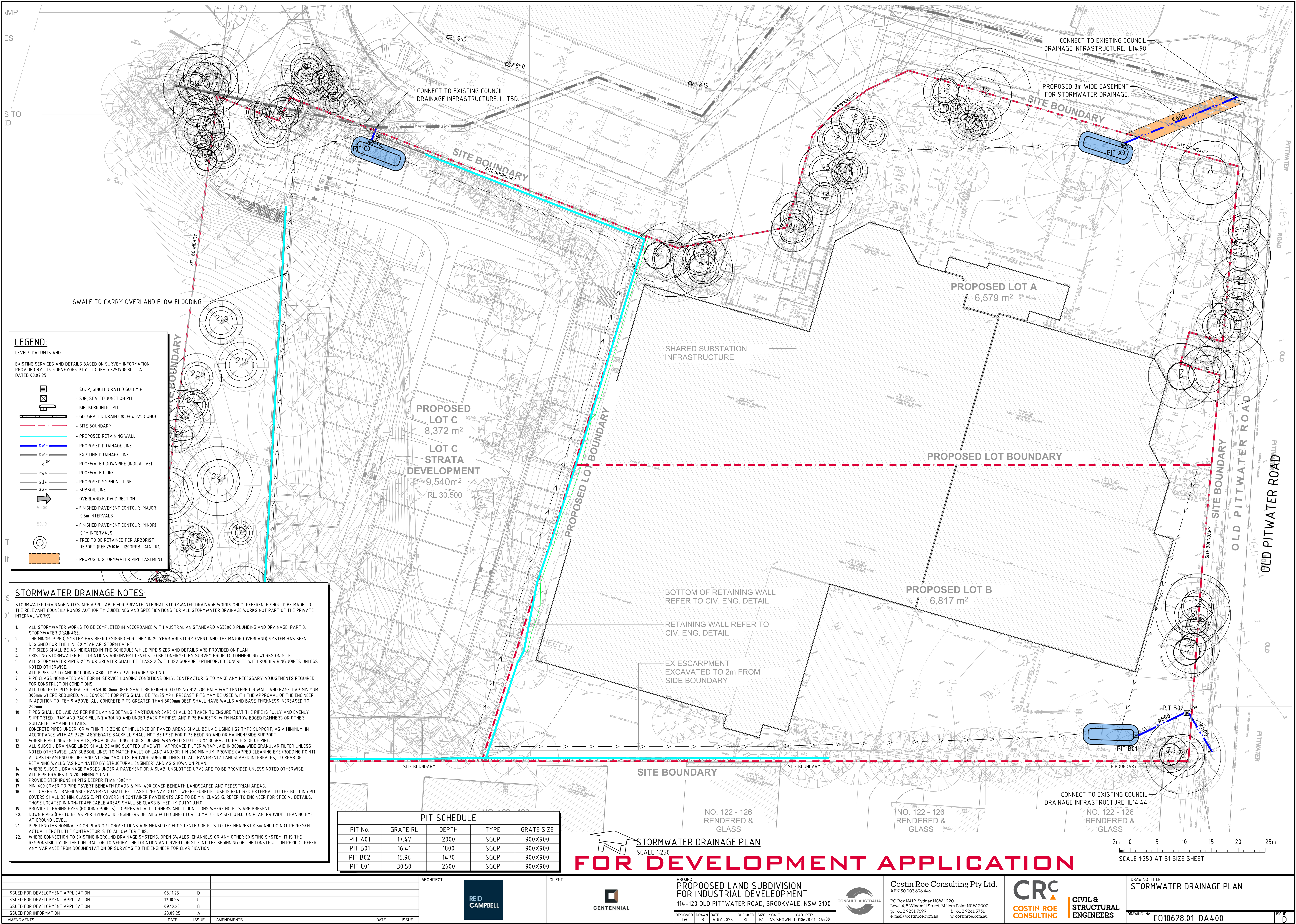




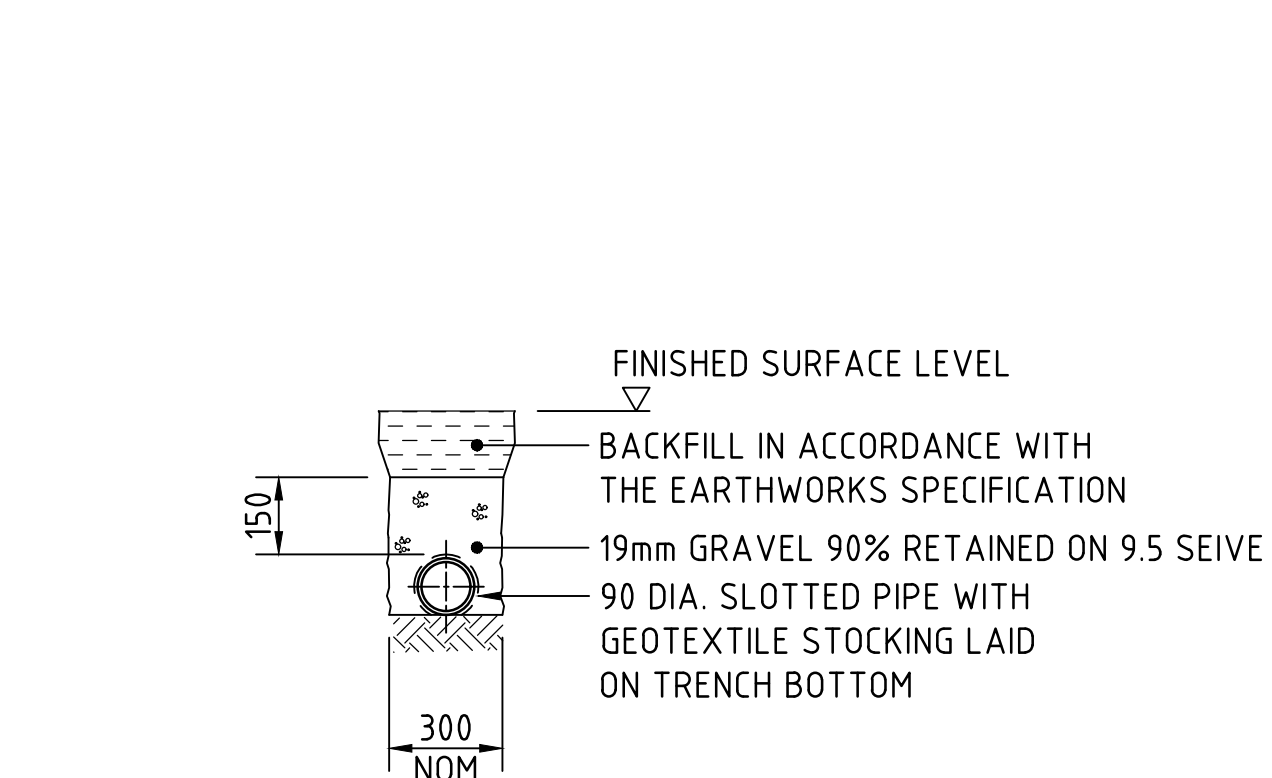




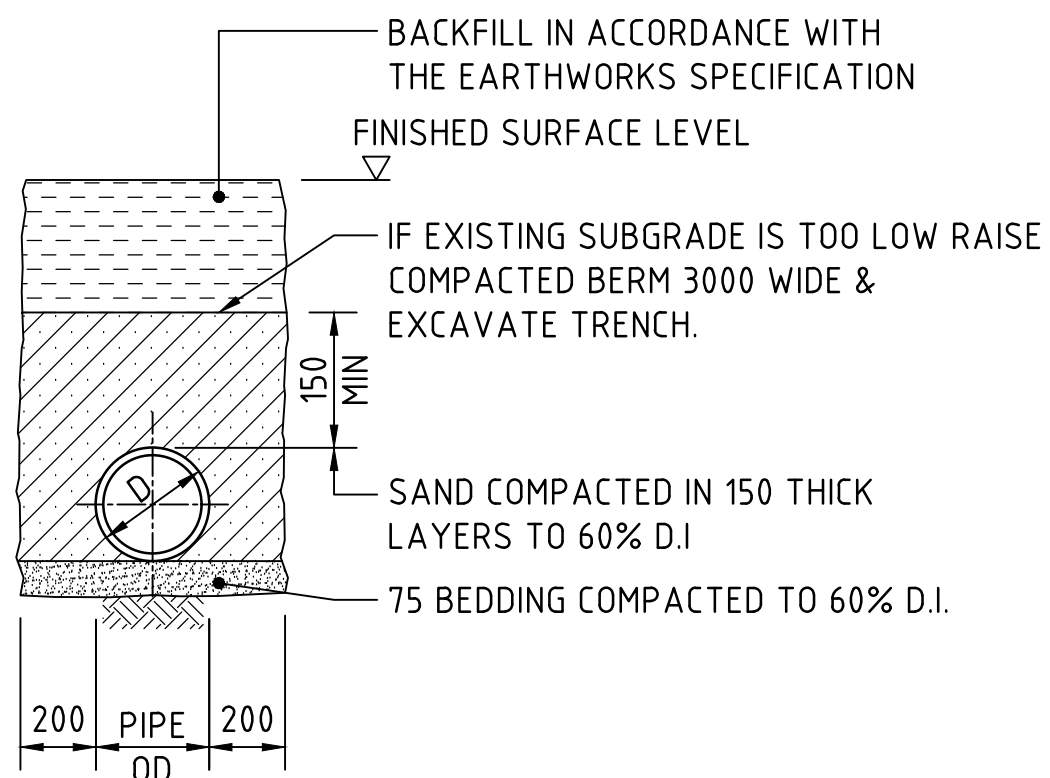




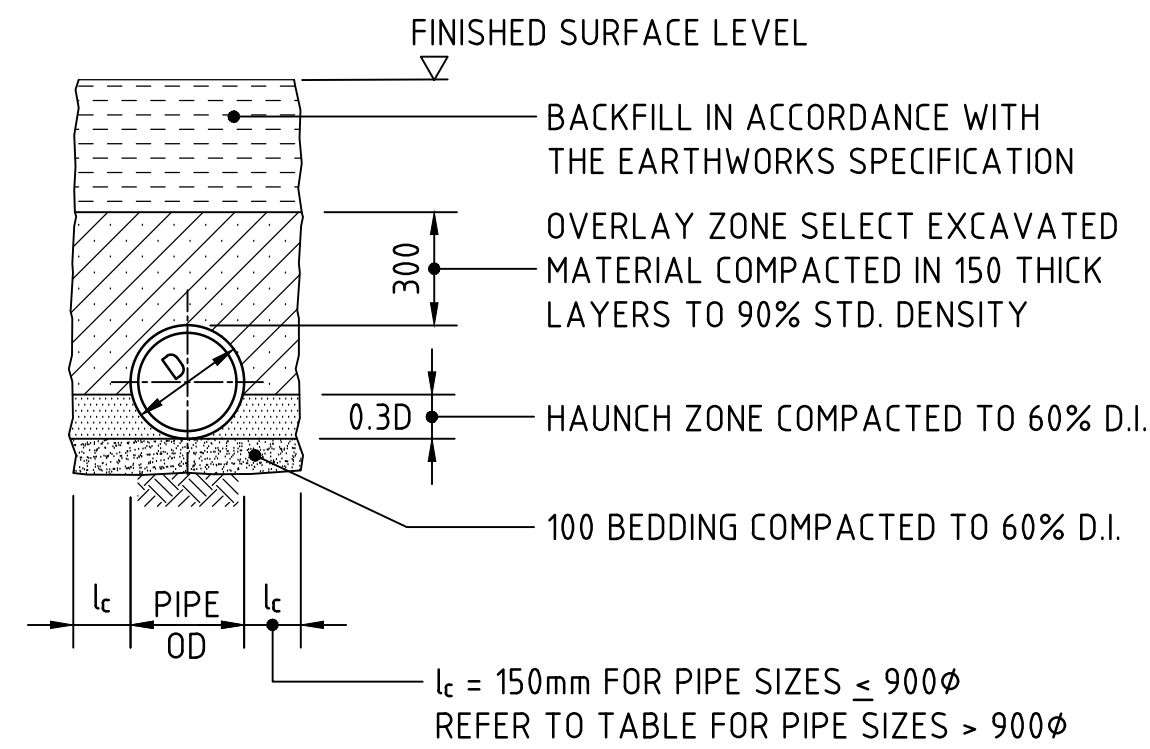




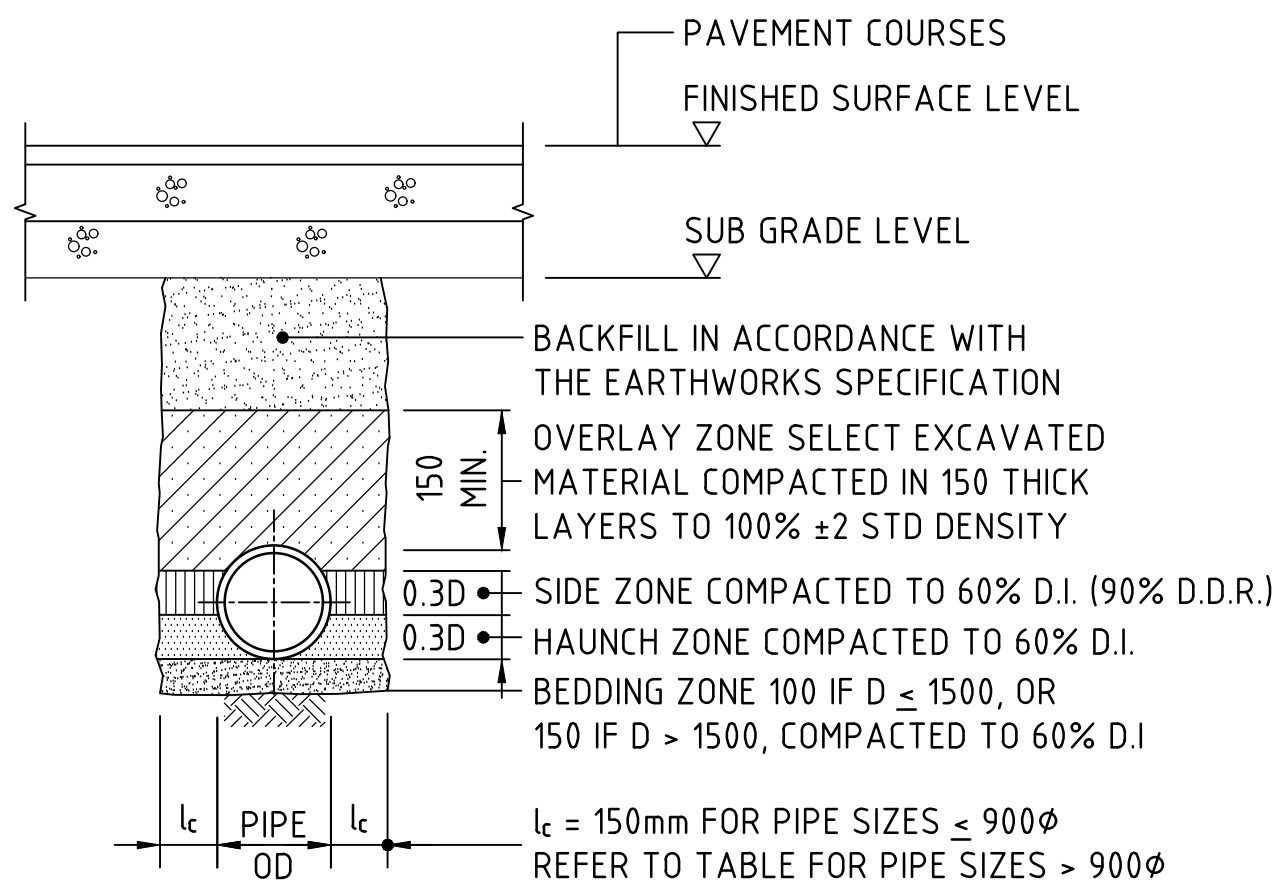
SUPPORT TO AGRICULTURAL DRAIN  
SCALE 1:20



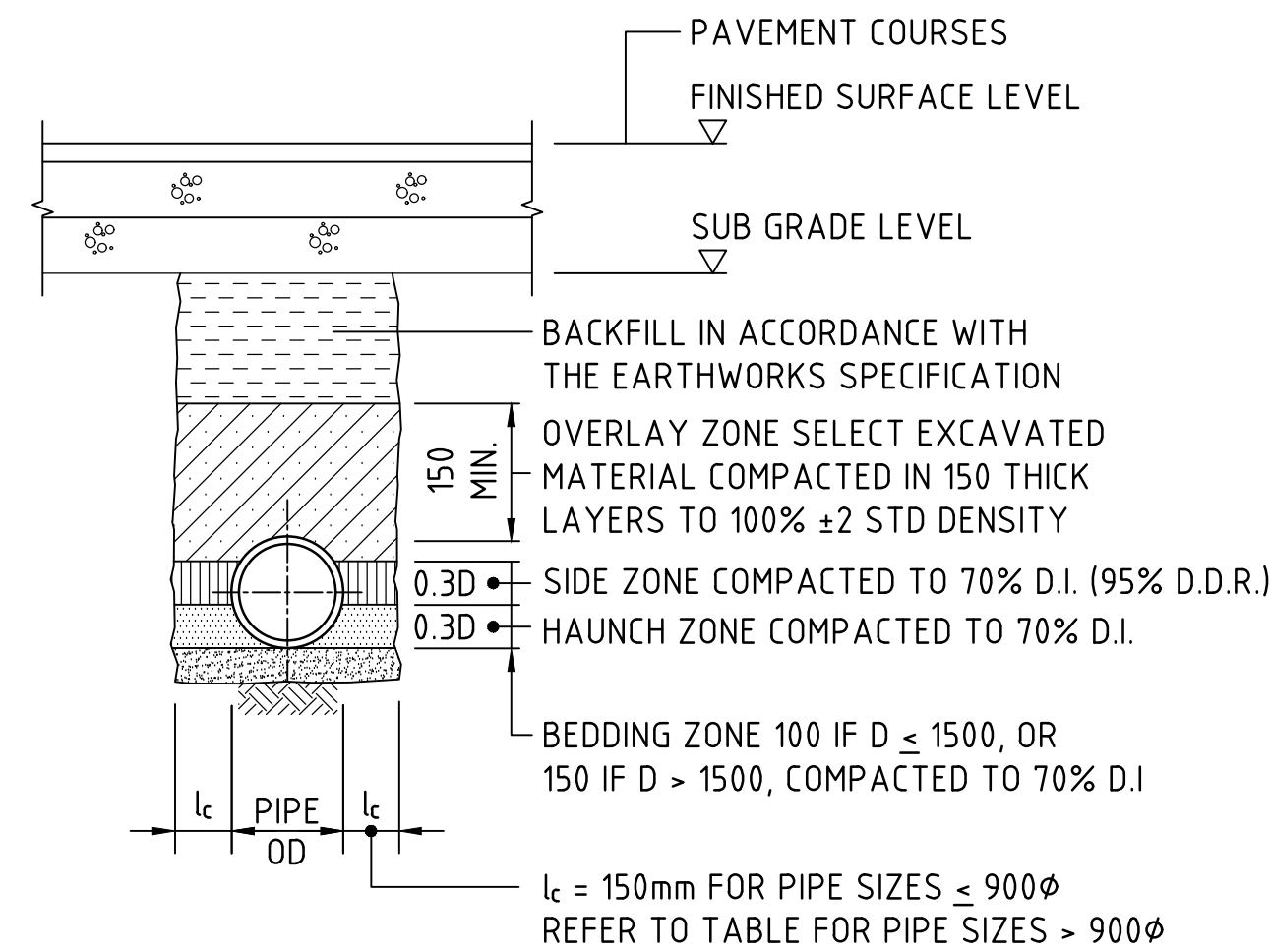
SUPPORT TO uPVC PIPES  
SCALE 1:20



TYPE H1 SUPPORT TO CONCRETE PIPES AT LANDSCAPED AREAS  
SCALE 1:20



TYPE HS2 SUPPORT TO CONCRETE PIPES UNDER PAVEMENT  
SCALE 1:20  
D ≤ 1350, MAX FILL = 4.0m  
D > 1350, MAX FILL = 3.0m

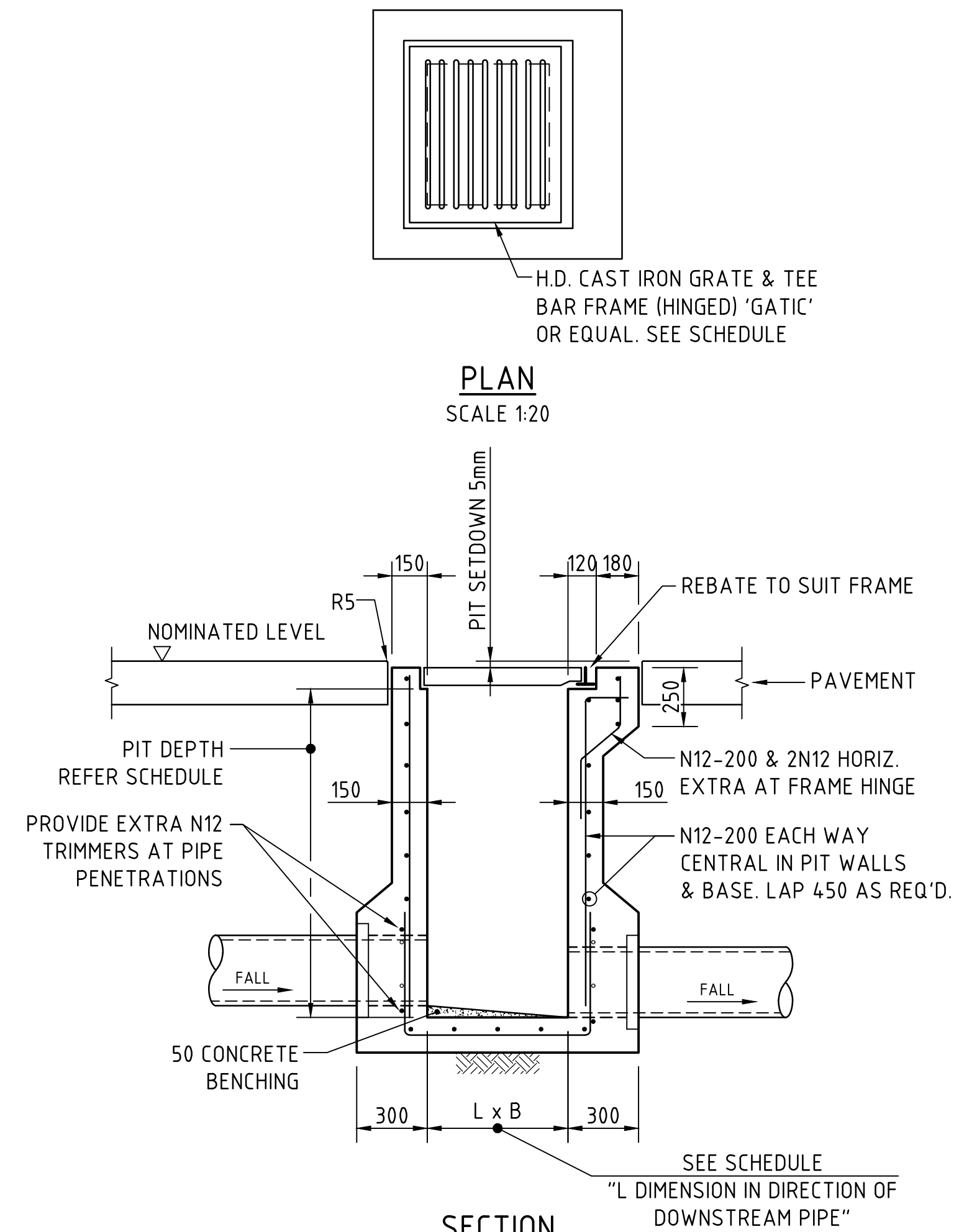


TYPE HS3 SUPPORT TO CONCRETE PIPES UNDER PAVEMENT  
SCALE 1:20  
D ≤ 1050, MAX FILL = 6.0m  
D > 1050, MAX FILL = 4.8m

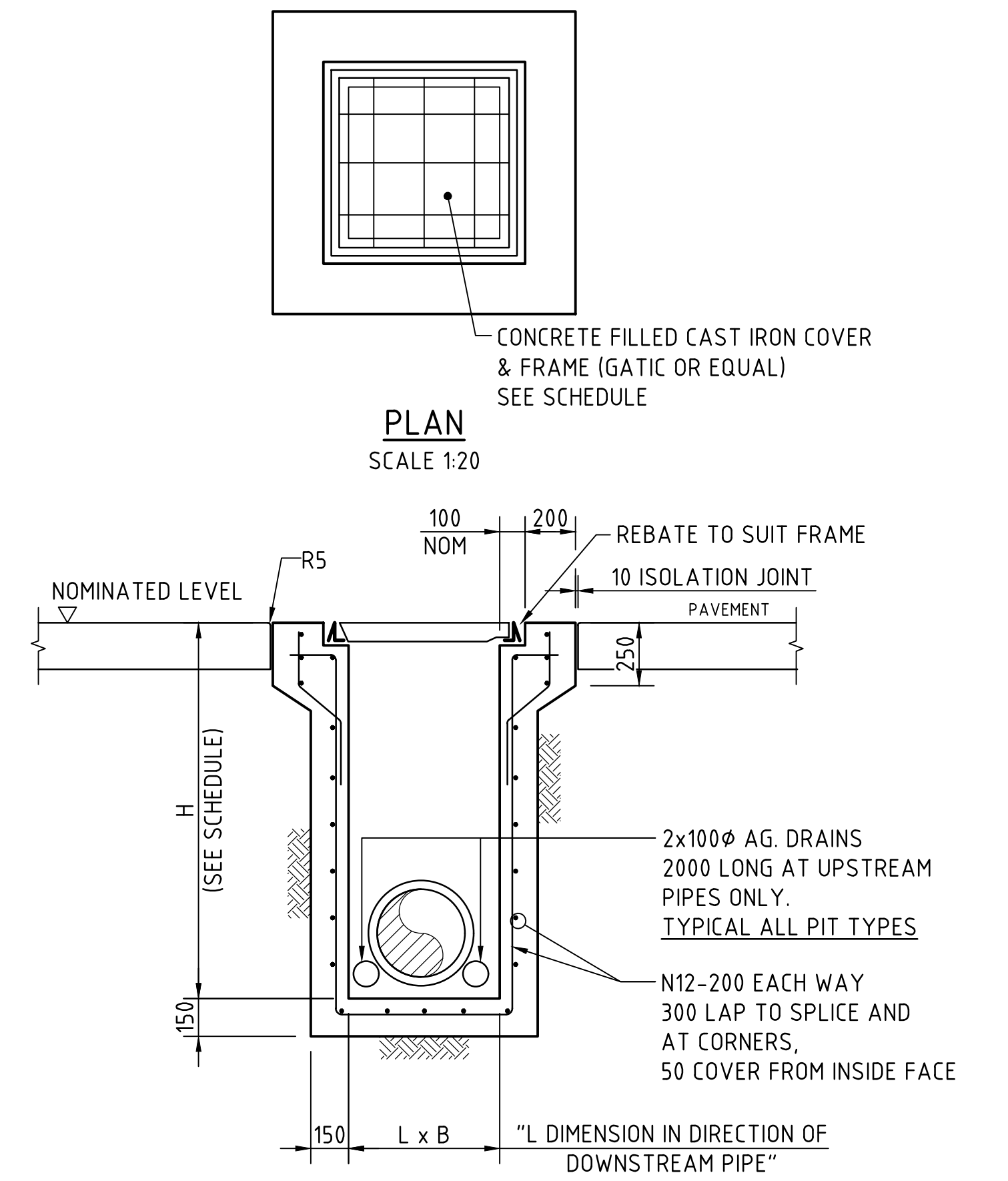
BEDDING & HAUNCH MATERIAL GRADING	
SIEVE SIZE (mm)	WEIGHT PASSING (%)
19.0	100
2.36	100 TO 50
0.60	90 TO 50
0.30	60 TO 10
0.15	25 TO 0
0.075	10 TO 0

SIDE ZONE WIDTH	
PIPE SIZE (mm)	l <sub>c</sub> (mm)
≤ 900φ	150
1050φ	175
1200φ	200
1350φ	225
1500φ	250
1650φ	275
1800φ	300
ENGINEER TO SPECIFY TRENCH WIDTHS FOR PIPE SIZES GREATER THAN 1800φ	

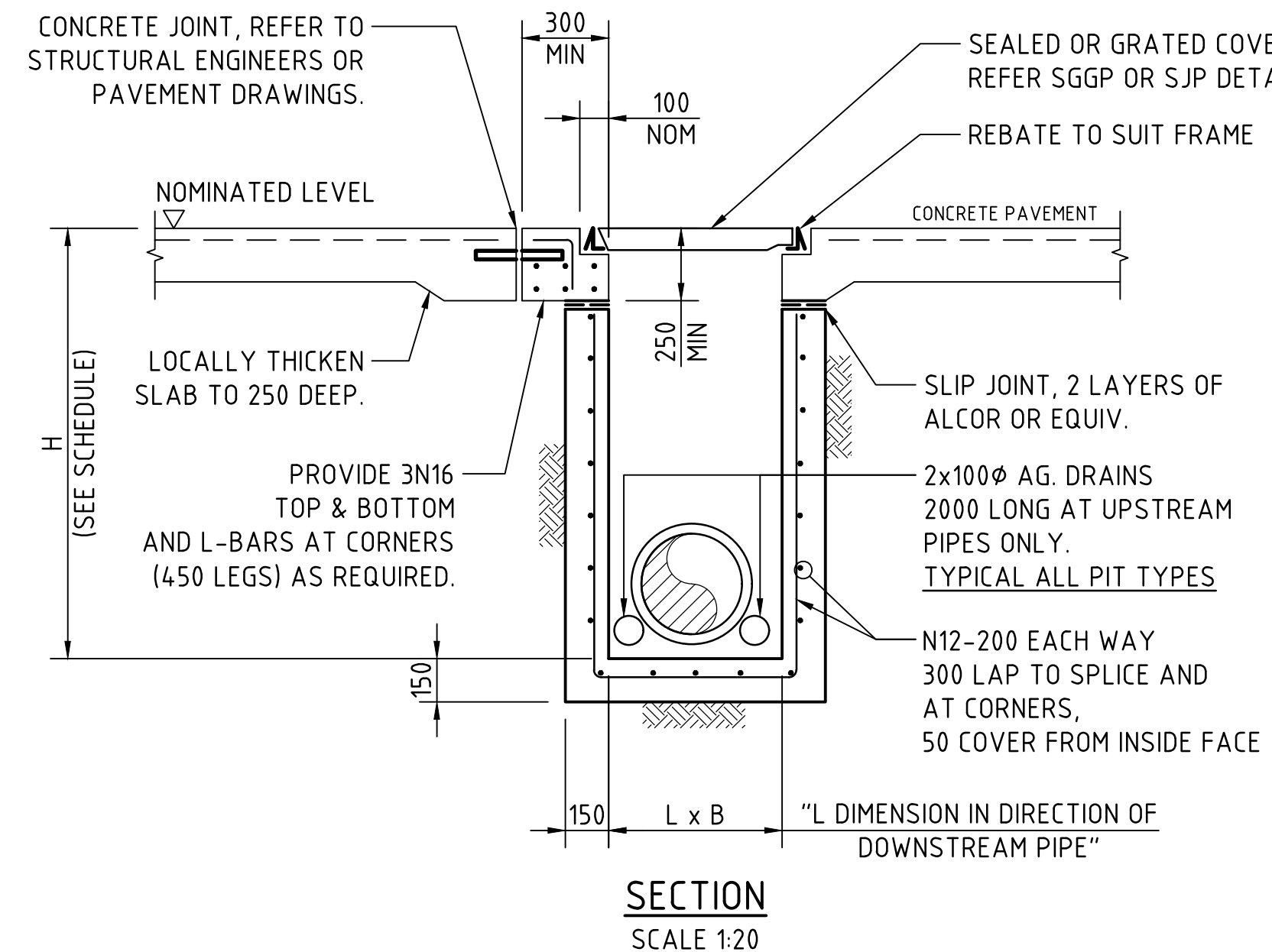
SIDE ZONE MATERIAL GRADING	
SIEVE SIZE (mm)	WEIGHT PASSING (%)
19.0	100
9.5	100 TO 50
2.6	100 TO 30
0.60	50 TO 15
0.075	25 TO 0
SELECT FILL MATERIAL IN ACCORDANCE WITH TABLE 1 AS 3725	



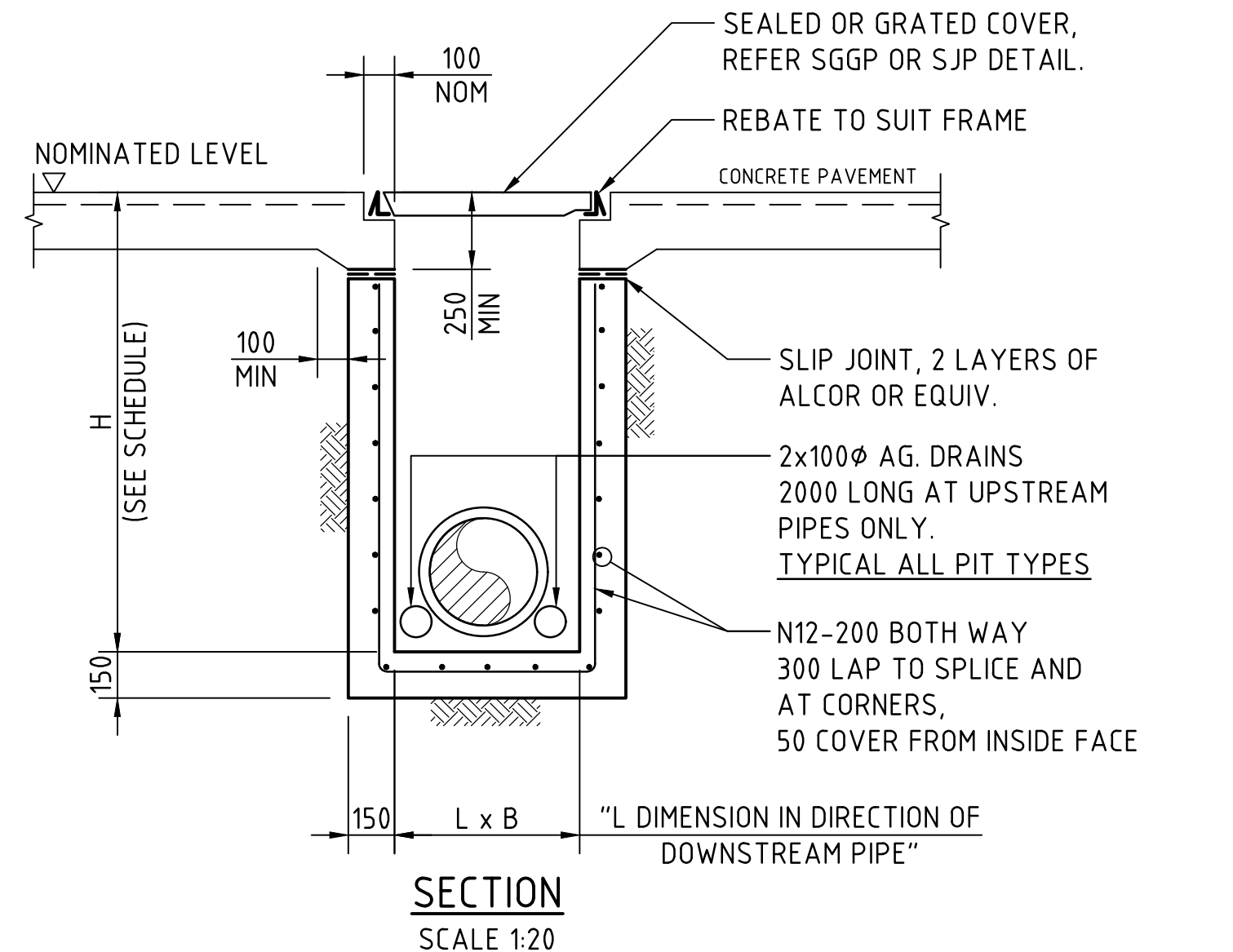
SINGLE GRATED GULLY PIT - SGGP  
SCALE 1:20



SEALED JUNCTION PIT - SJP  
SCALE 1:20



SJP/CIS & SGGP/CIS (CAST IN SLAB) PIT DETAIL  
GRATE/COVER SUPPORT  
CAST-INTO PAVEMENT SLAB  
(ADOPT IN CONCRETE PAVEMENT FOR SGGP's & SJP's, WHERE PITS ARE LOCATED IN THE CORNER OF SLAB PANELS OR ADJACENT TO SLAB PANEL JOINTS)



SJP/CIS & SGGP/CIS (CAST IN SLAB) PIT DETAIL  
GRATE/COVER SUPPORT  
CAST-INTO PAVEMENT SLAB  
(ADOPT IN CONCRETE PAVEMENTS FOR SGGP's & SJP's, WHERE JOINTS ARE NOT LOCATED WITHIN PROXIMITY OF THE GRATE)

FOR DEVELOPMENT APPLICATION

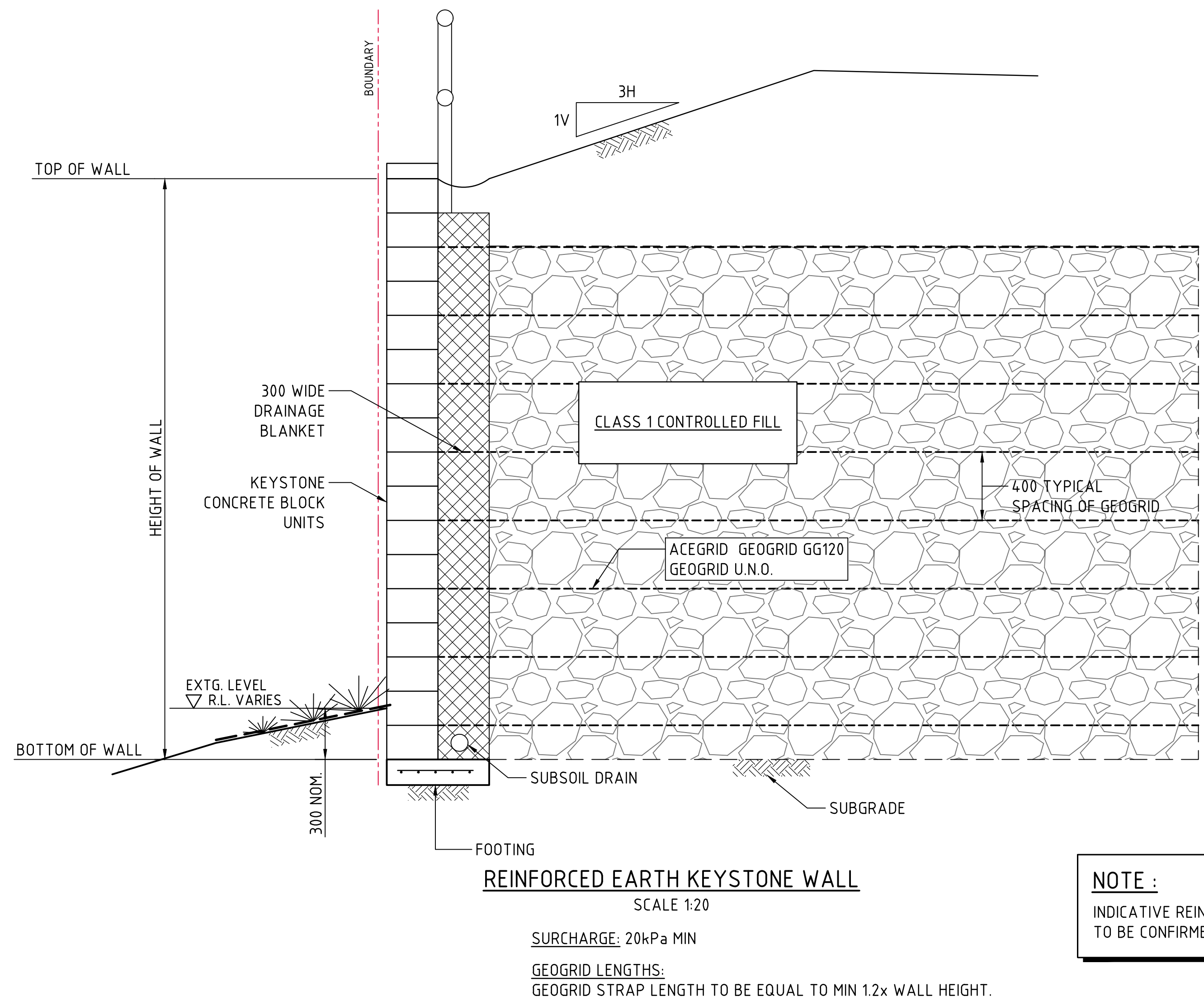
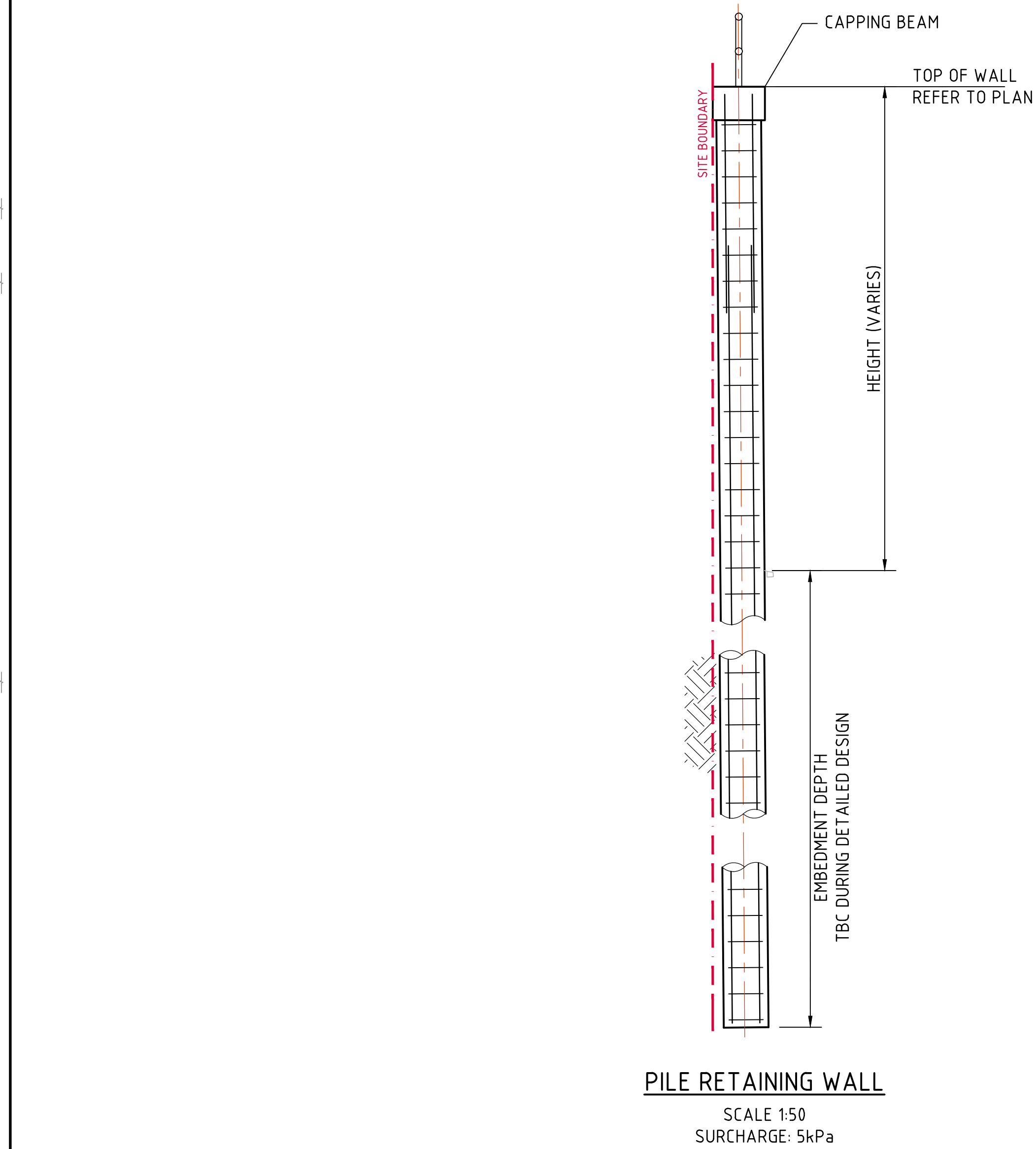
200mm 0 500 1000 1500 2000mm  
SCALE 1:20 AT B1 SIZE SHEET

PROJECT PROPOSED LAND SUBDIVISION FOR INDUSTRIAL DEVELOPMENT 114-120 OLD PITTWATER ROAD, BROOKVALE, NSW 2100			CLIENT CENTENNIAL			ARCHITECT REID CAMPBELL			COSTIN ROE CONSULTING PTY LTD. ABN 50 003 696 446 PO Box N419 Sydney NSW 1220 Level 4, 8 Windmill Street, Millers Point NSW 2000 p: +61 2 9251 7699 f: +61 2 9241 3731 e: mail@costinroe.com.au w: costinroe.com.au			DRAWING TITLE STORMWATER DRAINAGE DETAILS SHEET 1		
ISSUED FOR DEVELOPMENT APPLICATION 09.10.25 B			ISSUED FOR INFORMATION 23.09.25 A			AMENDMENTS			DRAWING No C010628.01-DA451			ISSUE B		

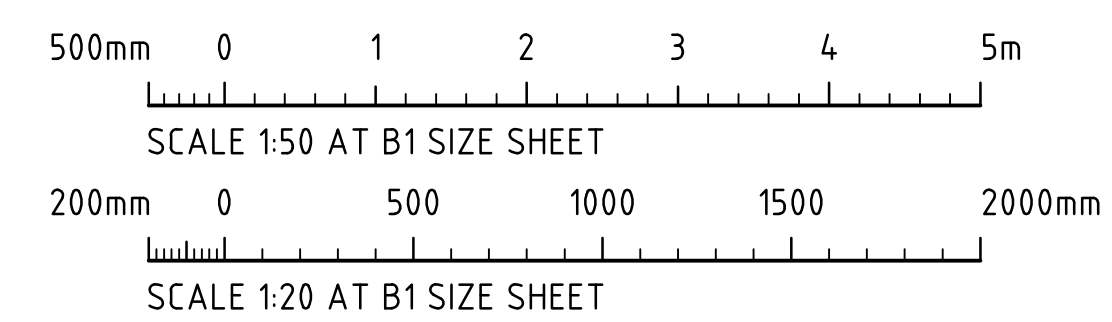










**NOTE :**  
INDICATIVE REINFORCEMENT LENGTHS SHOWN. DESIGN TO BE CONFIRMED IN DETAILED DESIGN



**FOR DEVELOPMENT APPLICATION**

			ARCHITECT		CLIENT		PROJECT		CONSULT AUSTRALIA		Costin Roe Consulting Pty Ltd.		CRC		DRAWING TITLE	
							PROPOSED LAND SUBDIVISION FOR INDUSTRIAL DEVELOPMENT				ABN 50 003 696 446		CIVIL & STRUCTURAL ENGINEERS		RETAINING WALL DETAILS	
ISSUED FOR DEVELOPMENT APPLICATION			09.10.25		B		114-120 OLD PITTVATER ROAD, BROOKVALE, NSW 2100				PO Box N419 Sydney NSW 1220					
ISSUED FOR INFORMATION			23.09.25		A						Level 4, 8 Windmill Street, Millers Point NSW 2000					
AMENDMENTS			DATE		ISSUE						p: +61 2 9251 7699					
			AMENDMENTS		DATE						e: mail@costinroe.com.au					
											w: costinroe.com.au					