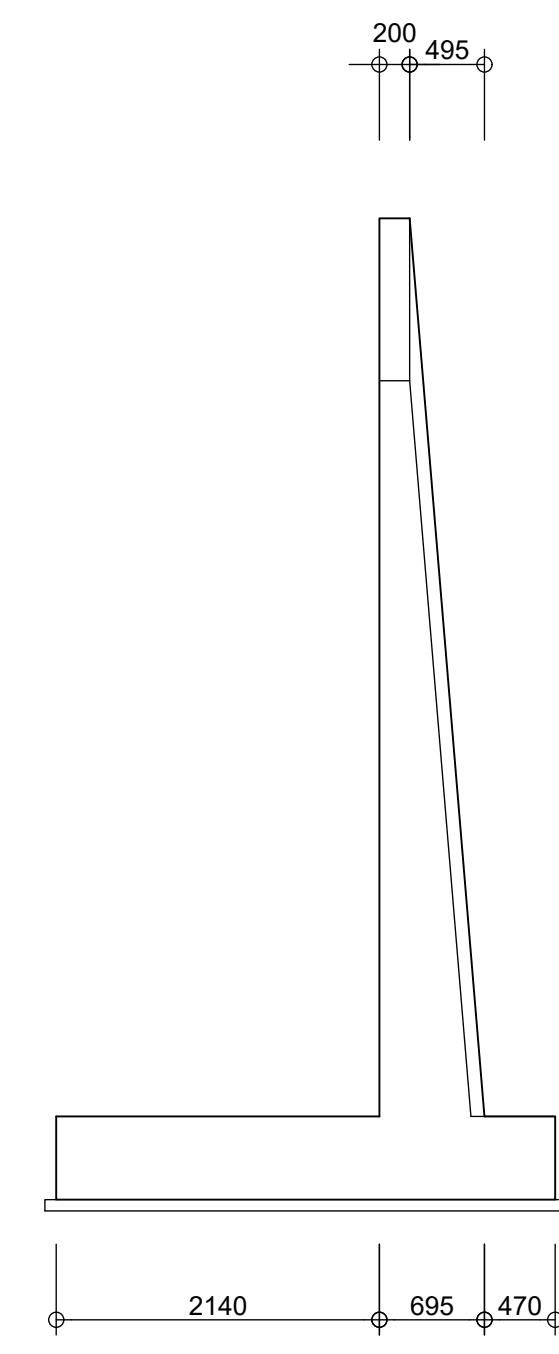
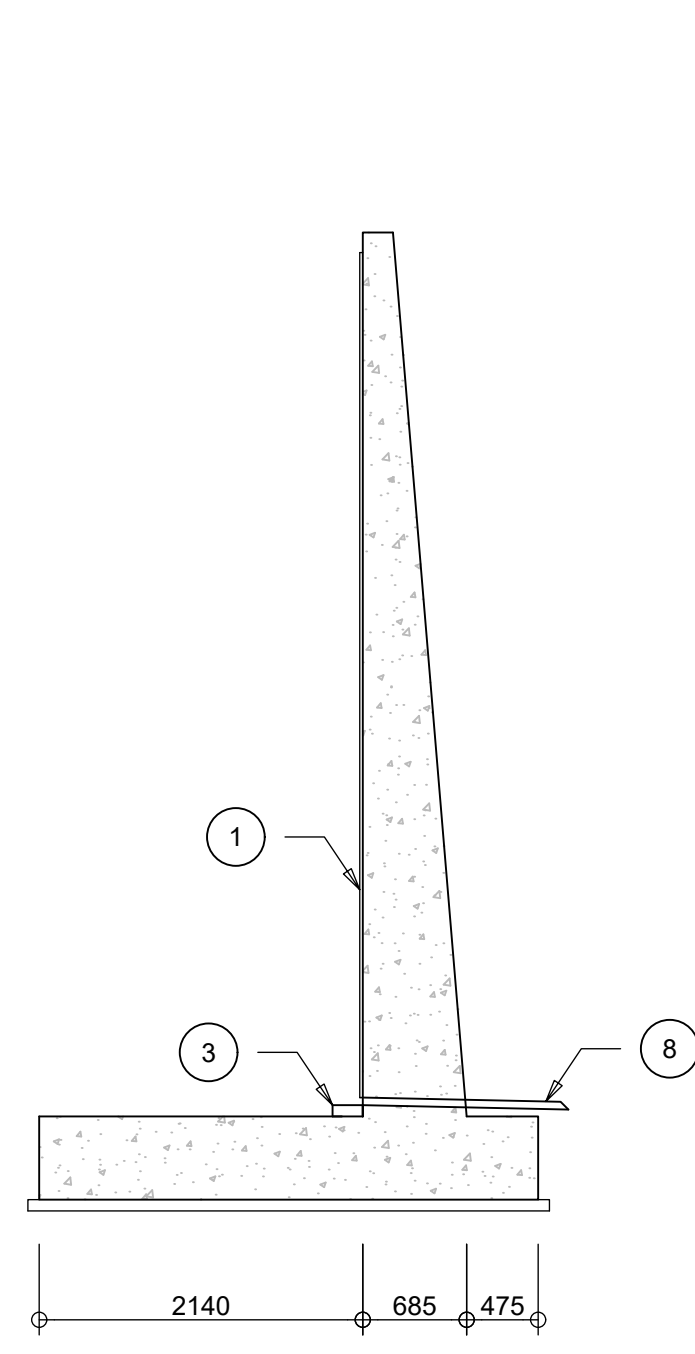


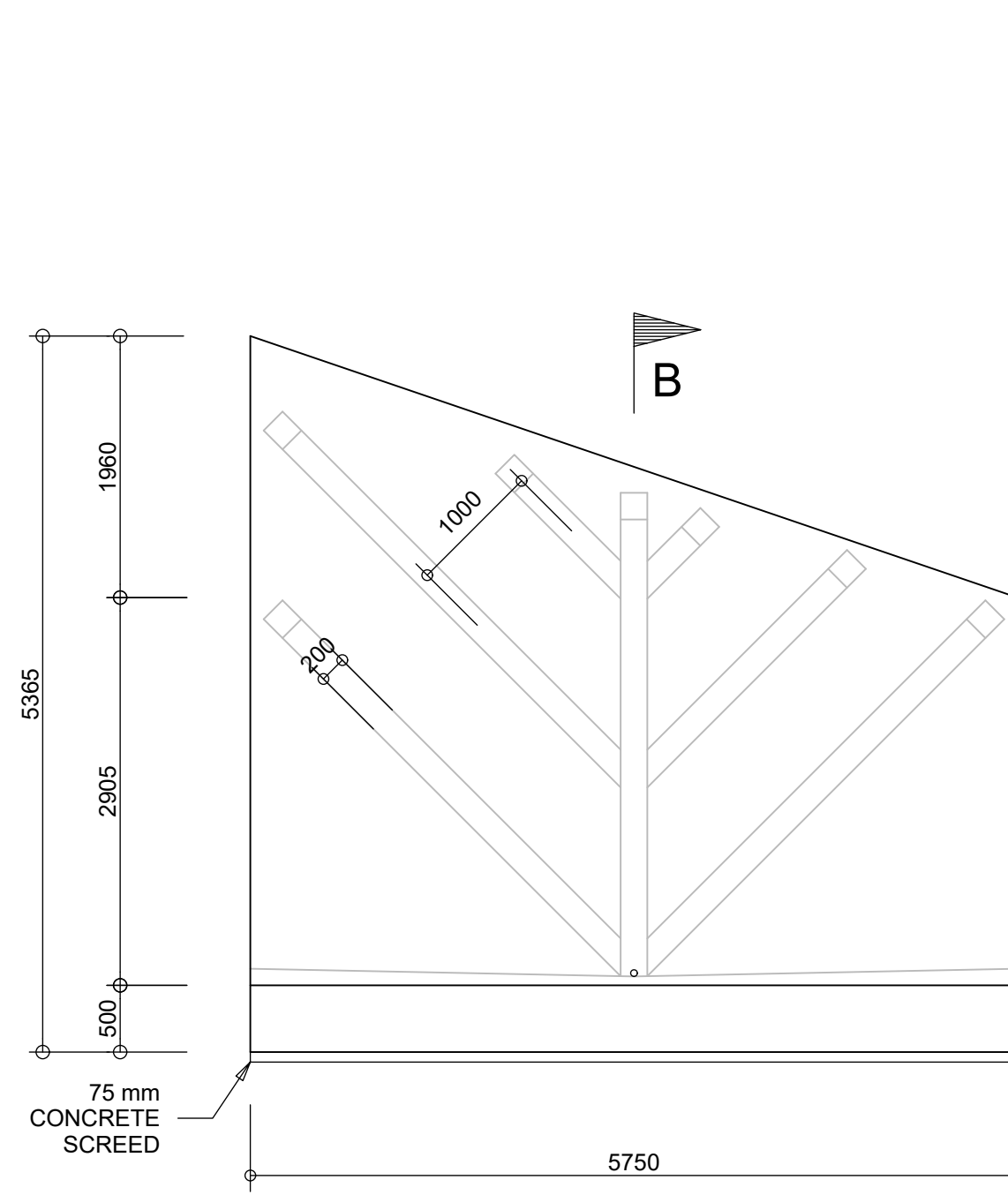
ELEVATION : SW1 WINGWALL  
SCALE 1:50



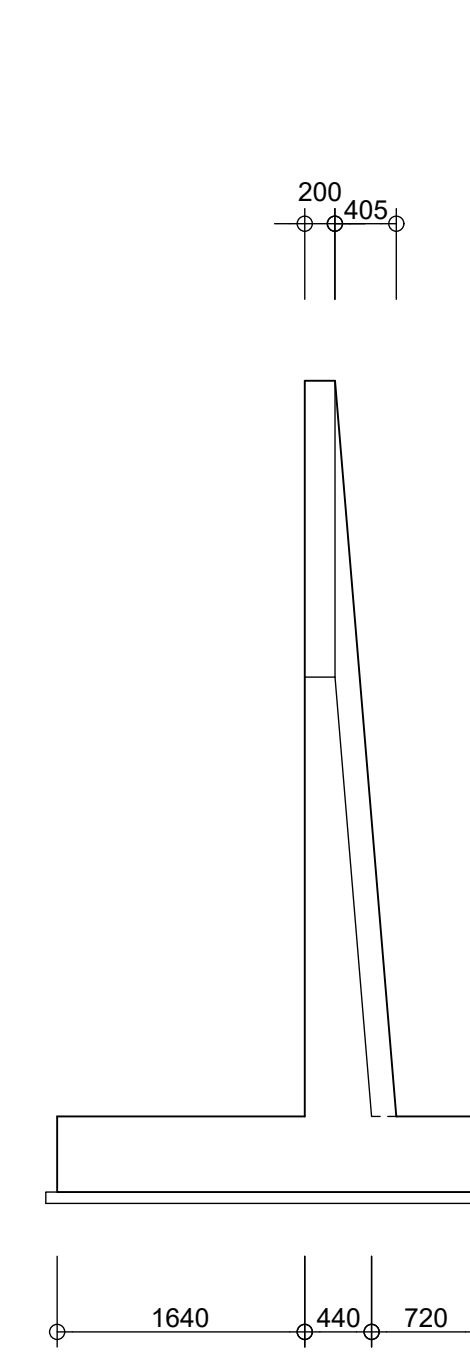
ELEVATION : SW1 WINGWALL  
SCALE 1:50



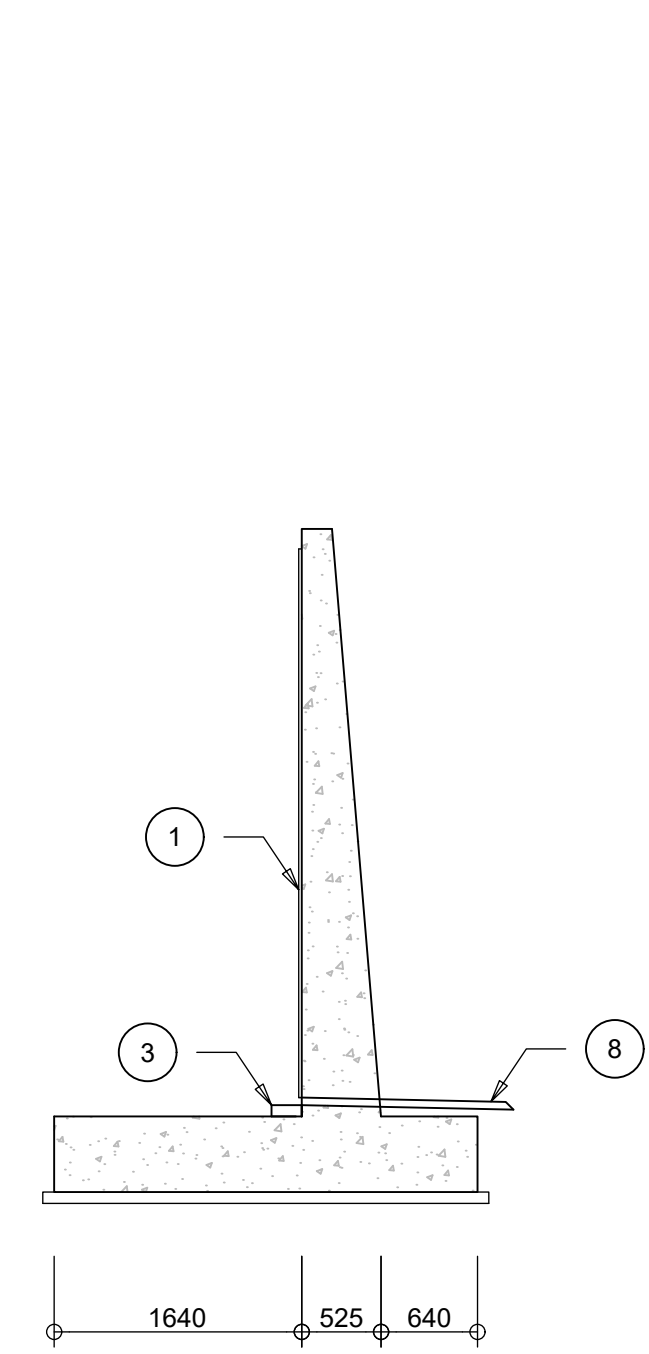
SECTION A-A  
SCALE 1:50



ELEVATION : SW2 WINGWALL  
SCALE 1:50



ELEVATION : SW2 WINGWALL  
SCALE 1:50



SECTION B-B  
SCALE 1:50

#### CONCRETE NOTES

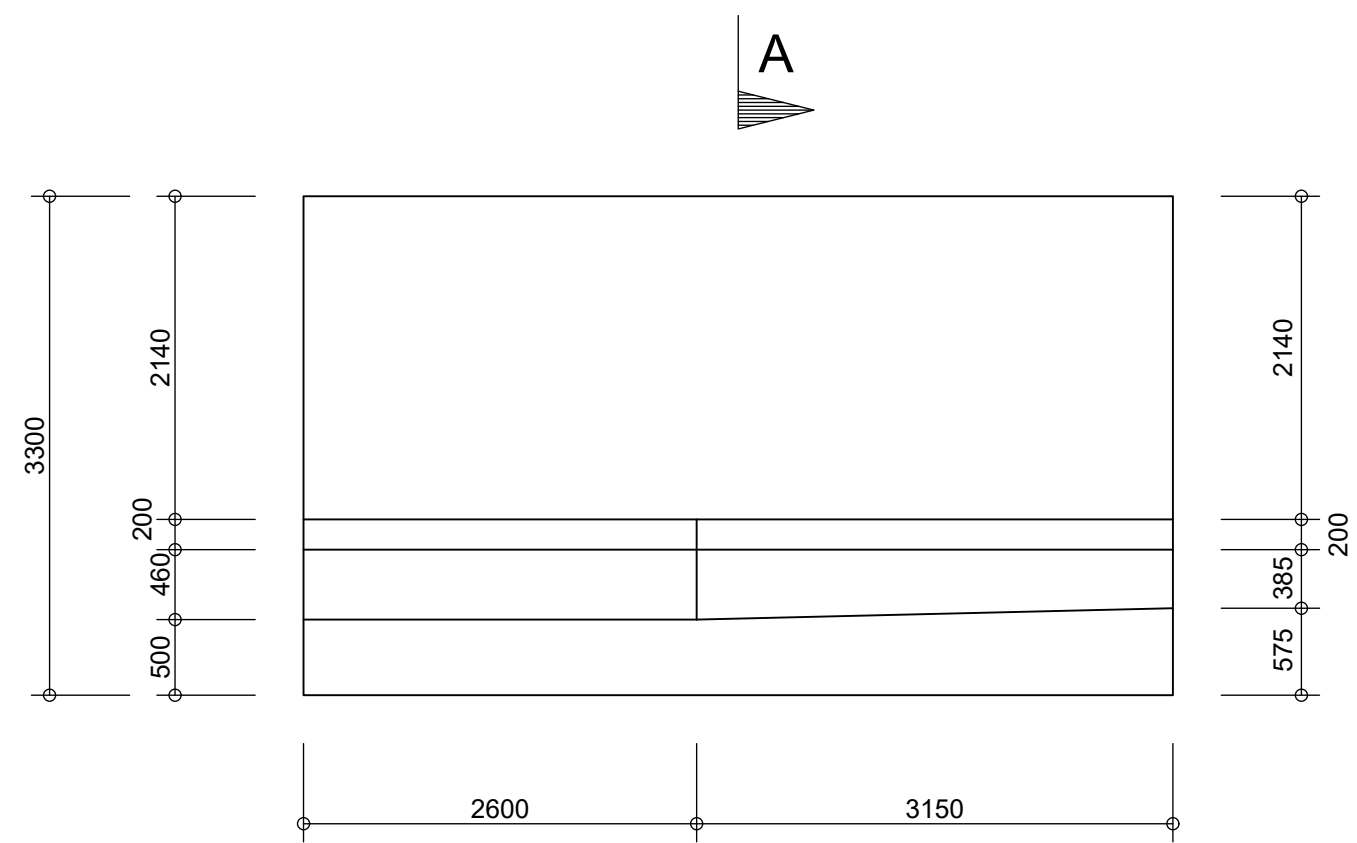
1. CONCRETE CLASS SHALL BE: D25/30-20
2. ALL EXTERNAL SHARP CORNERS TO HAVE A 20 x 20 mm CHAMFER.
3. CONCRETE FINISH :  
TYPE OF SURFACE : UNEXPOSED  
FORMED SURFACE : CLASS F1  
EXPOSED : CLASS F2  
TOP BEARING SEAT : N/A  
UNFORMED SURFACE : CLASS U1  
CLASS U2  
CLASS U2

#### DRAINAGE NOTES

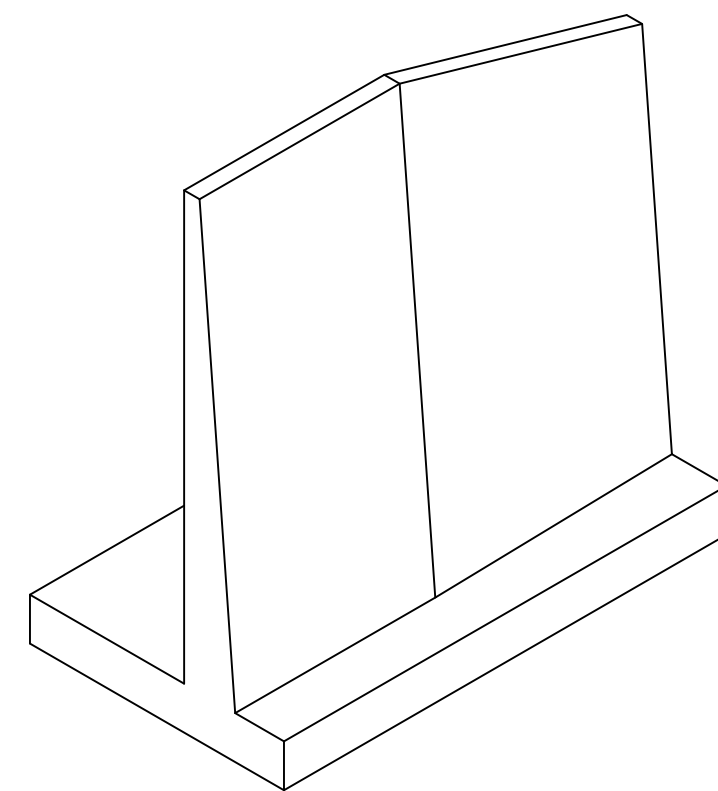
1. THE FILTER ELEMENTS SHALL CONSIST OF A DRAINAGE FLOWNET CORE COMPLETELY ENVELOPED IN A GEOTEXTILE JACKET.
2. THE GEOTEXTILE JACKET SHALL :  
- BE UV RESISTANT  
- RESIST THE PASSAGE OF 100 MICRONS OR LARGER SOIL PARTICLES.
3. PERFORATED DRAINAGE PIPES SHALL BE HDPE TO SANS B52782 OR CLASS 1 PITCH FIBRE PIPES TO SANS 921.
4. THE WEEPHOLES SHALL BE 50mm DIA. uPVC TO SANS 967.

#### LEGEND

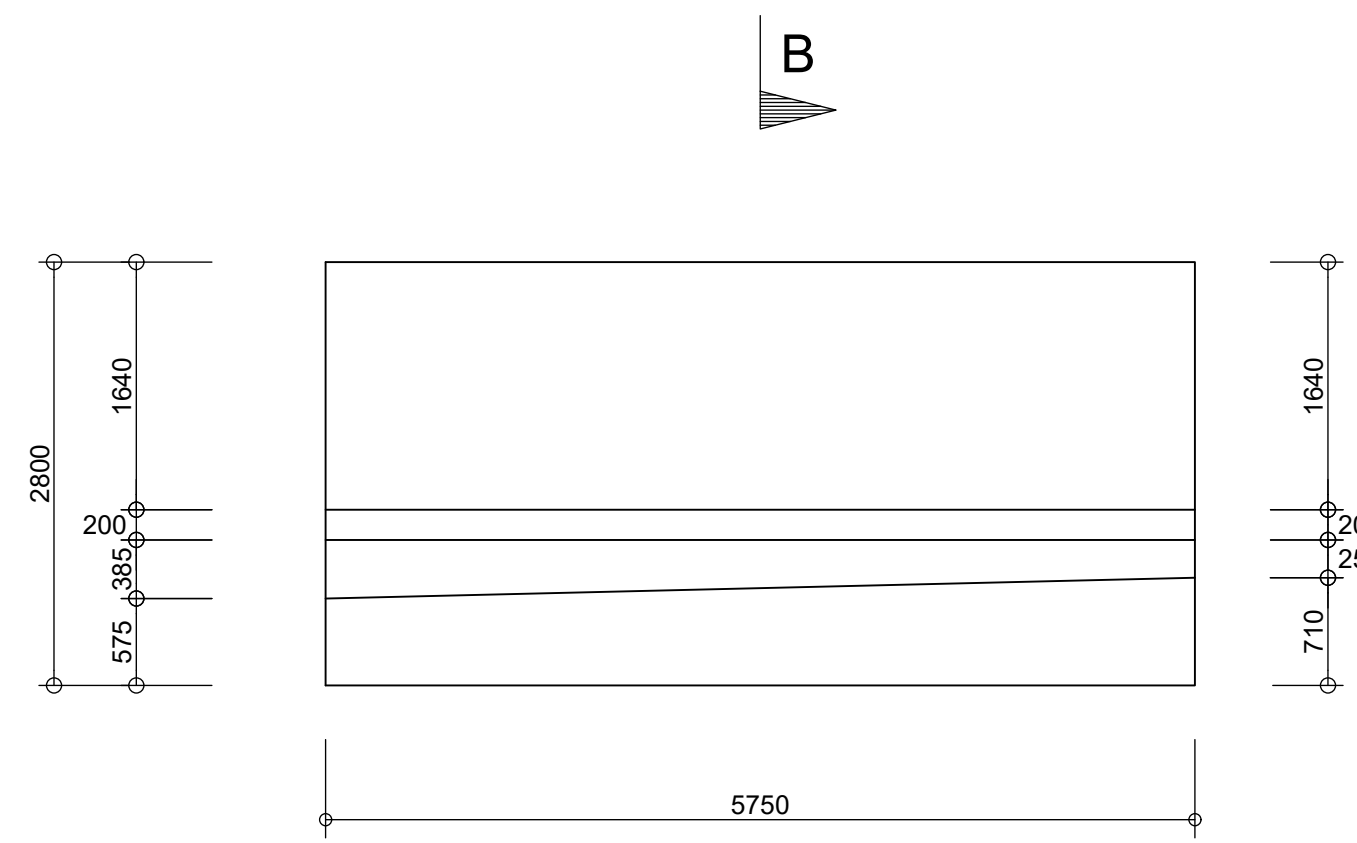
- 1 - 200mm WIDE FILTER ELEMENTS SECURED TO BACK FACE OF STRUCTURE AT 45° SLOPE.
- 2 - CONCRETE NAILS WITH 25 x 25mm HOOP IRON WASHERS TO SECURE FILTER ELEMENTS TO STRUCTURE AT ± 1 000mm CENTRES.
- 3 - CONCRETE SCREED TO GRADE AND LEVEL OF DRAINAGE PIPES PRIOR TO PLACING OF DRAINAGE PIPES.
- 4 - 65mm dia PERFORATED DRAINAGE PIPES WRAPPED IN GEOTEXTILE. THE GEOTEXTILE SHALL HAVE AN OVERLAP OF NOT LESS THAN 150mm AND BE TIED AT CENTRES NOT GREATER THAN 200mm.
- 5 - EXTENSION TO PERFORATED DRAINAGE PIPE DISCHARGING AT TOE OF ROAD EMBANKMENT OR INTO ROAD DRAINAGE.
- 6 - 3.15mm dia STAINLESS STEEL WIRE BARRIER.
- 7 - 50mm dia uPVC WEEPHOLES AT CENTRES NOT GREATER THAN 5.0m. THE CONTRACTOR SHALL ENSURE THAT THE WEEPHOLES ARE CLEAR AND APPROVED BY THE ENGINEER BEFORE THE FILTER ELEMENTS ARE INSTALLED.
- 8 - TEMPORARY POLYSTYRENE PLUG TO PREVENT INGRESS OF GROUT DURING PLACING OF THE CONCRETE.
- 9 - 200mm WIDE FILTER ELEMENT SECURED TO BACK FACE OF STRUCTURE AT SAME GRADE AS WEEPHOLES (ITEM 8).
- 10 - 200mm WIDE FILTER ELEMENT SECURED TO BACK FACE OF STRUCTURE AT SAME GRADE AS WEEPHOLES (ITEM 8).



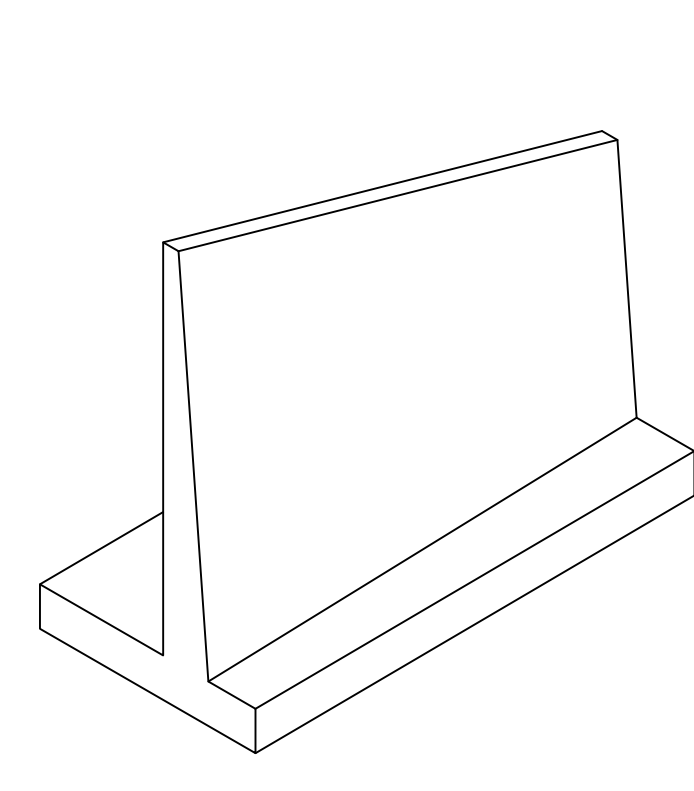
PLAN : SW1 WINGWALL  
SCALE 1:50



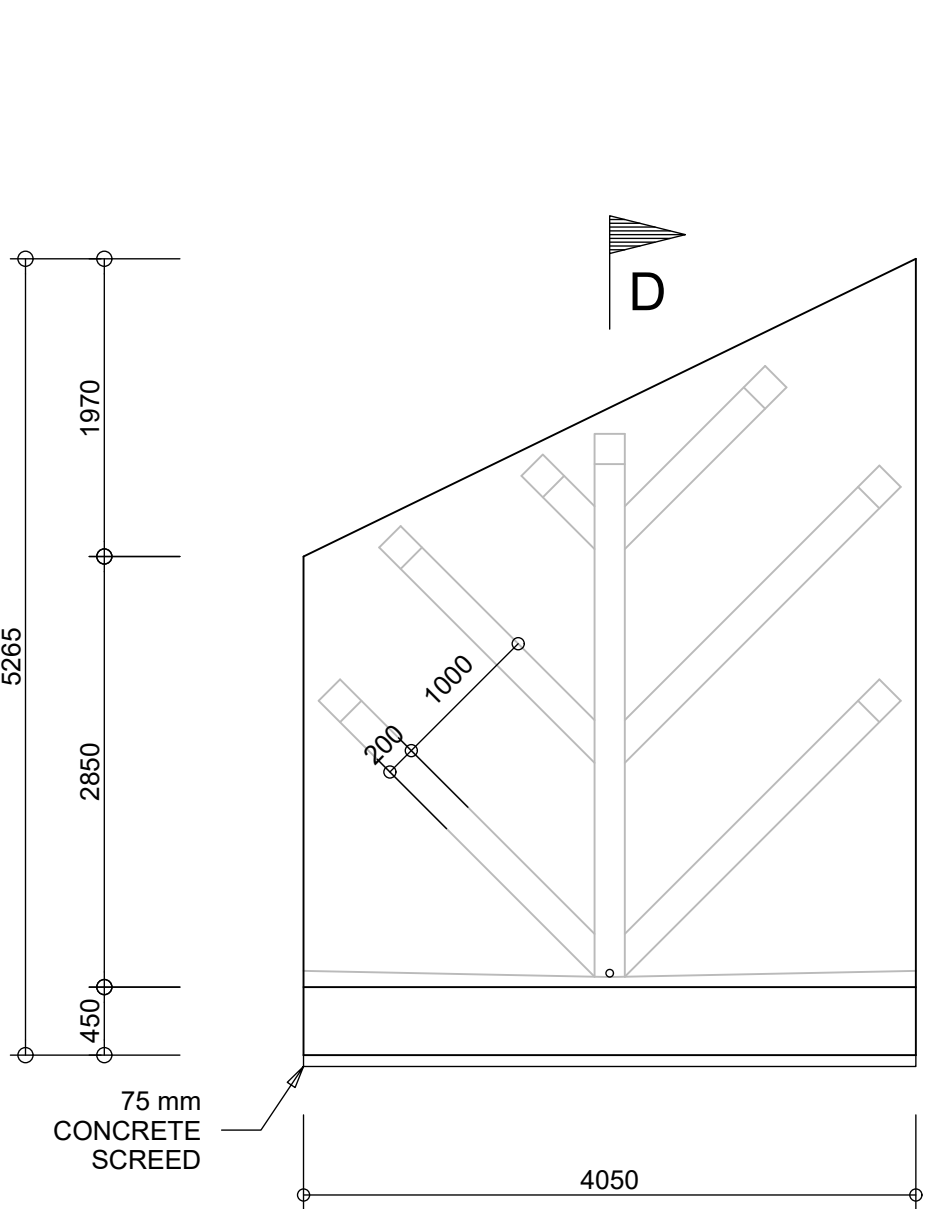
ISOMETRIC VIEW  
N.T.S.



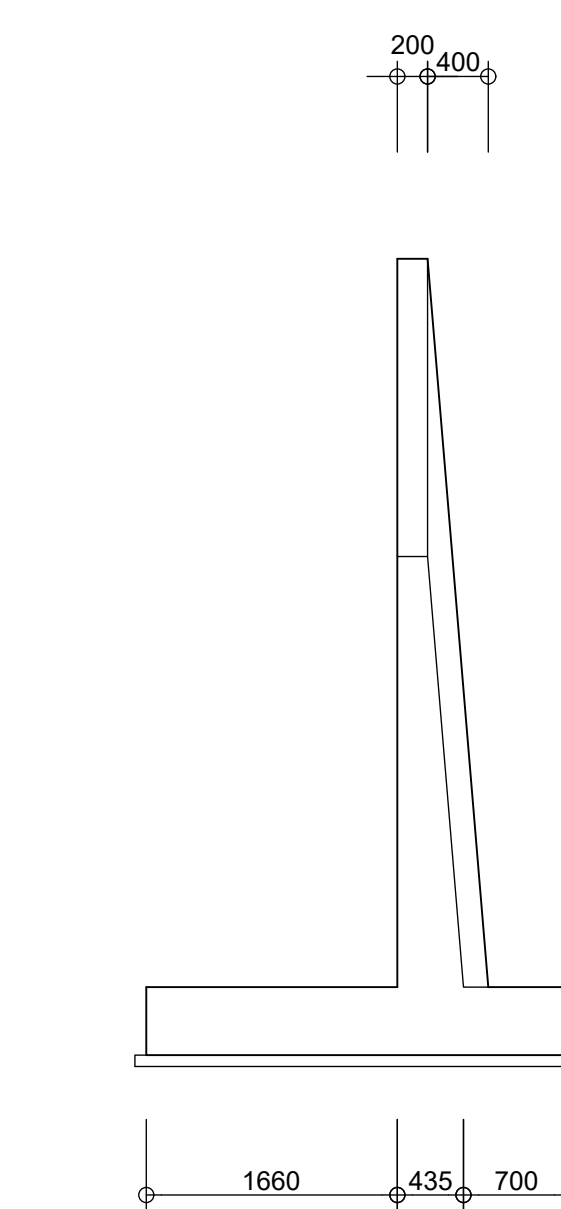
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SCALE 1:50



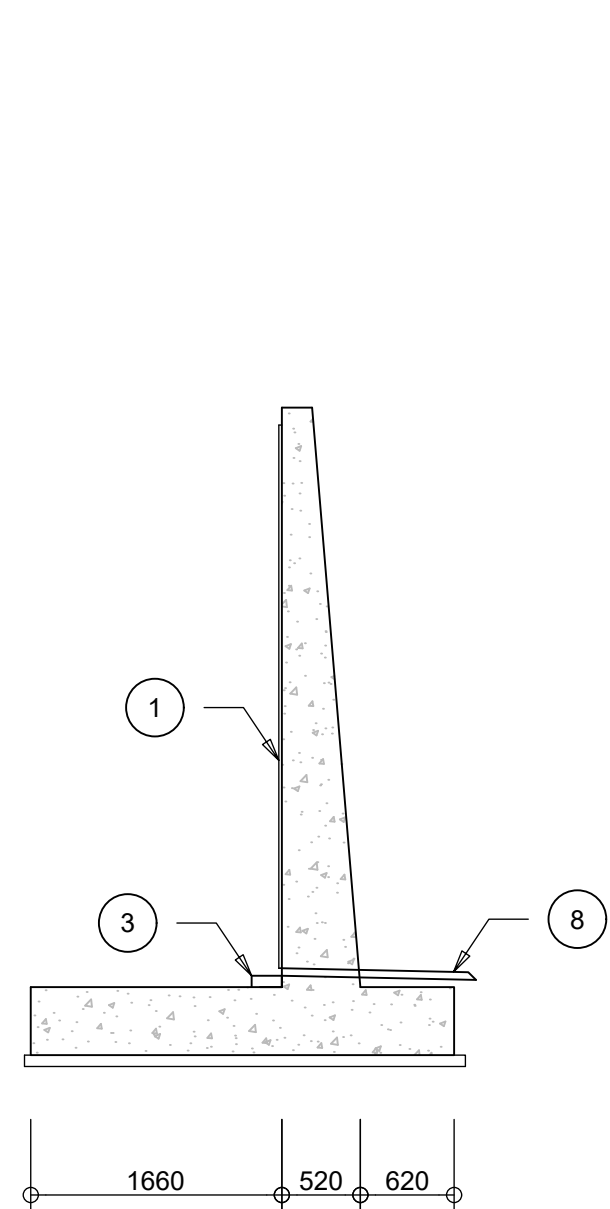
ISOMETRIC VIEW  
N.T.S.



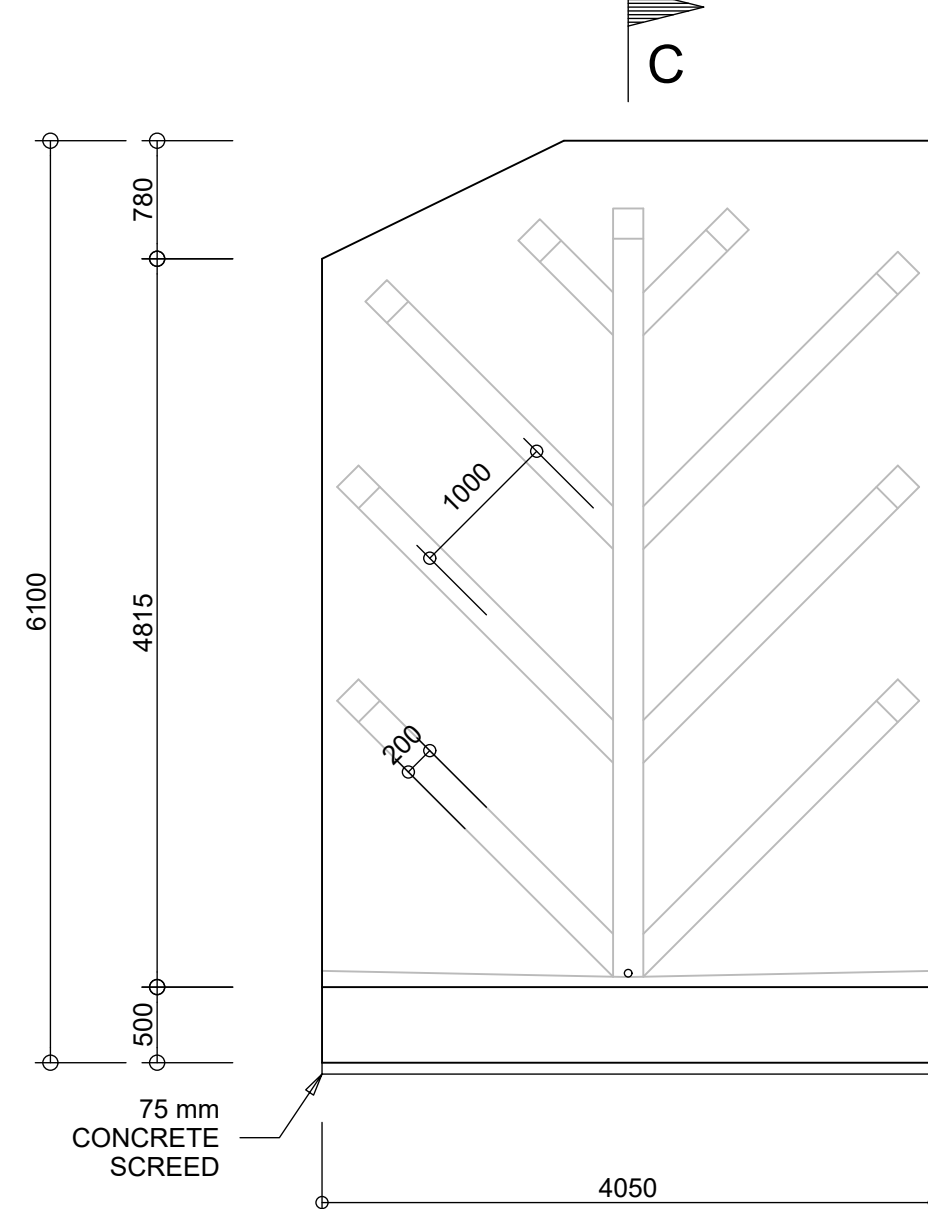
ELEVATION : NW2 WINGWALL  
SCALE 1:50



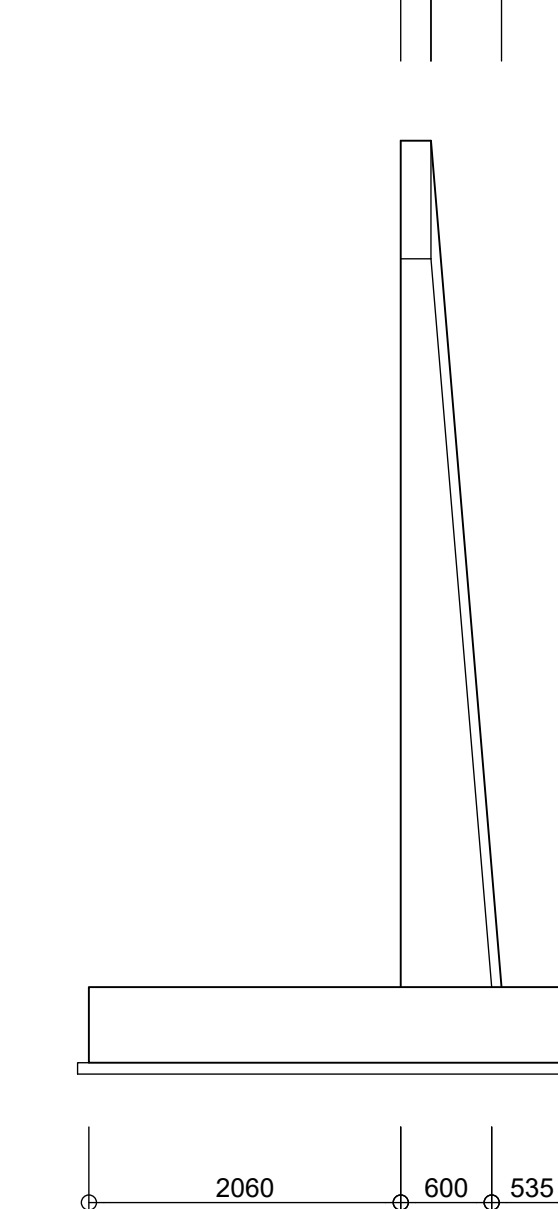
ELEVATION : NW2 WINGWALL  
SCALE 1:50



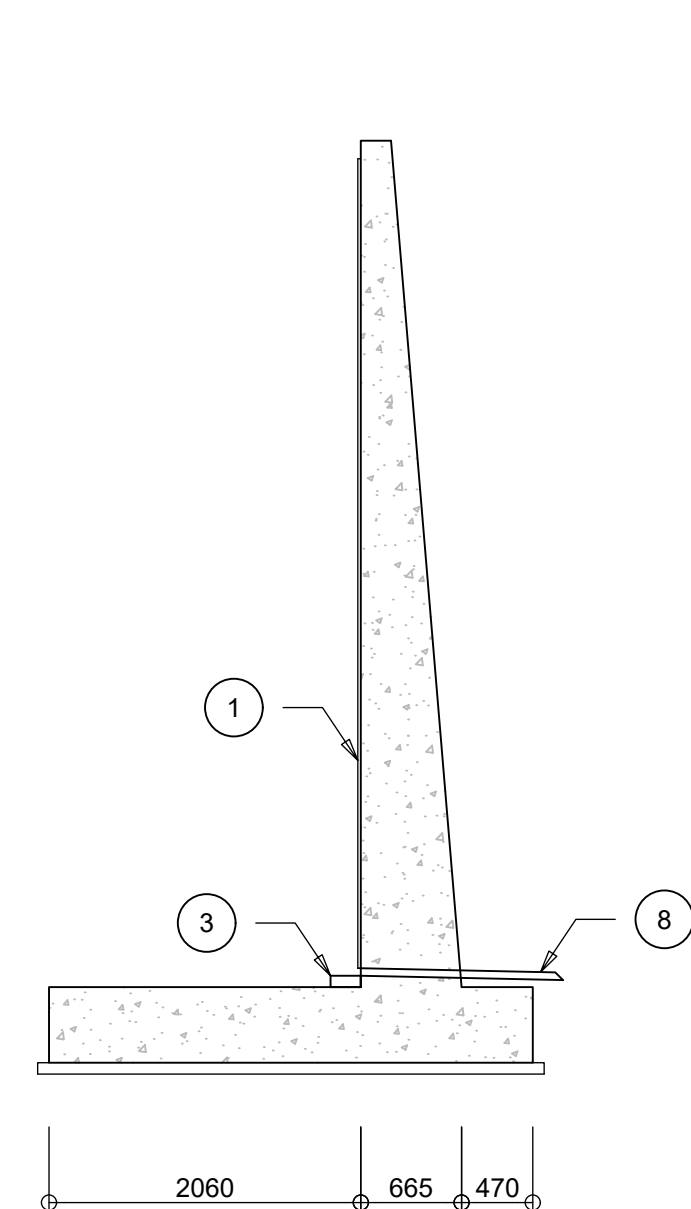
SECTION D-D  
SCALE 1:50



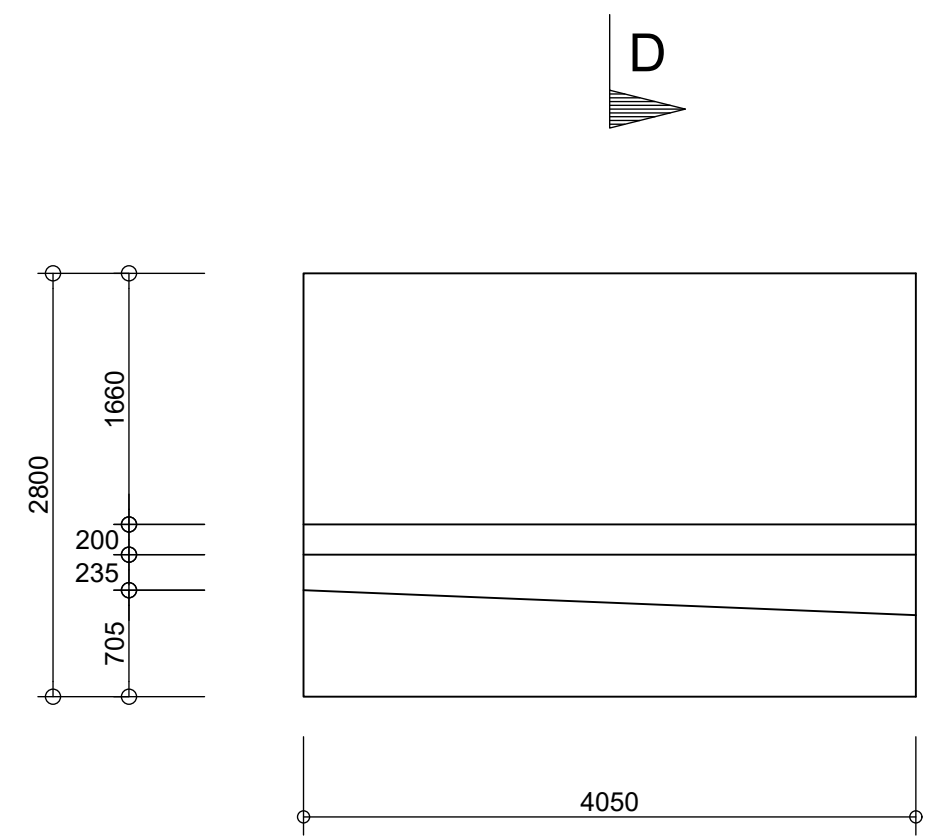
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SCALE 1:50



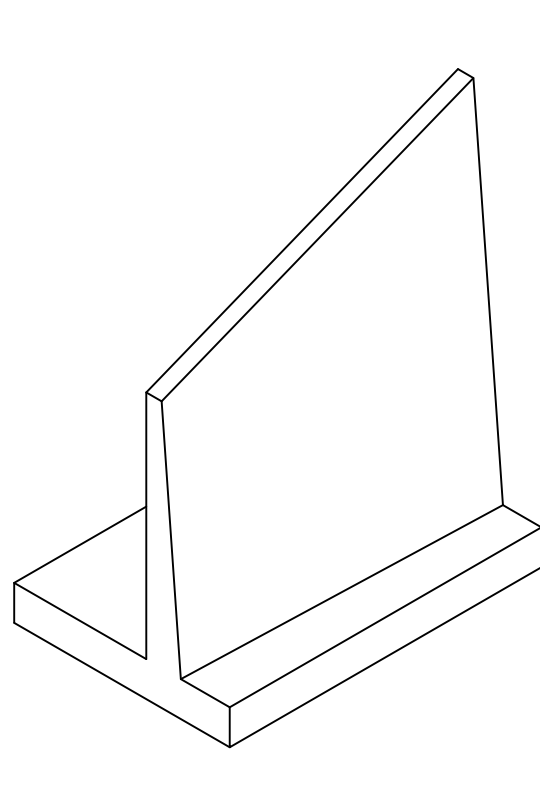
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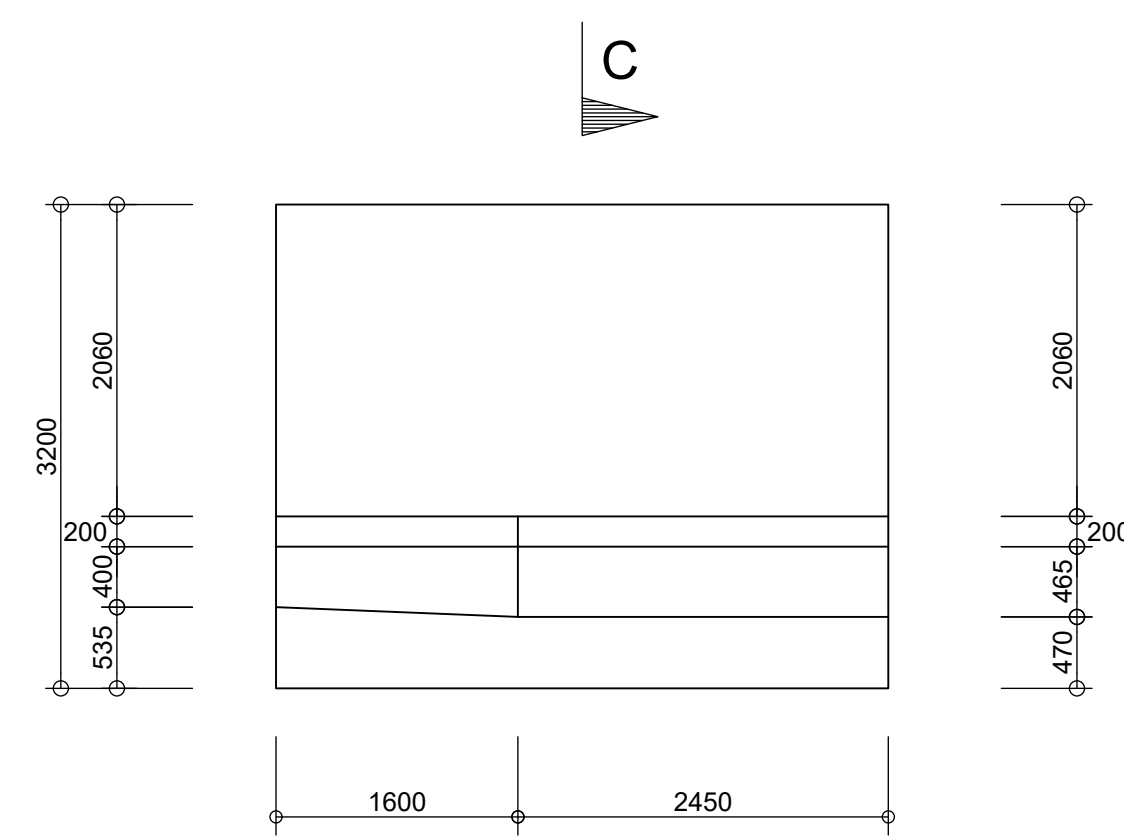
SECTION C-C  
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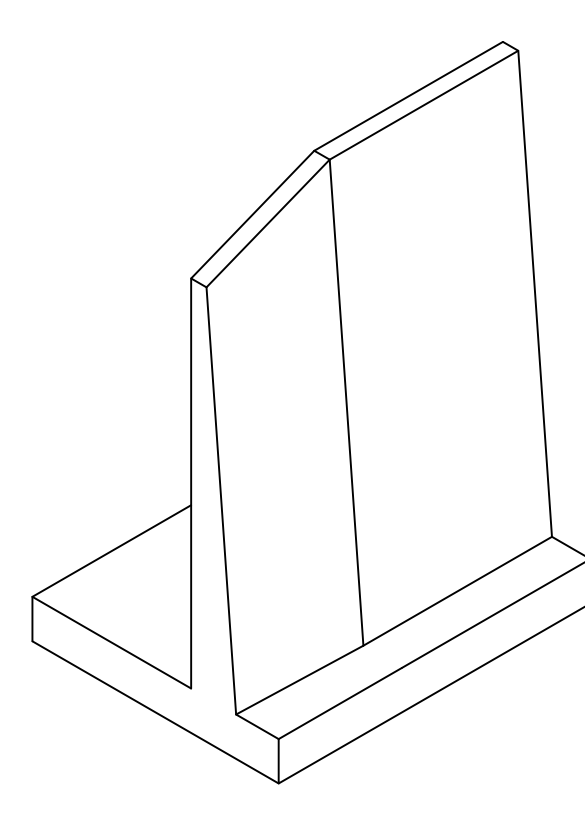
PLAN : NW2 WINGWALL  
SCALE 1:50



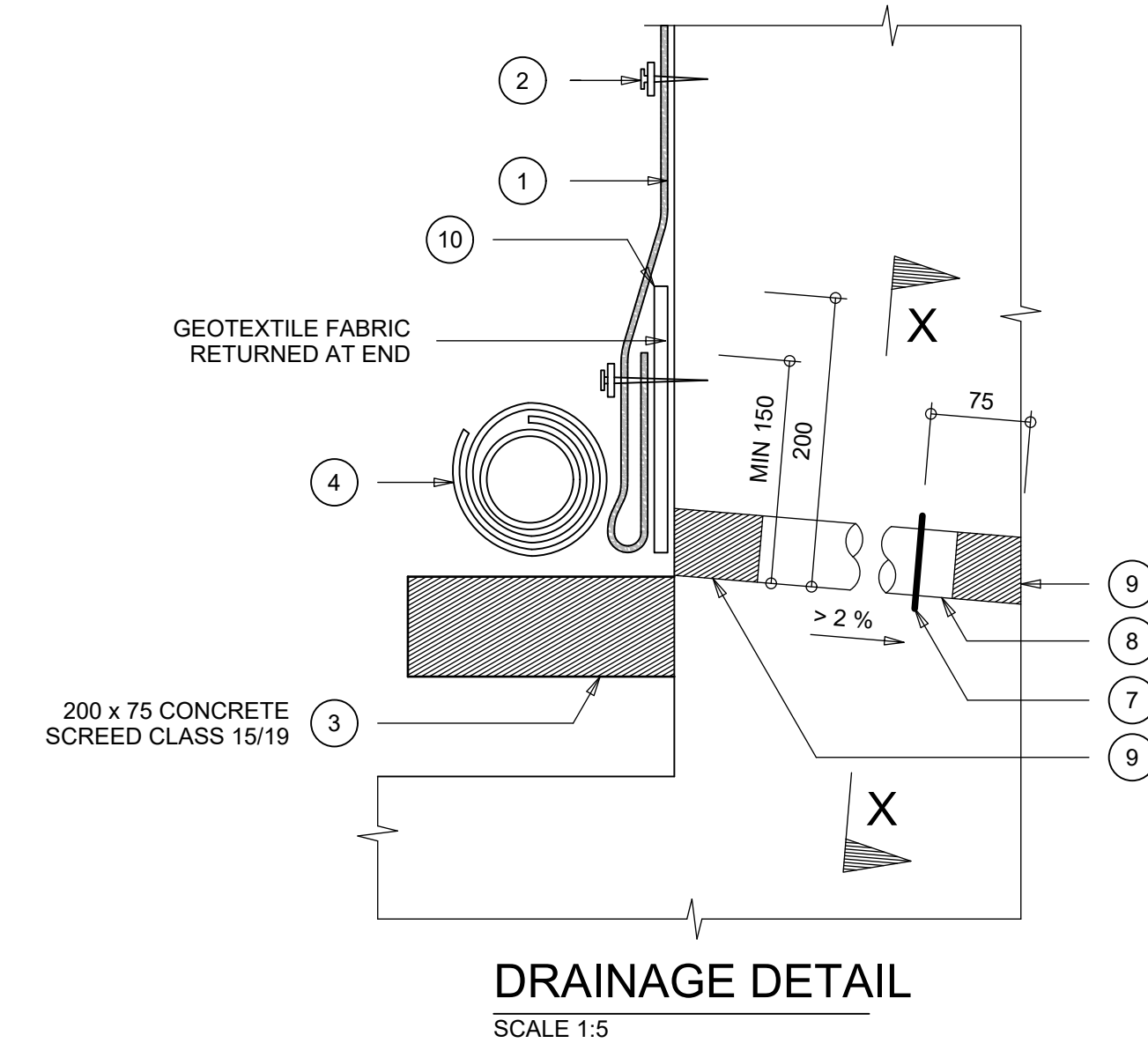
ISOMETRIC VIEW  
N.T.S.



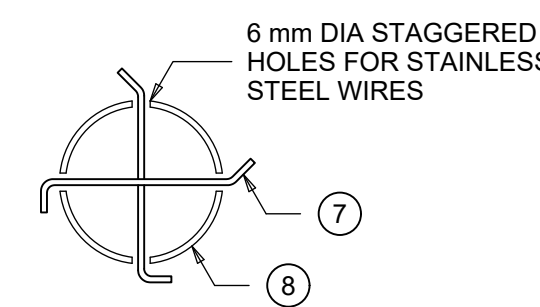
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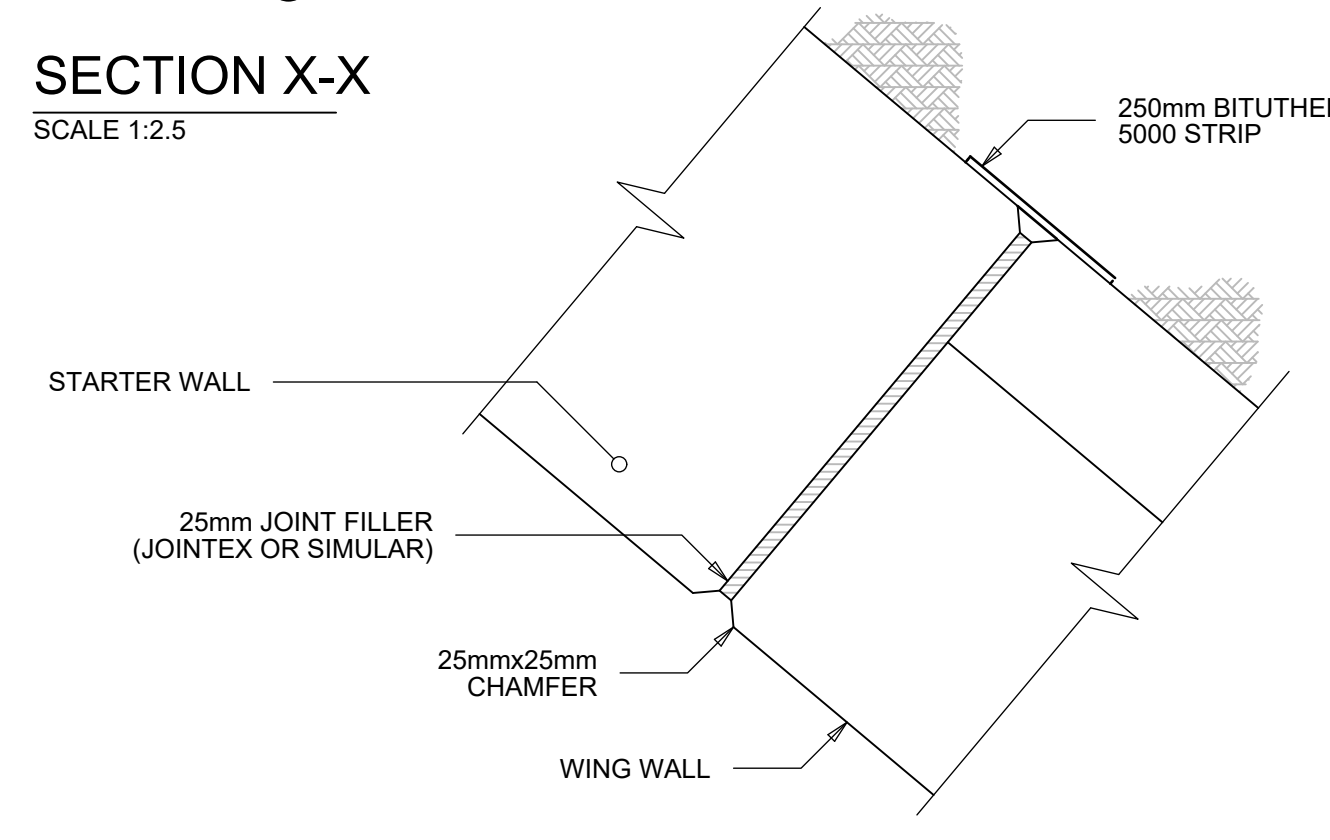
ISOMETRIC VIEW  
N.T.S.



DRAINAGE DETAIL  
SCALE 1:5



SECTION X-X  
SCALE 1:2.5



TYPICAL JOINT SECTION  
SCALE 1:10

FOR TENDER  
PURPOSES ONLY

			CONSTRUCTION RECORD (AS-BUILT)						DESIGNED BY			CONSULTANT APPROVAL			HEAD OFFICE						EASTERN REGION			ACCEPTANCE			REHABILITATION OF NATIONAL ROUTE N11 SECTION 13 FROM R518 INTERSECTION(km 8.340) TO GROOTSANDSLOOT RIVER(km 24.280)			PROJECT NUMBER			NRA N.011-130-2010/1					
			WORKS CONTRACT ENGINEER												48 Tambora Avenue Administrative Review Purposes Only Val de Grace Pretoria 0184			58 van Eck Place Pietermaritzburg 3201			THIS ACCEPTANCE IS FOR PROCEDURAL AND ADMINISTRATIVE REVIEW PURPOSES ONLY AND DOES NOT ATTRACT LEGAL LIABILITY OR LIABILITY OF ANY KIND FROM WHATSOEVER CAUSE OR HOWEVER ARISING			DRAWING LOCATION DATA						ROUTE			N11			N11		
			Name : Prof. Reg. No. : Date :						Prof. Reg. No.  CHECKED BY			Name : Prof. Reg. No. : Date : 11/03/2021			PO Box 415 Pretoria 0001 South Africa			PO Box 100410 Scottsville 3209						DITHOKENG RIVER BRIDGE B0270 AT km 15.606			DRAWING km DISTANCE			13			13					
			SANRAL PROJECT MANAGER						NAME																		DRAWING TYPE			15.58			15.62					
									NAME																		BRIDGE/STRUCTURE No.			B0270								
V0 11/03/2021			ORIGINAL VERSION						NAME																		CONSULTANT DRAWING No.			BCD/B0270/11								
No. DATE			REVISION			CONSULT. ENG.			Name : Date :			Prof. Reg. No. DRAWN BY			Name : Date :			Tel: (012) 844 8000			Tel: (033) 392 8100			for the SA NATIONAL ROADS AGENCY SOC LTD. Date:			SCALE : AS SHOWN			SHEET 11 OF 22			SANRAL DOCUMENT #			V0		
									All dimensions to be checked on site before any work is put in hand. Refer any discrepancies to the engineer.  Copyright reserved																													