

Democratic Socialist Republic of Sri Lanka

Ministry of Defence



National Building Research Institute (NBRI)



Reduction of Landslide Vulnerability by Mitigation Measures Project (RLVMMP)

funded by Asian Infrastructure Investment Bank (AIIB)

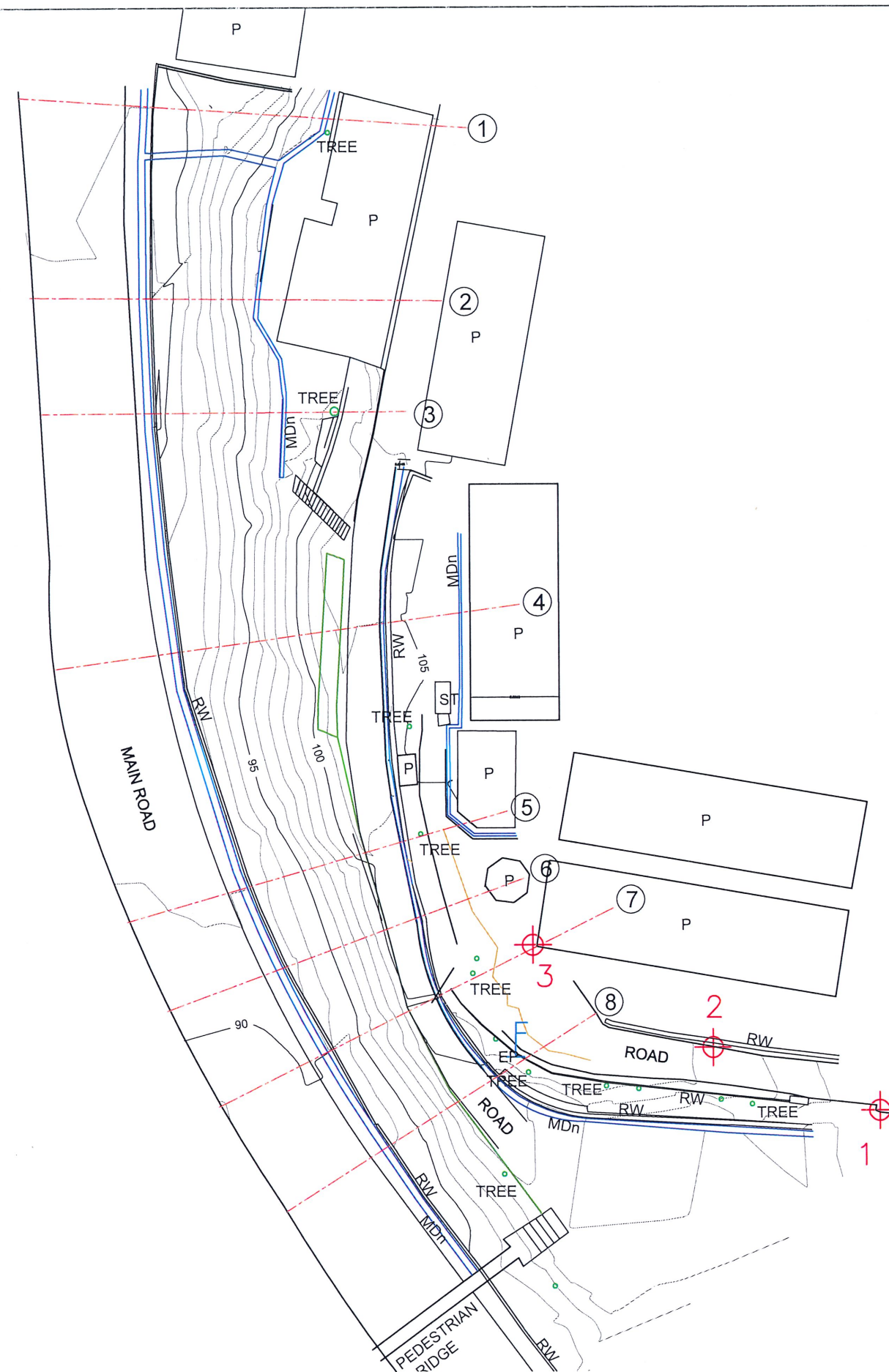
(Loan No: L0124A)

DRAWINGS

Rectification of Unstable Slopes at Vidyarthi College and Pushpadana Girl's College (Site No. 244, 245) in Kandy District
Under Package 10R of Reduction of Landslide Vulnerability by Mitigation Measures Project (RLVMMP)

Contract No: RLVMMP/WORKS/10R

July 2026



REFERENCE

ELECTRIC POST	EP
SECTIONS	
TREE	
PERMANENT BUILDING	P
SCAR	
SEPTIC TANK	ST
ROCK	
MASONRY DRAIN	MDn
REFERENCE POINT	

N	E	Z	PN
3014.281	4003.936	100.001	1
3019.984	3988.81	102.705	2
3029.288	3972.44	104.609	3

EMPLOYER



DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA
MINISTRY OF DEFENCE
NATIONAL BUILDING RESEARCH ORGANISATION
No. 99/1, JAWATTA ROAD,
COLOMBO - 05



DESIGNER

NATIONAL BUILDING RESEARCH ORGANISATION
No. 99/1, JAWATTA ROAD,
COLOMBO - 05

REV	DATE	REVISION DESCRIPTION	APPROVAL

PROJECT TITLE

REDUCTION OF LANDSLIDE VULNERABILITY
BY MITIGATION MEASURES PROJECT
VIDYARTHA COLLEGE
LOCATION 01
KANDY

TITLE

SURVEY PLAN

SCALE 1:500

DATE 25.03.2026

PROJECT / DRAWING No.

RLVMP/WORKS/NCB/PH II/224/L 01/DR 01

REVISION

DESCRIPTION

SURVEYED

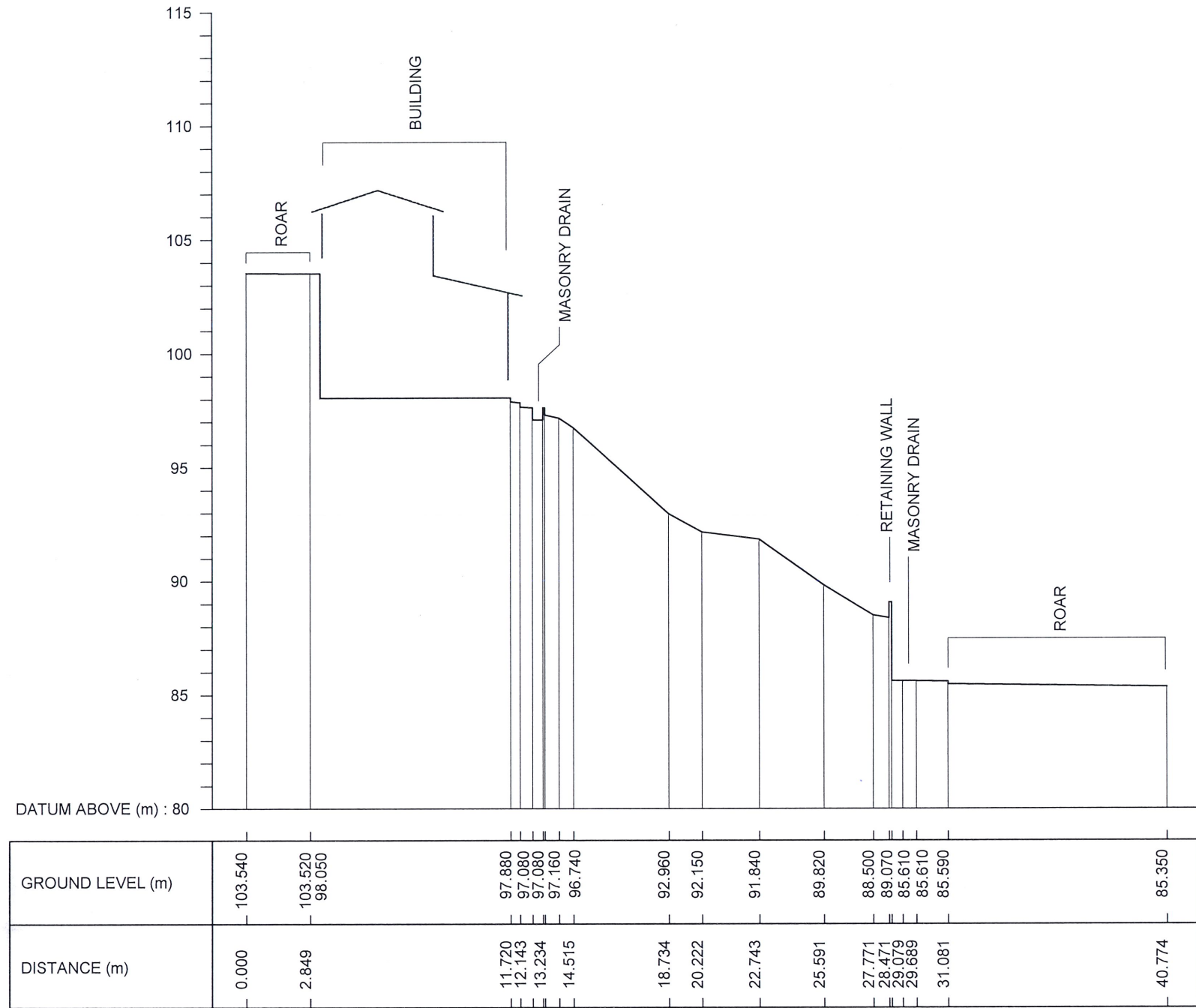
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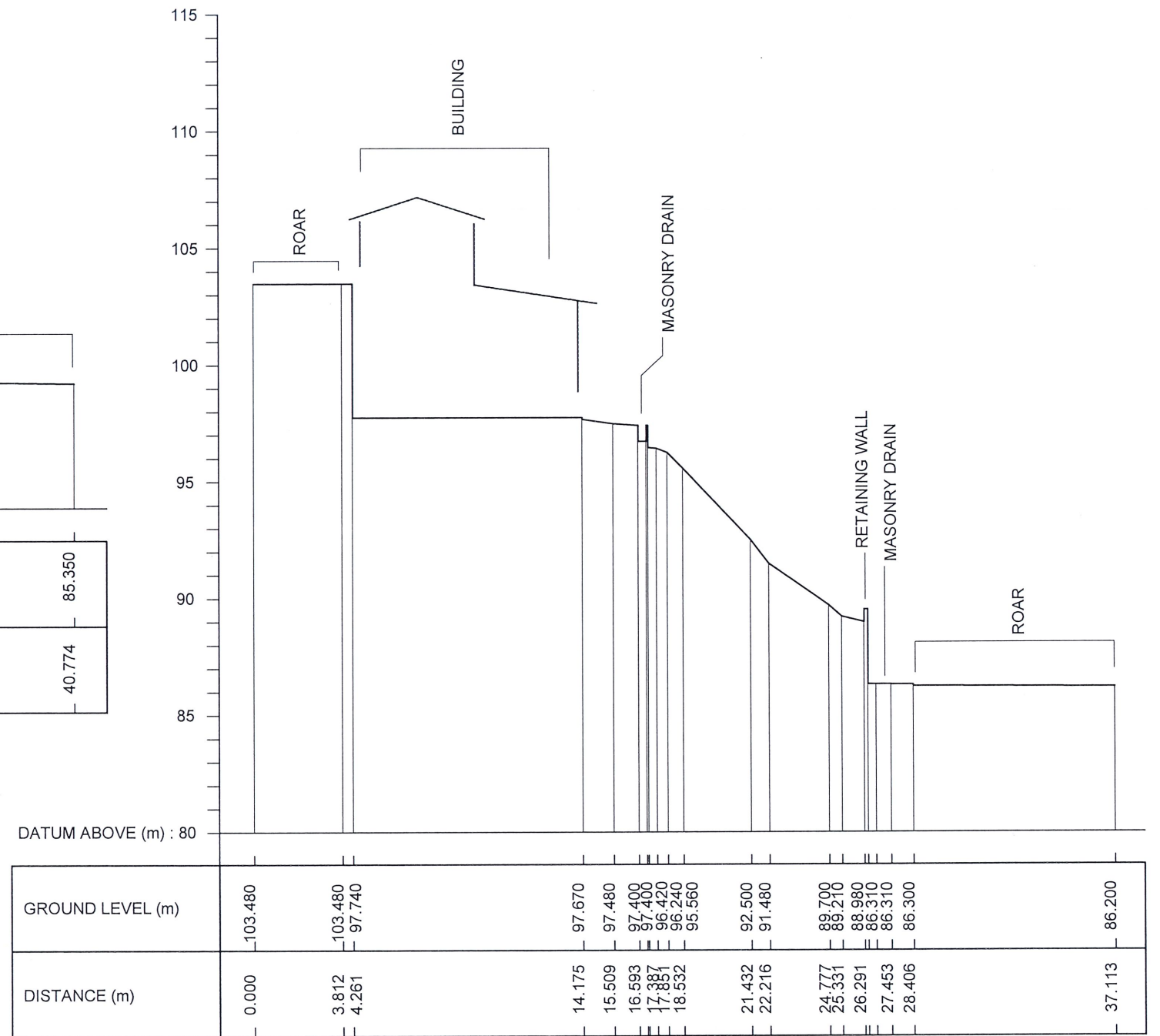
W.L.P.N.N WIJESINGHE

N.S.D.M.D. PERERA

SIGNATURE

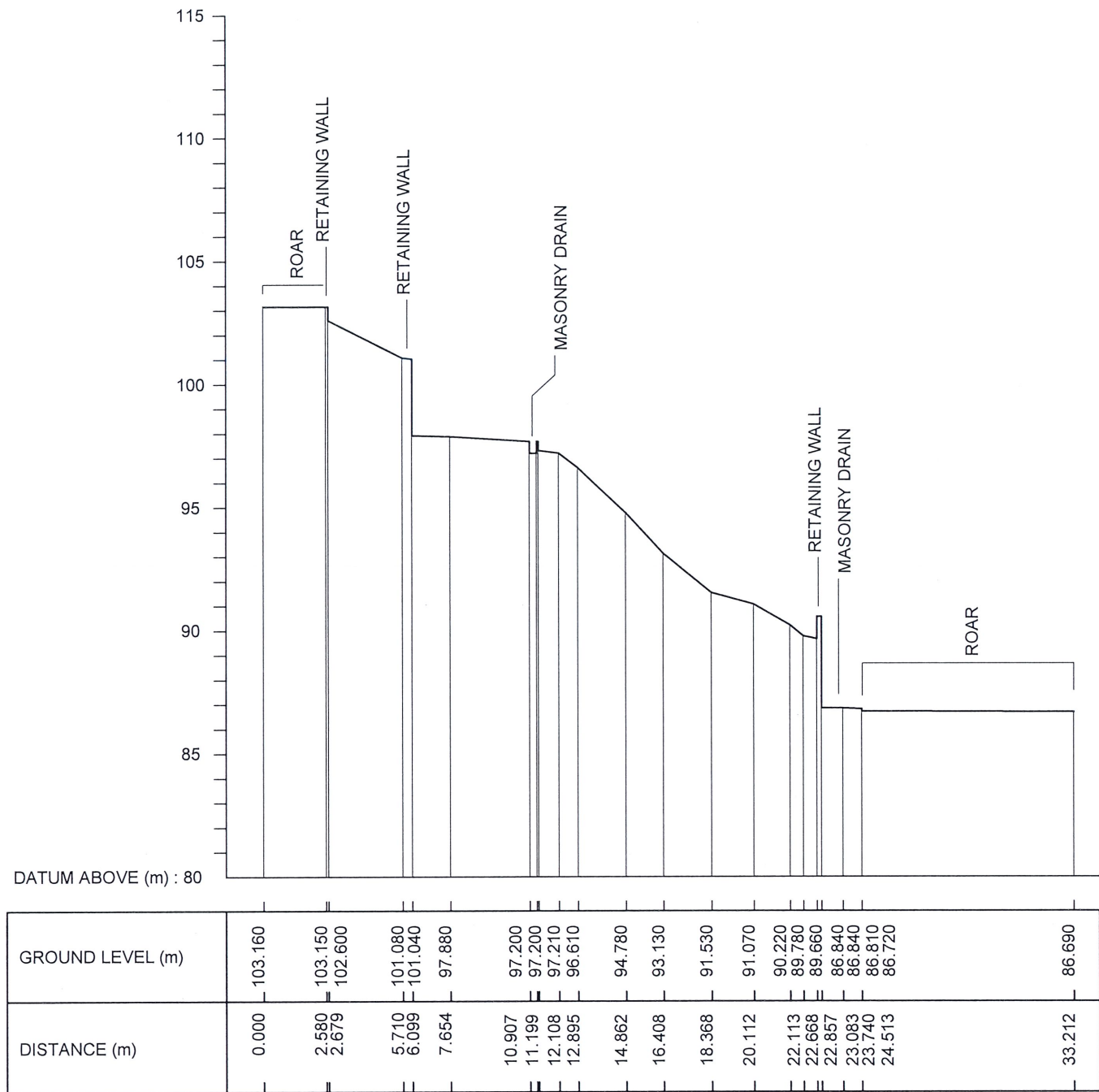


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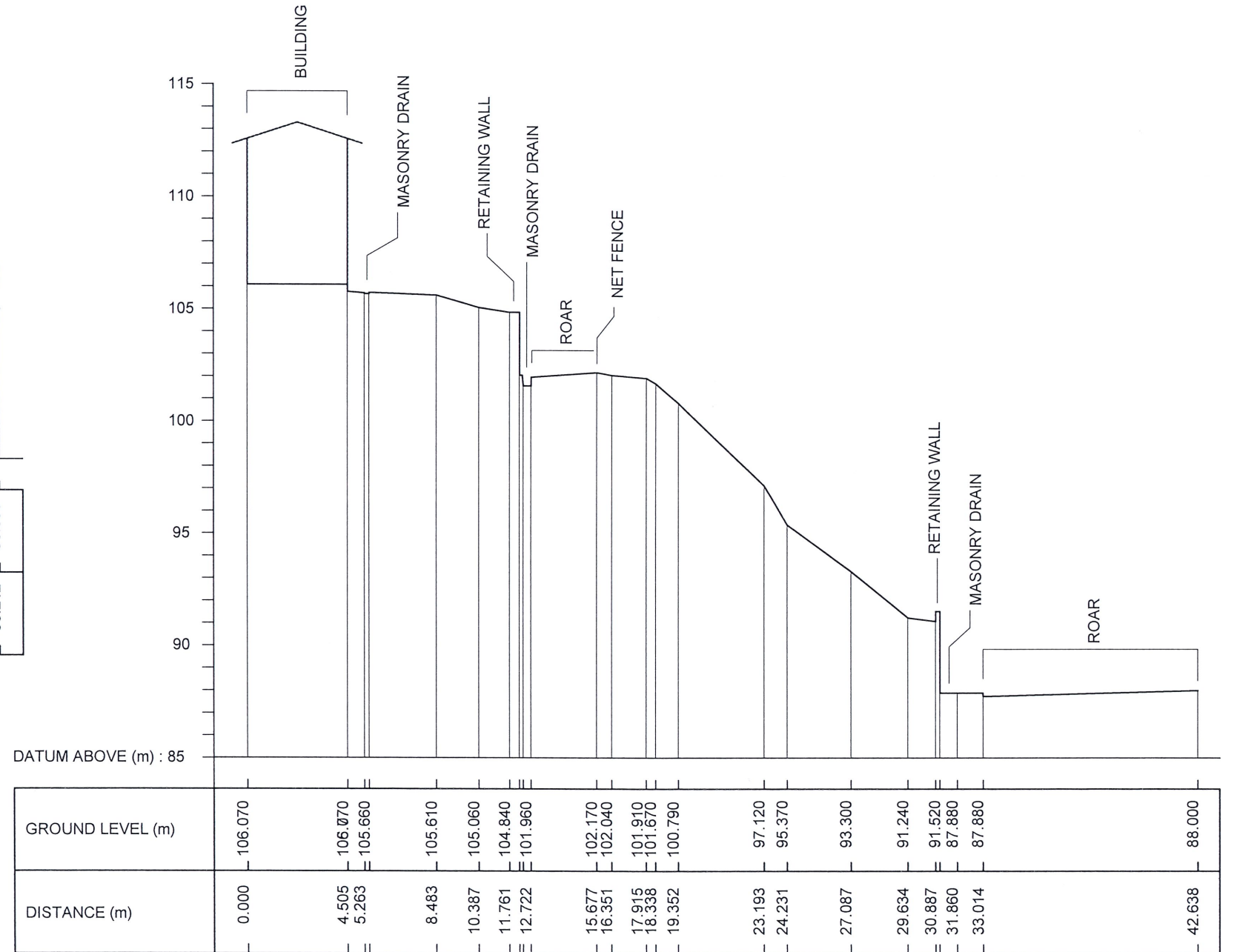


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 EMPLOYER DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA MINISTRY OF DEFENCE NATIONAL BUILDING RESEARCH ORGANISATION No. 99/1, JAWATTA ROAD, COLOMBO - 05	 DESIGNER NATIONAL BUILDING RESEARCH ORGANISATION No. 99/1, JAWATTA ROAD, COLOMBO - 05	REV	DATE	REVISION DESCRIPTION	APPROVAL	PROJECT TITLE REDUCTION OF LANDSLIDE VULNERABILITY BY MITIGATION MEASURES PROJECT VIDYARTHA COLLEGE LOCATION 01 KANDY	TITLE EXISTING CROSS SECTIONS SCALE 1:250 DATE 25.03.2026 PROJECT / DRAWING No. RLVMMMP/WORKS/NCB/PH II/224/L 01/DR 02a REVISION	DESCRIPTION	NAME	SIGNATURE
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								CHECKED	N.S.D.M.D. PERERA	

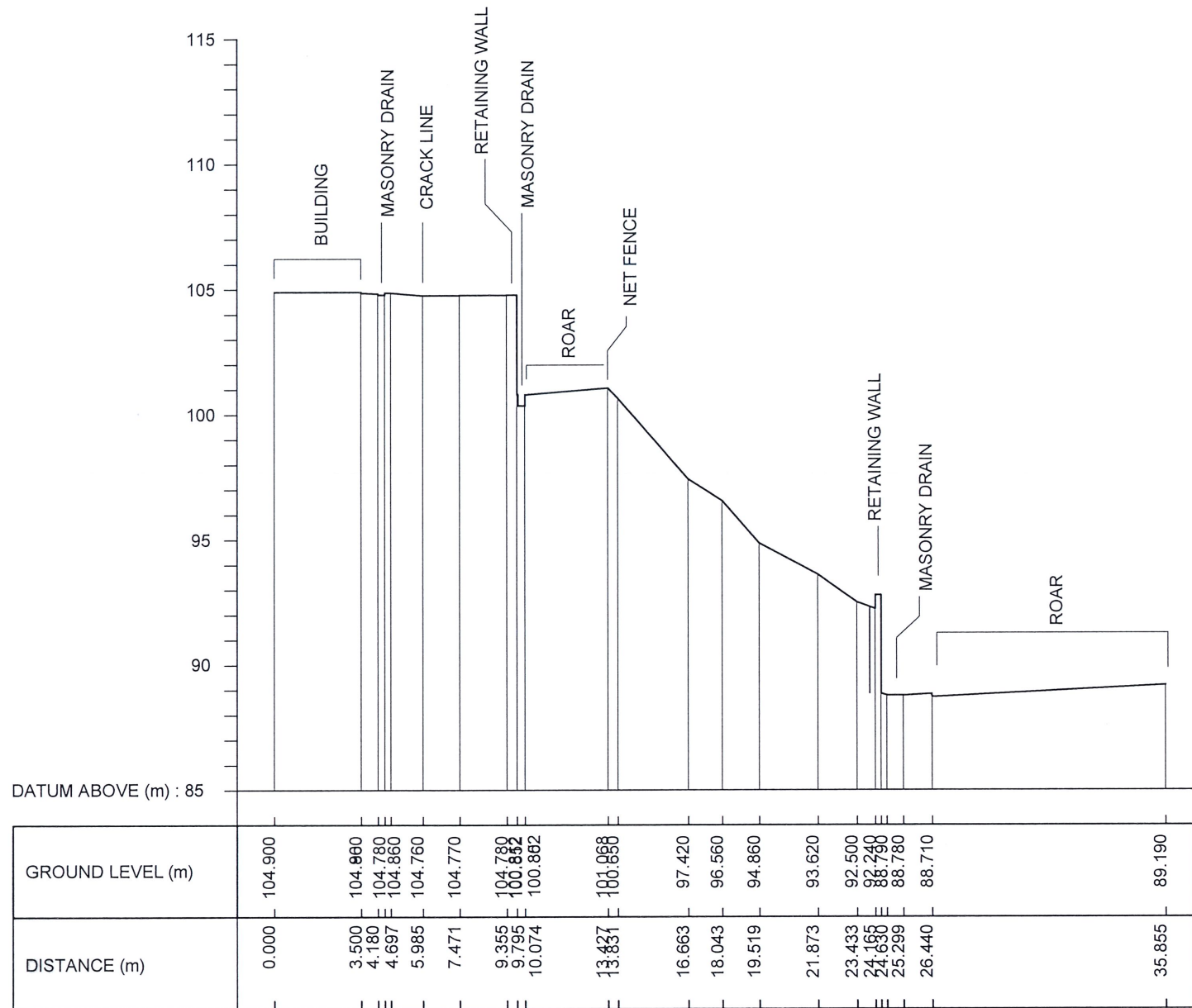


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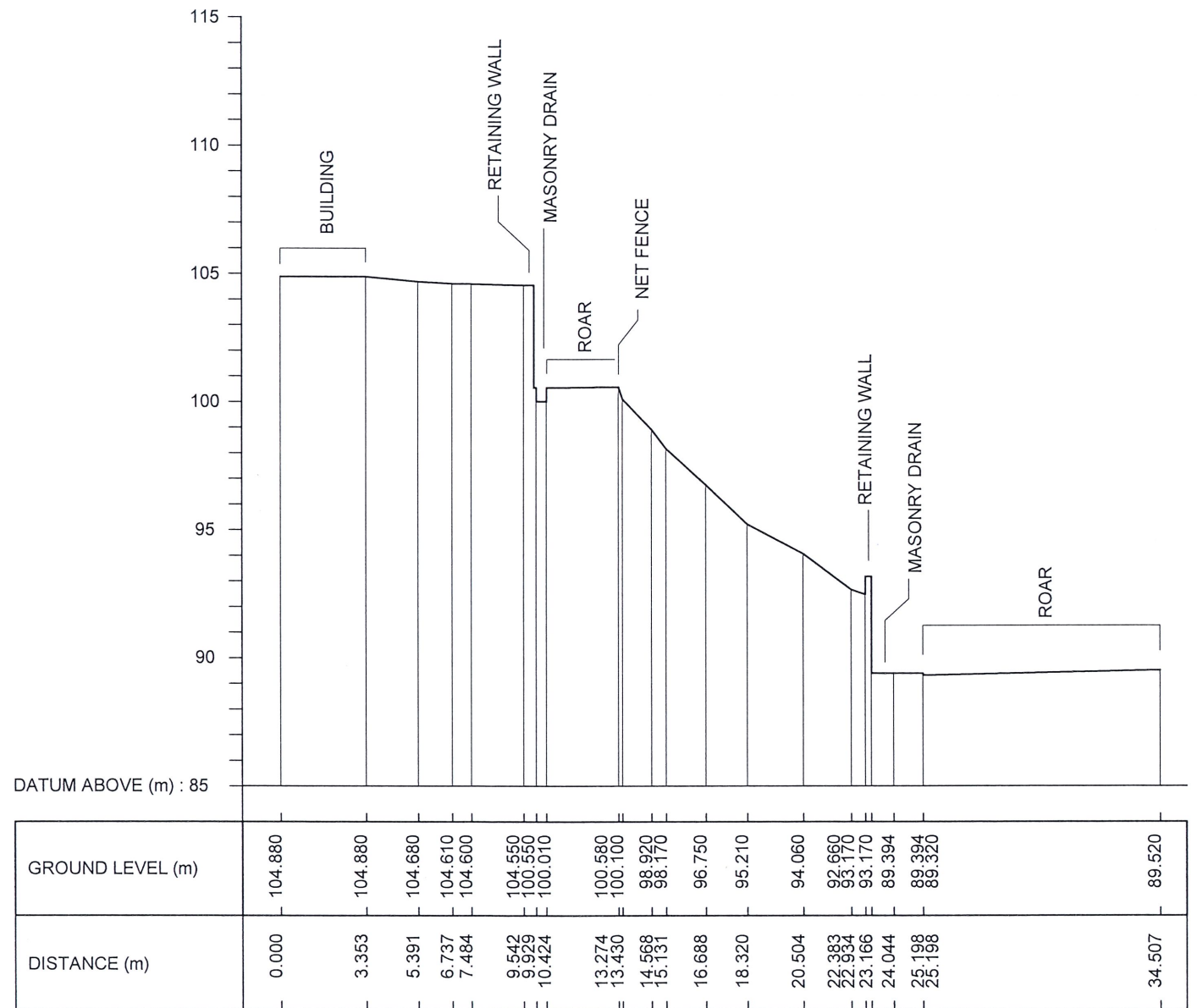


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 EMPLOYER DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA MINISTRY OF DEFENCE NATIONAL BUILDING RESEARCH ORGANISATION No. 99/1, JAWATTA ROAD, COLOMBO - 05	 DESIGNER NATIONAL BUILDING RESEARCH ORGANISATION No. 99/1, JAWATTA ROAD, COLOMBO - 05	REV	DATE	REVISION DESCRIPTION	APPROVAL	PROJECT TITLE REDUCTION OF LANDSLIDE VULNERABILITY BY MITIGATION MEASURES PROJECT VIDYARTHA COLLEGE LOCATION 01 KANDY	TITLE EXISTING CROSS SECTIONS	DESCRIPTION	NAME	SIGNATURE
								SURVEYED	W.L.P.N.N WIJESINGHE	
								CHECKED	N.S.D.M.D. PERERA	
						SCALE	1:250	DATE	25.03.2026	
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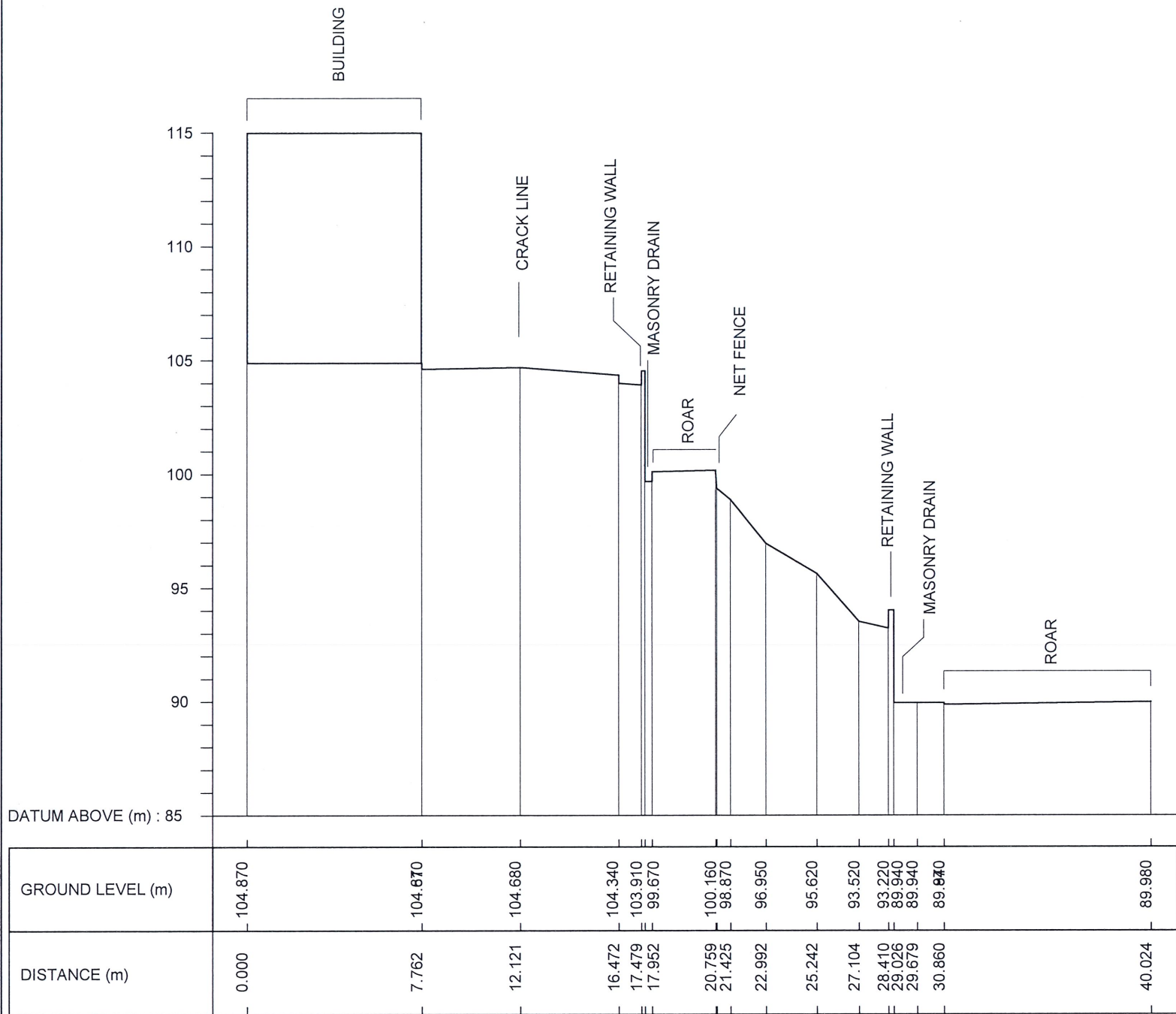


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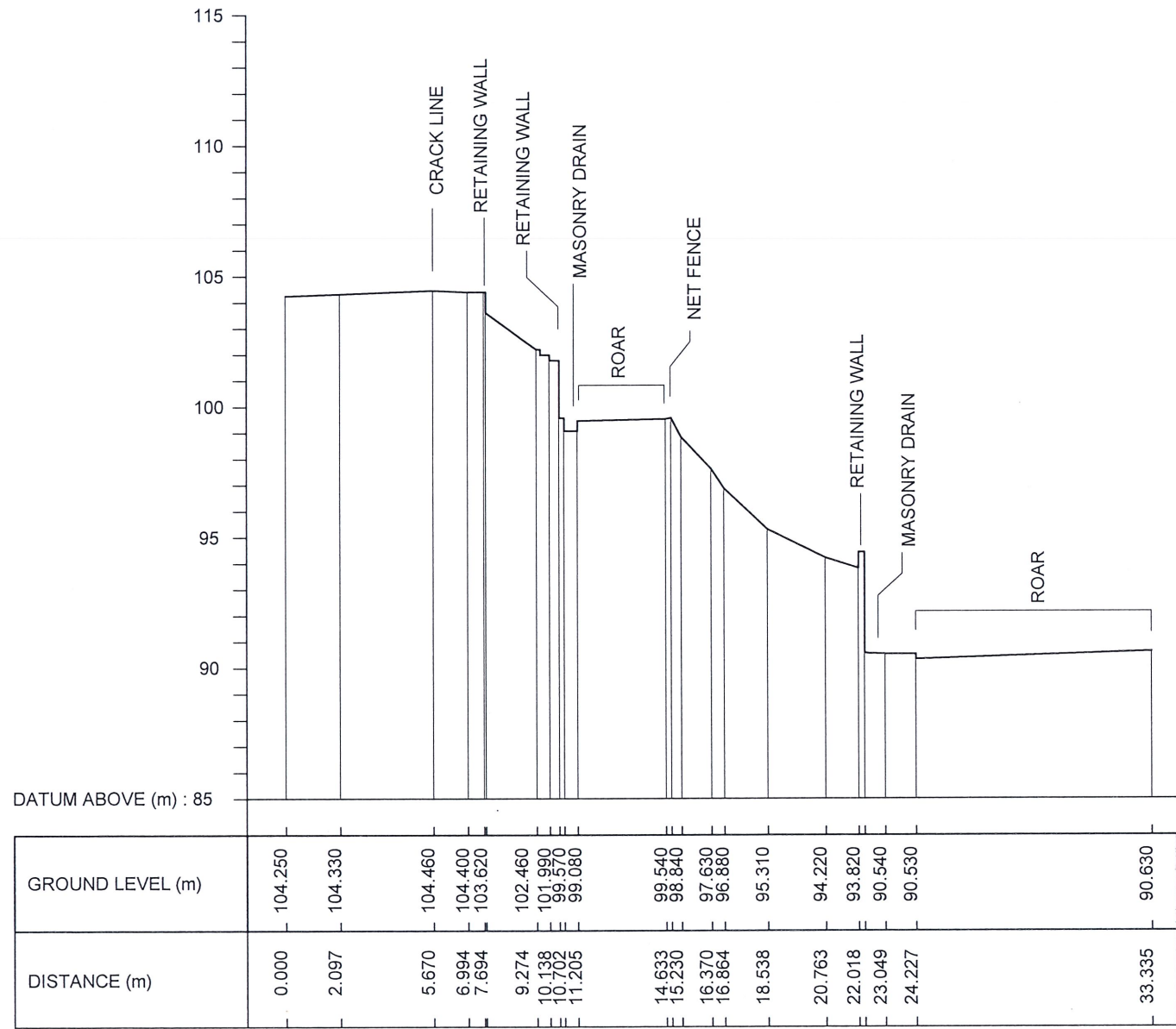


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 DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA MINISTRY OF DEFENCE NATIONAL BUILDING RESEARCH ORGANISATION No. 99/1, JAWATTA ROAD, COLOMBO - 05	 NATIONAL BUILDING RESEARCH ORGANISATION No. 99/1, JAWATTA ROAD, COLOMBO - 05	REV	DATE	REVISION DESCRIPTION	APPROVAL	PROJECT TITLE REDUCTION OF LANDSLIDE VULNERABILITY BY MITIGATION MEASURES PROJECT VIDYARTHA COLLEGE LOCATION 01 KANDY	TITLE EXISTING CROSS SECTIONS SCALE 1:250 PROJECT / DRAWING No. RLVMM/WORKS/NCB/PH II/224/L 01/DR 02c	DESCRIPTION	NAME	SIGNATURE
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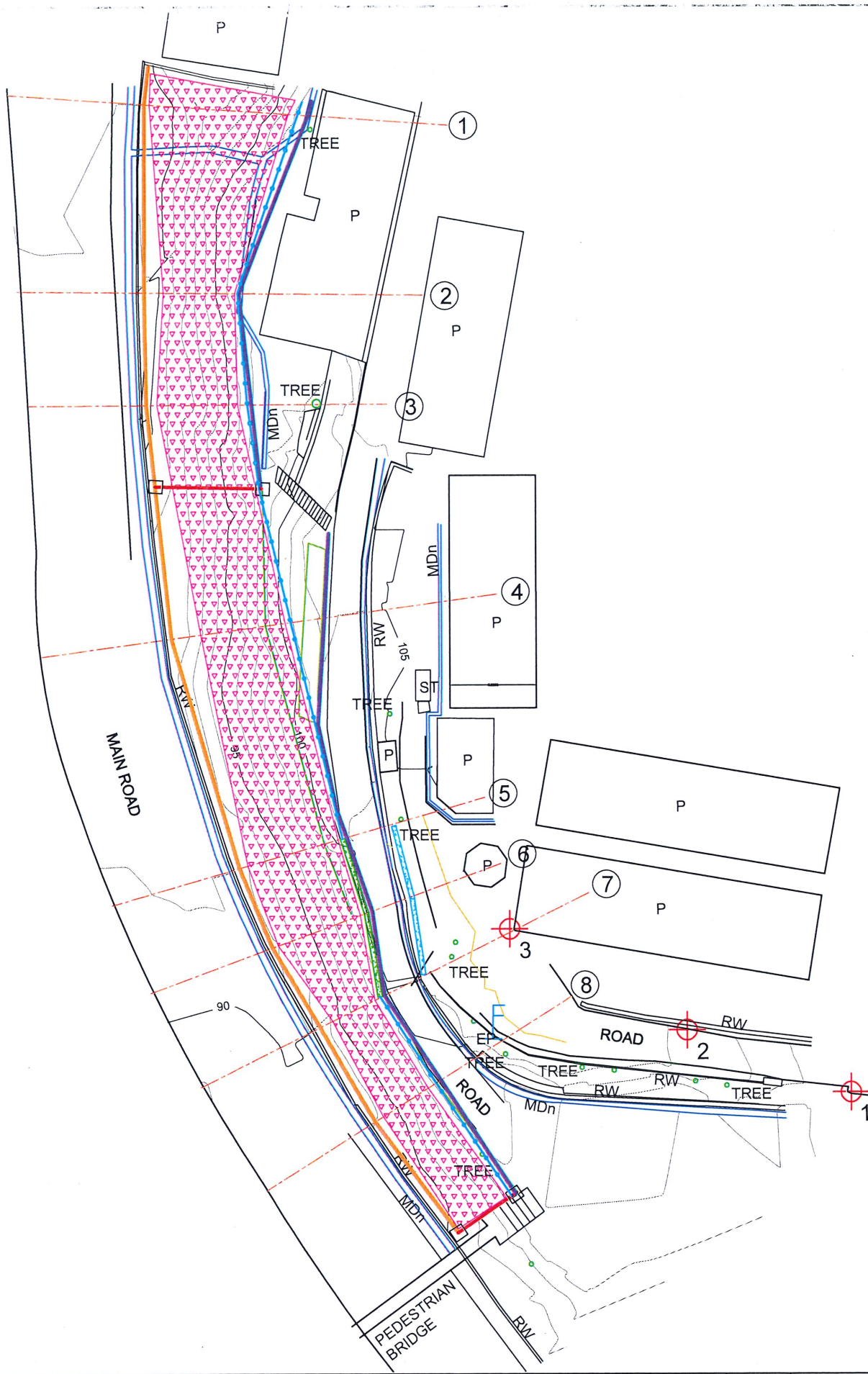


CS 7



CS 8

 EMPLOYER DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA MINISTRY OF DEFENCE NATIONAL BUILDING RESEARCH ORGANISATION No. 99/1, JAWATTA ROAD, COLOMBO - 05	 DESIGNER NATIONAL BUILDING RESEARCH ORGANISATION No. 99/1, JAWATTA ROAD, COLOMBO - 05	REV	DATE	REVISION DESCRIPTION	APPROVAL	PROJECT TITLE REDUCTION OF LANDSLIDE VULNERABILITY BY MITIGATION MEASURES PROJECT VIDYARTHA COLLEGE LOCATION 01 KANDY	TITLE EXISTING CROSS SECTIONS	DESCRIPTION	NAME	SIGNATURE
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								CHECKED	N.S.D.M.D. PERERA	
						SCALE 1:250	DATE 25.03.2026			
						PROJECT / DRAWING No. RLVMP/WORKS/NCB/PH III/224/L 01/DR 02d		REVISION		



REFERENCE

- ELECTRIC POST EP
- SECTIONS
- TREE
- PERMANENT BUILDING P
- SCAR
- SEPTIC TANK ST
- ROCK
- MASONRY DRAIN MDn
- REFERENCE POINT

N	E	Z	PN
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3019.984	3988.81	102.705	2
3029.288	3972.44	104.609	3

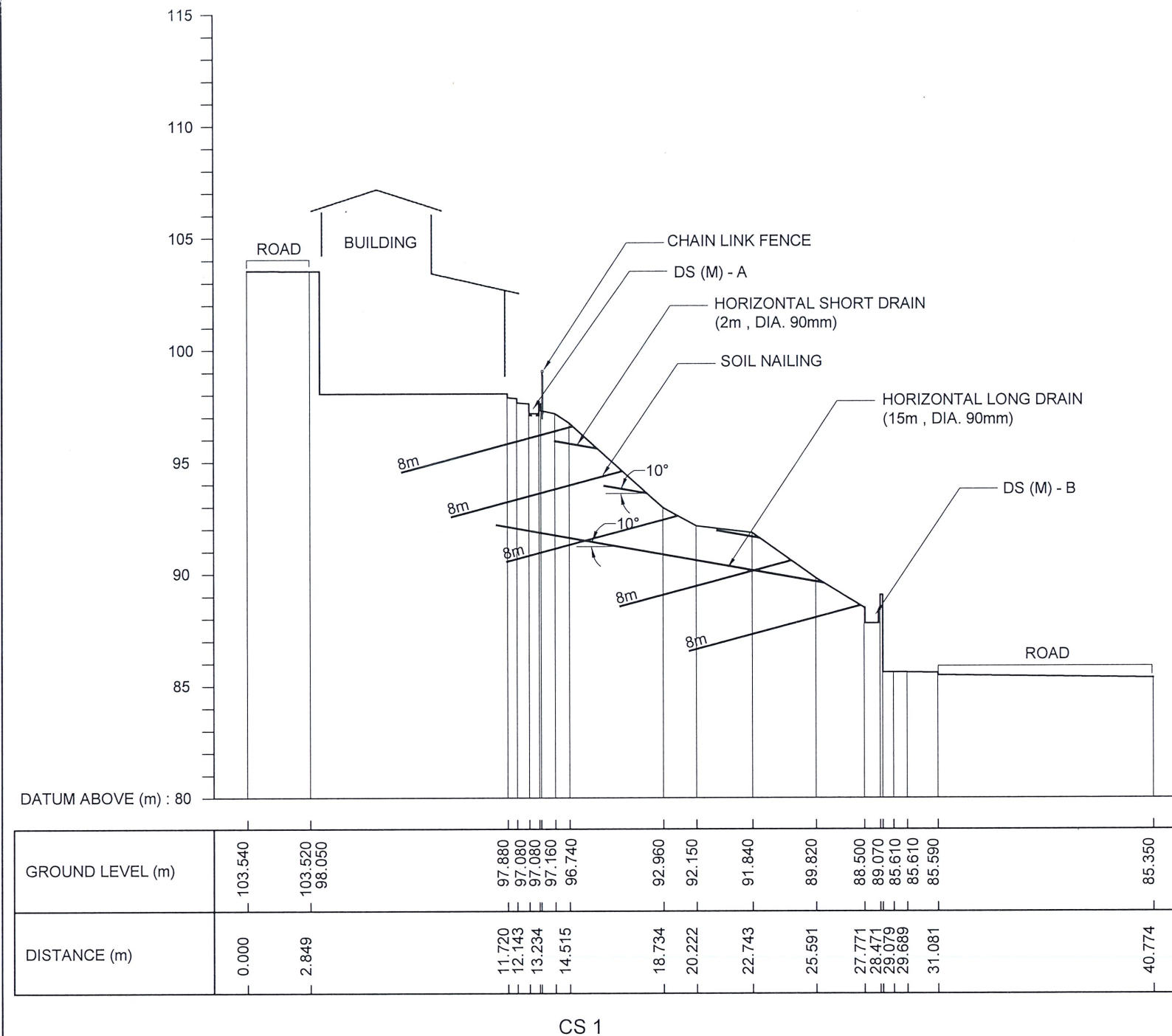
DESIGN NOTATION

- DS (B) - C
- DS (C) - A
- DS (M) - A
- DS (M) - B
- CHAIN LINK FENCE
- SOIL NAILING AREA
- CONCRETE CANTILEVER WALL (4.5m) WITH CHAIN LINK FENCE
- CONCRETE CANTILEVER WALL (2.0m) WITH CHAIN LINK FENCE
- CATCH PIT

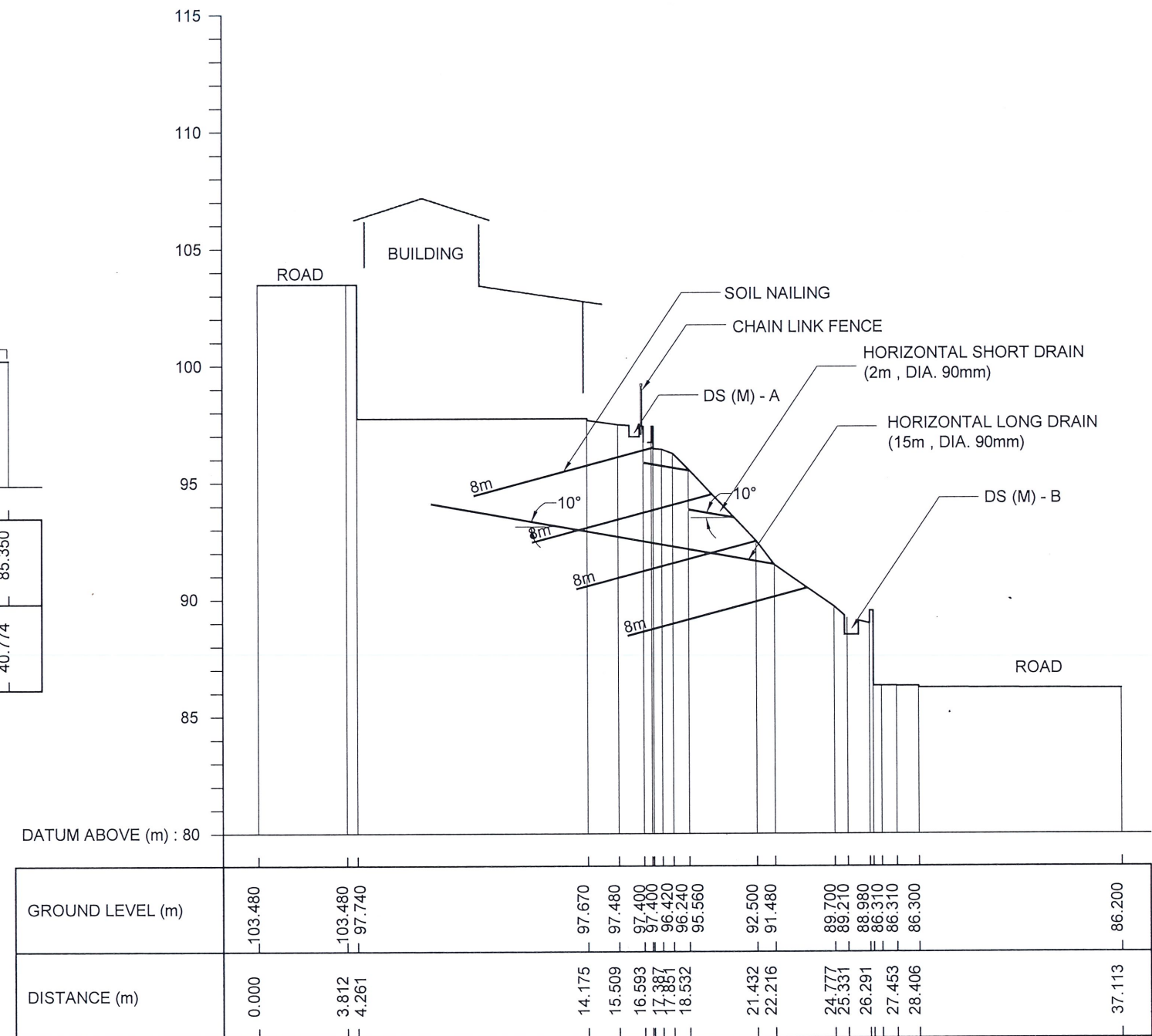
NOTES

- SURFACE DRAIN LOCATIONS (PATH) & LENGTHS MIGHT BE VARIED ACCORDING TO ACTUAL SITE CONDITION.
- UNSTABLE BOULDERS SHALL BE REMOVED AS PER THE INSTRUCTION OF THE ENGINEER.
- PROPOSED DRAINS SHALL BE CONNECTED TO THE EXISTING DRAINS / LEADER WAYS TO PROPERLY DRAIN OUT THE WATER.
- WALLS SHOULD BE PLACED ON A HARD LAYER.
- HEIGHT OF THE WALL MAY BE VARIED ACCORDING TO THE ACTUAL SITE CONDITIONS AND SHALL BE CONSTRUCTED AS PER THE ENGINEER'S INSTRUCTIONS.
- LOCATION OF THE CATCH PITS MIGHT BE VARIED ACCORDING TO THE ACTUAL SITE CONDITION.

EMPLOYER		DESIGNER		REV		DATE		REVISION DESCRIPTION		APPROVAL		PROJECT TITLE		TITLE		DESCRIPTION		NAME		SIGNATURE	
 DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA MINISTRY OF DEFENCE NATIONAL BUILDING RESEARCH ORGANISATION No. 99/1, JAWATTA ROAD, COLOMBO - 05		 NATIONAL BUILDING RESEARCH ORGANISATION No. 99/1, JAWATTA ROAD, COLOMBO - 05										REDUCTION OF LANDSLIDE VULNERABILITY BY MITIGATION MEASURES PROJECT VIDYARTHA COLLEGE LOCATION 01 KANDY	PLAN VIEW OF PROPOSED MITIGATION MEASURES	DRAWN	K.M.D. NISHANTHI						
														DESIGNED	N.S.D.M.D. PERERA						
														CHECKED	I.A.N.D. IDIRIMANNA						
														RECOMMENDED	PROF. S.A.S. KULATHILAKA						
														APPROVED	K. N. BANDARA						
												SCALE 1:250		DATE 25.03.2026							
												PROJECT / DRAWING No.		REVISION							
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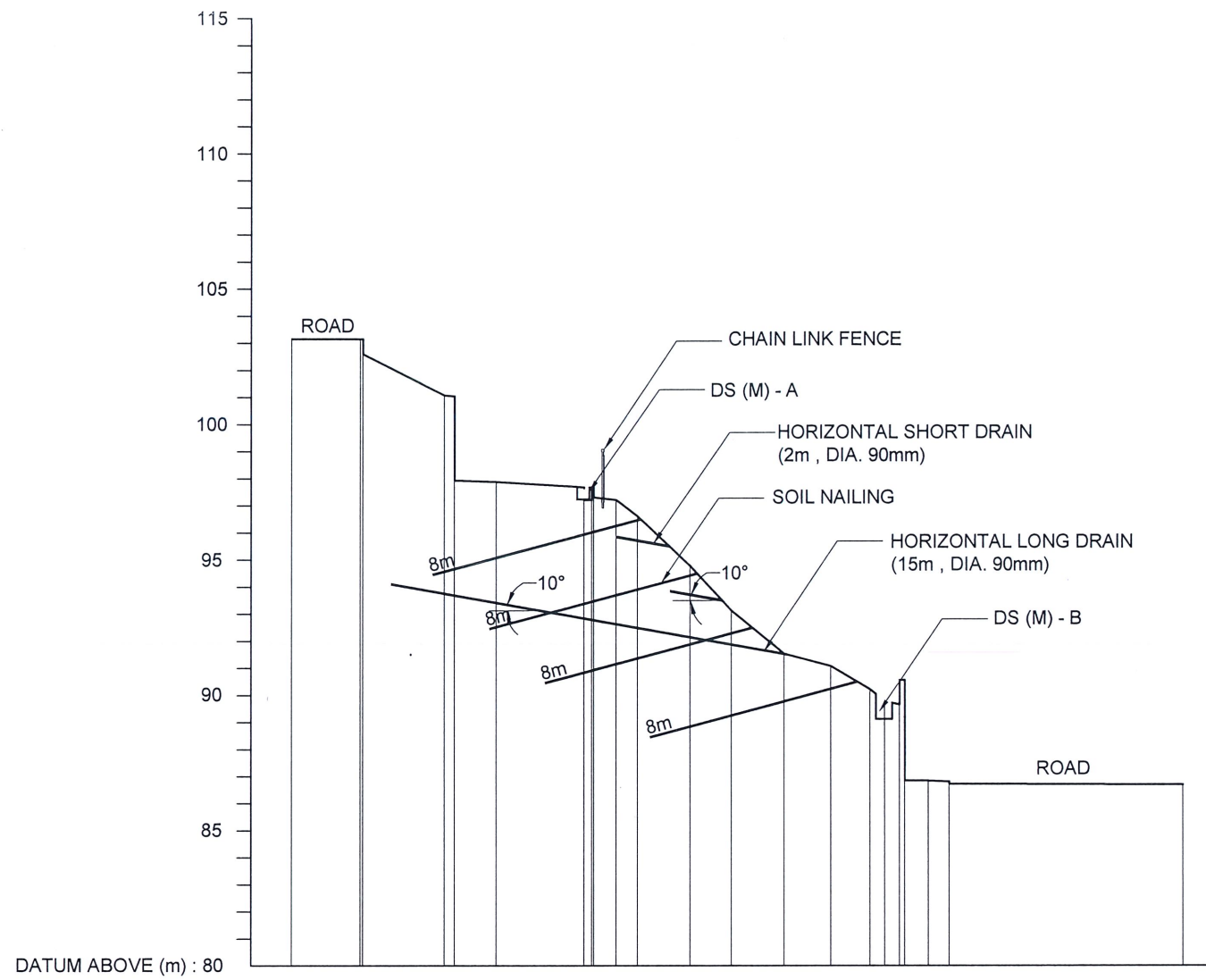


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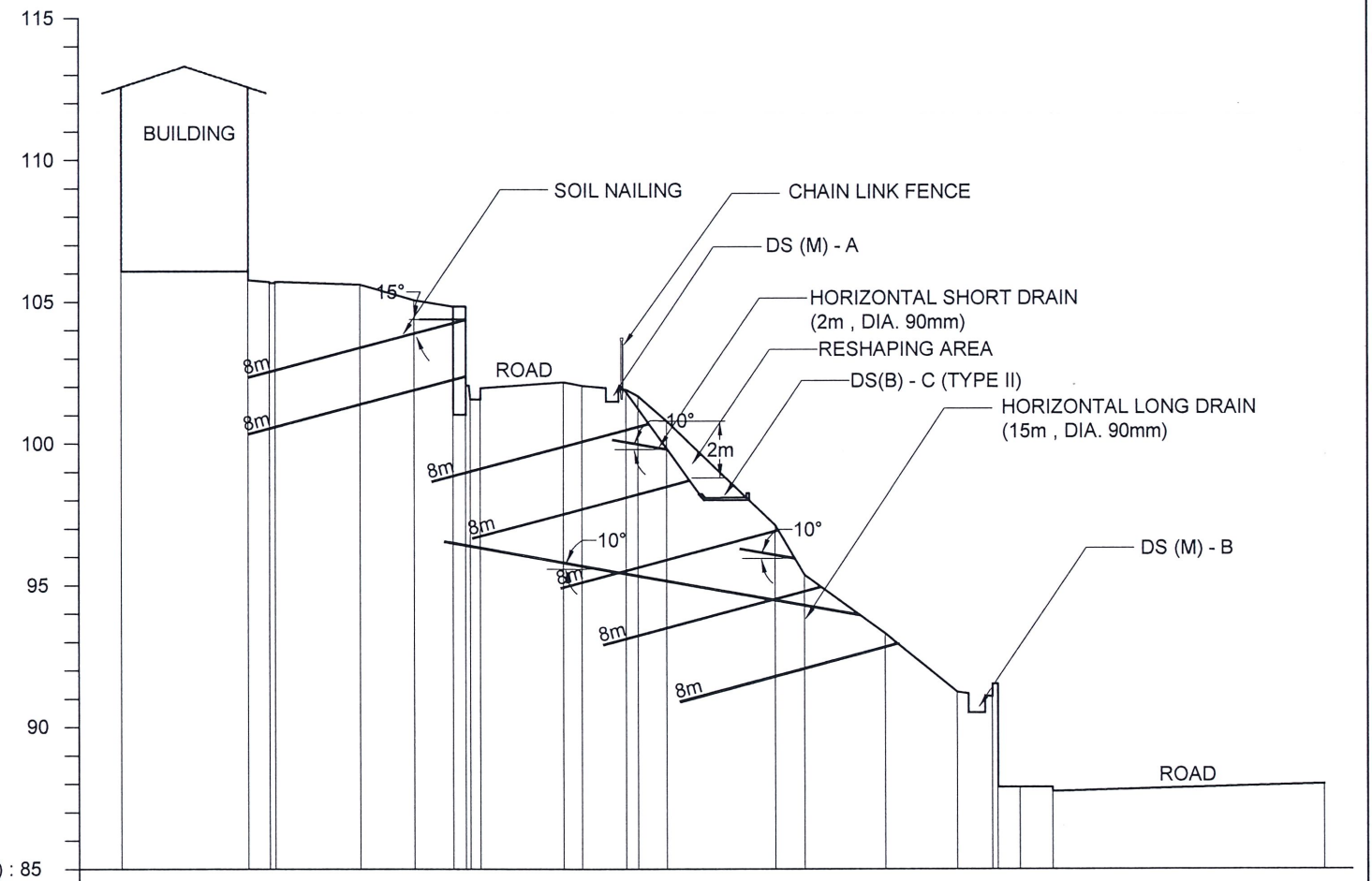
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EMPLOYER DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA MINISTRY OF DEFENCE NATIONAL BUILDING RESEARCH ORGANISATION No. 99/1, JAWATTA ROAD, COLOMBO - 05	DESIGNER NATIONAL BUILDING RESEARCH ORGANISATION No. 99/1, JAWATTA ROAD, COLOMBO - 05	REV	DATE	REVISION DESCRIPTION	APPROVAL	PROJECT TITLE REDUCTION OF LANDSLIDE VULNERABILITY BY MITIGATION MEASURES PROJECT VIDYARTHA COLLEGE LOCATION 01 KANDY	TITLE CROSS SECTIONS OF PROPOSED MITIGATION MEASURES		DESCRIPTION	NAME	SIGNATURE
									DRAWN	K.M.D. NISHANTHI	
									DESIGNED	N.S.D.M.D. PERERA	
									CHECKED	I.A.N.D. IDRIMANNA	
									RECOMMENDED	PROF. S.A.S. KULATHILAKA	
		SCALE		1:250	DATE		25.03.2026	REVISION	APPROVED	K.N. BANDARA	
		PROJECT / DRAWING No. RLVMP/WORKS/NCB/PH II/224/L01/DR 04a									



GROUND LEVEL (m)	103.160	103.150	102.600	101.080	101.040	97.880	97.200	97.200	97.210	96.610	94.780	93.130	91.530	91.070	90.220	89.780	89.660	86.840	86.810	86.720	86.690
DISTANCE (m)	0.000	2.580	2.679	5.710	6.099	7.654	10.907	11.199	12.108	12.895	14.862	16.408	18.368	20.112	22.113	22.668	22.857	23.083	23.740	24.513	33.212

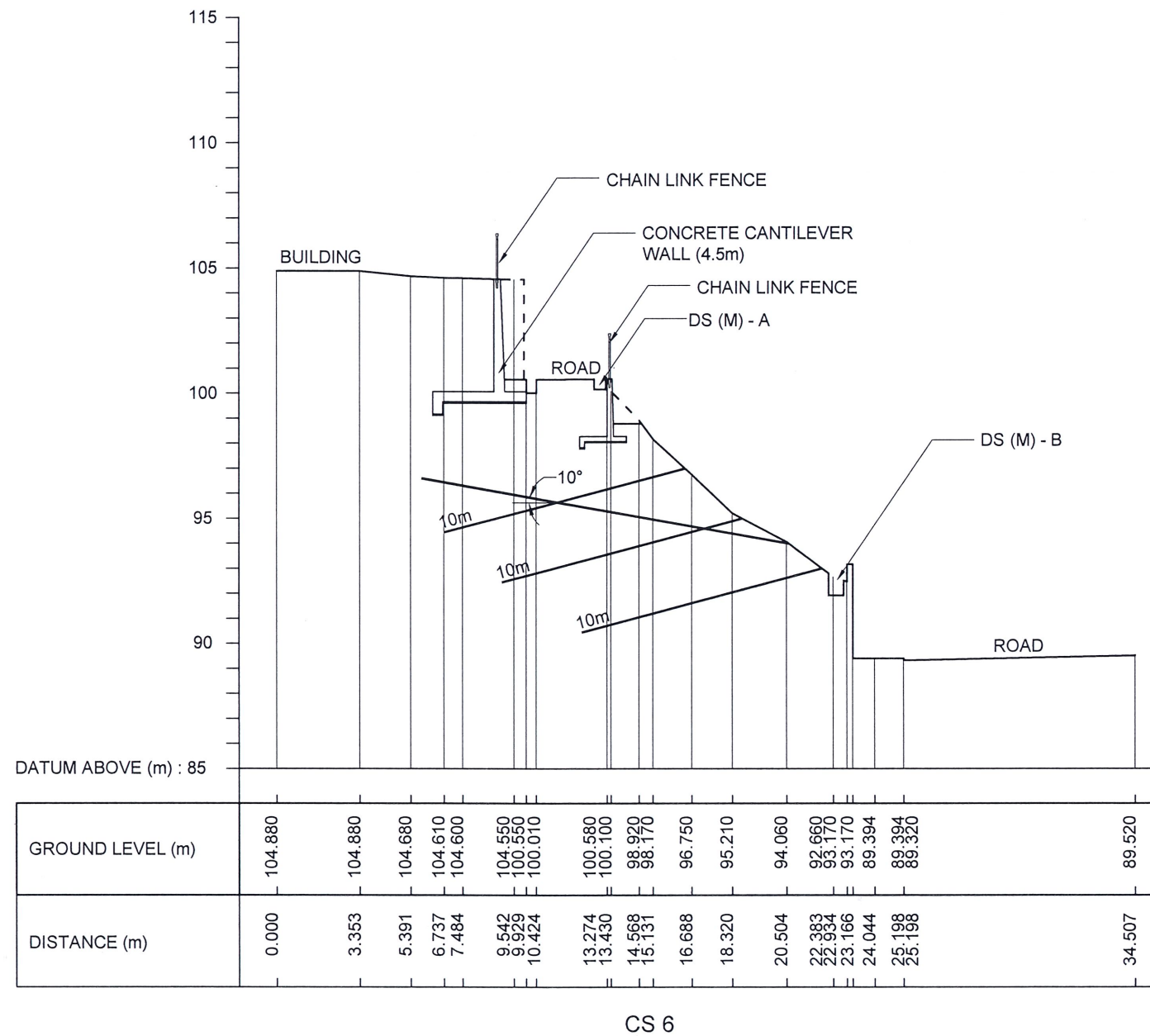
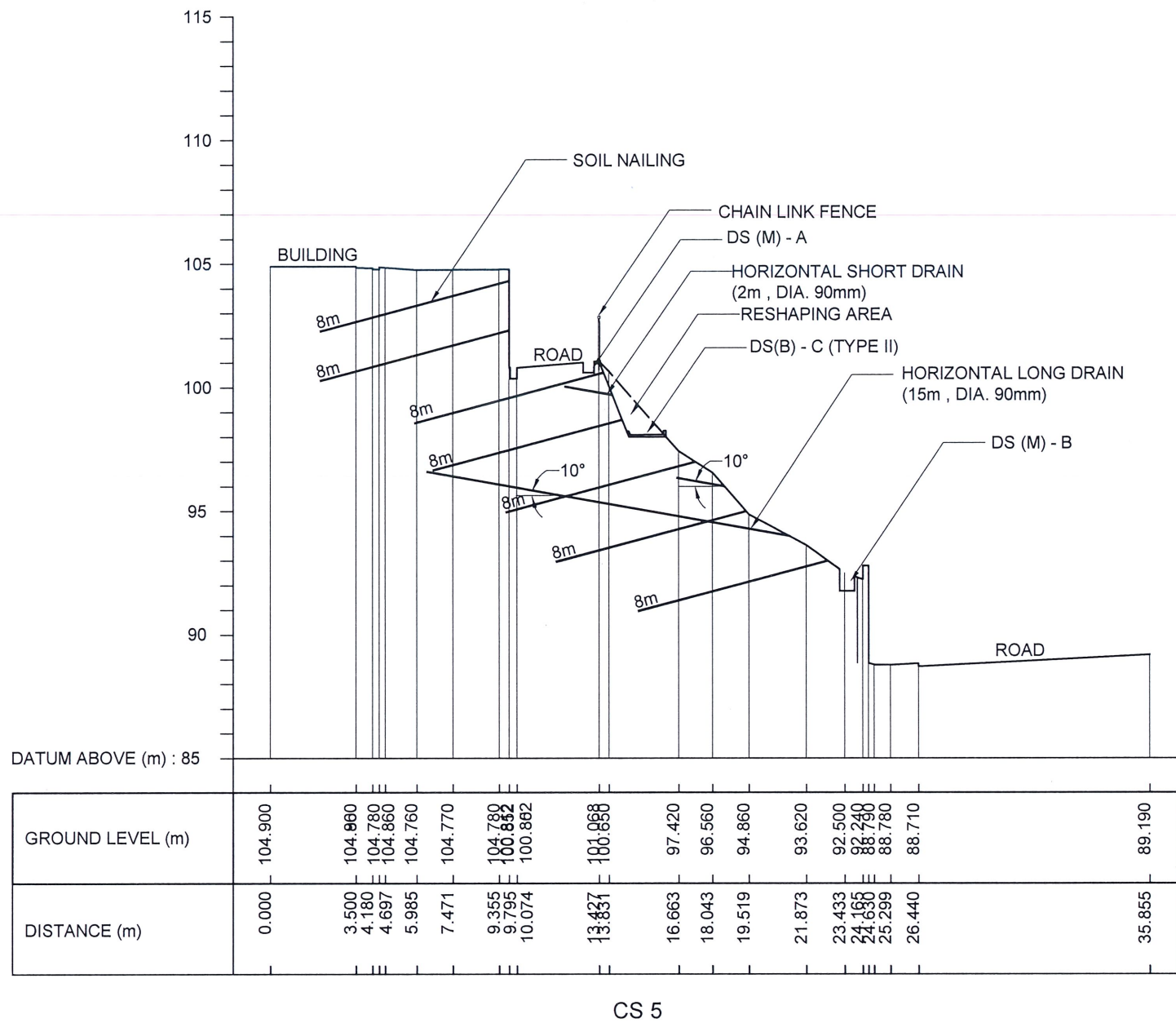
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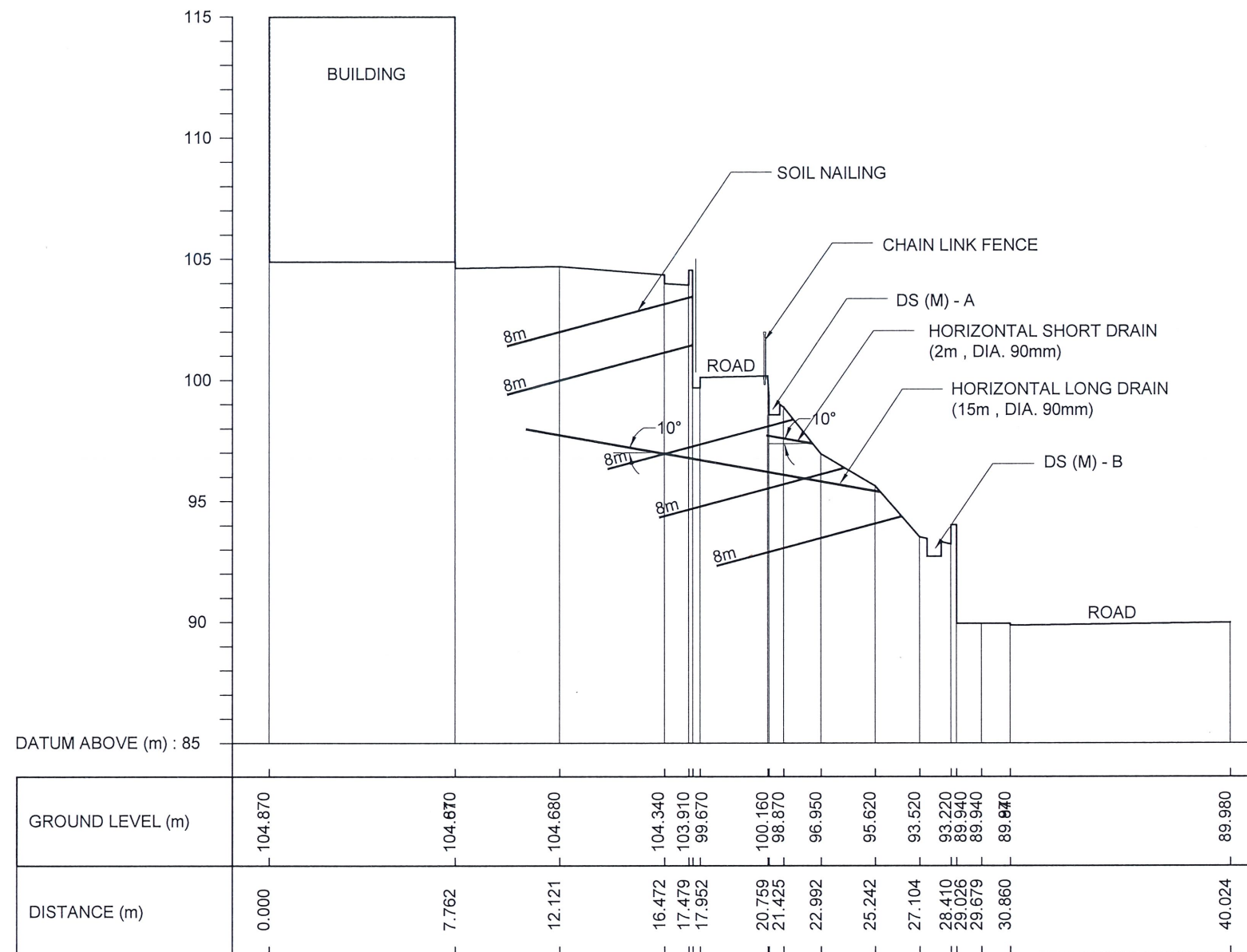
GROUND LEVEL (m)	106.070	106.070	105.660	105.610	105.060	104.840	101.960	102.170	102.040	101.910	101.670	100.790	97.120	95.370	93.300	91.240	91.520	87.880	87.880	88.000
DISTANCE (m)	0.000	4.505	5.263	8.483	10.387	11.761	12.722	15.677	16.351	17.915	18.338	19.352	23.193	24.231	27.087	29.634	30.887	31.860	33.014	42.638

CS 4

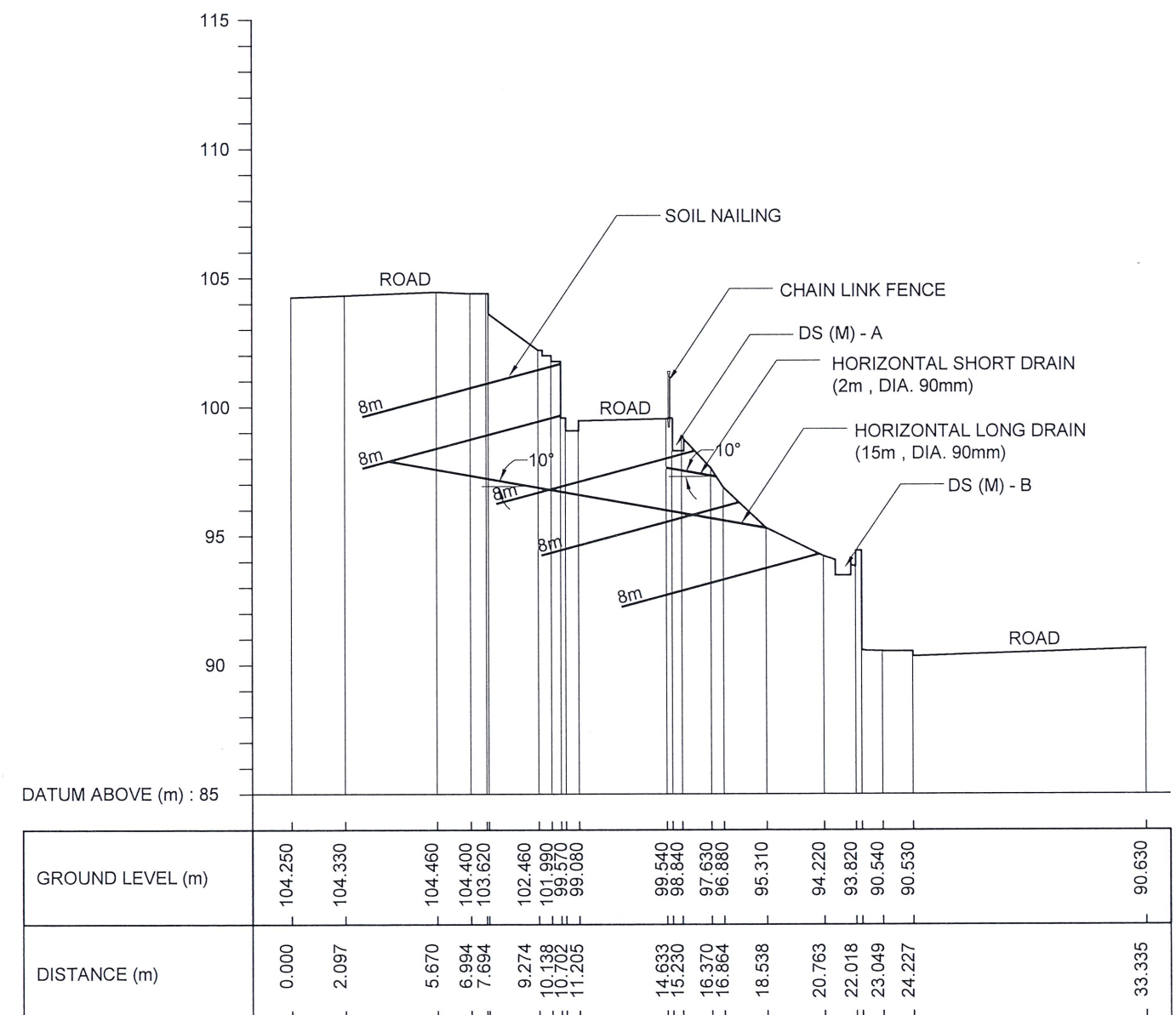
EMPLOYER  DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA MINISTRY OF DEFENCE NATIONAL BUILDING RESEARCH ORGANISATION No. 99/1, JAWATTA ROAD, COLOMBO - 05	DESIGNER  NATIONAL BUILDING RESEARCH ORGANISATION No. 99/1, JAWATTA ROAD, COLOMBO - 05	REV	DATE	REVISION DESCRIPTION	APPROVAL	PROJECT TITLE REDUCTION OF LANDSLIDE VULNERABILITY BY MITIGATION MEASURES PROJECT VIDYARTHA COLLEGE LOCATION 01 KANDY	TITLE CROSS SECTIONS OF PROPOSED MITIGATION MEASURES	DESCRIPTION	NAME	SIGNATURE
								DRAWN	K.M.D. NISHANTHI	
								DESIGNED	N.S.D.M.D. PERERA	
								CHECKED	I.A.N.D. IDIRIMANNA	
							RECOMMENDED	PROF. S.A.S. KULATHILAKA		
							APPROVED	K.N. BANDARA		



EMPLOYER  DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA MINISTRY OF DEFENCE NATIONAL BUILDING RESEARCH ORGANISATION No. 99/1, JAWATTA ROAD, COLOMBO - 05 	DESIGNER  NATIONAL BUILDING RESEARCH ORGANISATION No. 99/1, JAWATTA ROAD, COLOMBO - 05	REV	DATE	REVISION DESCRIPTION	APPROVAL	PROJECT TITLE REDUCTION OF LANDSLIDE VULNERABILITY BY MITIGATION MEASURES PROJECT VIDYARTHA COLLEGE LOCATION 01 KANDY	TITLE CROSS SECTIONS OF PROPOSED MITIGATION MEASURES		DESCRIPTION	NAME	SIGNATURE		
									DRAWN	K.M.D. NISHANTHI			
									DESIGNED	N.S.D.M.D. PERERA			
									CHECKED	I.A.N.D. IDIRIMANNA			
									SCALE 1:250	DATE 25.03.2026	RECOMMENDED	PROF. S.A.S. KULATHILAKA	
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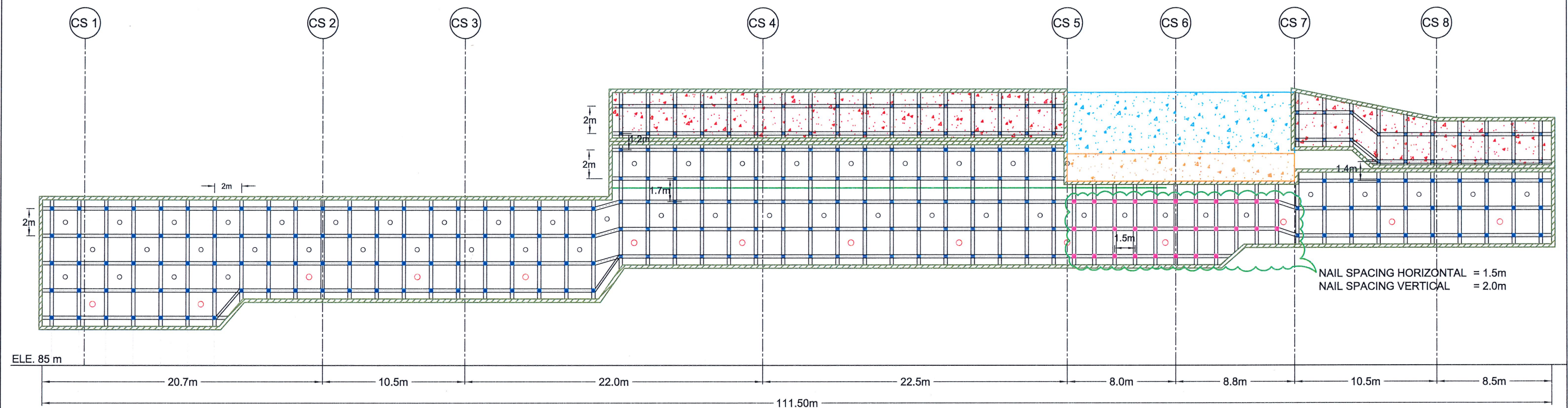


CS 7



CS 8

EMPLOYER  DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA MINISTRY OF DEFENCE NATIONAL BUILDING RESEARCH ORGANISATION No. 99/1, JAWATTA ROAD, COLOMBO - 05	DESIGNER  NATIONAL BUILDING RESEARCH ORGANISATION No. 99/1, JAWATTA ROAD, COLOMBO - 05	REV	DATE	REVISION DESCRIPTION	APPROVAL	PROJECT TITLE REDUCTION OF LANDSLIDE VULNERABILITY BY MITIGATION MEASURES PROJECT VIDYARTHA COLLEGE LOCATION 01 KANDY	TITLE CROSS SECTIONS OF PROPOSED MITIGATION MEASURES	DESCRIPTION	NAME	SIGNATURE
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								DESIGNED	N.S.D.M.D. PERERA	
								CHECKED	I.A.N.D. IDIRIMANNA	
								RECOMMENDED	PROF. S.A.S. KULATHILAKA	
								APPROVED	K.N. BANDARA	

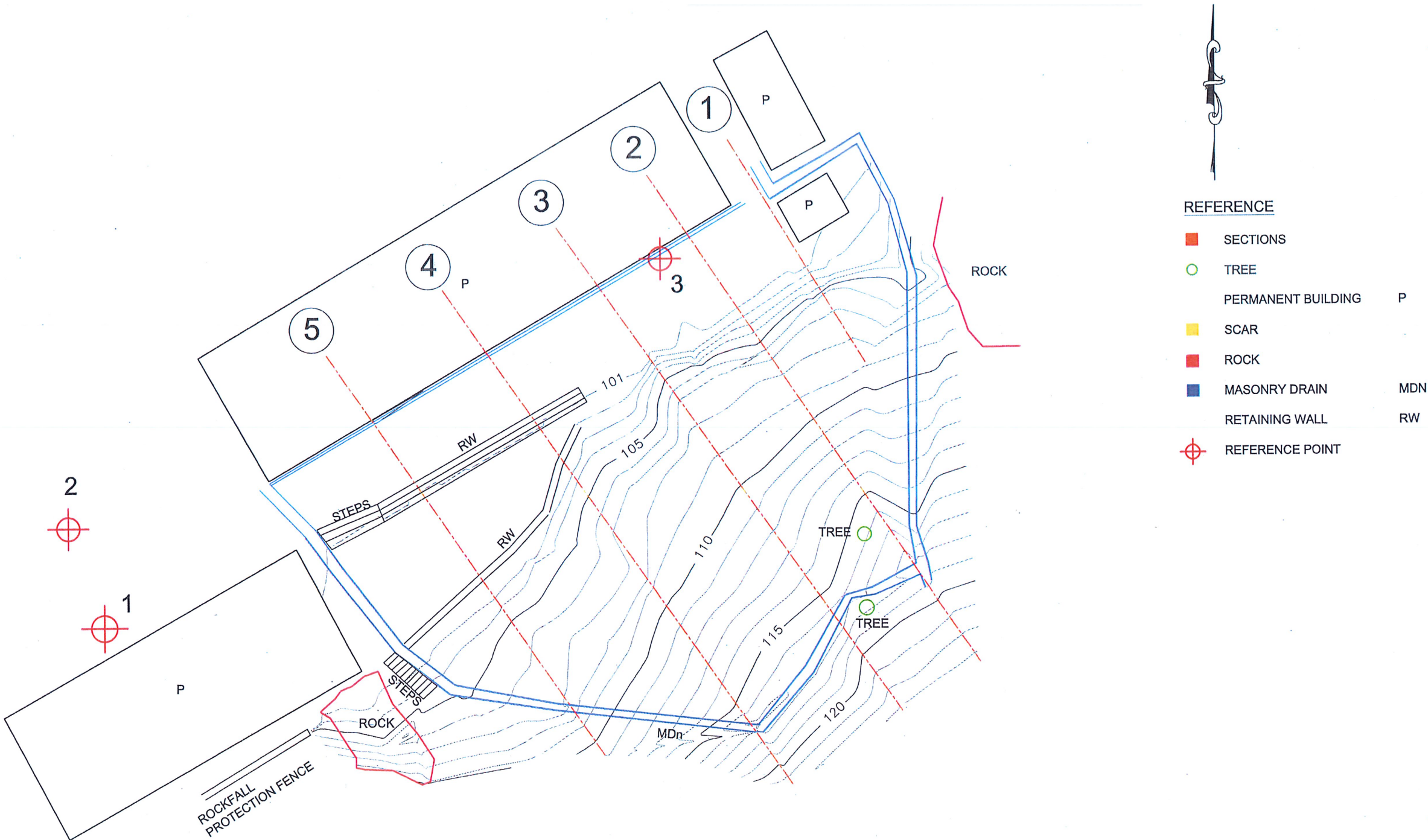


FRONT ELEVATION OF SOIL NAILING AREA

LEGEND

- | | | | | | | | |
|--|--------------|---|---|--|---------------------------------|---|---|
| | SOIL NAILING | - | TOTAL SOIL NAIL LENGTH = 8m
NO OF SOIL NAIL = 260
REINFORCEMENT DIAMETER = 32 mm
DIAMETER OF DRILLED HOLE = 125mm
NAIL SPACING = AS SHOWN | | HORIZONTAL LONG DRAIN | - | HORIZONTAL LONG DRAIN LENGTH = 15 m
NO'S OF LONG DRAIN = 14
DIAMETER = 90 mm
SPACING = 08 m |
| | SOIL NAILING | - | TOTAL SOIL NAIL LENGTH = 10m
NO OF SOIL NAIL = 30
REINFORCEMENT DIAMETER = 32 mm
DIAMETER OF DRILLED HOLE = 125mm
NAIL SPACING = AS SHOWN | | HORIZONTAL SHORT DRAIN | - | HORIZONTAL SHORT DRAIN LENGTH = 2 m
NO'S OF SHORT DRAIN = 56
DIAMETER = 90 mm
SPACING = 04 m |
| | | | | | BERM DRAIN | | |
| | | | | | BOUNDARY BEAM | | |
| | | | | | EXISTING RETAINING WALL | | |
| | | | | | CONCRETE CANTILEVER WALL (4.5m) | | |
| | | | | | CONCRETE CANTILEVER WALL (2.0m) | | |

EMPLOYER  DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA MINISTRY OF DEFENCE NATIONAL BUILDING RESEARCH ORGANISATION No. 99/1, JAWATTA ROAD, COLOMBO - 05	 NATIONAL BUILDING RESEARCH ORGANISATION No. 99/1, JAWATTA ROAD, COLOMBO - 05	REV	DATE	REVISION DESCRIPTION	APPROVAL	PROJECT TITLE	REDUCTION OF LANDSLIDE VULNERABILITY BY MITIGATION MEASURES PROJECT	VIDYARTHA COLLEGE	LOCATION 01	KANDY	TITLE				FRONT ELEVATION OF PROPOSED MITIGATION MEASURES				DESCRIPTION		NAME		SIGNATURE							
															DRAWN		K.M.D. NISHANTHI													
															DESIGNED		N.S.D.M.D. PERERA													
															CHECKED		I.A.N.D. IDIRIMANNA													
																	SCALE		N.T.S.		DATE		25.03.2026		RECOMMENDED		PROF. S.A.S. KULATHILAKA			
																			PROJECT / DRAWING No.				REVISION							
																			RLVMMP/WORKS/NCB/PH II/224/L01/DR 05											
																							APPROVED				K.N. BANDARA			



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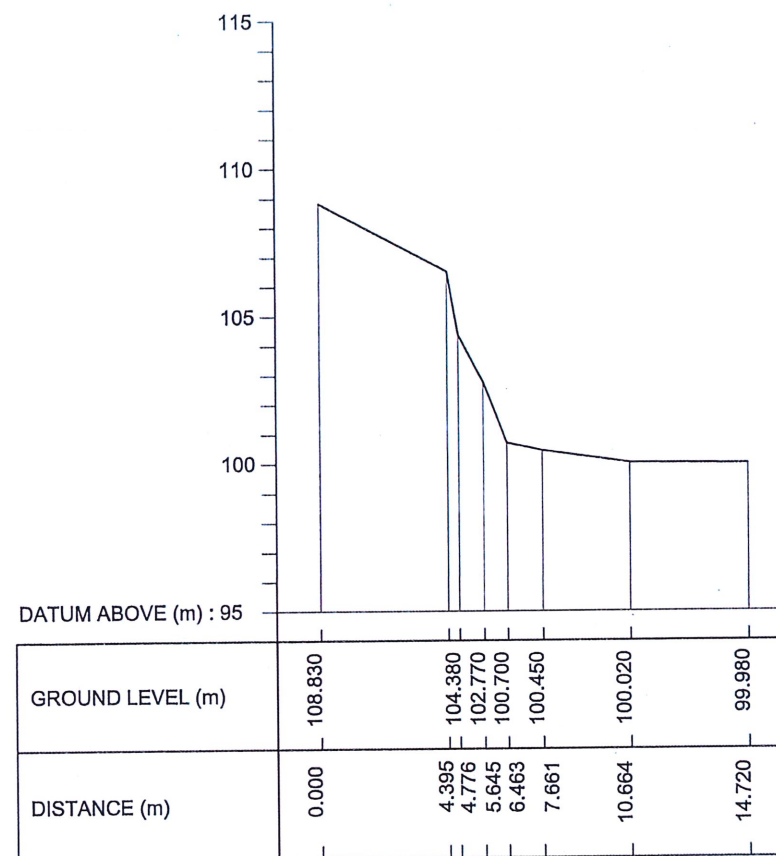
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COLOMBO - 05

REV	DATE	REVISION DESCRIPTION	APPROVAL

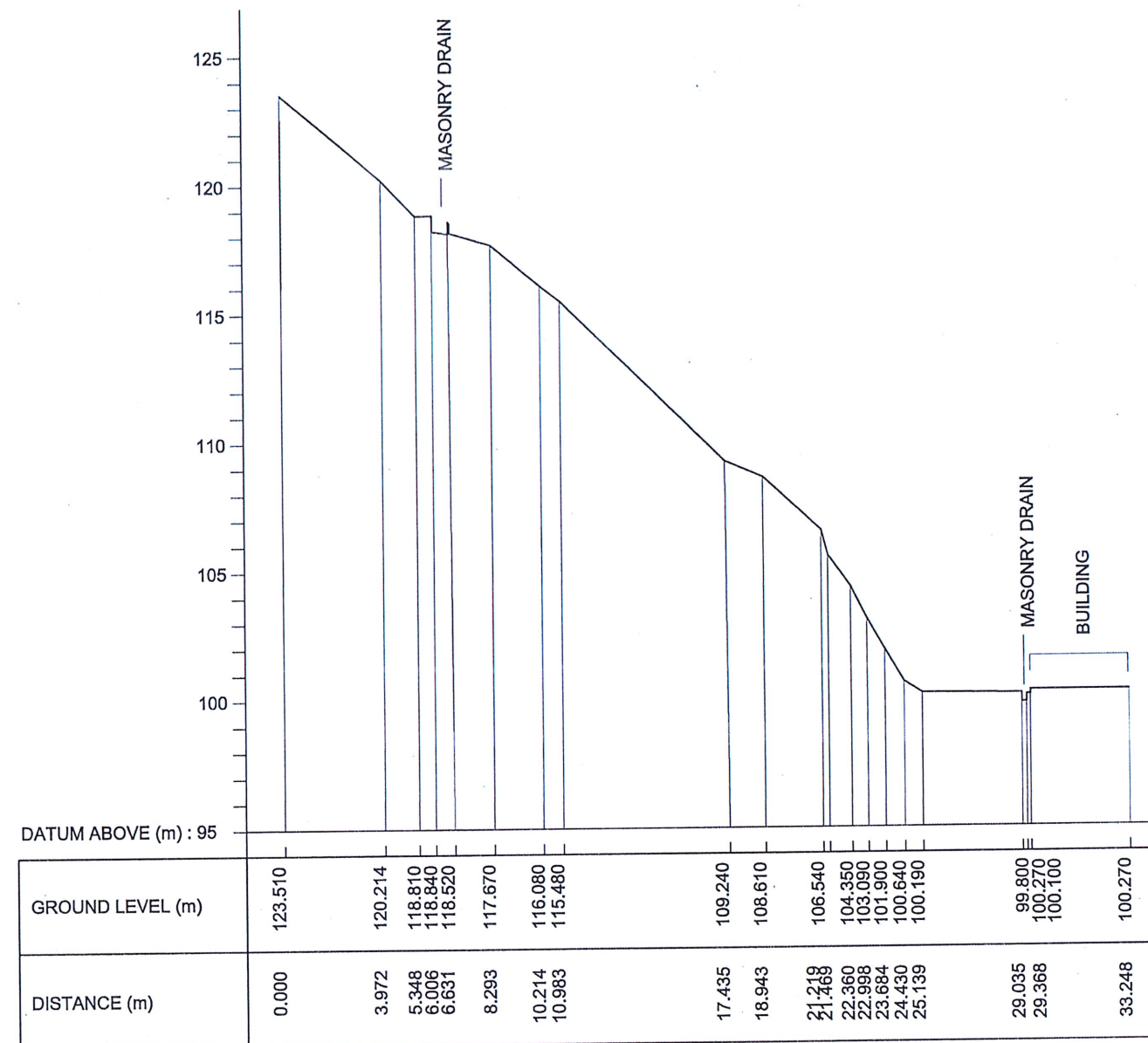
PROJECT TITLE
REDUCTION OF LANDSLIDE VULNERABILITY
BY MITIGATION MEASURES PROJECT
VIDYARTHA COLLEGE
LOCATION 02
KANDY

TITLE
SURVEY PLAN
SCALE 1:250
DATE 19.09.2025
PROJECT / DRAWING No.
RLVMMP/WORKS/NCB/PH II/224/L02/DR 01
REVISION

DESCRIPTION	NAME	SIGNATURE
SURVEYED	W.L.P.N.N WIJESINGHE	
CHECKED	N.S.D.M.D. PERERA	

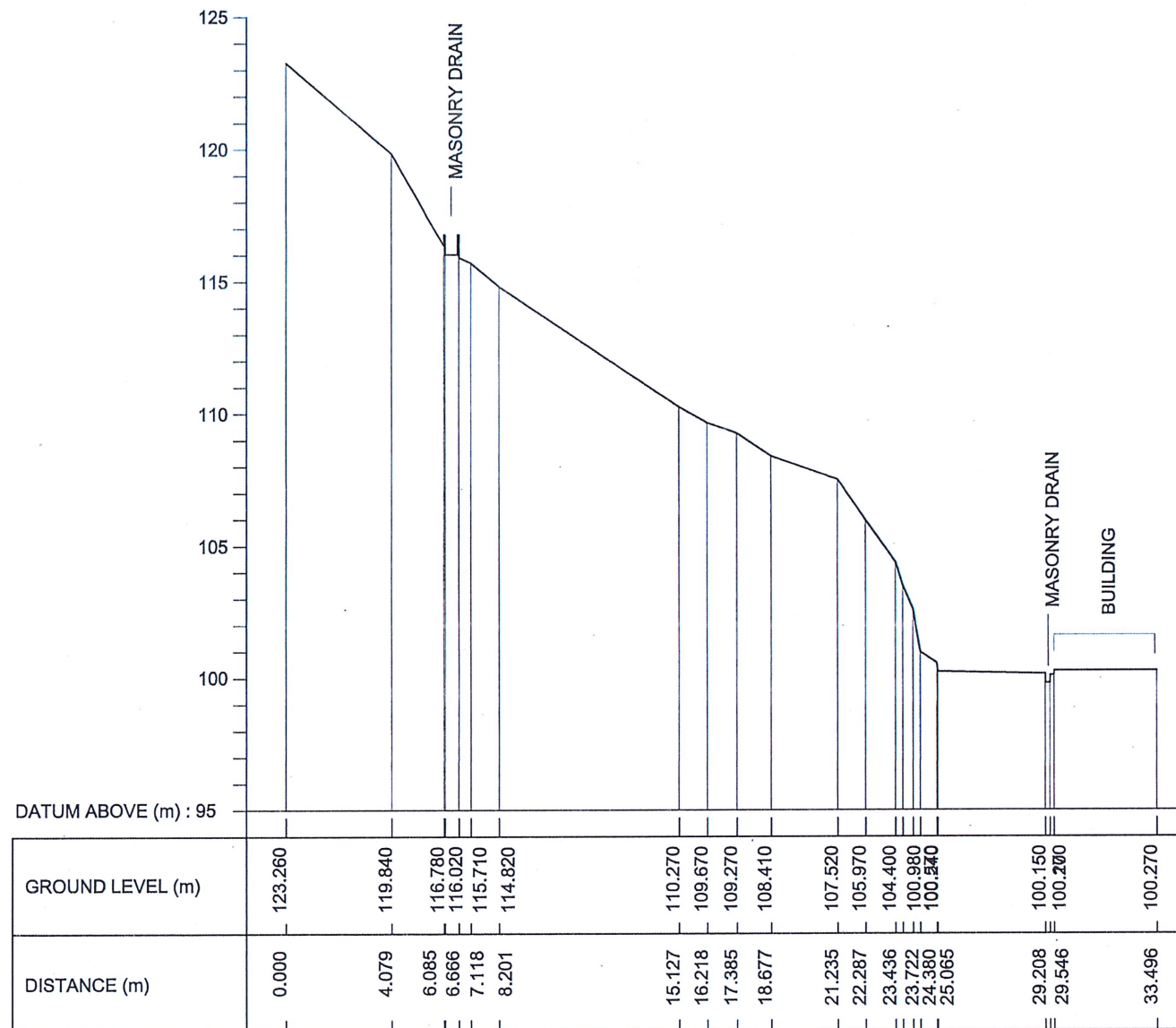


CS 1

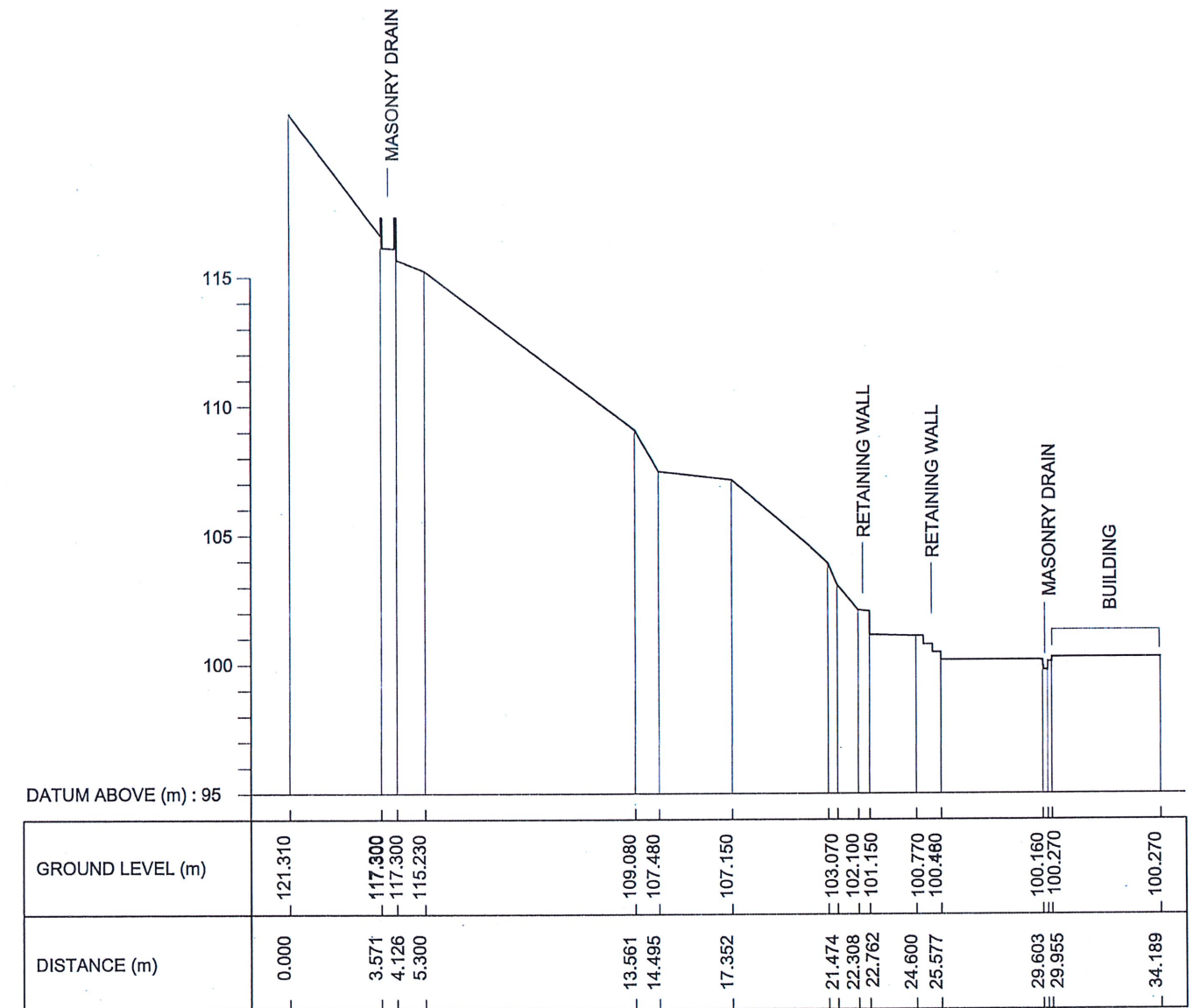


CS 2

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								CHECKED	N.S.D.M.D. PERERA	
						SCALE	1:250	DATE	19.09.2025	
						PROJECT / DRAWING No.		REVISION		
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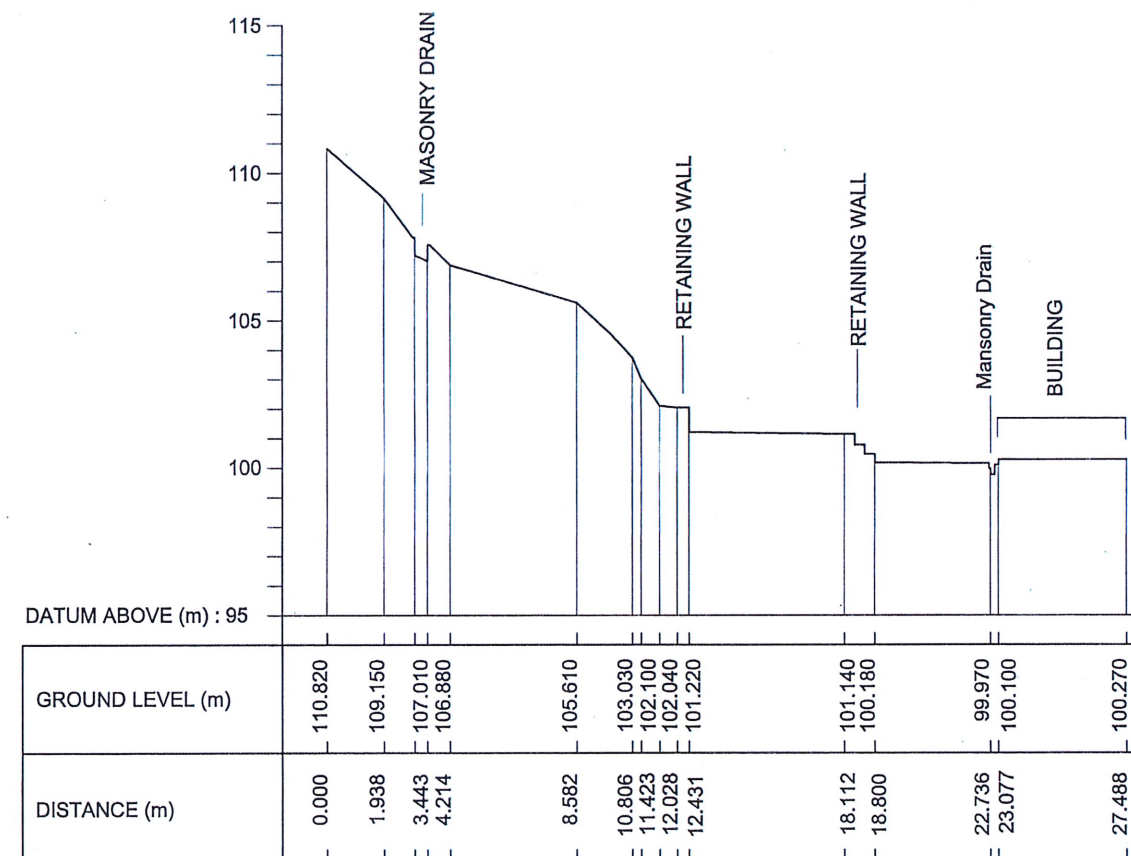


CS 3



CS 4

EMPLOYER  DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA MINISTRY OF DEFENCE NATIONAL BUILDING RESEARCH ORGANISATION No. 99/1, JAWATTA ROAD, COLOMBO - 05	DESIGNER  NATIONAL BUILDING RESEARCH ORGANISATION No. 99/1, JAWATTA ROAD, COLOMBO - 05	REV	DATE	REVISION DESCRIPTION	APPROVAL	PROJECT TITLE REDUCTION OF LANDSLIDE VULNERABILITY BY MITIGATION MEASURES PROJECT VIDYARTHA COLLEGE LOCATION 02 KANDY	TITLE EXISTING CROSS SECTIONS	DESCRIPTION	NAME	SIGNATURE		
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						PROJECT / DRAWING No.		REVISION				
						RLVMMP/WORKS/NCB/PH II/224/L02/DR 02b						



CS 5

EMPLOYER  DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA MINISTRY OF DEFENCE NATIONAL BUILDING RESEARCH ORGANISATION No. 99/1, JAWATTA ROAD, COLOMBO - 05	DESIGNER  NATIONAL BUILDING RESEARCH ORGANISATION No. 99/1, JAWATTA ROAD, COLOMBO - 05	REV	DATE	REVISION DESCRIPTION	APPROVAL	PROJECT TITLE REDUCTION OF LANDSLIDE VULNERABILITY BY MITIGATION MEASURES PROJECT VIDYARTHA COLLEGE LOCATION 02 KANDY	TITLE EXISTING CROSS SECTION		DESCRIPTION	NAME	SIGNATURE		
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									CHECKED	N.S.D.M.D. PERERA			
							SCALE	1:250	DATE	19.09.2025			
							PROJECT / DRAWING No.		REVISION				
							RLVMM/WORKS/NCB/PH II/224/L02/DR 02c						



REFERENCE

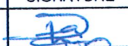
- SECTIONS
- TREE
- PERMANENT BUILDING P
- SCAR
- ROCK
- MASONRY DRAIN MDN
- RETAINING WALL RW
- REFERENCE POINT

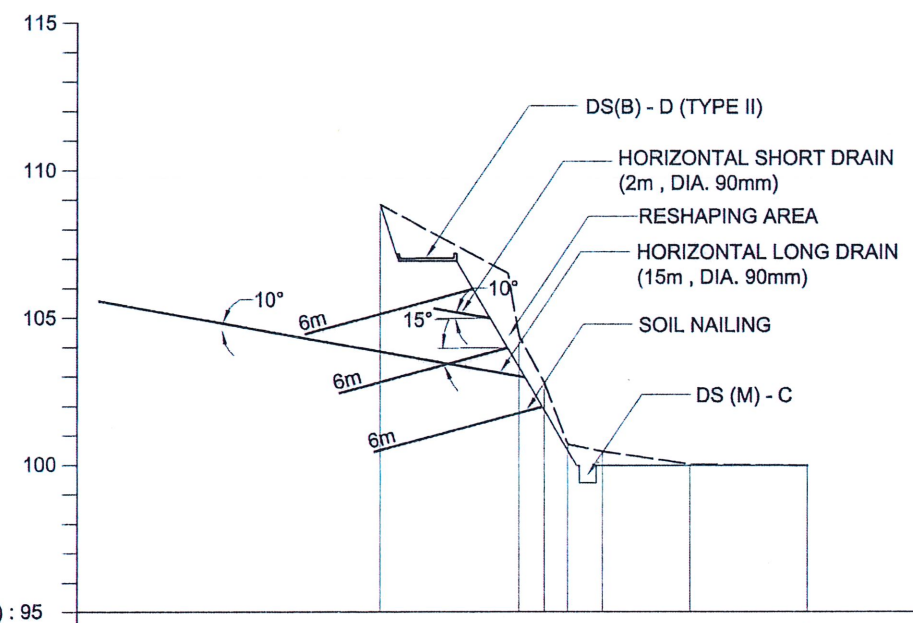
DESIGN NOTATION

- DS (B) - D
- DS (C) - B
- DS (M) - B
- DS (M) - C
- SOIL NAILING AREA A
- CATCH PIT

NOTES

- SURFACE DRAIN LOCATIONS (PATH) & LENGTHS MIGHT BE VARIED ACCORDING TO ACTUAL SITE CONDITION.
- UNSTABLE BOULDERS SHALL BE REMOVED AS PER THE INSTRUCTION OF THE ENGINEER.
- PROPOSED DRAINS SHALL BE CONNECTED TO THE EXISTING DRAINS / LEADER WAYS TO PROPERLY DRAIN OUT THE WATER.
- LOCATION OF THE CATCH PITS MIGHT BE VARIED ACCORDING TO THE ACTUAL SITE CONDITION.

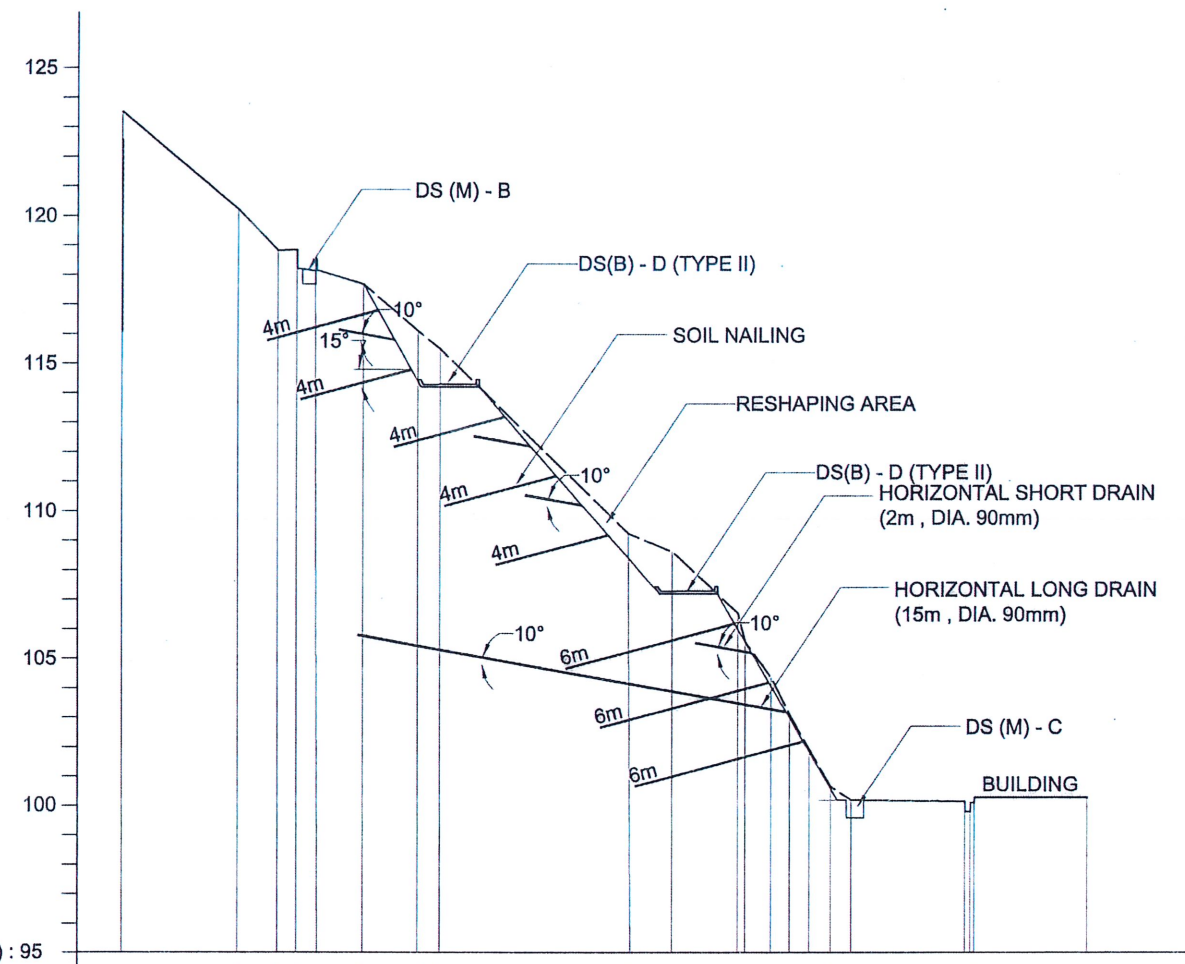
EMPLOYER DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA MINISTRY OF DEFENCE NATIONAL BUILDING RESEARCH ORGANISATION No. 99/1, JAWATTA ROAD, COLOMBO - 05	DESIGNER NATIONAL BUILDING RESEARCH ORGANISATION No. 99/1, JAWATTA ROAD, COLOMBO - 05	REV	DATE	REVISION DESCRIPTION	APPROVAL	PROJECT TITLE REDUCTION OF LANDSLIDE VULNERABILITY BY MITIGATION MEASURES PROJECT VIDYARTHA COLLEGE LOCATION 02 KANDY	TITLE PLAN VIEW OF PROPOSED MITIGATION MEASURES	DESCRIPTION	NAME	SIGNATURE	
								DRAWN	K.M.D. NISHANTHI		
								DESIGNED	N.S.D.M.D. PERERA		
								CHECKED	DR. S.O.A.D.M. LAKRUWAN		
								RECOMMENDED	PROF. S.A.S. KULATHILAKA		
									APPROVED	K.N. BANDARA	
									SCALE 1:250		DATE 19.09.2025
						PROJECT / DRAWING No. RLVMMP/WORKS/NCB/PH II/224/LO2/DR 03					



DATUM ABOVE (m) : 95

GROUND LEVEL (m)	108.830	104.380	102.770	100.700	100.450	100.020	99.980	
DISTANCE (m)	0.000	4.395	4.776	5.645	6.463	7.661	10.664	14.720

CS 1

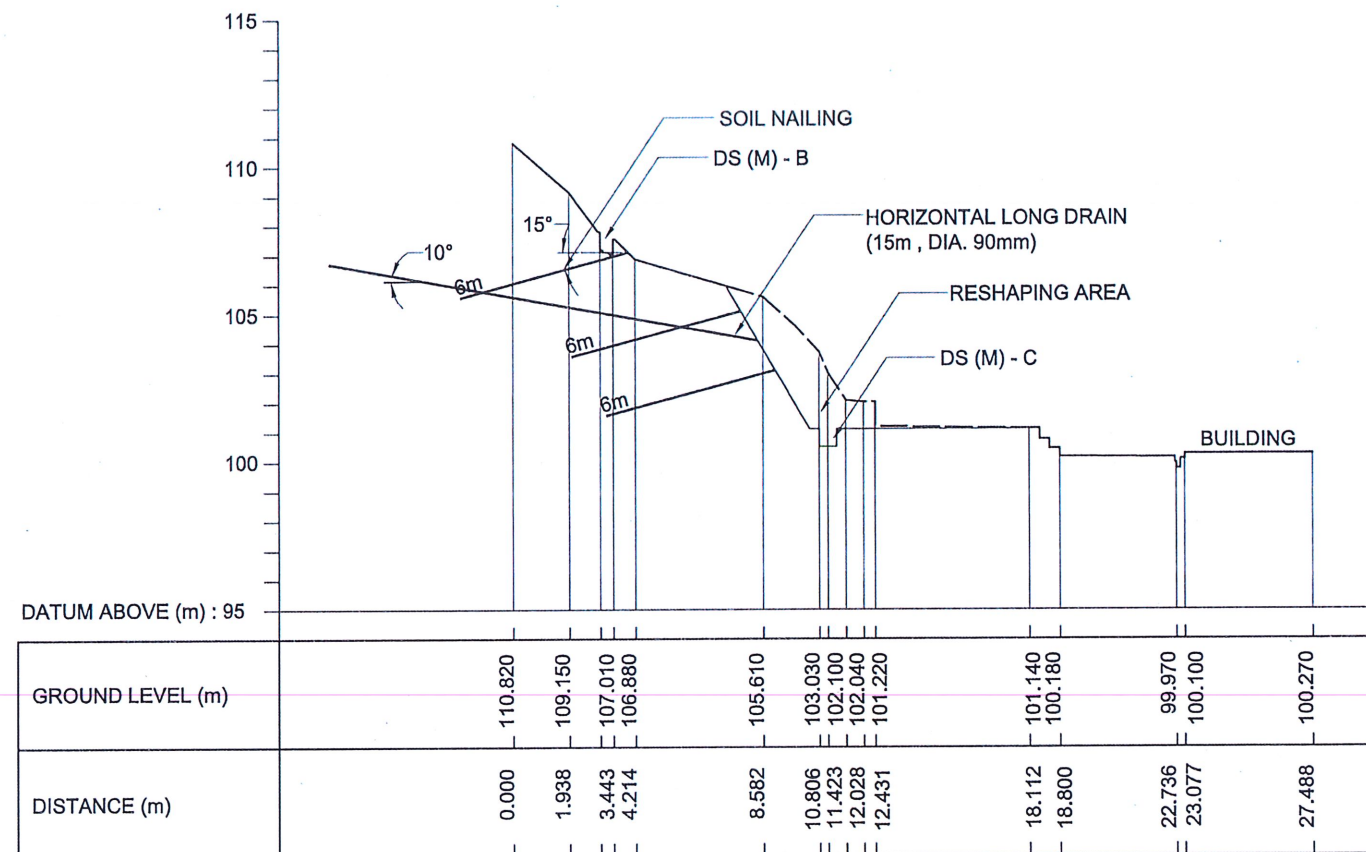


DATUM ABOVE (m) : 95

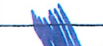
GROUND LEVEL (m)	123.510	120.214	118.810	118.840	118.520	117.670	116.080	115.480	109.240	108.610	106.540	104.350	103.090	101.900	100.640	100.190	99.800	100.270	100.100	100.270
DISTANCE (m)	0.000	3.972	5.348	6.006	6.631	8.293	10.214	10.983	17.435	18.943	21.219	22.360	22.998	23.884	24.430	25.139	29.035	29.368	33.248	

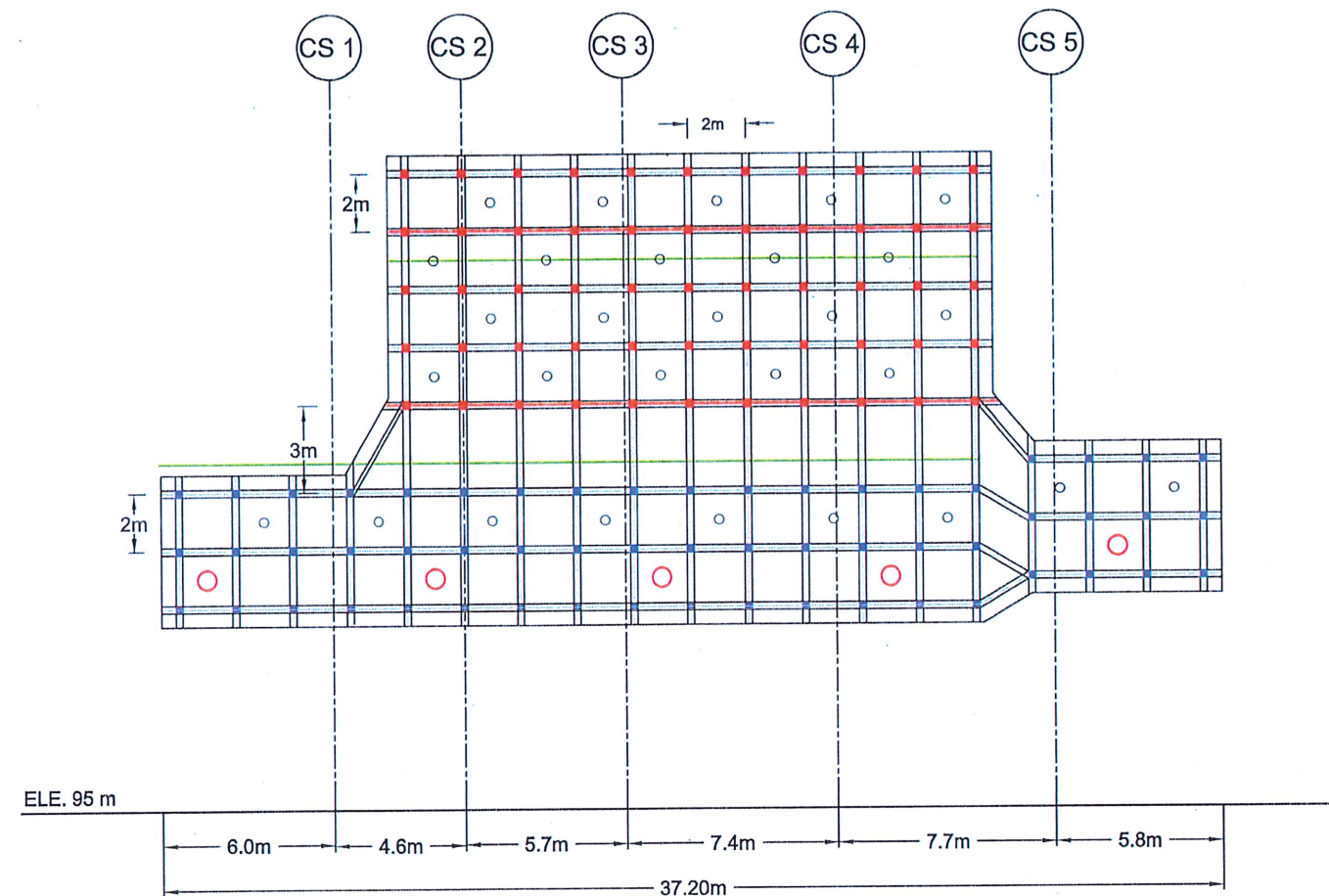
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EMPLOYER		DESIGNER	REV	DATE	REVISION DESCRIPTION	APPROVAL	PROJECT TITLE	TITLE			DESCRIPTION	NAME	SIGNATURE		
 DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA MINISTRY OF DEFENCE NATIONAL BUILDING RESEARCH ORGANISATION No. 99/1, JAWATTA ROAD, COLOMBO - 05	 NATIONAL BUILDING RESEARCH ORGANISATION No. 99/1, JAWATTA ROAD, COLOMBO - 05	 NATIONAL BUILDING RESEARCH ORGANISATION No. 99/1, JAWATTA ROAD, COLOMBO - 05					REDUCTION OF LANDSLIDE VULNERABILITY BY MITIGATION MEASURES PROJECT VIDYARTHA COLLEGE LOCATION 02 KANDY	CROSS SECTIONS OF PROPOSED MITIGATION MEASURES			DRAWN	K.M.D. NISHANTHI			
													DESIGNED	N.S.D.M.D. PERERA	
													CHECKED	DR. S.O.A.D.M. LAKRUWAN	
													RECOMMENDED	PROF. S.A.S. KULATHILAKA	
										SCALE 1:250	DATE 19.09.2025	REVISION	APPROVED	K.N. BANDARA	
										PROJECT / DRAWING No. RLVMMP/WORKS/NCB/PH II/224/L02/DR 04a					



CS 5

EMPLOYER  DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA MINISTRY OF DEFENCE NATIONAL BUILDING RESEARCH ORGANISATION No. 99/1, JAWATTA ROAD, COLOMBO - 05	DESIGNER  NATIONAL BUILDING RESEARCH ORGANISATION No. 99/1, JAWATTA ROAD, COLOMBO - 05	REV	DATE	REVISION DESCRIPTION	APPROVAL	PROJECT TITLE REDUCTION OF LANDSLIDE VULNERABILITY BY MITIGATION MEASURES PROJECT VIDYARTHA COLLEGE LOCATION 02 KANDY	TITLE CROSS SECTION OF PROPOSED MITIGATION MEASURES		DESCRIPTION	NAME	SIGNATURE
									DRAWN	K.M.D. NISHANTHI	
									DESIGNED	N.S.D.M.D. PERERA	
									CHECKED	DR. S.O.A.D.M. LAKRUWAN	
		SCALE 1:250		DATE	19.09.2025		RECOMMENDED	PROF. S.A.S. KULATHILAKA			
		PROJECT / DRAWING No. RLVMMP/WORKS/NCB/PH II/224/L02/DR 04b					REVISION	APPROVED	K.N. BANDARA		

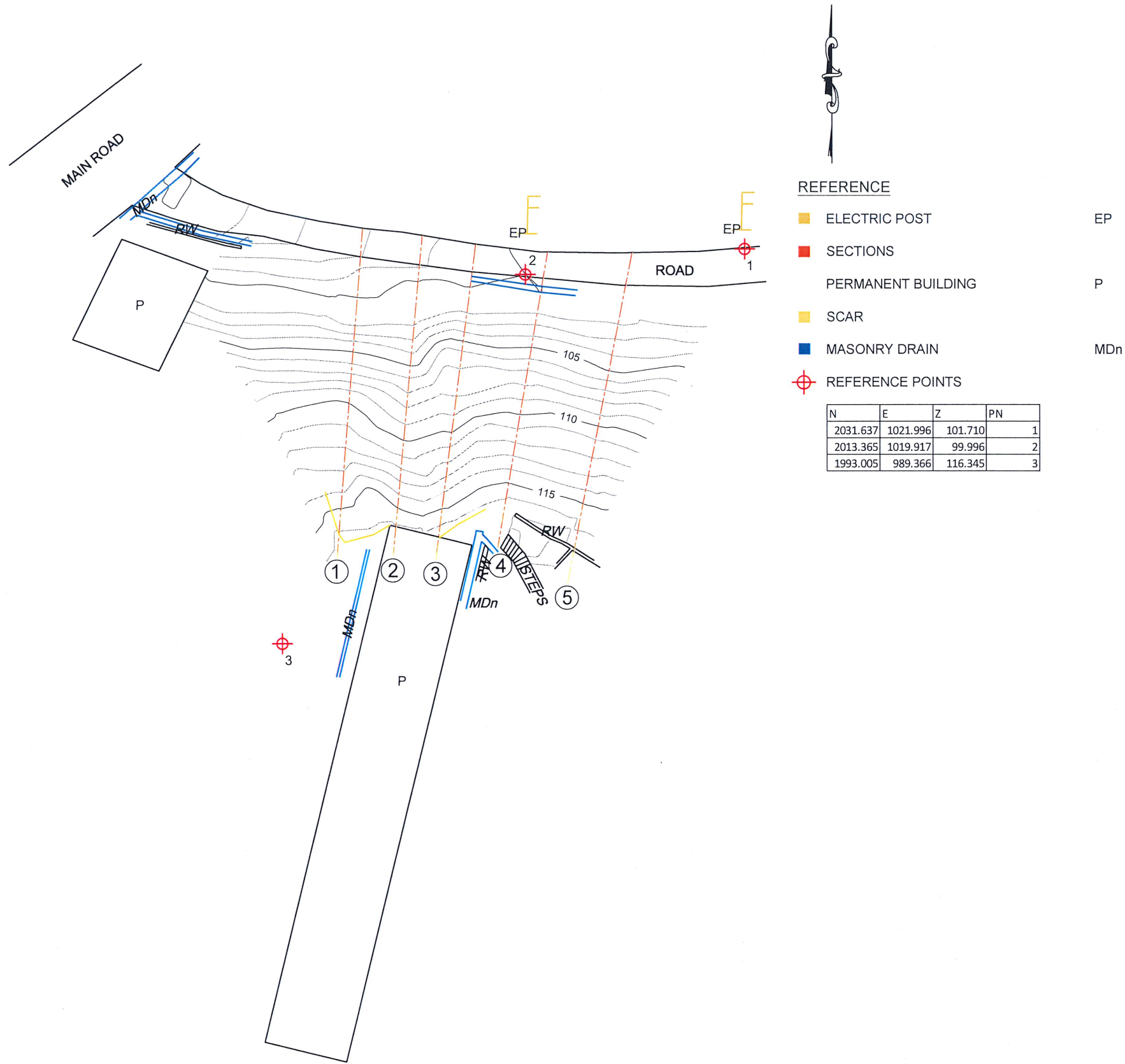


FRONT ELEVATION OF SOIL NAILING AREA

LEGEND

	SOIL NAILING	-	TOTAL SOIL NAIL LENGTH = 6m NO OF SOIL NAIL = 57 REINFORCEMENT DIAMETER = 32 mm DIAMETER OF DRILLED HOLE = 125mm NAIL SPACING = 2m (HORIZONTAL)		HORIZONTAL LONG DRAIN	-	HORIZONTAL LONG DRAIN LENGTH = 15 m NO'S OF LONG DRAIN = 05 DIAMETER = 90 mm SPACING = 08 m
	SOIL NAILING	-	TOTAL SOIL NAIL LENGTH = 4m NO OF SOIL NAIL = 55 REINFORCEMENT DIAMETER = 32 mm DIAMETER OF DRILLED HOLE = 125mm NAIL SPACING = 2m (HORIZONTAL)		HORIZONTAL SHORT DRAIN	-	HORIZONTAL SHORT DRAIN LENGTH = 2 m NO'S OF SHORT DRAIN = 29 DIAMETER = 90 mm SPACING = 04 m
	BERM DRAIN						
	BOUNDARY BEAM						

EMPLOYER DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA MINISTRY OF DEFENCE NATIONAL BUILDING RESEARCH ORGANISATION No. 99/1, JAWATTA ROAD, COLOMBO - 05 	DESIGNER NATIONAL BUILDING RESEARCH ORGANISATION No. 99/1, JAWATTA ROAD, COLOMBO - 05	REV	DATE	REVISION DESCRIPTION	APPROVAL	PROJECT TITLE REDUCTION OF LANDSLIDE VULNERABILITY BY MITIGATION MEASURES PROJECT VIDYARTHA COLLEGE LOCATION 02 KANDY	TITLE FRONT ELEVATION OF PROPOSED MITIGATION MEASURES	DESCRIPTION	NAME	SIGNATURE
								DRAWN	K.M.D. NISHANTHI	
								DESIGNED	N.S.D.M.D. PERERA	
								CHECKED	DR. S.O.A.D.M. LAKRUWAN	
								RECOMMENDED	PROF. S.A.S. KULATHILAKA	
								APPROVED	K.N. BANDARA	
		SCALE 1:250		DATE 19.09.2025	PROJECT / DRAWING No. RLVMMP/WORKS/NCB/PH II/224/L02/DR 05			REVISION		



EMPLOYER



DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA
MINISTRY OF DEFENCE
NATIONAL BUILDING RESEARCH INSTITUTE
No. 99/1, JAWATTA ROAD,
COLOMBO - 05



DESIGNER



NATIONAL BUILDING RESEARCH INSTITUTE
No. 99/1, JAWATTA ROAD,
COLOMBO - 05

REV	DATE	REVISION DESCRIPTION	APPROVAL

PROJECT TITLE

REDUCTION OF LANDSLIDE VULNERABILITY
BY MITIGATION MEASURES PROJECT
VIDYARTHA COLLEGE
LOCATION 03
KANDY

TITLE

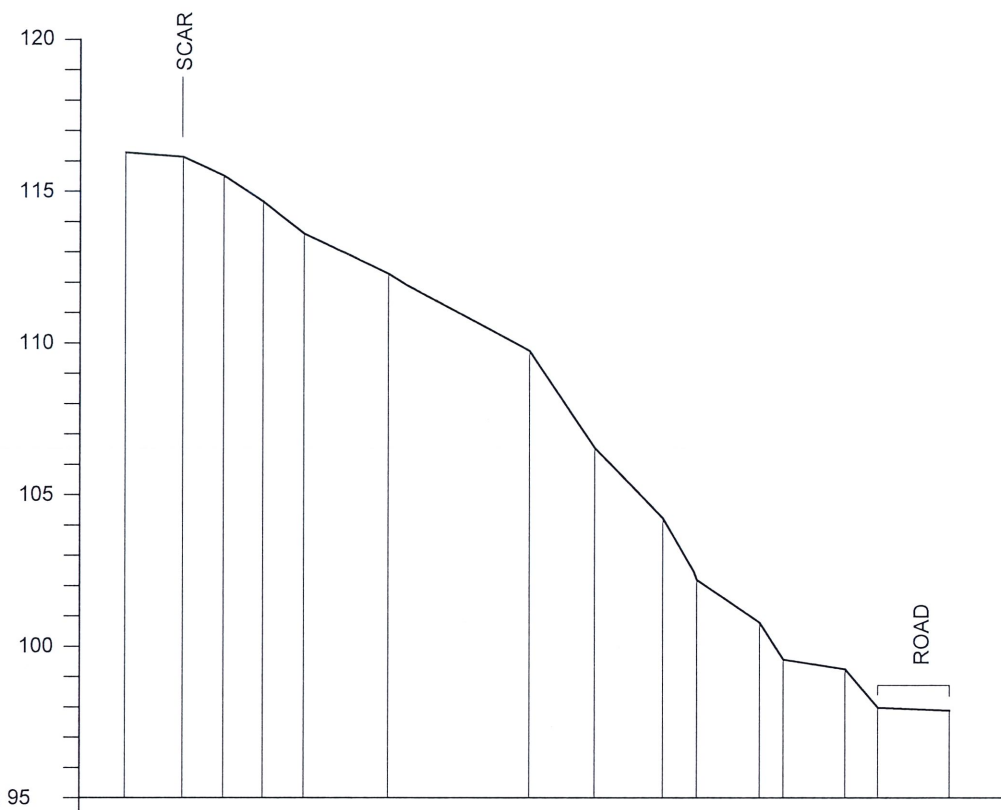
SURVEY PLAN

SCALE 1:400
PROJECT / DRAWING No.
RLVMMP/WORKS/NCB/PH II/224/L03/DR 01

DATE 06.04.2026

REVISION

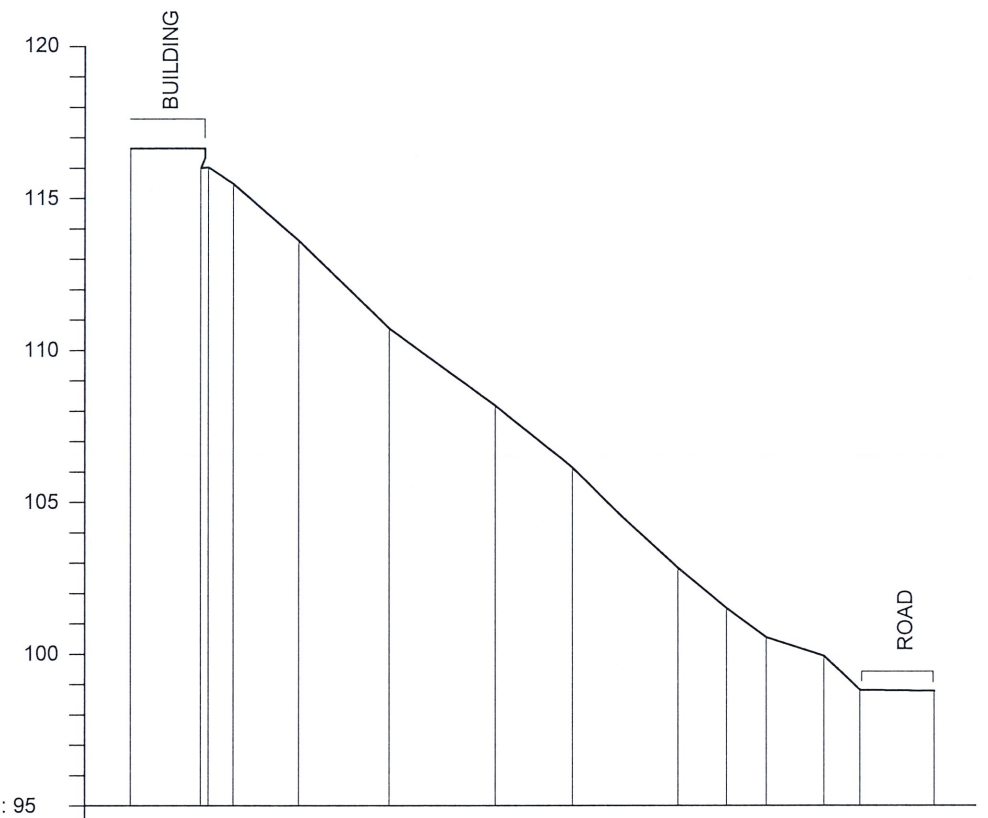
DESCRIPTION	NAME	SIGNATURE
SURVEYED	W.L.P.N.N WIJESINGHE	
CHECKED	R.J.K.P.N. RANATHUNGA	PNB



DATUM ABOVE (m) : 95

GROUND LEVEL (m)	116.290	116.140	115.510	114.660	113.600	112.270	109.730	106.540	104.220	102.480	100.780	99.570	99.250	97.980	97.880
DISTANCE (m)	0.000	1.929	3.287	4.599	5.963	8.753	13.439	15.626	17.887	18.912	21.106	21.887	23.927	25.018	27.389

CS 1



DATUM ABOVE (m) : 95

GROUND LEVEL (m)	116.650	116.000	115.480	113.610	110.720	108.180	106.140	104.540	102.840	101.510	100.550	99.940	98.810	98.780
DISTANCE (m)	0.000	2.319	3.396	5.565	8.588	12.105	14.676	16.310	18.165	19.776	21.100	23.023	24.229	26.688

CS 2



DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA
MINISTRY OF DEFENCE
NATIONAL BUILDING RESEARCH INSTITUTE
No. 99/1, JAWATTA ROAD,
COLOMBO - 05



DESIGNER

NATIONAL BUILDING RESEARCH INSTITUTE
No. 99/1, JAWATTA ROAD,
COLOMBO - 05

REV	DATE	REVISION DESCRIPTION	APPROVAL

PROJECT TITLE

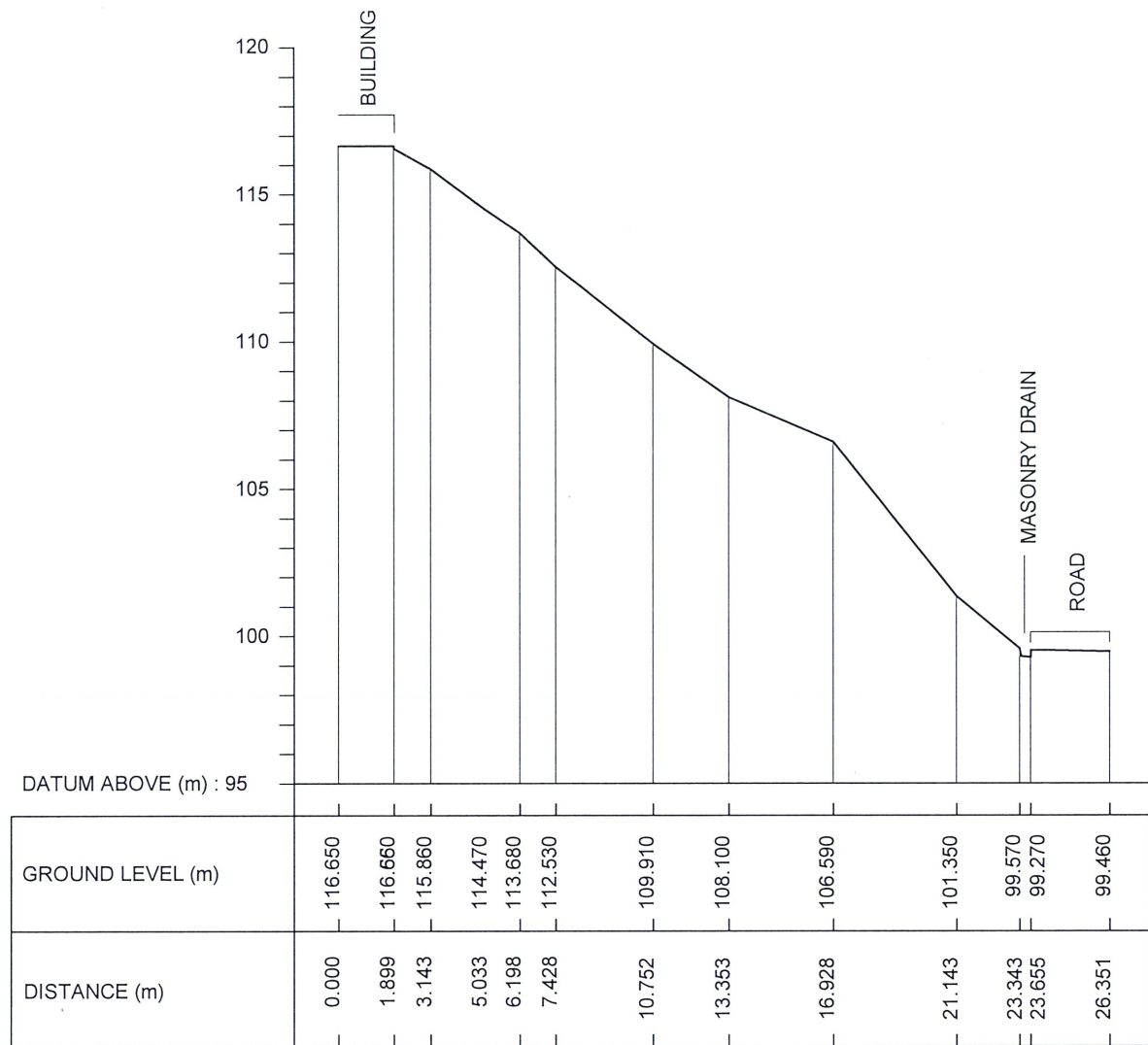
REDUCTION OF LANDSLIDE VULNERABILITY
BY MITIGATION MEASURES PROJECT
VIDYARTHA COLLEGE
LOCATION 03
KANDY

TITLE

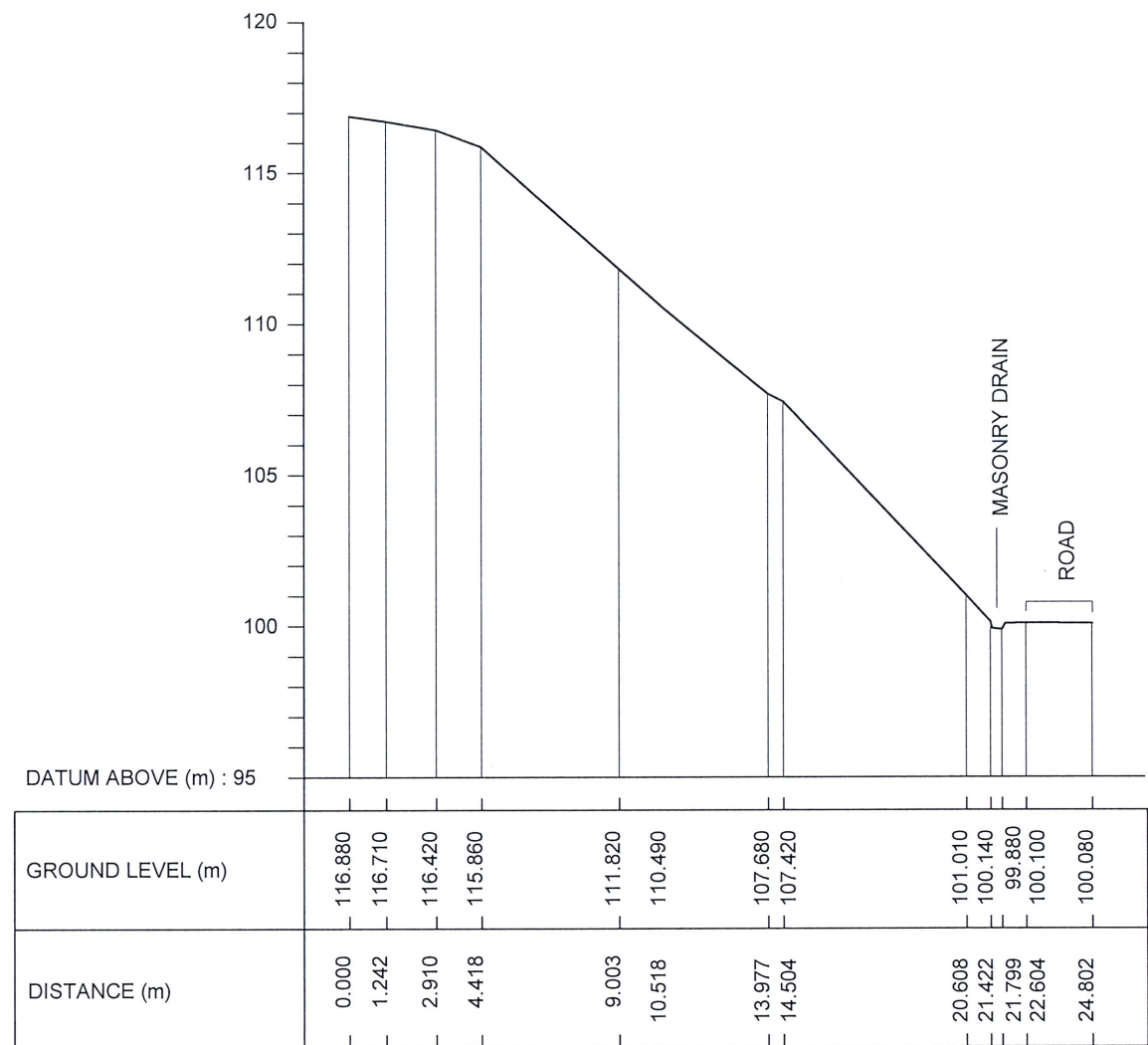
EXISTING CROSS SECTIONS

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PROJECT / DRAWING No.	RLVMM/WORKS/NCB/PH II/224/L03/DR 02a	REVISION	

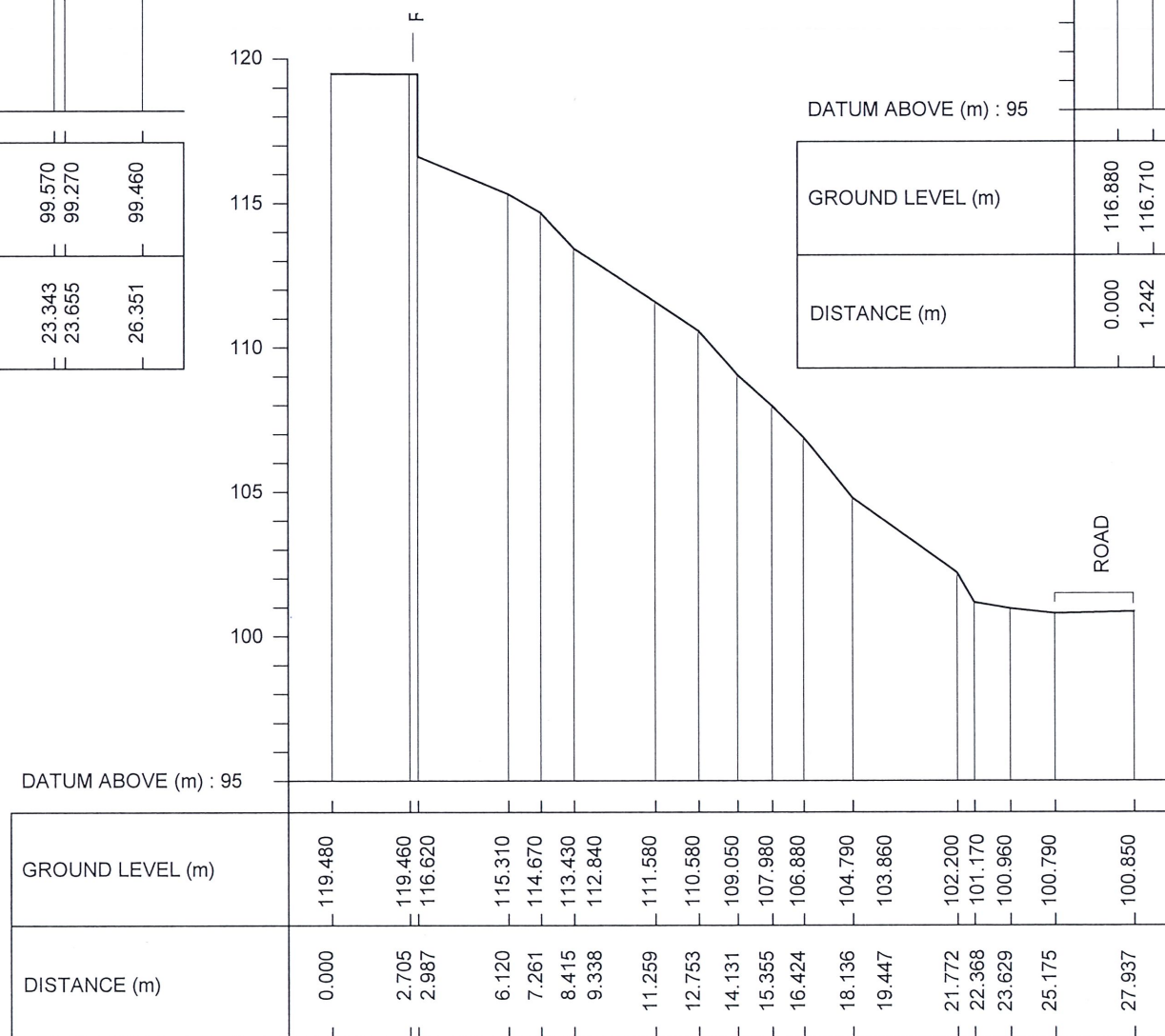
DESCRIPTION	NAME	SIGNATURE
SURVEYED	W.L.P.N.N WIJESINGHE	
CHECKED	R.J.K.P.N. RANATHUNGA	



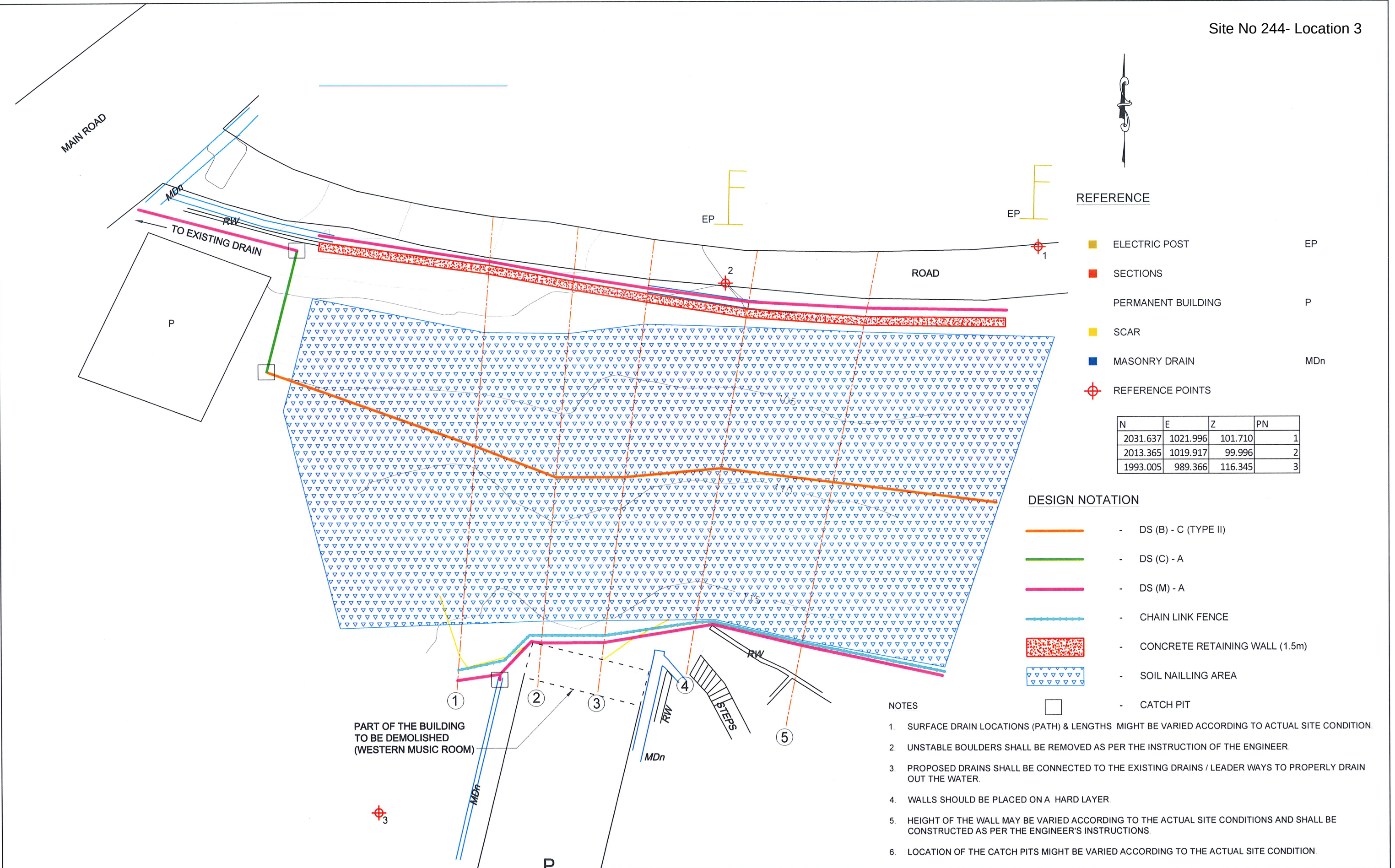
CS 3

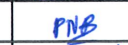


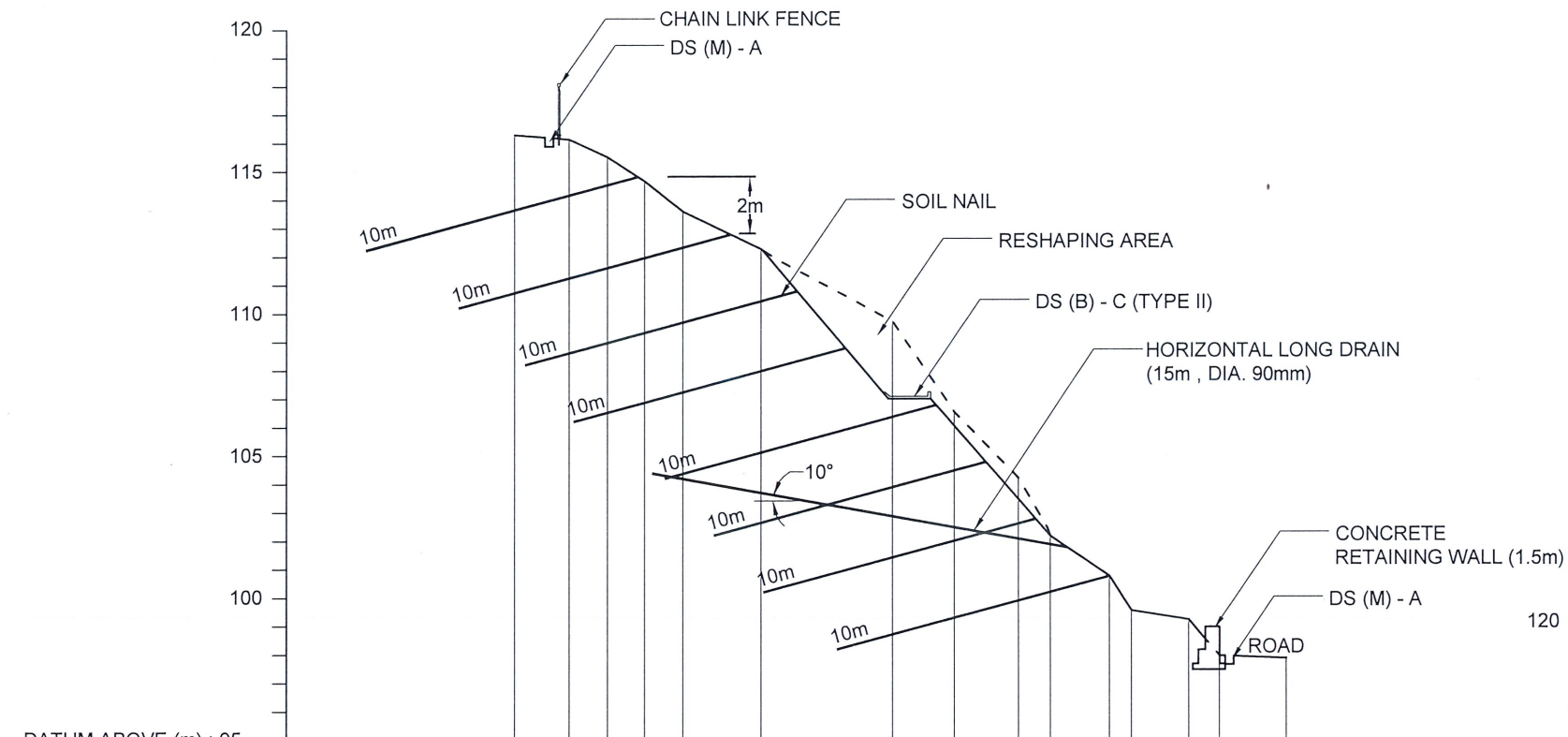
CS 4



CS 5



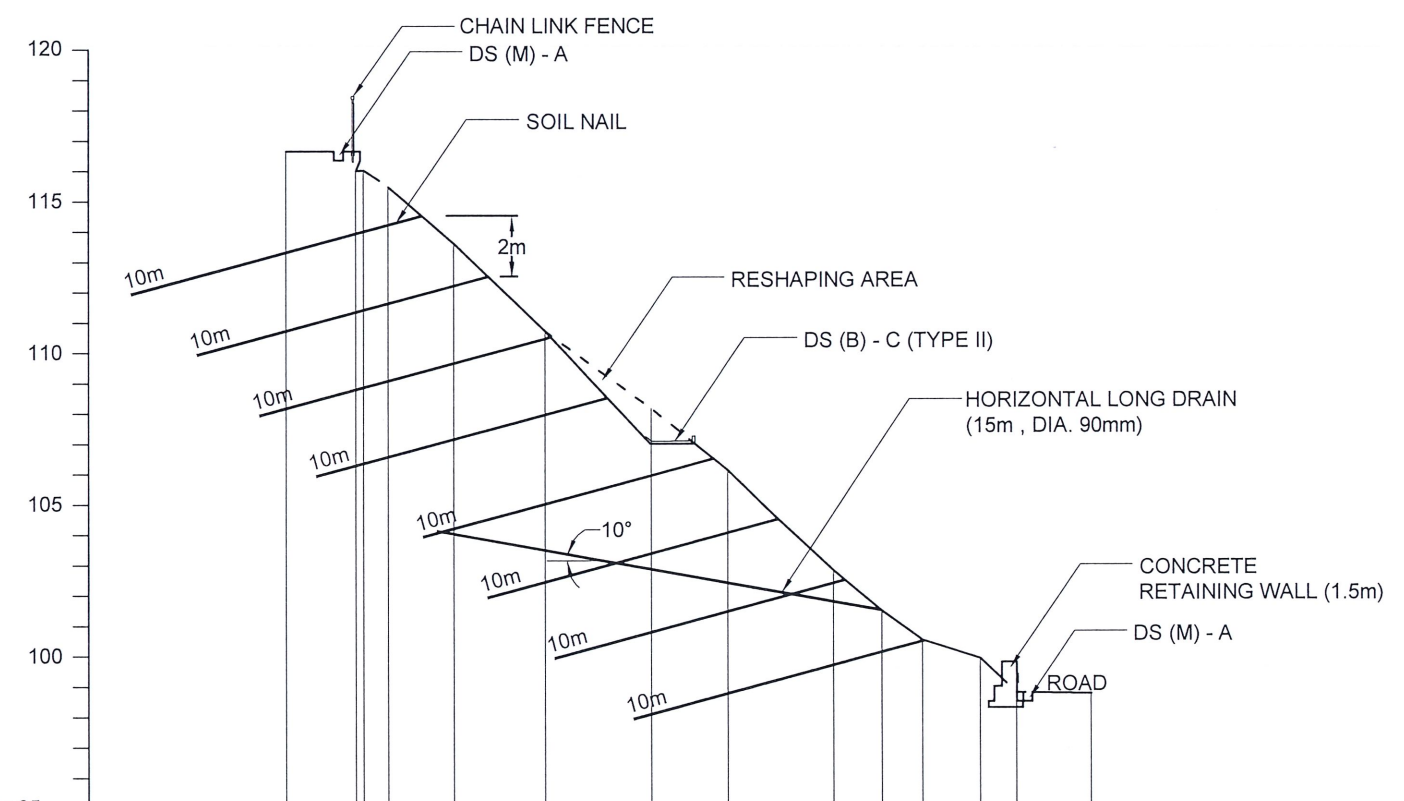
EMPLOYER DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA MINISTRY OF DEFENCE NATIONAL BUILDING RESEARCH INSTITUTE No. 99/1, JAWATTA ROAD, COLOMBO - 05	DESIGNER NATIONAL BUILDING RESEARCH INSTITUTE No. 99/1, JAWATTA ROAD, COLOMBO - 05	REV	DATE	REVISION DESCRIPTION	APPROVAL	PROJECT TITLE REDUCTION OF LANDSLIDE VULNERABILITY BY MITIGATION MEASURES PROJECT VIDYARTHA COLLEGE LOCATION 03 KANDY	TITLE FRONT ELEVATION OF PROPOSED MITIGATION MEASURES		DESCRIPTION	NAME	SIGNATURE		
									DRAWN	K. M. D. NISHANTHI			
									DESIGNED	R.J.K.P.N. RANATHUNGA			
									CHECKED	I.A.N.D. IDRIMANNA			
									SCALE 1:200 PROJECT / DRAWING No. RLVMMP/WORKS/NCB/PH II/224/L03/DR 03	DATE 06.04.2026 REVISION	RECOMMENDED	PROF. S. A. S. KULATHILAKA	
											APPROVED	ENG. (DR.) SANCHITHA JAYAKODY	



DATUM ABOVE (m) : 95

GROUND LEVEL (m)	116.290	116.140	115.510	114.660	113.600	112.270	109.730	106.540	104.220	102.480	100.780	99.570	99.250	97.980	97.880
DISTANCE (m)	0.000	1.929	3.287	4.599	5.963	8.753	13.439	15.626	17.887	18.912	21.106	21.887	23.927	25.018	27.389

CS 1



DATUM ABOVE (m) : 95

GROUND LEVEL (m)	116.650	116.000	115.480	113.610	110.720	108.180	106.140	104.540	102.840	101.510	100.550	99.940	98.810	98.780
DISTANCE (m)	0.000	2.319	3.396	5.565	8.588	12.105	14.676	16.310	18.165	19.776	21.100	23.023	24.229	26.688

CS 2

EMPLOYER



DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA
MINISTRY OF DEFENCE
NATIONAL BUILDING RESEARCH INSTITUTE
No. 99/1, JAWATTA ROAD,
COLOMBO - 05



DESIGNER



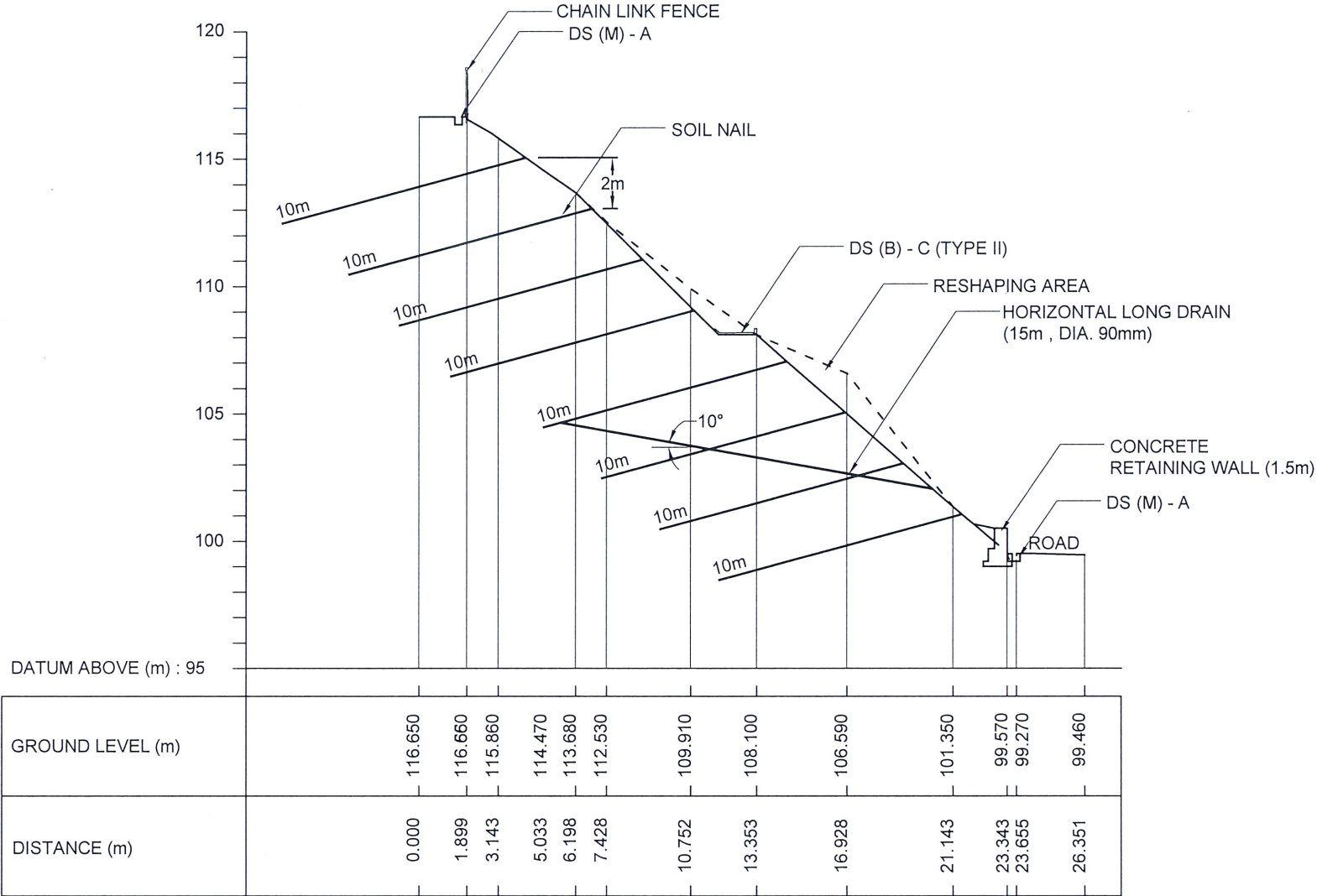
NATIONAL BUILDING RESEARCH INSTITUTE
No. 99/1, JAWATTA ROAD,
COLOMBO - 05

REV	DATE	REVISION DESCRIPTION	APPROVAL

PROJECT TITLE
REDUCTION OF LANDSLIDE VULNERABILITY
BY MITIGATION MEASURES PROJECT
VIDYARTHA COLLEGE
LOCATION 03
KANDY

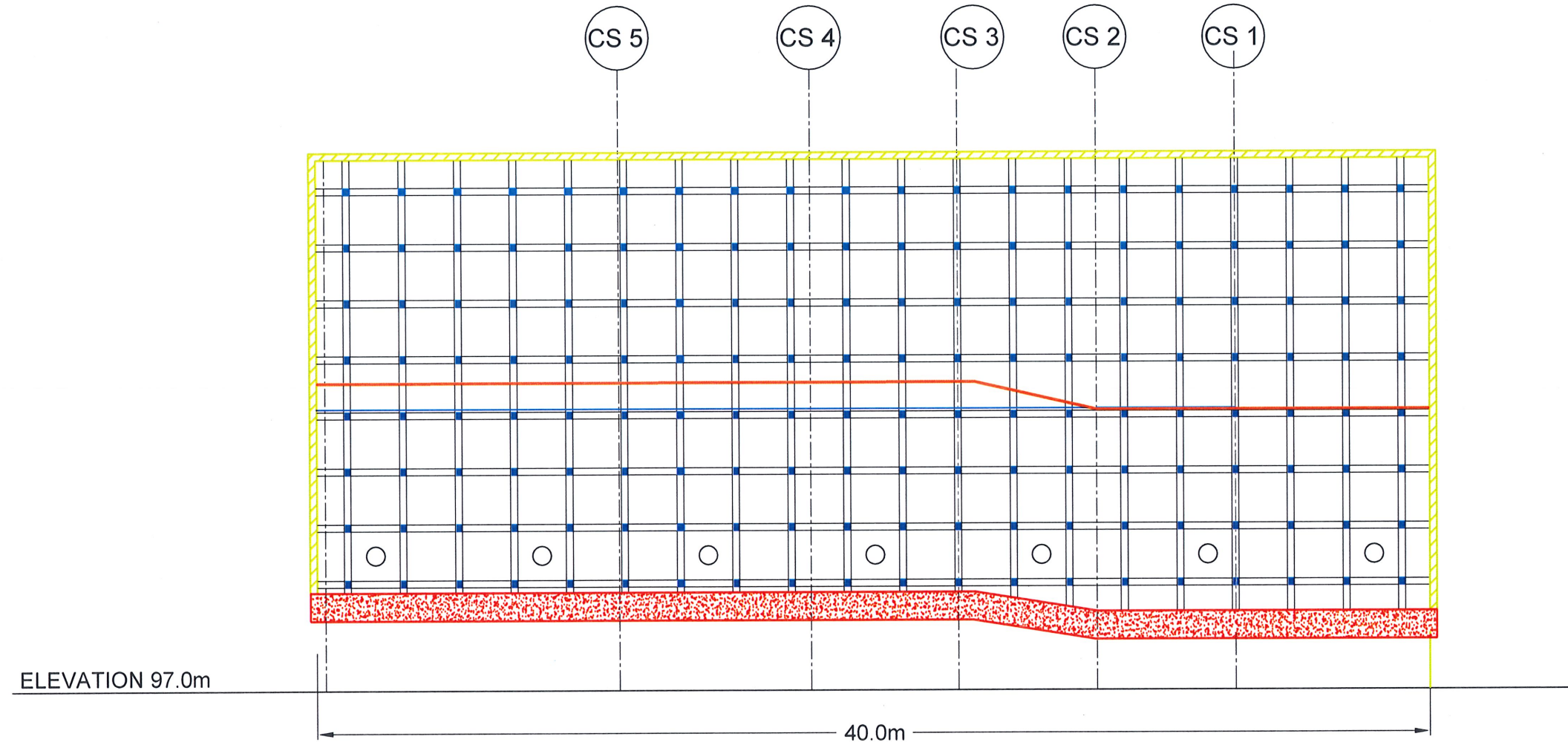
TITLE	DESCRIPTION	NAME	SIGNATURE
CROSS SECTION OF PROPOSED MITIGATION MEASURES	DRAWN	K. M. D. NISHANTHI	
	DESIGNED	R.J.K.P.N. RANATHUNGA	
	CHECKED	I.A.N.D. IDIRIMANNA	
	RECOMMENDED	PROF. S. A. S. KULATHILAKA	
	APPROVED	ENG. (DR.) SANCHITHA JAYAKODY	

SCALE 1:250 DATE 06.04.2026
PROJECT / DRAWING No. RLVMP/WORKS/NCB/PH II/224/L03/DR 04a REVISION



CS 3

EMPLOYER DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA MINISTRY OF DEFENCE NATIONAL BUILDING RESEARCH INSTITUTE No. 99/1, JAWATTA ROAD, COLOMBO - 05 	DESIGNER NATIONAL BUILDING RESEARCH INSTITUTE No. 99/1, JAWATTA ROAD, COLOMBO - 05	REV	DATE	REVISION DESCRIPTION	APPROVAL	PROJECT TITLE REDUCTION OF LANDSLIDE VULNERABILITY BY MITIGATION MEASURES PROJECT VIDYARTHA COLLEGE LOCATION 03 KANDY	TITLE CROSS SECTION OF PROPOSED MITIGATION MEASURES		DESCRIPTION	NAME	SIGNATURE				
									DRAWN	K. M. D. NISHANTHI					
									DESIGNED	R.J.K.P.N. RANATHUNGA					
									CHECKED	I.A.N.D. IDIRIMANNA					
								SCALE	1:250	DATE	06.04.2026	RECOMMENDED	PROF. S. A. S. KULATHILAKA		
								PROJECT / DRAWING No. RLVMP/WORKS/NCB/PH II/224/L03/DR 04b		REVISION	APPROVED	ENG. (DR.) SANCHITHA JAYAKODY			

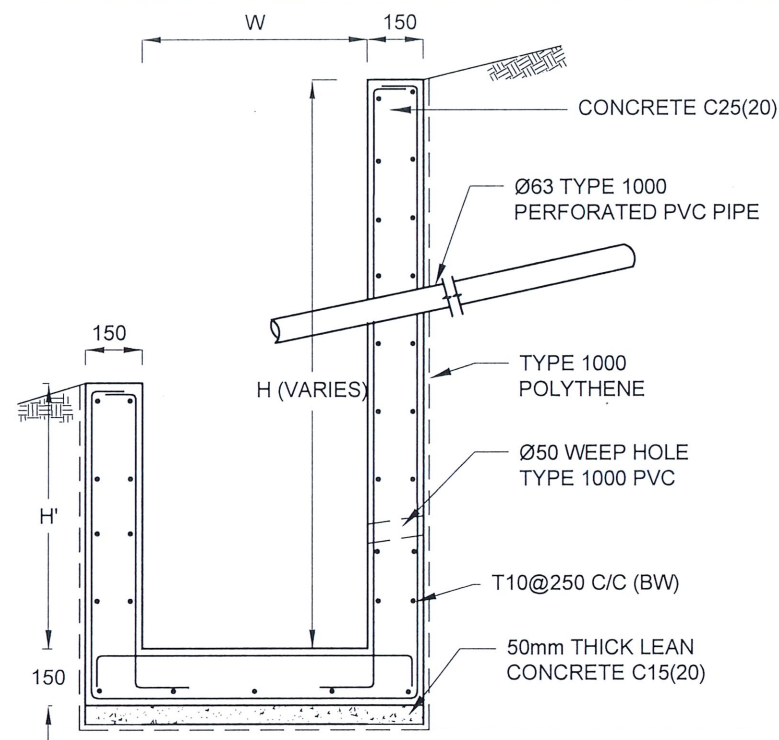


FRONT ELEVATION OF SOIL NAILING AREA

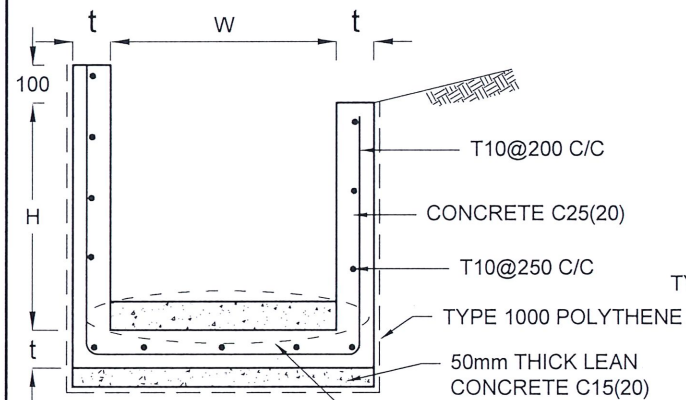
LEGEND

-  SOIL NAILING
- TOTAL SOIL NAIL LENGTH = 10m
NO OF SOIL NAIL = 176
REINFORCEMENT DIAMETER = 32 mm
DIAMETER OF DRILLED HOLE = 125mm
NAIL SPACING = 2m (BW)
-  HORIZONTAL LONG DRAIN
- HORIZONTAL LONG DRAIN LENGTH = 15 m
NO'S OF LONG DRAIN = 07
DIAMETER = 90 mm
SPACING = 06 m
-  DS (B) - C (TYPE II)
-  BOUNDARY BEAM

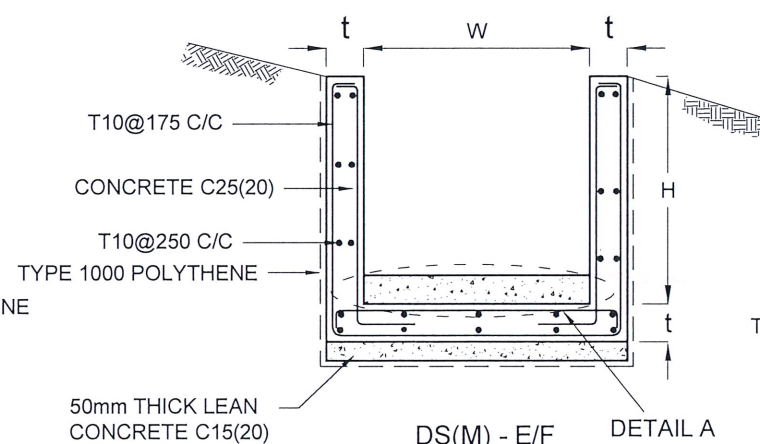
EMPLOYER  DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA MINISTRY OF DEFENCE NATIONAL BUILDING RESEARCH INSTITUTE No. 99/1, JAWATTA ROAD, COLOMBO - 05	DESIGNER  NATIONAL BUILDING RESEARCH INSTITUTE No. 99/1, JAWATTA ROAD, COLOMBO - 05	REV	DATE	REVISION DESCRIPTION	APPROVAL	PROJECT TITLE REDUCTION OF LANDSLIDE VULNERABILITY BY MITIGATION MEASURES PROJECT VIDYARTHA COLLEGE LOCATION 03 KANDY	TITLE FRONT ELEVATION OF PROPOSED MITIGATION MEASURES	DESCRIPTION	NAME	SIGNATURE			
								DRAWN	K. M. D. NISHANTHI				
								DESIGNED	R.J.K.P.N. RANATHUNGA				
								CHECKED	I.A.N.D. IDIRIMANNA				
								RECOMMENDED	PROF. S. A. S. KULATHILAKA				
								SCALE 1:200	DATE 06.04.2026	REVISION	APPROVED	ENG. (DR.) SANCHITHA JAYAKODY	
								PROJECT / DRAWING No. RLVMP/WORKS/NCB/PH II/224/L03/DR 05					



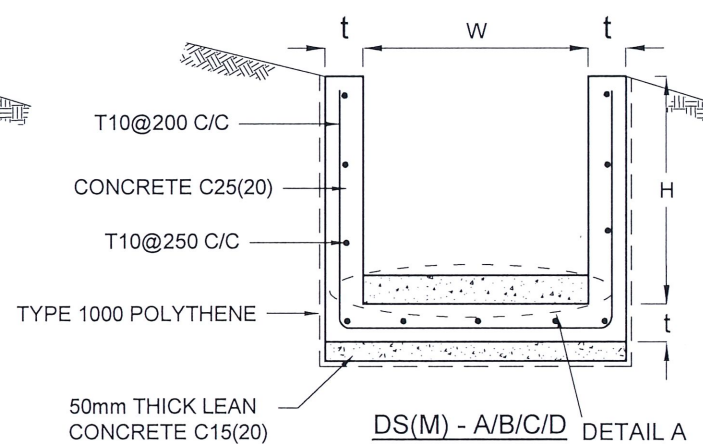
DS (M) - L



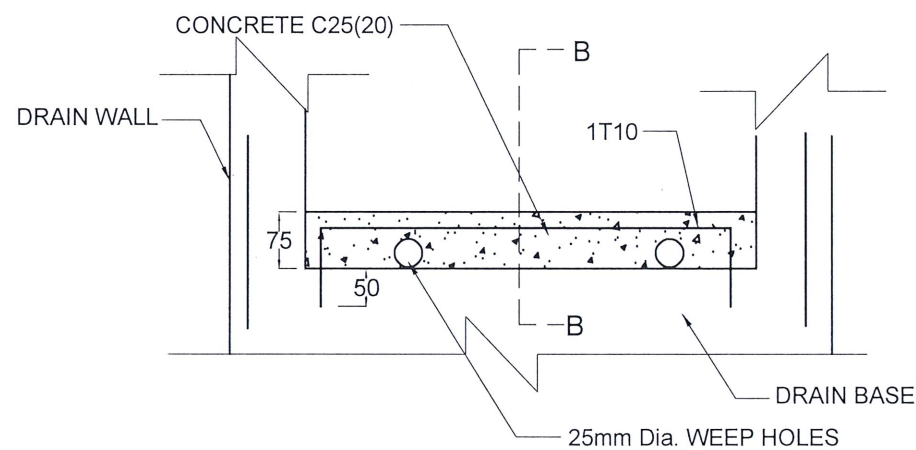
DS(M) - P/R/Q



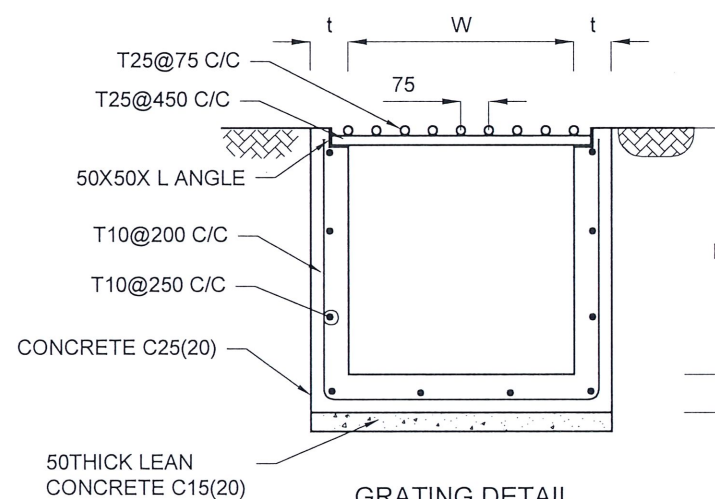
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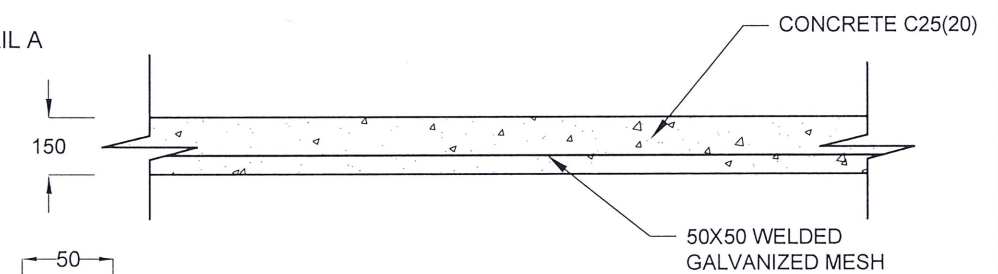
DS(M) - A/B/C/D



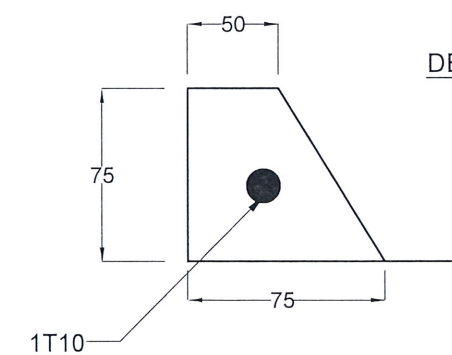
DETAIL A - (ENERGY BREAKER AT 3M)



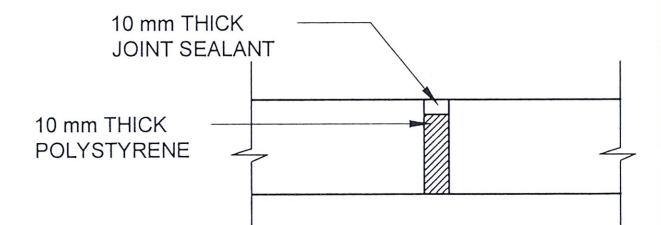
GRATING DETAIL



DETAILS OF BERM SEALING



SECTION B-B



EXPANTION JOINT DETAIL

DS(M) - L	W (mm)	H' (mm)
TYPE I	600	600
TYPE II	800	800

DRAIN TYPE	W (mm)	H (mm)	t (mm)
DS (M) - A /P	300	300	100
DS (M) - B/R	450	450	100
DS (M) - C/Q	600	600	100
DS (M) - D	750	750	125
DS (M) - E	900	900	150
DS (M) - F	1000	1000	150

NOTES

- DEPTH OF EXCAVATION MAY VARY ACCORDING TO SITE CONDITIONS.
- STEPS SHALL BE CONSTRUCTED AT SURFACE DRAIN ON SLOPING GROUND ACCORDING TO THE SITE CONDITIONS AS INSTRUCTED BY THE ENGINEER.
- ENERGY BREAKERS SHALL BE CONSTRUCTED AT THE STEEP DRAIN SEGMENTS AS PER THE INSTRUCTIONS OF THE ENGINEER.
- DOWELS SHALL BE INSTALLED ACCORDING TO THE GROUND CONDITIONS AS INSTRUCTED BY THE ENGINEER.
- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE STATED.
- 10 mm THICK EXPANSION JOINT SHALL BE INTRODUCED IN EVERY 5m INTERVAL.

CONCRETE

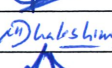
- USE FOLLOWING CONCRETE GRADES FOR STRUCTURE

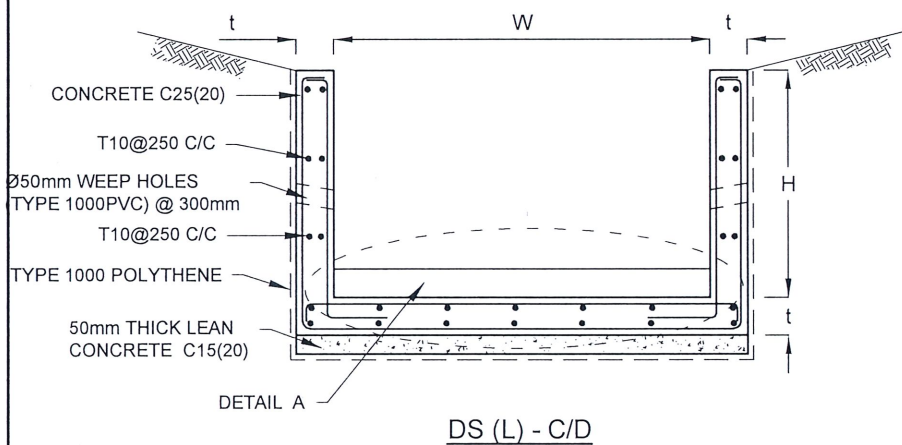
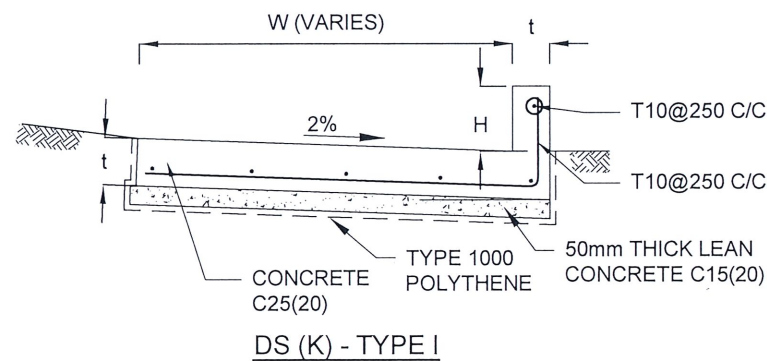
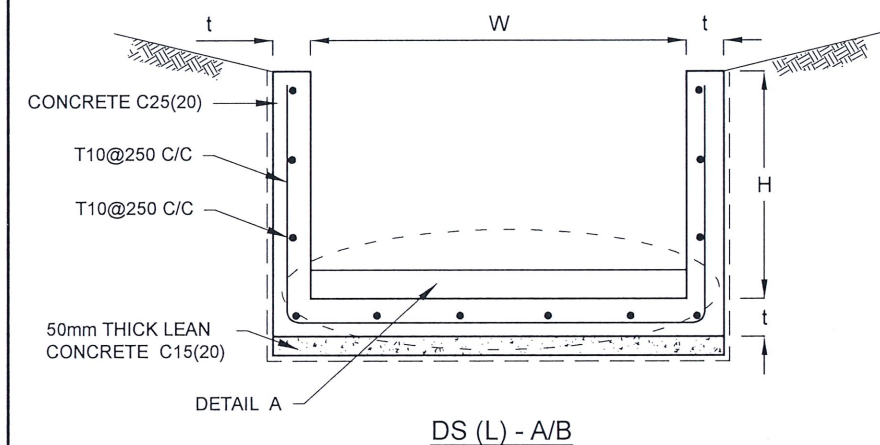
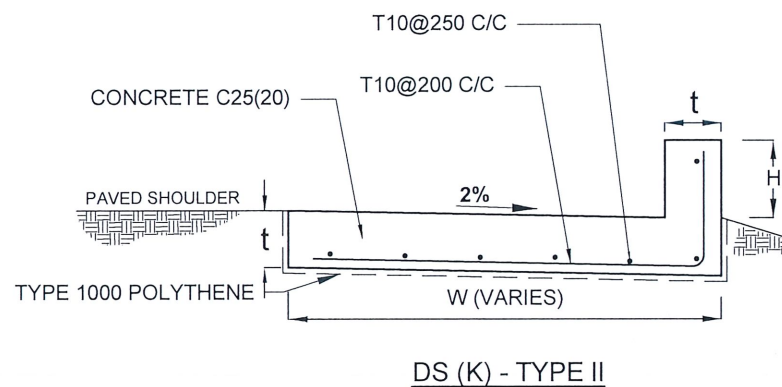
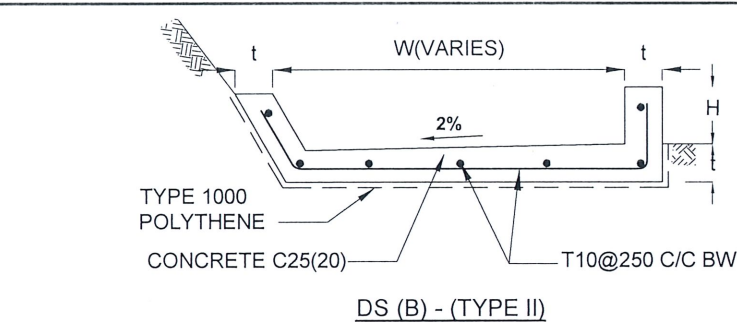
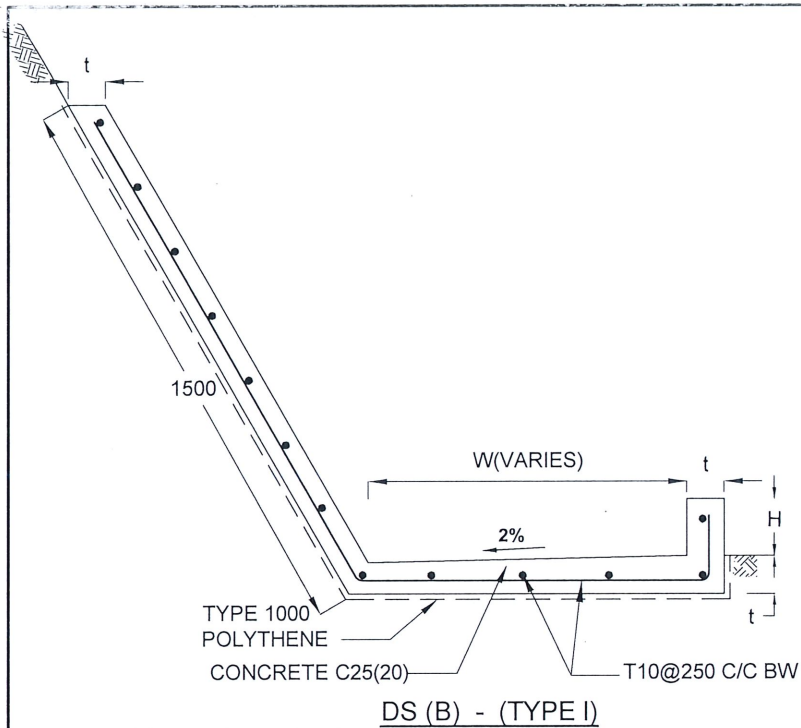
[a]	SCREED	- C15(20)
[b]	WALLS / BASE / ENERGY BREAKERS	- C25(20)

REINFORCEMENT

- HIGH YIELD REINFORCEMENT BARS DENOTED BY "T" SHALL CONFORM TO THE REQUIREMENTS OF TYPE 2 OF BS 4449 AND HAVE A CHARACTERISTIC TENSILE STRENGTH OF 460N/mm².
- BARS OF CUT LENGTH LARGER THAN THE SUPPLIED LENGTH TO BE LAPPED FOR A LENGTH OF 40 x BAR DIA. AND LAPPING SHOULD BE STAGGERED.
- ANCHORAGE LENGTH SHOULD BE 40X BAR DIA.
- REINFORCEMENT BARS SHALL BE BENT IN ACCORDANCE WITH STANDARD SPECIFICATIONS.
- COVER TO REINFORCEMENT

[a]	BURIED FACES AND DRAIN INVERTS	- 40 mm
[b]	ALL OTHER FACES	- 25 mm

EMPLOYER	DESIGNER	REV	DATE	REVISION DESCRIPTION	APPROVAL	PROJECT TITLE	TITLE	DESCRIPTION	NAME	SIGNATURE
 DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA MINISTRY OF DEFENCE NATIONAL BUILDING RESEARCH INSTITUTE No. 99/1, JAWATTA ROAD, COLOMBO - 05	 DESIGN UNIT NATIONAL BUILDING RESEARCH INSTITUTE No. 99/1, JAWATTA ROAD, COLOMBO - 05					REDUCTION OF LANDSLIDE VULNERABILITY BY MITIGATION MEASURES PROJECT VIDYARTHA COLLEGE KANDY	DETAILS OF DRAINS (SURFACE DRAIN -1 OF 2)	DRAWN	K. M. D. NISHANTHI	
								DESIGNED	N.S.D.M.D. PERERA	
								CHECKED	I.A.N.D. IDRIMANNA	
								RECOMMENDED	PROF. S. A. S. KULATHILAKA	
								APPROVED	ENG. (DR.) SANCHITHA JAYAKODY	
							SCALE	N.T.S.	DATE	06.04.2026
							PROJECT / DRAWING No.	RLVMMP/WORKS/NCB/PH III/224/A1	REVISION	00



DRAIN TYPE	W (mm)	H (mm)	t (mm)
DS (B) - A	500	150	100
DS (B) - B	1000	150	100
DS (B) - C	1500	150	100
DS (B) - D	2000	150	100

NOTES

- DEPTH OF EXCAVATION MAY VARY ACCORDING TO SITE CONDITIONS.
- STEPS SHALL BE CONSTRUCTED AT SURFACE DRAIN ON SLOPING GROUND ACCORDING TO THE SITE CONDITIONS AS INSTRUCTED BY THE ENGINEER.
- ENERGY BREAKERS SHALL BE CONSTRUCTED IN STAGGERED PATTERN AT THE STEEP DRAIN SEGMENTS AS PER THE INSTRUCTIONS OF THE ENGINEER.
- DOWELS SHALL BE INSTALLED ACCORDING TO THE GROUND CONDITIONS AS INSTRUCTED BY THE ENGINEER.
- COVER SLABS NEED TO BE PROVIDED ONLY FOR THE REGIONS AS INSTRUCTED BY THE ENGINEER.
- COVER SLAB WIDTH (W_c) SHOULD BE TAKEN AS THE SUM OF DRAIN WIDTH AND $2 \times$ DRAIN WALL THICKNESS. [$W_c = W + 2 \times t$]
- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE STATED.
- 10 mm THICK EXPANSION JOINT SHALL BE INTRODUCED IN EVERY 5m INTERVAL.

CONCRETE

- USE FOLLOWING CONCRETE GRADES FOR STRUCTURE

[a]	SCREED	- C15(20)
[b]	WALLS / BASE / ENERGY BREAKERS	- C25(20)

REINFORCEMENT

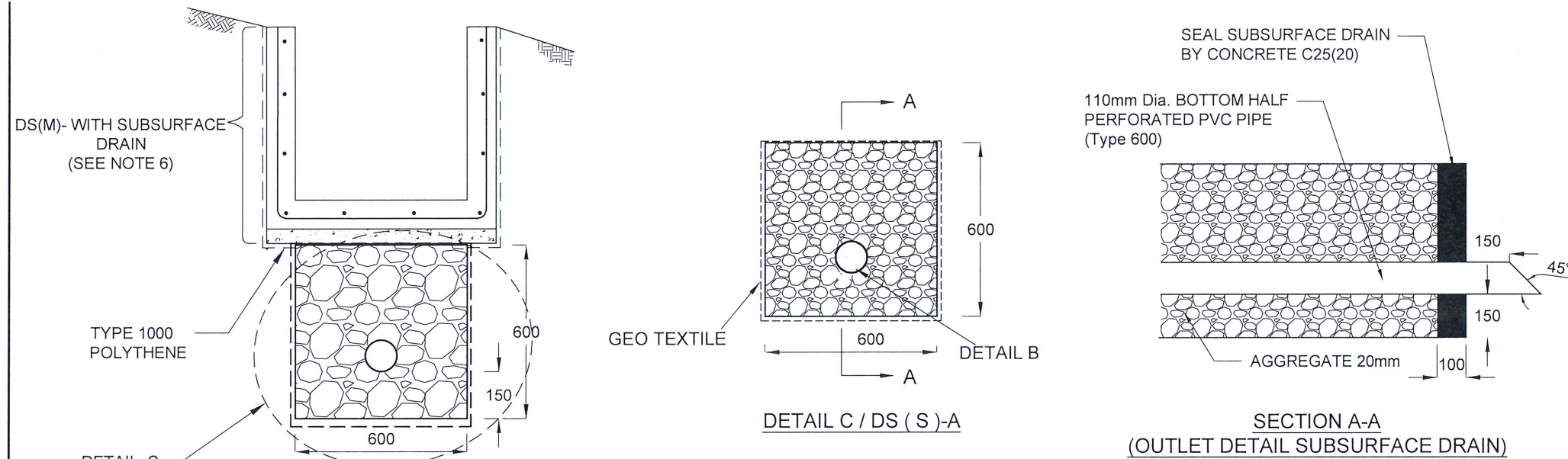
- HIGH YIELD REINFORCEMENT BARS DENOTED BY "T" SHALL CONFORM TO THE REQUIREMENTS OF TYPE 2 OF BS 4449 AND HAVE A CHARACTERISTIC TENSILE STRENGTH OF 460 N/mm^2 .
- BARS OF CUT LENGTH LARGER THAN THE SUPPLIED LENGTH TO BE LAPPED FOR A LENGTH OF $40 \times$ BAR DIA. AND LAPPING SHOULD BE STAGGERED.
- ANCHORAGE LENGTH SHOULD BE $40 \times$ BAR DIA.
- REINFORCEMENT BARS SHALL BE BENT IN ACCORDANCE WITH STANDARD SPECIFICATIONS.
- COVER TO REINFORCEMENT

[a]	BURIED FACES AND DRAIN INVERTS	- 40 mm
[b]	ALL OTHER FACES	- 25 mm

DRAIN TYPE	W (mm)	H (mm)	t (mm)
DS (K) - A	1000	200	100
DS (K) - B	1000	300	100
DS (K) - C	1150	200	200

DRAIN TYPE	W (mm)	H (mm)	t (mm)
DS (L) - A	1000	600	100
DS (L) - B	1000	800	125
DS (L) - C	1000	1000	125
DS (L) - D	2000	2000	150

EMPLOYER DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA MINISTRY OF DEFENCE NATIONAL BUILDING RESEARCH INSTITUTE No. 99/1, JAWATTA ROAD, COLOMBO - 05	DESIGNER DESIGN UNIT NATIONAL BUILDING RESEARCH INSTITUTE No. 99/1, JAWATTA ROAD, COLOMBO - 05	REV DATE REVISION DESCRIPTION APPROVAL	PROJECT TITLE REDUCTION OF LANDSLIDE VULNERABILITY BY MITIGATION MEASURES PROJECT VIDYARTHA COLLEGE KANDY	TITLE DETAILS OF DRAINS (SURFACE DRAIN -2 OF 2)	DESCRIPTION	NAME	SIGNATURE
					DRAWN	K. M. D. NISHANTHI	
					DESIGNED	N.S.D.M.D. PERERA	
					CHECKED	I.A.N.D. IDRIMANNA	
					RECOMMENDED	PROF. S. A. S. KULATHILAKA	
					APPROVED	ENG. (DR.) SANCHITHA JAYAKODY	



NOTES

1. W,H,t ; SHALL BE THE SAME AS RESPECTIVE DRAIN SECTION.
2. CP - R SHALL BE USED WHERE $H > 900\text{mm}$
3. DEPTH OF EXCAVATION MAY VARY ACCORDING TO SITE CONDITIONS.
4. DOWELS SHALL BE INSTALLED ACCORDING TO THE GROUND CONDITIONS AS INSTRUCTED BY THE ENGINEER.
5. 10 mm THICK EXPANSION JOINT SHALL BE INTRODUCED IN EVERY 5m INTERVAL.
6. DETAILS OF SURFACE DRAIN PORTION OF THE SUBSURFACE DRAINS SHALL BE AS PER DS(M), DS(B), DS(K) OR DS(C) SECTIONS ACCORDINGLY.
7. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE STATED.

CONCRETE

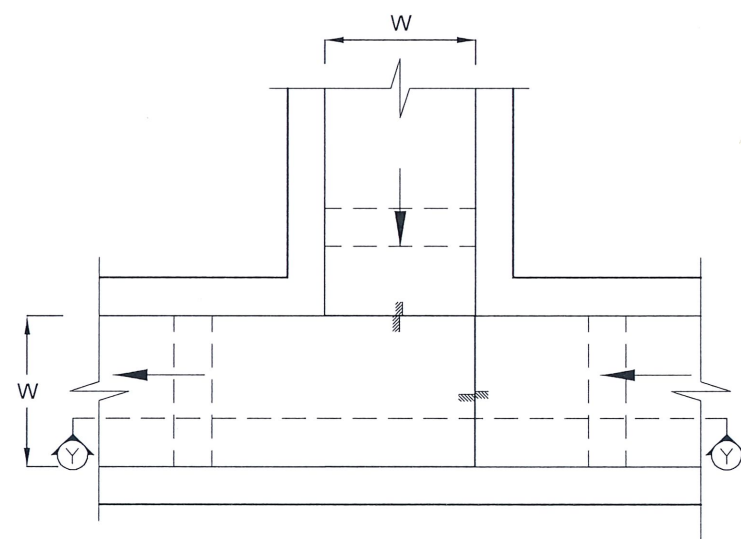
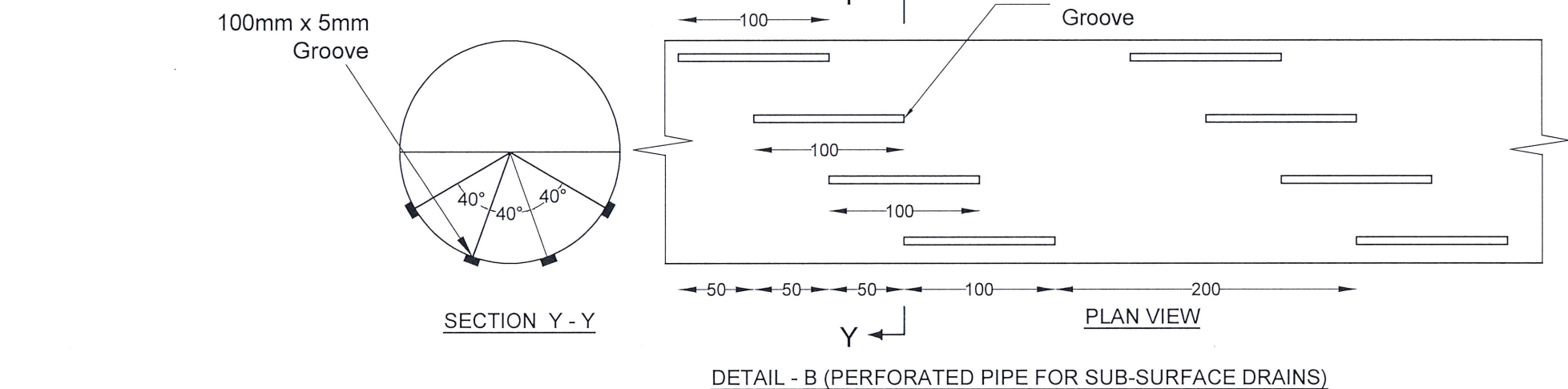
8. USE FOLLOWING CONCRETE GRADES FOR STRUCTURE

[a]	SCREED	- C15(20)
[b]	WALLS / BASE / ENERGY BREAKERS	- C25(20)

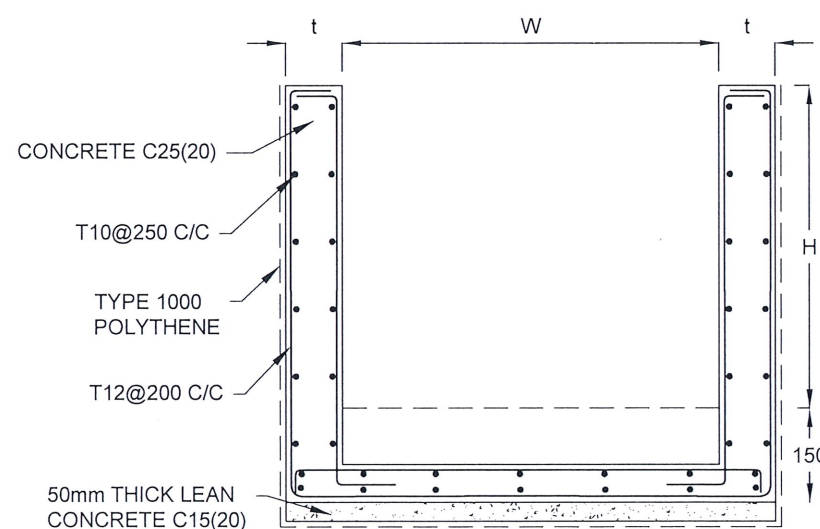
REINFORCEMENT

9. HIGH YIELD REINFORCEMENT BARS DENOTED BY "T" SHALL CONFORM TO THE REQUIREMENTS OF TYPE 2 OF BS 4449 AND HAVE A CHARACTERISTIC TENSILE STRENGTH OF 460N/mm^2 .
10. BARS OF CUT LENGTH LARGER THAN THE SUPPLIED LENGTH TO BE LAPPED FOR A LENGTH OF $40 \times \text{BAR DIA.}$ AND LAPPING SHOULD BE STAGGERED.
11. ANCHORAGE LENGTH SHOULD BE $40 \times \text{BAR DIA.}$
12. REINFORCEMENT BARS SHALL BE BENT IN ACCORDANCE WITH STANDARD SPECIFICATIONS.
13. COVER TO REINFORCEMENT

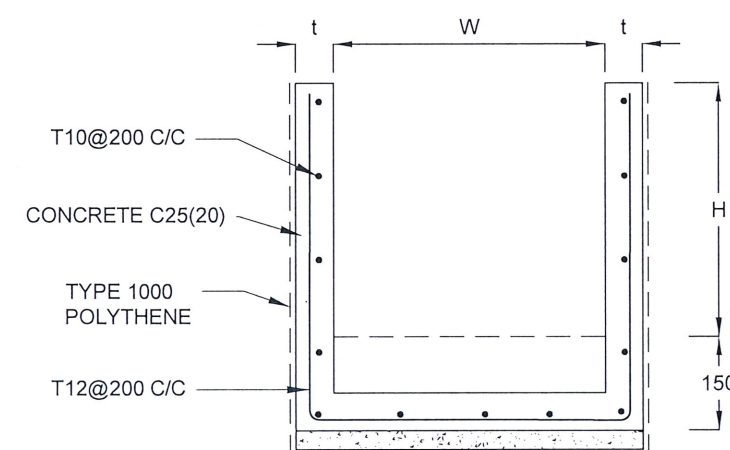
[a]	BURIED FACES AND DRAIN INVERTS	- 40 mm
[b]	ALL OTHER FACES	- 25 mm



PLAN VIEW OF CATCH PIT (CP)

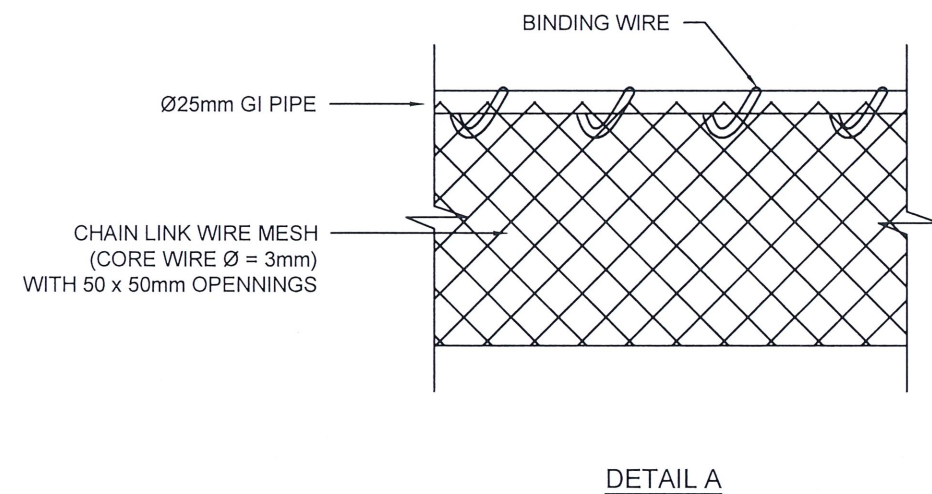
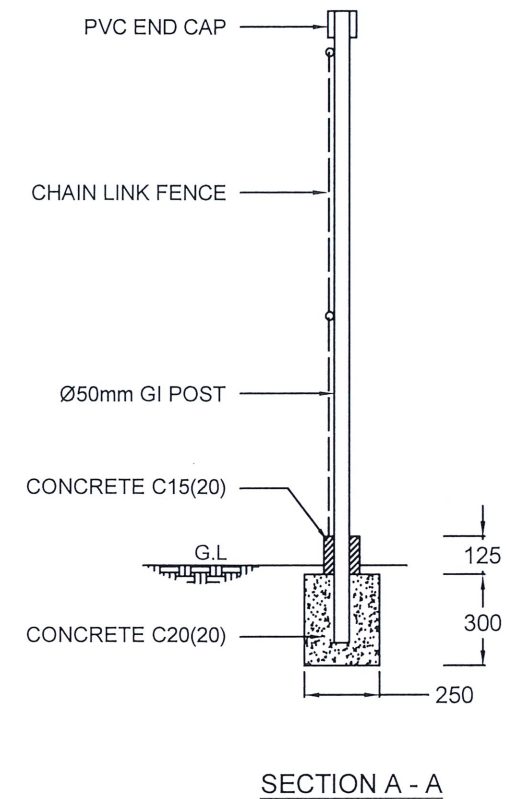
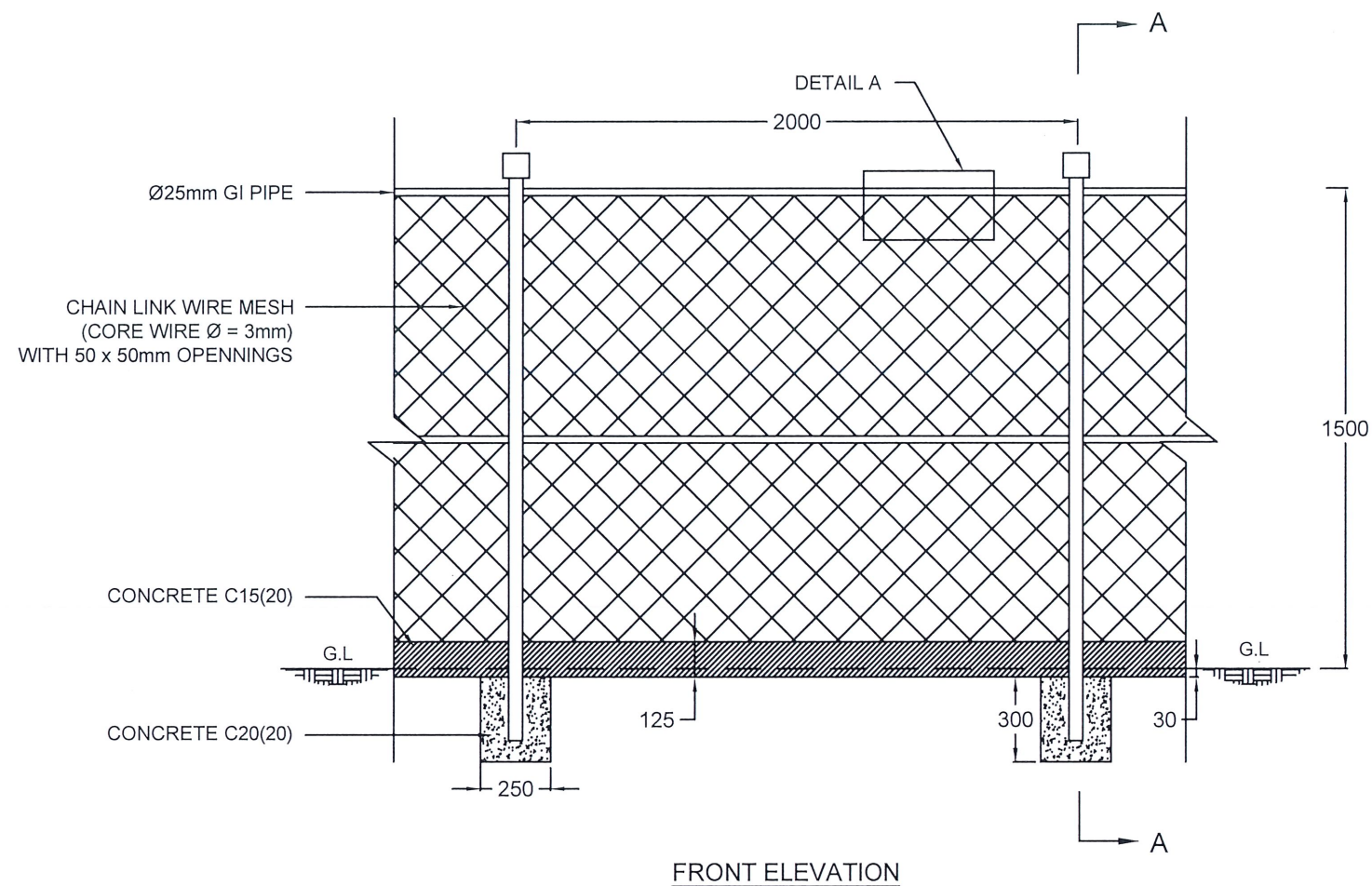


SECTION Y-Y (CP-R)



SECTION Y-Y

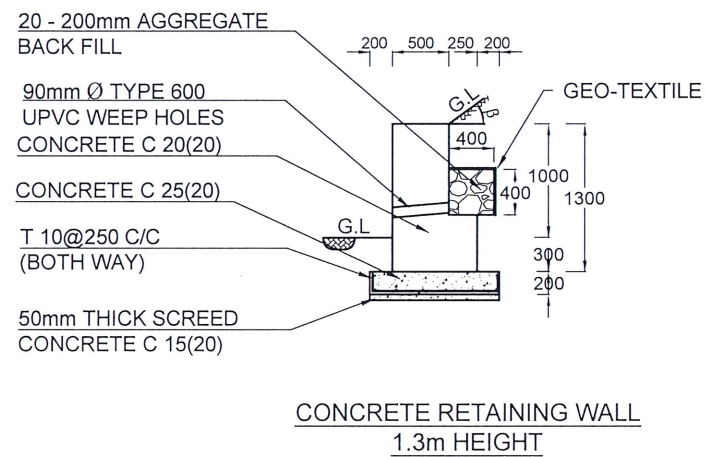
EMPLOYER		DESIGNER		REV	DATE	REVISION DESCRIPTION	APPROVAL	PROJECT TITLE	TITLE		DESCRIPTION	NAME	SIGNATURE	
 DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA MINISTRY OF DEFENCE NATIONAL BUILDING RESEARCH INSTITUTE No. 99/1, JAWATTA ROAD, COLOMBO - 05 		 DESIGN UNIT NATIONAL BUILDING RESEARCH INSTITUTE No. 99/1, JAWATTA ROAD, COLOMBO - 05							REDUCTION OF LANDSLIDE VULNERABILITY BY MITIGATION MEASURES PROJECT VIDYARTHA COLLEGE KANDY	DETAILS OF DRAINS (SUBSURFACE DRAIN AND CATCHPIT)		DRAWN	K. M. D. NISHANTHI	
											DESIGNED	N.S.D.M.D. PERERA		
											CHECKED	I.A.N.D. IDIRIMANNA		
											RECOMMENDED	PROF. S. A. S. KULATHILAKA		
										SCALE	N.T.S.	DATE	06.04.2026	
										PROJECT / DRAWING No. RLVMMP/WORKS/NCB/PH III/224/A3		REVISION 00	APPROVED	ENG. (DR.) SANCHITHA JAYAKODY



NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS
2. GI POST SHOULD BE COVERED WITH GREEN COLOUR ANTI-CORROSIVE PAINT.
3. PRIOR APPROVAL IS REQUIRED FOR CHAIN LINK WIRE MESH, GI POST AND PVC CAP.

EMPLOYER	DESIGNER	REV	DATE	REVISION DESCRIPTION	APPROVAL	PROJECT TITLE	TITLE	DESCRIPTION	NAME	SIGNATURE
 DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA MINISTRY OF DEFENCE NATIONAL BUILDING RESEARCH INSTITUTE No. 99/1, JAWATTA ROAD, COLOMBO - 05	 DESIGN UNIT NATIONAL BUILDING RESEARCH INSTITUTE No. 99/1, JAWATTA ROAD, COLOMBO - 05					REDUCTION OF LANDSLIDE VULNERABILITY BY MITIGATION MEASURES PROJECT VIDYARTHA COLLEGE KANDY	DETAILS OF CHAIN LINK FENCE SCALE: N.T.S. DATE: 06.04.2026 PROJECT / DRAWING No. RLVMP/WORKS/NCB/PH III/224/B REVISION 00	DRAWN DESIGNED CHECKED RECOMMENDED APPROVED	K.M.D. NISHANTHI N.S.D.M.D. PERERA I.A.N.D. IDIRIMANNA PROF. S.A.S. KULATHILAKA ENG. (DR.) SANCHITHA JAYAKODY	    



NOTES

- ALL DIMENSION ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
- RETAINING WALL TYPE SHALL BE DECIDED ACCORDING TO THE ACTUAL SITE CONDITION.
- WHERE THE EARTH CUT HEIGHT IS LESS THAN THAT OF THE APPLICABLE TYPICAL WALL, THE HEIGHT OF THE WALL SHOULD BE REDUCED TO FIT THE CUT HEIGHT, FROM ITS BOTTOM END WHILE MAINTAINING THE GIVEN TOP WIDTH.
- BACK SLOPE ANGLE, LEVEL AND FORM MAY VARY AS PER THE DESIGN AT EACH SITE.
- ALLOWABLE BEARING CAPACITY SHALL BE 150 kN/m².
- DOWELS SHALL BE INSTALLED IF HARD ROCK IS ENCOUNTERED AS PER THE ENGINEERS INSTRUCTIONS
- 10mm THICK EXPANSION JOINTS SHOULD BE PROVIDED AT EVERY 5m INTERVALS WITH APPROVED MATERIAL.
- WEEP HOLES TO BE PROVIDED AT 1.5m C/C STAGGERED USING 90mm DIA UPVC PIPES (TYPE 600) WITH A MINIMUM SLOPE OF 1: 20 TO ALLOW PROPER DRAINAGE.

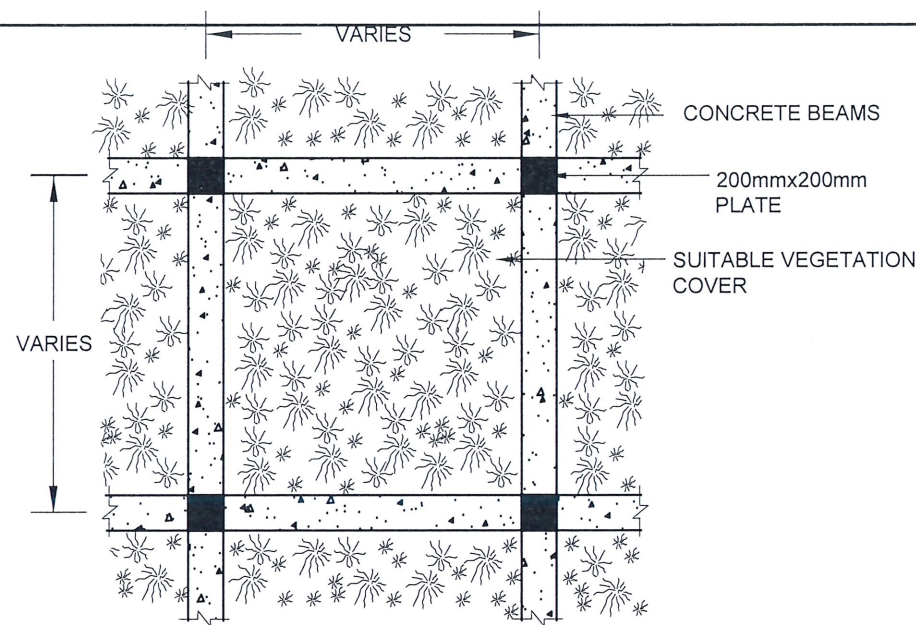
CONCRETE

- THE FOLLOWING CONCRETE GRADES SHOULD BE USED FOR STRUCTURES
 - SCREED CONCRETE - C. 15(20)
 - WALL - C. 20(20)
 - BASE - C. 30(20)

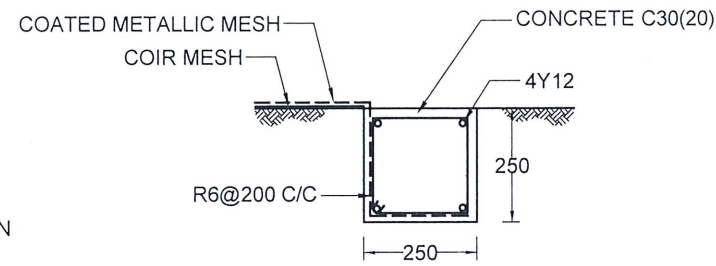
REINFORCEMENT

- HIGH YIELD REINFORCEMENT BARS DENOTED BY "T" SHALL CONFORM TO THE REQUIREMENTS OF TYPE 2 OF BS 4449 AND HAVE A CHARACTERISTIC TENSILE STRENGTH OF 460N/mm²
- CLEAR CONCRETE COVER FOR ALL REINFORCEMENT TO BE 50mm.
- REINFORCEMENT BARS SHALL BE BENT IN ACCORDANCE WITH STANDARD SPECIFICATIONS.
- BARS OF CUT LENGTH LARGER THAN THE SUPPLIED LENGTH TO BE LAPPED FOR A LENGTH OF 40 x BAR DIA AND LAPPING SHOULD BE STAGGERED.
- ANCHORAGE LENGTH SHOULD BE 40 x BAR DIA.

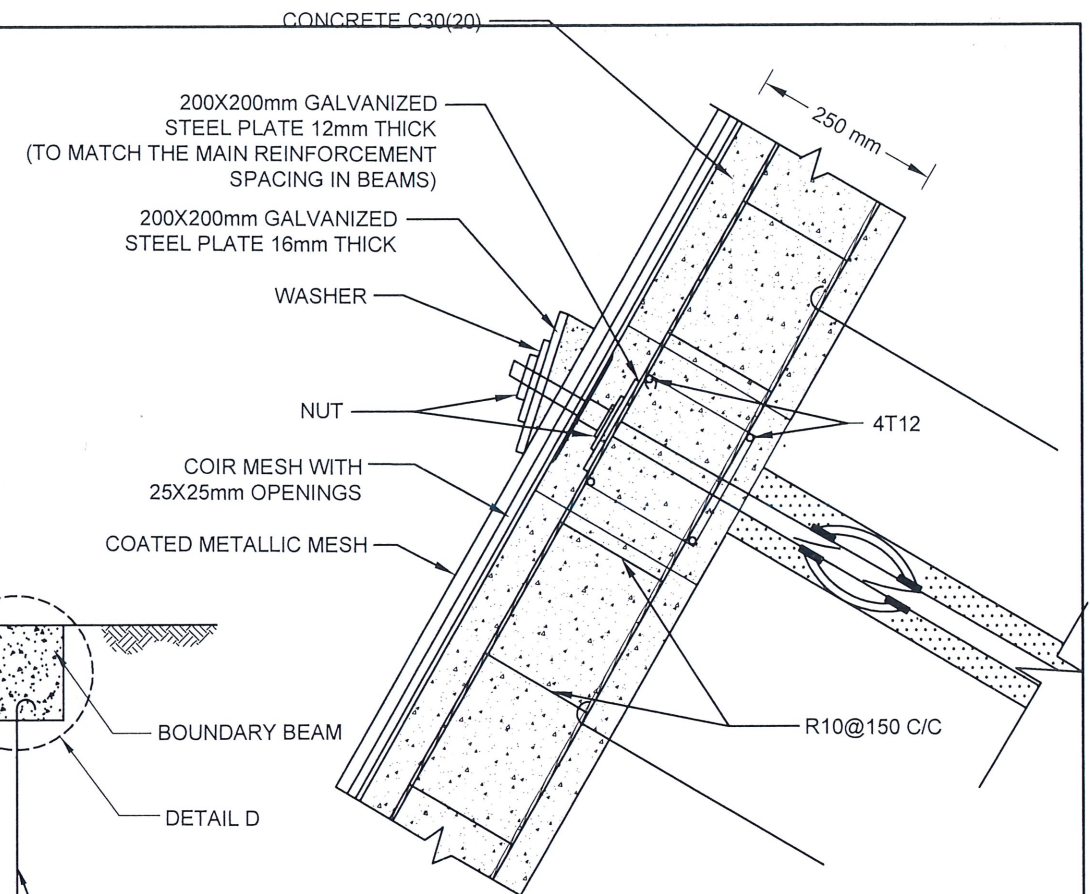
EMPLOYER	DESIGNER	REV	DATE	REVISION DESCRIPTION	APPROVAL	PROJECT TITLE	TITLE	DESCRIPTION	NAME	SIGNATURE
 DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA MINISTRY OF DEFENCE, NATIONAL BUILDING RESEARCH INSTITUTE No. 99/1, JAWATTA ROAD, COLOMBO - 05	 DESIGN UNIT NATIONAL BUILDING RESEARCH INSTITUTE No. 99/1, JAWATTA ROAD, COLOMBO - 05					REDUCTION OF LANDSLIDE VULNERABILITY BY MITIGATION MEASURES PROJECT VIDYARTHA COLLEGE KANDY	DETAILS OF CONCRETE GRAVITY RETAINING WALLS	DRAWN	K.M.D. NISHANTHI	
								DESIGNED	N.S.D.M.D. PERERA	
								CHECKED	I.A.N.D. IDIRIMANNA	
								RECOMMENDED	PROF. S.A.S. KULATHILAKA	
								APPROVED	ENG.(DR.) SANCHITHA JAYAKODY	
						PROJECT / DRAWING No. RLVMP/WORKS/NCB/PH III/224/C	SCALE NTS	DATE 06.04.2026	REVISION 00	



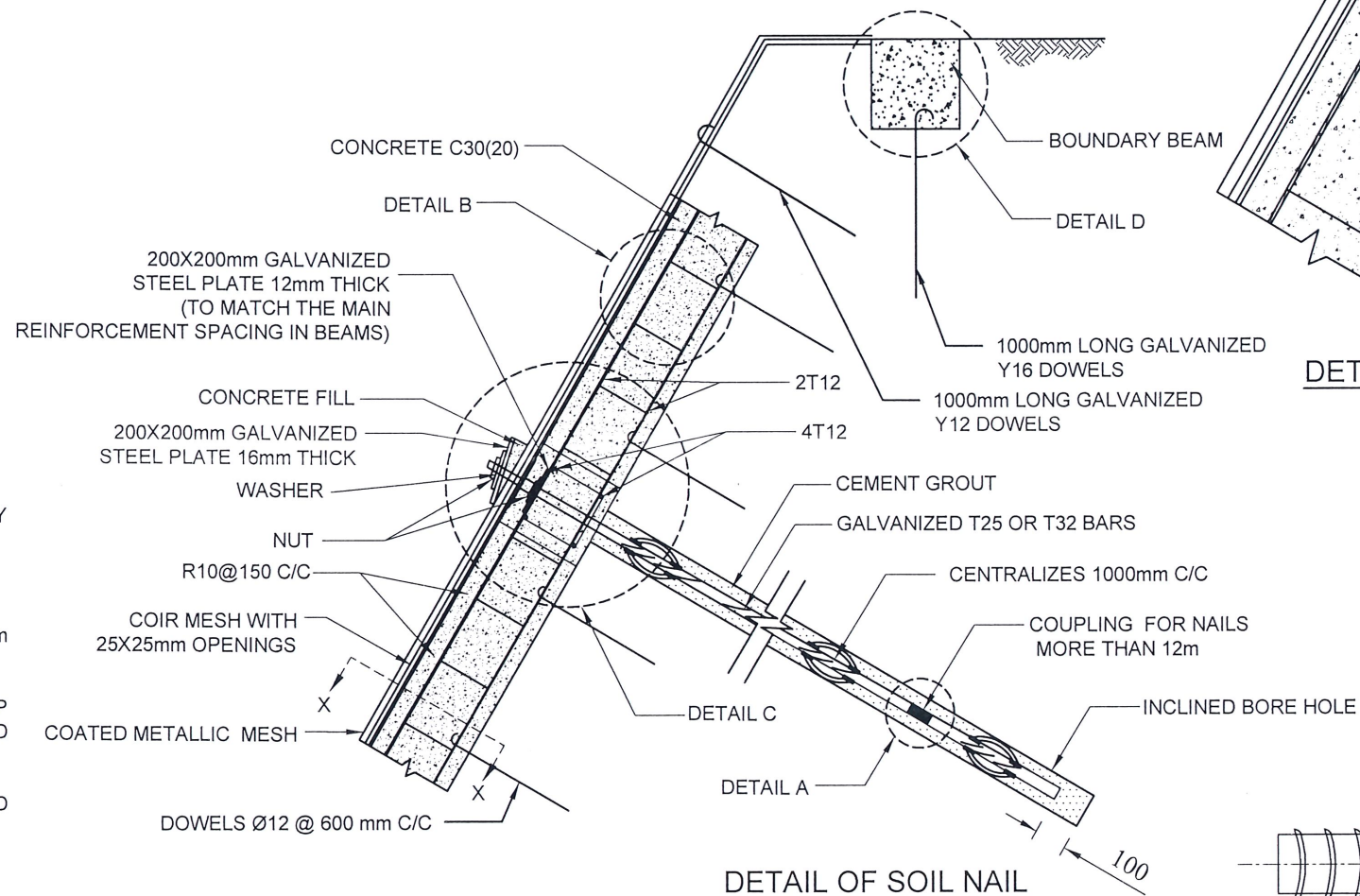
DETAIL - B



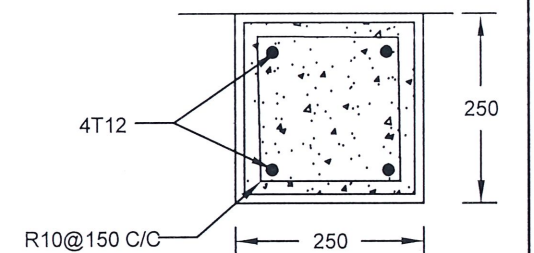
DETAIL D



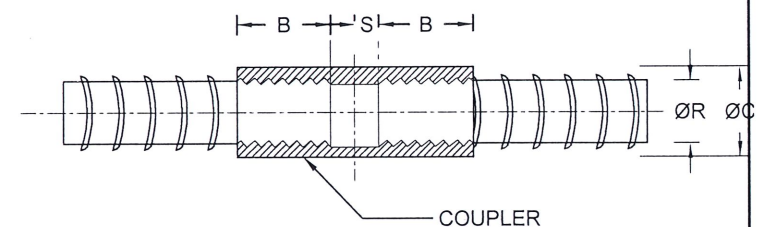
DETAIL C



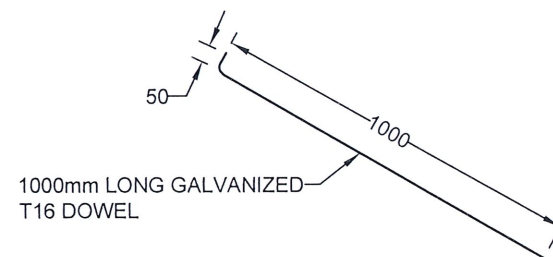
DETAIL OF SOIL NAIL



SECTION X-X



COUPLER DETAILS - A (NAIL LENGTH >12m)



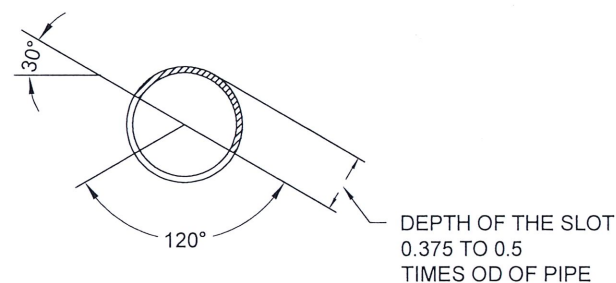
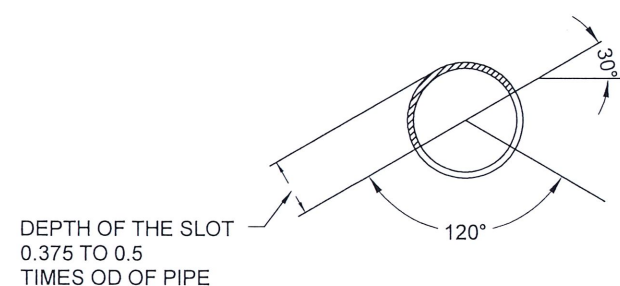
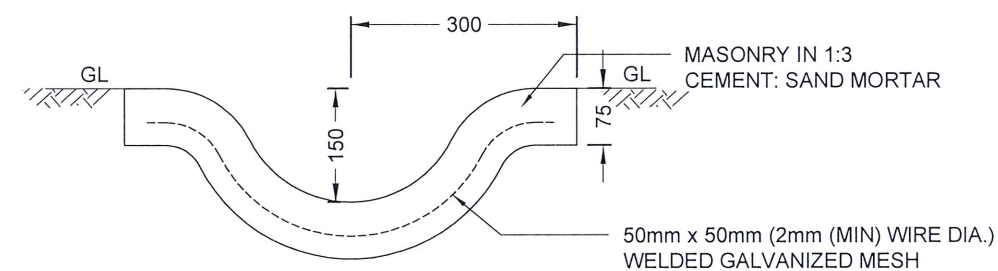
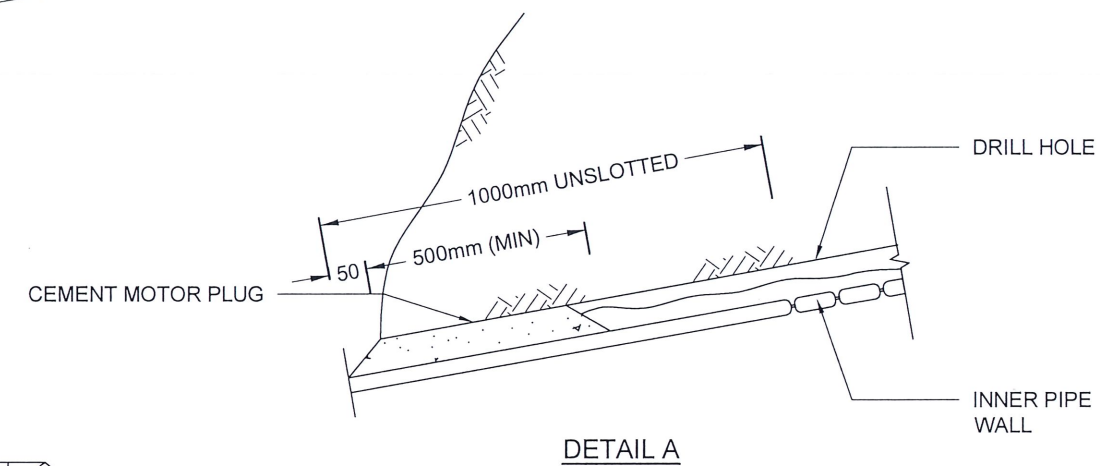
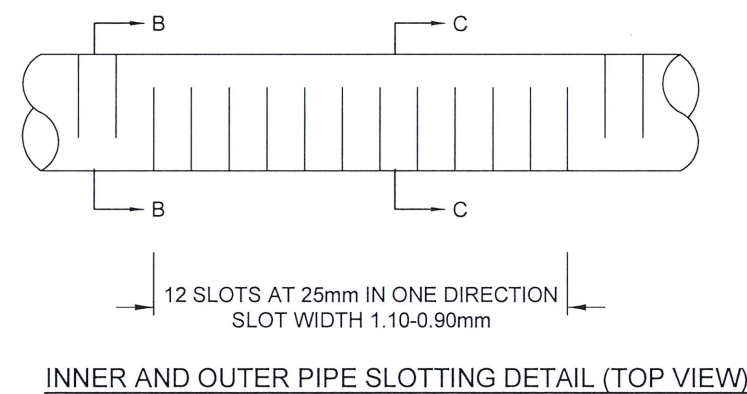
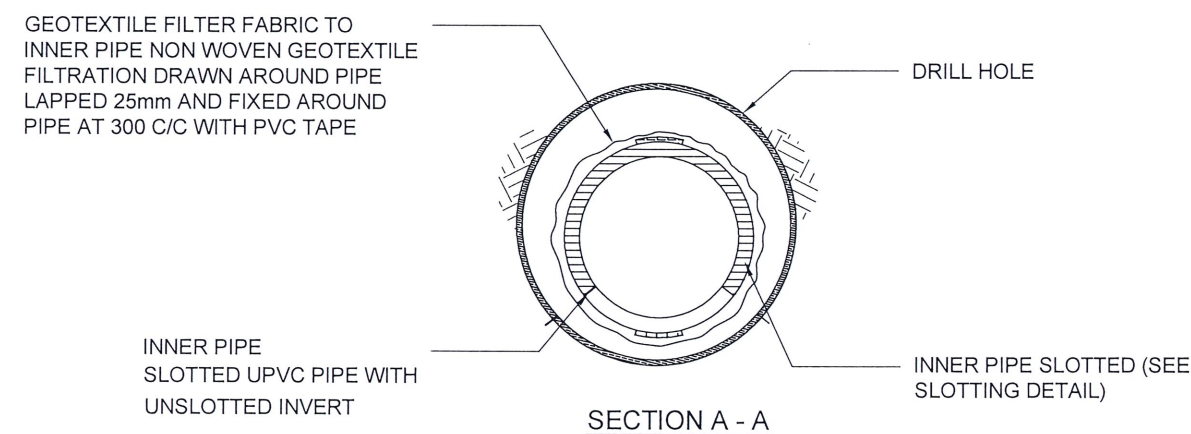
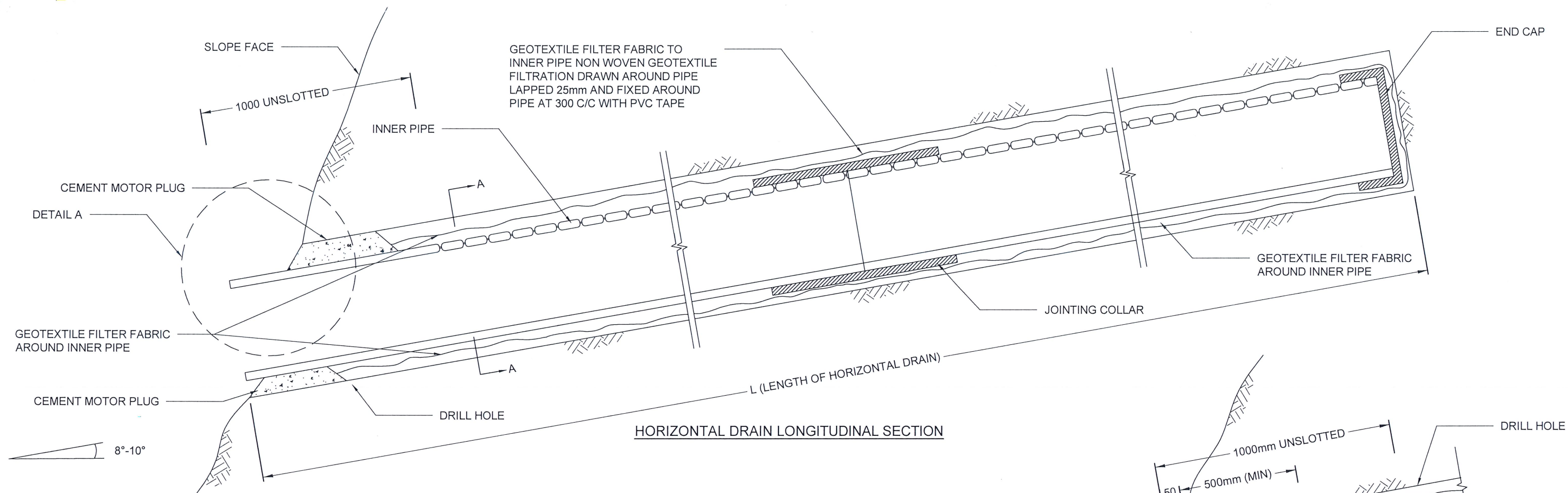
DETAILS OF DOWELS

NOTES

- ALL DIMENSIONS ARE IN MILLIMETERS.
- STRUCTURAL CONC. AS PER SPECIFICATION.
- MINIMUM CLEAR COVER TO R/F - 50mm OR AS SPECIFIED BY THE ENGINEER.
- STRUCTURAL MEMBERS AS PER SPECIFICATION.
- LAP LENGTH FOR R/F BARS 40 x BAR DIA.
- TWO SETS OF 4T12 BARS PLACED PERPENDICULAR TO EACH OTHERS BY CONNECTING NAIL HEADS VERTICALLY AND HORIZONTALLY ON SLOPE FACE.
- TURFING / SODDING / SEEDING / PLANTING USED FOR VEGETATION COVER.
- THE BAR COUPLER SHALL ONLY BE USE FOR SOIL NAILING OF MORE THAN 12m LONG.
- THE TENSILE STRENGTH OF THE BAR COUPLER SHALL BE CAPABLE TO DEVELOP AT LEAST 95% OF TENSILE STRENGTH OF THE REBAR AS TESTED AND CERTIFIED BY THE MANUFACTURE.
- SPACING BETWEEN NAIL HEAD ARE VARIED ACCORDING TO THE GROUND CONDITION.
- DOWEL SPACING FOR BOUNDARY BEAM SHALL BE 2m.
- BOUNDARY BEAM SHALL BE STRUCTURALLY CONNECTED TO ALREADY CONSTRUCTED GRID BEAMS AT EACH JUNCTION.
- MINIMUM OF 2 DOWELS SHALL BE TYPICALLY USED TO FIX THE HIGH TENSILE WIRE MESH AGAINST THE SLOPE AT EACH SLOPE SPACE IN BETWEEN THE GRID BEAMS, AS SHOWN IN THE DRAWING.
- SPACING AND LOCATIONS OF DOWELS INSTALLED TO FIX THE HIGH TENSILE WIRE MESH AGAINST THE SLOPE SHALL BE VARIED ACCORDING TO THE SITE CONDITION.

REINFORCEMENT BAR DIAMETER (ØR)	COUPLER OUTER BAR DIAMETER (ØC)	MIN - THREADED LENGTH OF COUPLER (B)	NON - THREADED LENGTH OF COUPLER (S)
25 mm	36 mm	50 mm	2.5 mm
32 mm	46 mm	64 mm	2.5 mm

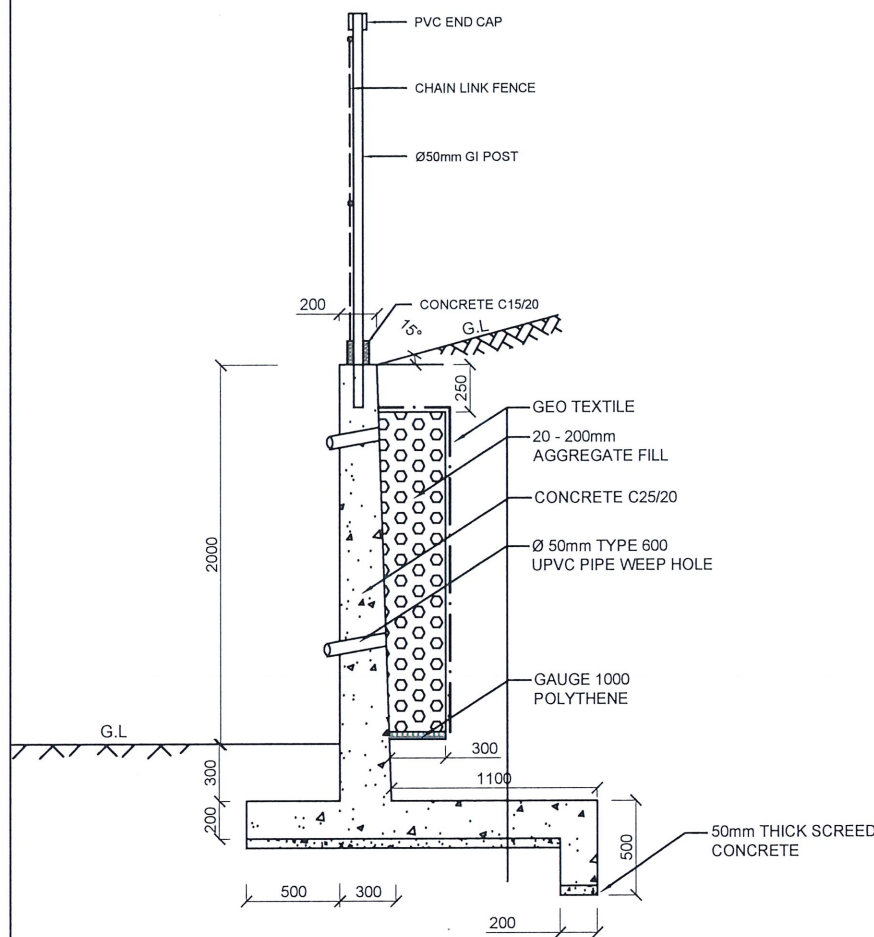
EMPLOYER		DESIGNER		REV		DATE		REVISION DESCRIPTION		APPROVAL		PROJECT TITLE		TITLE				DESCRIPTION		NAME		SIGNATURE					
 DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA MINISTRY OF DEFENCE NATIONAL BUILDING RESEARCH INSTITUTE NO. 99 /1, JAWATTA ROAD COLOMBO - 05		 DESIGN UNIT NATIONAL BUILDING RESEARCH INSTITUTE No. 99/1, JAWATTA ROAD, COLOMBO - 05										REDUCTION OF LANDSLIDE VULNERABILITY BY MITIGATION MEASURES PROJECT VIDYARTHA COLLEGE KANDY		DETAILS OF SOIL NAILING WITH EMBEDDED GRID BEAM				DRAWN		K.M.D. NISHANTHI							
																		DESIGNED		N.S.D.M.D. PERERA							
																		CHECKED		I.A.N.D. IDIRIMANNA							
														SCALE N.T.S.				DATE		06.04.2026		RECOMMENDED		PROF. S.A.S. KULATHILAKA			
														PROJECT / DRAWING No. RLVMMP/WORKS/NCB/PH III/224/D1				REVISION 00		APPROVED		ENG.(DR.) SANCHITHA JAYAKODY					



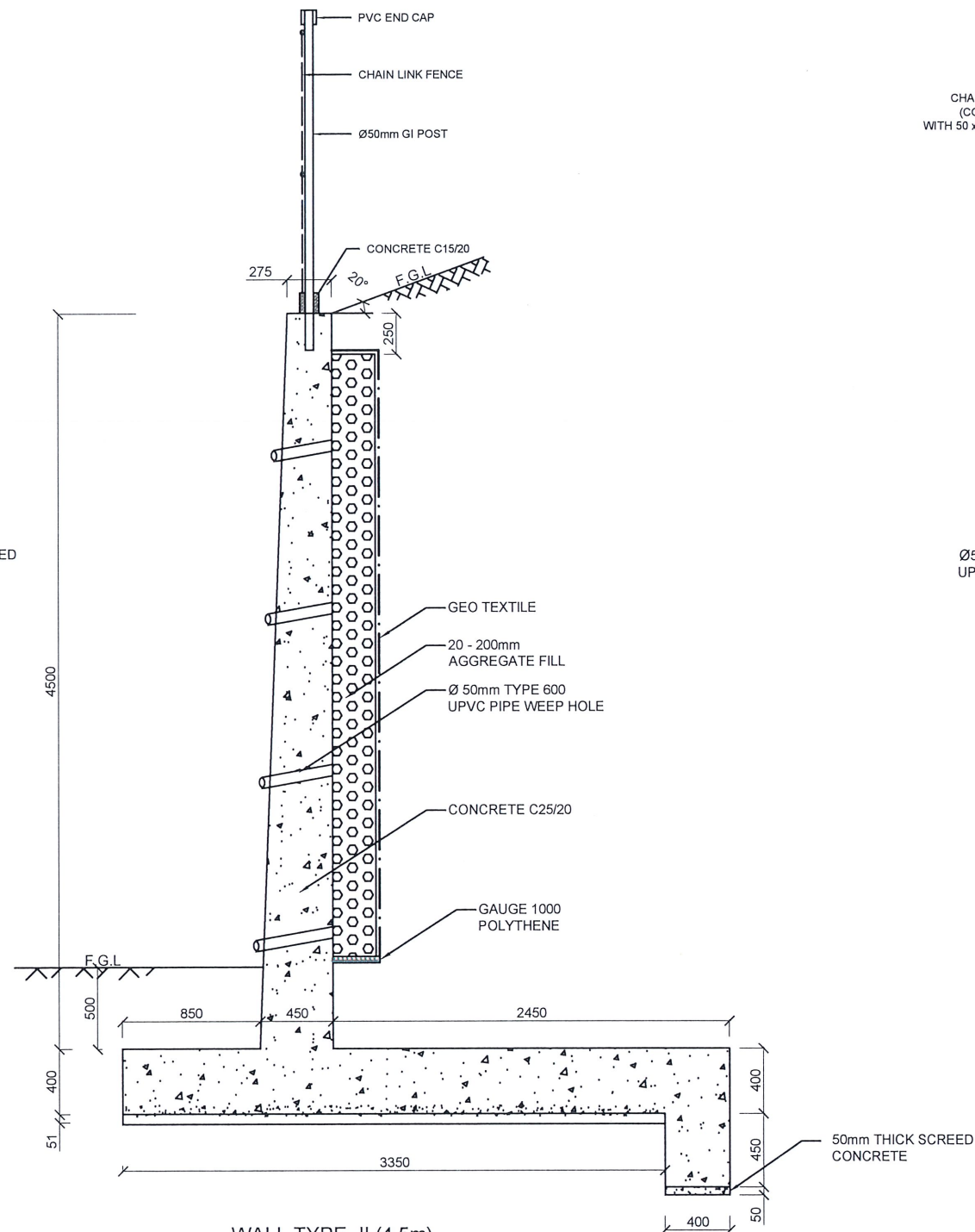
NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
2. PIPE DIAMETERS, ANGLE & LENGTHS AS SPECIFIED IN DRAWINGS.
3. ALL MATERIALS SHALL CONFORM TO PROJECT SPECIFICATION

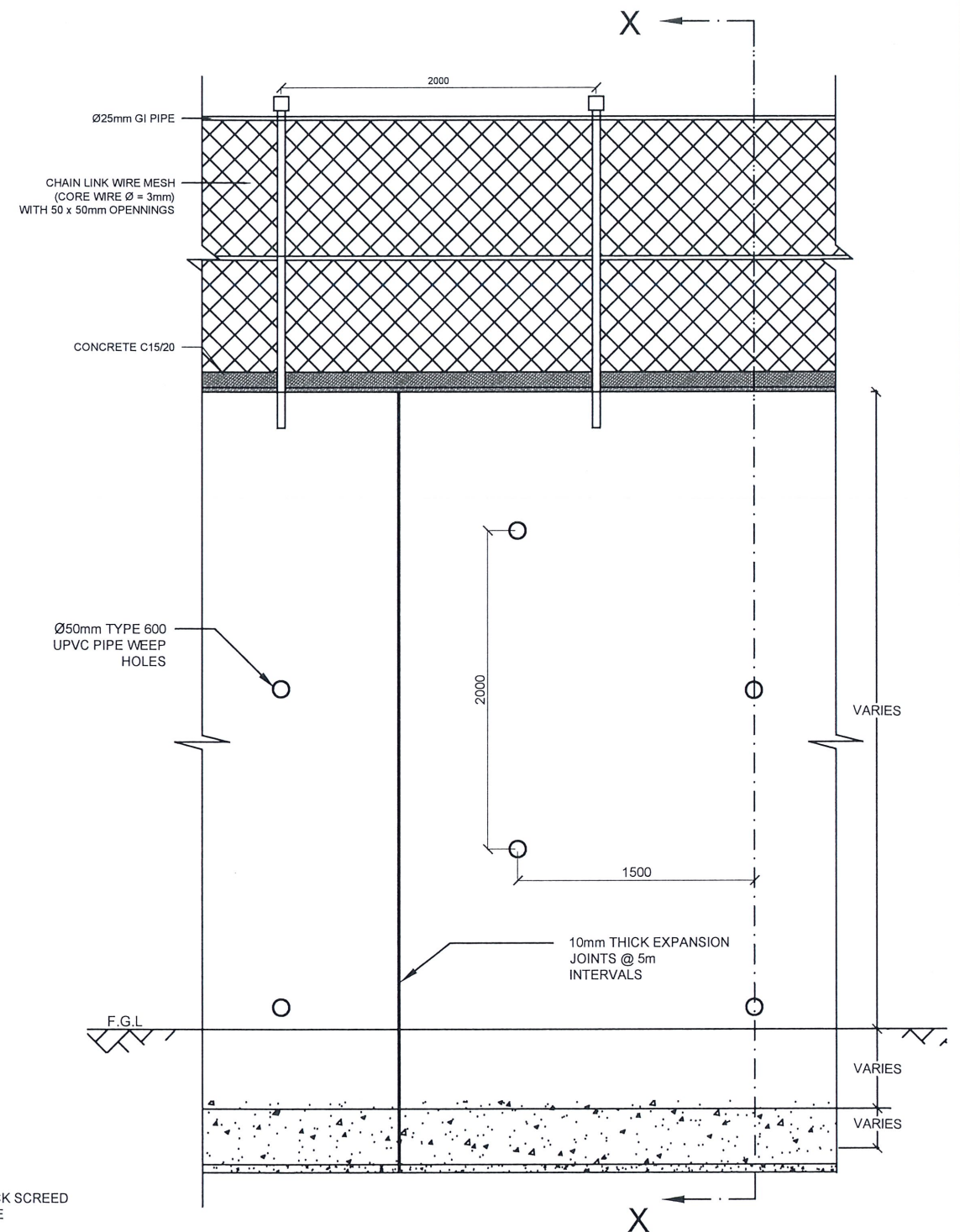
EMPLOYER  DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA MINISTRY OF DEFENCE NATIONAL BUILDING RESEARCH INSTITUTE No. 99/1, JAWATTA ROAD, COLOMBO - 05 		DESIGNER  DESIGN UNIT NATIONAL BUILDING RESEARCH INSTITUTE No. 99/1, JAWATTA ROAD, COLOMBO - 05		<table><tr><th>REV</th><th>DATE</th><th>REVISION DESCRIPTION</th><th>APPROVAL</th></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr></table>				REV	DATE	REVISION DESCRIPTION	APPROVAL																													PROJECT TITLE REDUCTION OF LAND SLIDE VULNERABILITY BY MITIGATION MEASURES PROJECT VIDYARTHA COLLEGE KANDY		<table><tr><td colspan="4" rowspan="3">TITLE DETAILS OF HORIZONTAL DRAIN SECTIONS</td></tr><tr><td>SCALE</td><td>N.T.S.</td><td>DATE</td><td>06.04.2026</td></tr><tr><td colspan="2">PROJECT / DRAWING No. RI VMMP/WORKS/NCB/PH III/224/E</td><td>REVISION 00</td></tr><tr><td colspan="2">DESCRIPTION</td><td colspan="2">NAME</td><td colspan="2">SIGNATURE</td></tr><tr><td colspan="2">DRAWN</td><td colspan="2">K.M.D. NISHANTHI</td><td colspan="2"></td></tr><tr><td colspan="2">DESIGNED</td><td colspan="2">N.S.D.M.D. PERERA</td><td colspan="2"></td></tr><tr><td colspan="2">CHECKED</td><td colspan="2">I.A.N.D. IDIRIMANNA</td><td colspan="2"></td></tr><tr><td colspan="2">RECOMMENDED</td><td colspan="2">PROF. S.A.S. KULATHILAKA</td><td colspan="2"></td></tr><tr><td colspan="2">APPROVED</td><td colspan="2">ENG. (DR.) SANCHITHA JAYAKODY</td><td colspan="2"></td></tr></table>				TITLE DETAILS OF HORIZONTAL DRAIN SECTIONS				SCALE	N.T.S.	DATE	06.04.2026	PROJECT / DRAWING No. RI VMMP/WORKS/NCB/PH III/224/E		REVISION 00	DESCRIPTION		NAME		SIGNATURE		DRAWN		K.M.D. NISHANTHI				DESIGNED		N.S.D.M.D. PERERA				CHECKED		I.A.N.D. IDIRIMANNA				RECOMMENDED		PROF. S.A.S. KULATHILAKA				APPROVED		ENG. (DR.) SANCHITHA JAYAKODY			
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DRAWN		K.M.D. NISHANTHI																																																																																										
DESIGNED		N.S.D.M.D. PERERA																																																																																										
CHECKED		I.A.N.D. IDIRIMANNA																																																																																										
RECOMMENDED		PROF. S.A.S. KULATHILAKA																																																																																										
APPROVED		ENG. (DR.) SANCHITHA JAYAKODY																																																																																										



WALL TYPE I (2m)



WALL TYPE II (4.5m)

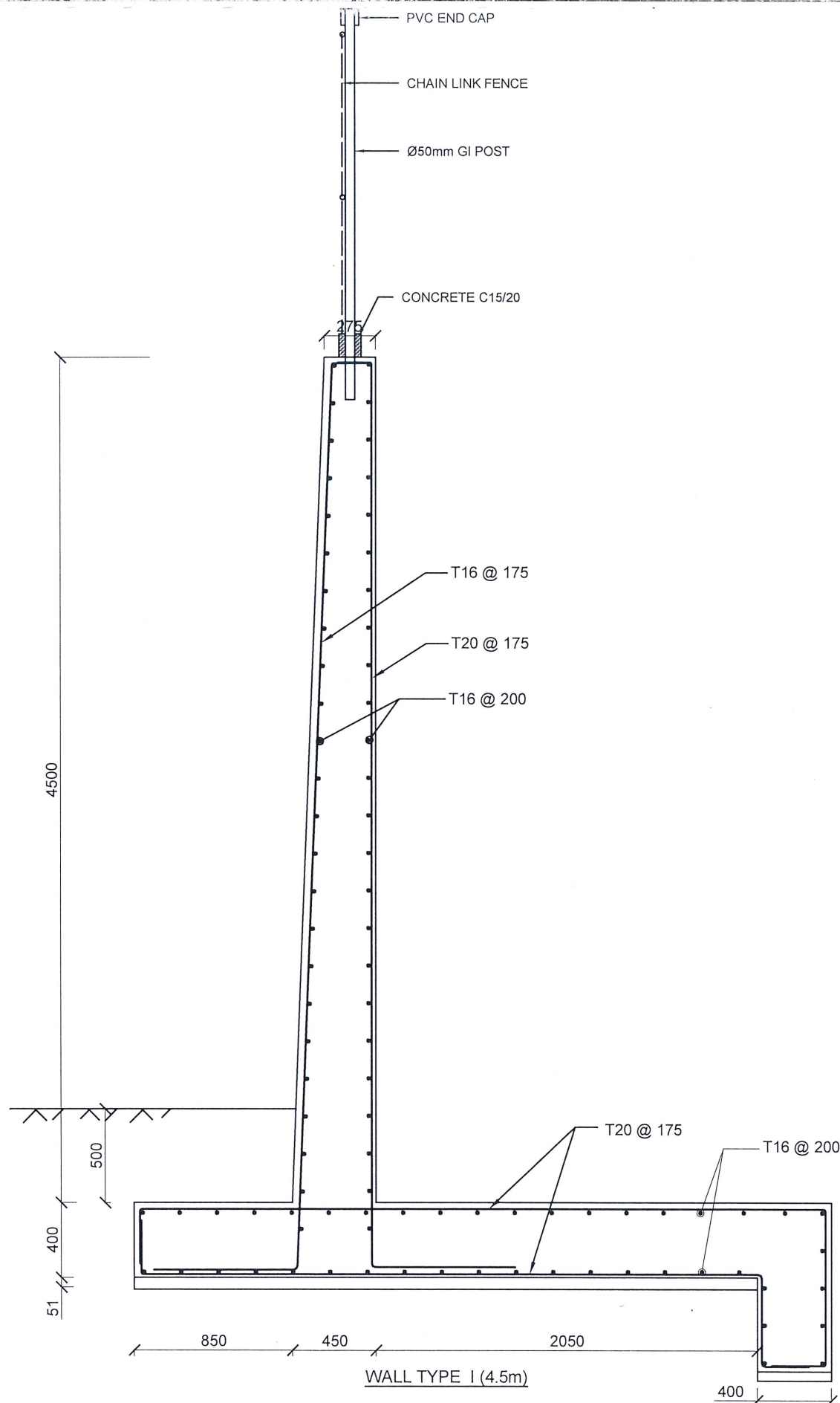
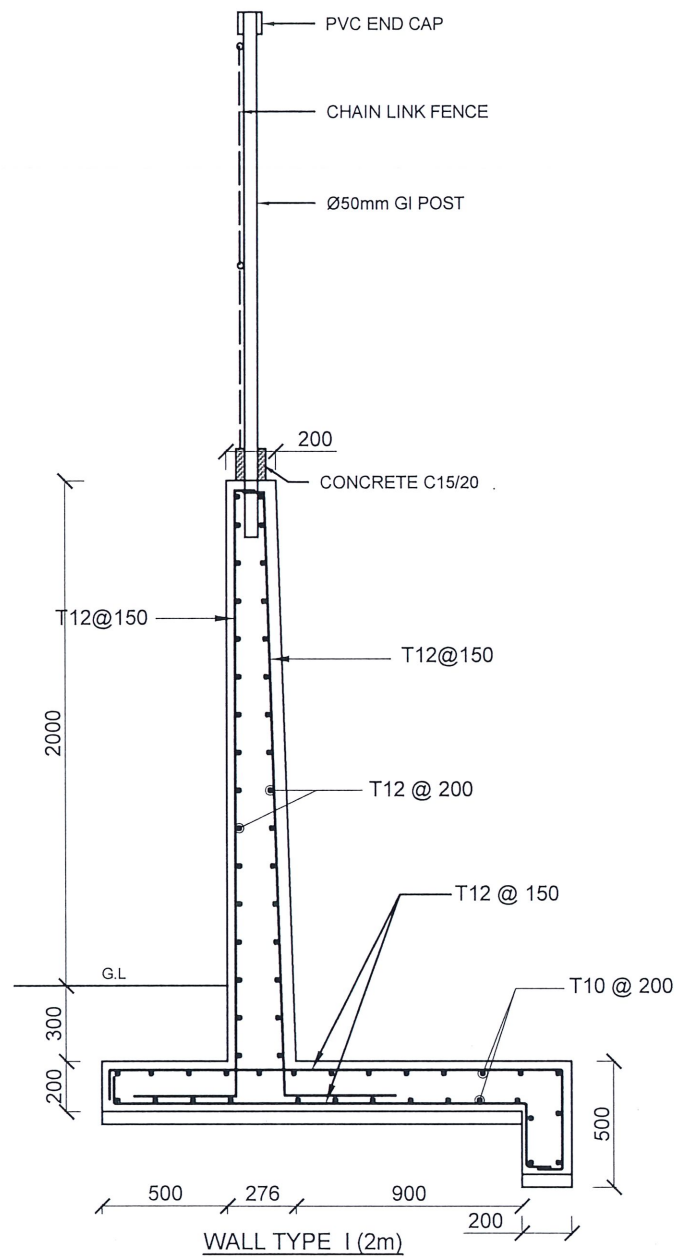


FRONT ELEVATION

NOTES

- ALL DIMENSIONS ARE IN MILLIMETERS.
- STRUCTURAL CONCRETE SHOULD BE GRADE 25 AND SCREED CONCRETE SHOULD BE GRADE 15.
- AGGREGATE BACKFILL AND GEO-TEXTILE SHOULD BE CONFORMED TO THE SPECIFICATIONS PROVIDED.
- 50mm DIAMETER WEEP HOLES SHOULD BE PROVIDED AS GIVEN IN THE DRAWING AND SHOULD BE STAGGERED TO A SLOPE OF 1 : 20.
- HEIGHT OF THE WALL SHALL BE SELECTED CONFORMING TO THE CUT HEIGHT OF THE LOCATION AS PER THE INSTRUCTIONS GIVEN BY ENGINEER.
- TEMPORARY SHORING WILL BE NEEDED DURING THE EXCAVATION FOR THE RETAINING WALLS.

EMPLOYER		DESIGNER		REV	DATE	REVISION DESCRIPTION	APPROVAL	PROJECT TITLE	TITLE		DESCRIPTION	NAME	SIGNATURE		
 DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA MINISTRY OF DEFENCE NATIONAL BUILDING RESEARCH INSTITUTE No. 99/1, JAWATTA ROAD, COLOMBO - 05		 NATIONAL BUILDING RESEARCH INSTITUTE No. 99/1, JAWATTA ROAD, COLOMBO - 05						REDUCTION OF LANDSLIDE VULNERABILITY BY MITIGATION MEASURES PROJECT VIDYARTHA COLLEGE KANDY	DETAILS OF CANTILEVER WALL		DRAWN	K.M.D. NISHANTHI			
						DESIGNED	N.S.D.M.D. PERERA								
						CHECKED	I.A.N.D. IDIRIMANNA								
						RECOMMENDED	PROF. S.A.S. KULATHILAKA								
						SCALE			N.T.S.	DATE	06.04.2026	REVISION	APPROVED	ENG.(DR.) SANCHITHA JAYAKODY	
						PROJECT / DRAWING No.			RLVMMP/WORKS/NCB/PH II/224/F1						



NOTES

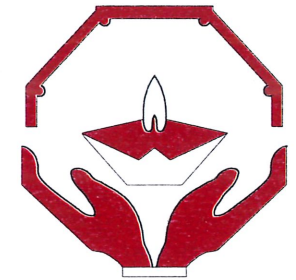
1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. STRUCTURAL CONCRETE SHOULD BE GRADE 25 AND SCREED CONCRETE SHOULD BE GRADE 15.
3. MINIMUM COVER FOR THE REINFORCEMENT SHOULD BE 40mm.
4. HIGH YIELD REINFORCEMENT BARS DENOTED BY 'T' SHALL CONFORM TO THE REQUIREMENTS OF TYPE 2 OF BS 4449 AND HAVE A CHARACTERISTIC TENSILE STRENGTH OF 460 N / mm².
5. ANCHORAGE LENGTH SHOULD BE 38 x BAR DIAMETER.
6. TENSION LAP LENGTH SHOULD BE 52 x BAR DIAMETER.
7. COMPRESSION LAP LENGTH SHOULD BE 38 x BAR DIAMETER.
8. AGGREGATE BACKFILL AND GEO-TEXTILE SHOULD BE CONFORMED TO THE SPECIFICATIONS PROVIDED.
9. 50mm DIAMETER WEEP HOLES SHOULD BE PROVIDED AS GIVEN IN THE DRAWING AND SHOULD BE STAGGERED TO A SLOPE OF 1 : 20.

EMPLOYER		DESIGNER		REV		DATE		REVISION DESCRIPTION		APPROVAL		PROJECT TITLE		TITLE				DESCRIPTION		NAME		SIGNATURE	
 DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA MINISTRY OF DEFENCE NATIONAL BUILDING RESEARCH INSTITUTE No. 99/1, JAWATTA ROAD, COLOMBO - 05		 NATIONAL BUILDING RESEARCH INSTITUTE No. 99/1, JAWATTA ROAD, COLOMBO - 05										REDUCTION OF LANDSLIDE VULNERABILITY BY MITIGATION MEASURES PROJECT VIDYARTHA COLLEGE KANDY		REINFORCEMENT DETAILS OF CANTILEVER WALL				DRAWN		K.M.D. NISHANTHI			
																		DESIGNED		N.S.D.M.D. PERERA			
																		CHECKED		I.A.N.D. IDIRIMANNA			
																		RECOMMENDED		PROF. S.A.S. KULATHILAKA			
																		APPROVED		ENG.(DR.) SANCHITHA JAYAKODY			
														SCALE N.T.S. DATE 06.04.2026									
														PROJECT / DRAWING No. RLVMMP/WORKS/NCB/PH II/224/F2				REVISION					

DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA
MINISTRY OF DEFENCE



NATIONAL BUILDING RESEARCH INSTITUTE

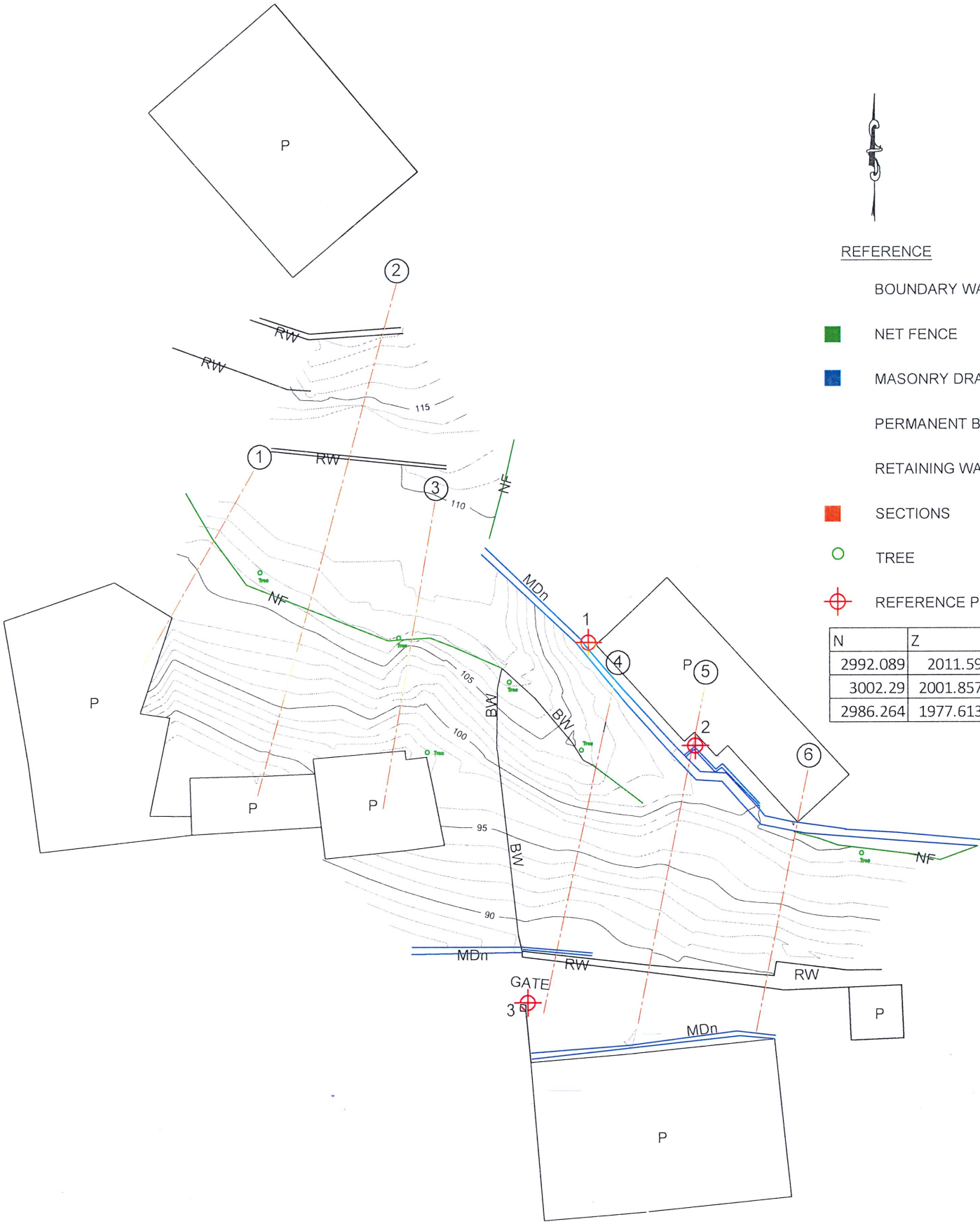


REDUCTION OF LANDSLIDE VULNERABILITY
BY MITIGATION MEASURES PROJECT
PUSHPADANA COLLEGE
KANDY

PROJECT NO: RLVMMMP/WORKS/NCB/PHIII/230

DETAILED DESIGN DRAWINGS

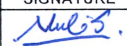
MARCH 2026

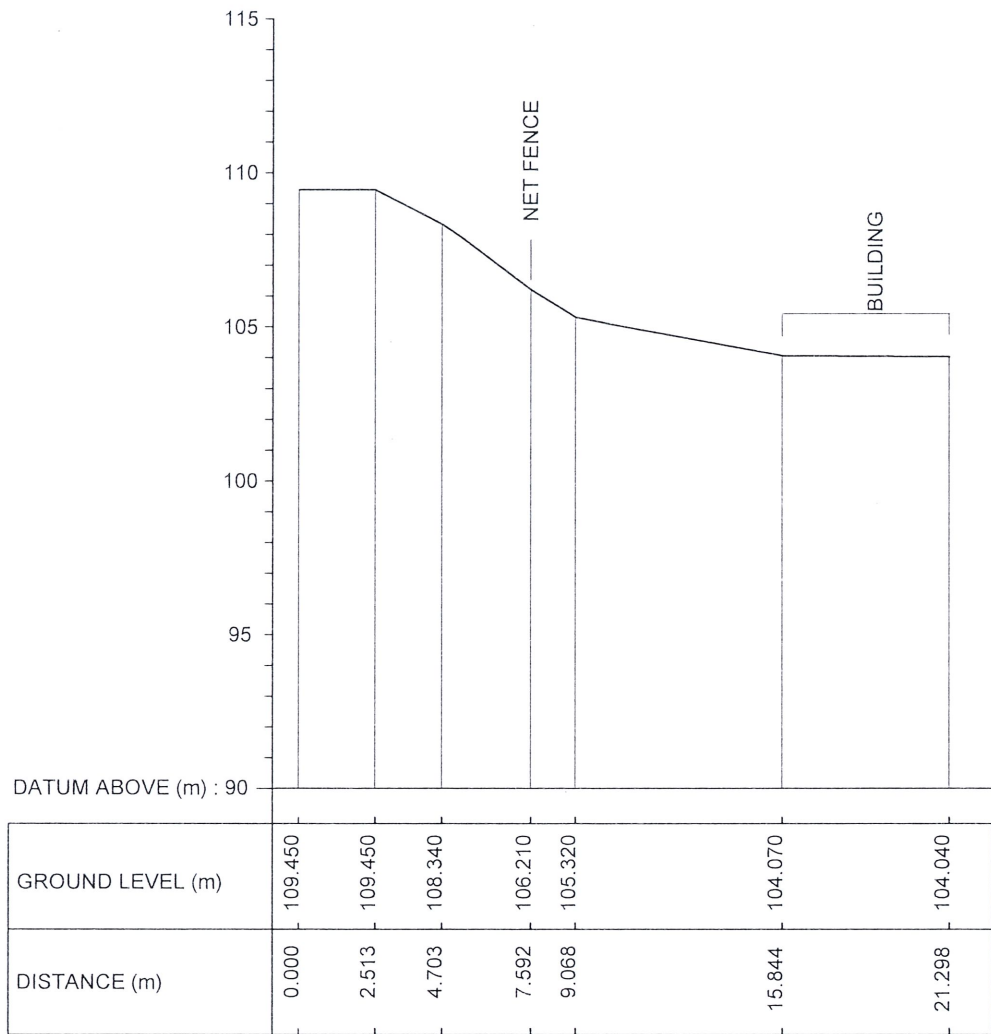


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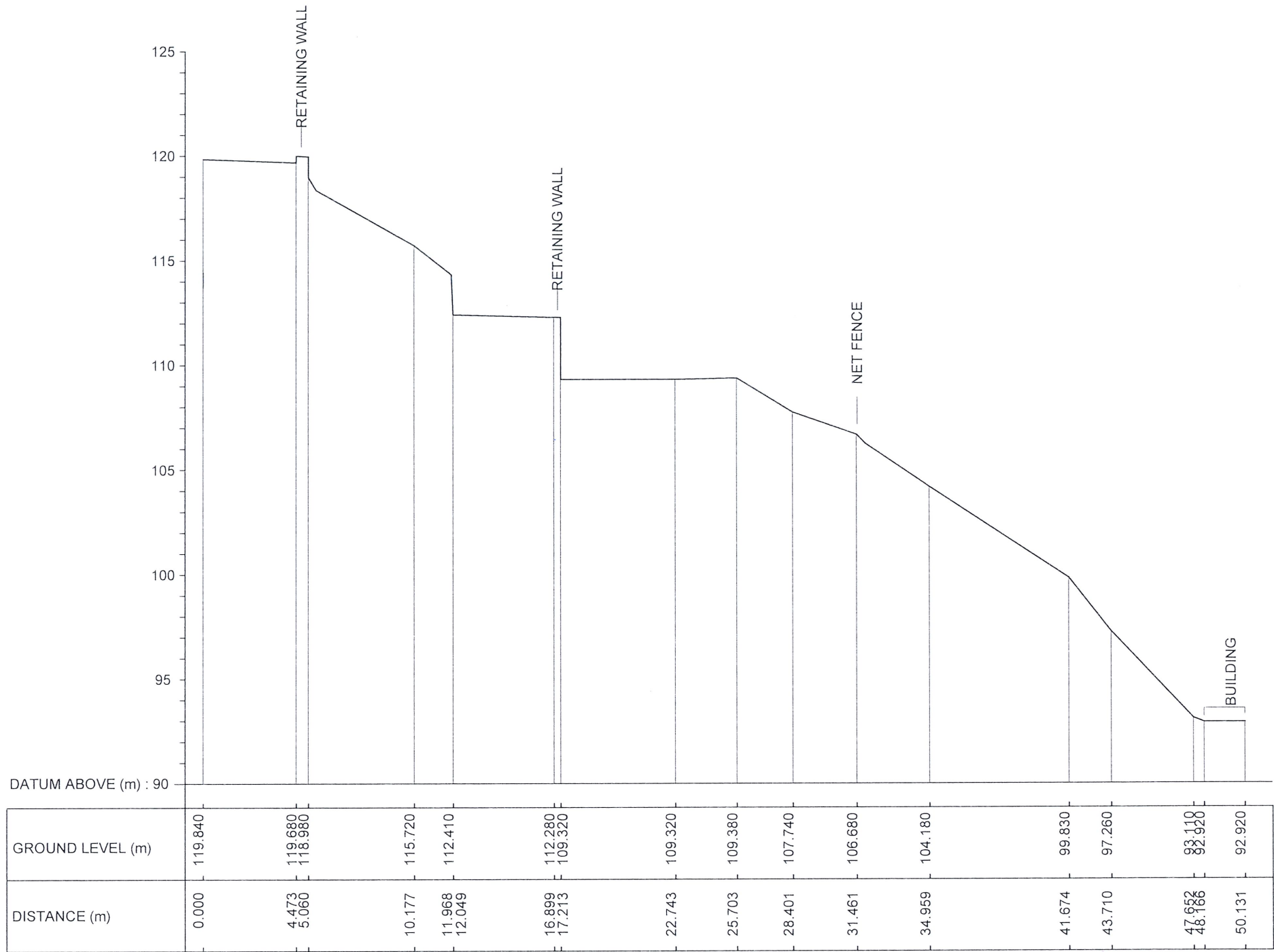
- BOUNDARY WALL BW
- NET FENCE NF
- MASONRY DRAIN MDn
- PERMANENT BUILDING P
- RETAINING WALL RW
- SECTIONS
- TREE
- REFERENCE POINTS

N	Z	E	PN
2992.089	2011.59	100	1
3002.29	2001.857	100.008	2
2986.264	1977.613	86.059	3

EMPLOYER  DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA MINISTRY OF DEFENCE NATIONAL BUILDING RESEARCH INSTITUTE No. 99/1, JAWATTA ROAD, COLOMBO - 05 	DESIGNER  DESIGN UNIT NATIONAL BUILDING RESEARCH INSTITUTE No. 99/1, JAWATTA ROAD, COLOMBO - 05	REV	DATE	REVISION DESCRIPTION	APPROVAL	PROJECT TITLE REDUCTION OF LANDSLIDE VULNERABILITY BY MITIGATION MEASURES PROJECT PUSHPADANA COLLEGE KANDY LOCATION 01	TITLE SURVEY PLAN	DESCRIPTION	NAME	SIGNATURE					
								SURVEYED	W.L.P.N.N. WIJESINGHE						
								CHECKED	R.J.K.P.N. RANATHUNGA						
									SCALE	1:500	DATE	23.03.2026	REVISION	00	
									PROJECT / DRAWING No. RLVMMP/WORKS/NCB/PH III/230/L1/DR 01						

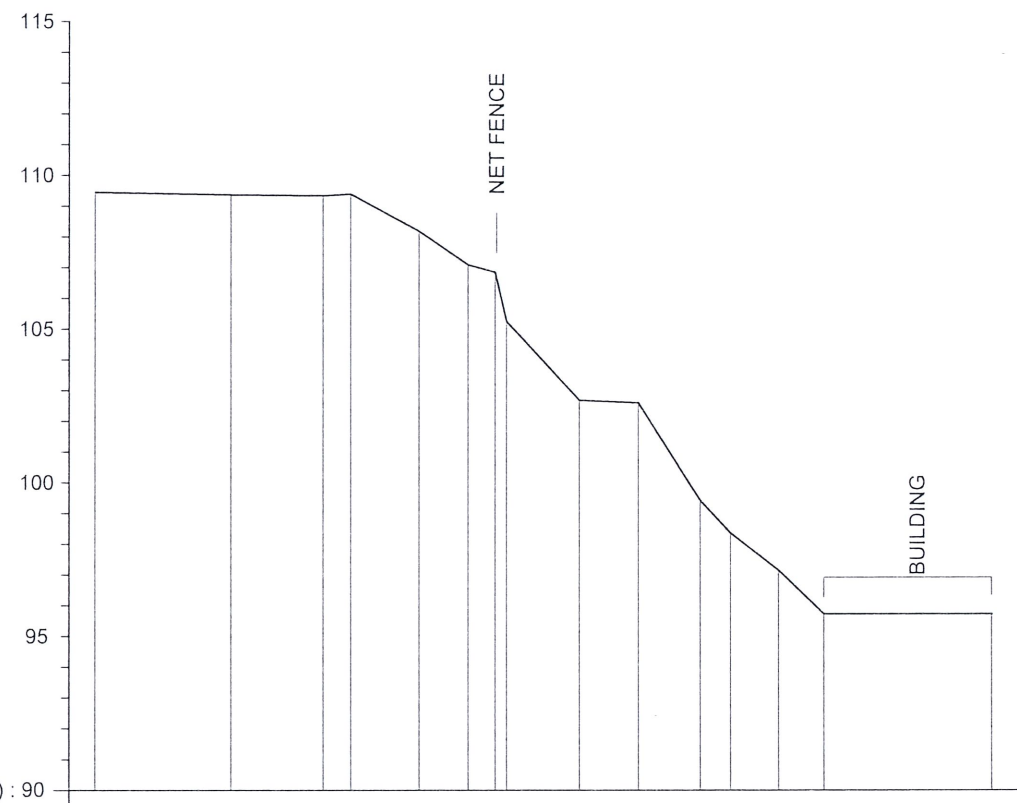


CS 1



CS 2

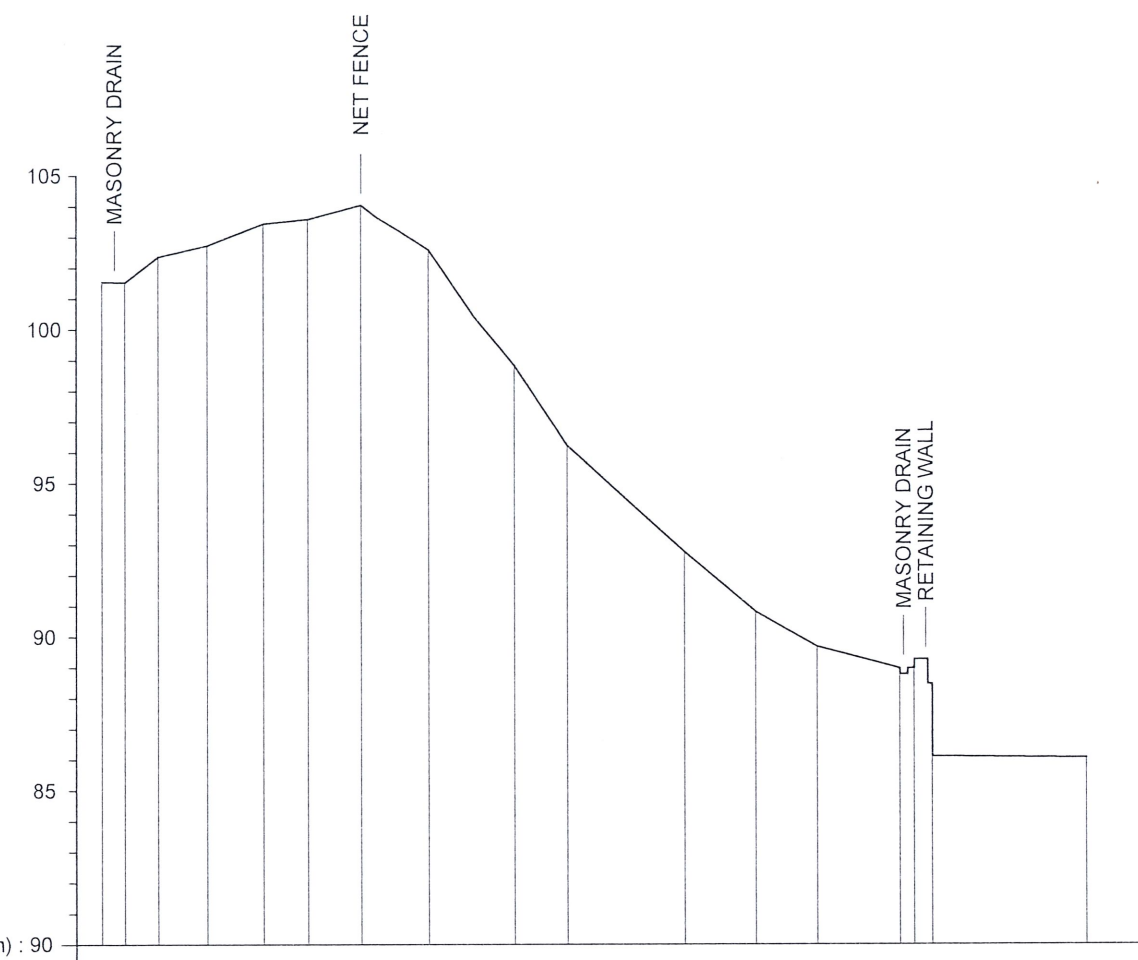
 EMPLOYER DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA MINISTRY OF DEFENCE NATIONAL BUILDING RESEARCH INSTITUTE No. 99/1, JAWATTA ROAD, COLOMBO - 05	 DESIGNER DESIGN UNIT NATIONAL BUILDING RESEARCH INSTITUTE No. 99/1, JAWATTA ROAD, COLOMBO - 05	REV	DATE	REVISION DESCRIPTION	APPROVAL	PROJECT TITLE REDUCTION OF LANDSLIDE VULNERABILITY BY MITIGATION MEASURES PROJECT PUSHPADANA COLLEGE KANDY LOCATION 01	TITLE EXISTING CROSS SECTIONS	DESCRIPTION	NAME	SIGNATURE
								SURVEYED	W.L.P.N.N. WIJESINGHE	
								CHECKED	R.J.K.P.N. RANATHUNGA	
						SCALE 1:250	DATE 23.03.2026			
						PROJECT / DRAWING No. RLVMMP/WORKS/NCB/PH III/230/L1/DR 02a	REVISION 00			



DATUM ABOVE (m) : 90

GROUND LEVEL (m)	109.450	109.360	109.330	109.380	108.180	107.080	106.840	105.240	102.680	102.600	99.420	98.360	97.150	95.720	95.720
DISTANCE (m)	0.000	4.457	7.455	8.363	10.596	12.203	13.084	13.467	15.847	17.774	19.803	20.794	22.369	23.844	29.314

CS 3

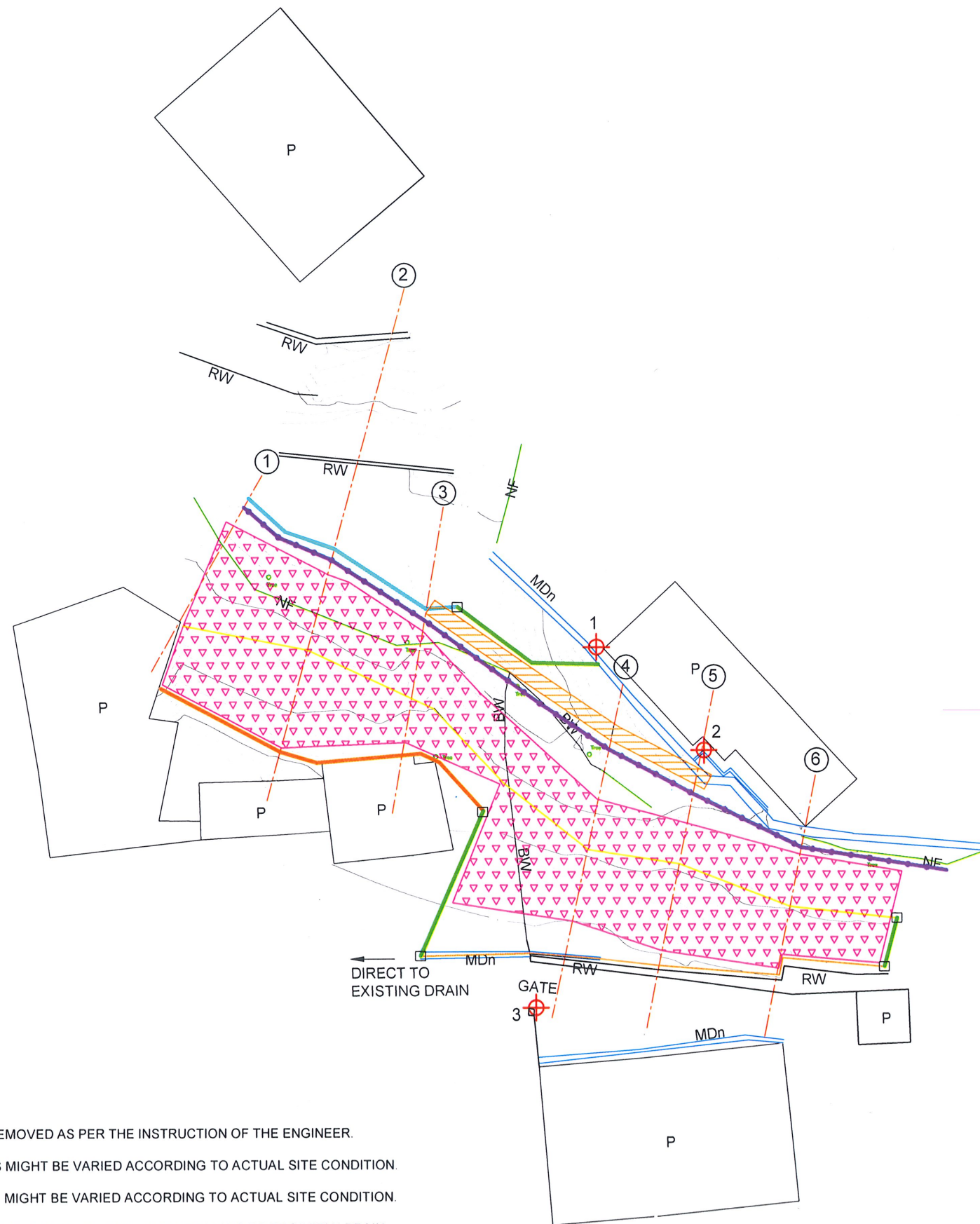


DATUM ABOVE (m) : 90

GROUND LEVEL (m)	101.550	101.530	102.360	102.730	103.430	103.580	104.040	102.580	100.410	98.820	96.220	92.760	90.810	89.680	88.770	88.970	89.260	86.110	86.060
DISTANCE (m)	0.000	0.748	1.826	3.432	5.272	6.738	8.450	10.666	12.130	13.459	15.193	19.036	21.354	23.347	26.045	26.045	26.511	27.097	32.170

CS 4

EMPLOYER  DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA MINISTRY OF DEFENCE NATIONAL BUILDING RESEARCH INSTITUTE No. 99/1, JAWATTA ROAD, COLOMBO - 05	DESIGNER  DESIGN UNIT NATIONAL BUILDING RESEARCH INSTITUTE No. 99/1, JAWATTA ROAD, COLOMBO - 05	REV	DATE	REVISION DESCRIPTION	APPROVAL	PROJECT TITLE REDUCTION OF LANDSLIDE VULNERABILITY BY MITIGATION MEASURES PROJECT PUSHPADANA COLLEGE KANDY LOCATION 01	TITLE EXISTING CROSS SECTIONS	DESCRIPTION	NAME	SIGNATURE
								SURVEYED	W.L.P.N.N. WIJESINGHE	
								CHECKED	R.J.K.P.N. RANATHUNGA	
						SCALE	1:250	DATE	23.03.2026	
						PROJECT / DRAWING No. RLVMM/WORKS/NCB/PH III/230/L1/DR 02b		REVISION	00	



REFERENCE

BOUNDARY WALL	BW
NET FENCE	NF
MASONRY DRAIN	MDn
PERMANENT BUILDING	P
RETAINING WALL	RW
SECTIONS	
TREE	
REFERENCE POINTS	

N	Z	E	PN
2992.089	2011.59	100	1
3002.29	2001.857	100.008	2
2986.264	1977.613	86.059	3

DESIGN NOTATION

—	- DS (B) - C (TYPE II)
—	- DS (C) - A
—	- DS (K) - A
—	- DS (M) - A
—	- CHAIN LINK FENCE
▨	- STAIRCASE
▤	- SOIL NAILING AREA
□	- CATCH PIT

NOTES

- UNSTABLE BOULDERS AND DEBRIS SHALL BE REMOVED AS PER THE INSTRUCTION OF THE ENGINEER.
- LOCATIONS & LENGTHS OF HORIZONTAL DRAINS MIGHT BE VARIED ACCORDING TO ACTUAL SITE CONDITION.
- SURFACE DRAIN LOCATIONS (PATH) & LENGTHS MIGHT BE VARIED ACCORDING TO ACTUAL SITE CONDITION.
- PROPOSED DRAINS SHALL BE CONNECTED TO THE EXISTING DRAINS / LEADER WAYS TO PROPERLY DRAIN OUT THE WATER.
- LOCATION OF THE CATCH PITS MIGHT BE VARIED ACCORDING TO THE ACTUAL SITE CONDITION.

EMPLOYER



DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA
MINISTRY OF DEFENCE
NATIONAL BUILDING RESEARCH INSTITUTE
No. 99/1, JAWATTA ROAD,
COLOMBO - 05



DESIGNER

DESIGN UNIT
NATIONAL BUILDING RESEARCH INSTITUTE
No. 99/1, JAWATTA ROAD,
COLOMBO - 05

REV

DATE

REVISION DESCRIPTION

APPROVAL

PROJECT TITLE

REDUCTION OF LANDSLIDE VULNERABILITY
BY MITIGATION MEASURES PROJECT
PUSHPADANA COLLEGE
KANDY
LOCATION 01

TITLE

PLAN VIEW OF
PROPOSED MITIGATION MEASURES

SCALE 1:500

PROJECT / DRAWING No.
RLVMP/WORKS/NCB/PH III/230/L1/DR 03

DATE

23.03.2026

REVISION
00

DESCRIPTION

NAME

SIGNATURE

DRAWN

K. M. D. NISHANTHI

DESIGNED

R.J.K.P.N. RANATHUNGA

CHECKED

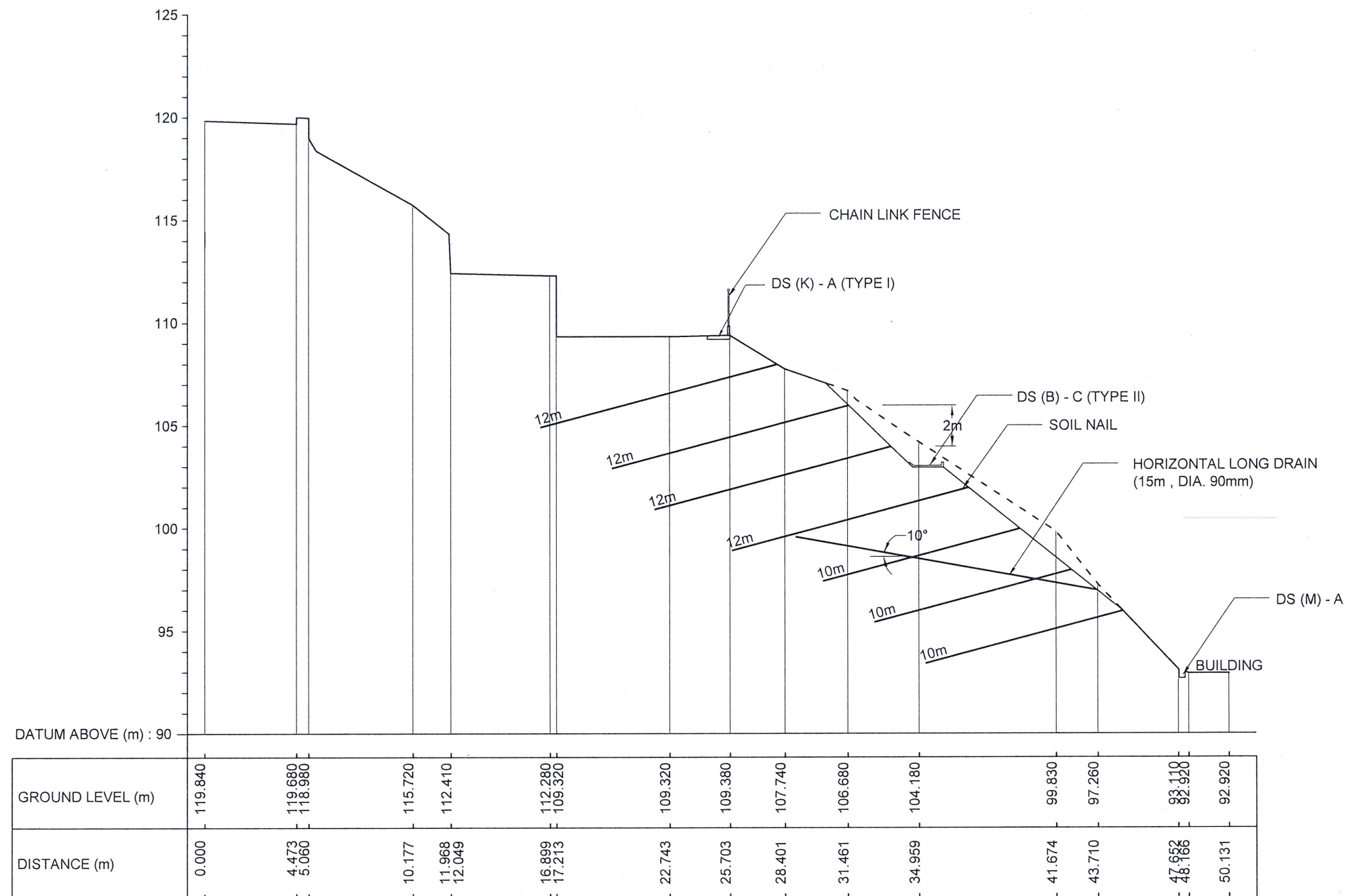
I.A.N.D. IDIRIMANNA

RECOMMENDED

PROF. S. A. S. KULATHILAKA

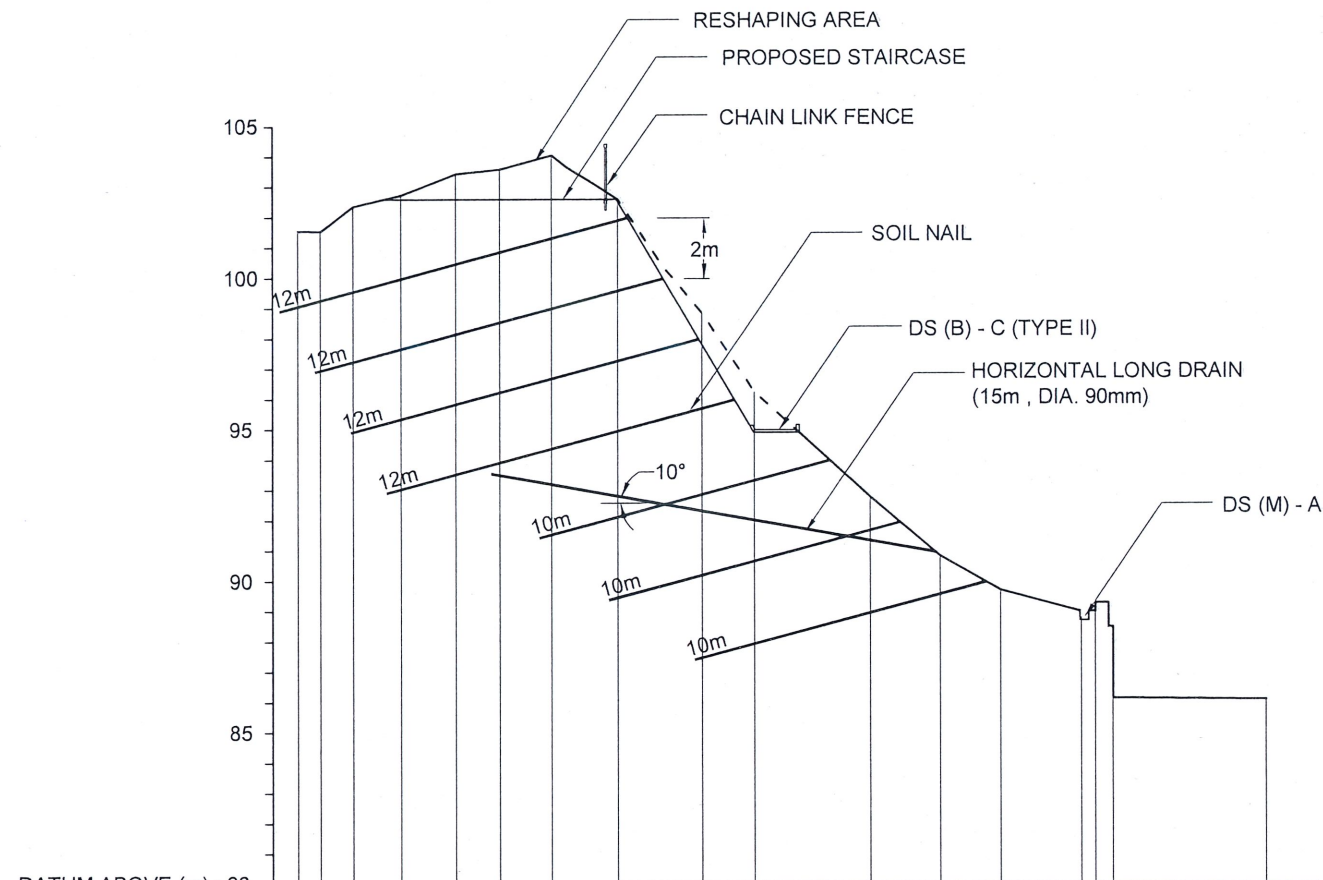
APPROVED

DR. S.H.S. JAYAKODY



CS 2

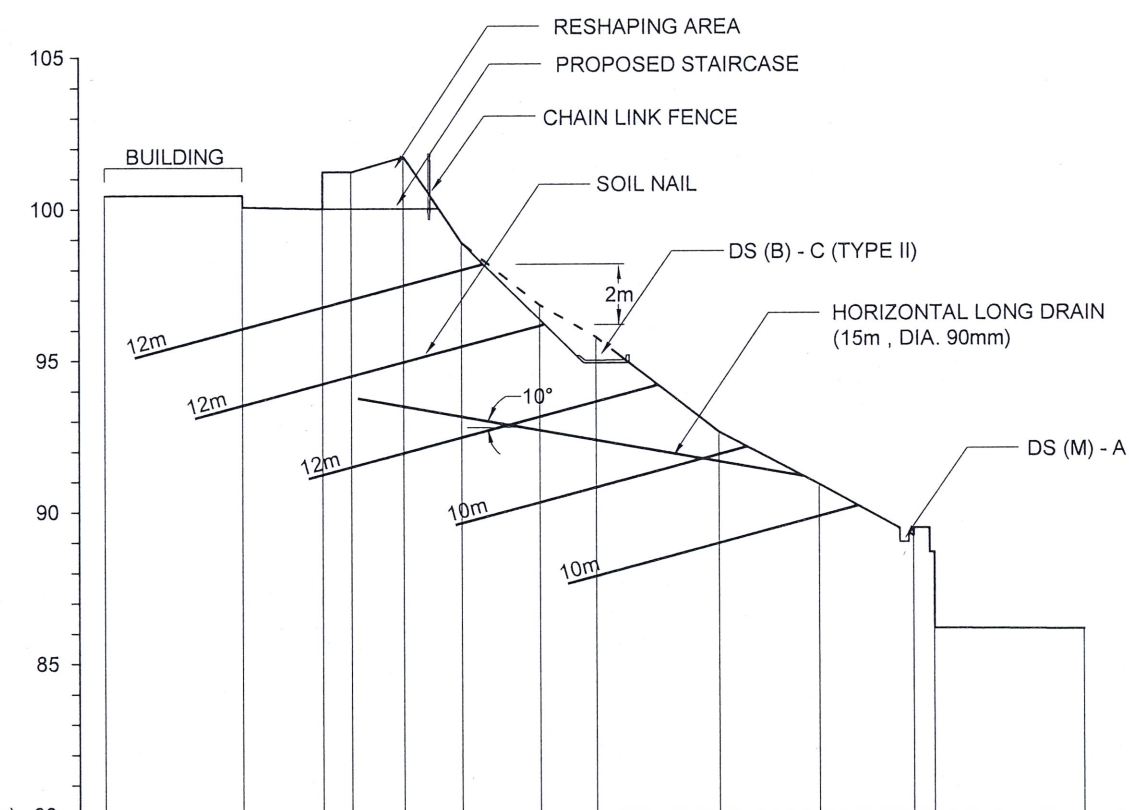
EMPLOYER  DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA MINISTRY OF DEFENCE NATIONAL BUILDING RESEARCH INSTITUTE No. 99/1, JAWATTA ROAD, COLOMBO - 05 		DESIGNER  DESIGN UNIT NATIONAL BUILDING RESEARCH INSTITUTE No. 99/1, JAWATTA ROAD, COLOMBO - 05 		REV	DATE	REVISION DESCRIPTION	APPROVAL	PROJECT TITLE REDUCTION OF LANDSLIDE VULNERABILITY BY MITIGATION MEASURES PROJECT PUSHPADANA COLLEGE KANDY LOCATION 01	TITLE CROSS SECTION OF PROPOSED MITIGATION MEASURES	DESCRIPTION DRAWN	NAME K. M. D. NISHANTHI	SIGNATURE 		
									DESIGNED	R. J. K. P. N. RANATHUNGA				
									CHECKED	I. A. N. D. IDIRIMANNA				
								SCALE 1:250	DATE	23.03.2026	RECOMMENDED	PROF. S. A. S. KULATHILAKA		
								PROJECT / DRAWING No. RLVMMMP/WORKS/NCB/PH III/230/L1/DR 04a		REVISION	00	APPROVED	DR. S. H. S. JAYAKODY	



DATUM ABOVE (m) : 90

GROUND LEVEL (m)	101.550	101.530	102.360	102.730	103.430	103.580	104.040	102.580	100.410	98.820	96.220	92.760	90.810	89.680	88.770	88.970	88.260	86.110	86.060
DISTANCE (m)	0.000	0.748	1.826	3.432	5.272	6.738	8.450	10.666	12.130	13.459	15.193	19.036	21.354	23.347	26.045	26.045	26.511	27.097	32.170

CS 4

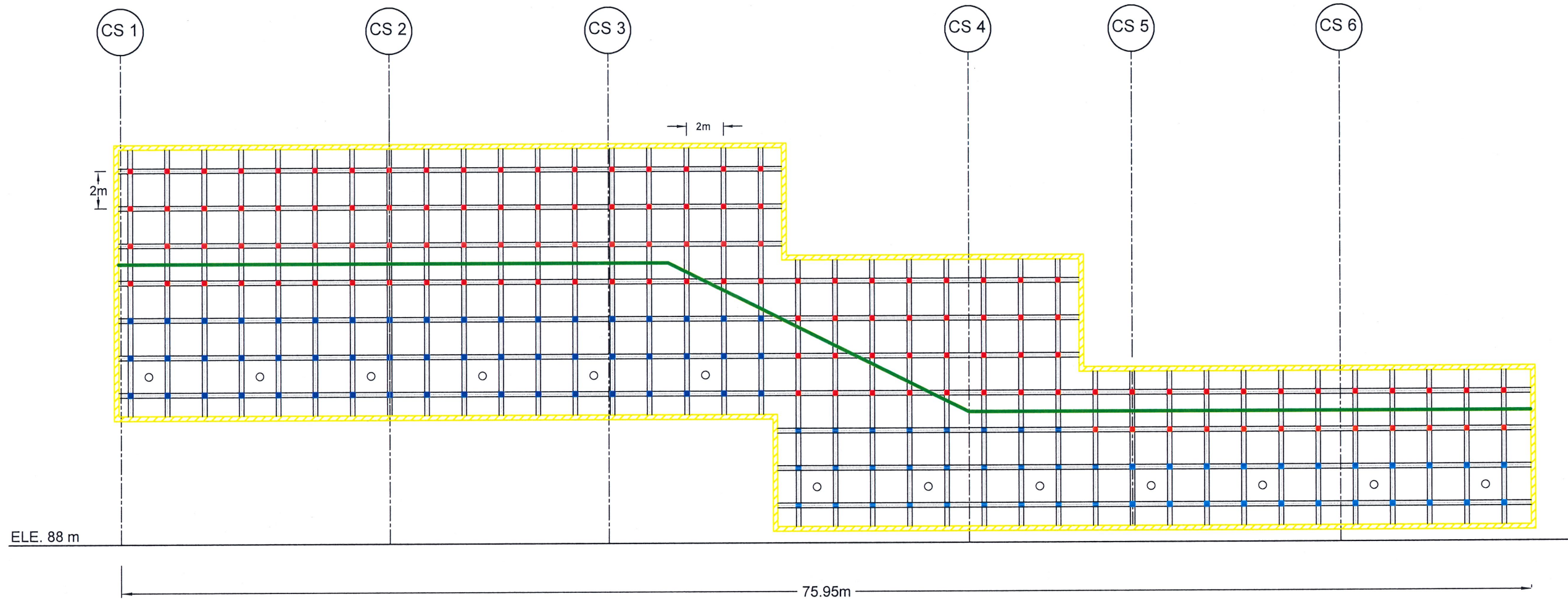


DATUM ABOVE (m) : 90

GROUND LEVEL (m)	100.440	100.060	100.000	101.220	101.710	98.880	96.810	95.750	92.610	90.880	89.430	88.620	86.080
DISTANCE (m)	0.000	4.570	7.228	8.192	9.932	11.864	14.438	16.304	20.374	23.711	26.835	27.514	32.465

CS 5

EMPLOYER		DESIGNER		REV	DATE	REVISION DESCRIPTION	APPROVAL	PROJECT TITLE	TITLE			DESCRIPTION	NAME	SIGNATURE
 DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA MINISTRY OF DEFENCE NATIONAL BUILDING RESEARCH INSTITUTE No. 99/1, JAWATTA ROAD, COLOMBO - 05 								REDUCTION OF LANDSLIDE VULNERABILITY BY MITIGATION MEASURES PROJECT PUSHPADANA COLLEGE KANDY LOCATION 01	CROSS SECTION OF PROPOSED MITIGATION MEASURES			DRAWN	K. M. D. NISHANTHI	
		DESIGNED	R.J.K.P.N. RANATHUNGA											
		CHECKED	I.A.N.D. IDRIMANNA											
		RECOMMENDED	PROF. S. A. S. KULATHILAKA											
		SCALE 1:250		DATE	23.03.2026	APPROVED	DR. S.H.S. JAYAKODY							
		PROJECT / DRAWING No. RLVMP/WORKS/NCB/PH III/230/L1/DR 04b			REVISION 00									



FRONT ELEVATION OF SOIL NAILING AREA

LEGEND



SOIL NAILING

- TOTAL SOIL NAIL LENGTH = 10m
- NO OF SOIL NAIL = 114
- REINFORCEMENT DIAMETER = 32 mm
- DIAMETER OF DRILLED HOLE = 125mm
- NAIL SPACING = AS SHOWN



SOIL NAILING

- TOTAL SOIL NAIL LENGTH = 12m
- NO OF SOIL NAIL = 128
- REINFORCEMENT DIAMETER = 32 mm
- DIAMETER OF DRILLED HOLE = 125mm
- NAIL SPACING = AS SHOWN



HORIZONTAL LONG DRAIN

- HORIZONTAL LONG DRAIN LENGTH = 15 m
- NO'S OF LONG DRAIN = 13
- DIAMETER = 90 mm
- SPACING = 06 m

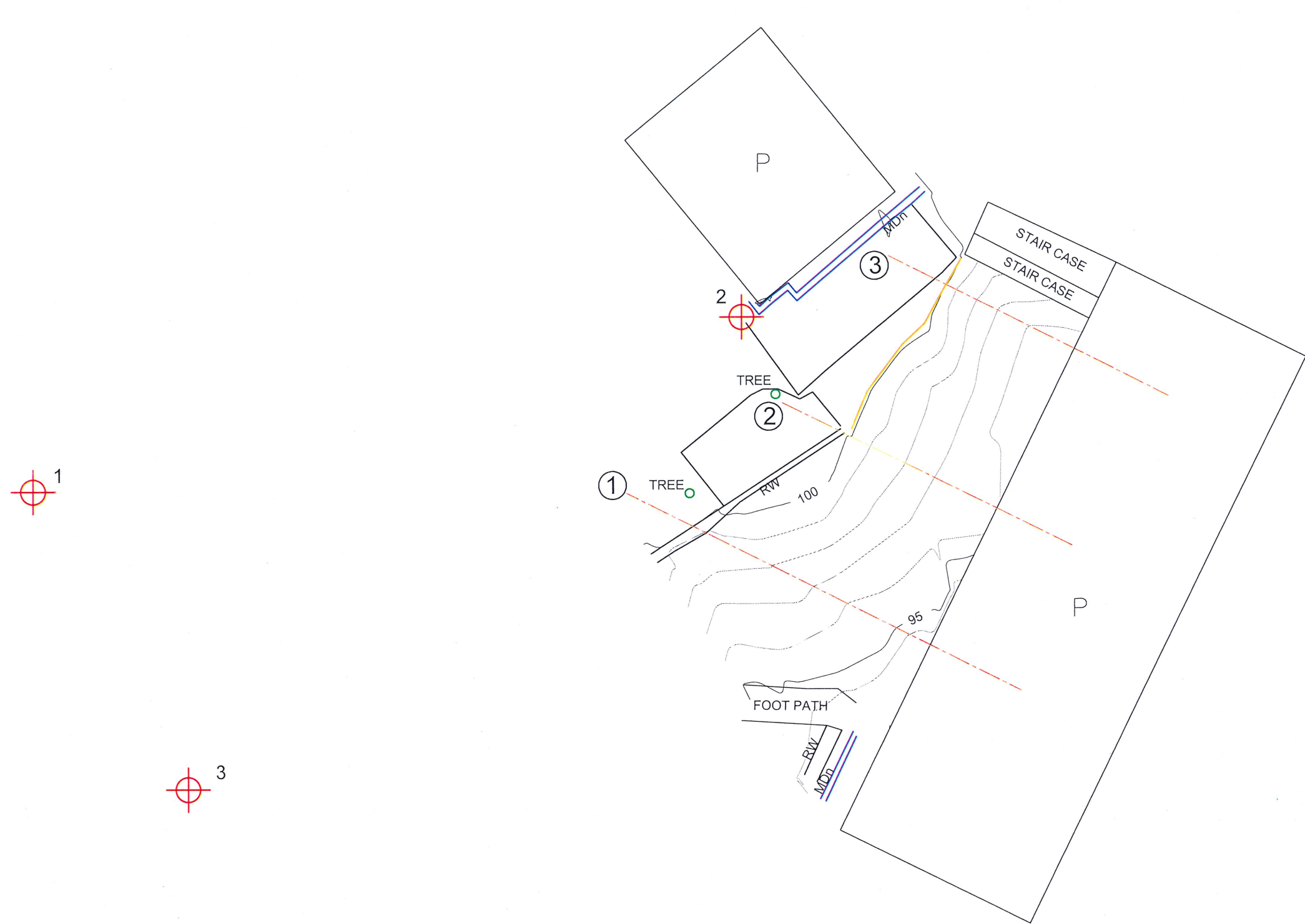


DS (B) - C (TYPE II)



BOUNDARY BEAM

EMPLOYER  DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA MINISTRY OF DEFENCE NATIONAL BUILDING RESEARCH INSTITUTE No. 99/1, JAWATTA ROAD, COLOMBO - 05 	DESIGNER  DESIGN UNIT NATIONAL BUILDING RESEARCH INSTITUTE No. 99/1, JAWATTA ROAD, COLOMBO - 05	REV	DATE	REVISION DESCRIPTION	APPROVAL	PROJECT TITLE REDUCTION OF LANDSLIDE VULNERABILITY BY MITIGATION MEASURES PROJECT PUSHPADANA COLLEGE KANDY LOCATION 01	TITLE FRONT ELEVATION OF PROPOSED MITIGATION MEASURES				DESCRIPTION	NAME	SIGNATURE				
											DRAWN	K. M. D. NISHANTHI					
											DESIGNED	R.J.K.P.N. RANATHUNGA					
											CHECKED	I.A.N.D. IDIRIMANNA					
										SCALE	1:250	DATE	23.03.2026	RECOMMENDED	PROF. S. A. S. KULATHILAKA		
										PROJECT / DRAWING No. RI VMMP/WORKS/NCB/PH III/230/L 1/DR 05				REVISION 00	APPROVED	DR. S.H.S. JAYAKODY	



REFERENCE

- MASONRY DRAIN MDn
- PERMANENT BUILDING P
- RETAINING WALL RW
- SCAR
- SECTIONS
- TREE

REFERENCE POINTS

N	E	Z	PN
2965.477	1993.451	100.001	1
2995.699	2000.775	100.086	2
2972.072	1980.841	99.941	3

EMPLOYER
DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA
MINISTRY OF DEFENCE
NATIONAL BUILDING RESEARCH INSTITUTE
No. 99/1, JAWATTA ROAD,
COLOMBO - 05

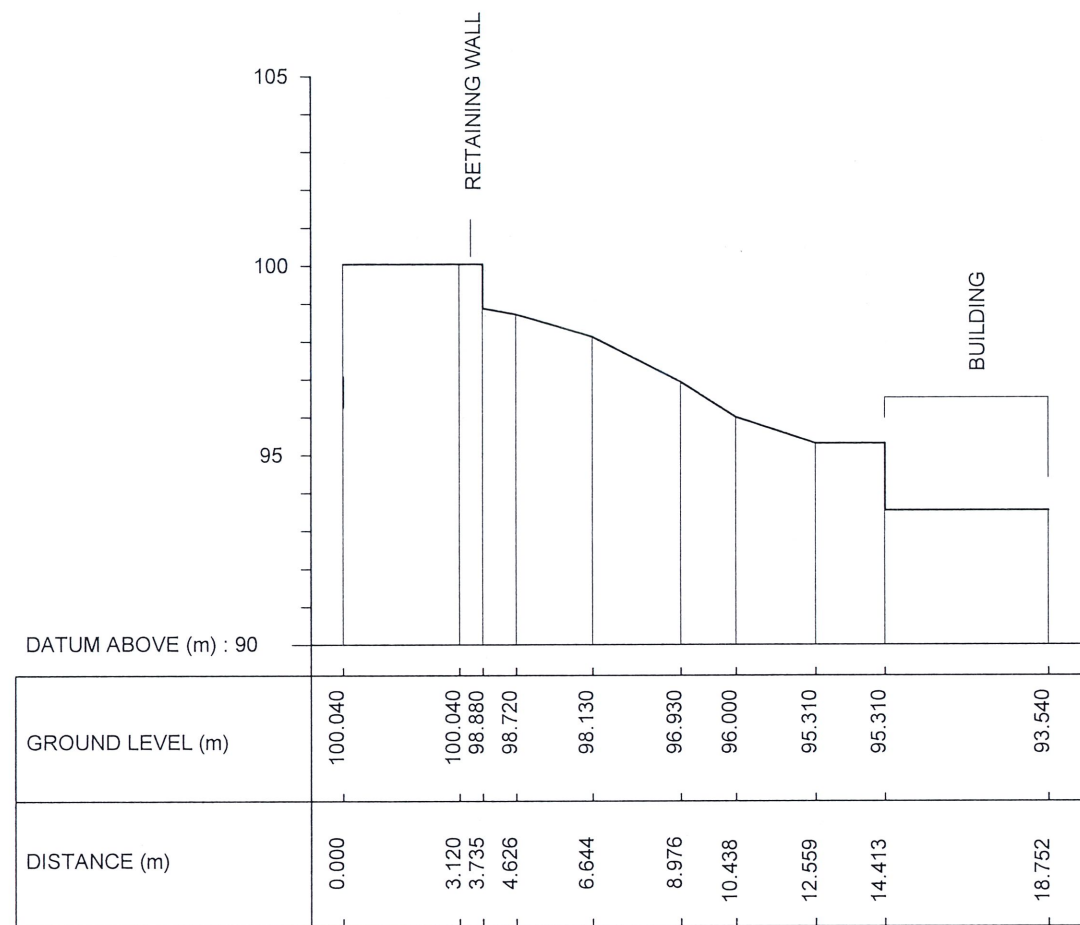
DESIGNER
DESIGN UNIT
NATIONAL BUILDING RESEARCH INSTITUTE
No. 99/1, JAWATTA ROAD,
COLOMBO - 05

REV	DATE	REVISION DESCRIPTION	APPROVAL

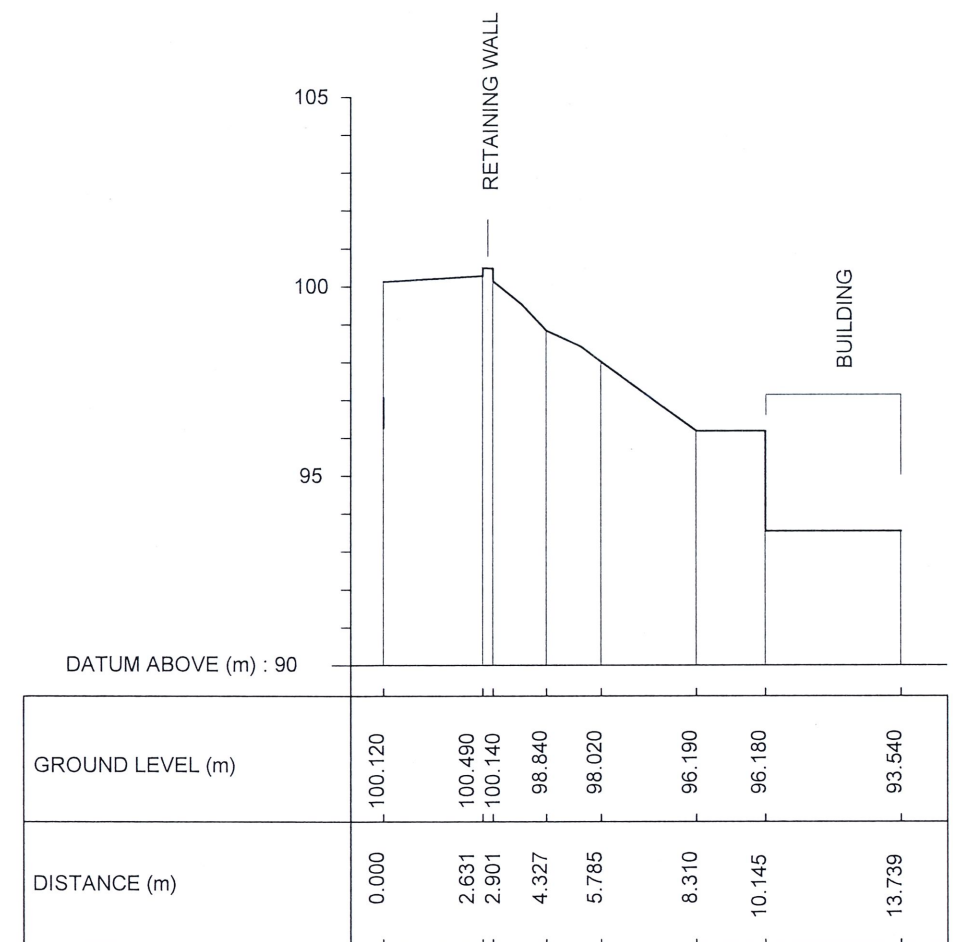
PROJECT TITLE
REDUCTION OF LANDSLIDE VULNERABILITY
BY MITIGATION MEASURES PROJECT
IN FRONT OF BUILDING NO. 3
PUSHPADANA COLLEGE
KANDY
LOCATION 02

TITLE
SURVEY PLAN
SCALE 1:400
DATE 23.03.2026
PROJECT / DRAWING No.
RLVMMP/WORKS/NCB/PH III/230/L2/DR 01
REVISION
00

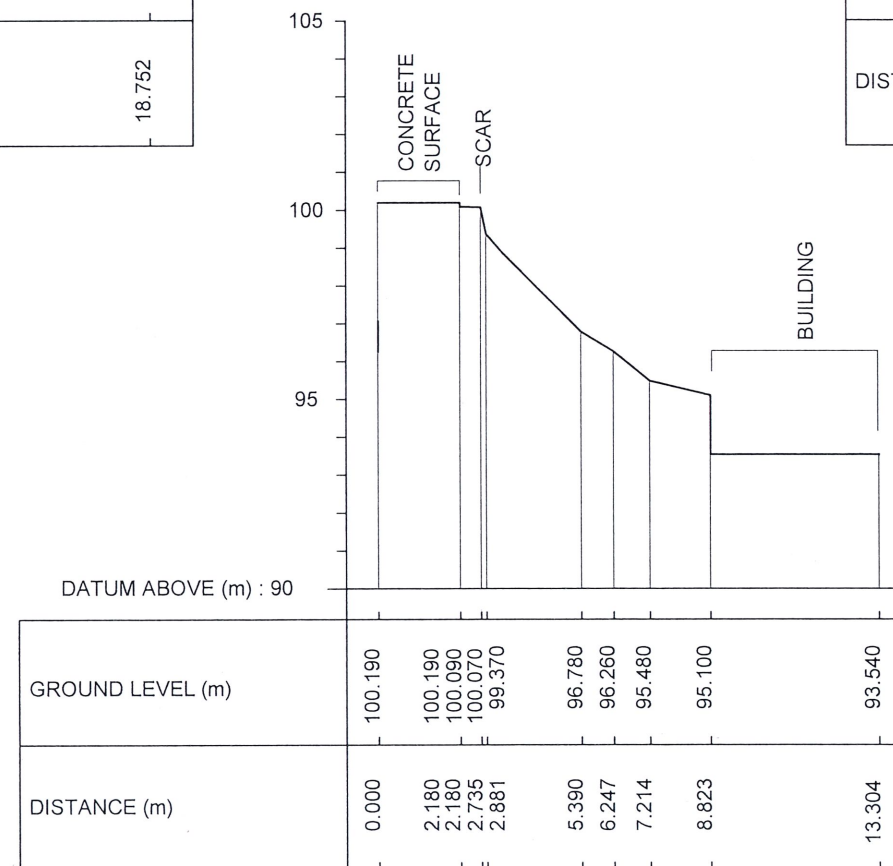
DESCRIPTION	NAME	SIGNATURE
SURVEYED	W.L.P.N.N. WIJESINGHE	
CHECKED	R.J.K.P.N. RANATHUNGA	



CS 1

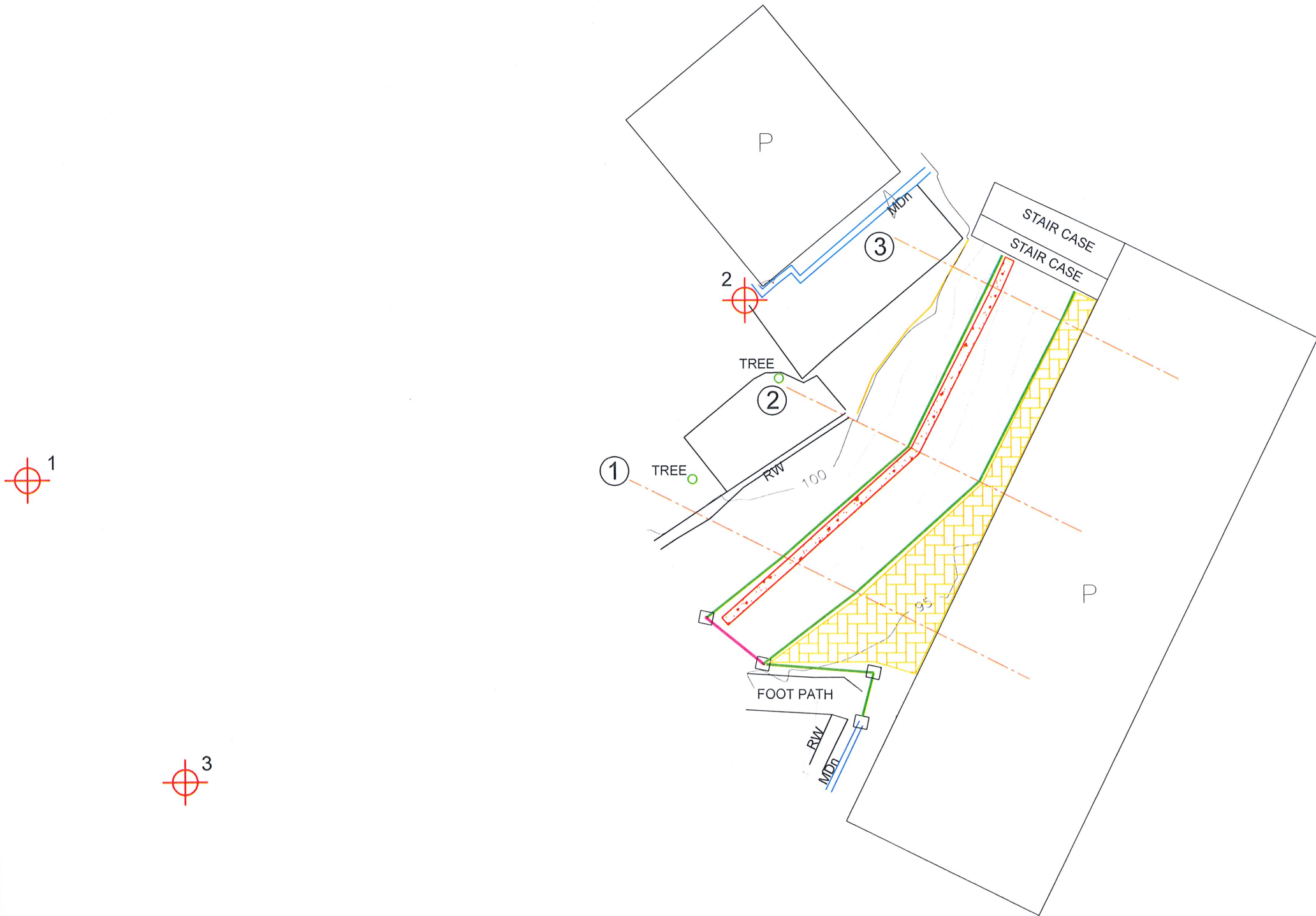


CS 2



CS 3

EMPLOYER  DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA MINISTRY OF DEFENCE NATIONAL BUILDING RESEARCH INSTITUTE No. 99/1, JAWATTA ROAD, COLOMBO - 05	DESIGNER  DESIGN UNIT NATIONAL BUILDING RESEARCH INSTITUTE No. 99/1, JAWATTA ROAD, COLOMBO - 05	REV	DATE	REVISION DESCRIPTION	APPROVAL	PROJECT TITLE REDUCTION OF LANDSLIDE VULNERABILITY BY MITIGATION MEASURES PROJECT IN FRONT OF BUILDING NO. 3 PUSHPADANA COLLEGE KANDY LOCATION 02	TITLE EXISTING CROSS SECTION	DESCRIPTION	NAME	SIGNATURE
							SCALE 1:200	DATE 23.03.2026		
							PROJECT / DRAWING No.	REVISION 00		
							RLVMMP/WORKS/NCB/PH III/230/L2/DR 02			



REFERENCE

- MASONRY DRAIN MDn
- PERMANENT BUILDING P
- RETAINING WALL RW
- SCAR
- SECTIONS
- TREE
- REFERENCE POINTS

N	E	Z	PN
2965.477	1993.451	100.001	1
2995.699	2000.775	100.086	2
2972.072	1980.841	99.941	3

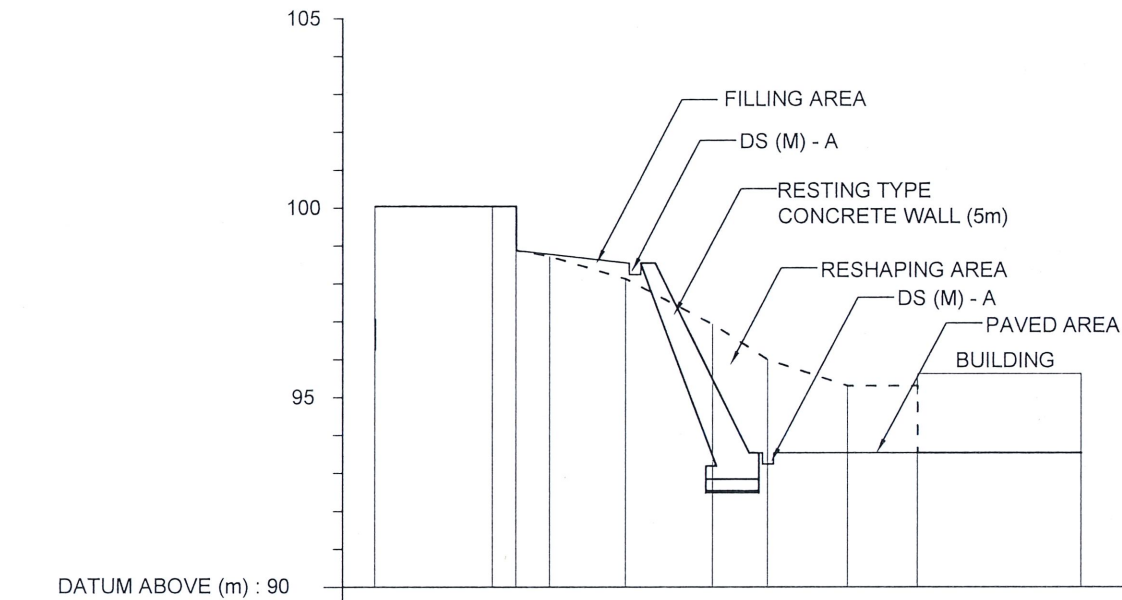
DESIGN NORTATION

- DS (C) - A
- DS (M) - A
- RESTING TYPE CONCRETE WALL (5m)
- PAVED AREA
- CATCH PIT

NOTES

- SURFACE DRAIN LOCATIONS (PATH) & LENGTHS MIGHT BE VARIED ACCORDING TO ACTUAL SITE CONDITION.
- PROPOSED DRAINS SHALL BE CONNECTED TO THE EXISTING DRAINS / LEADER WAYS TO PROPERLY DRAIN OUT THE WATER.
- LOCATION OF THE CATCH PITS MIGHT BE VARIED ACCORDING TO THE ACTUAL SITE CONDITION.

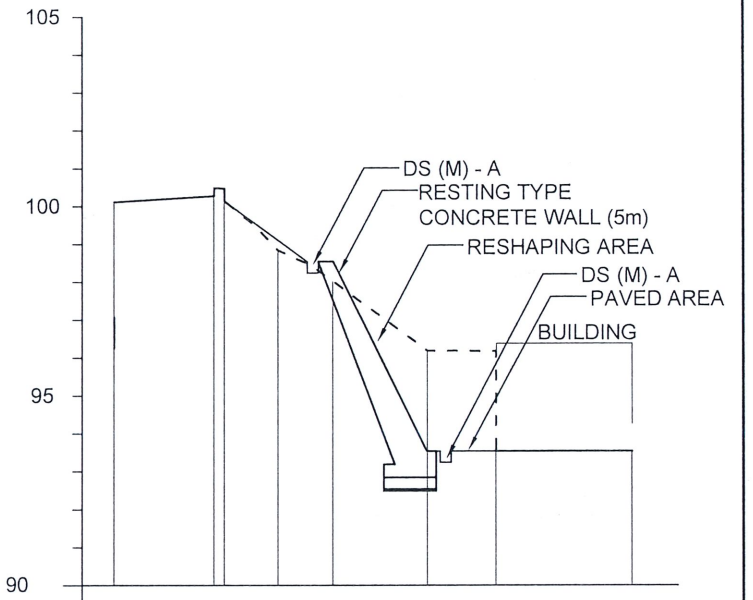
EMPLOYER  DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA MINISTRY OF DEFENCE NATIONAL BUILDING RESEARCH INSTITUTE No. 99/1, JAWATTA ROAD, COLOMBO - 05 	DESIGNER  DESIGN UNIT NATIONAL BUILDING RESEARCH INSTITUTE No. 99/1, JAWATTA ROAD, COLOMBO - 05	REV	DATE	REVISION DESCRIPTION	APPROVAL	PROJECT TITLE REDUCTION OF LANDSLIDE VULNERABILITY BY MITIGATION MEASURES PROJECT IN FRONT OF BUILDING NO. 3 PUSHPADANA COLLEGE KANDY LOCATION 02	TITLE PLAN VIEW OF PROPOSED MITIGATION MEASURES			DESCRIPTION	NAME	SIGNATURE
										DRAWN	K. M. D. NISHANTHI	
										DESIGNED	R.J.K.P.N. RANATHUNGA	
										CHECKED	I.A.N.D. IDIRIMANNA	
							RECOMMENDED	PROF. S. A. S. KULATHILAKA				
									SCALE 1:200	DATE 23.03.2026	REVISION 00	APPROVED



DATUM ABOVE (m) : 90

GROUND LEVEL (m)	100.040		100.040	98.880	98.720		98.130		96.930	96.000		95.310	95.310		93.540
DISTANCE (m)	0.000		3.120	3.735	4.626		6.644		8.976	10.438		12.559	14.413		18.752

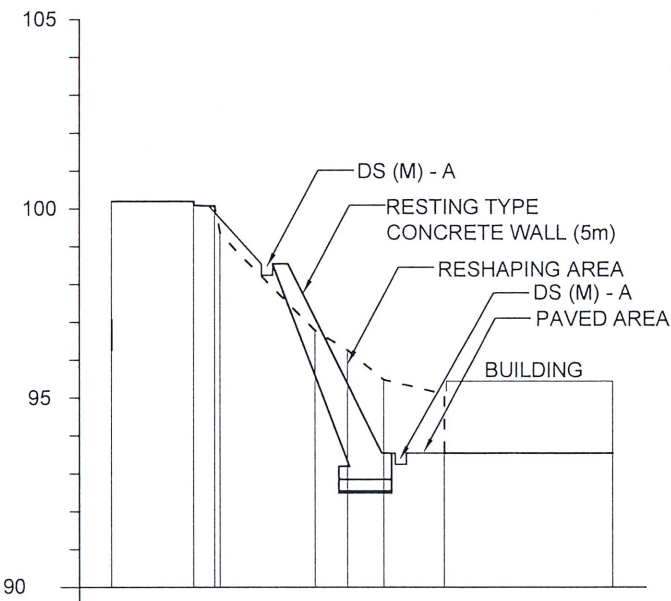
CS 1



DATUM ABOVE (m) : 90

GROUND LEVEL (m)	100.120		100.490	100.140	98.840		98.020		96.190	96.180		93.540
DISTANCE (m)	0.000		2.631	2.901	4.327		5.785		8.310	10.145		13.739

CS 2



DATUM ABOVE (m) : 90

GROUND LEVEL (m)	100.190		100.190	100.090	100.070	99.370		96.780	96.260	95.480		95.100		93.540
DISTANCE (m)	0.000		2.180	2.180	2.735	2.881		5.390	6.247	7.214		8.823		13.304

CS 3

EMPLOYER



DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA
MINISTRY OF DEFENCE
NATIONAL BUILDING RESEARCH INSTITUTE
No. 99/1, JAWATTA ROAD,
COLOMBO - 05



DESIGNER

DESIGN UNIT
NATIONAL BUILDING RESEARCH INSTITUTE
No. 99/1, JAWATTA ROAD,
COLOMBO - 05

REV	DATE	REVISION DESCRIPTION	APPROVAL

PROJECT TITLE

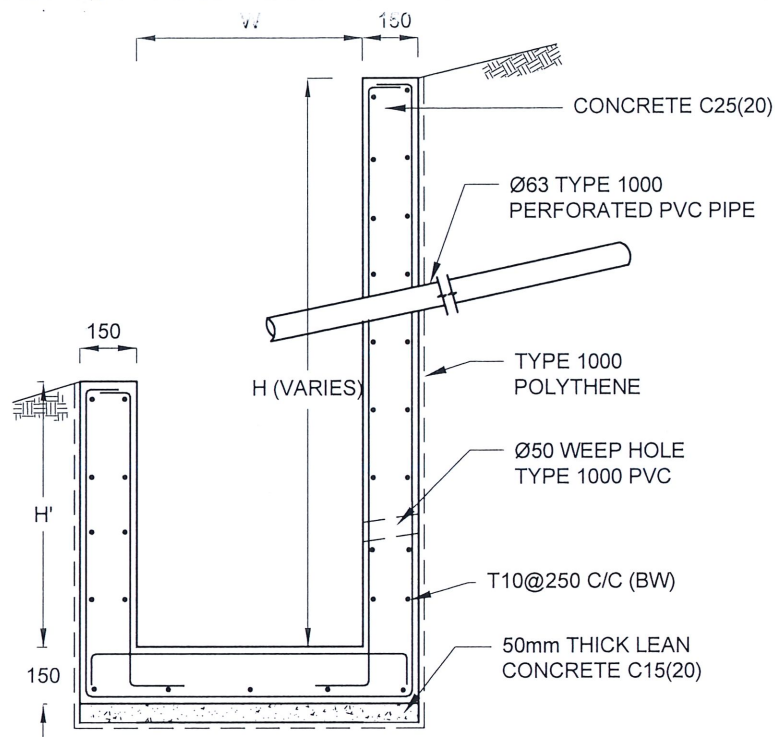
REDUCTION OF LANDSLIDE VULNERABILITY
BY MITIGATION MEASURES PROJECT
IN FRONT OF BUILDING NO. 3
PUSHPADANA COLLEGE
KANDY
LOCATION 02

TITLE

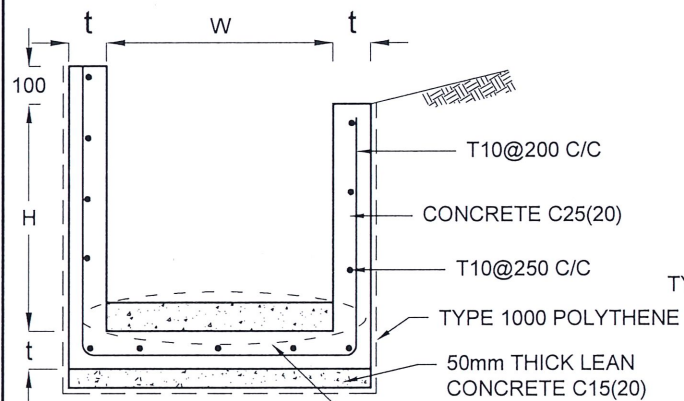
CROSS SECTIONS OF
PROPOSED MITIGATION MEASURES

SCALE 1:200 DATE 23.03.2026
PROJECT / DRAWING No. RLVMM/WORKS/NCB/PH III/230/L2/DR 04 REVISION 00

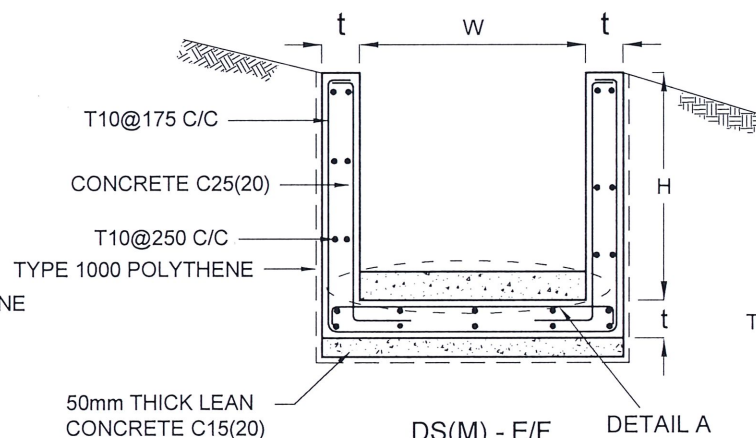
DESCRIPTION	NAME	SIGNATURE
DRAWN	K. M. D. NISHANTHI	
DESIGNED	R.J.K.P.N. RANATHUNGA	
CHECKED	I.A.N.D. IDRIMANNA	
RECOMMENDED	PROF. S. A. S. KULATHILAKA	
APPROVED	DR. S.H.S. JAYAKODY	



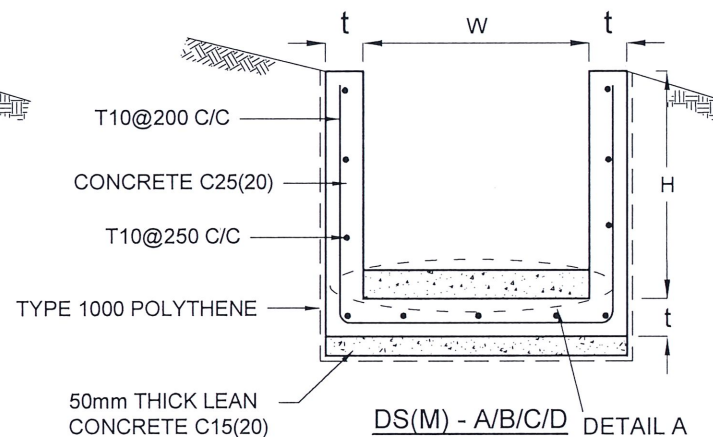
DS (M) - L



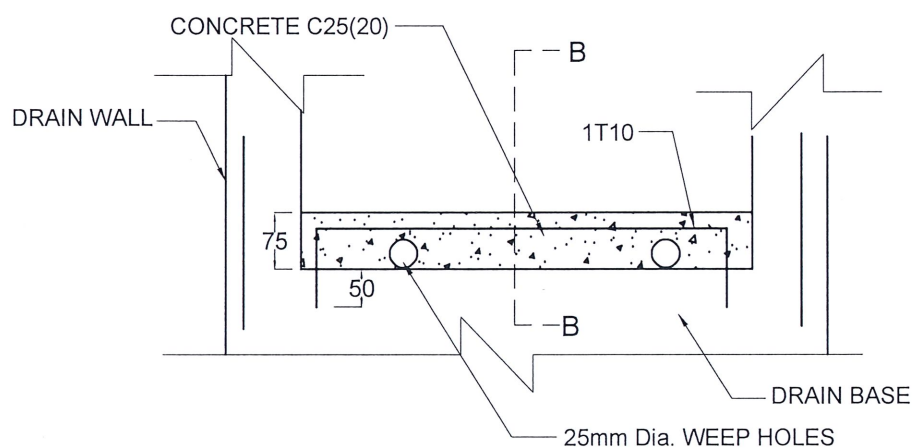
DS(M) - P/R/Q



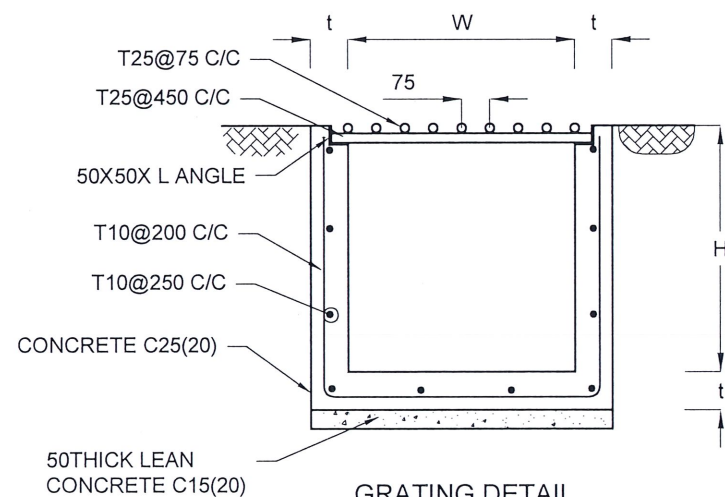
DS(M) - E/F



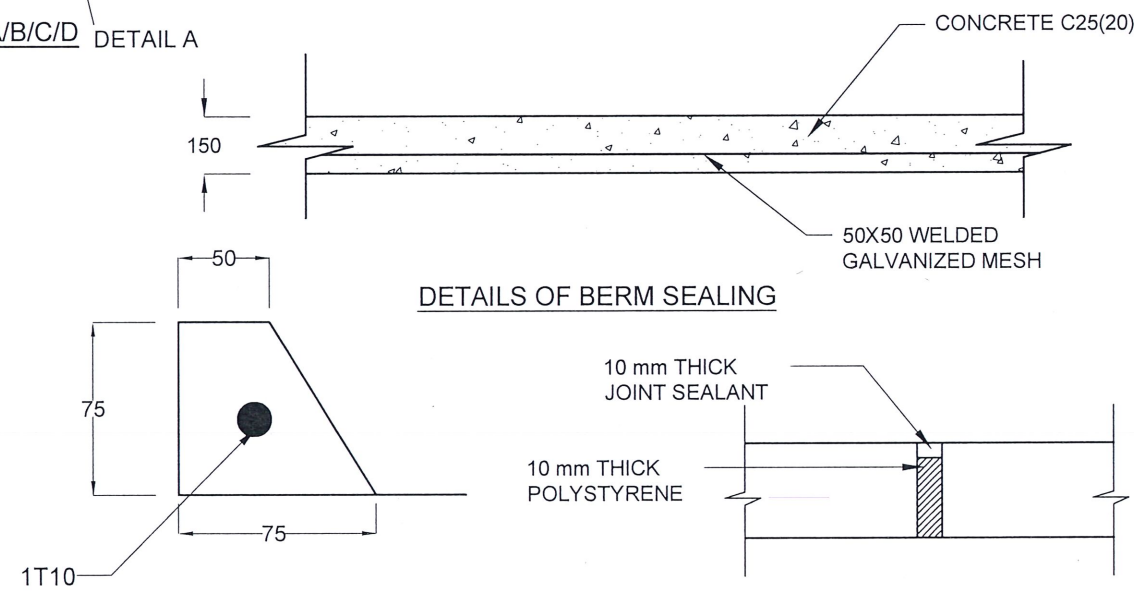
DS(M) - A/B/C/D



DETAIL A - (ENERGY BREAKER AT 3M)



GRATING DETAIL



DETAILS OF BERM SEALING

SECTION B-B

EXPANTION JOINT DETAIL

NOTES

1. DEPTH OF EXCAVATION MAY VARY ACCORDING TO SITE CONDITIONS.
2. STEPS SHALL BE CONSTRUCTED AT SURFACE DRAIN ON SLOPING GROUND ACCORDING TO THE SITE CONDITIONS AS INSTRUCTED BY THE ENGINEER.
3. ENERGY BREAKERS SHALL BE CONSTRUCTED AT THE STEEP DRAIN SEGMENTS AS PER THE INSTRUCTIONS OF THE ENGINEER.
4. DOWELS SHALL BE INSTALLED ACCORDING TO THE GROUND CONDITIONS AS INSTRUCTED BY THE ENGINEER.
5. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE STATED.
6. 10 mm THICK EXPANSION JOINT SHALL BE INTRODUCED IN EVERY 5m INTERVAL.

CONCRETE

7. USE FOLLOWING CONCRETE GRADES FOR STRUCTURE

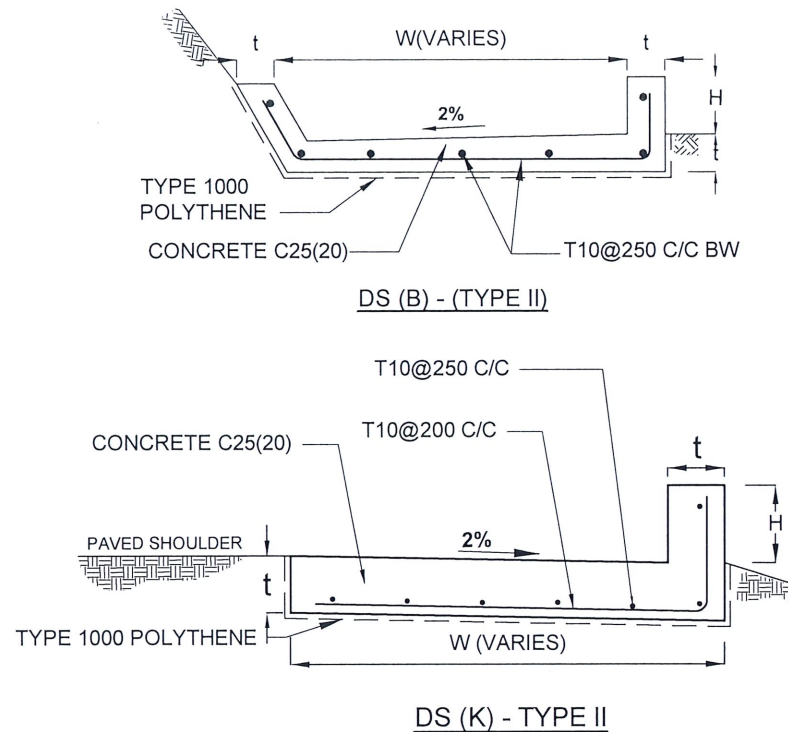
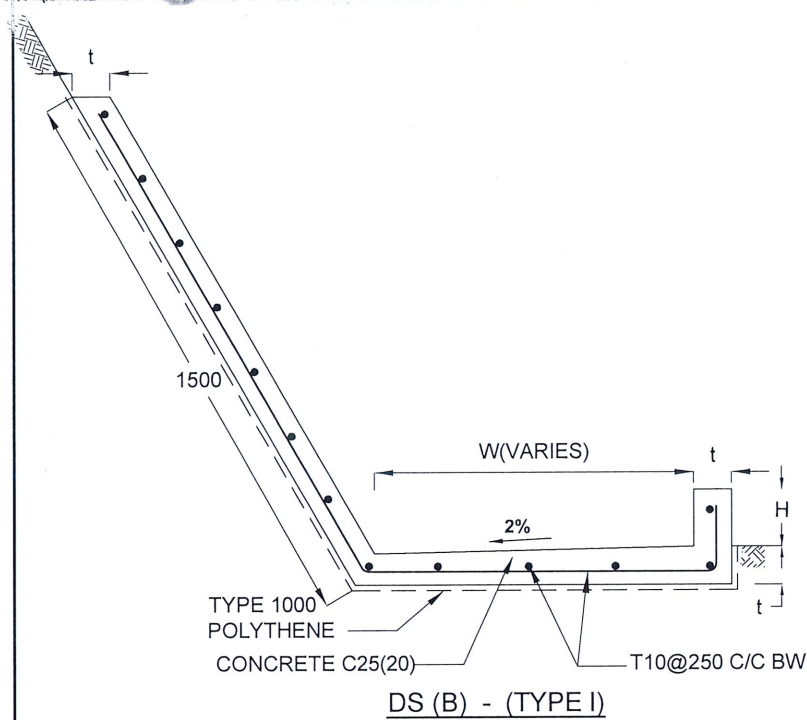
[a]	SCREED	- C15(20)
[b]	WALLS / BASE / ENERGY BREAKERS	- C25(20)

REINFORCEMENT

8. HIGH YIELD REINFORCEMENT BARS DENOTED BY "T" SHALL CONFORM TO THE REQUIREMENTS OF TYPE 2 OF BS 4449 AND HAVE A CHARACTERISTIC TENSILE STRENGTH OF 460N/mm².
9. BARS OF CUT LENGTH LARGER THAN THE SUPPLIED LENGTH TO BE LAPPED FOR A LENGTH OF 40 x BAR DIA. AND LAPPING SHOULD BE STAGGERED.
10. ANCHORAGE LENGTH SHOULD BE 40X BAR DIA.
11. REINFORCEMENT BARS SHALL BE BENT IN ACCORDANCE WITH STANDARD SPECIFICATIONS.
12. COVER TO REINFORCEMENT

[a]	BURIED FACES AND DRAIN INVERTS	- 40 mm
[b]	ALL OTHER FACES	- 25 mm

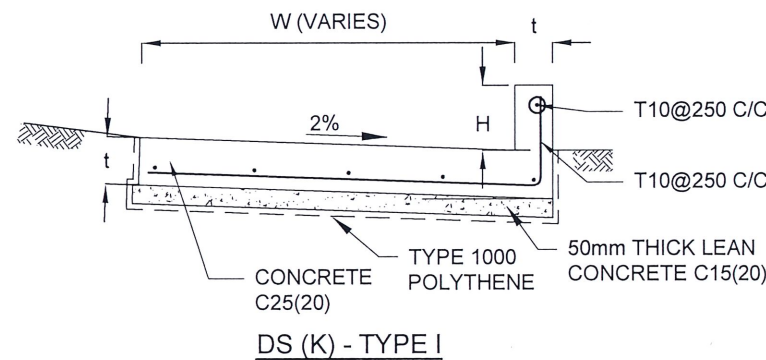
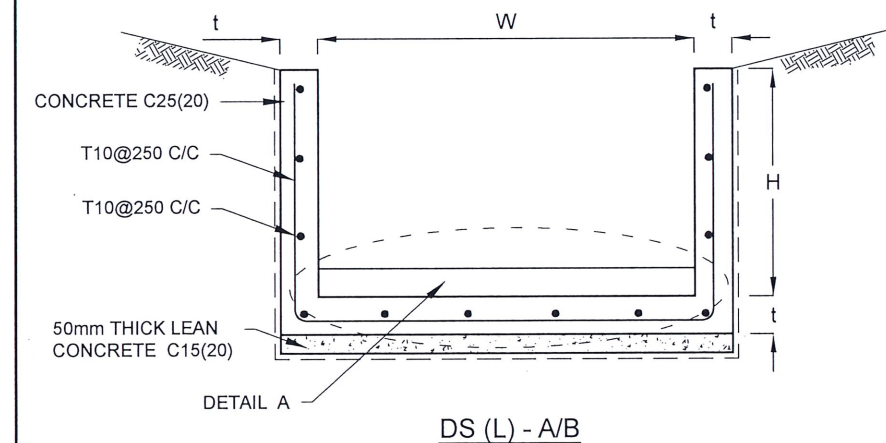
EMPLOYER	DESIGNER	REV	DATE	REVISION DESCRIPTION	APPROVAL	PROJECT TITLE	TITLE	DESCRIPTION	NAME	SIGNATURE
 DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA MINISTRY OF DEFENCE NATIONAL BUILDING RESEARCH INSTITUTE No. 99/1, JAWATTA ROAD, COLOMBO - 05	 DESIGN UNIT NATIONAL BUILDING RESEARCH INSTITUTE No. 99/1, JAWATTA ROAD, COLOMBO - 05					REDUCTION OF LANDSLIDE VULNERABILITY BY MITIGATION MEASURES PROJECT PUSHPADANA COLLEGE KANDY	DETAILS OF DRAINS (SURFACE DRAIN -1 OF 2)	DRAWN	K. M. D. NISHANTHI	
								DESIGNED	R.J.K.P.N. RANATHUNGA	
								CHECKED	I.A.N.D. IDIRIMANNA	
								RECOMMENDED	PROF. S. A. S. KULATHILAKA	
								APPROVED	DR. S.H.S. JAYAKODY	
							SCALE N.T.S.	DATE	23.03.2026	
							PROJECT / DRAWING No. RLVMM/WORKS/NCB/PH III/230/A1	REVISION	00	



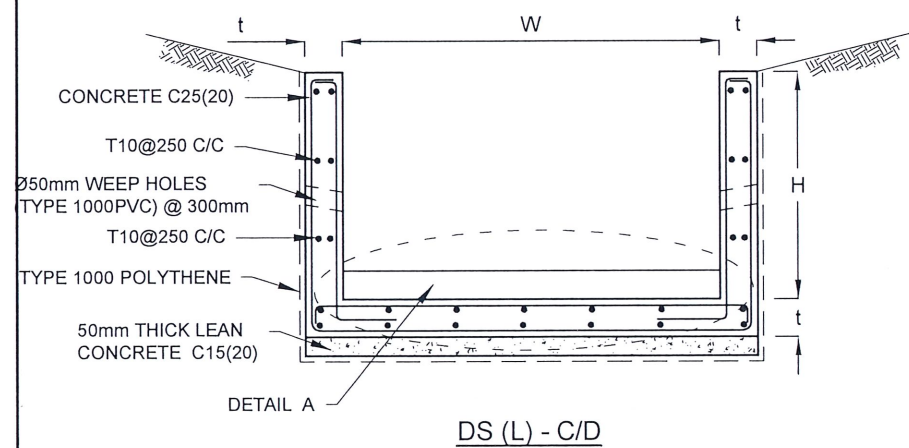
DRAIN TYPE	W (mm)	H (mm)	t (mm)
DS (B) - A	500	150	100
DS (B) - B	1000	150	100
DS (B) - C	1500	150	100
DS (B) - D	2000	150	100

NOTES

- DEPTH OF EXCAVATION MAY VARY ACCORDING TO SITE CONDITIONS.
- STEPS SHALL BE CONSTRUCTED AT SURFACE DRAIN ON SLOPING GROUND ACCORDING TO THE SITE CONDITIONS AS INSTRUCTED BY THE ENGINEER.
- ENERGY BREAKERS SHALL BE CONSTRUCTED IN STAGGERED PATTERN AT THE STEEP DRAIN SEGMENTS AS PER THE INSTRUCTIONS OF THE ENGINEER.
- DOWELS SHALL BE INSTALLED ACCORDING TO THE GROUND CONDITIONS AS INSTRUCTED BY THE ENGINEER.
- COVER SLABS NEED TO BE PROVIDED ONLY FOR THE REGIONS AS INSTRUCTED BY THE ENGINEER.
- COVER SLAB WIDTH (W_c) SHOULD BE TAKEN AS THE SUM OF DRAIN WIDTH AND $2x$ DRAIN WALL THICKNESS. [$W_c = W + 2xt$]
- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE STATED.
- 10 mm THICK EXPANSION JOINT SHALL BE INTRODUCED IN EVERY 5m INTERVAL.



DRAIN TYPE	W (mm)	H (mm)	t (mm)
DS (K) - A	1000	200	100
DS (K) - B	1000	300	100
DS (K) - C	1150	200	200



DRAIN TYPE	W (mm)	H (mm)	t (mm)
DS (L) - A	1000	600	100
DS (L) - B	1000	800	125
DS (L) - C	1000	1000	125
DS (L) - D	2000	2000	150

CONCRETE

- USE FOLLOWING CONCRETE GRADES FOR STRUCTURE

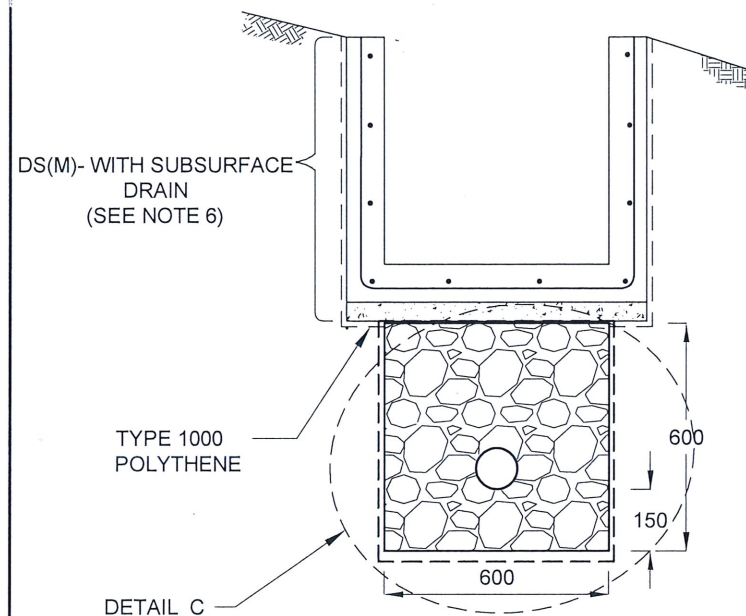
[a]	SCREED	- C15(20)
[b]	WALLS / BASE / ENERGY BREAKERS	- C25(20)

REINFORCEMENT

- HIGH YIELD REINFORCEMENT BARS DENOTED BY "T" SHALL CONFORM TO THE REQUIREMENTS OF TYPE 2 OF BS 4449 AND HAVE A CHARACTERISTIC TENSILE STRENGTH OF 460N/mm².
- BARS OF CUT LENGTH LARGER THAN THE SUPPLIED LENGTH TO BE LAPPED FOR A LENGTH OF 40 x BAR DIA. AND LAPPING SHOULD BE STAGGERED.
- ANCHORAGE LENGTH SHOULD BE 40X BAR DIA.
- REINFORCEMENT BARS SHALL BE BENT IN ACCORDANCE WITH STANDARD SPECIFICATIONS.
- COVER TO REINFORCEMENT

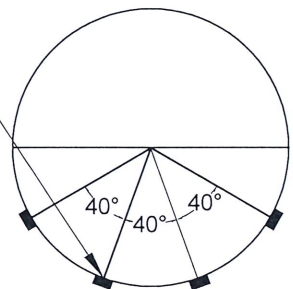
[a]	BURIED FACES AND DRAIN INVERTS	- 40 mm
[b]	ALL OTHER FACES	- 25 mm

EMPLOYER	DESIGNER	REV	DATE	REVISION DESCRIPTION	APPROVAL	PROJECT TITLE	TITLE	DESCRIPTION	NAME	SIGNATURE
DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA MINISTRY OF DEFENCE NATIONAL BUILDING RESEARCH INSTITUTE No. 99/1, JAWATTA ROAD, COLOMBO - 05	DESIGN UNIT NATIONAL BUILDING RESEARCH INSTITUTE No. 99/1, JAWATTA ROAD, COLOMBO - 05					REDUCTION OF LANDSLIDE VULNERABILITY BY MITIGATION MEASURES PROJECT PUSHPADANA COLLEGE KANDY	DETAILS OF DRAINS (SURFACE DRAIN - 2 OF 2)	DRAWN	K. M. D. NISHANTHI	
								DESIGNED	R.J.K.P.N. RANATHUNGA	
								CHECKED	I.A.N.D. IDIRIMANNA	
								RECOMMENDED	PROF. S. A. S. KULATHILAKA	
								APPROVED	DR. S.H.S. JAYAKODY	
							SCALE	N.T.S.	DATE	23.03.2026
							PROJECT / DRAWING No.	RLVMMP/WORKS/NCB/PH III/230/A2	REVISION	00

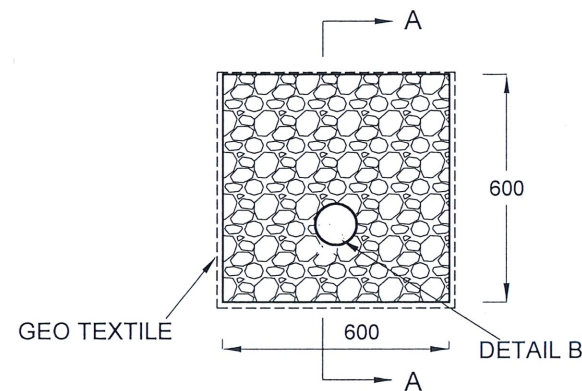


SUBSURFACE DRAIN
[DS (S) -A]

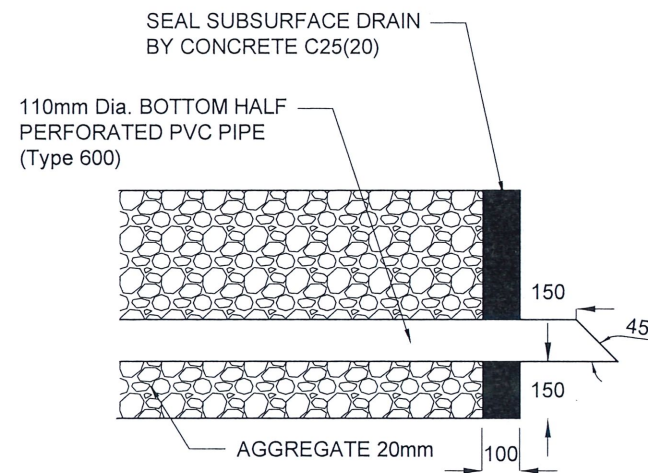
100mm x 5mm
Groove



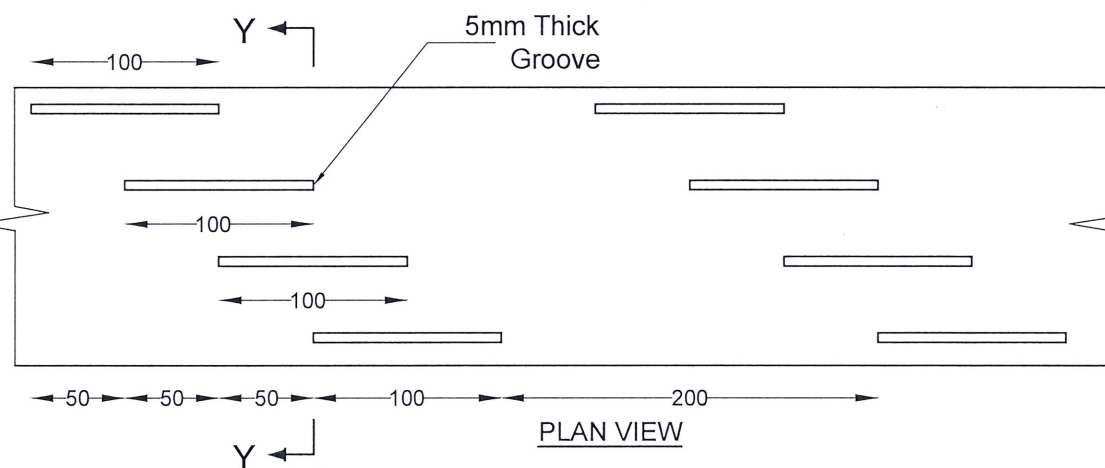
SECTION Y - Y



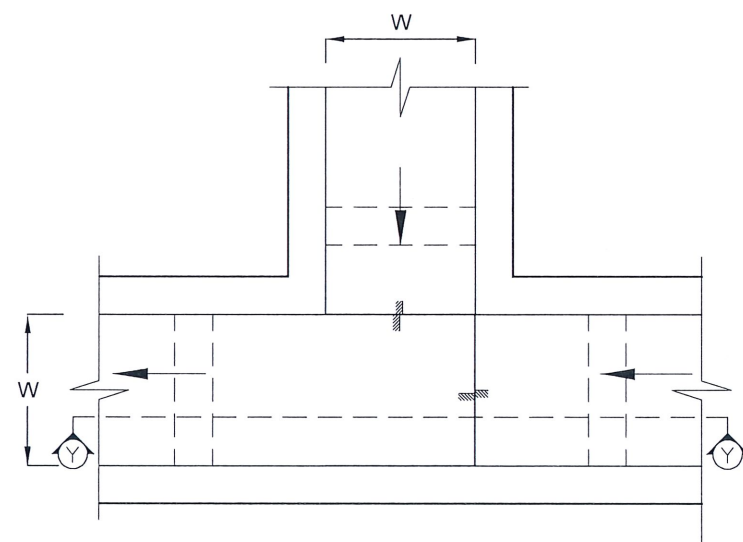
DETAIL C / DS (S) -A



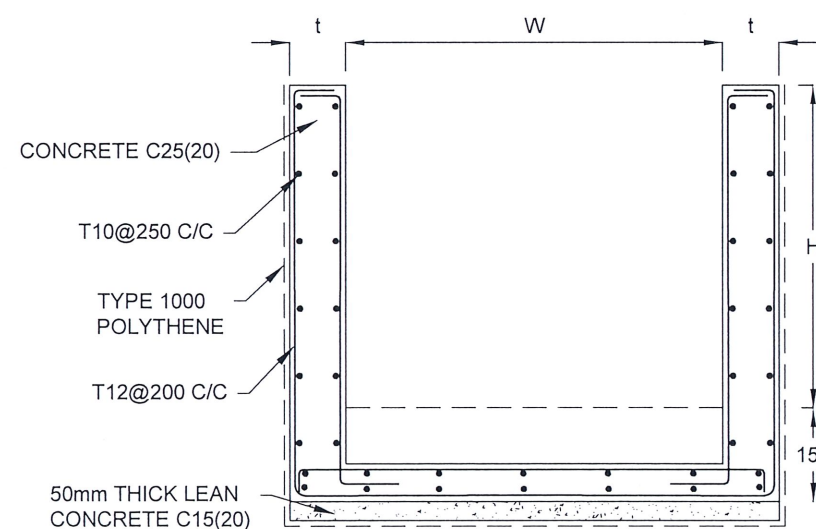
SECTION A-A
(OUTLET DETAIL SUBSURFACE DRAIN)



DETAIL - B (PERFORATED PIPE FOR SUB-SURFACE DRAINS)



PLAN VIEW OF CATCH PIT (CP)



SECTION Y-Y (CP- R)

NOTES

- W,H,t; SHALL BE THE SAME AS RESPECTIVE DRAIN SECTION.
- CP - R SHALL BE USED WHERE $H \geq 900\text{mm}$
- DEPTH OF EXCAVATION MAY VARY ACCORDING TO SITE CONDITIONS.
- DOWELS SHALL BE INSTALLED ACCORDING TO THE GROUND CONDITIONS AS INSTRUCTED BY THE ENGINEER.
- 10 mm THICK EXPANSION JOINT SHALL BE INTRODUCED IN EVERY 5m INTERVAL.
- DETAILS OF SURFACE DRAIN PORTION OF THE SUBSURFACE DRAINS SHALL BE AS PER DS(M), DS(B), DS(K) OR DS(C) SECTIONS ACCORDINGLY.
- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE STATED.

CONCRETE

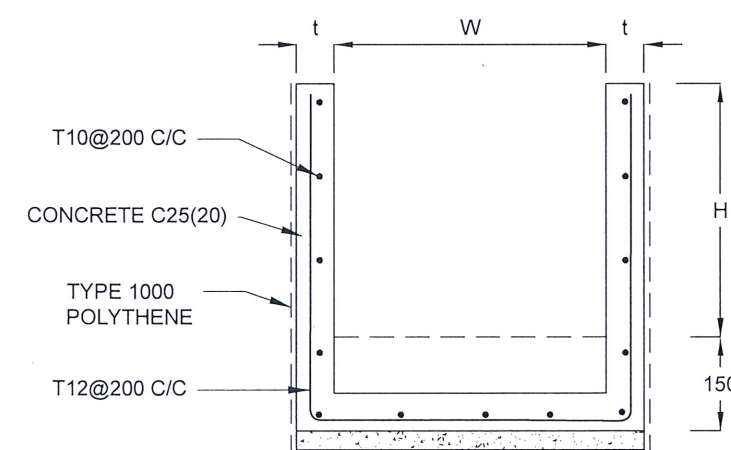
- USE FOLLOWING CONCRETE GRADES FOR STRUCTURE

[a]	SCREED	- C15(20)
[b]	WALLS / BASE / ENERGY BREAKERS	- C25(20)

REINFORCEMENT

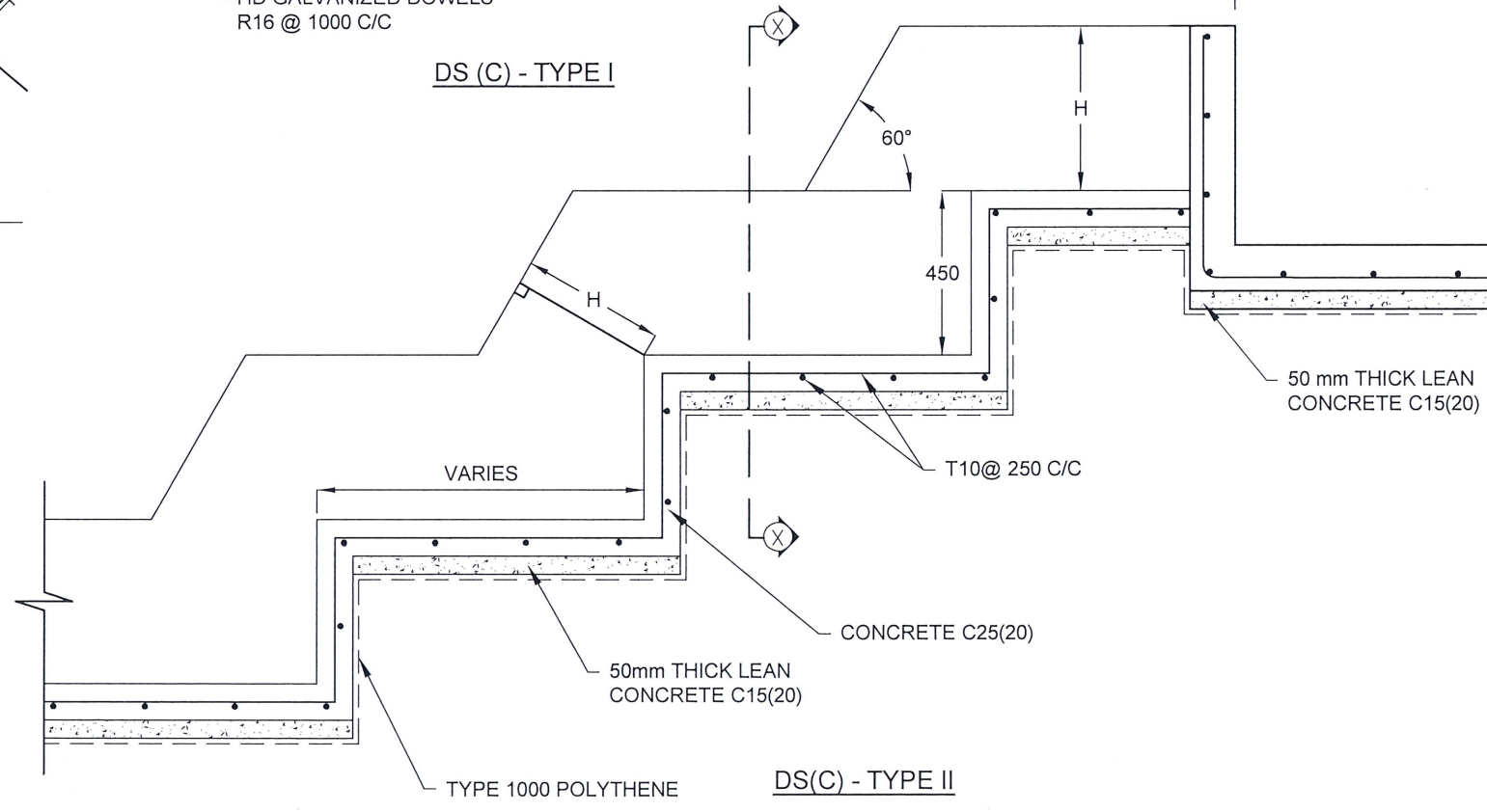
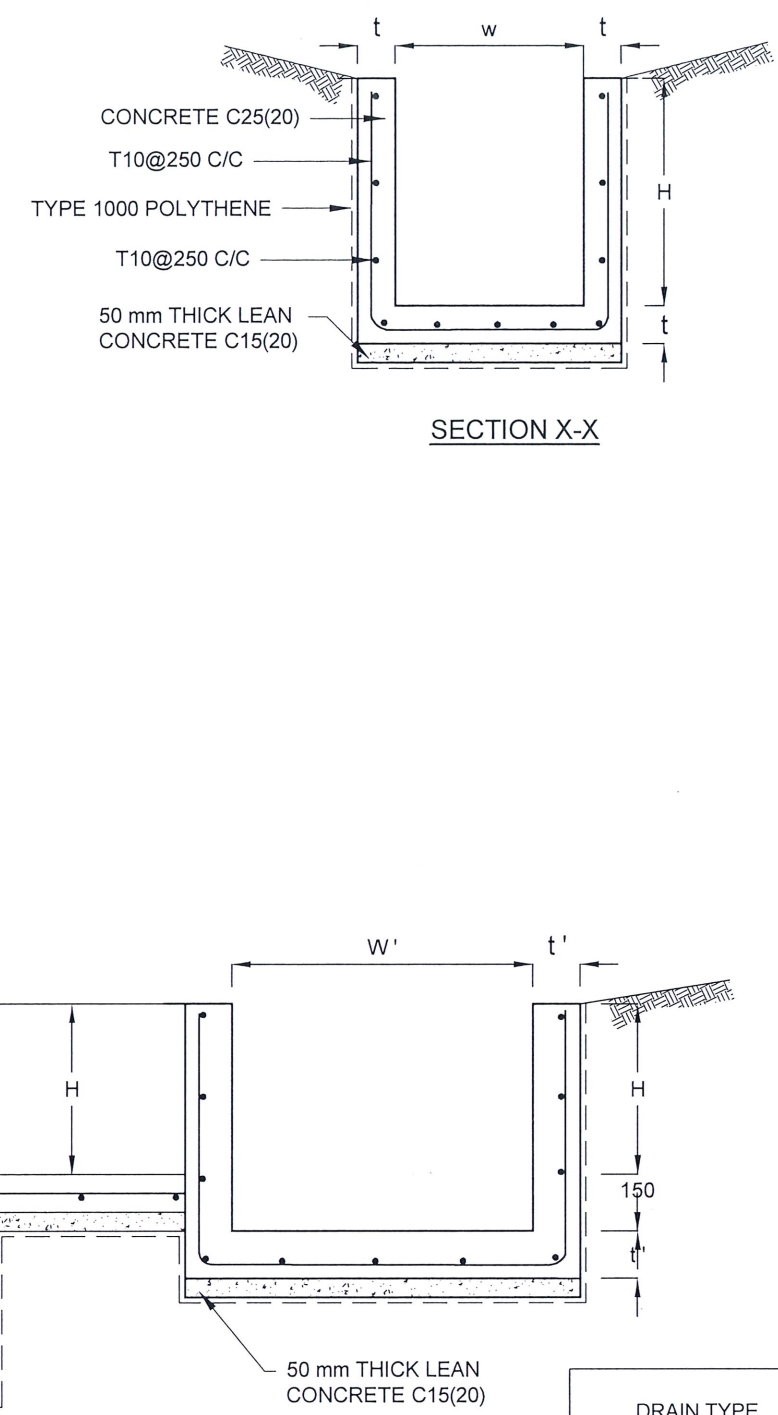
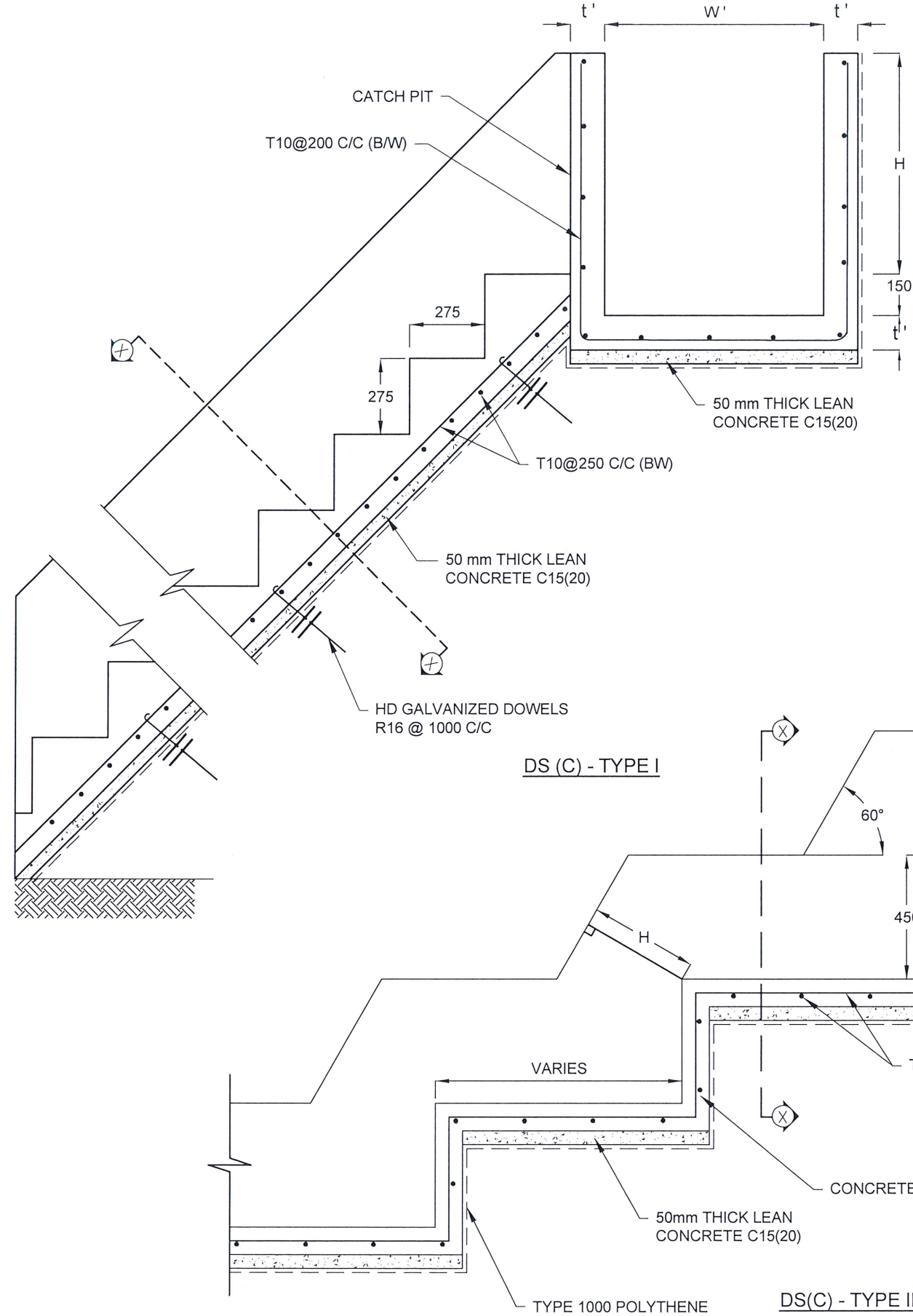
- HIGH YIELD REINFORCEMENT BARS DENOTED BY "T" SHALL CONFORM TO THE REQUIREMENTS OF TYPE 2 OF BS 4449 AND HAVE A CHARACTERISTIC TENSILE STRENGTH OF 460N/mm^2 .
- BARS OF CUT LENGTH LARGER THAN THE SUPPLIED LENGTH TO BE LAPPED FOR A LENGTH OF $40 \times \text{BAR DIA.}$ AND LAPPING SHOULD BE STAGGERED.
- ANCHORAGE LENGTH SHOULD BE $40 \times \text{BAR DIA.}$
- REINFORCEMENT BARS SHALL BE BENT IN ACCORDANCE WITH STANDARD SPECIFICATIONS.
- COVER TO REINFORCEMENT

[a]	BURIED FACES AND DRAIN INVERTS	- 40 mm
[b]	ALL OTHER FACES	- 25 mm



SECTION Y - Y

EMPLOYER		DESIGNER		REV		DATE		REVISION DESCRIPTION		APPROVAL		PROJECT TITLE		TITLE		DESCRIPTION		NAME		SIGNATURE	
 DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA MINISTRY OF DEFENCE NATIONAL BUILDING RESEARCH INSTITUTE No. 99/1, JAWATTA ROAD, COLOMBO - 05		 DESIGN UNIT NATIONAL BUILDING RESEARCH INSTITUTE No. 99/1, JAWATTA ROAD, COLOMBO - 05										REDUCTION OF LANDSLIDE VULNERABILITY BY MITIGATION MEASURES PROJECT PUSHPADANA COLLEGE KANDY		DETAILS OF DRAINS (SUBSURFACE DRAIN AND CATCHPIT)		DRAWN		K. M. D. NISHANTHI			
																DESIGNED		R.J.K.P.N. RANATHUNGA			
																CHECKED		I.A.N.D. IDIRIMANNA			
														SCALE		N.T.S.		DATE		23.03.2026	
														PROJECT / DRAWING No.				REVISION		00	
														R1 VMMP/WORKS/NCB/PH III/230/A3				APPROVED		DR. S.H.S. JAYAKODY	
																					



NOTES

- USE EITHER TYPE I OR TYPE II CASCADE DRAIN ACCORDING TO THE ACTUAL GROUND CONDITION AS INSTRUCTED BY THE ENGINEER.
- LENGTH OF THE STEPS OF CASCADE WILL BE VARIED ACCORDING TO THE SITE CONDITIONS.
- DEPTH OF EXCAVATION SHALL BE VARIED ACCORDING TO SITE CONDITIONS.
- DOWELS SHALL BE INSTALLED ACCORDING TO THE GROUND CONDITIONS AS INSTRUCTED BY THE ENGINEER.
- 10 mm THICK EXPANSION JOINT SHALL BE INTRODUCED IN EVERY 5m INTERVAL.
- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE STATED.

CONCRETE

- USE FOLLOWING CONCRETE GRADES FOR STRUCTURE
 - [a] SCREED - C15(20)
 - [b] WALLS / BASE / ENERGY BREAKERS - C25(20)

REINFORCEMENT

- HIGH YIELD REINFORCEMENT BARS DENOTED BY "T" SHALL CONFORM TO THE REQUIREMENTS OF TYPE 2 OF BS 4449 AND HAVE A CHARACTERISTIC TENSILE STRENGTH OF 460N/mm².
- BARS OF CUT LENGTH LARGER THAN THE SUPPLIED LENGTH TO BE LAPPED FOR A LENGTH OF 40 x BAR DIA. AND LAPPING SHOULD BE STAGGERED.
- ANCHORAGE LENGTH SHOULD BE 40X BAR DIA.
- REINFORCEMENT BARS SHALL BE BENT IN ACCORDANCE WITH STANDARD SPECIFICATIONS.
- COVER TO REINFORCEMENT
 - [a] BURIED FACES AND DRAIN INVERTS - 40 mm
 - [b] ALL OTHER FACES - 25 mm

DRAIN TYPE	W (mm)	H (mm)	t (mm)	W' (mm)	t' (mm)
DS (C) - A	450	450	100	600	100
DS (C) - B	450	600	100	750	100
DS (C) - C	600	600	100	800	100
DS (C) - D	750	750	100	800	100
DS (C) - E	800	800	125	1000	125
DS (C) - F	1000	750	125	1200	125

EMPLOYER

 DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA
 MINISTRY OF DEFENCE
 NATIONAL BUILDING RESEARCH INSTITUTE
 No. 99/1, JAWATTA ROAD,
 COLOMBO - 05

DESIGNER

 DESIGN UNIT
 NATIONAL BUILDING RESEARCH INSTITUTE
 No. 99/1, JAWATTA ROAD,
 COLOMBO - 05

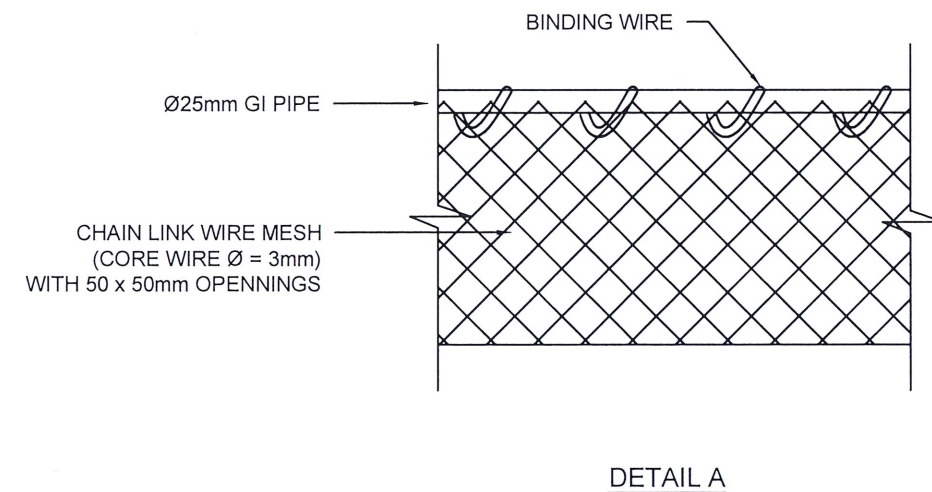
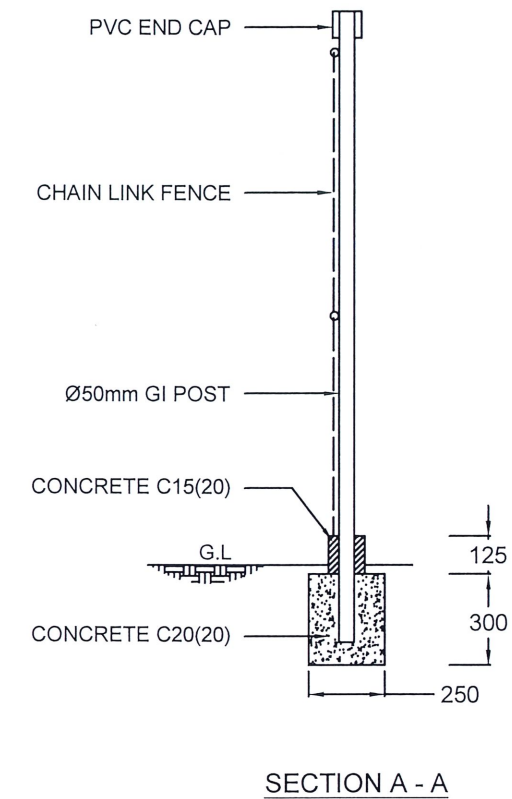
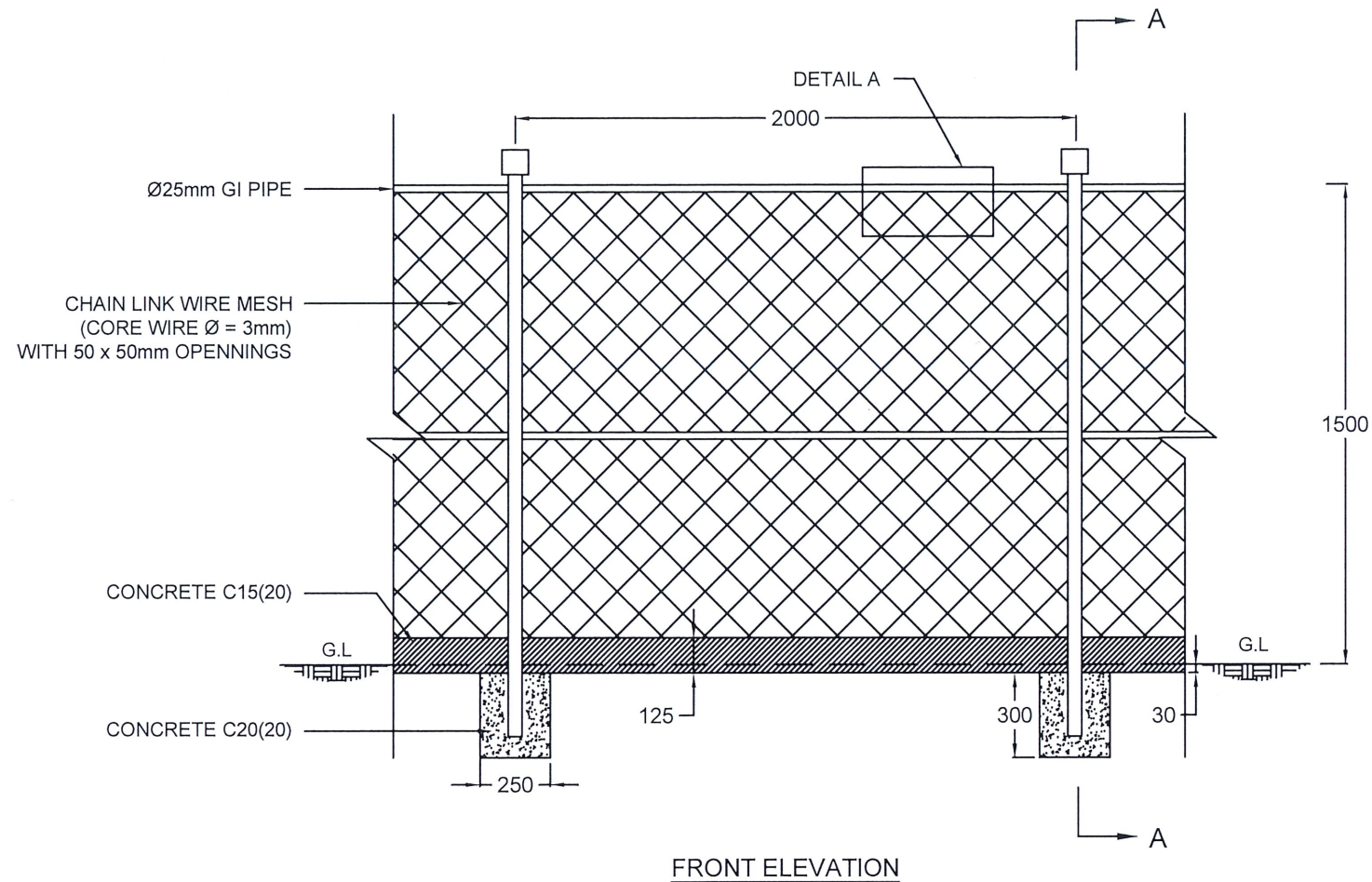
REV	DATE	REVISION DESCRIPTION	APPROVAL

PROJECT TITLE
 REDUCTION OF LANDSLIDE VULNERABILITY
 BY MITIGATION MEASURES PROJECT
 PUSHPADANA COLLEGE
 KANDY

TITLE
 DETAILS OF DRAINS
 (CASCADE DRAIN)

SCALE N.T.S. DATE 23.03.2026
 PROJECT / DRAWING No. RLVMM/WORKS/NCB/PH III/230/A4 REVISION 00

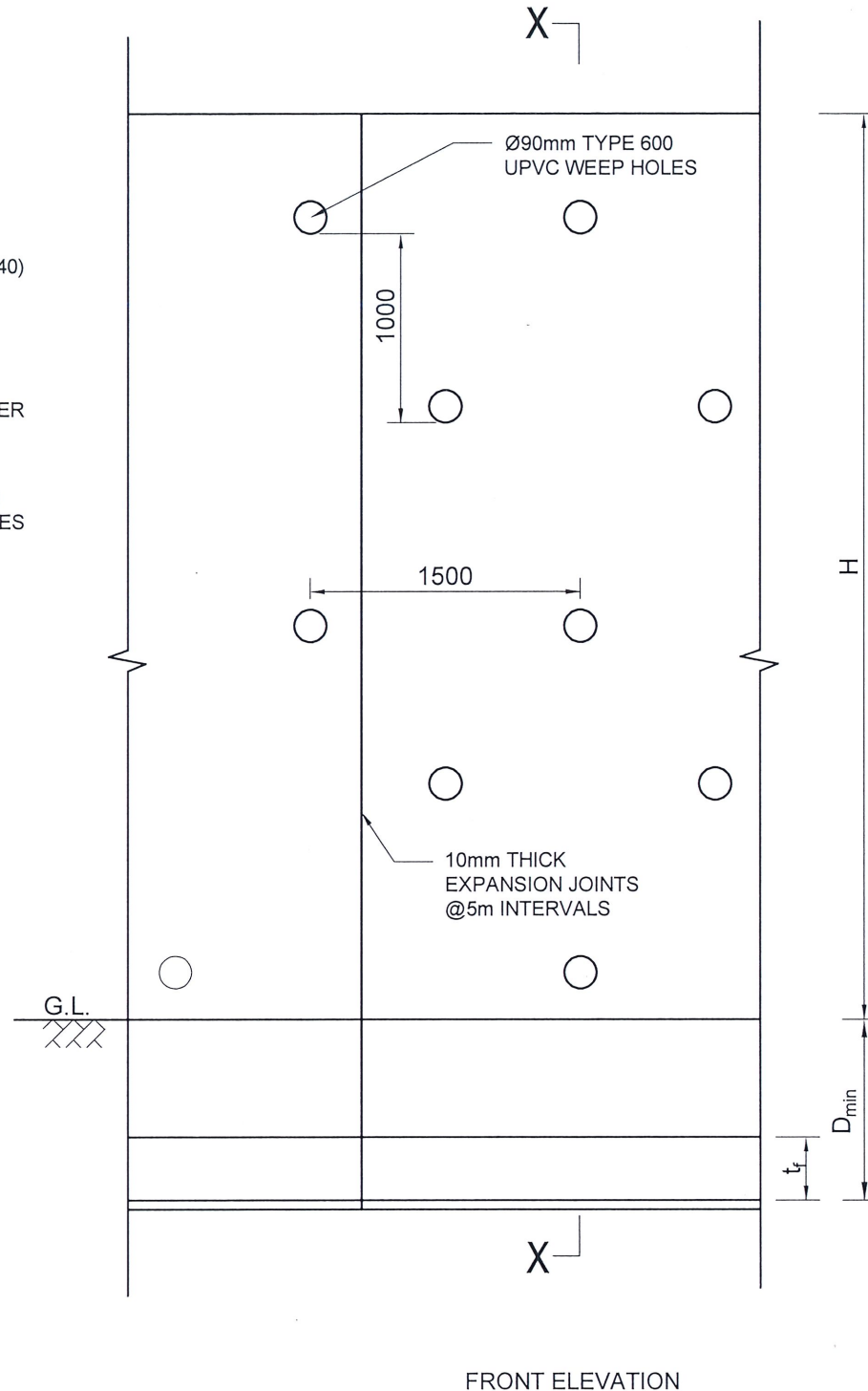
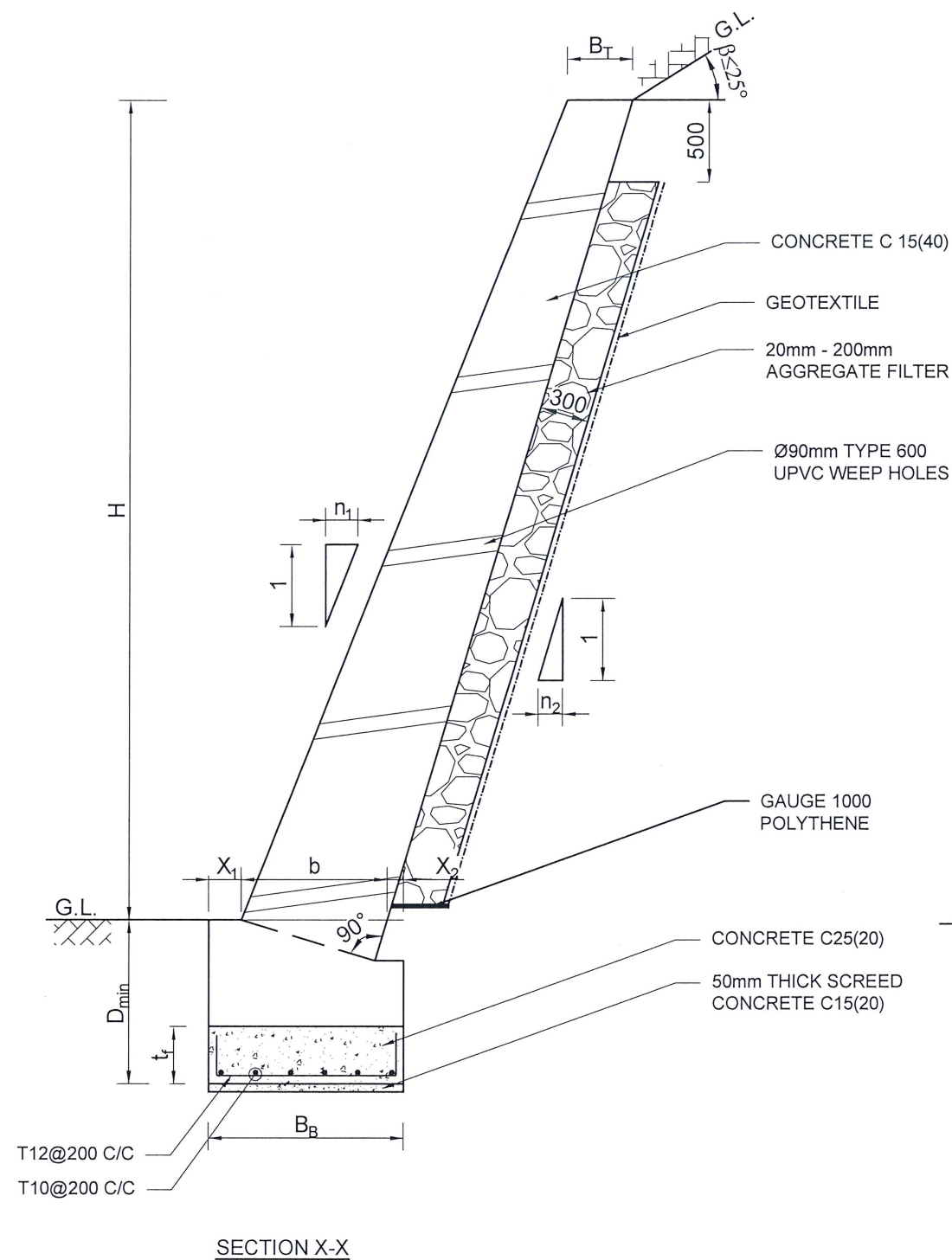
DESCRIPTION	NAME	SIGNATURE
DRAWN	K. M. D. NISHANTHI	
DESIGNED	R.J.K.P.N. RANATHUNGA	
CHECKED	I.A.N.D. IDIRIMANNA	
RECOMMENDED	PROF. S. A. S. KULATHILAKA	
APPROVED	DR. S.H.S. JAYAKODY	



NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS
2. GI POST SHOULD BE COVERED WITH GREEN COLOUR ANTI-CORROSIVE PAINT.
3. PRIOR APPROVAL IS REQUIRED FOR CHAIN LINK WIRE MESH, GI POST AND PVC CAP.

EMPLOYER	DESIGNER	REV	DATE	REVISION DESCRIPTION	APPROVAL	PROJECT TITLE	TITLE	DESCRIPTION	NAME	SIGNATURE
 DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA MINISTRY OF DEFENCE NATIONAL BUILDING RESEARCH INSTITUTE No. 99/1, JAWATTA ROAD, COLOMBO - 05	 DESIGN UNIT NATIONAL BUILDING RESEARCH INSTITUTE No. 99/1, JAWATTA ROAD, COLOMBO - 05					REDUCTION OF LANDSLIDE VULNERABILITY BY MITIGATION MEASURES PROJECT PUSHPADANA COLLEGE KANDY	DETAILS OF CHAIN LINK FENCE	DRAWN	K.M.D. NISHANTHI	
								DESIGNED	R.J.K.P.N. RANATHUNGA	
								CHECKED	I.A.N.D. IDIRIMANNA	
								RECOMMENDED	PROF. S.A.S. KULATHILAKA	
							SCALE: N.T.S. DATE: 23.03.2026 PROJECT / DRAWING No. RLVMP/WORKS/NCB/PH III/230/B	REVISION 00 APPROVED	DR. S.H.S. JAYAKODY	



DETAILS OF TYPICAL RESTING TYPE RETAINING WALL SECTIONS

Dim: Height	B _T (mm)	B _B (mm)	X ₁ (mm)	X ₂ (mm)	t _f (mm)	D _{min} (mm)	n ₁	n ₂
2m	300	800	200	100	200	600	0.30	0.20
3m	300	900	200	100	200	600	0.30	0.20
4m	400	1100	200	100	250	800	0.30	0.20
5m	400	1400	250	150	300	1000	0.50	0.38
6m	500	1700	250	150	300	1200	0.40	0.27
7m	500	2000	300	200	300	1400	0.40	0.27

NOTES:

- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
- RETAINING WALL TYPE SHALL BE DECIDED ACCORDING TO THE ACTUAL SITE CONDITION.
- SLOPE SHALL BE ABLE TO STAND ON ITS OWN UNTIL THE WALL IS MADE. NOT SUITABLE FOR COLLAPSING SOILS.
- WHERE THE EARTH CUT HEIGHT IS LESS THAN THAT OF THE APPLICABLE TYPICAL WALL, THE HEIGHT OF THE WALL SHOULD BE REDUCED TO FIT THE CUT HEIGHT, FROM ITS BOTTOM END WHILE MAINTAINING THE GIVEN TOP WIDTH.
- BACK SLOPE ANGLE, LEVEL AND FROM MAY VARY AS PER THE DESIGN AT EACH SITE.
- ALLOWABLE BEARING CAPACITY SHALL BE 150kN/m² FOR 2-4m HIGH WALLS AND 200kN/m² FOR 5-7m HIGH WALL.
- DOWELS SHALL BE INSTALLED IF HARD ROCK IS ENCOUNTERED AS PER THE ENGINEERS INSTRUCTIONS.
- 10mm THICK EXPANSION JOINTS SHOULD BE PROVIDED AT EVERY 5m INTERVALS WITH APPROVED MATERIAL.
- WEEP HOLES TO BE PROVIDED AT 1.5m C/C (HORIZONTALLY) STAGGERED USING 90mm DIA UPVC PIPES (TYPE 600) WITH A MINIMUM SLOPE OF 1: 20 TO ALLOW PROPER DRAINAGE.

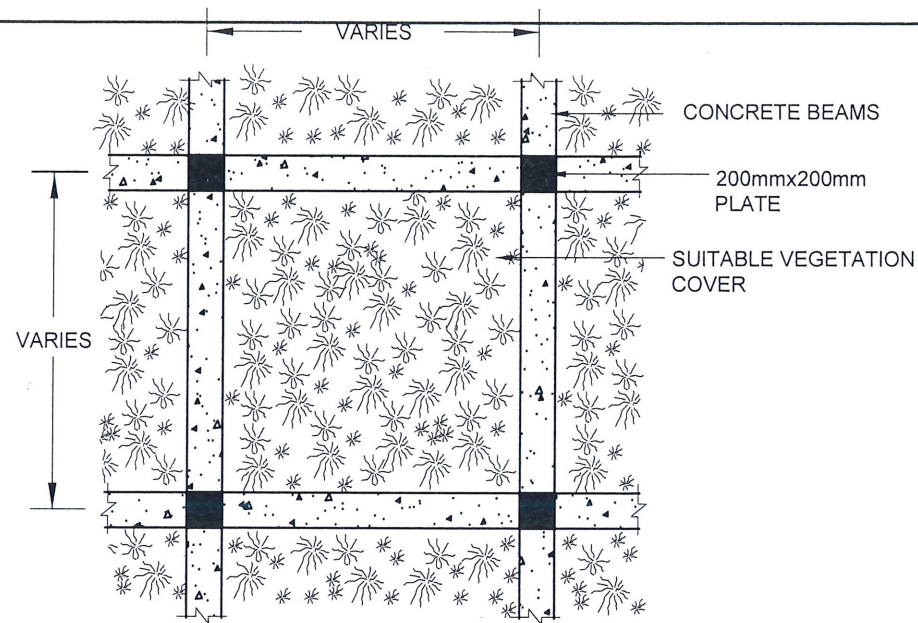
CONCRETE

- THE FOLLOWING CONCRETE GRADES SHOULD BE USED FOR STRUCTURES
 - SCREED CONCRETE - C. 15(20)
 - WALL - C. 15(40)
 - BASE - C. 30(20)

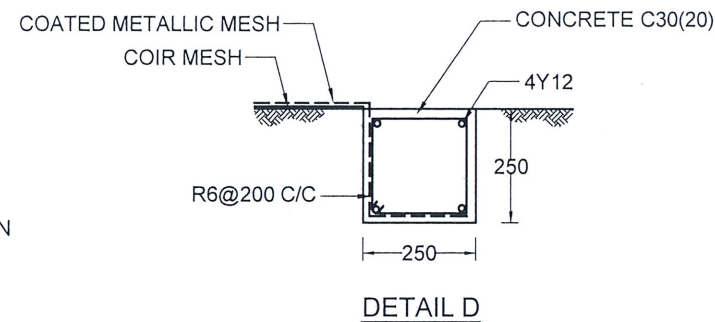
REINFORCEMENT

- HIGH YIELD REINFORCEMENT BARS DENOTED BY "T" SHALL CONFORM TO THE REQUIREMENTS OF TYPE 2 OF BS 4449 AND HAVE A CHARACTERISTIC TENSILE STRENGTH OF 460N/mm²
- CLEAR CONCRETE COVER FOR ALL REINFORCEMENT TO BE 50 mm.
- REINFORCEMENT BARS SHALL BE BENT IN ACCORDANCE WITH STANDARD SPECIFICATIONS.
- BARS OF CUT LENGTH LARGER THAN THE SUPPLIED LENGTH TO BE LAPPED FOR A LENGTH OF 40x BAR DIA. AND LAPPING SHOULD BE STAGGERED.
- ANCHORAGE LENGTH SHOULD BE 40 x BAR DIA.

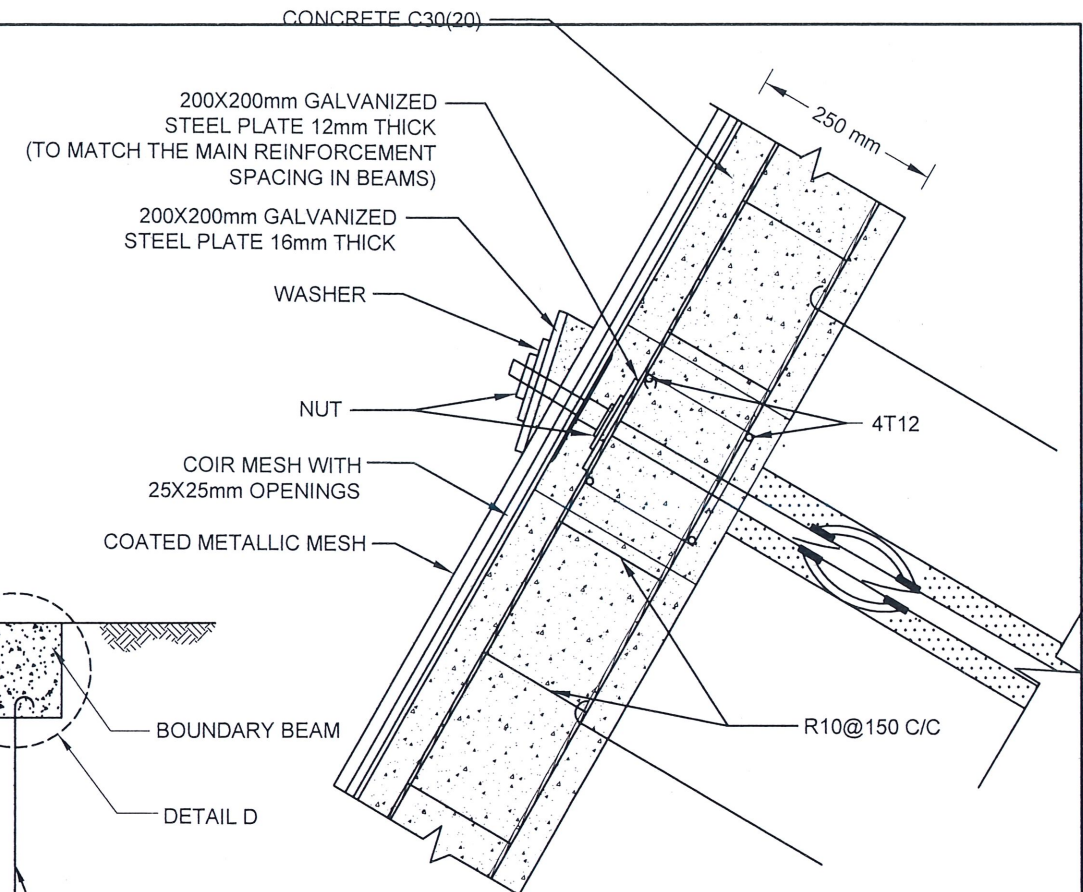
EMPLOYER  DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA MINISTRY OF DEFENCE NATIONAL BUILDING RESEARCH INSTITUTE No. 99/1, JAWATTA ROAD, COLOMBO - 05	DESIGNER  DESIGN UNIT NATIONAL BUILDING RESEARCH INSTITUTE No. 99/1, JAWATTA ROAD, COLOMBO - 05	REV DATE REVISION DESCRIPTION APPROVAL	PROJECT TITLE REDUCTION OF LANDSLIDE VULNERABILITY BY MITIGATION MEASURES PROJECT PUSHPADANA COLLEGE KANDY	TITLE DETAILS OF CONCRETE RESTING TYPE RETAINING WALLS	DESCRIPTION	NAME	SIGNATURE
					DRAWN	K.M.D. NISHANTHI	
					DESIGNED	R.J.K.P.N. RANATHUNGA	
					CHECKED	I.A.N.D. IDIRIMANNA	
					RECOMMENDED	PROF. S.A.S. KULATHILAKA	
					APPROVED	DR. S.H.S. JAYAKODY	



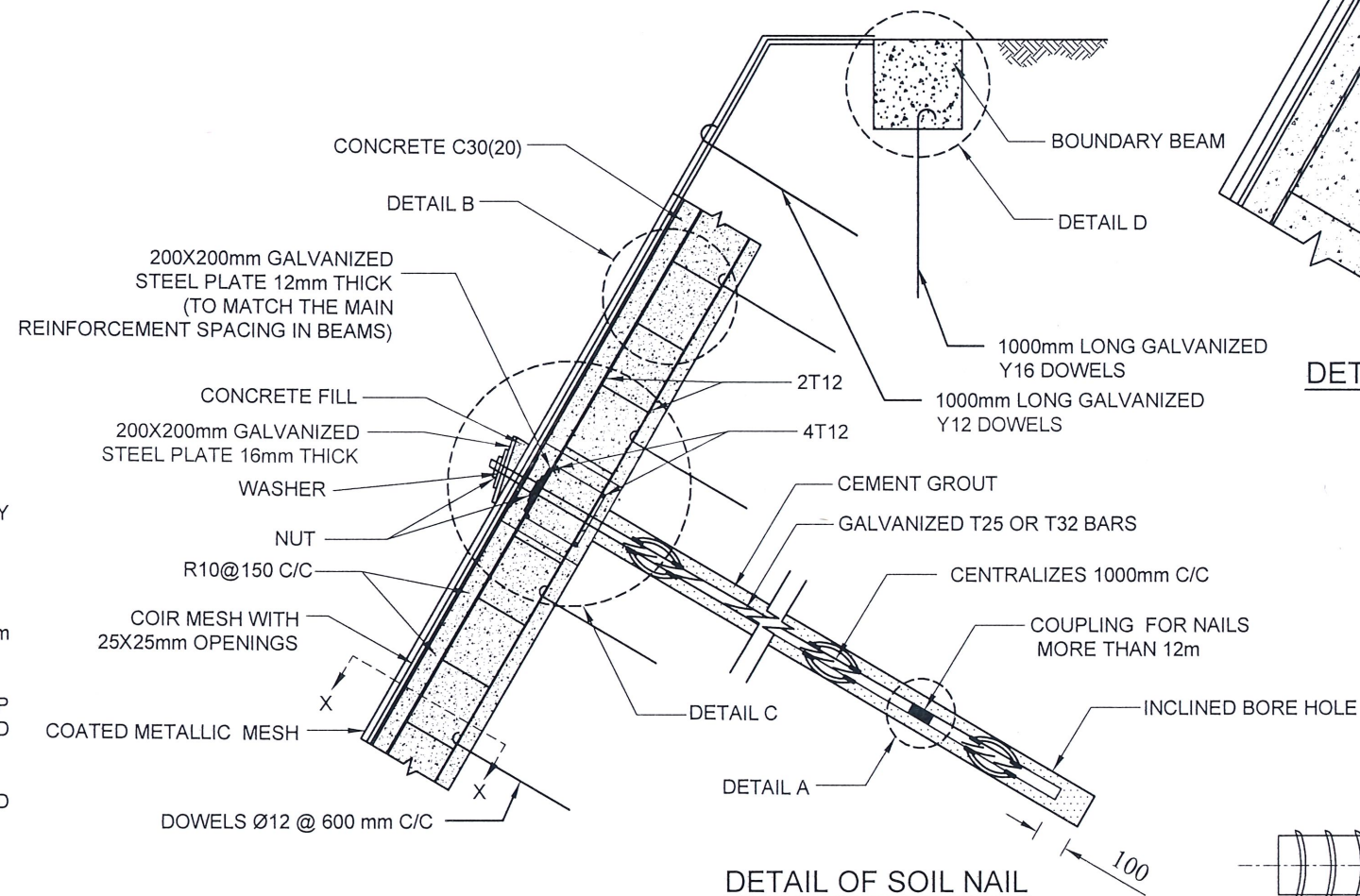
DETAIL - B



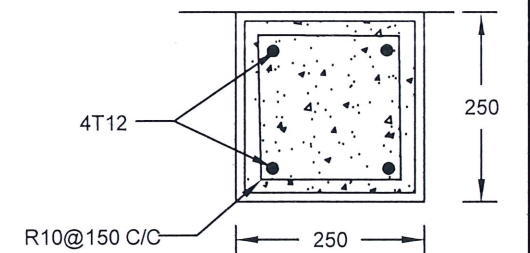
DETAIL D



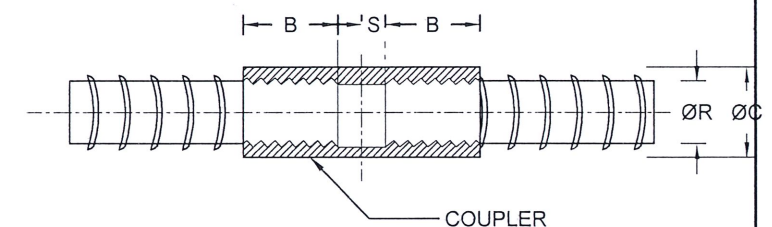
DETAIL C



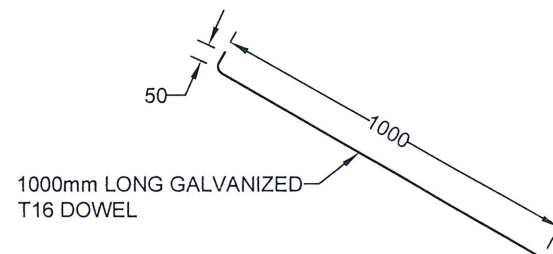
DETAIL OF SOIL NAIL



SECTION X-X



COUPLER DETAILS - A (NAIL LENGTH >12m)



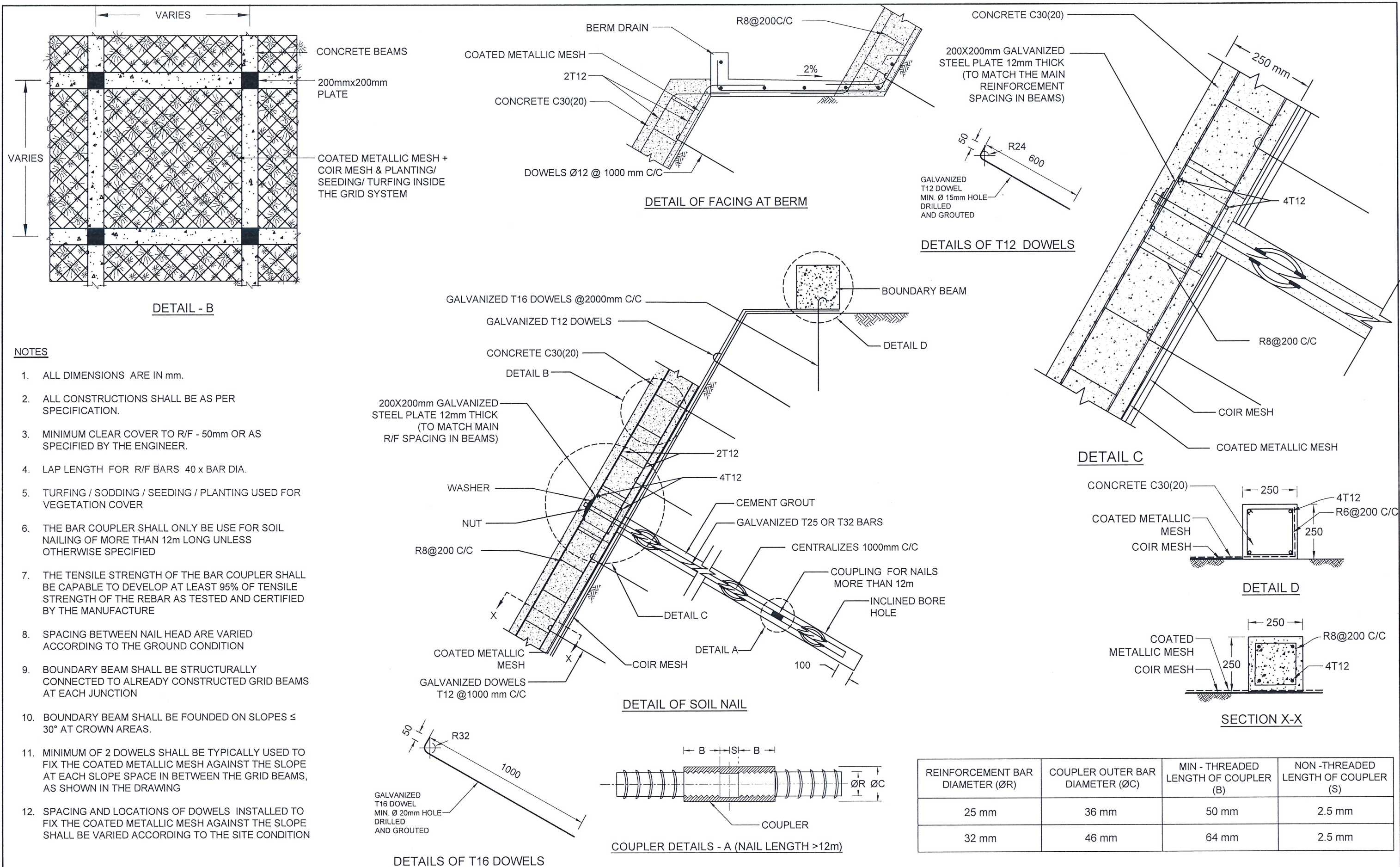
DETAILS OF DOWELS

NOTES

- ALL DIMENSIONS ARE IN MILLIMETERS.
- STRUCTURAL CONC. AS PER SPECIFICATION.
- MINIMUM CLEAR COVER TO R/F - 50mm OR AS SPECIFIED BY THE ENGINEER.
- STRUCTURAL MEMBERS AS PER SPECIFICATION.
- LAP LENGTH FOR R/F BARS 40 x BAR DIA.
- TWO SETS OF 4T12 BARS PLACED PERPENDICULAR TO EACH OTHERS BY CONNECTING NAIL HEADS VERTICALLY AND HORIZONTALLY ON SLOPE FACE.
- TURFING / SODDING / SEEDING / PLANTING USED FOR VEGETATION COVER.
- THE BAR COUPLER SHALL ONLY BE USE FOR SOIL NAILING OF MORE THAN 12m LONG.
- THE TENSILE STRENGTH OF THE BAR COUPLER SHALL BE CAPABLE TO DEVELOP AT LEAST 95% OF TENSILE STRENGTH OF THE REBAR AS TESTED AND CERTIFIED BY THE MANUFACTURE.
- SPACING BETWEEN NAIL HEAD ARE VARIED ACCORDING TO THE GROUND CONDITION.
- DOWEL SPACING FOR BOUNDARY BEAM SHALL BE 2m.
- BOUNDARY BEAM SHALL BE STRUCTURALLY CONNECTED TO ALREADY CONSTRUCTED GRID BEAMS AT EACH JUNCTION.
- MINIMUM OF 2 DOWELS SHALL BE TYPICALLY USED TO FIX THE HIGH TENSILE WIRE MESH AGAINST THE SLOPE AT EACH SLOPE SPACE IN BETWEEN THE GRID BEAMS, AS SHOWN IN THE DRAWING.
- SPACING AND LOCATIONS OF DOWELS INSTALLED TO FIX THE HIGH TENSILE WIRE MESH AGAINST THE SLOPE SHALL BE VARIED ACCORDING TO THE SITE CONDITION.

REINFORCEMENT BAR DIAMETER (ØR)	COUPLER OUTER BAR DIAMETER (ØC)	MIN - THREADED LENGTH OF COUPLER (B)	NON - THREADED LENGTH OF COUPLER (S)
25 mm	36 mm	50 mm	2.5 mm
32 mm	46 mm	64 mm	2.5 mm

EMPLOYER  DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA MINISTRY OF DEFENCE NATIONAL BUILDING RESEARCH INSTITUTE NO. 99/1, JAWATTA ROAD COLOMBO - 05 		DESIGNER  DESIGN UNIT NATIONAL BUILDING RESEARCH INSTITUTE No. 99/1, JAWATTA ROAD, COLOMBO - 05	<table><tr><th>REV</th><th>DATE</th><th>REVISION DESCRIPTION</th><th>APPROVAL</th></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr></table>	REV	DATE	REVISION DESCRIPTION	APPROVAL																																					PROJECT TITLE REDUCTION OF LANDSLIDE VULNERABILITY BY MITIGATION MEASURES PROJECT PUSHPADANA COLLEGE KANDY	<table><tr><th colspan="4">TITLE</th></tr><tr><td colspan="4">DETAILS OF SOIL NAILING WITH EMBEDDED GRID BEAM</td></tr><tr><td>SCALE</td><td>N.T.S.</td><td>DATE</td><td>25.05.2026</td></tr><tr><td colspan="2">PROJECT / DRAWING No. RLVMMP/WORKS/NCB/PH III/230/D1</td><td>REVISION 00</td><td> </td></tr></table>	TITLE				DETAILS OF SOIL NAILING WITH EMBEDDED GRID BEAM				SCALE	N.T.S.	DATE	25.05.2026	PROJECT / DRAWING No. RLVMMP/WORKS/NCB/PH III/230/D1		REVISION 00		<table><tr><th>DESCRIPTION</th><th>NAME</th><th>SIGNATURE</th></tr><tr><td>DRAWN</td><td>K.M.D. NISHANTHI</td><td></td></tr><tr><td>DESIGNED</td><td>R.J.K.P.N. RANATHUNGA</td><td></td></tr><tr><td>CHECKED</td><td>I.A.N.D. IDRIMANNA</td><td></td></tr><tr><td>RECOMMENDED</td><td>PROF. S.A.S. KULATHILAKA</td><td></td></tr><tr><td>APPROVED</td><td>ENG.(DR.) SANCHITHA JAYAKODY</td><td></td></tr></table>	DESCRIPTION	NAME	SIGNATURE	DRAWN	K.M.D. NISHANTHI		DESIGNED	R.J.K.P.N. RANATHUNGA		CHECKED	I.A.N.D. IDRIMANNA		RECOMMENDED	PROF. S.A.S. KULATHILAKA		APPROVED	ENG.(DR.) SANCHITHA JAYAKODY	
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- ALL DIMENSIONS ARE IN mm.
- ALL CONSTRUCTIONS SHALL BE AS PER SPECIFICATION.
- MINIMUM CLEAR COVER TO R/F - 50mm OR AS SPECIFIED BY THE ENGINEER.
- LAP LENGTH FOR R/F BARS 40 x BAR DIA.
- TURFING / SODDING / SEEDING / PLANTING USED FOR VEGETATION COVER
- THE BAR COUPLER SHALL ONLY BE USE FOR SOIL NAILING OF MORE THAN 12m LONG UNLESS OTHERWISE SPECIFIED
- THE TENSILE STRENGTH OF THE BAR COUPLER SHALL BE CAPABLE TO DEVELOP AT LEAST 95% OF TENSILE STRENGTH OF THE REBAR AS TESTED AND CERTIFIED BY THE MANUFACTURE
- SPACING BETWEEN NAIL HEAD ARE VARIED ACCORDING TO THE GROUND CONDITION
- BOUNDARY BEAM SHALL BE STRUCTURALLY CONNECTED TO ALREADY CONSTRUCTED GRID BEAMS AT EACH JUNCTION
- BOUNDARY BEAM SHALL BE FOUNDED ON SLOPES $\leq 30^\circ$ AT CROWN AREAS.
- MINIMUM OF 2 DOWELS SHALL BE TYPICALLY USED TO FIX THE COATED METALLIC MESH AGAINST THE SLOPE AT EACH SLOPE SPACE IN BETWEEN THE GRID BEAMS, AS SHOWN IN THE DRAWING
- SPACING AND LOCATIONS OF DOWELS INSTALLED TO FIX THE COATED METALLIC MESH AGAINST THE SLOPE SHALL BE VARIED ACCORDING TO THE SITE CONDITION

EMPLOYER

 DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA
MINISTRY OF DEFENCE
NATIONAL BUILDING RESEARCH INSTITUTE
No. 99/1, JAWATTA ROAD,
COLOMBO - 05

DESIGNER

 DESIGN UNIT
NATIONAL BUILDING RESEARCH INSTITUTE
No. 99/1, JAWATTA ROAD,
COLOMBO - 05

REV	DATE	REVISION DESCRIPTION	APPROVAL

PROJECT TITLE

REDUCTION OF LAND SLIDE VULNERABILITY
BY MITIGATION MEASURES PROJECT
PUSHPADANA COLLEGE
KANDY

TITLE

DETAILS OF SOIL NAILING WITH
NON EMBEDDED GRID BEAM

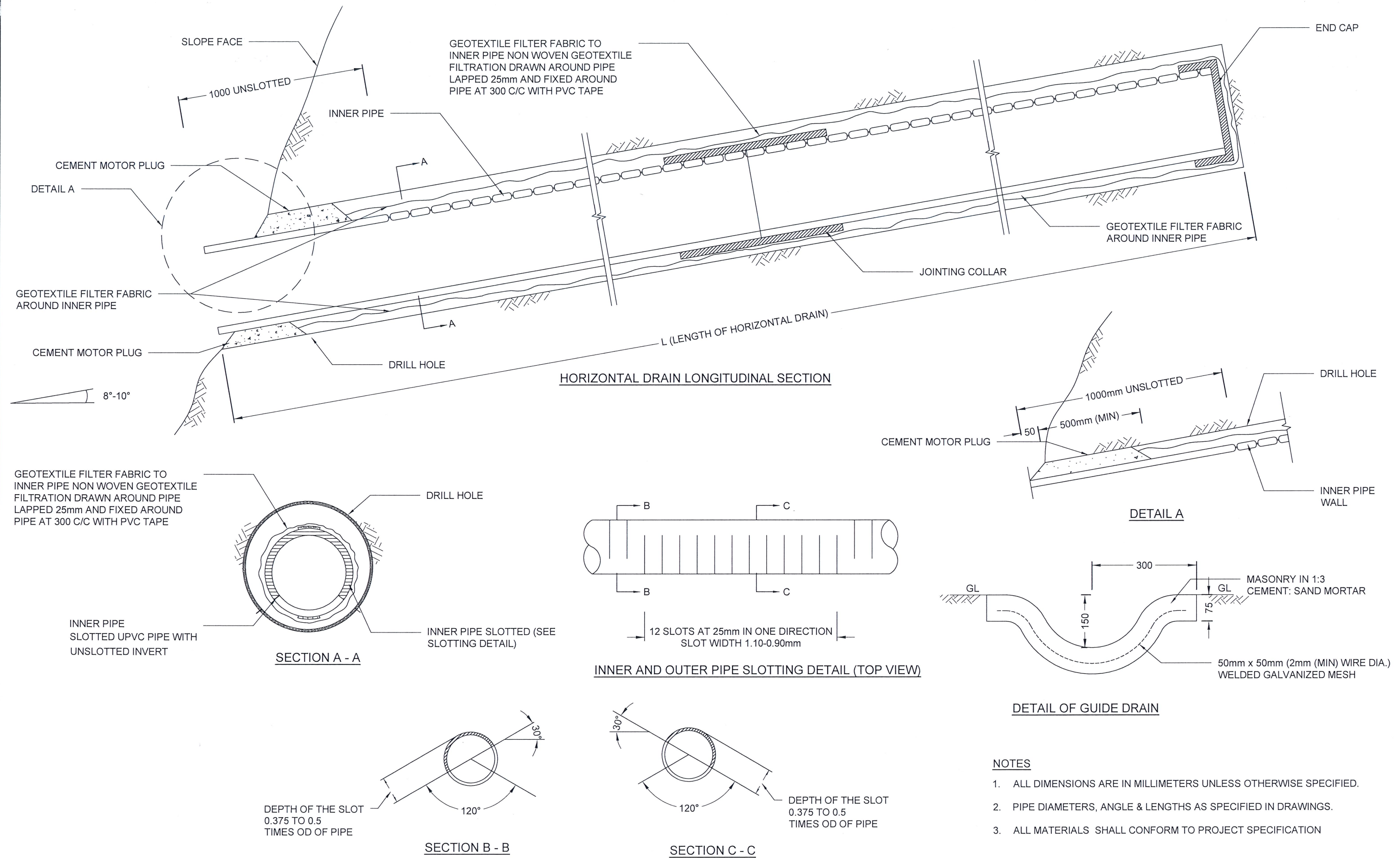
SCALE N.T.S.

DATE 27.04.2026

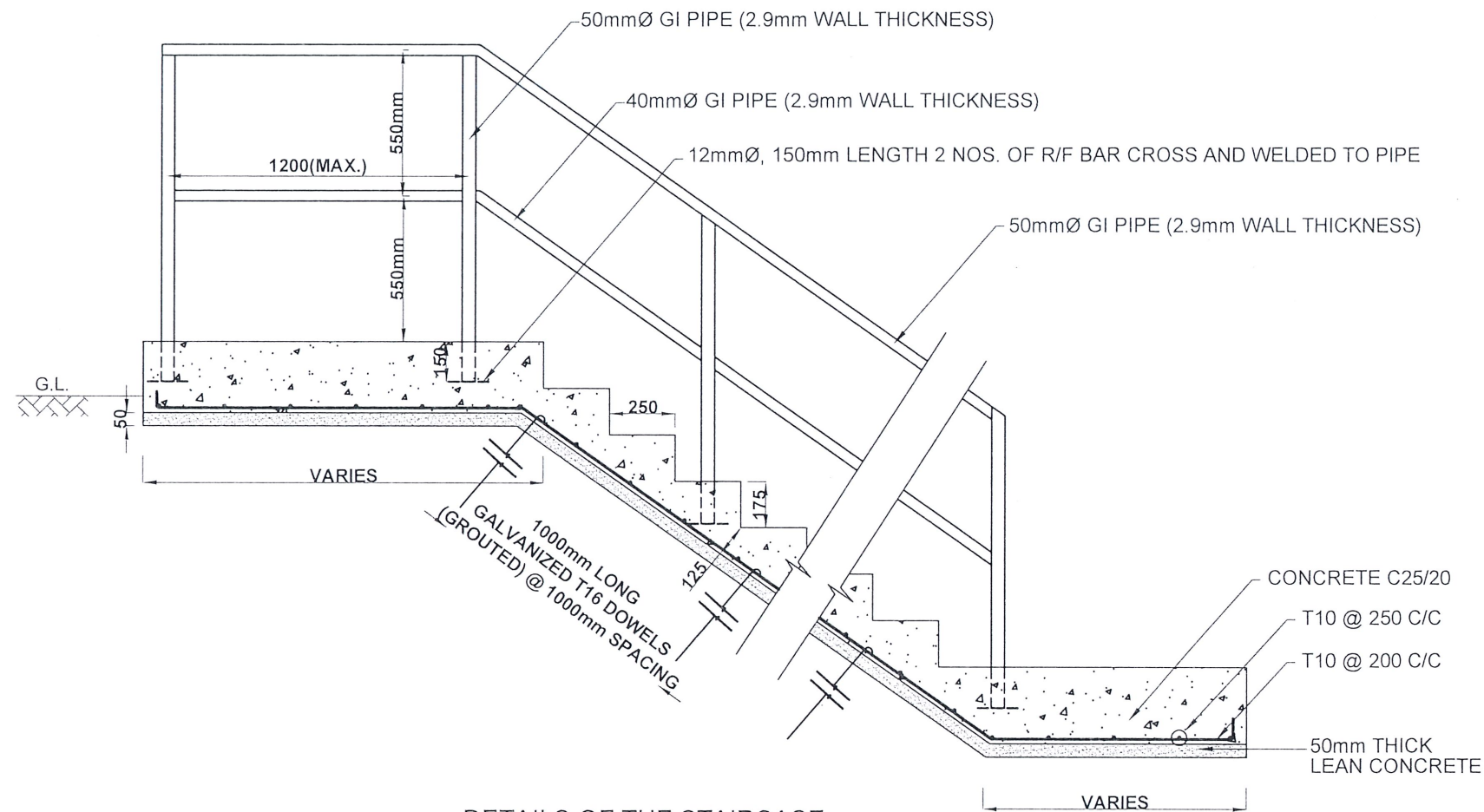
PROJECT / DRAWING No.
RLVMMP/WORKS/NCB/PH III/230/D2

REVISION
00

DESCRIPTION	NAME	SIGNATURE
DRAWN	K.M.D. NISHANTHI	
DESIGNED	R.J.K.P.N. RANATHUNGA	
CHECKED	I.A.N.D. IDIRIMANNA	
RECOMMENDED	PROF. S.A.S. KULATHILAKA	
APPROVED	ENG.(DR.) SANCHITHA JAYAKODY	



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											CHECKED	I.A.N.D. IDIRIMANNA		
							SCALE	N.T.S.	DATE	23.03.2026	RECOMMENDED	PROF. S.A.S. KULATHILAKA		
							PROJECT / DRAWING No. RLVMMP/WORKS/NCB/PH II/230/E				REVISION 00	APPROVED	DR. S.H.S. JAYAKODY	



DETAILS OF THE STAIRCASE

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. MINIMUM CLEAR COVER TO R/F TO BE NOT LESS THAN 25 mm.
3. COMPRESSION LAP LENGTH TO BE 40XBAR DIAMETER.
4. TENSION LAP LENGTH TO BE 56XBAR DIAMETER.
5. ANCHORAGE LENGTH SHOULD BE 40X BAR DIAMETER.
6. TREAD AND RISER OF THE STEPS WILL BE VARIED ACCORDING TO THE ACTUAL SITE CONDITIONS.
7. DEPTH OF EXCAVATION SHALL BE VARIED ACCORDING TO THE SITE CONDITIONS.
8. DOWELS SHALL BE INSTALLED AS PER THE INSTRUCTION OF THE ENGINEER

 DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA MINISTRY OF DEFENCE NATIONAL BUILDING RESEARCH INSTITUTE No. 99/1, JAWATTA ROAD, COLOMBO - 05 		 DESIGN UNIT NATIONAL BUILDING RESEARCH INSTITUTE No. 99/1, JAWATTA ROAD, COLOMBO - 05	<table><thead><tr><th>REV</th><th>DATE</th><th>REVISION DESCRIPTION</th><th>APPROVAL</th></tr></thead><tbody><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr></tbody></table>	REV	DATE	REVISION DESCRIPTION	APPROVAL																													REDUCTION OF LANDSLIDE VULNERABILITY BY MITIGATION MEASURES PROJECT PUSHPADANA COLLEGE KANDY	<table><thead><tr><th colspan="4">TITLE</th><th>DESCRIPTION</th><th>NAME</th><th>SIGNATURE</th></tr></thead><tbody><tr><td colspan="4" rowspan="4">DETAILS OF STAIRCASE</td><td>DRAWN</td><td>K. M. D. NISHANTHI</td><td></td></tr><tr><td>DESIGNED</td><td>R. J. K. P. N. RANATHUNGA</td><td></td></tr><tr><td>CHECKED</td><td>I. A. N. D. IDIRIMANNA</td><td></td></tr><tr><td>RECOMMENDED</td><td>PROF. S. A. S. KULATHILAKA</td><td></td></tr><tr><td>SCALE</td><td>N.T.S.</td><td>DATE</td><td>23.03.2026</td><td rowspan="2">REVISION 00</td><td rowspan="2">APPROVED</td><td rowspan="2">DR. S. H. S. JAYAKODY</td><td rowspan="2"></td></tr><tr><td colspan="4">PROJECT / DRAWING No. RLVMP/WORKS/NCB/PH III/230/F</td></tr></tbody></table>	TITLE				DESCRIPTION	NAME	SIGNATURE	DETAILS OF STAIRCASE				DRAWN	K. M. D. NISHANTHI		DESIGNED	R. J. K. P. N. RANATHUNGA		CHECKED	I. A. N. D. IDIRIMANNA		RECOMMENDED	PROF. S. A. S. KULATHILAKA		SCALE	N.T.S.	DATE	23.03.2026	REVISION 00	APPROVED	DR. S. H. S. JAYAKODY		PROJECT / DRAWING No. RLVMP/WORKS/NCB/PH III/230/F			
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