



CLIMATE PROOFED ARID AND SEMI ARID RURAL ROADS,

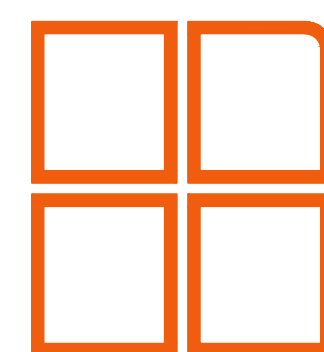
**FINAL DETAILED DESIGN OF GATHIGA - MATERI ROAD
BATCH 2**

MARCH 2025

EMPLOYER

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KERRA
P.O BOX 48151-00100,
NAIROBI, Kenya**

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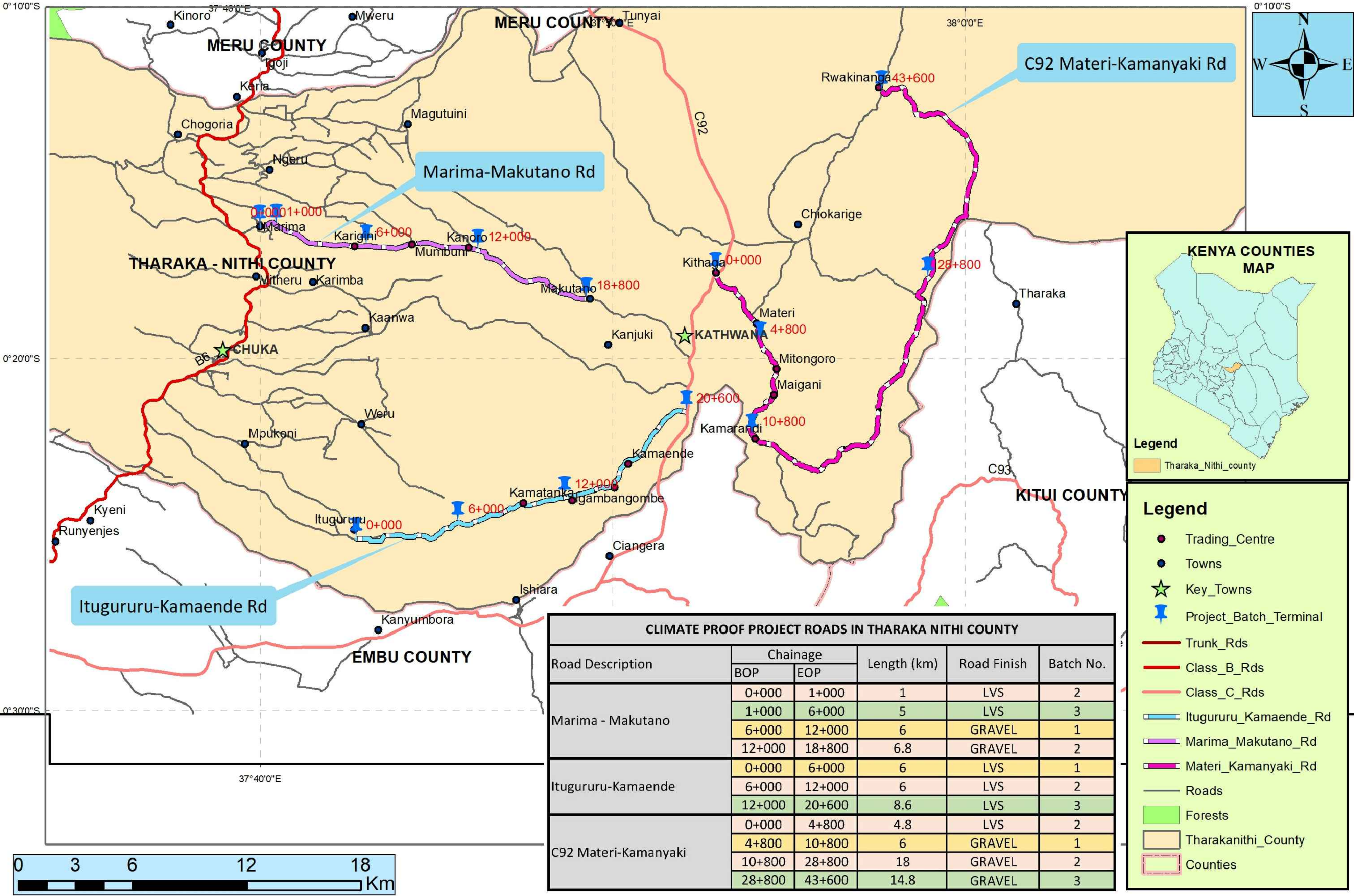
ENGINEER

**DIRECTOR
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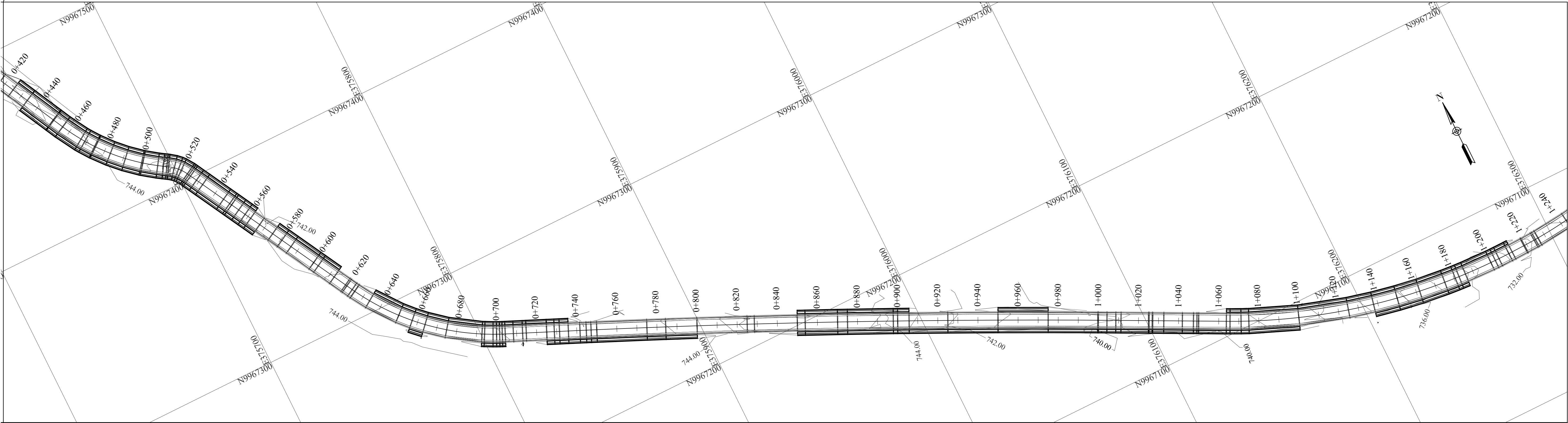
	GATHIGA MATERI ROAD DRAWINGS
	COVER PAGE
	DRAWING LIST
	GENERAL DRAWINGS
CE/1045/GD/GM/01	LOCATION MAP
	PLAN AND PROFILE
CE1045/PP/GM/01	PLAN AND PROFILE - 0+000 - 0+000
CE1045/PP/GM/02	PLAN AND PROFILE - 0+600 -1+200
CE1045/PP/GM/03	PLAN AND PROFILE - 1+200 - 1+800
CE1045/PP/GM/04	PLAN AND PROFILE - 1+800 - 2+400
CE1045/PP/GM/05	PLAN AND PROFILE - 2+400 - 3+000
CE1045/PP/GM/06	PLAN AND PROFILE - 3+000 - 3+600
CE1045/PP/GM/07	PLAN AND PROFILE - 3+600 - 4+200
CE1045/PP/GM/08	PLAN AND PROFILE - 4+200 - 4+875.44
	TYPICAL CROSS-SECTION
CE1045/TD/GM/01	TYPICAL CROSS-SECTION FOR GATHAGA - MATIRI ROAD OPTION 1
CE1045/TD/GM/02	TYPICAL CROSS-SECTION FOR GATHAGA - MATIRI ROAD OPTION 2
	TYPICAL CULVERT DRAWINGS
CE1045/CDS/GM/O1	HEADWALL TYPE 1 (HEADWALL AND WINGWALLS)
CE1045/CDS/GM/O2	HEADWALL TYPE 2 (DROP INLETS)
CE1045/CDS/GM/O3	HEADWALL TYPE 4 (FOR ACCESS CULVERT)
CE1045/CDS/GM/O4	BEDDING AND HAUNCH PROFILES TYPE III& IV
CE1045/CDS/GM/O5	CULVERT ROAD SIGNS
	STANDARD DRAWINGS
CE1045/SD/GM/01	STANDARD DRAWING - STANDARD - ROAD SIGNS
CE1045/SD/GM/02	STANDARD DRAWING - STANDARD - ROAD SIGNS INSTALLATION
CE1045/SD/GM/03	STANDARD DRAWING - STANDARD - MISC MINOR JUNCTION
CE1045/SD/GM/04	STANDARD DRAWING - MISC URBAN ROAD DETAIL
CE1045/SD/GM/05	STANDARD DRAWING - TRAFFIC MANAGEMENT
CE1045/SD/GM/06	STANDARD DRAWING - PUBLICITY SIGN BOARD
CE1045/SD/GM/07	STANDARD DRAWING - ROAD MARKING
CE1045/SD/GM/08	STANDARD DRAWING - MISC MARKING ON JUNCTION
CE1045/SD/GM/09	STANDARD DRAWING - STANDARD - BUMPS

GENERAL DRAWINGS

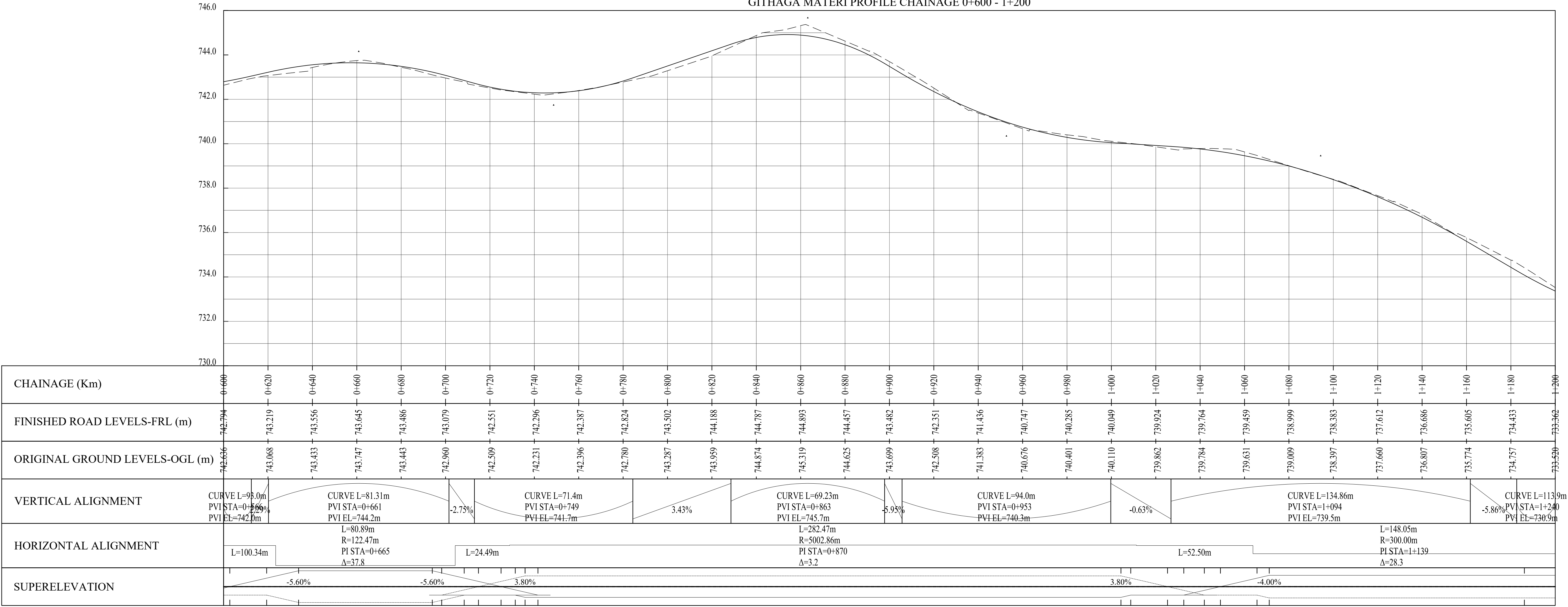
CLIMATE PROOFED PROJECT ROADS IN THARAKA NITHI COUNTY



PLAN AND PROFILE



GITHAGA MATERI PROFILE CHAINAGE 0+600 - 1+200

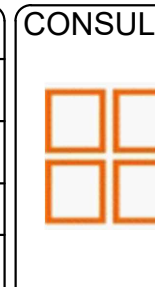


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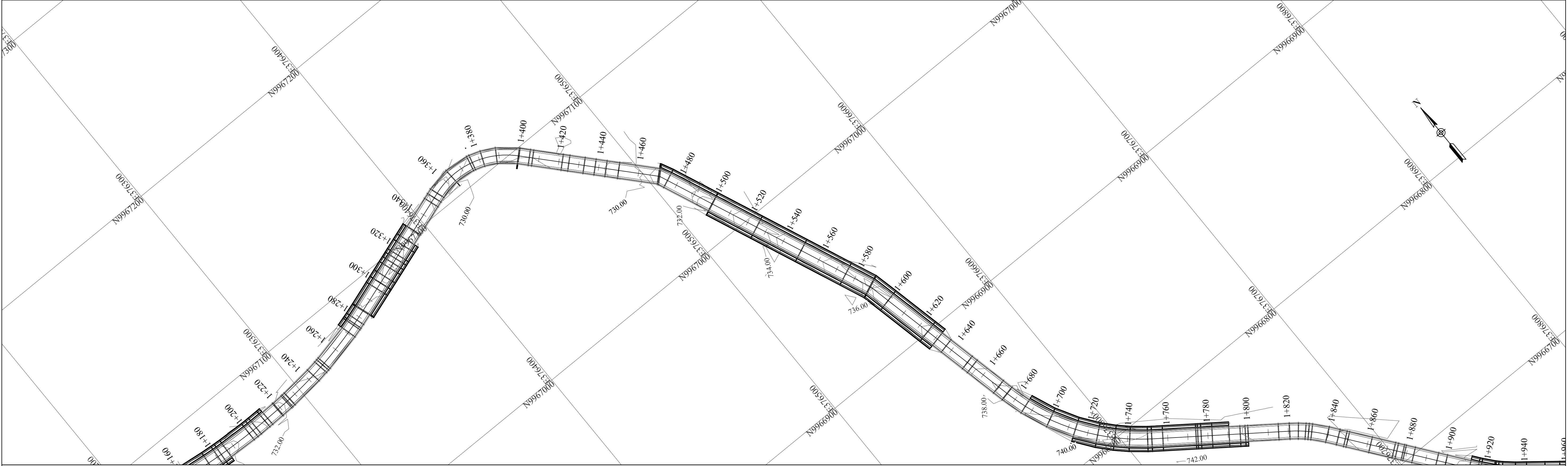
Runji Consulting Group Ltd
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PROJECT TITLE:
FINAL DETAILED ENGINEERING DESIGN OF GITHAGA - MATERI ROAD BACH 2

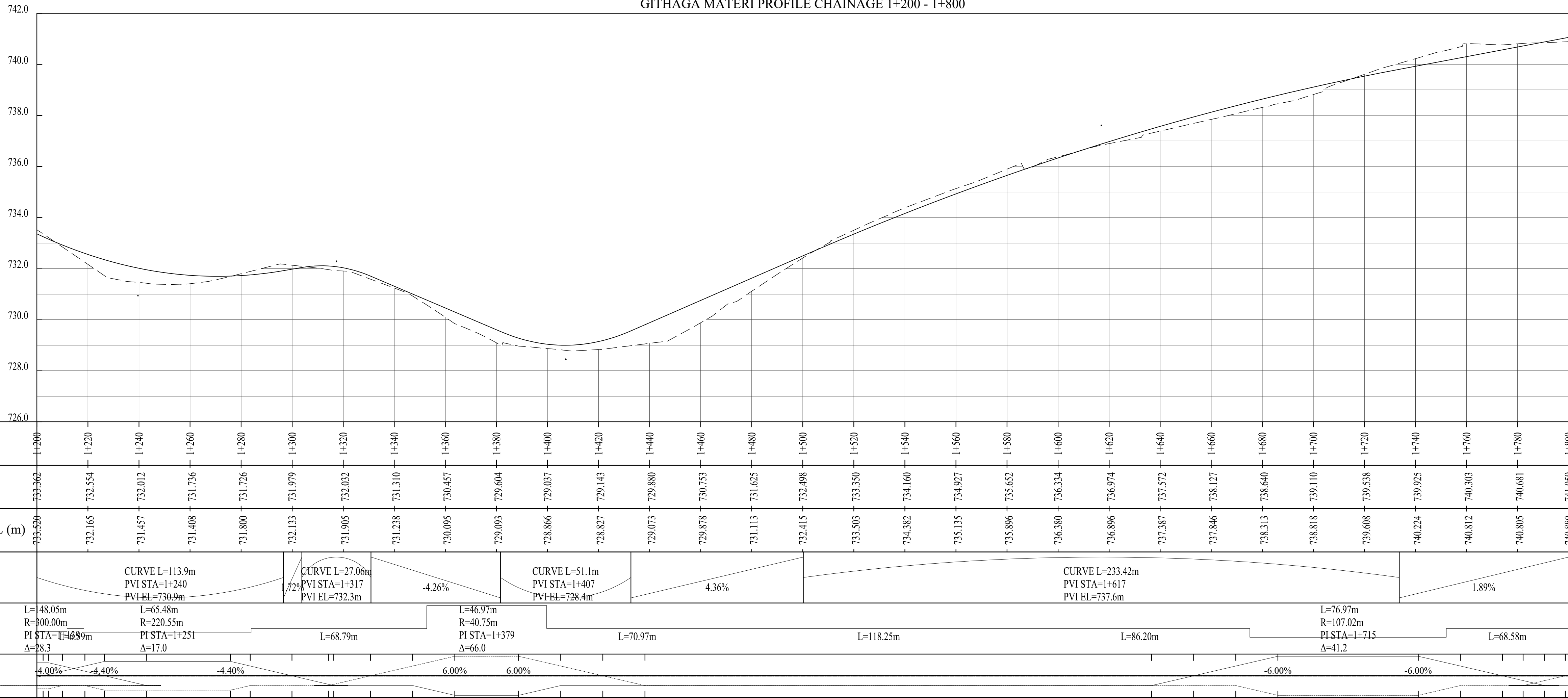
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PLAN AND PROFILE CHAINAGE 0+600 - 1+200

DRAWN BY: S.W.O DESIGNED BY: C.N.M CHECKED BY: M.N.J
Scale:1:1000 HORIZONTAL 1:100 VERTICAL

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GITHAGA MATERI PROFILE CHAINAGE 1+200 - 1+800



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ENGINEERING DESIGN OF
GITHAGA - MATERI ROAD
BACH 2

DRAWING TITLE:

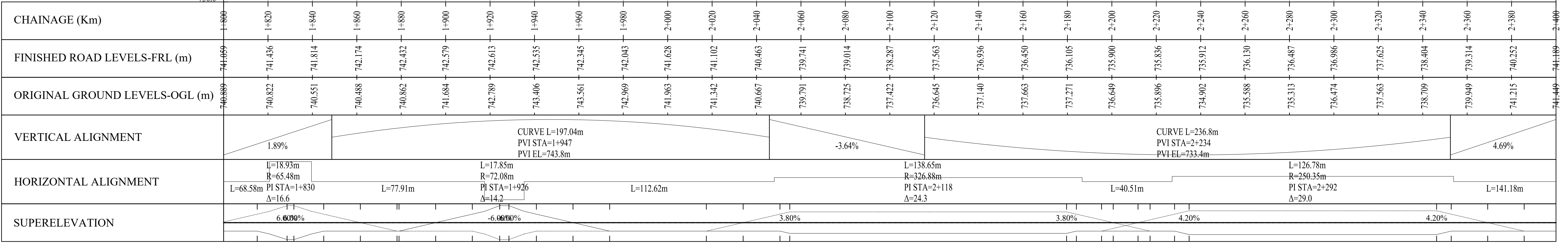
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CHAINAGE 1+200 - 1+800

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CHECKED BY: M.N.J

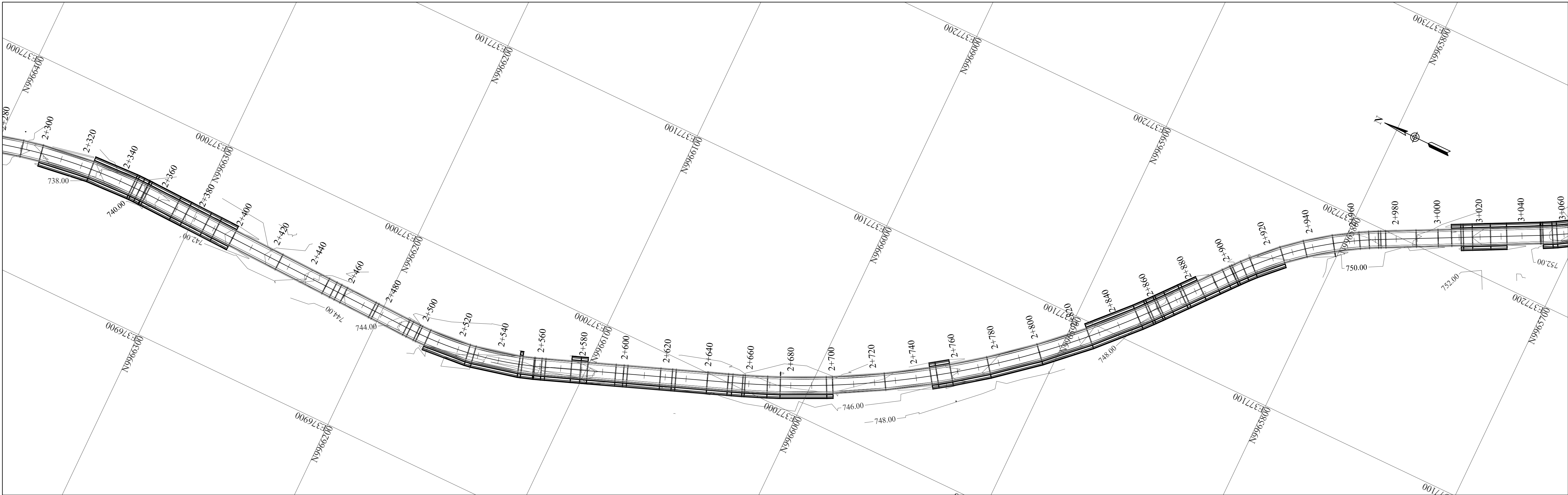
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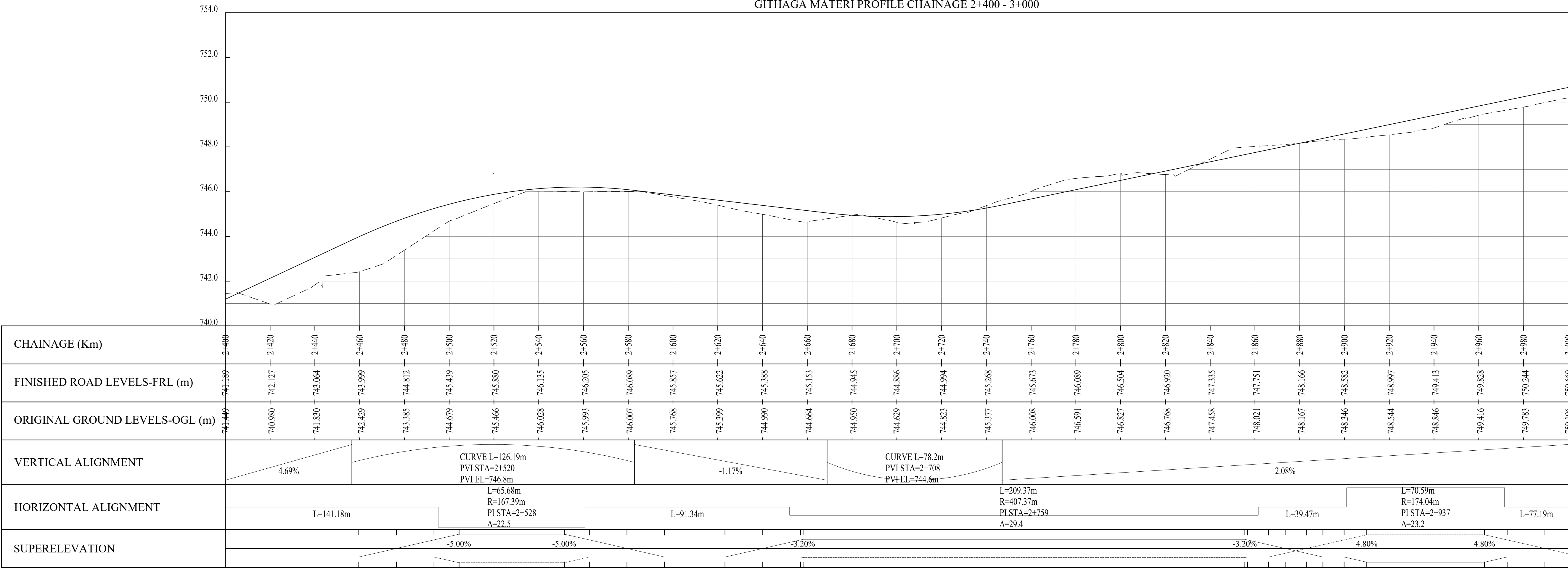
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GITHAGA MATERI PROFILE CHAINAGE 2+400 - 3+000



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FINAL DETAILED
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GITHAGA - MATERI ROAD
BACH 2

DRAWING TITLE:

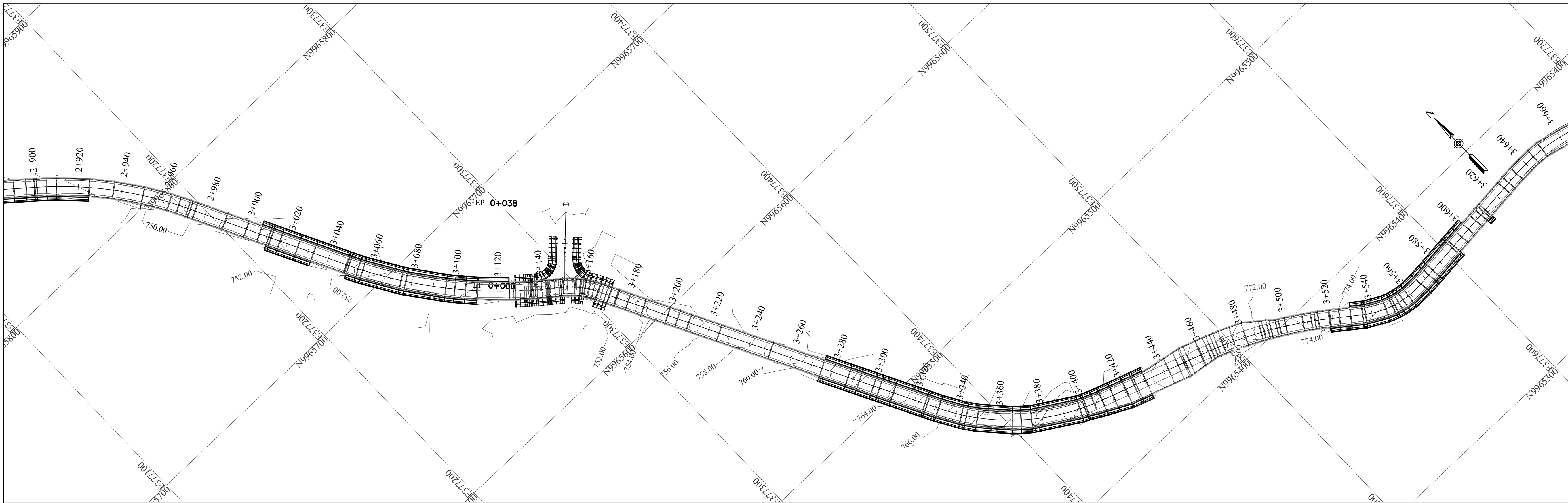
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CHAINAGE 2+400 - 3+000

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CHECKED BY: M.N.J

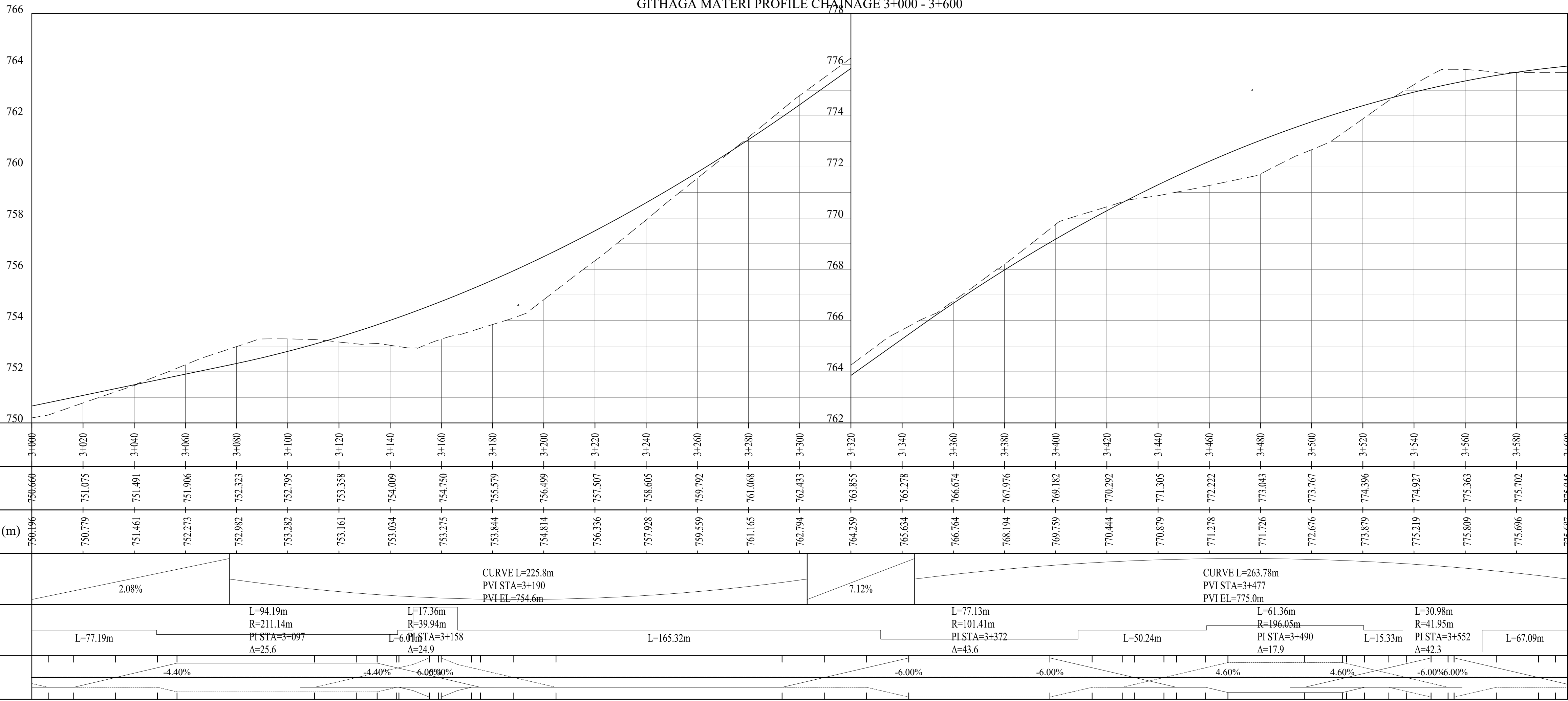
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GITHAGA MATERI PROFILE CHAINAGE 3+000 - 3+600



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PROJECT TITLE:

FINAL DETAILED
ENGINEERING DESIGN OF
GITHAGA - MATERI ROAD
BACH 2

DRAWING TITLE:

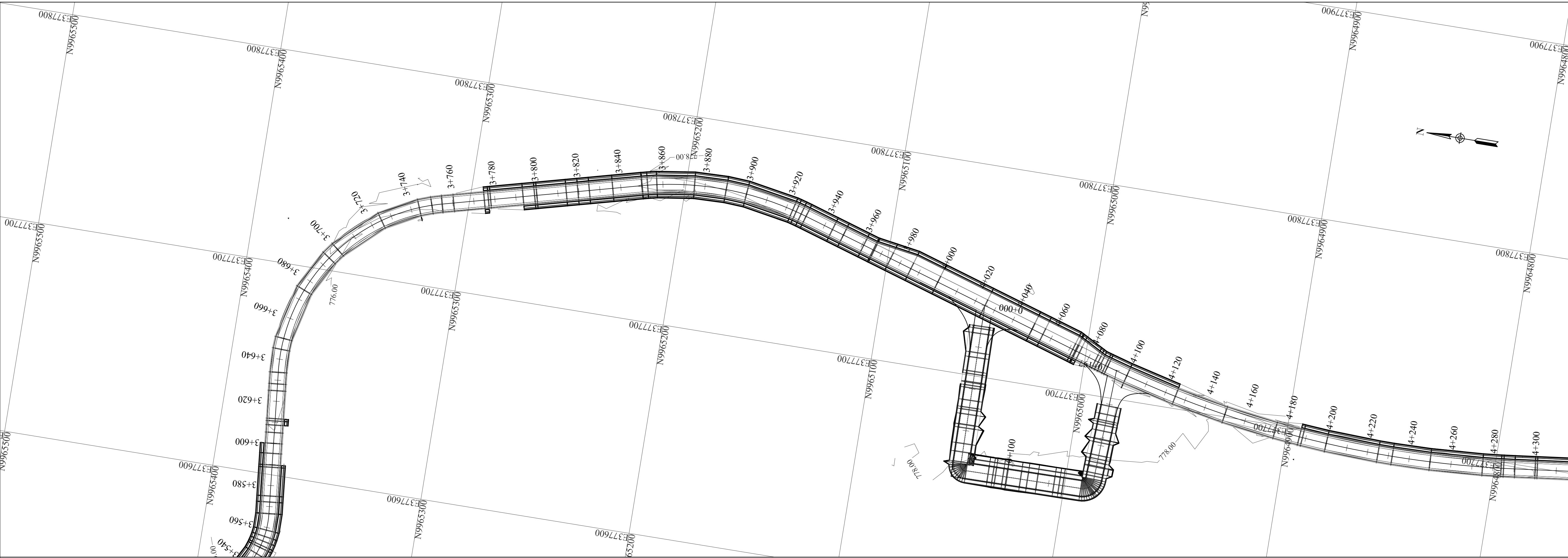
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CHAINAGE 3+000 - 3+600

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DESIGNED BY: C.N.M
CHECKED BY: M.N.J

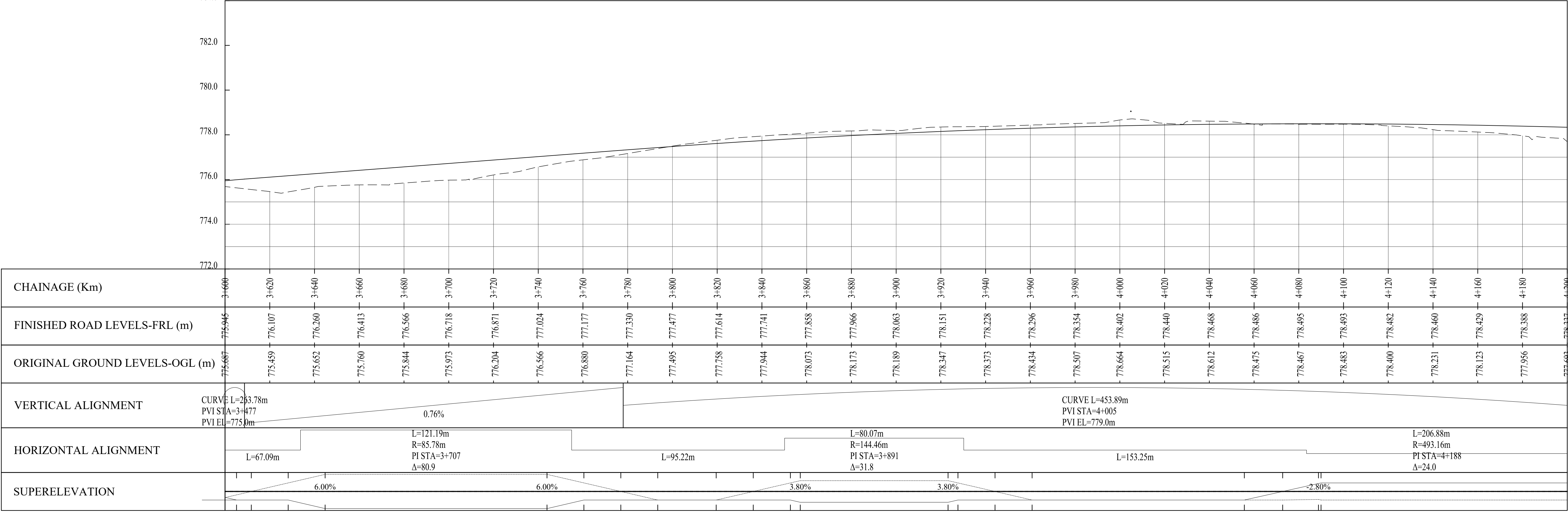
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GITHAGA MATERI PROFILE CHAINAGE 3+600 - 4+200



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PROJECT TITLE:

FINAL DETAILED
ENGINEERING DESIGN OF
GITHAGA - MATERI ROAD
BACH 2

DRAWING TITLE:

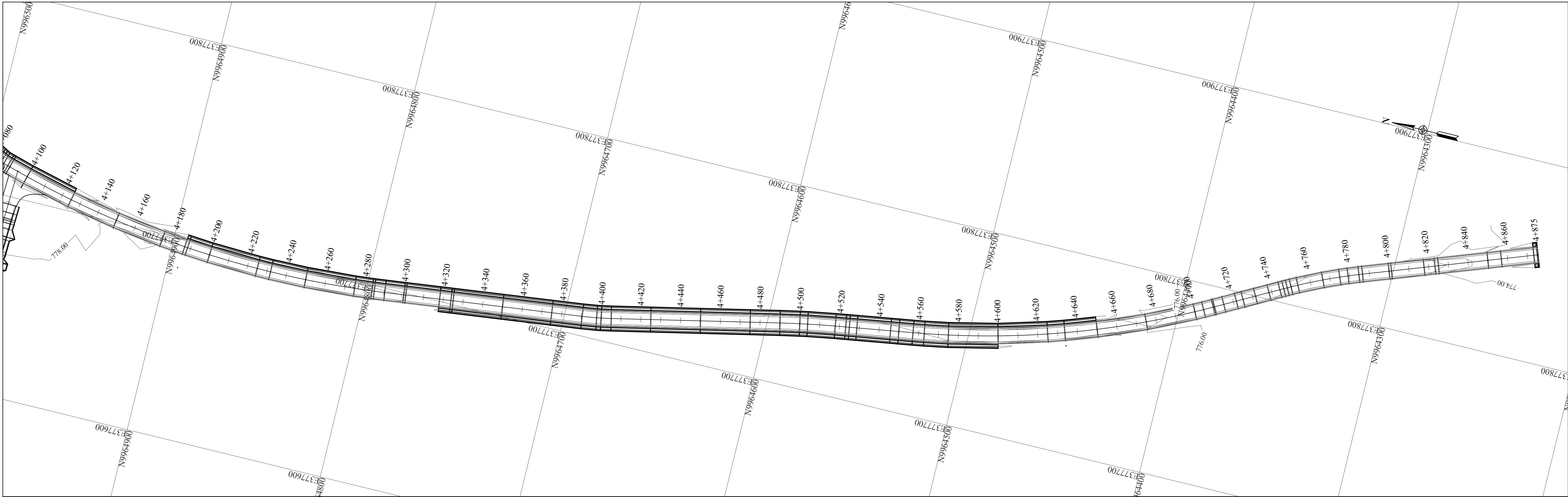
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CHAINAGE 3+600 - 4+200

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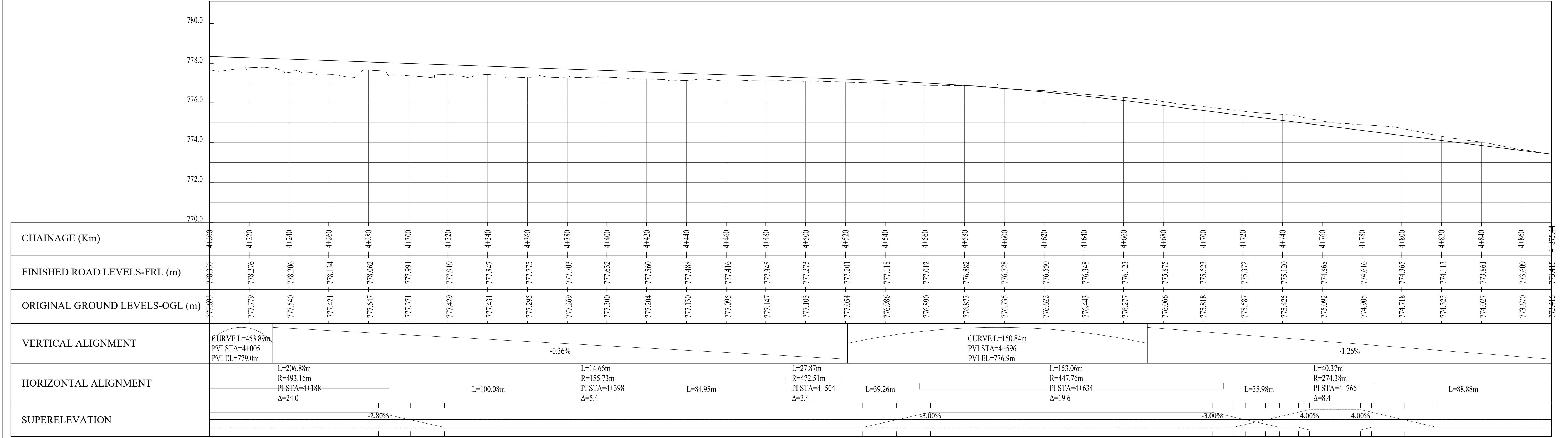
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Date : MARCH 2025



GITHAGA MATERI PROFILE CHAINAGE 4+200 - 4+875.44



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PROJECT TITLE:

FINAL DETAILED
ENGINEERING DESIGN OF
GITHAGA - MATERI ROAD
BACH 2

DRAWING TITLE:

PLAN AND PROFILE
CHAINAGE 4+200 - 4+875.44

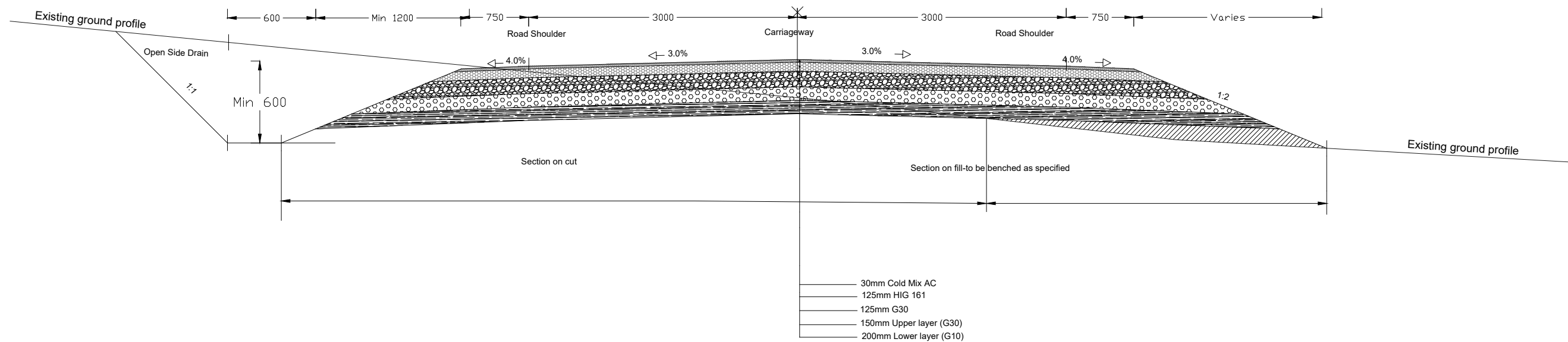
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DESIGNED BY: C.N.M
CHECKED BY: M.N.J

Scale:1:1000 HORIZONTAL
1:100 VERTICAL

Drg No.CE1045/PP/GM/08

Date : MARCH 2025

TYPICAL CROSS-SECTION

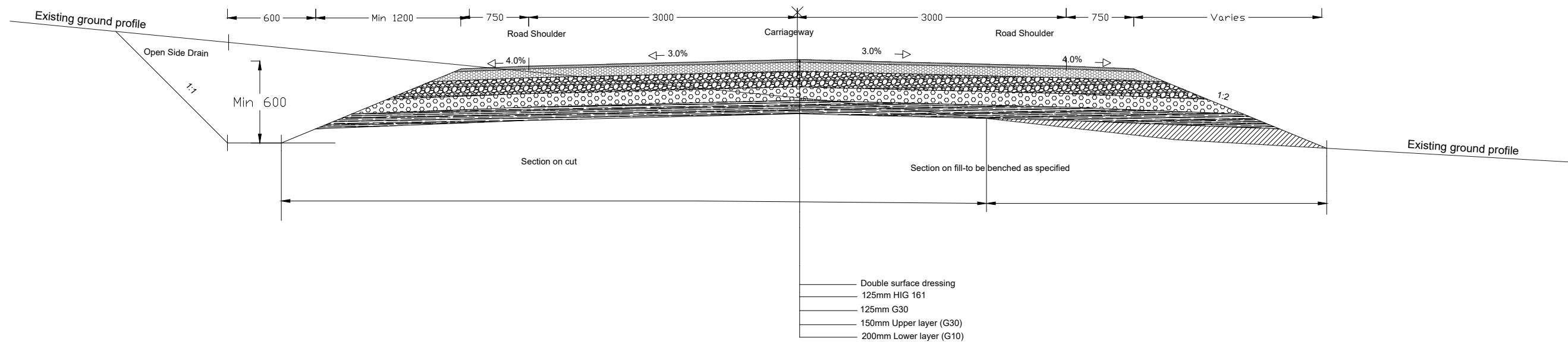


GATHIGA MATERI TYPICAL CROSS-SECTION OPTION 1

SCALE 1:50

- GENERAL NOTES:**
1. Final fill slopes 1:4 where $H_f \leq 1.0\text{m}$
1:2 where $1.0\text{m} \leq H \leq 3.0\text{m}$
1:1.5 where $H_f \leq 3.0\text{m}$
 2. Cutting backslopes may be steepened as instructed at culvert locations to minimise pipe extensions.
 3. Cutting Backslopes 1:3 where $H_c \leq 1.0\text{m}$
1:2 where $H_c \leq 1.0\text{m} \leq H \leq 3.0\text{m}$
1:1.5 where $H_c \leq 3.0\text{m}$
1:0.5 in rock cut
 4. Width of side ditches 1.0m or wider as instruted by the Engineer.
 5. Final shoulder width to be 2.0m where guard rails are instructed.

Slope benching details



GATHIGA MATERI TYPICAL CROSS-SECTION OPTION 2

SCALE 1:50

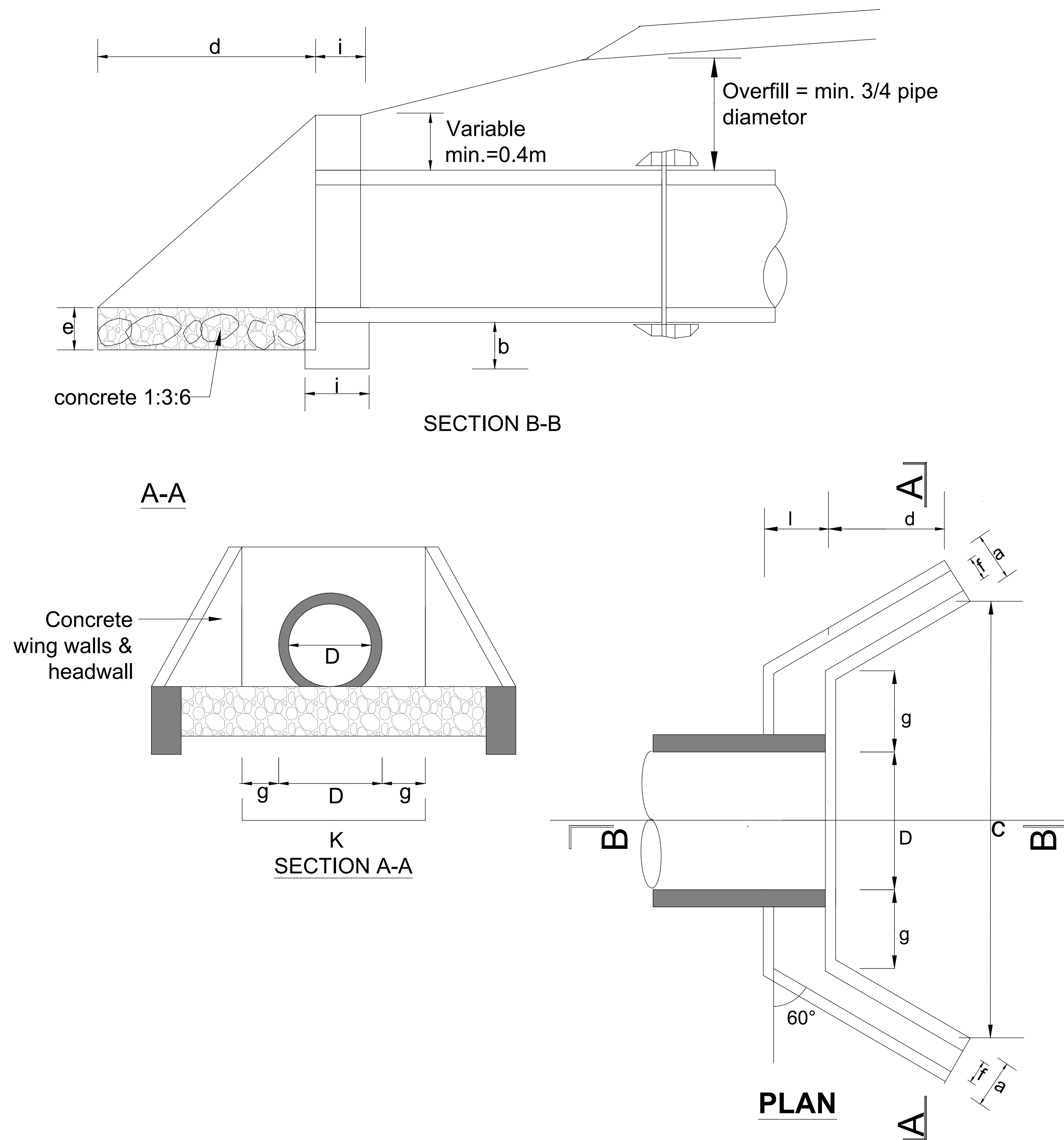
GENERAL NOTES:

1. Final fill slopes 1:4 where $H_f \leq 1.0m$
1:2 where $H_f = 1.0m \leq H \leq 3.0m$
1:1.5 where $H_f \leq 3.0m$
2. Cutting backslopes may be steepened as instructed at culvert locations to minimise pipe extensions.
3. Cutting Backslopes 1:3 where $H_c \leq 1.0m$
1:2 where $H_c = 1.0m \leq H \leq 3.0m$
1:1.5 where $H_c \leq 3.0m$
1:0.5 in rock cut
4. Width of side ditches 1.0m or wider as instruted by the Engineer.
5. Final shoulder width to be 2.0m where guard rails are instructed.

Slope benching details

TYPICAL CULVERT DRAWINGS

FIGURE H.8 - HEADWALL TYPE 1 (HEAD AND WINGWALLS)



DIMENSIONS AND MATERIAL REQUIREMENTS

PIPE DIAMETER IN (M)			TYPE A (CONCRETE BLOCKS)			TYPE B (STONE MASONRY)		
			450	600	900	450	600	900
DIMENSION		UNIT						
a	FOUNDATION	m	0.30	0.30	0.30	0.40	0.40	0.60
b	FOUNDATION	m	0.30	0.30	0.40	0.30	0.30	0.40
c	FOUNDATION		2.20	2.35	2.89	2.20	2.35	2.89
d	APRON	m	1.00	1.00	1.20	1.00	1.00	1.20
e	APRON	m	0.20	0.20	0.20	0.20	0.20	0.20
f	WALL	m	0.20	0.20	0.20	0.40	0.40	0.40
g	WALL	m	0.30	0.30	0.30	0.30	0.30	0.30
h	WALL	m	1.15	1.15	1.39	1.15	1.15	1.39
l	WALL	m	0.20	0.20	0.20	0.40	0.40	0.40
k	APRON	m	1.05	1.20	1.50	1.05	1.20	1.50
MATERIAL REQUIREMENT								
FOUNDATION								
	(Concrete)	m3	0.3	0.32	0.51	0.4	0.42	1.03
HEAD/WINGWALLS								
	(Concrete/)	m3	0.4	0.47	0.67	0.8	0.93	1.35
APRON								
	(Concrete)	m3	0.33	0.36	0.53	0.33	0.36	0.53

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PROJECT TITLE:

FINAL DETAILED ENGINEERING DESIGN OF
GATHIGA- MATERI ROAD
BATCH 2

DRAWING TITLE:

**HEADWALL TYPE 1 (HEADWALL
AND WINGWALLS)**

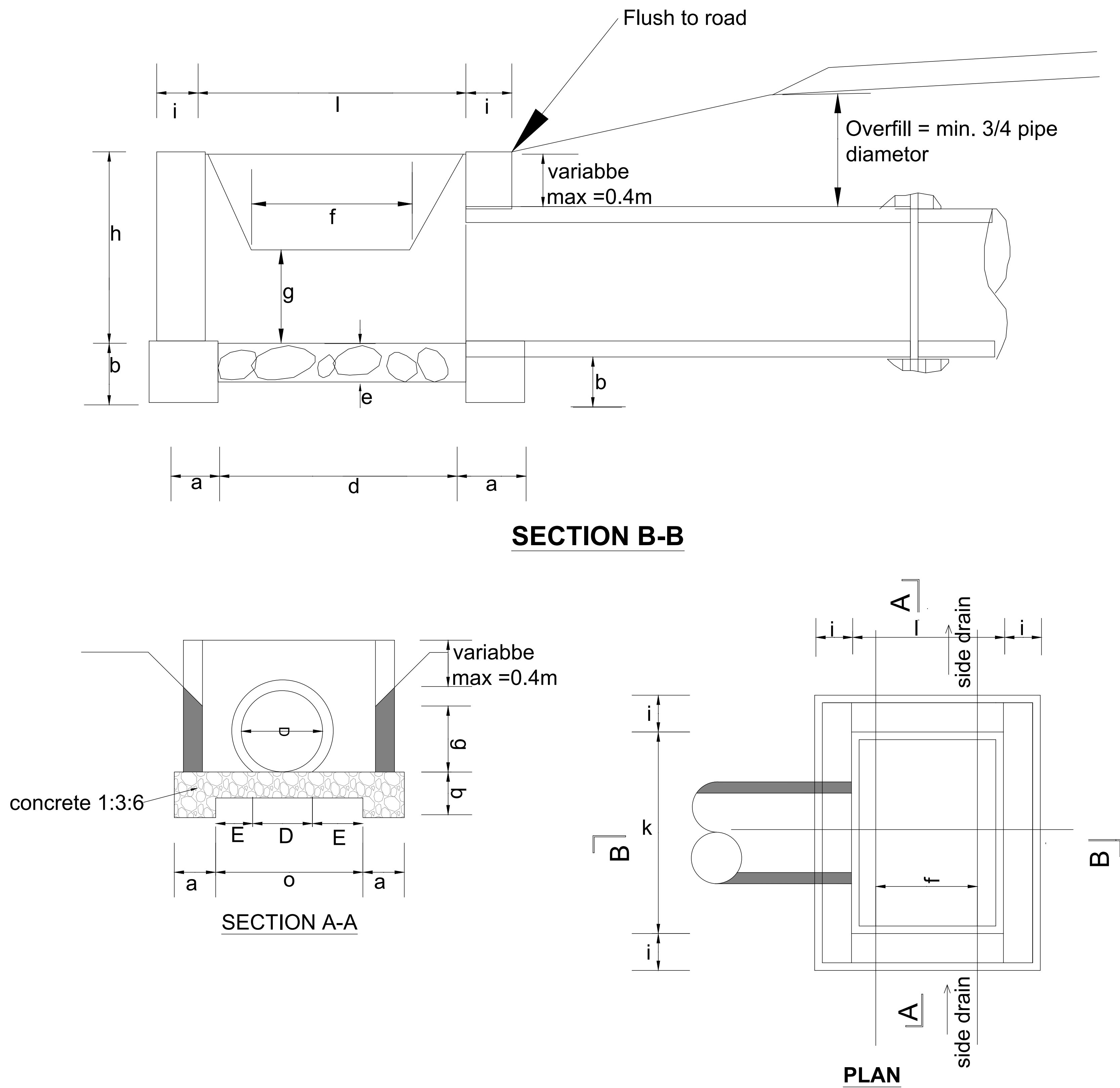
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DESIGNED BY: C.N.M
CHECKED BY: M.J.N

Scale: NTS

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Date : MARCH 2025

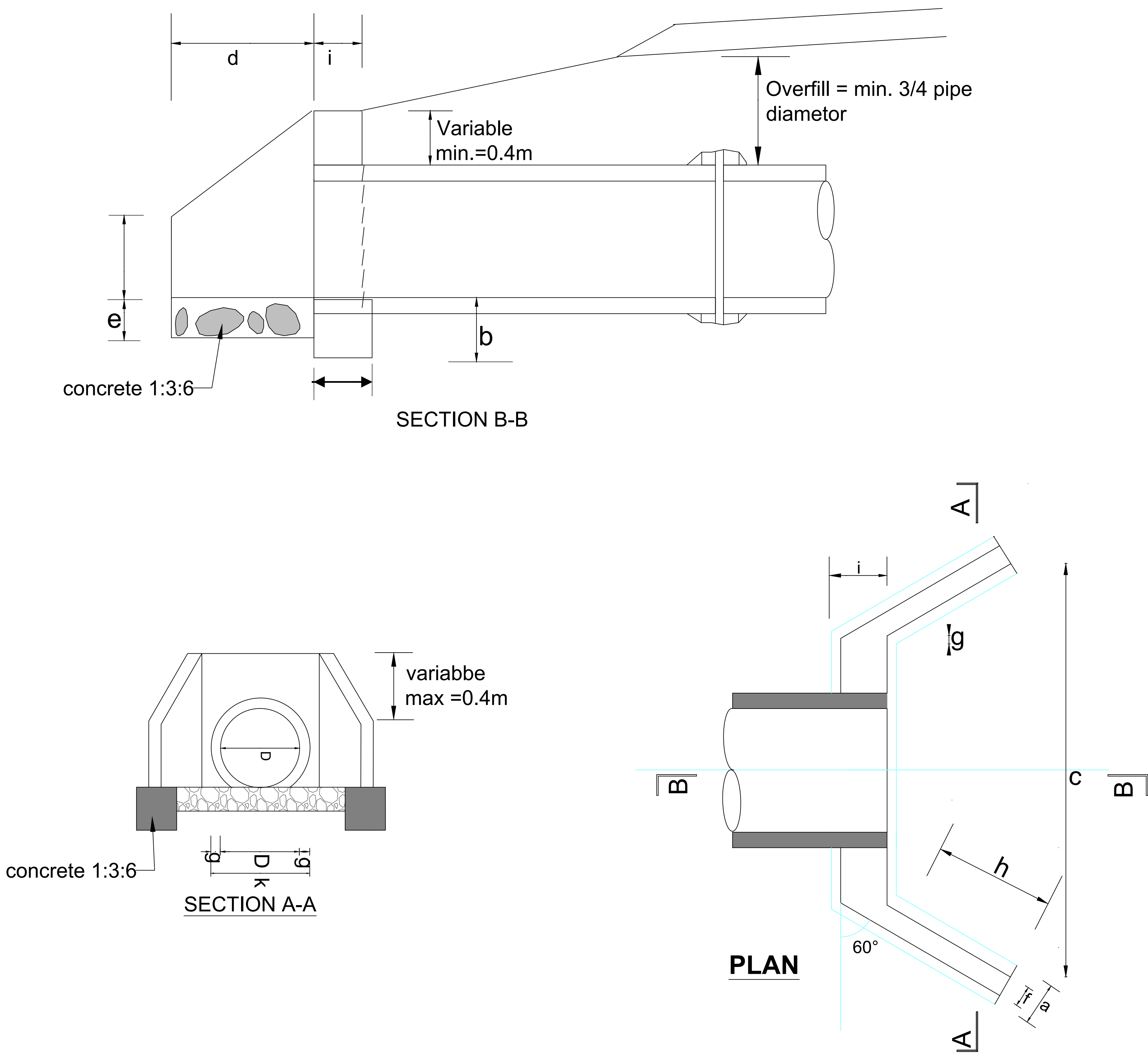
FIGURE H.9 - HEADWALL TYPE 2 (DROP INLETS)



DIMENSIONS AND MATERIAL REQUIREMENTS

PIPE DIAMETER IN (M)			TYPE A			TYPE B		
			(CONCRETE BLOCKS)			(STONE MASONRY)		
			450	600	900	450	600	900
DIMENSION	UNIT							
a	FOUNDATION	m	0.30	0.30	0.30	0.40	0.40	0.40
b	FOUNDATION	m	0.30	0.30	0.30	0.30	0.30	0.30
c	FOUNDATION	m	1.10	1.10	1.40	1.20	1.20	1.50
d	APRON	m	0.90	0.90	0.90	1.00	1.00	1.00
e	APRON	m	0.20	0.20	0.20	0.20	0.20	0.20
f	DROP INLET	m	0.60	0.60	0.60	0.60	0.60	0.60
g	DROP INLET	m	0.30	0.40	0.60	0.30	0.40	0.60
h	DROP INLET	m	0.60	0.80	1.20	0.60	0.80	1.20
i	DROP INLET	m	0.20	0.20	0.20	0.40	0.40	0.40
k	DROP INLET	m	1.20	1.20	1.50	1.20	1.20	1.50
l	DROP INLET	m	1.00	1.00	1.00	1.00	1.00	1.00
m	DROP INLET	m	0.38	0.30	0.30	0.38	0.30	0.30
MATERIAL REQUIREMENT								
FOUNDATION								
(Concrete)	m3		0.47	0.47	0.52	0.72	0.72	0.79
HEAD/WINGWALLS								
(Concrete/Masonry)	m3		0.53	0.69	1.11	1.24	1.63	2.61
APRON								
(Concrete)	m3		0.24	0.24	0.30	0.24	0.24	0.30

FIGURE H.12 - HEADWALL TYPE 4 (FOR ACCESS CULVERT)

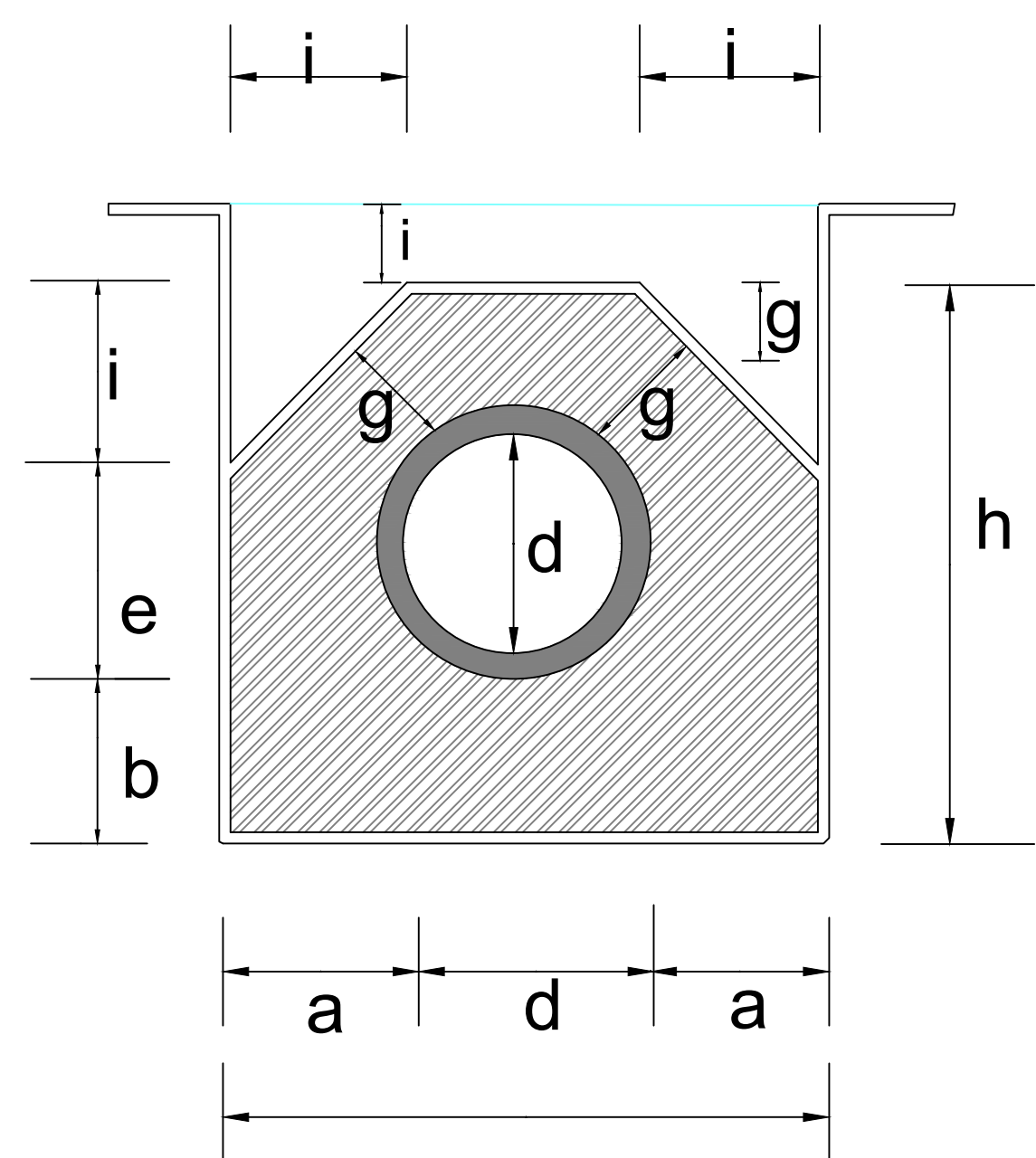


DIMENSIONS AND MATERIAL REQUIREMENTS							
PIPE DIAMETER IN (M)		TYPE A (CONCRETE BLOCKS)			TYPE B (STONE MASONRY)		
		450	600	900	450	600	900
DIMENSION		UNIT					
a	FOUNDATION	m	0.30	0.30		0.40	0.40
b	FOUNDATION	m	0.30	0.30		0.30	0.30
c	APRON		1.34	1.49		1.34	1.49
d	APRON	m	0.60	0.60		0.60	0.60
e	APRON	m		0.20		0.20	0.20
f	WINGWALLS	m	0.20	0.20		0.40	0.40
g	WINGWALLS	m	0.10	0.10		0.10	0.10
h	HEADWALLS	m	0.69	0.69		0.69	0.69
i	HEADWALLS	m	0.20	0.20		0.40	0.40
k	HEADWALLS	m	0.65	0.80		0.65	0.80
l	HEADWALLS	m	0.40	0.40		0.40	0.40
MATERIAL REQUIREMENT							
FOUNDATION							
(Concrete 1:2:4, 1:3:6)		m3	0.18	0.2		0.24	0.26
HEAD/WINGWALLS							
(Concrete/Masonry)		m3	0.25	0.29		0.50	0.58
APRON		m3	0.12	0.14		0.12	0.14

FIGURE H.14-BEDDING AND HAUNCH PROFILES TYPE III& IV

PROFILE IV

(CONCRETE)



	450 (mm)	600 (mm)	900 (mm)
Dimensions in (m)			
	0.15	0.2	0.2
	0.15	0.15	0.15
	0.86	0.15	1.48
	0.56	0.72	1.08
	0.46	0.15	0.78
	0.15	0.15	0.15
	0.15	0.15	0.15
	0.81	1.02	1.38
	0.28	0.35	0.45
volume in (m3/m)			
	0.37	0.61	0.92
-fair to poor subgrade condition -overfill $>\frac{3}{4}$ Dia; -Seasonal waterflow only. -Use gravel material for. -backfill/overfill.			

REVISIONS	No.	DATE	DESCRIPTION



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**FINAL DETAILED ENGINEERING DESIGN OF
GATHIGA- MATERI ROAD
BATCH 2**

DRAWING TITLE:

**BEDDING AND HAUNCH PROFILES
TYPE III& IV**

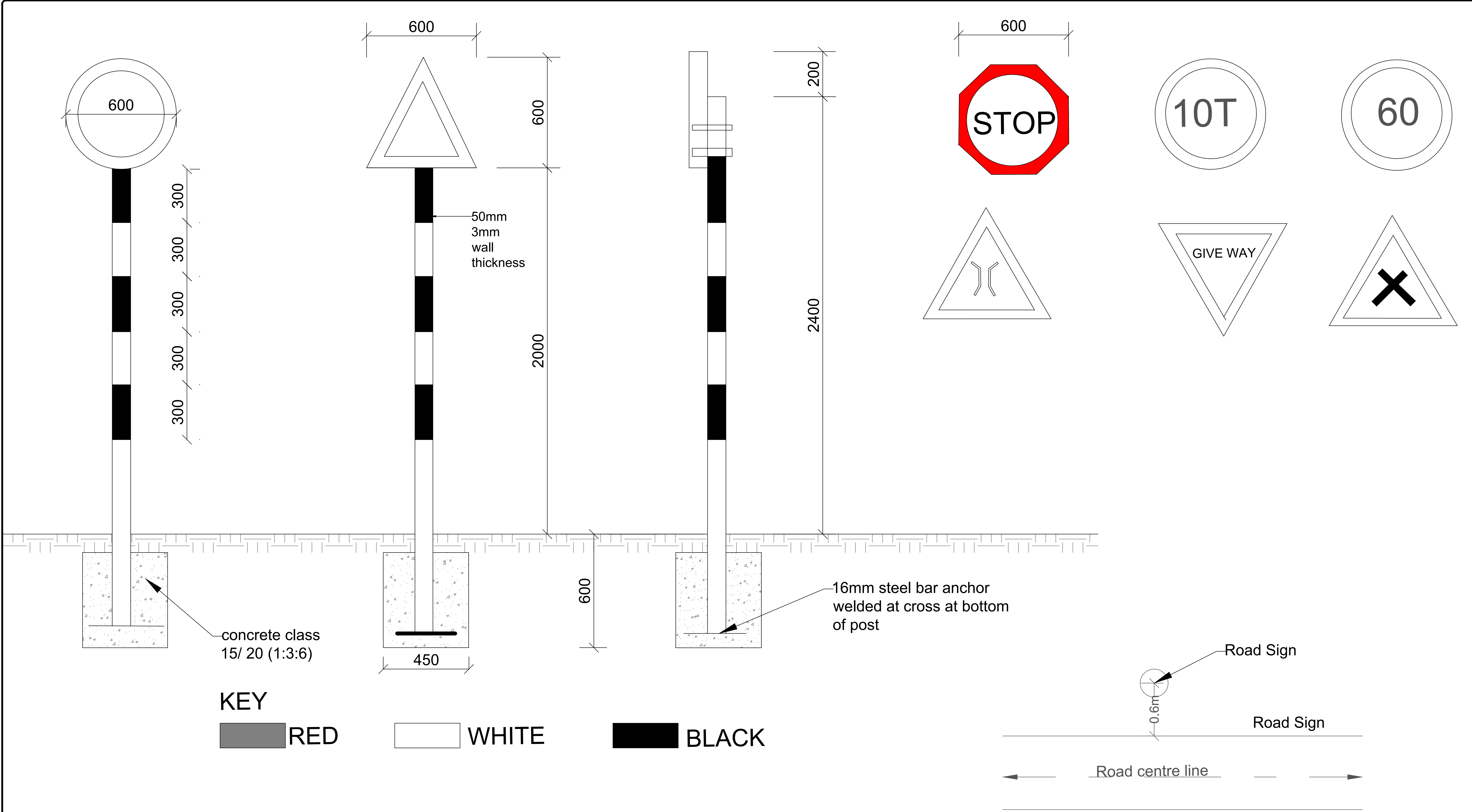
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DESIGNED BY: C.N.M
CHECKED BY: M.J.N

Scale: NTS

Drg No.

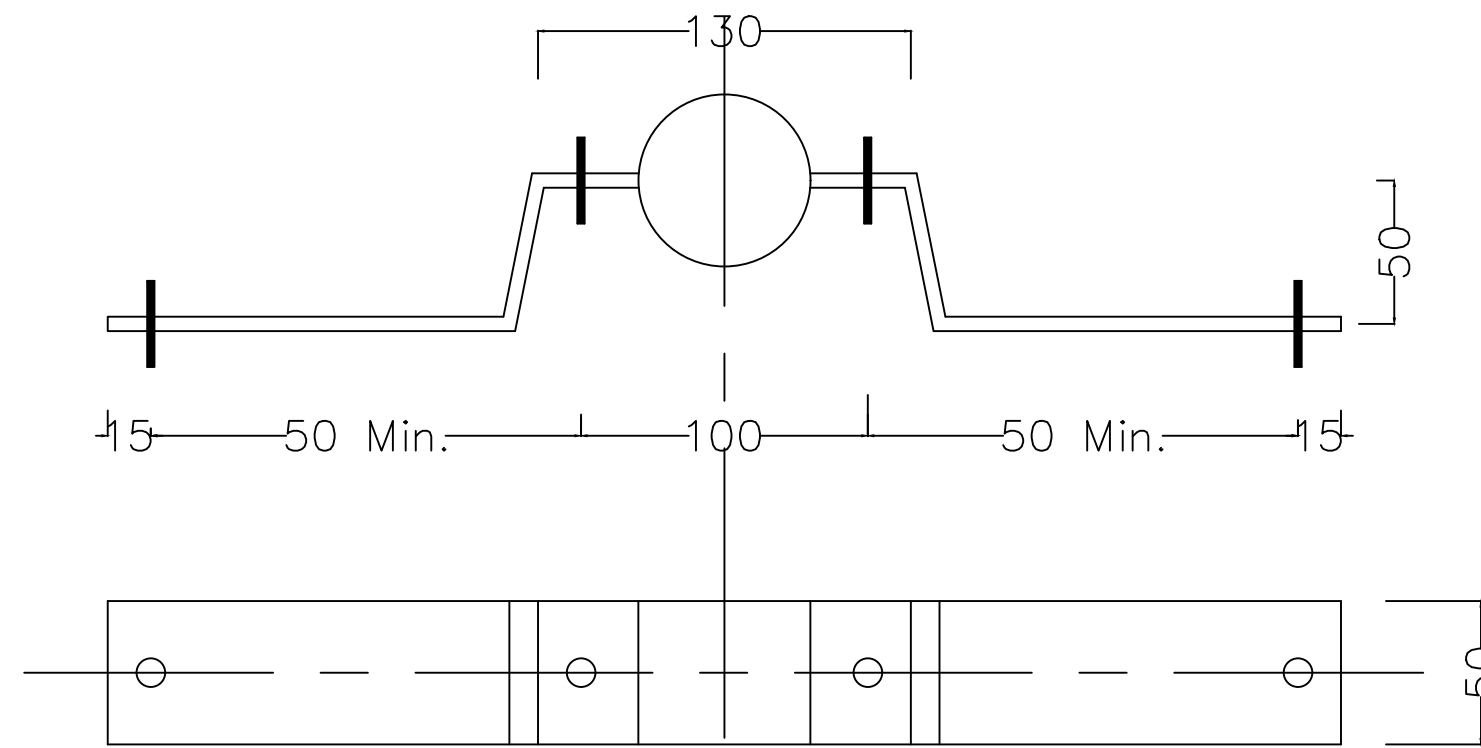
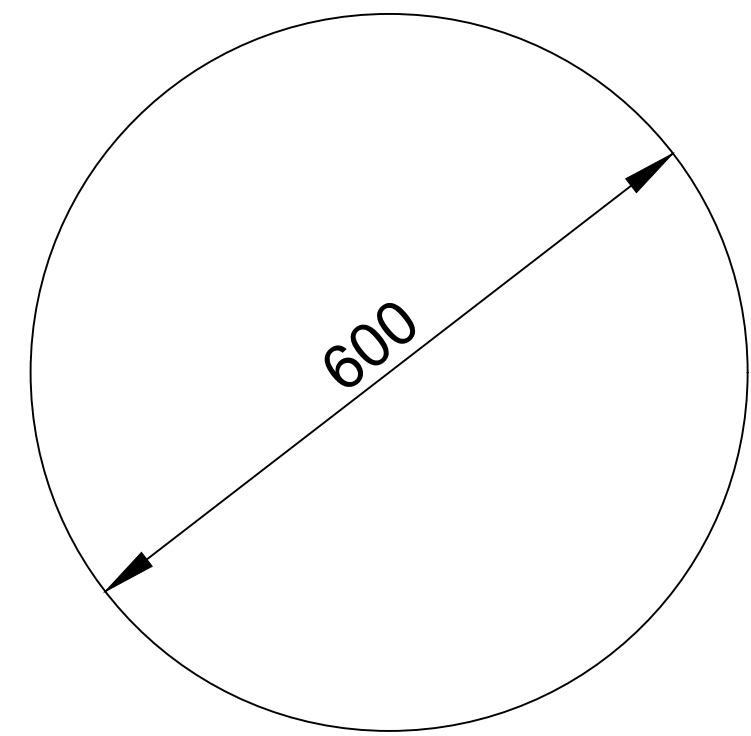
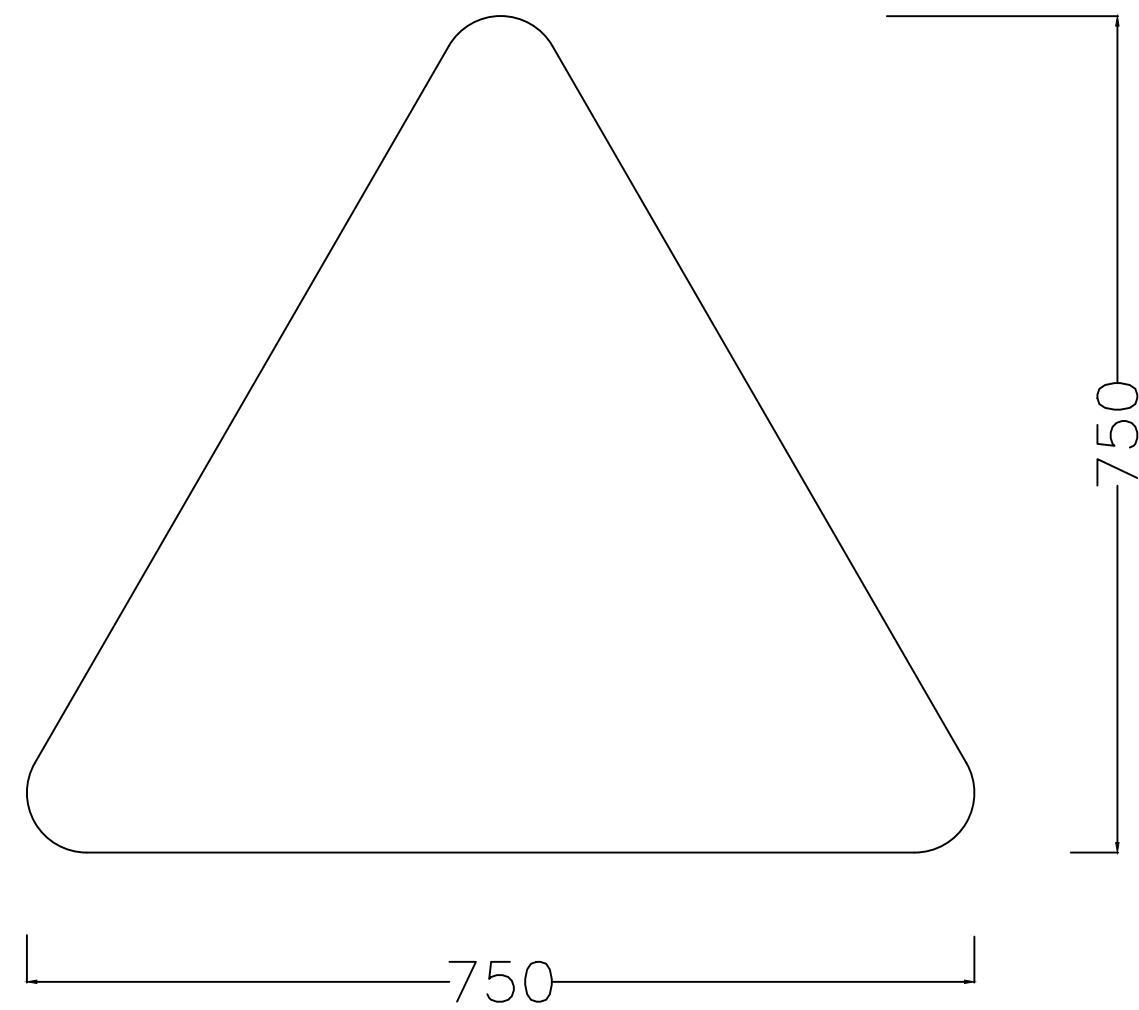
CE1045/CDS/GM/O4

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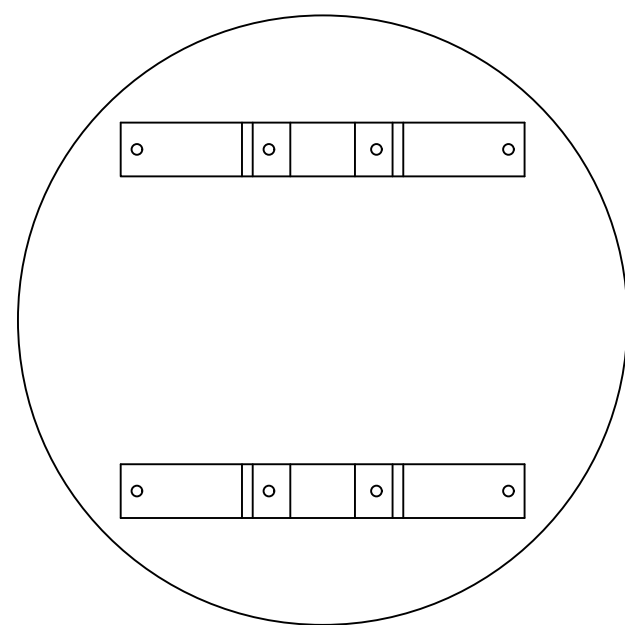
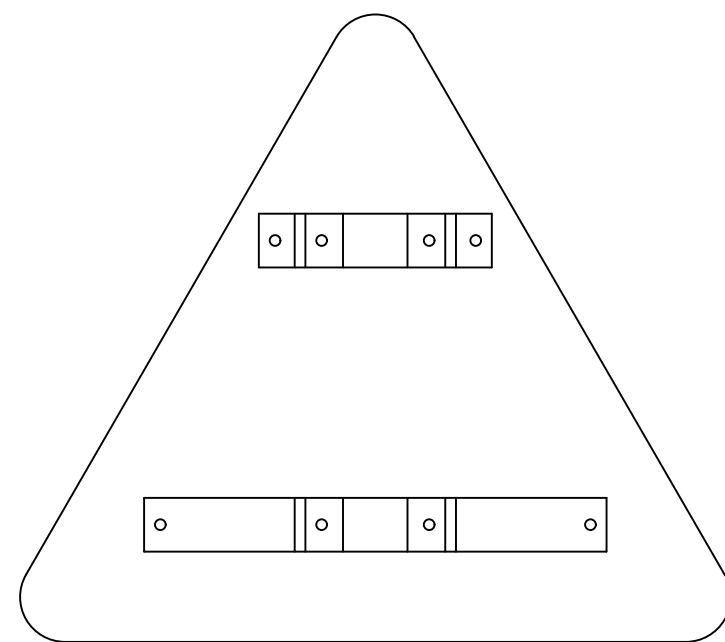
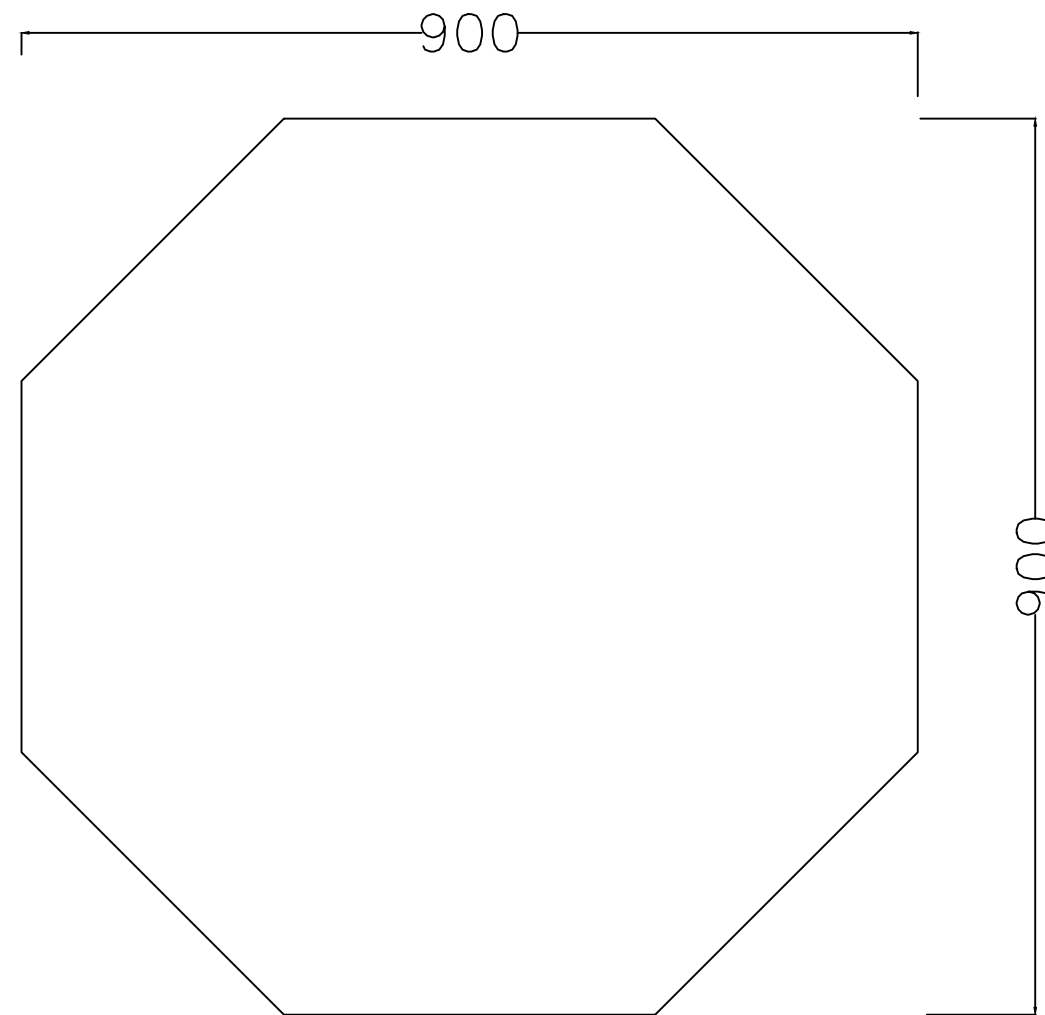
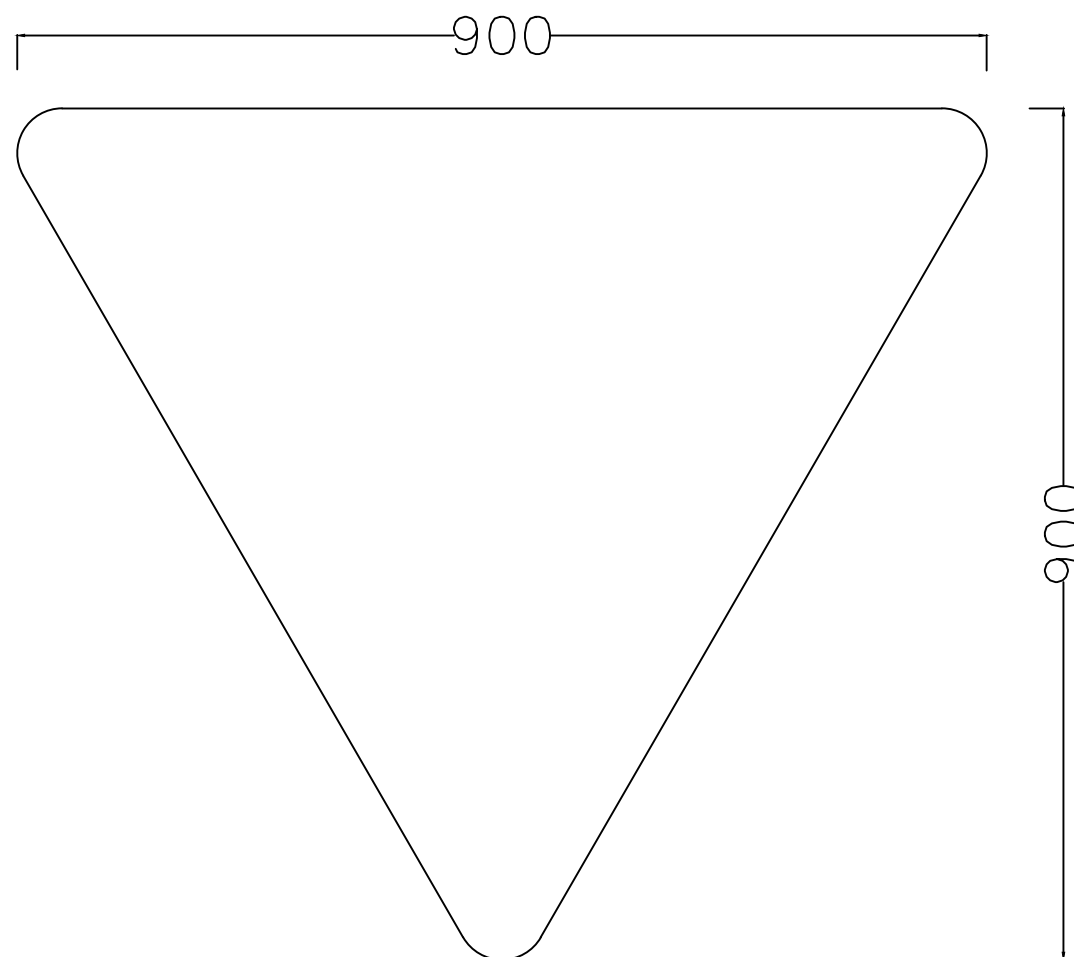


- 1.The type of sign required and their location shall de shown as road plan or as directed by engineer
- 2.signs plate to be 2mm thick mild steel plate
- 3.sign post to be 50mm fixing clamp/brackets
- 4.Sign plate to be fixed to steel tube by \$Nos M10 bolts and 50mm fixing clamp/brackets
- 5,Sign paints shall be reflective
- 6.The sign plate and post shall be treated by applying two coats of lead red oxide paint before applying a priming and two finish coats of approved paints. Paints used shall have a hard,durable and glossy finish.

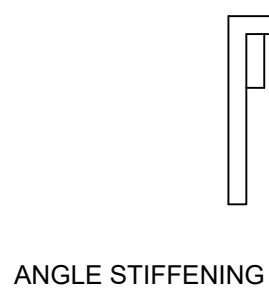
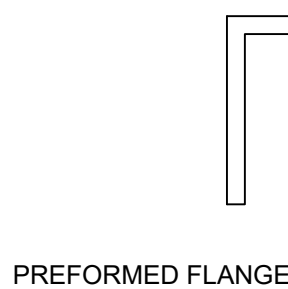
STANDARD DRAWINGS



FIXING BRACKET DETAIL
SCALE 1:2.5

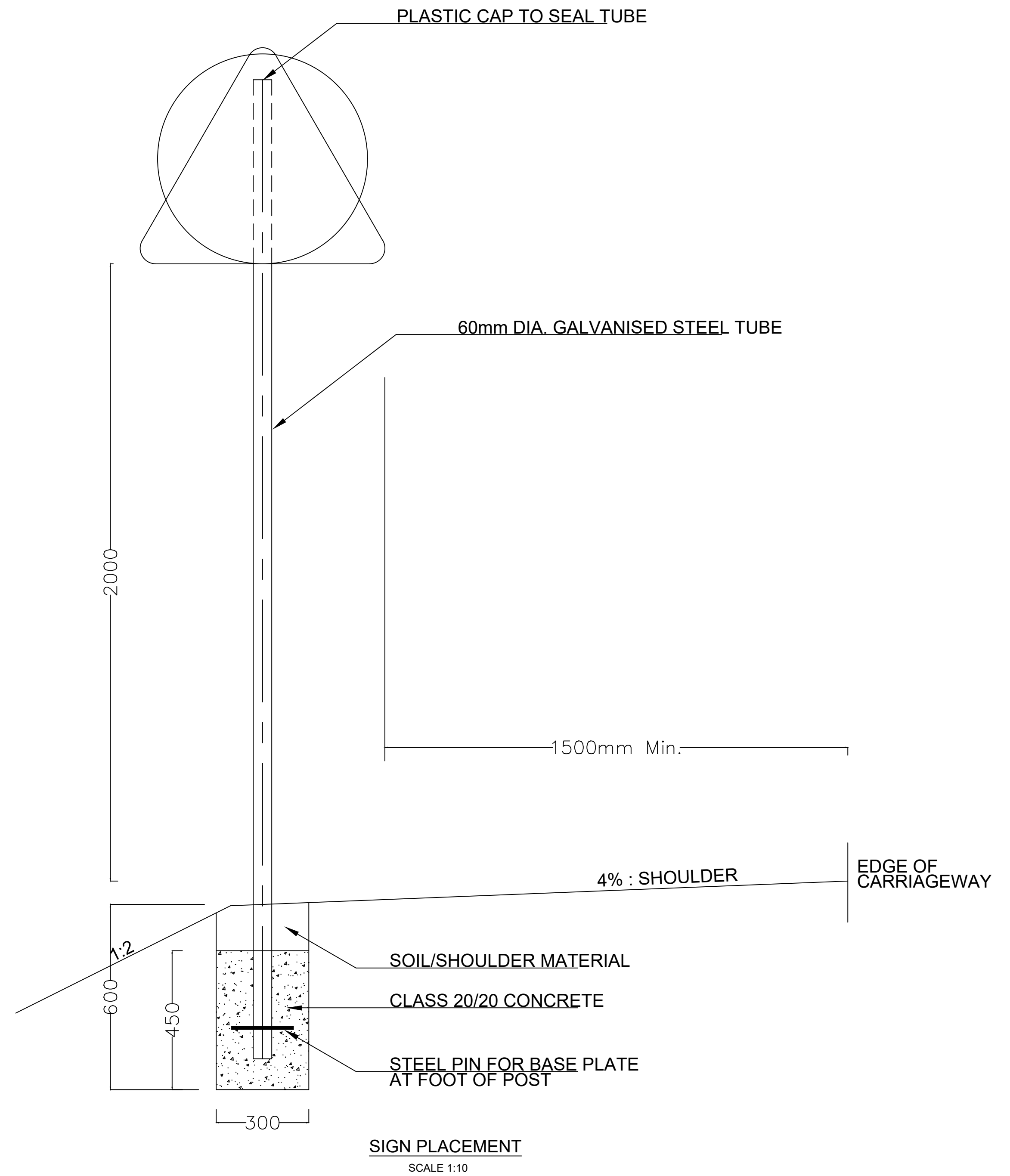


TYPICAL FIXING DETAILS
SCALE 1:25



STIFFENING TO SIGNS
SCALE 1:20

- GENERAL NOTES:**
- ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
 - ALL ROAD SIGNS ARE 3mm ALUMINIUM PLATES WITH REFLECTIVE MATERIALS.
 - PLASTIC WASHERS TO BE PLACED BETWEEN ALUMINIUM SIGNS AND STEEL BRACKETS.
 - ALL SIGN SUPPORTS AND FITTINGS TO BE GALVANISED MILD STEEL.
 - THE ENDS OF BOLTS TO BE HAMMERED OR SPOT WELDED.
 - ALL WHITE, RED, BLUE AND YELLOW PARTS ON SIGNS TO BE MADE OF RETRO-REFLECTIVE MATERIAL.
 - THE WIDTHS OF SIGN MARKINGS TO BE AS FOLLOWS;
RED BORDERS TO STANDARD SIGNS - 75mm
RED STRIPES ON COUNT DOWN SIGNS - 75mm
RED BORDER TO PRIORITY TRIANGLE SIGNS - 100mm
RED BORDER TO PROHIBITORY SIGNS - 50mm
RED BORDERS TO CRUCIFORM LEVEL "X" - 60mm
WHITE BORDER TO PRIORITY (OCTAGON) - 50mm
YELLOW STRIPES ON HAZARD SIGNS - 100mm.
BLACK STRIPES ON HAZARD SIGNS - 200mm.



SIGN PLACEMENT
SCALE 1:10

No.	DATE	DESCRIPTION



Kenya Rural Roads Authority
Bara Bara Plaza,
P.O. Box 48151- 00100, Nairobi. Kenya

DIRECTOR GENERAL	
DIRECTOR (PLANNING , DESIGN &ENVIRONMENT)	

Consultant:
Runji Consulting Group Ltd
Engineering & Project Management.
3, Kindaruma Road (Off Ngong Road)
P. O. Box 68053-00200 Nairobi
Tel. (020) 2717213/4

PROJECT TITLE:
**FINAL DETAILED ENGINEERING DESIGN OF
GATHIGA - MATERI (ROAD)
BATCH 2**

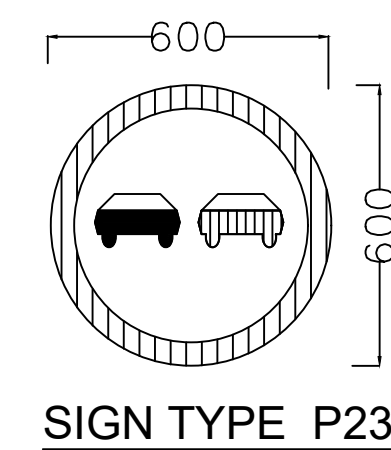
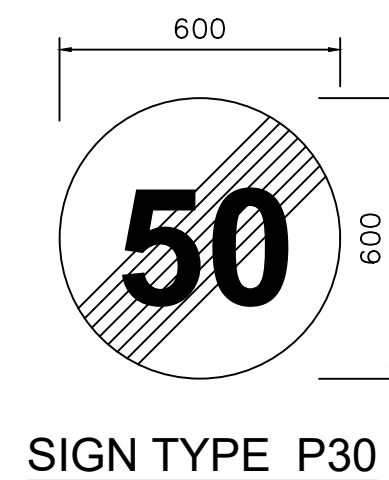
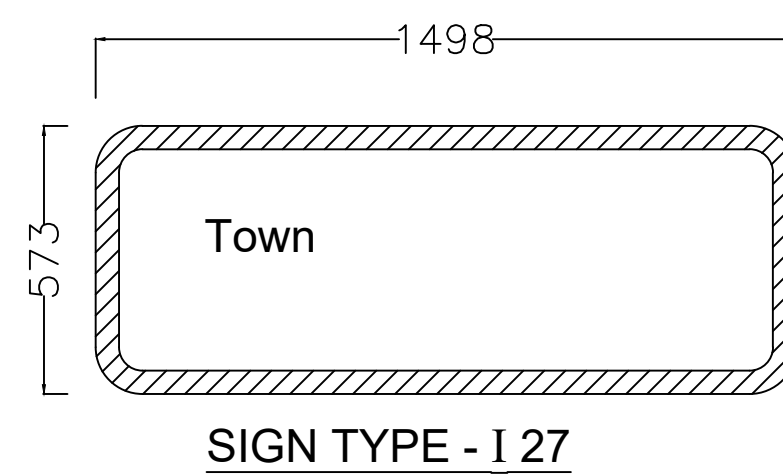
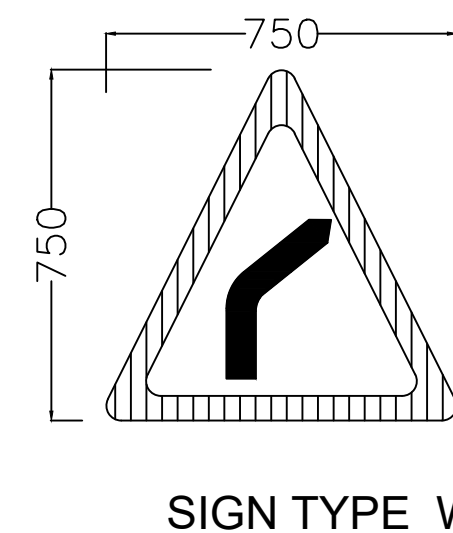
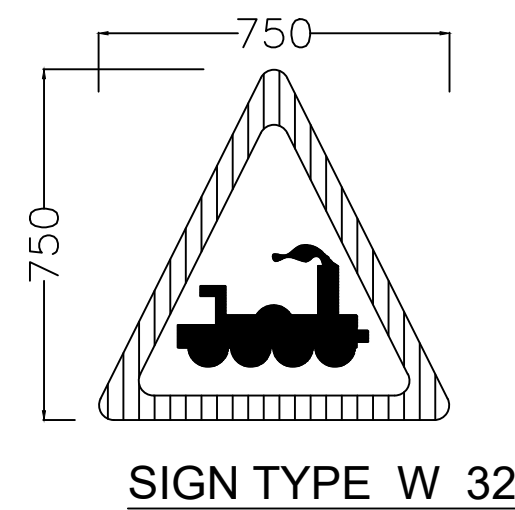
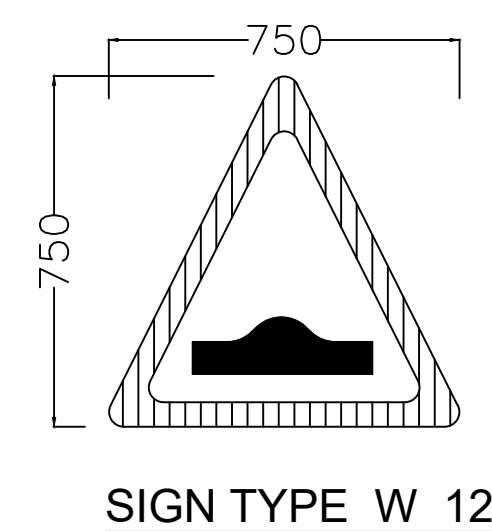
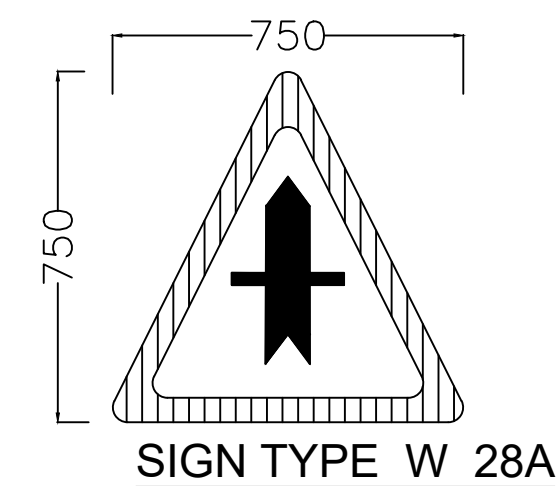
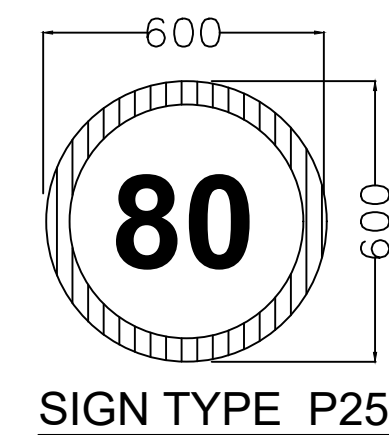
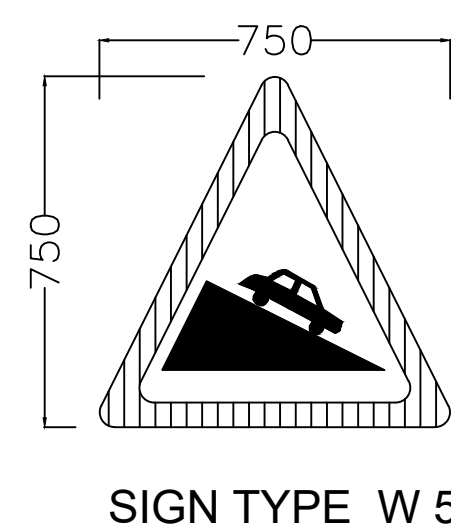
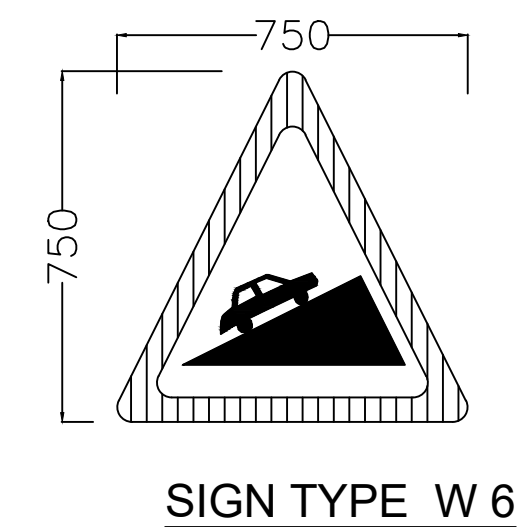
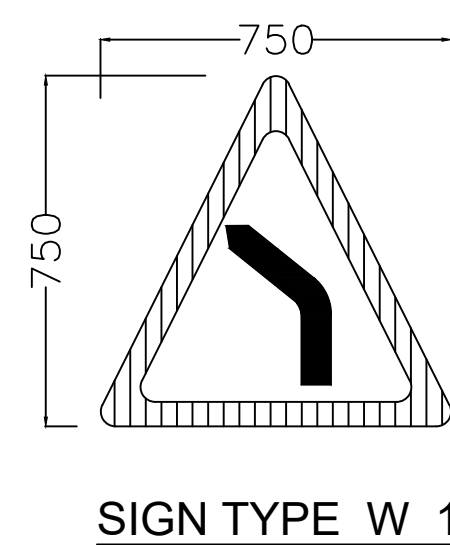
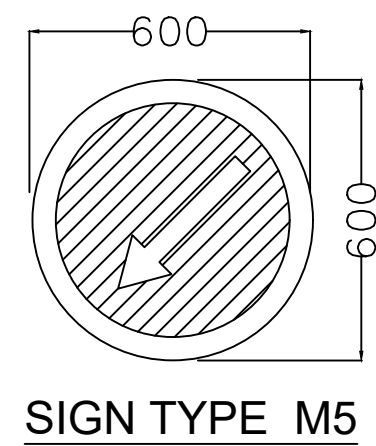
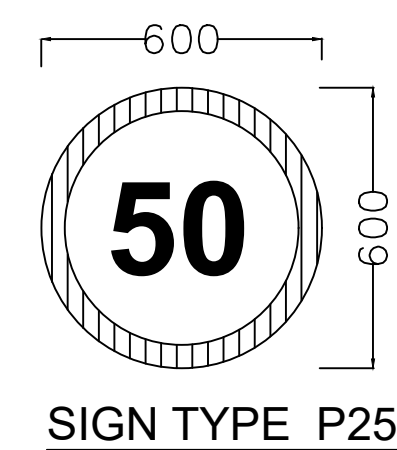
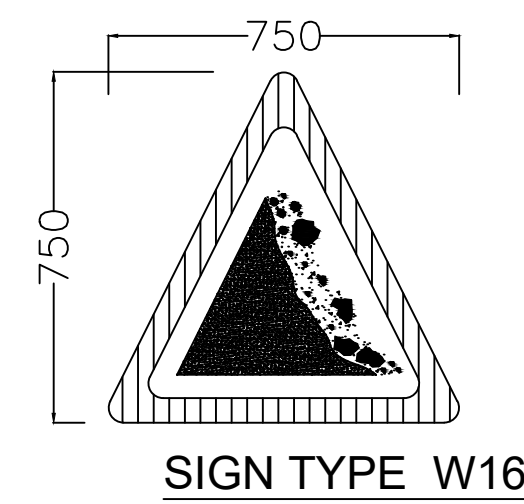
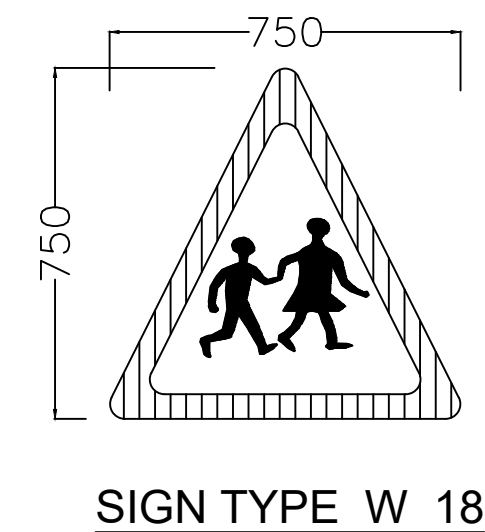
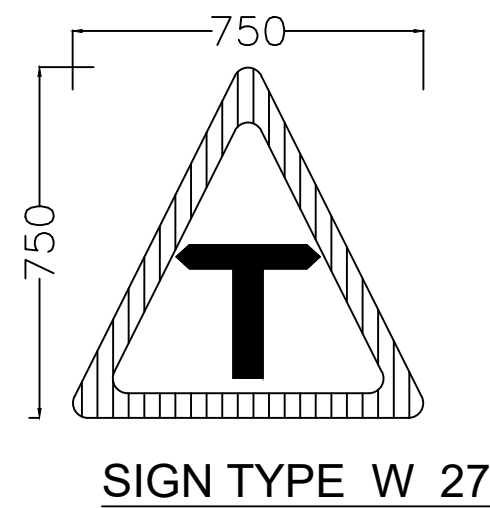
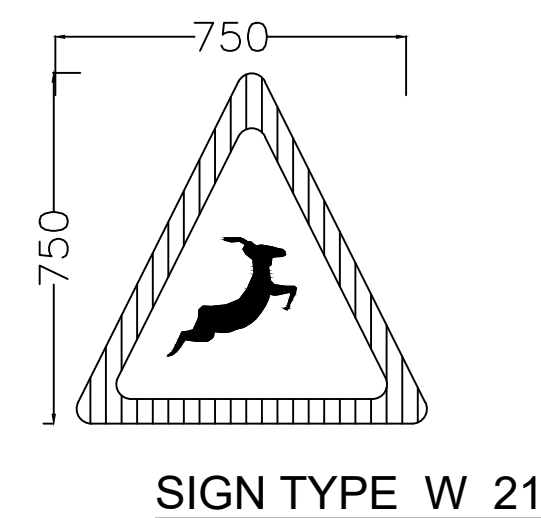
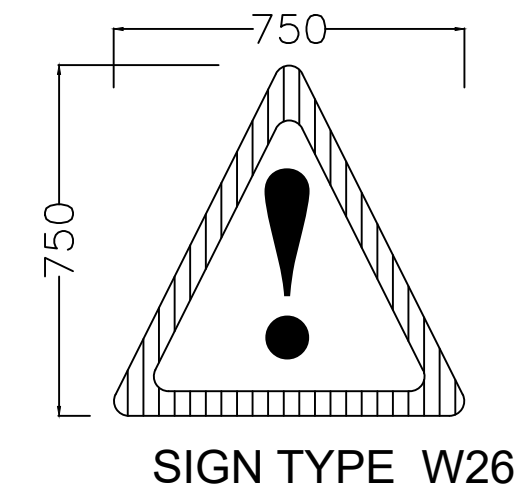
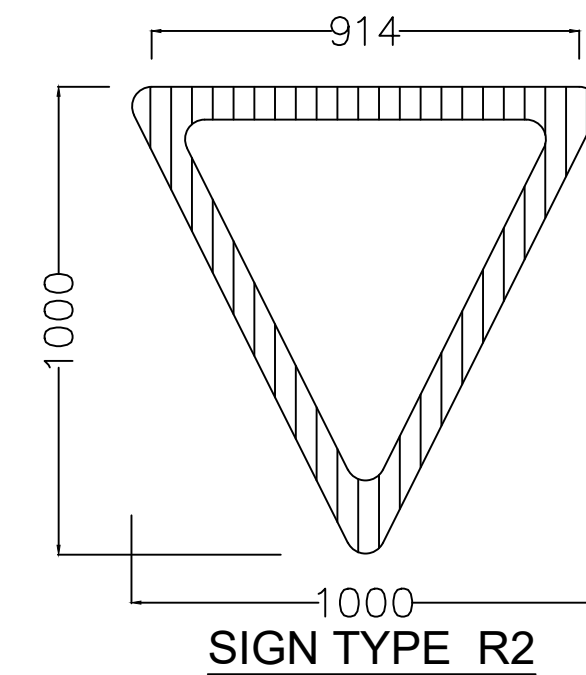
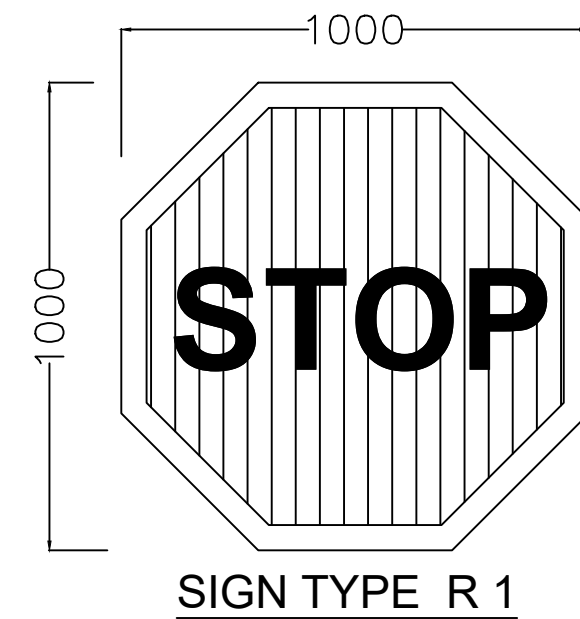
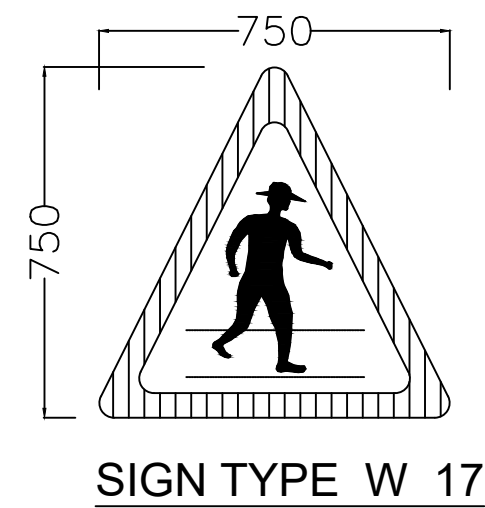
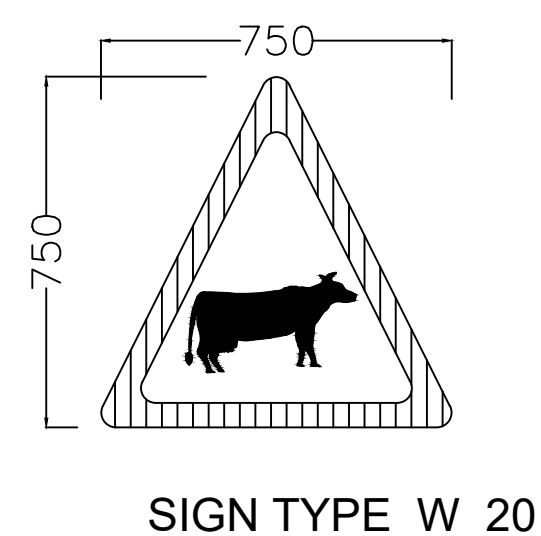
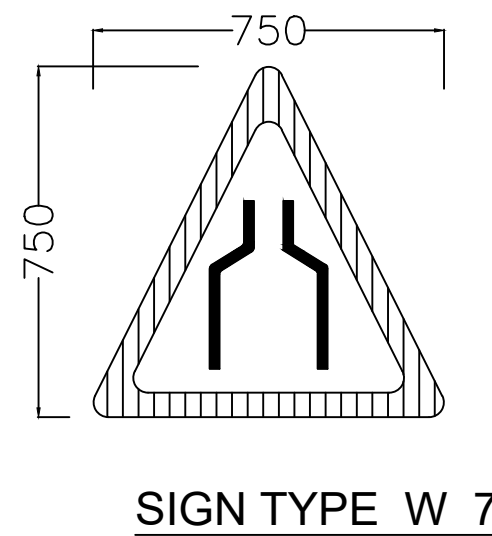
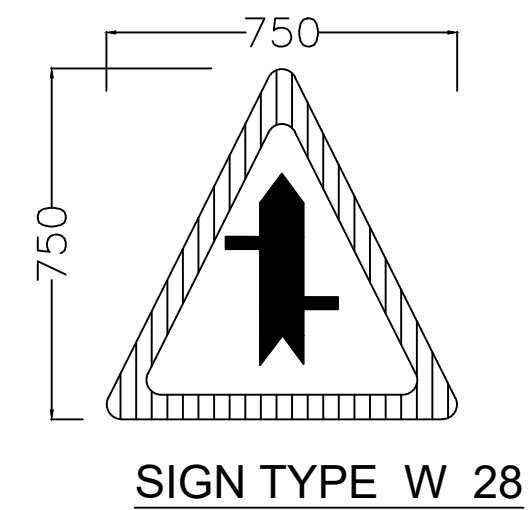
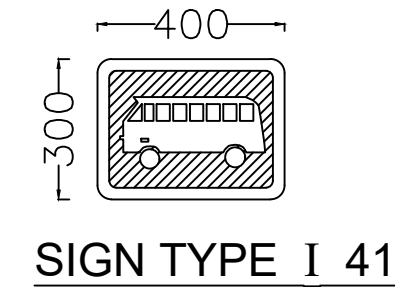
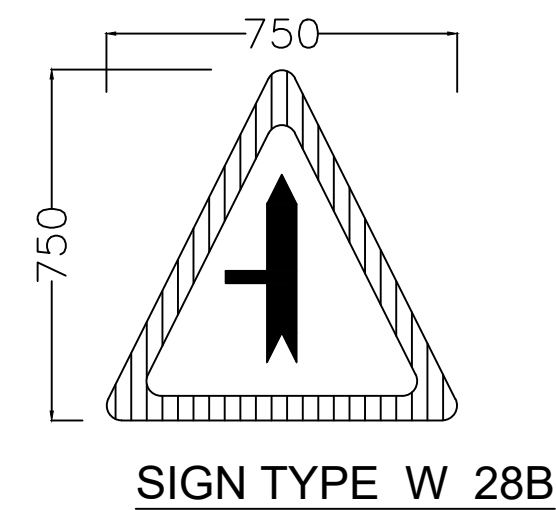
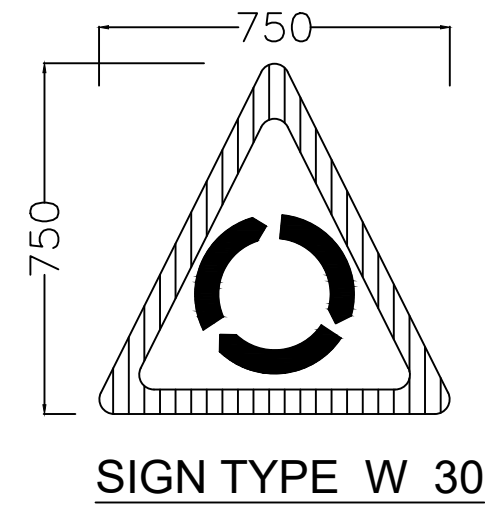
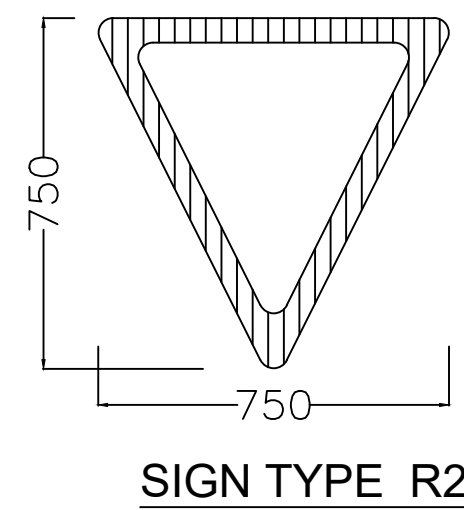
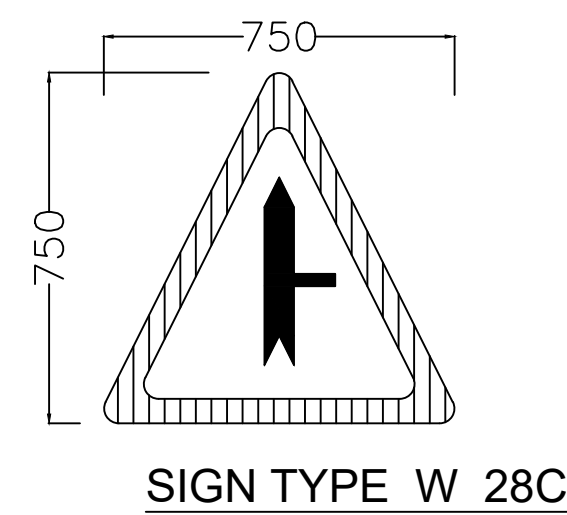
DRAWING TITLE:
**STANDARD DRAWING -
STANDARD - ROAD SIGNS**

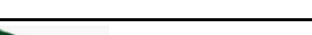
DRAWN BY: S.W.O
DESIGNED BY: C.N.M
CHECKED BY: M.J.N

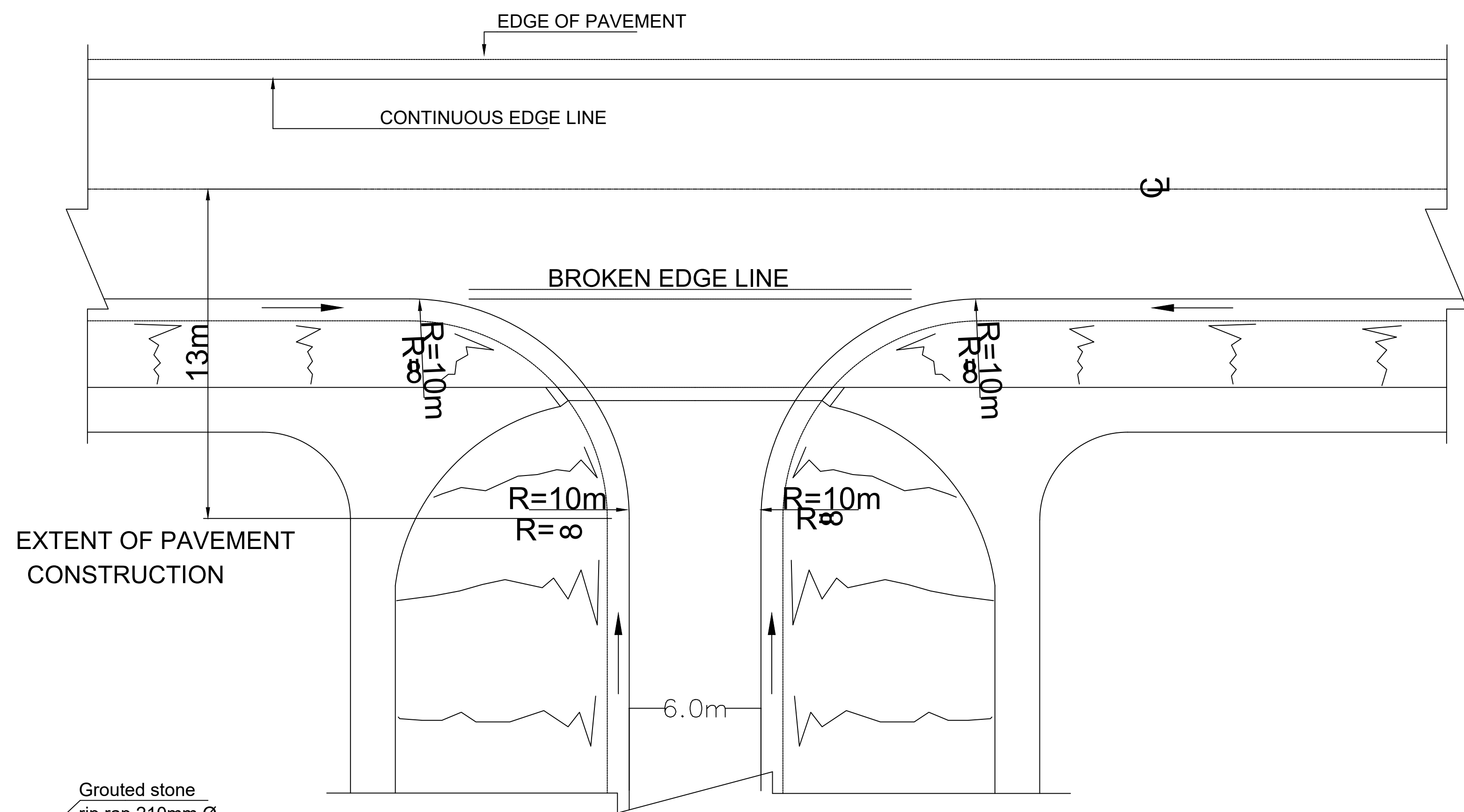
Scale: AS SHOWN

Drg No.
CE1045/SD/GM/01

Date : **MARCH 2025**

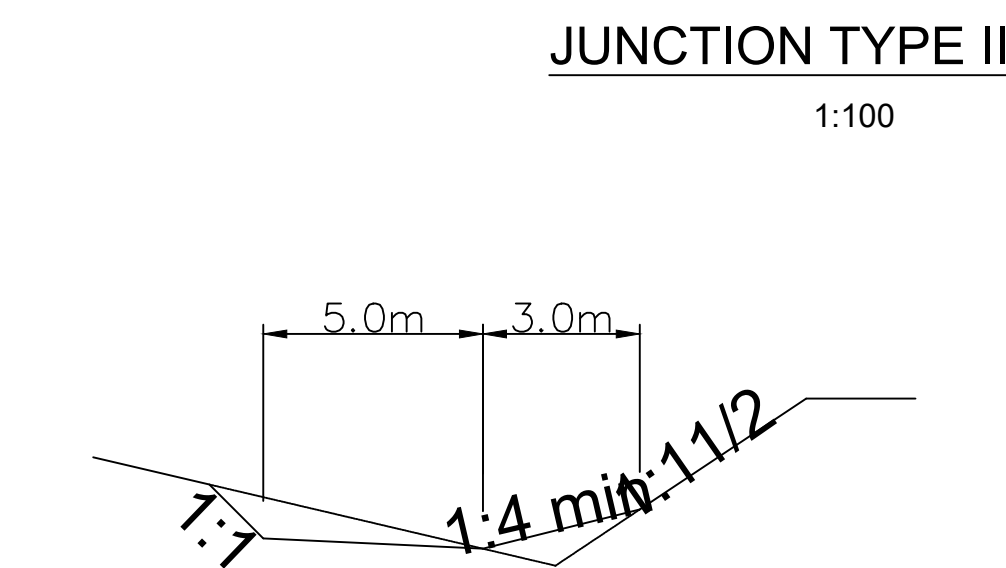


REVISIONS	No.	DATE	DESCRIPTION	 Kenya Rural Roads Authority Bara Bara Plaza, P.O. Box 48151- 00100, Nairobi, Kenya	DIRECTOR GENERAL		Consultant:  Runji Consulting Group Ltd Engineering & Project Management. 3, Kindaruma Road (Off Ngong Road) P.O. Box 68053-00200 Nairobi Tel. (020) 2717213/4	PROJECT TITLE: FINAL DETAILED ENGINEERING DESIGN OF GATHIGA - MATERI (ROAD) BATCH 2	DRAWING TITLE: STANDARD DRAWING - STANDARD - ROAD SIGNS INSTALLATION	DRAWN BY: S.W.O DESIGNED BY: C.N.M CHECKED BY: M.J.N	Drg No. CE1045/SD/GM/02
					DIRECTOR (PLANNING , DESIGN &ENVIRONMENT)						
										Scale: AS SHOWN	Date : MARCH 2025



1. R_c =CONTROL RADIUS DEPENDANT UPON VEHICLE TURNING CHARACTERISTICS RECOMMENDED VALUE 15m.
2. THE RATIO R_1 : R_2 : R_3 TO BE 2:1:3 AND THE RECOMMENDED VALUE FOR R_2 IS 12.0m
3. W_1 SHALL EQUAL MINOR ROAD LANE WIDTH BUT SHALL NOT BE LESS THAN 3.0m
4. W_2 SHALL EQUAL 5.5m (EXCLUDING OFFSETS TO RAISED KERBS)

1:75



1:100

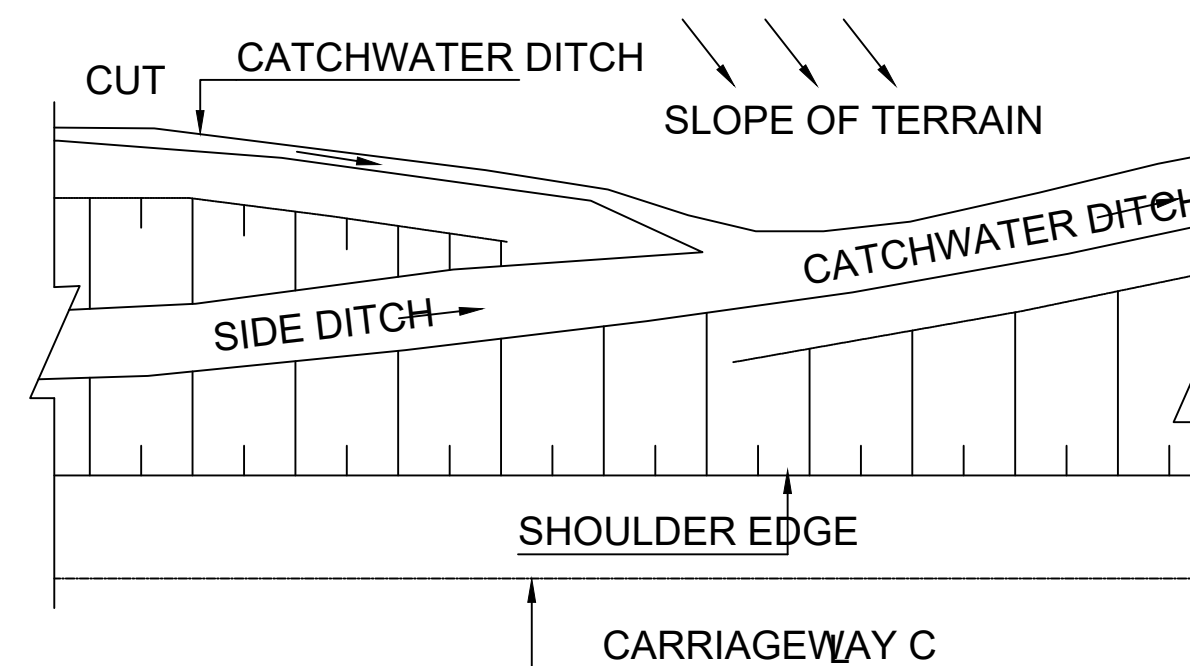
OF A SCOUR CHECK

1:50

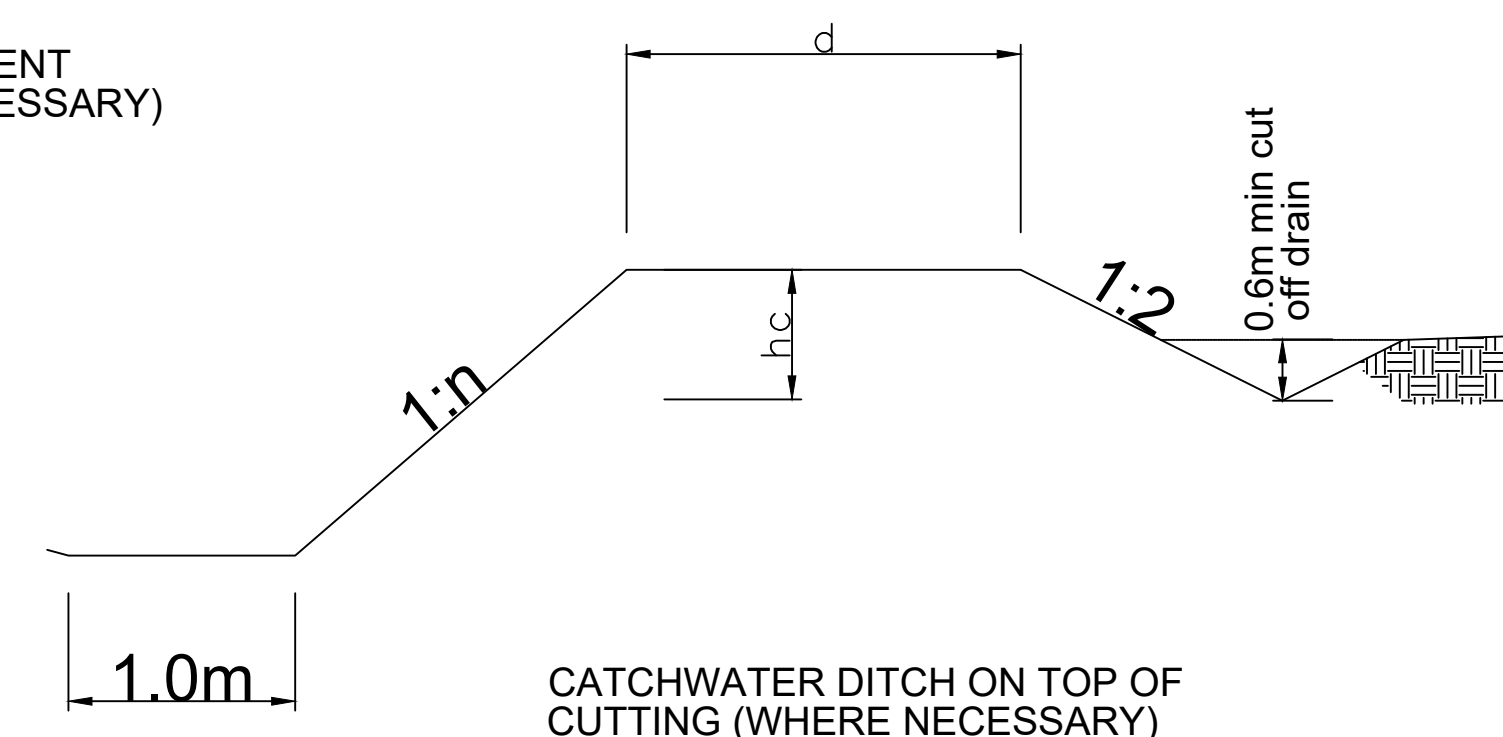
R1 = 24m
R2 = 12m
R3 = 36m
Rc = 15m

1. JUNCTION TYPE I WILL BE USED FOR ALL JUNCTION WITH CLASSIFIED ROADS AND TYPE II FOR THE OTHER JUNCTIONS EG SCHOOL ETC.
2. DIMENSIONS IN METERS UNLESS STATED OTHERWISE.
3. ROAD MARKINGS TO BE CARRIED OUT IN ACCORDANCE WITH M.O.P.W. ROAD DESIGN MANUAL.
4. EXTENT OF PROTECTION WORKS AT INLET AND OUTLET OF 600mm PIPE CULVERT TO BE AS DIRECTED BY THE ENGINEER.
5. CENTRE LINE OF SIDE DRAIN TO BE MAINTAINED AT CONSTANT DISTANCE FROM EGDE OF PAVEMENT.
6. MAINROAD CROSS-SECTION TO BE APPLIED ON SIDE ROAD CONSTRUCTION TO LIMIT OF BITUMEN SURFACING.
7. FOR PRIVATE ACCESSSES OR AS DIRECTED, PAVEMENT BEYOND EDGE OF MAIN ROAD TO BE 150mm COMPACTED GRAVEL.

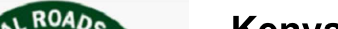
LONGITUDINAL SECTION II

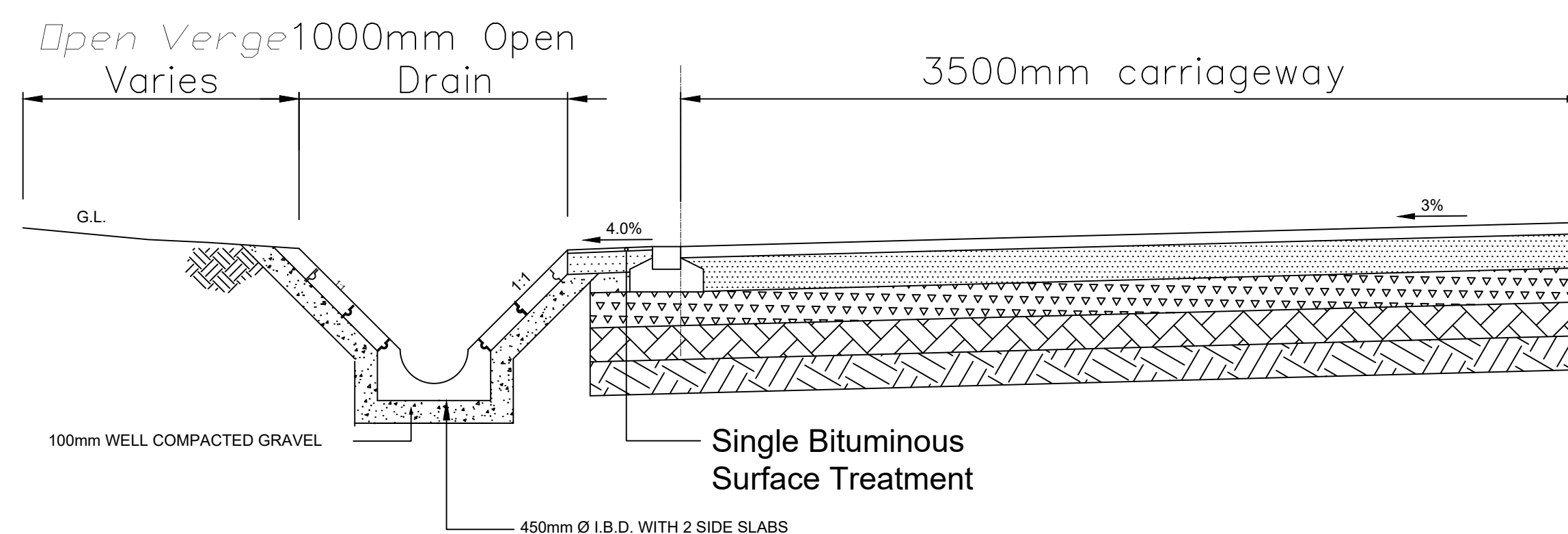
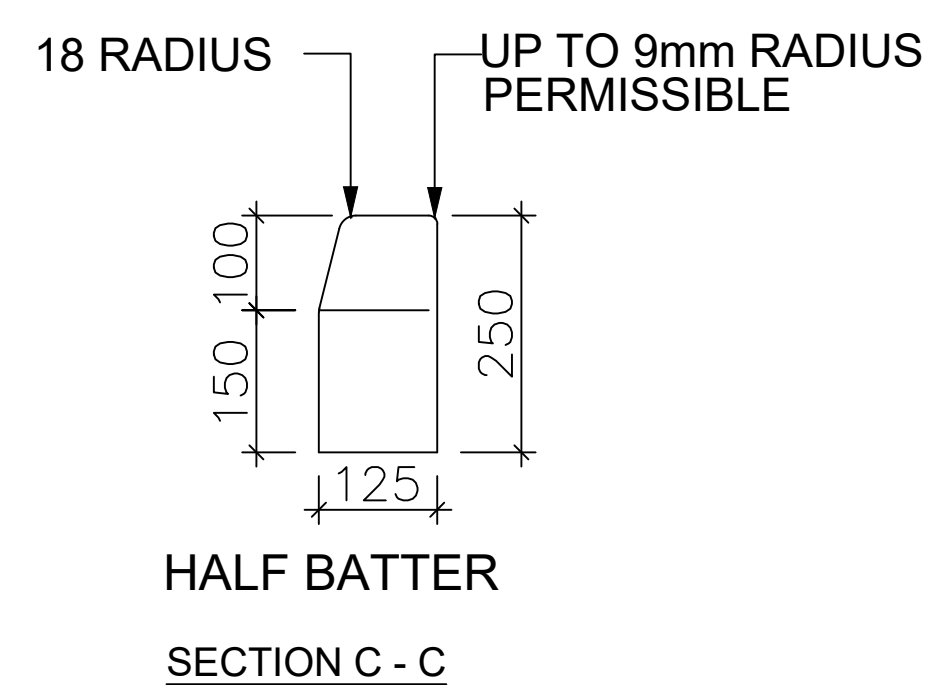
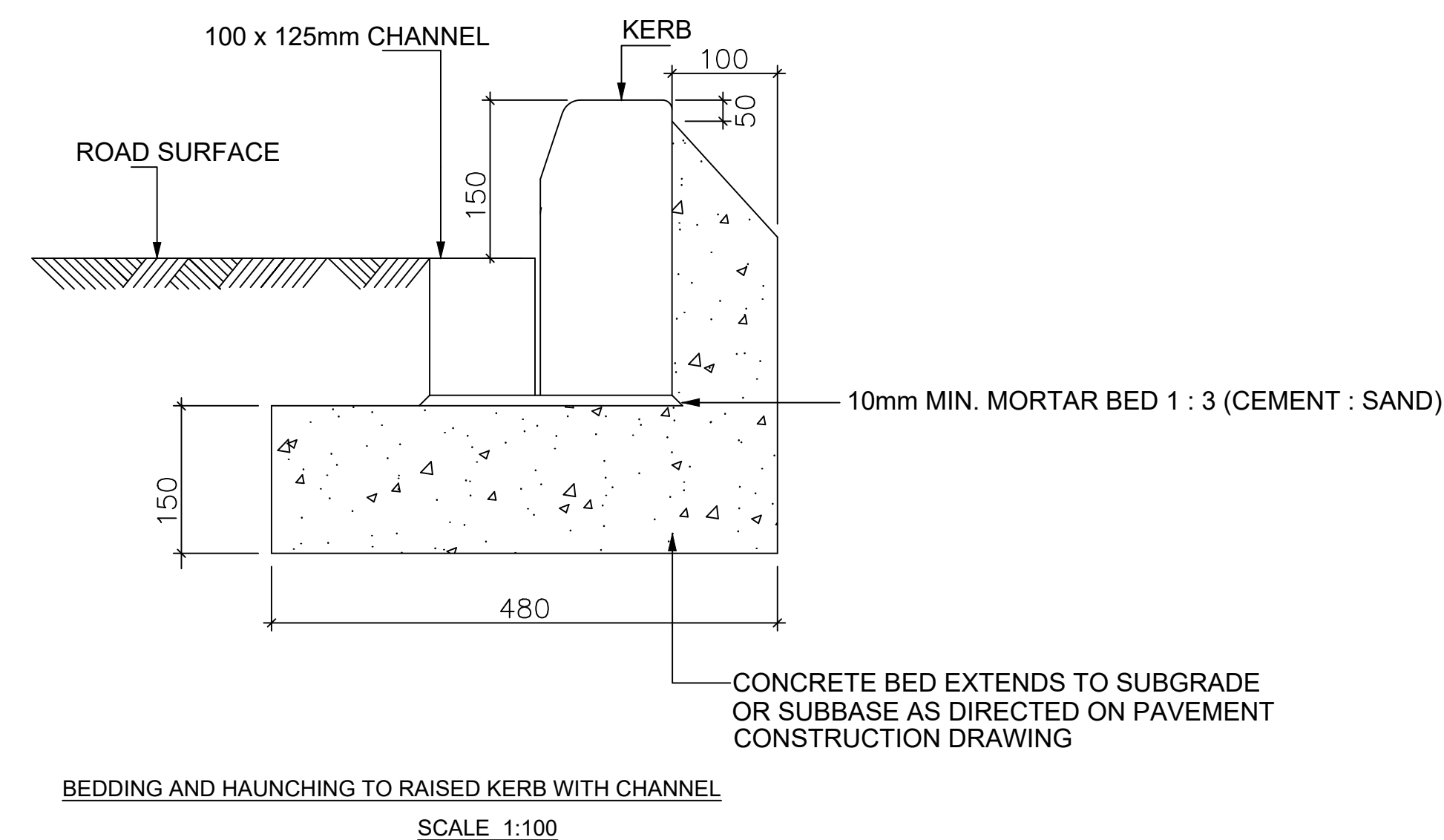
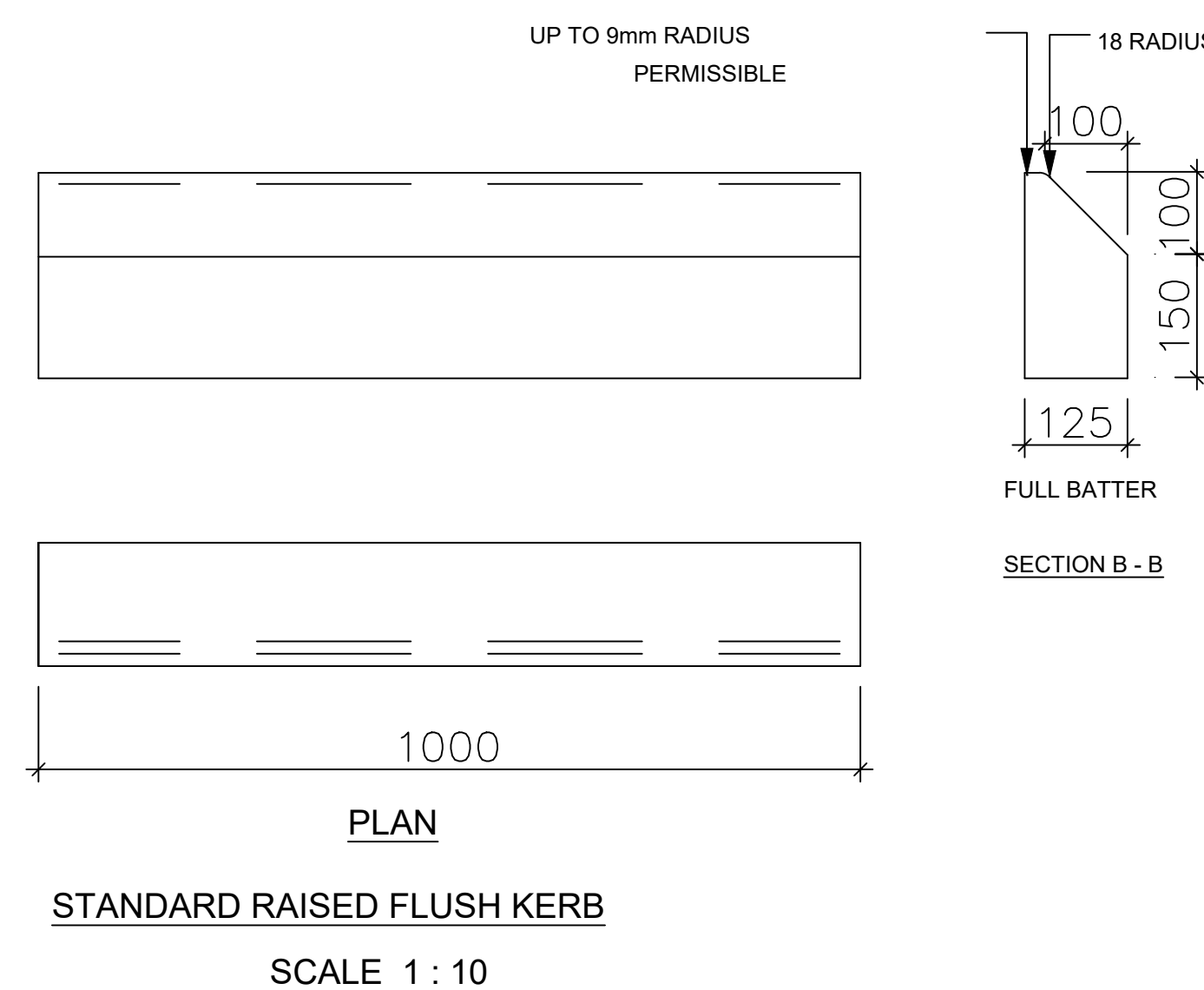
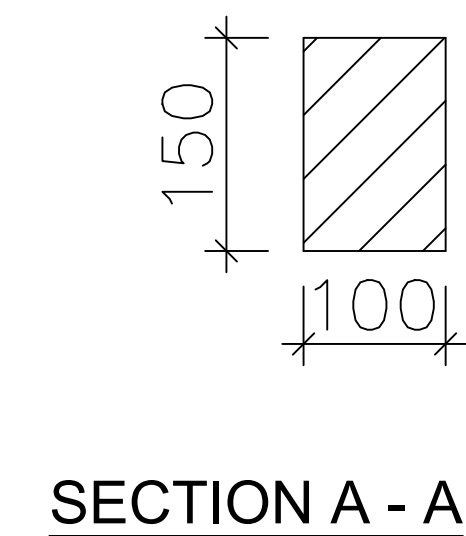
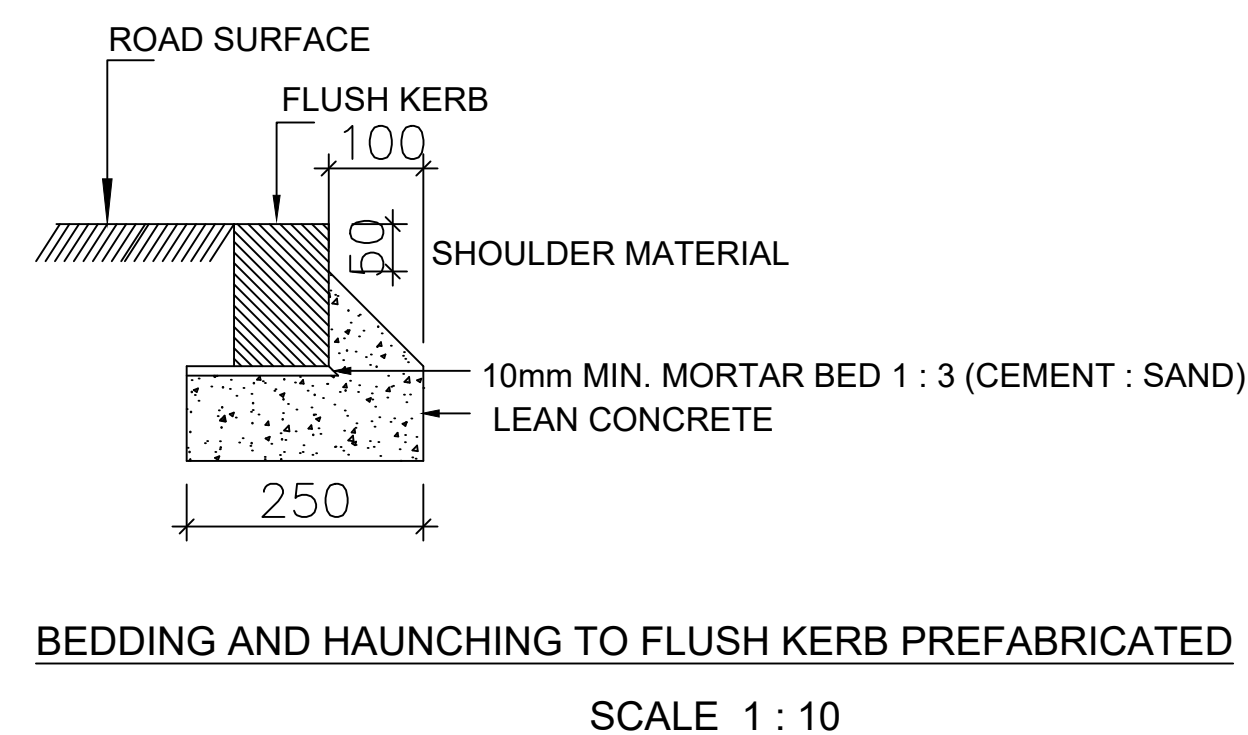


PLAN



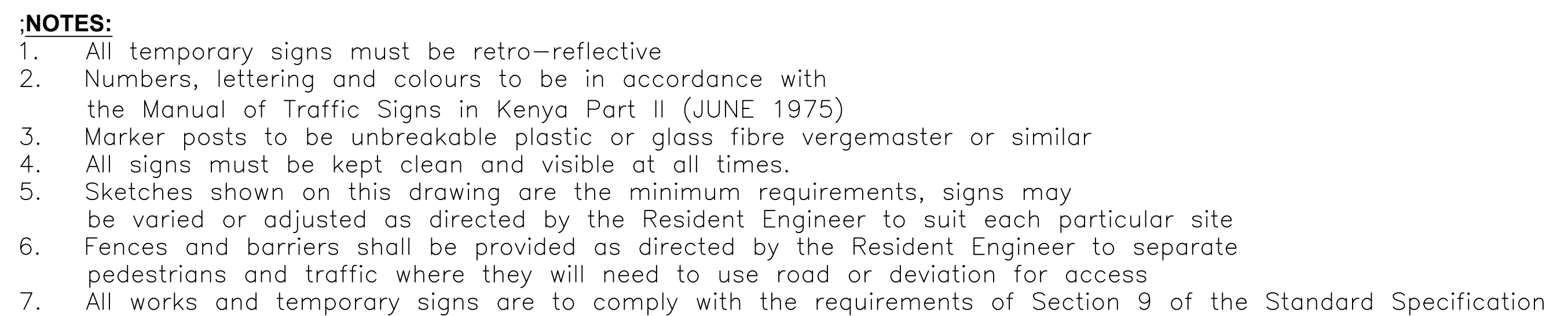
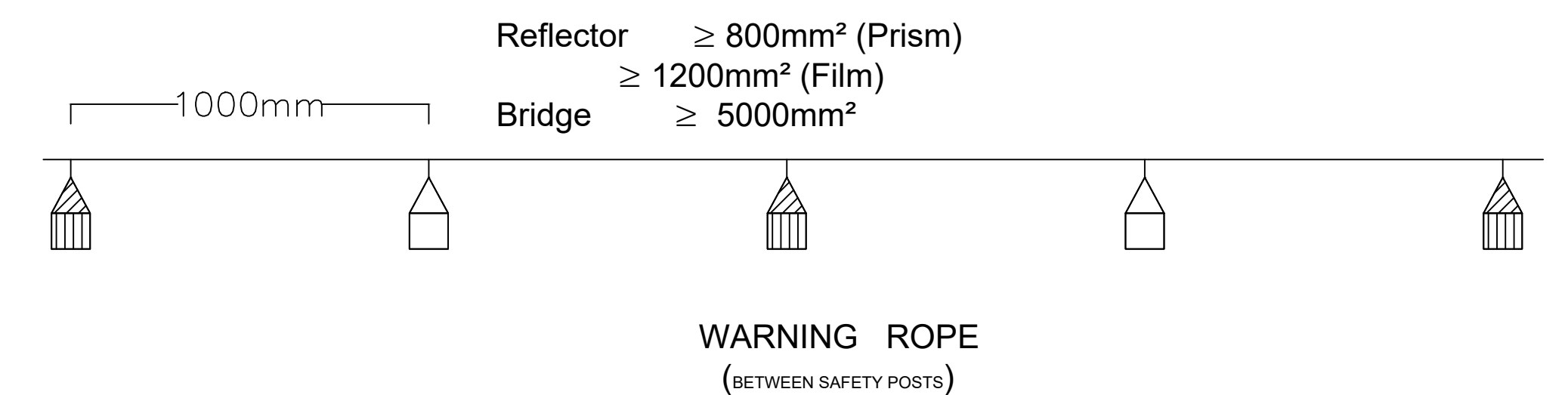
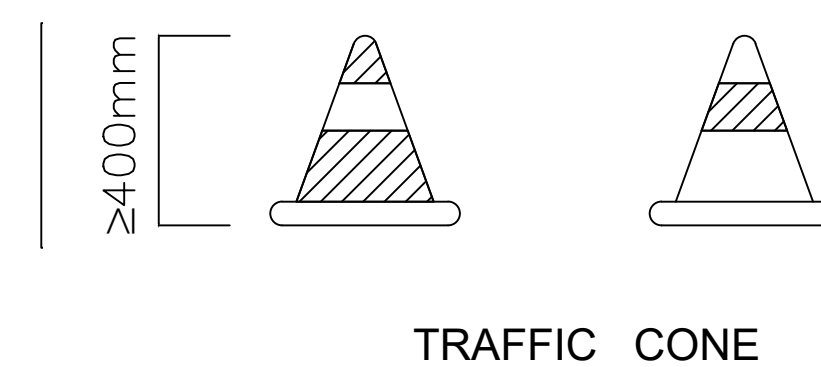
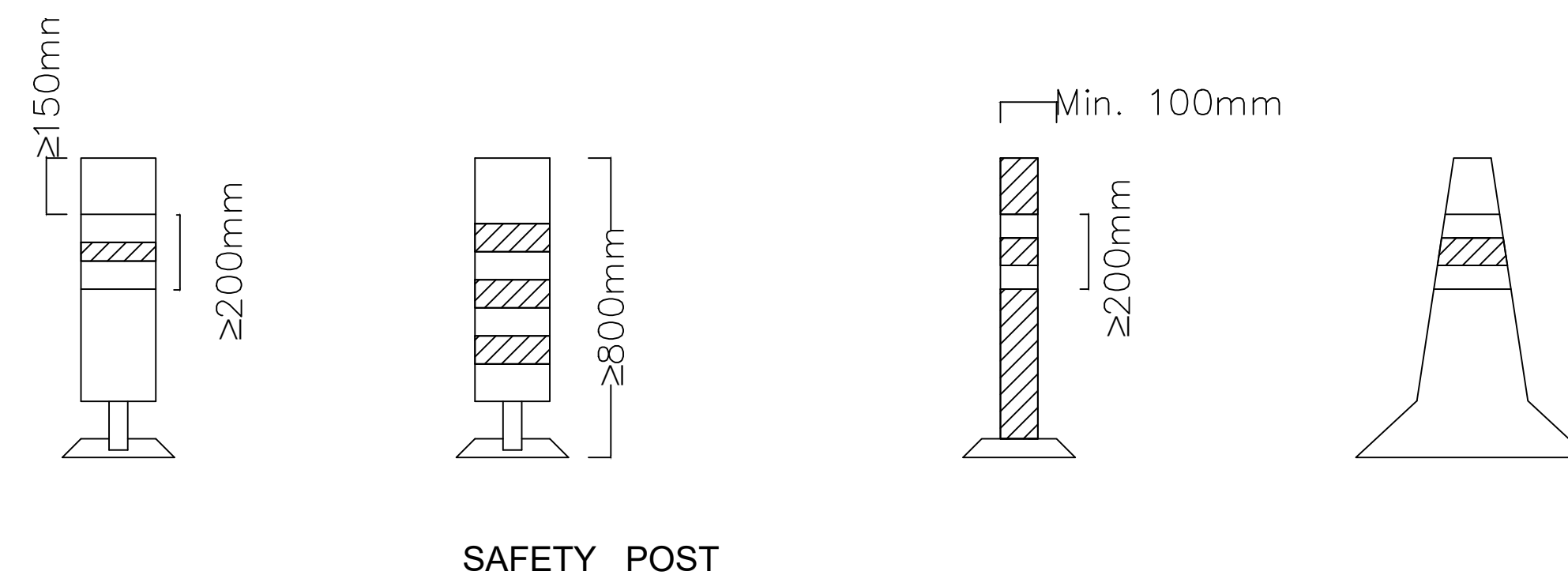
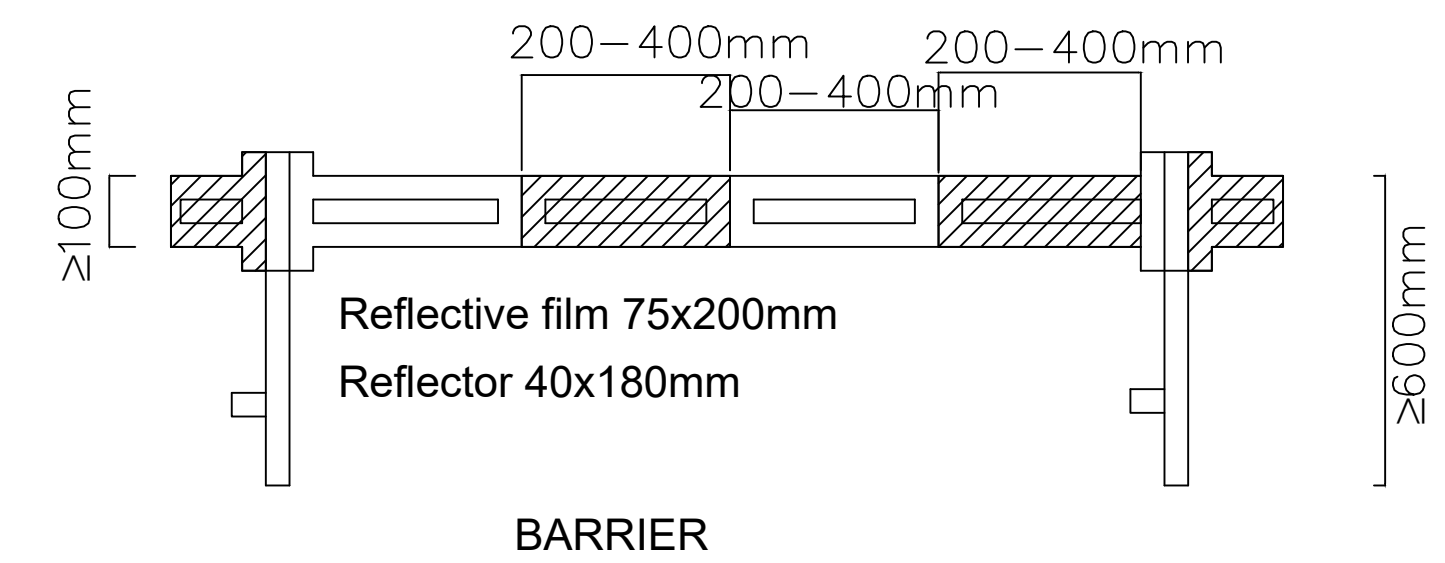
LONGITUDINAL SECTION I

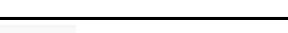
REVISIONS	No.	DATE	DESCRIPTION	 Kenya Rural Roads Authority Bara Bara Plaza, P.O. Box 48151-00100, Nairobi. Kenya	DIRECTOR GENERAL	Consultant:  Runji Consulting Group Ltd Engineering & Project Management. 3, Kinduruma Road (Off Ngong Road) P.O. Box 68053-00100 Nairobi Tel. (020) 2717213/4	PROJECT TITLE: FINAL DETAILED ENGINEERING DESIGN OF GATHIGA - MATERI (ROAD) BATCH 2	DRAWING TITLE: STANDARD DRAWING - STANDARD - MISC MINOR JUNCTION	DRAWN BY: S.W.O DESIGNED BY: C.N.M CHECKED BY: M.J.N Scale: AS SHOWN	Drg No. CE1045/SD/GM/03 Date : MARCH 2025
					DIRECTOR (PLANNING , DESIGN &ENVIRONMENT)					

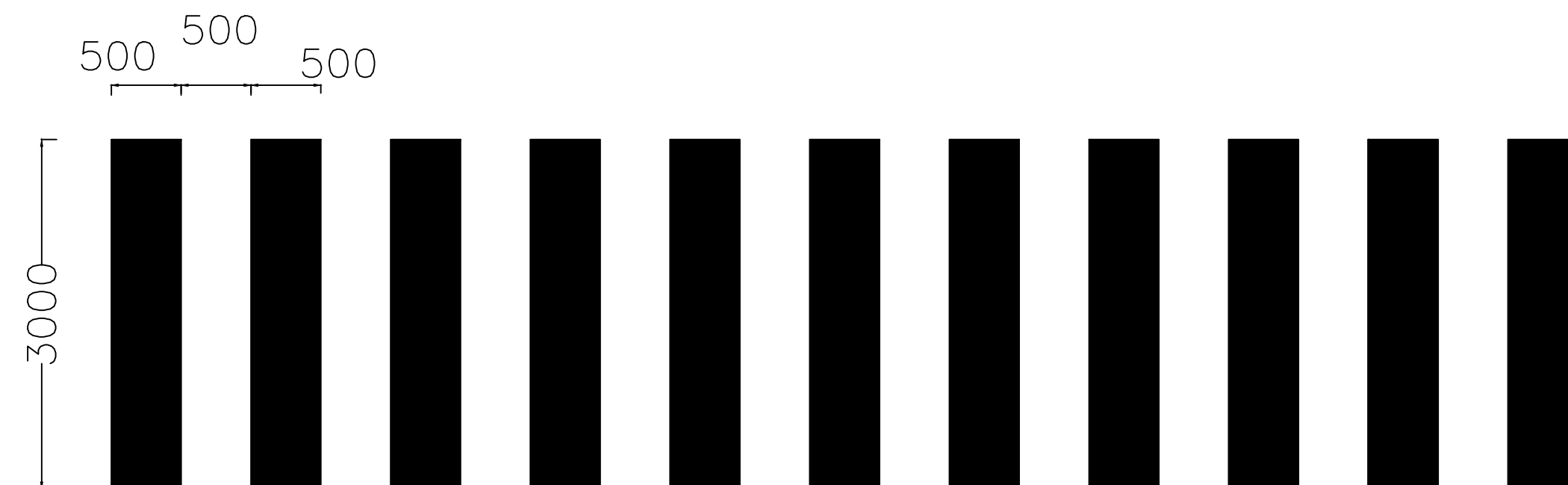
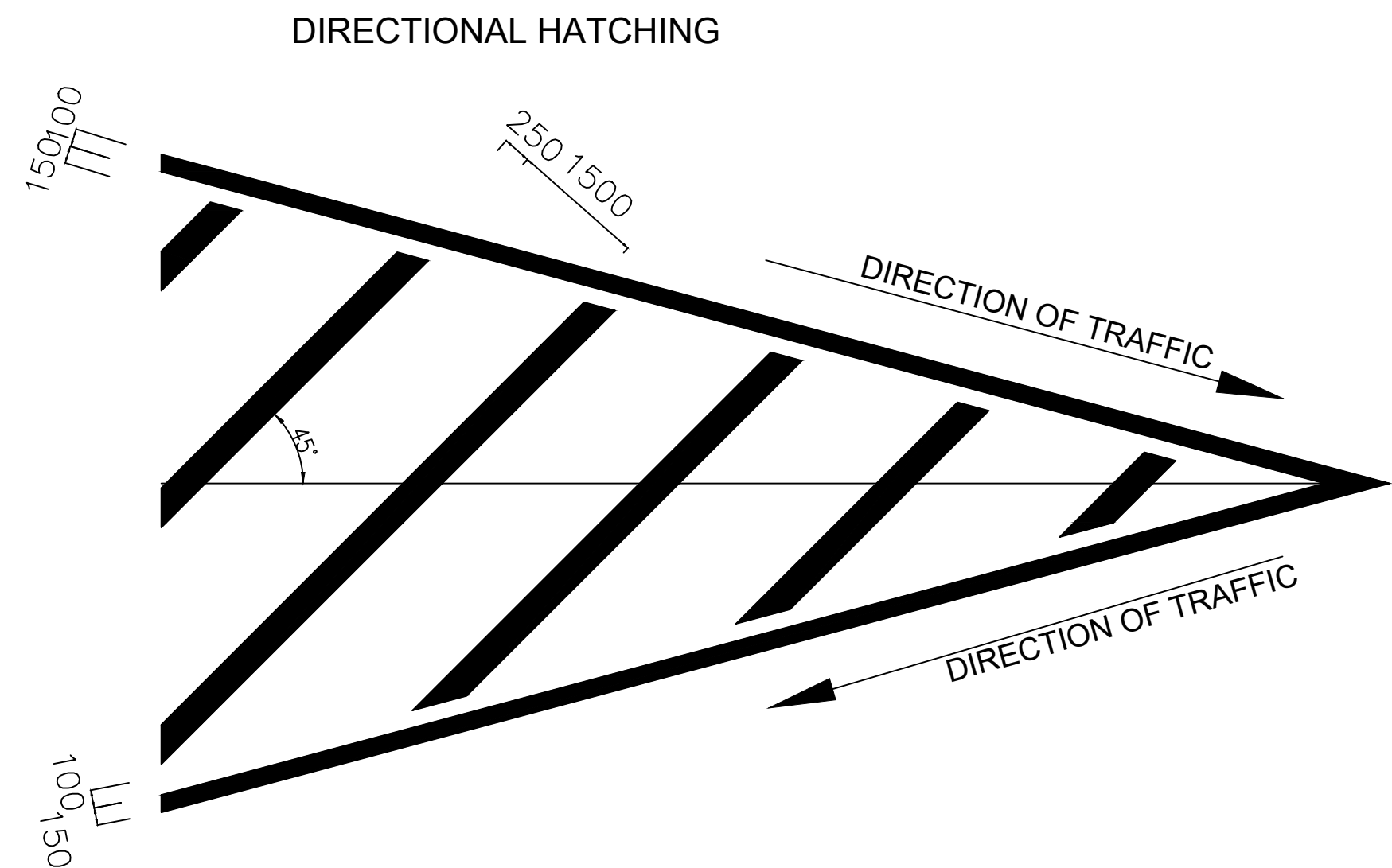
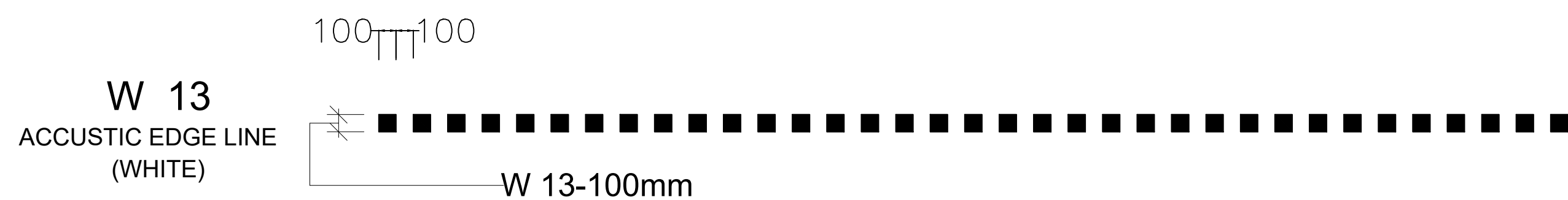
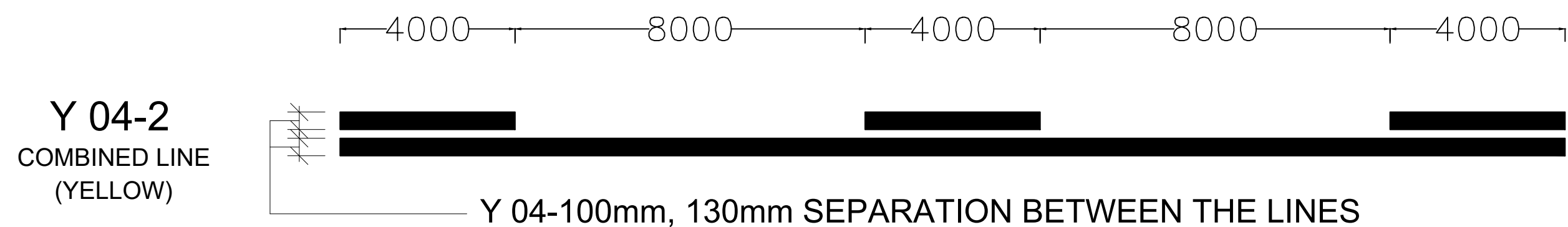
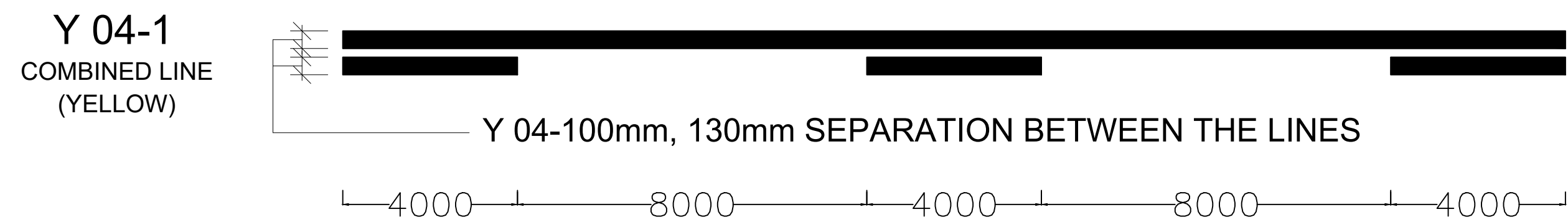
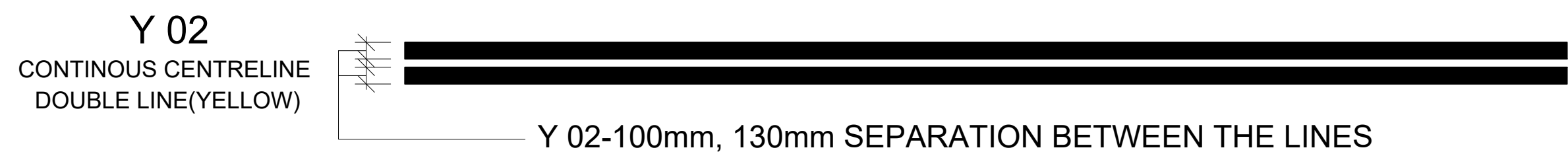


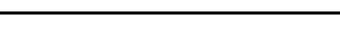
TYPICAL ROAD CROSS-SECTION FOR TOWNSHIP ROADS AND PARKING

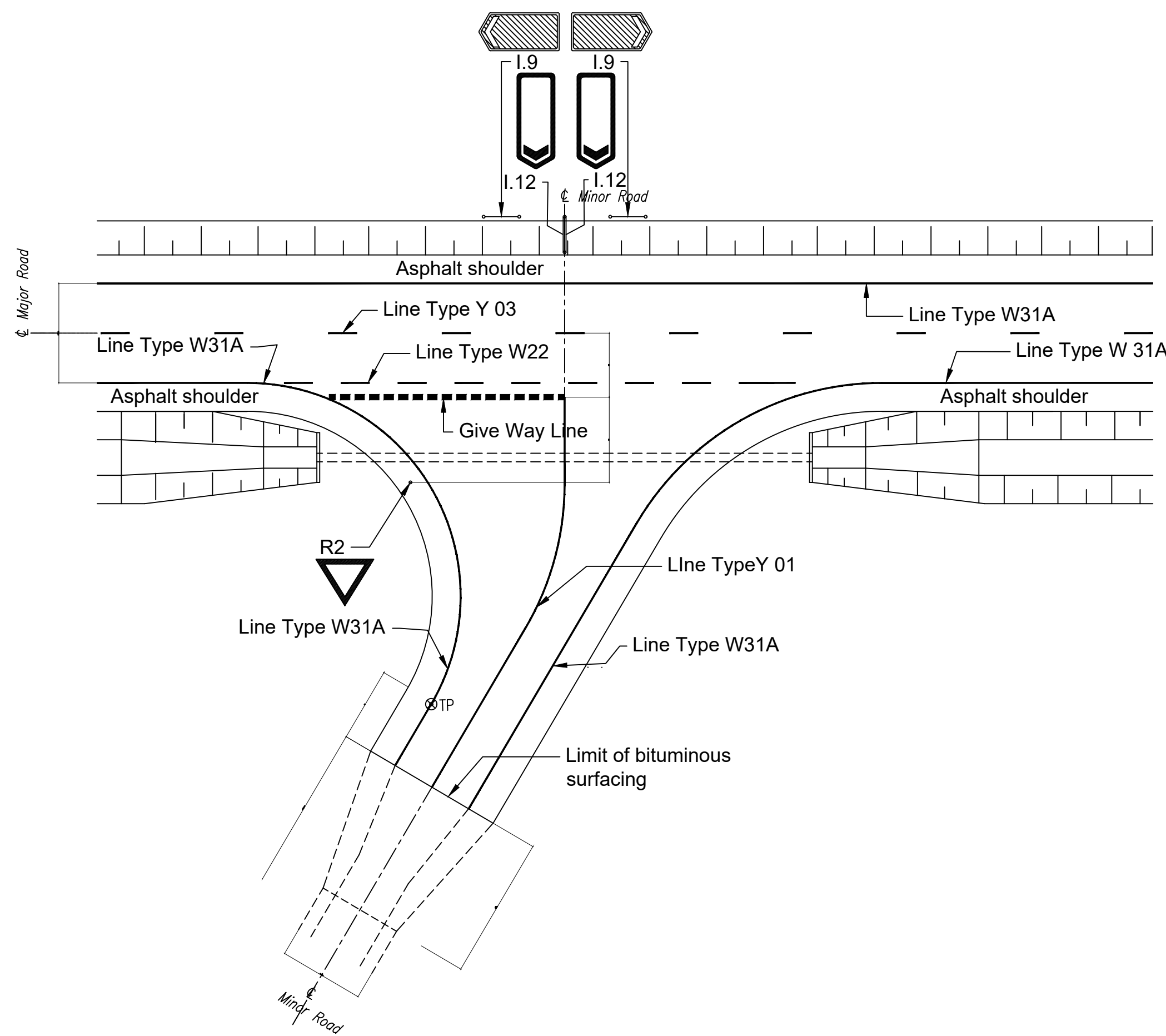
REVISIONS	No.	DATE	DESCRIPTION	 Kenya Rural Roads Authority Bara Bara Plaza, P.O. Box 48151- 00100, Nairobi. Kenya	DIRECTOR GENERAL		Consultant:  Runji Consulting Group Ltd Engineering & Project Management. 3, Kindaruma Road (Off Ngong Road) P. O. Box 68053-00200 Nairobi Tel. (020) 2717213/4	PROJECT TITLE: FINAL DETAILED ENGINEERING DESIGN OF GATHIGA - MATERI (ROAD) BATCH 2	DRAWING TITLE: STANDARD DRAWING - MISC URBAN ROAD DETAIL	DRAWN BY: S.W.O DESIGNED BY: C.N.M CHECKED BY: M.J.N Scale: AS SHOWN	Drg No. CE1045/SD/GM/04 Date : MARCH 2025
					DIRECTOR (PLANNING , DESIGN &ENVIRONMENT)						



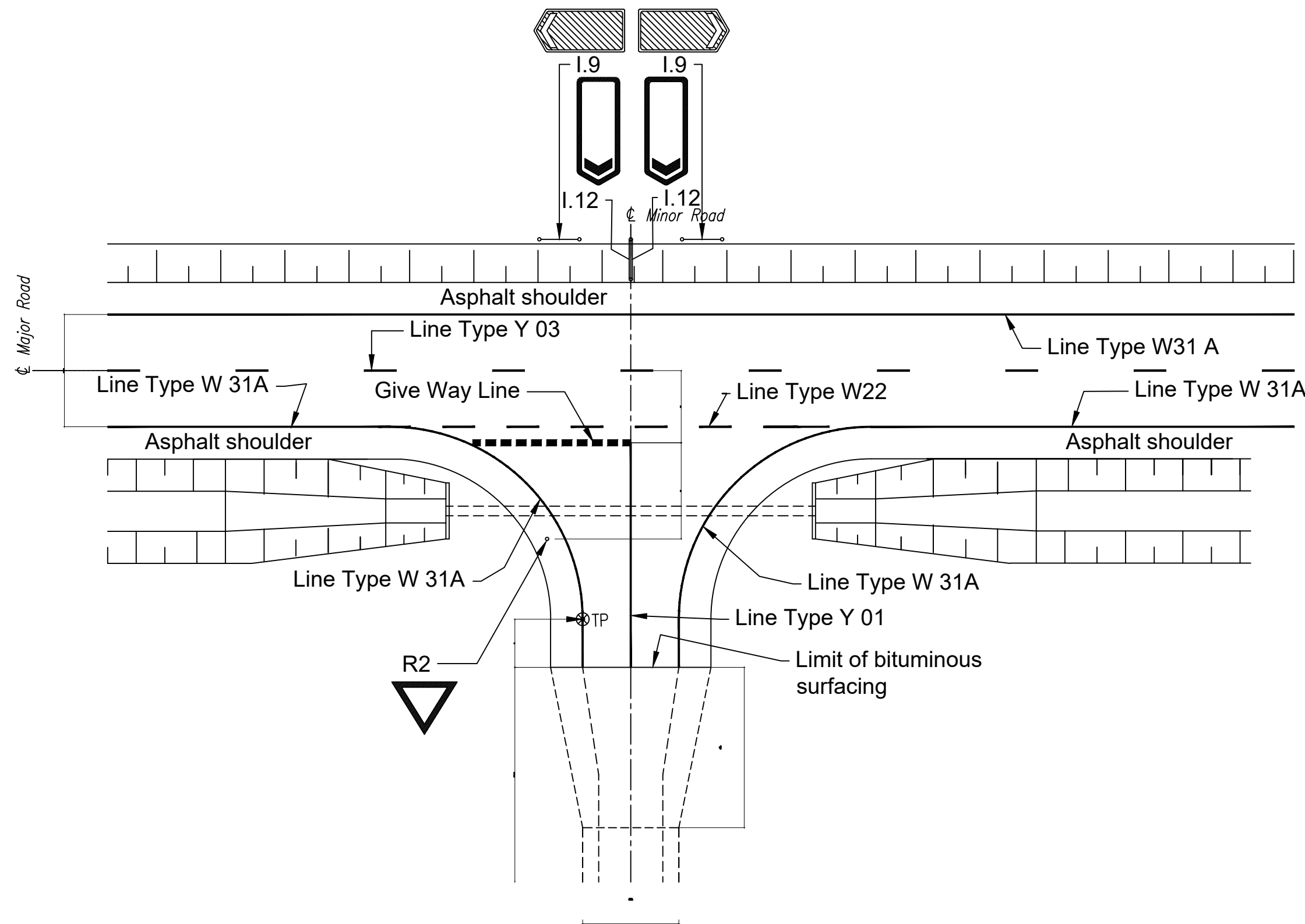
REVISIONS	No.	DATE	DESCRIPTION	 Kenya Rural Roads Authority Bara Bara Plaza, P.O. Box 48151- 00100, Nairobi. Kenya	DIRECTOR GENERAL	Consultant:  Runji Consulting Group Ltd Engineering & Project Management. 3, Kinduma Road (Off Ngong Road) P. O. Box 68053-00200 Nairobi Tel. (020) 2717213/4	PROJECT TITLE: FINAL DETAILED ENGINEERING DESIGN OF GATHIGA - MATERI (ROAD) BATCH 2	DRAWING TITLE: STANDARD DRAWING - TRAFFIC MANAGEMENT	DRAWN BY: S.W.O DESIGNED BY: C.N.M CHECKED BY: M.J.N	Drg No. CE1045/SD/GM/05		
											Scale: AS SHOWN	Date : MARCH 2025



REVISIONS	No.	DATE	DESCRIPTION	 Kenya Rural Roads Authority Bara Bara Plaza, P.O. Box 48151- 00100, Nairobi. Kenya	DIRECTOR GENERAL		Consultant:  Runji Consulting Group Ltd Engineering & Project Management. 3, Kindaruma Road (Off Ngong Road) P. O. Box 68053-00200 Nairobi Tel. (020) 2717213/4	PROJECT TITLE: FINAL DETAILED ENGINEERING DESIGN OF GATHIGA - MATERI (ROAD) BATCH 2	DRAWING TITLE: STANDARD DRAWING - ROAD MARKING	DRAWN BY: S.W.O DESIGNED BY: C.N.M CHECKED BY: M.J.N	Drg No. CE1045/SD/GM/07
					DIRECTOR (PLANNING , DESIGN &ENVIRONMENT)						



ROAD MARKINGS AND SIGNS LAYOUT AT
TYPE C1 JUNCTIONS
Scale 1:50



ROAD MARKINGS AND SIGNS MOUNTING AT
TYPE C2 JUNCTIONS
Scale 1:50

NOTES:

1. Dimensions and road sign position details are in metres.
2. For layout details of road junction/access types, see Dwg. no. TYP-ALG-003.
3. For standard road marking Line Type details, see Dwg. no. TYP-ALG-006.
4. For road sign details, see Dwg. nos. TYP-SIG-005 - 006.
5. For sign board support and mounting details, see Dwg no. TYP-SIG-003.
6. Sign mounting details at junction type A1 are similar to those at junction type C2, unless otherwise specified by the Resident Engineer

REVISIONS	No.	DATE	DESCRIPTION



Kenya Rural Roads Authority
Bara Bara Plaza,
P.O. Box 48151- 00100, Nairobi, Kenya

DIRECTOR GENERAL
DIRECTOR (PLANNING , DESIGN &ENVIRONMENT)

Consultant:
Runji Consulting Group Ltd
Engineering & Project Management.
3, Kindaruma Road (Off Ngong Road)
P. O. Box 68053-00200 Nairobi
Tel. (020) 2717213/4

PROJECT TITLE:
FINAL DETAILED ENGINEERING DESIGN OF
GATHIGA - MATERI (ROAD)
BATCH 2

DRAWING TITLE:
STANDARD DRAWING -
MISC MARKING ON
JUNCTION

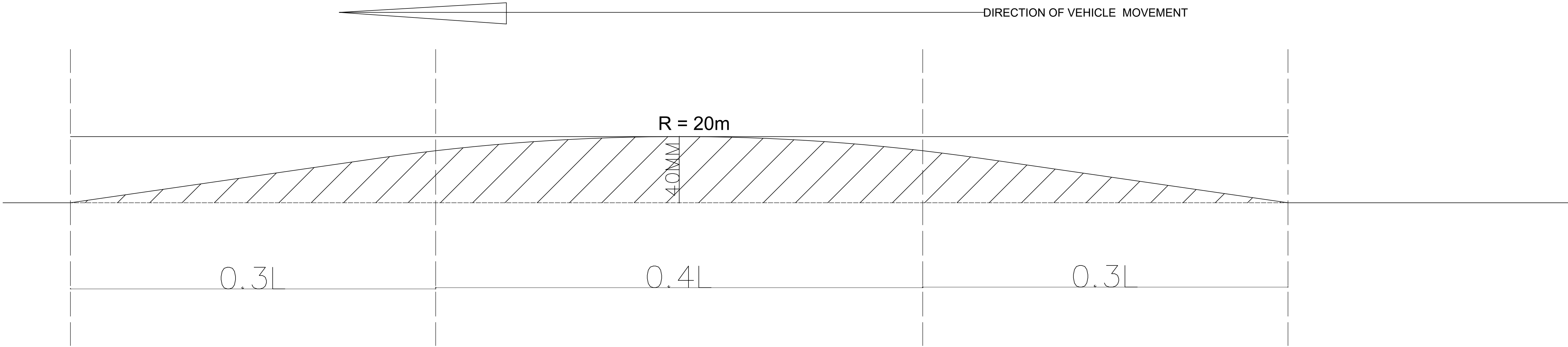
DRAWN BY: S.W.O
DESIGNED BY: C.N.M
CHECKED BY: M.J.N

Scale: AS SHOWN

Drg No.
CE1045/SD/GM/08

Date : MARCH 2025

SPEED BUMPS DETAILS



NOTE

When	Middle	Slope	Respective Speed
L =	0.4 x L	0.3 x L	
5m	2.0m	1.5m	50kph
4m	1.6m	1.2m	40kph
3m	1.2m	0.9m	30kph

No.	DATE	DESCRIPTION



Kenya Rural Roads Authority
Bara Bara Plaza,
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DIRECTOR GENERAL	
DIRECTOR (PLANNING , DESIGN &ENVIRONMENT)	

Consultant:



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PROJECT TITLE:
FINAL DETAILED ENGINEERING DESIGN OF GATHIGA - MATER (ROAD) BATCH 2

DRAWING TITLE:
STANDARD DRAWING - STANDARD - BUMPS

DRAWN BY: S.W.O DESIGNED BY: C.N.M CHECKED BY: M.J.N
Scale: AS SHOWN

Drg No. CE1045/SD/GM/09
Date : MARCH 2025