

ZAMBEZI RIVER AUTHORITY

Water! Today, Tomorrow
www.zambezira.org



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TENDER FOR THE 28.2KM NEW ACCESS ROAD - DEVILS GORGE HYDRO-ELECTRIC SCHEME

BOOK OF DRAWINGS

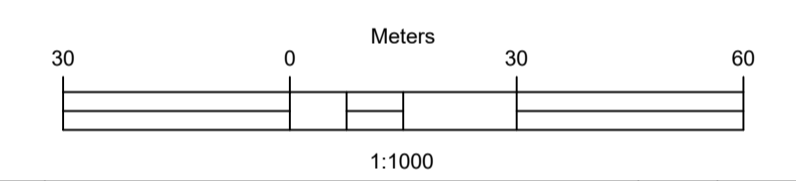
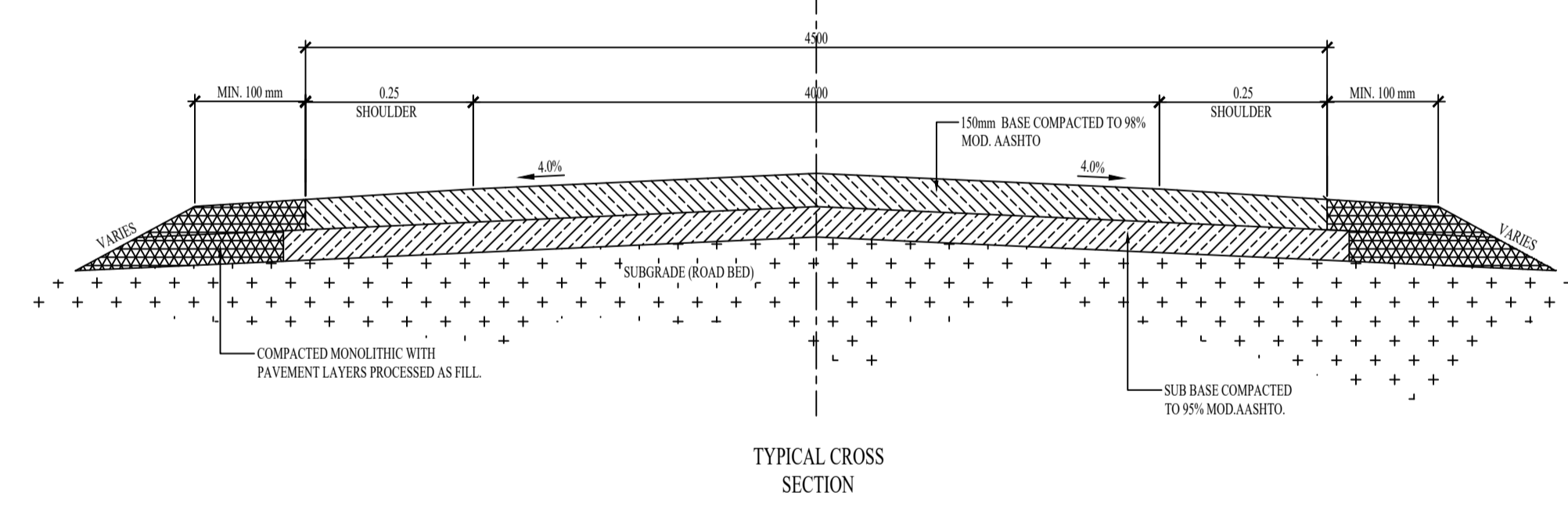
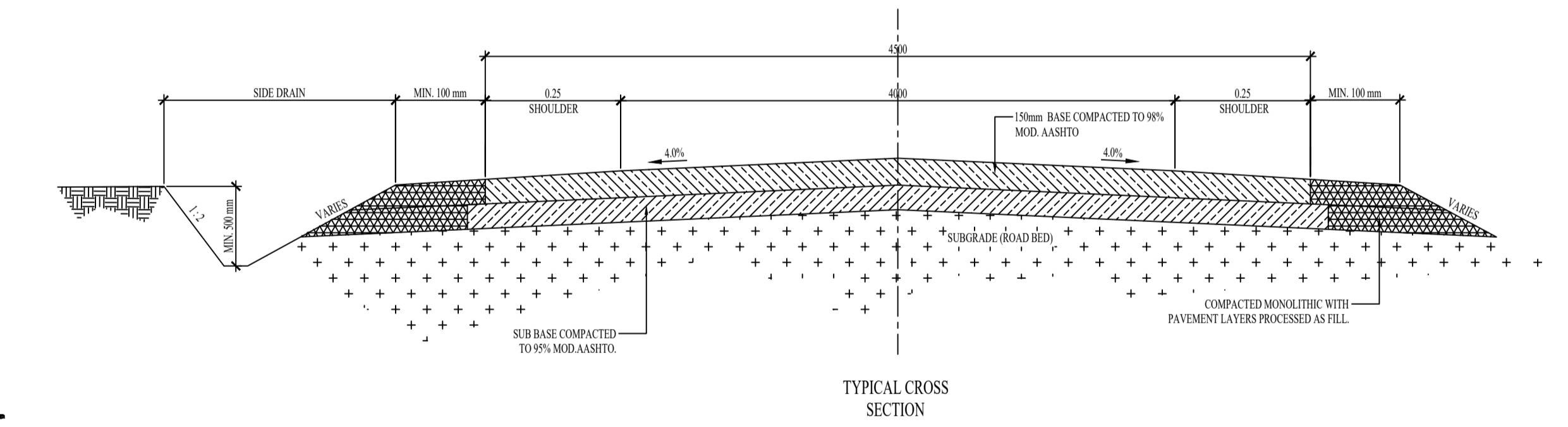
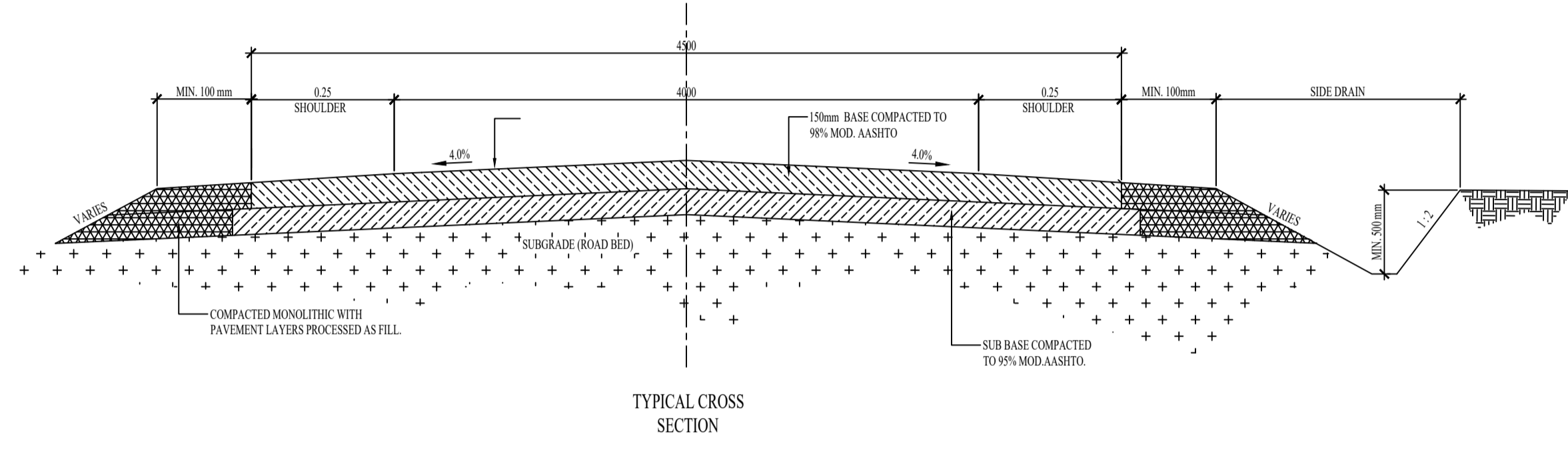
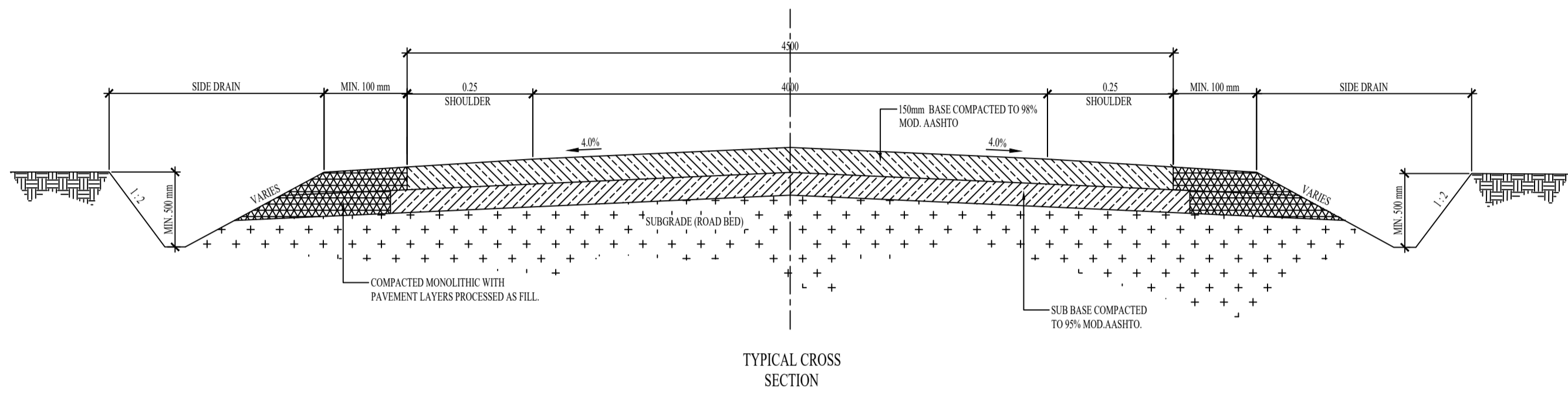
OCTOBER 2023

TYPICAL DRAWINGS

REFERENCE
Do not scale from this drawing, use stated dimensions only

DISCLAIMER
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GENERAL NOTES



No.	DESCRIPTION	BY	DATE

REVISIONS

CLIENT
ZAMBEZI RIVER AUTHORITY

SUPERVISION ENGINEER
ZAMBEZI RIVER AUTHORITY

PROJECT
**CONSTRUCTION OF 28.2KM GRAVEL ROAD
MAAMBA-SIAMUSAMBA SCHOOL JUNCTION
TO DEVILS GORGE HYDRO-ELECTRIC
SCHEME SITE**

DESIGNED	SIGNED	DATE
DRAWN	PS	Oct 2023
DESIGNED	PS	Oct 2023
CHECKED	AN	Oct 2023
APPROVED	AN	Oct 2023

REVISION APPROVAL

TITLE
**TYPICAL ROAD CROSS SECTION
DETAILS**

SCALE
NTS

DRAWING NO. **DGHES-TD-DD-02** REVISION NO. **0**

NOTES;

The side slope or inner slope of side ditch (embankment) and the back slope (cut) shall be as follows, where h, is height of fill and hc, is depth of cut:

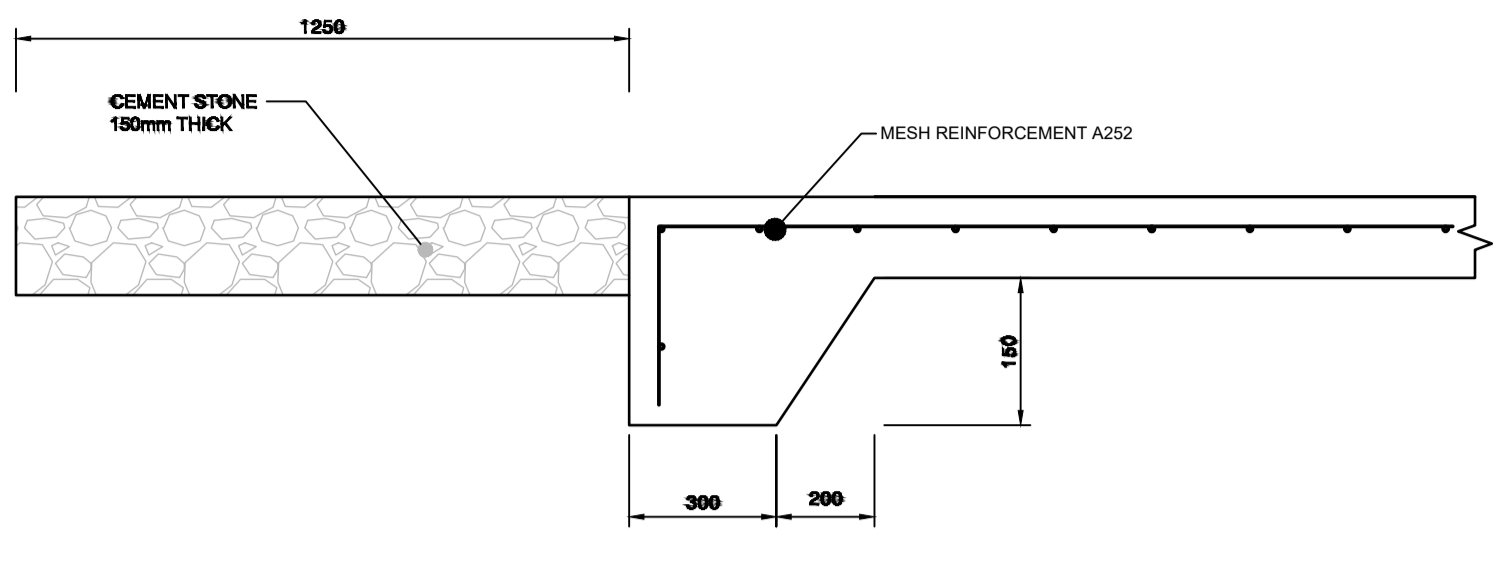
a) Slope of Fill
The slope of fill shall be 1:4 where $hf \leq 1$ m and 1:2 where $hf > 1$ m

b) Slope of Cut
The slope of cut shall be 1:2 where $hc \leq 1$ m and 1:1.5 where $hc > 1$ m.

REFERENCE
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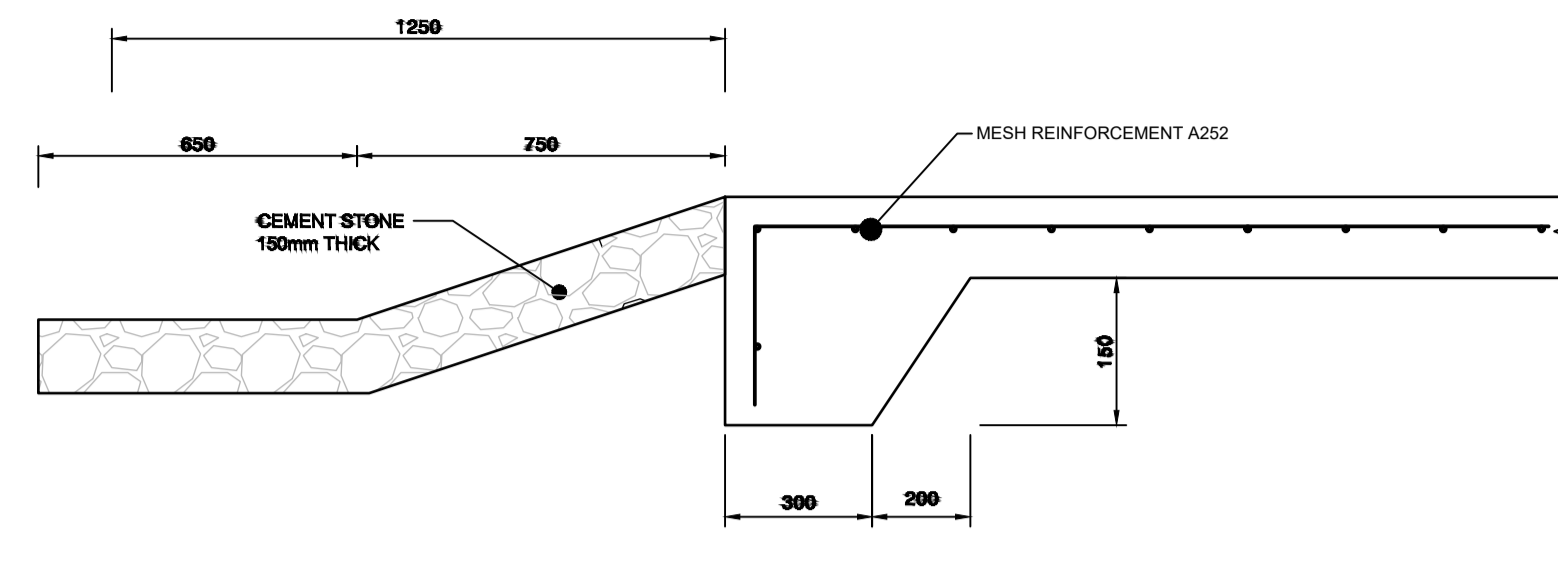
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GENERAL NOTES



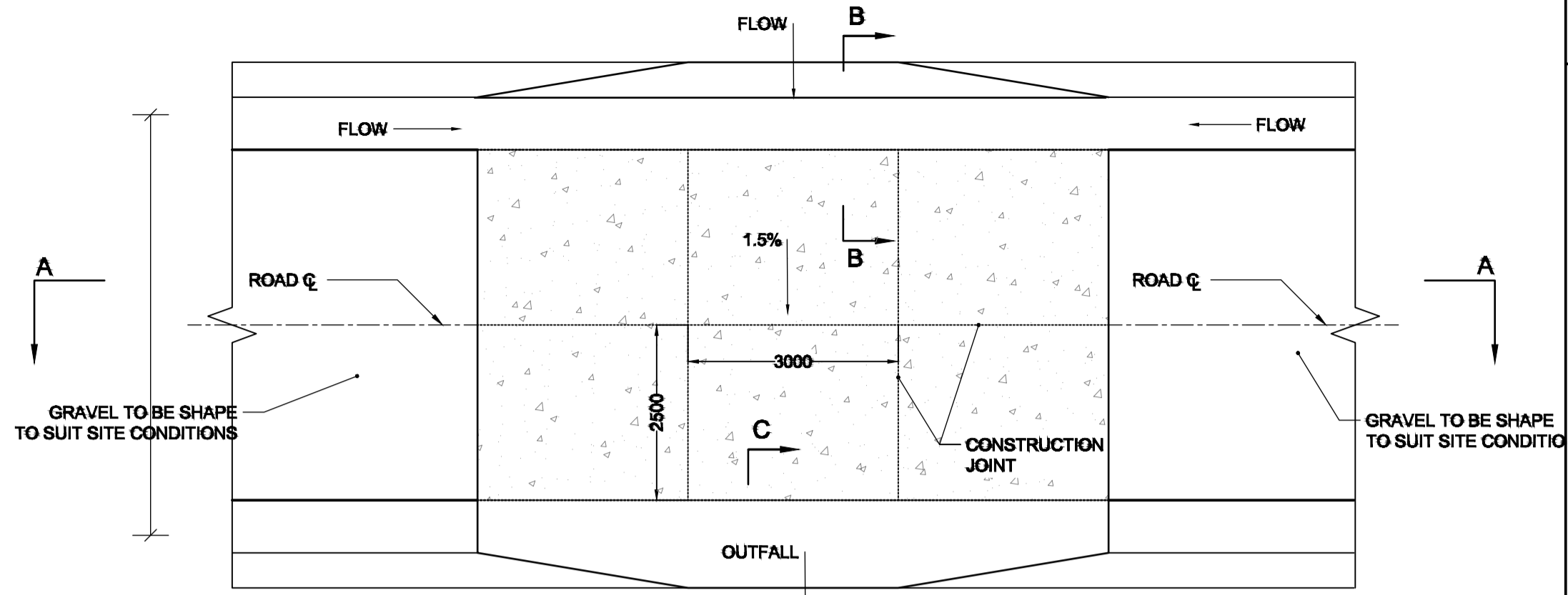
SECTION B-B

SCALE: 1:10



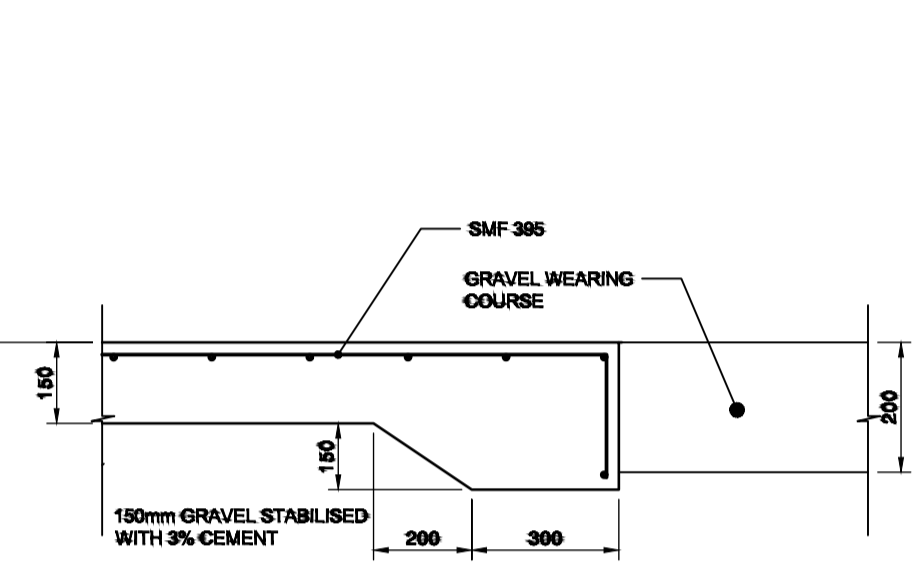
SECTION C-C

SCALE: 1:10



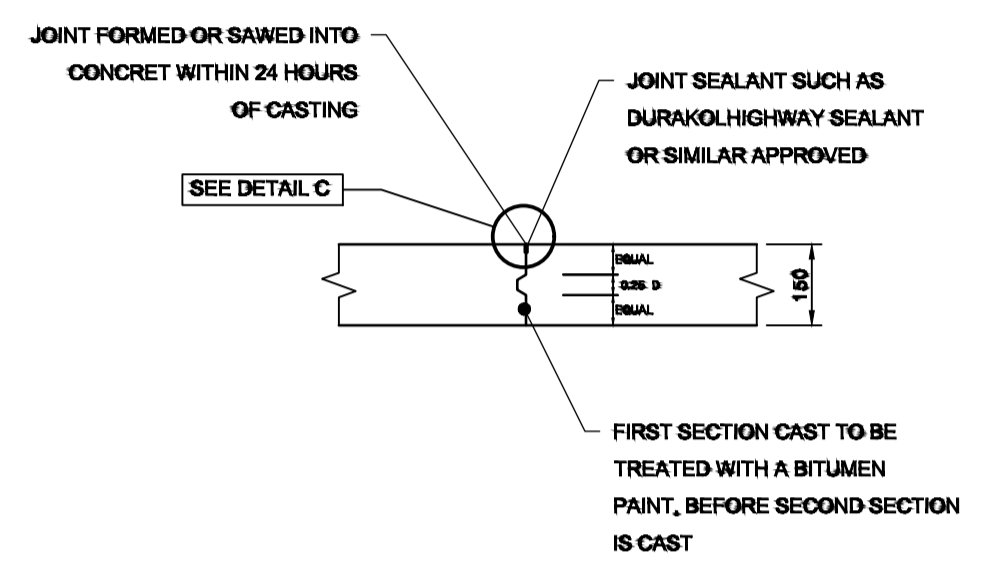
NON-VENTED CONCRETE DRIFT

SCALE: 1:50



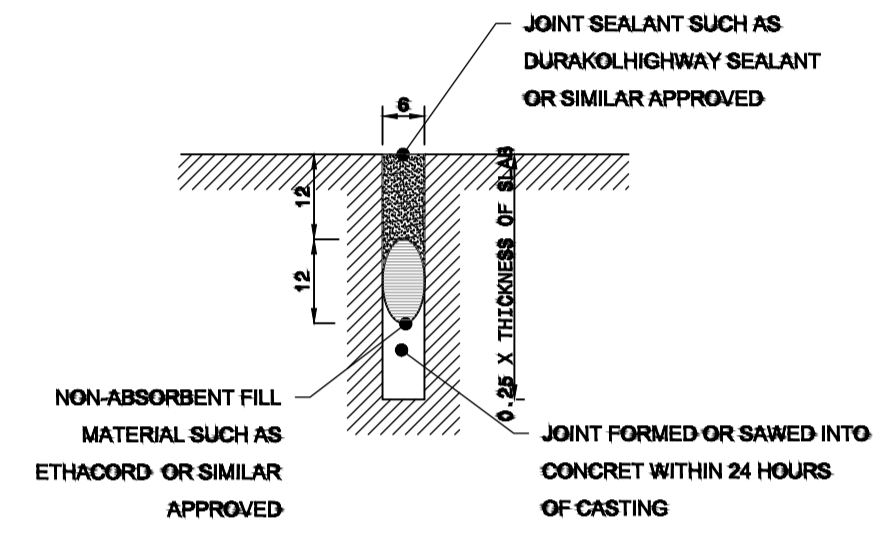
DETAIL A

SCALE 1:10



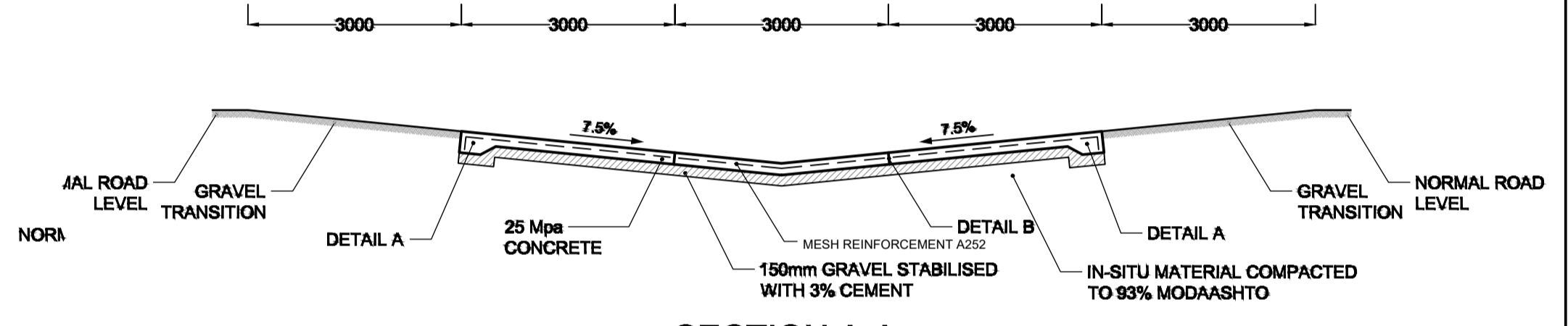
DETAIL B

SCALE: 1:10



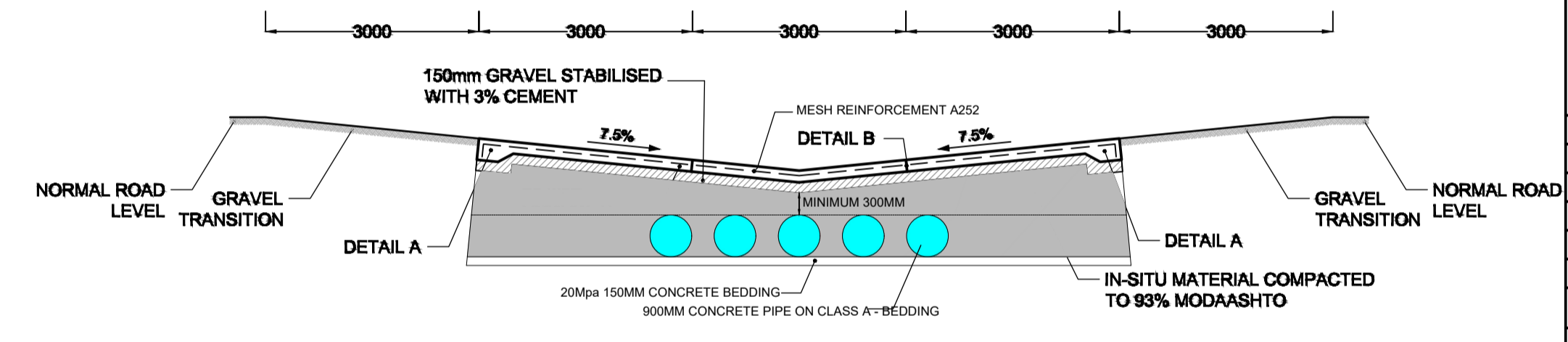
DETAIL C

SCALE: NTS



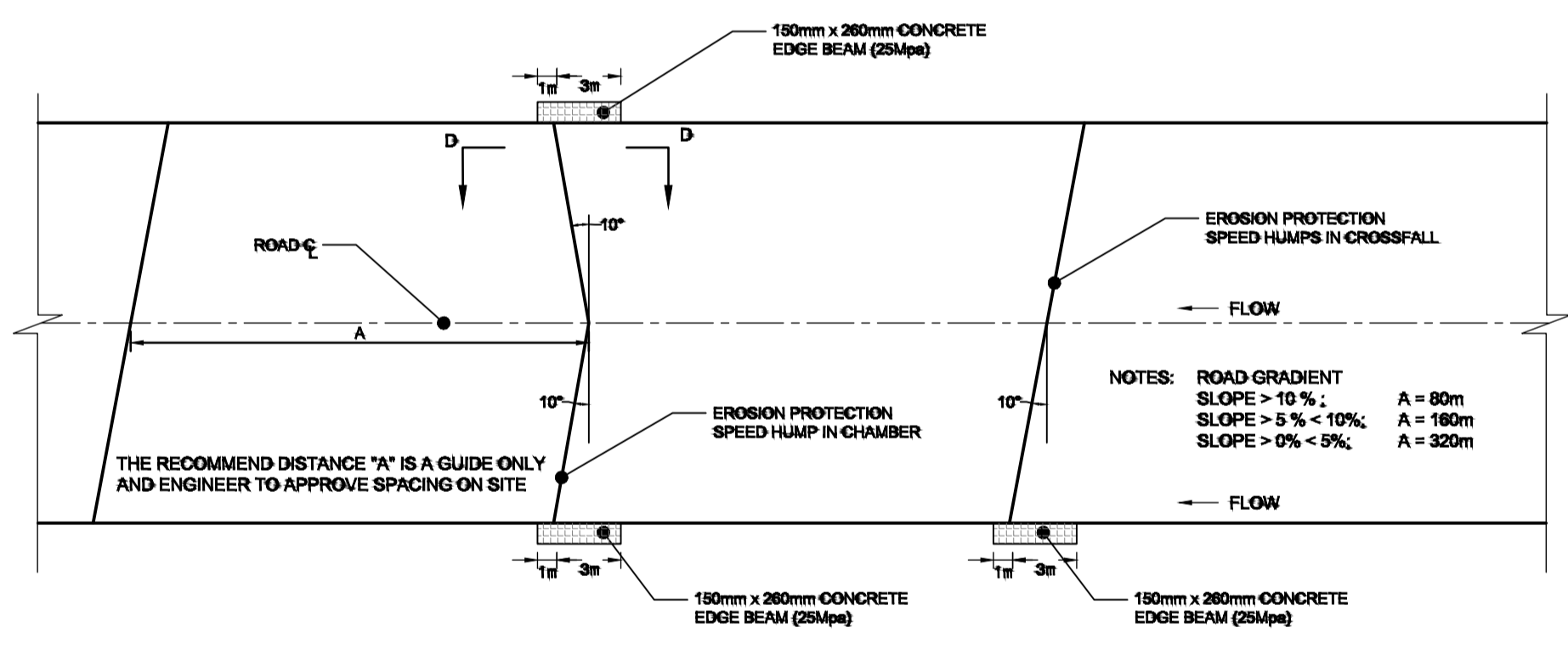
SECTION A-A

SCALE: 1:50



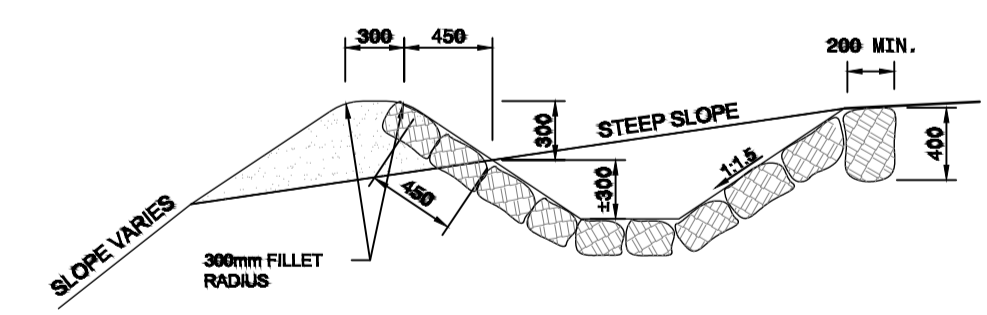
VENTED CONCRETE DRIFT

SCALE: 1:50



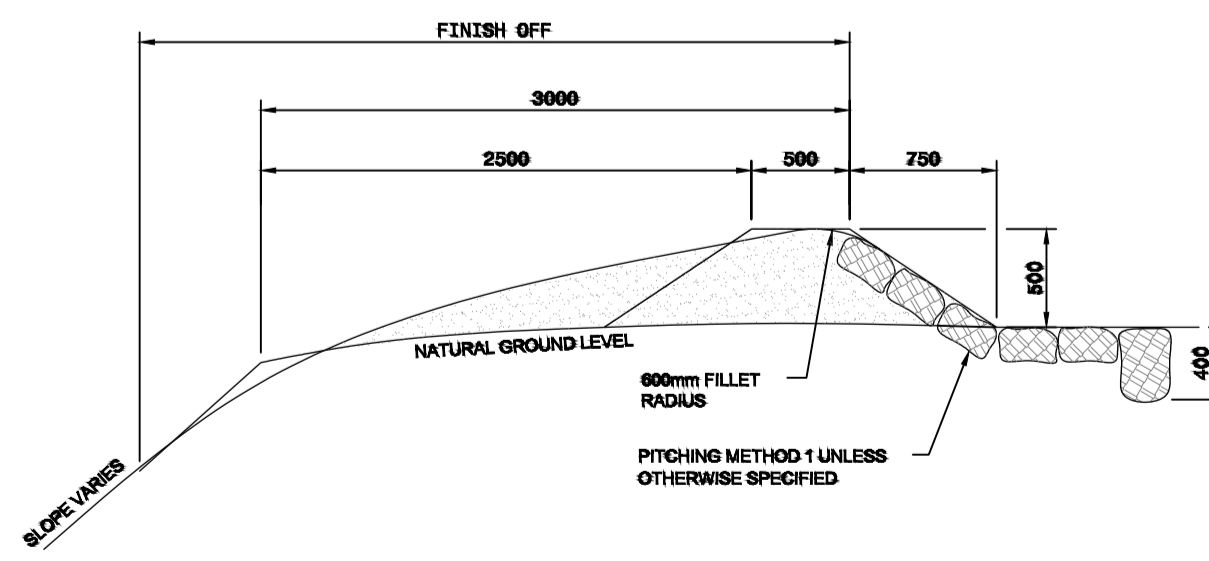
PLAN FOR EROSION PROTECTION SPEED HUMPS

SCALE: NTS



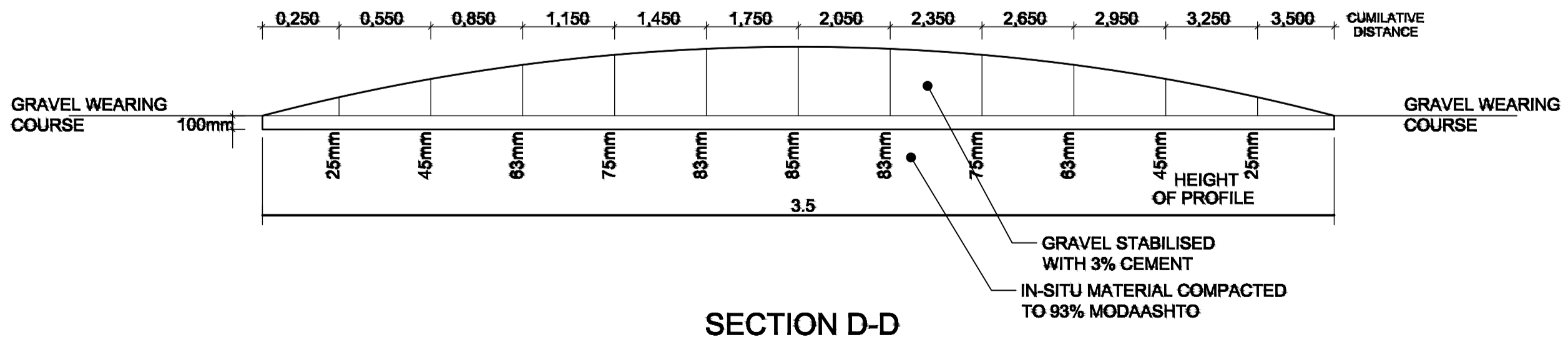
CATCHWATER BERM AND ADJACENT DITCH

SCALE: 1:25



CATCHWATER BERM

SCALE: 1:25



SECTION D-D

SCALE: 1:10

No.	DESCRIPTION	BY	DATE

CLIENT	ZAMBEZI RIVER AUTHORITY
SUPERVISION ENGINEER	ZAMBEZI RIVER AUTHORITY

PROJECT
CONSTRUCTION OF 28.2KM GRAVEL ROAD
MAAMBA-SIAMUSAMBA SCHOOL JUNCTION
TO DEVILS GORGE HYDRO-ELECTRIC
SCHEME SITE

DESIGNED	SIGNED	DATE
DRAWN	PS	Oct 2023
DESIGNED	PS	Oct 2023
CHECKED	AN	Oct 2023
APPROVED	AN	Oct 2023

REVISION APPROVAL
TITLE
TYPICAL DRAINAGE DETAILS
CONCRETE DRIFT, EROSION PROTECTION SPEED HUMP & BERM & DITCH DETAIL

SCALE
NTS

DRAWING NO.
DGHES-TD-DD-01

REVISION NO.
0

ROAD GEOMETRY AND PROFILES

REFERENCE
Do not scale from this drawing, use stated dimensions only

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GENERAL NOTES

Station	Northing	Easting	Tangential Direction
0+00.00	8,028,140.7347m	483,213.6261m	S17° 01' 36"E
0+02.00	8,028,121.6113m	483,219.4824m	S17° 01' 36"E
0+04.00	8,028,102.4880m	483,225.3388m	S17° 01' 36"E
0+06.00	8,028,083.3646m	483,231.1952m	S17° 01' 36"E
0+08.00	8,028,064.2413m	483,237.0515m	S17° 01' 36"E
0+10.00	8,028,045.1179m	483,242.9079m	S17° 01' 36"E
0+12.00	8,028,025.5453m	483,246.4579m	S0° 59' 35"W
0+14.00	8,028,006.2022m	483,241.9852m	S25° 02' 46"W
0+16.00	8,027,989.4693m	483,231.0859m	S35° 14' 06"W
0+18.00	8,027,973.5269m	483,219.0211m	S39° 52' 47"W
0+20.00	8,027,958.8452m	483,205.4522m	S45° 36' 33"W
0+22.00	8,027,944.8778m	483,191.1375m	S45° 42' 15"W
0+24.00	8,027,930.9105m	483,176.8226m	S45° 42' 15"W
0+26.00	8,027,916.9285m	483,162.5223m	S44° 52' 49"W
0+28.00	8,027,902.0754m	483,149.1412m	S39° 09' 03"W
0+30.00	8,027,886.0228m	483,137.2201m	S35° 18' 51"W
0+32.00	8,027,873.5897m	483,121.8724m	S60° 28' 01"W
0+34.00	8,027,863.7160m	483,104.4796m	S60° 25' 01"W
0+36.00	8,027,853.8423m	483,087.0868m	S60° 25' 01"W
0+38.00	8,027,843.9686m	483,069.6939m	S60° 25' 01"W
0+40.00	8,027,834.0949m	483,052.3011m	S60° 25' 01"W
0+42.00	8,027,824.2212m	483,034.9083m	S60° 25' 01"W
0+44.00	8,027,814.3475m	483,017.5155m	S60° 25' 01"W
0+46.00	8,027,804.4739m	483,000.1226m	S60° 25' 01"W
0+48.00	8,027,794.1965m	482,982.9750m	S55° 21' 11"W
0+50.00	8,027,781.5206m	482,967.5344m	S45° 52' 41"W
0+52.00	8,027,766.6087m	482,954.2252m	S39° 48' 04"W
0+54.00	8,027,751.7122m	482,940.9144m	S48° 28' 17"W
0+56.00	8,027,740.2392m	482,924.5574m	S56° 46' 03"W
0+58.00	8,027,729.2785m	482,907.8283m	S56° 46' 03"W
0+60.00	8,027,718.3177m	482,891.0992m	S56° 46' 03"W

Curve Point Data			
Description	Station	Northing	Easting
PC:	1+05.017	8028040.321	483244.377
RP:		8028026.371	483198.824
PT:	1+48.472	8027998.885	483237.737

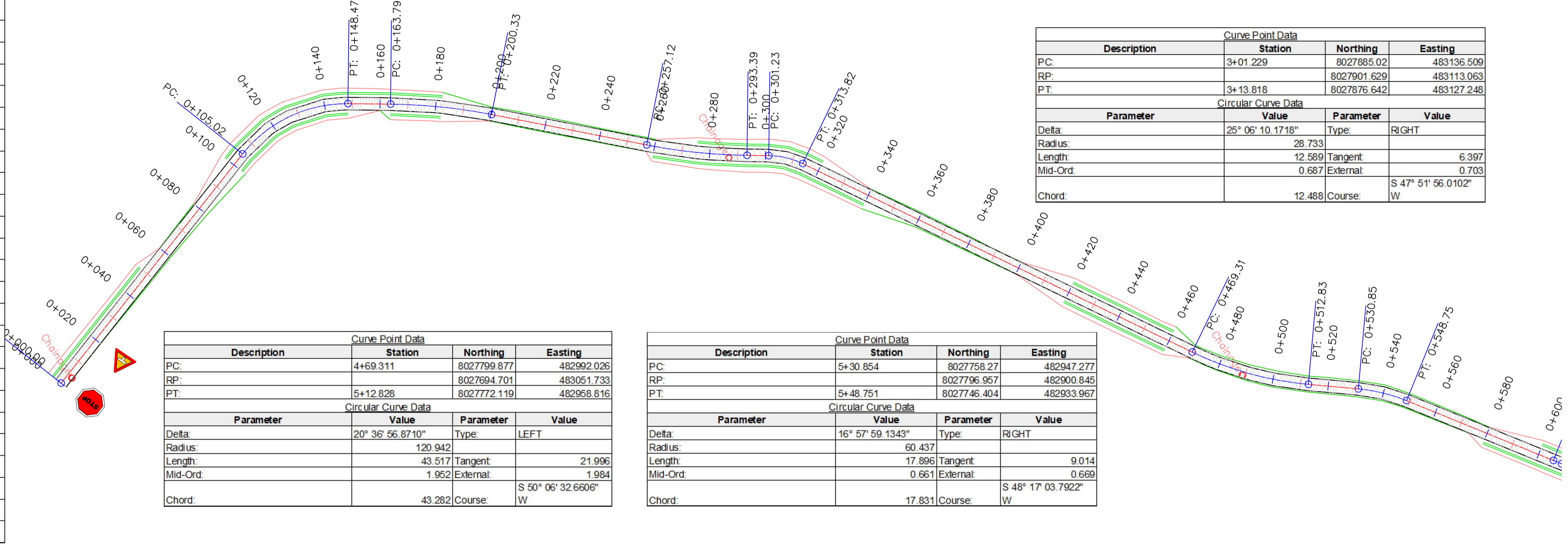
Circular Curve Data			
Parameter	Value	Parameter	Value
Delta:	52° 15' 42.0410"	Type:	RIGHT
Radius:	47.641		
Length:	43.455	Tangent:	23.371
Mid-Ord:	4.869	External:	5.424
Chord:	41.964	Course:	S 09° 06' 14.6989" W

Curve Point Data			
Description	Station	Northing	Easting
PC:	1+63.787	8027986.376	483228.901
RP:		8028101.762	483065.543
PT:	2+00.331	8027958.614	483205.215

Circular Curve Data			
Parameter	Value	Parameter	Value
Delta:	10° 28' 09.0649"	Type:	RIGHT
Radius:	200		
Length:	36.544	Tangent:	18.323
Mid-Ord:	0.834	External:	0.838
Chord:	36.494	Course:	S 40° 28' 10.2518" W

Curve Point Data			
Description	Station	Northing	Easting
PC:	2+57.125	8027918.951	483164.566
RP:		8027775.803	483304.239
PT:	2+93.392	8027891.415	483141.04

Circular Curve Data			
Parameter	Value	Parameter	Value
Delta:	10° 23' 23.8600"	Type:	LEFT
Radius:	200		
Length:	36.268	Tangent:	18.184
Mid-Ord:	0.822	External:	0.825
Chord:	36.218	Course:	S 40° 30' 32.8543" W

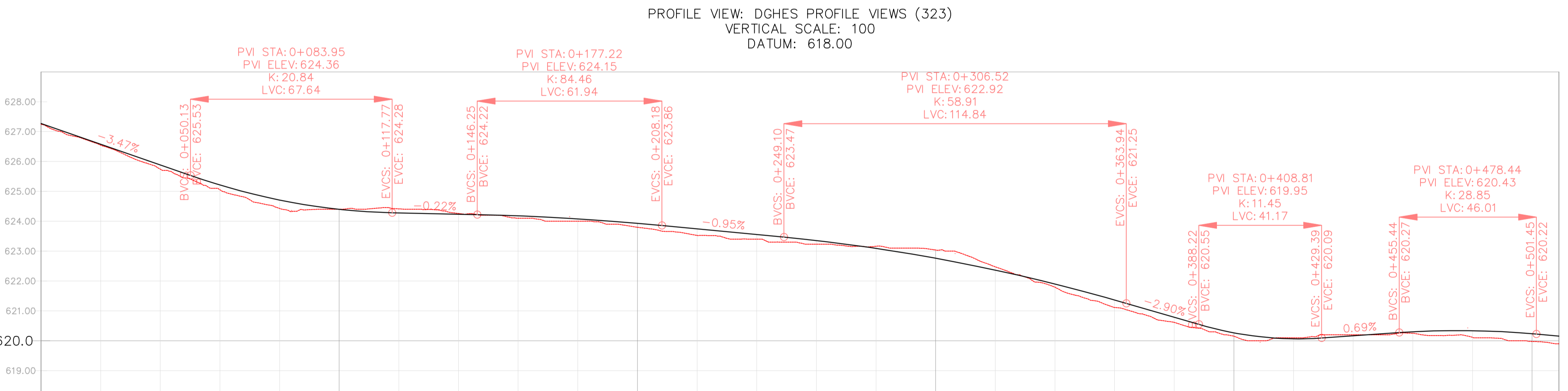
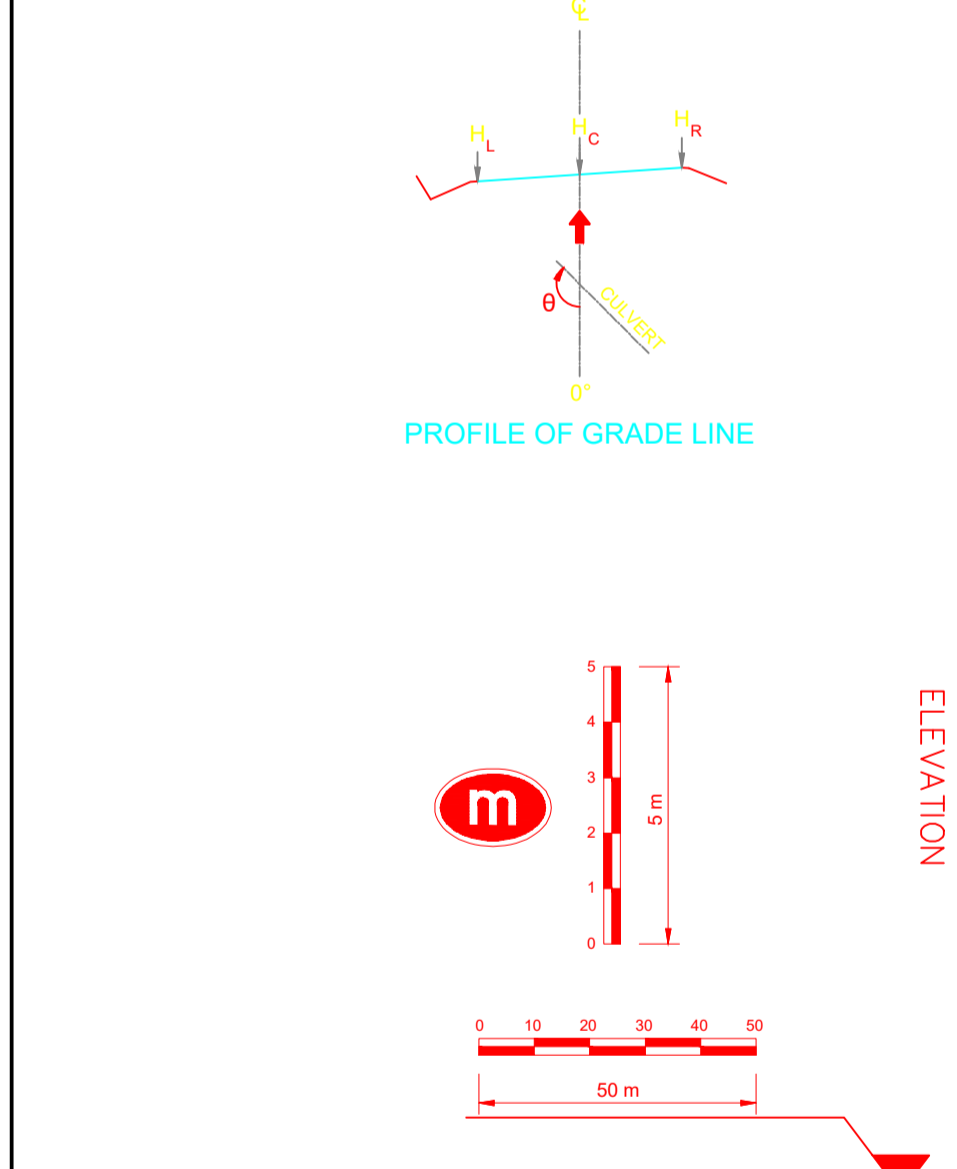


Curve Point Data			
Description	Station	Northing	Easting
PC:	4+69.311	8027799.877	482992.026
RP:		8027694.701	483051.733
PT:	5+12.828	8027772.119	482958.816

Circular Curve Data			
Parameter	Value	Parameter	Value
Delta:	20° 36' 56.8710"	Type:	LEFT
Radius:	120.942		
Length:	43.517	Tangent:	21.996
Mid-Ord:	1.952	External:	1.984
Chord:	43.282	Course:	S 50° 06' 32.6606" W

Curve Point Data			
Description	Station	Northing	Easting
PC:	5+30.854	8027758.27	482947.277
RP:		8027796.957	482900.845
PT:	5+48.751	8027746.404	482933.967

Circular Curve Data			
Parameter	Value	Parameter	Value
Delta:	16° 57' 59.1343"	Type:	RIGHT
Radius:	60.437		
Length:	17.896	Tangent:	9.014
Mid-Ord:	0.661	External:	0.669
Chord:	17.831	Course:	S 48° 17' 03.7922" W



PROFILE VIEW: DGES PROFILE VIEWS (323)
VERTICAL SCALE: 100
DATUM: 618.00

VERTICAL CURVES GRADE

FINAL ROAD LEVELS	H _L	LEFT	Stationing																										
			0+000	0+020	0+040	0+060	0+080	0+100	0+120	0+140	0+160	0+180	0+200	0+220	0+240	0+260	0+280	0+300	0+320	0+340	0+360	0+380	0+400	0+420	0+440	0+460	0+480	0+500	0+509
	H _L	LEFT	627.164	626.474	625.785	625.118	624.618	624.309	624.190	624.145	624.090	623.990	623.842	623.655	623.464	623.263	623.001	622.671	622.274	621.808	621.275	620.695	620.175	619.974	620.074	620.208	620.246	620.144	620.063
	H _C	ON CL	627.270	626.576	625.883	625.213	624.710	624.400	624.280	624.235	624.180	624.080	623.932	623.745	623.554	623.353	623.091	622.761	622.364	621.898	621.365	620.785	620.265	620.064	620.164	620.298	620.336	620.234	620.153
	H _R	RIGHT	627.164	626.474	625.785	625.118	624.618	624.309	624.190	624.145	624.090	623.990	623.842	623.655	623.464	623.263	623.001	622.671	622.274	621.808	621.275	620.695	620.175	619.974	620.074	620.208	620.246	620.144	620.063
GROUND LEVELS AT GRADE LINE			627.245	626.548	625.745	625.054	624.430	624.000	624.415	624.261	624.100	624.000	623.795	623.526	623.400	623.231	623.162	623.036	622.474	621.783	621.112	620.614	620.154	620.100	620.200	620.250	620.115	619.976	619.900
KILOMETER DISTANCE			0+000	0+020	0+040	0+060	0+080	0+100	0+120	0+140	0+160	0+180	0+200	0+220	0+240	0+260	0+280	0+300	0+320	0+340	0+360	0+380	0+400	0+420	0+440	0+460	0+480	0+500	0+509

LEGEND

- Vented/Non-vented Drift
- Road Boundary
- Road Centerline

Scale: 0 to 60 Meters, 1:1000

No.	DESCRIPTION	BY	DATE

CLIENT: ZAMBEZI RIVER AUTHORITY

CONSULTANT: ZAMBEZI RIVER AUTHORITY

PROJECT
CONSTRUCTION OF 28.2KM GRAVEL ROAD
MAAMBA-SIAMUSAMBA SCHOOL JUNCTION
TO DEVILS GORGE HYDRO-ELECTRIC
SCHEME SITE

DESIGNED	SIGNED	DATE
DRAWN	PS	Oct 2023
CHECKED	AN	Oct 2023
APPROVED	AN	Oct 2023

REVISION APPROVAL
TITLE

ROAD PLAN AND PROFILE

SCALE	HORIZONTAL SCALE: 1:1000	VERTICAL SCALE: 1:100
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DRAWING NO.	DGES-PP-01	REVISION NO.	0
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REFERENCE

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GENERAL NOTES

Curve Point Data			
Description	Station	Northing	Easting
PC:	6+05.714	8027715.186	482886.32
RP:	8027547.895	482995.927	
PT:	6+08.927	8027713.404	482883.647

Circular Curve Data			
Parameter	Value	Parameter	Value
Delta:	00° 55' 12.9281"	Type:	LEFT
Radius:	200		
Length:	3.212	Tangent:	1.606
Mid-Ord:	0.006	External:	0.006
Chord:	3.212	Course:	S 56° 18' 26.8953" W

Curve Point Data			
Description	Station	Northing	Easting
PC:	6+32.574	8027700.128	482864.077
RP:	8027618.503	482919.451	
PT:	6+62.322	8027679.996	482842.33

Circular Curve Data			
Parameter	Value	Parameter	Value
Delta:	17° 16' 48.3040"	Type:	LEFT
Radius:	98.636		
Length:	29.748	Tangent:	14.988
Mid-Ord:	1.119	External:	1.132
Chord:	29.635	Course:	S 47° 12' 26.2793" W

Curve Point Data			
Description	Station	Northing	Easting
PC:	7+07.954	8027644.317	482813.882
RP:	8027519.63	482970.257	
PT:	7+61.470	8027598.535	482786.48

Circular Curve Data			
Parameter	Value	Parameter	Value
Delta:	15° 19' 51.5313"	Type:	LEFT
Radius:	200		
Length:	53.515	Tangent:	26.918
Mid-Ord:	1.787	External:	1.803
Chord:	53.356	Course:	S 30° 54' 06.3617" W

Curve Point Data			
Description	Station	Northing	Easting
PC:	8+03.089	8027558.201	482777.013
RP:	8027591.054	482579.73	
PT:	8+33.169	8027529.012	482769.864

Circular Curve Data			
Parameter	Value	Parameter	Value
Delta:	08° 37' 01.9923"	Type:	RIGHT
Radius:	200		
Length:	30.08	Tangent:	15.068
Mid-Ord:	0.565	External:	0.567
Chord:	30.051	Course:	S 13° 45' 47.4702" W

Curve Point Data			
Description	Station	Northing	Easting
PC:	8+95.458	8027467.569	482765.84
RP:	8027463.388	482691.626	
PT:	9+28.396	8027435.344	482760.465

Circular Curve Data			
Parameter	Value	Parameter	Value
Delta:	25° 23' 23.2004"	Type:	RIGHT
Radius:	74.332		
Length:	32.939	Tangent:	16.744
Mid-Ord:	1.817	External:	1.863
Chord:	32.67	Course:	S 09° 28' 14.2760" W

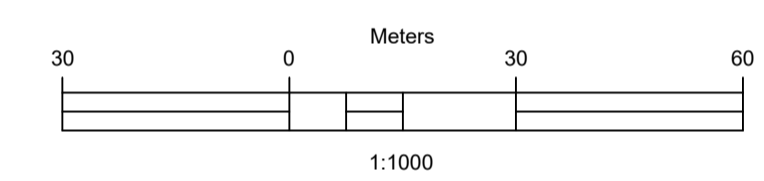
Curve Point Data			
Description	Station	Northing	Easting
PC:	9+35.655	8027428.622	482757.726
RP:	8027406.769	482811.368	
PT:	9+63.963	8027400.979	482753.736

Circular Curve Data			
Parameter	Value	Parameter	Value
Delta:	27° 54' 08.6140"	Type:	LEFT
Radius:	57.923		
Length:	28.208	Tangent:	14.389
Mid-Ord:	1.709	External:	1.761
Chord:	27.93	Course:	S 08° 12' 51.5692" W

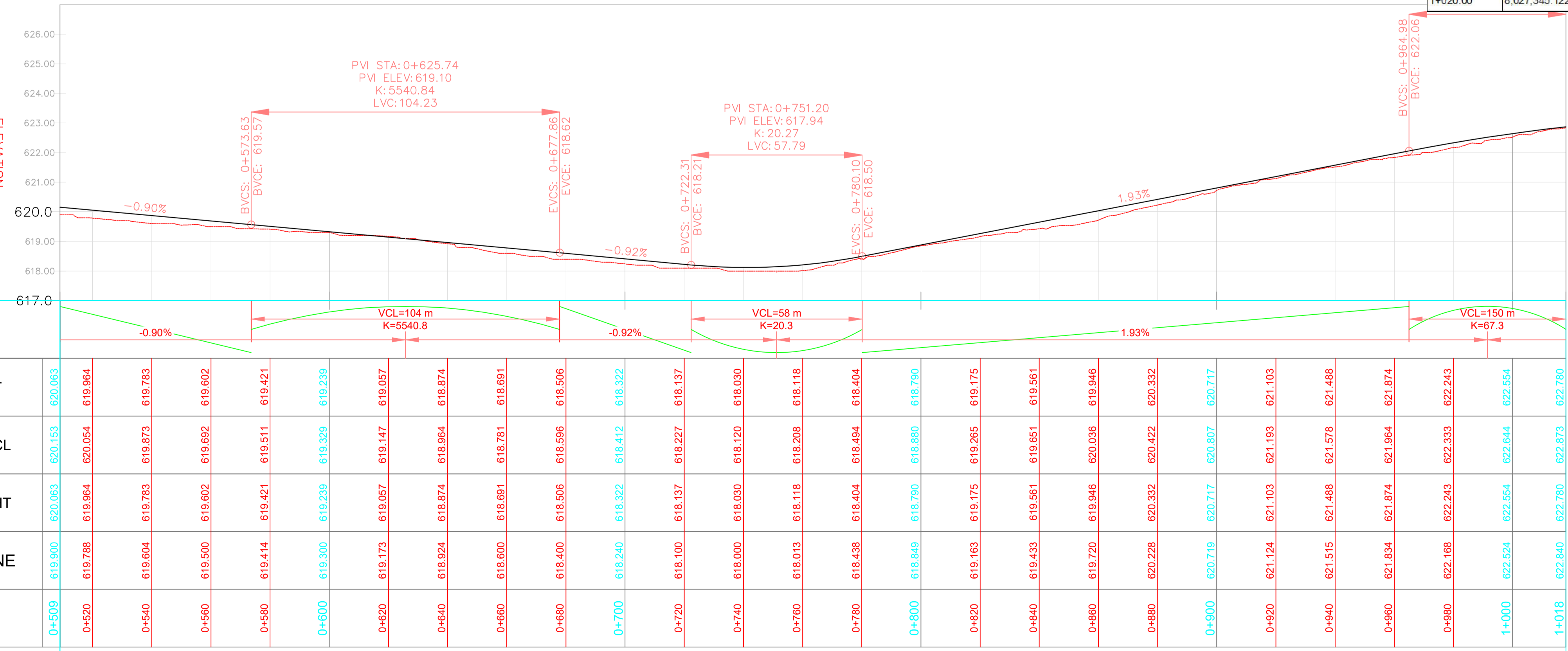
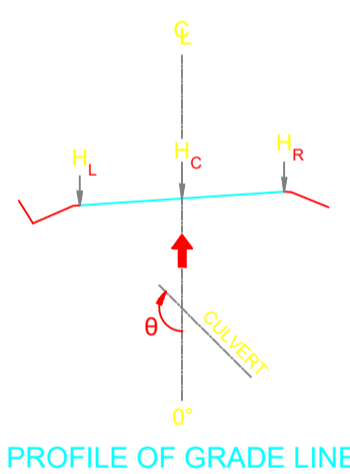
Station	Northing	Easting	Tangential Direction
0+500.00	8,027,781.5206m	482,967.5344m	S45° 52' 41"W
0+520.00	8,027,766.6087m	482,954.2252m	S39° 48' 04"W
0+540.00	8,027,751.7122m	482,940.9144m	S48° 28' 17"W
0+560.00	8,027,740.2392m	482,924.5574m	S56° 46' 03"W
0+580.00	8,027,729.2785m	482,907.8283m	S56° 46' 03"W
0+600.00	8,027,718.3177m	482,891.0992m	S56° 46' 03"W
0+620.00	8,027,707.1875m	482,874.4831m	S55° 50' 50"W
0+640.00	8,027,695.7323m	482,858.0948m	S51° 32' 02"W
0+660.00	8,027,681.7941m	482,843.7994m	S39° 54' 58"W
0+680.00	8,027,666.1738m	482,831.3095m	S38° 34' 02"W
0+700.00	8,027,650.5362m	482,818.8408m	S38° 34' 02"W
0+720.00	8,027,634.6783m	482,806.6603m	S35° 06' 59"W
0+740.00	8,027,617.7711m	482,795.9919m	S29° 23' 13"W
0+760.00	8,027,599.8833m	482,787.0548m	S23° 39' 25"W
0+780.00	8,027,580.9763m	482,780.8061m	S9° 27' 16"W
0+800.00	8,027,561.2479m	482,777.5208m	S9° 27' 16"W
0+820.00	8,027,541.6569m	482,773.5340m	S14° 17' 57"W
0+840.00	8,027,522.5181m	482,767.7448m	S18° 04' 18"W
0+860.00	8,027,502.9747m	482,763.9742m	S0° 42' 38"W
0+880.00	8,027,483.0021m	482,764.9709m	S3° 13' 27"E
0+900.00	8,027,463.0288m	482,765.9671m	S0° 16' 38"W
0+920.00	8,027,443.2824m	482,763.1871m	S15° 41' 36"W
0+940.00	8,027,424.5405m	482,756.2392m	S17° 52' 03"W
0+960.00	8,027,404.8323m	482,753.4779m	S1° 54' 57"E
0+980.00	8,027,384.9224m	482,755.3487m	S5° 44' 13"E
1+000.00	8,027,365.0226m	482,757.3479m	S5° 44' 13"E
1+020.00	8,027,345.1227m	482,759.3471m	S5° 44' 13"E

LEGEND

- Vented/Non-vented Drift
- Road Boundary
- Road Centerline



PROFILE VIEW: DGHS PROFILE VIEWS (324)
 VERTICAL SCALE: 100
 DATUM: 617.00



VERTICAL CURVES GRADE

FINAL ROAD LEVELS	LEVEL	STATION	ELEVATION
H _L LEFT		0+509	620.063
		0+520	619.964
		0+540	619.783
H _C ON CL		0+560	619.602
		0+580	619.421
		0+600	619.239
H _R RIGHT		0+620	619.057
		0+640	618.874
		0+660	618.691
GROUND LEVELS AT GRADE LINE		0+680	618.506
		0+700	618.322
		0+720	618.137
KILOMETER DISTANCE		0+740	618.030
		0+760	618.118
		0+780	618.404
	0+800	618.790	
	0+820	619.175	
	0+840	619.561	
	0+860	619.946	
	0+880	620.332	
	0+900	620.717	
	0+920	621.103	
	0+940	621.488	
	0+960	621.874	
	0+980	622.260	
	1+000	622.644	
	1+018	622.780	

No.	DESCRIPTION	BY	DATE
REVISIONS			
CLIENT ZAMBEZI RIVER AUTHORITY			
CONSULTANT ZAMBEZI RIVER AUTHORITY			
PROJECT CONSTRUCTION OF 28.2KM GRAVEL ROAD MAAMBA-SIAMUSAMBA SCHOOL JUNCTION TO DEVILS GORGE HYDRO-ELECTRIC SCHEME SITE			
DESIGNED	SIGNED	DATE	
DRAWN	PS	Oct 2023	
DESIGNED	PS	Oct 2023	
CHECKED	AN	Oct 2023	
APPROVED	AN	Oct 2023	
REVISION APPROVAL			
TITLE ROAD PLAN AND PROFILE			
SCALE HORIZONTAL SCALE: 1:1000		VERTICAL SCALE: 1:100	
DRAWING NO. DGHS-PP-01		REVISION NO. 0	

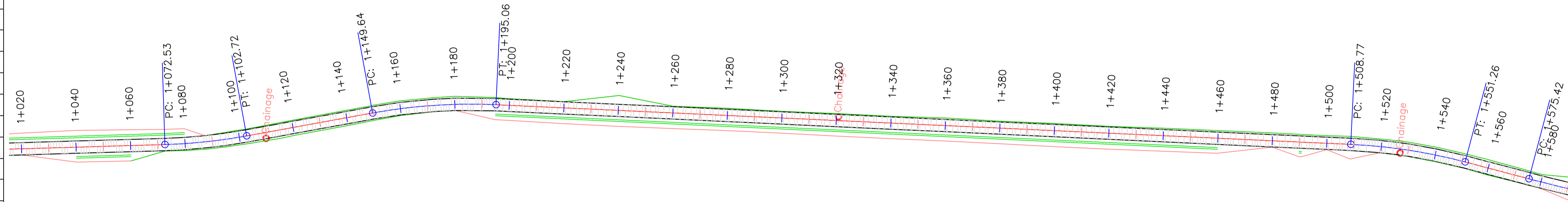
Station	Northing	Easting	Tangential Direction
1+000.00	8,027,365.0226m	482,757.3479m	S5° 44' 13"E
1+020.00	8,027,345.1227m	482,759.3471m	S5° 44' 13"E
1+040.00	8,027,325.2229m	482,761.3463m	S5° 44' 13"E
1+060.00	8,027,305.3231m	482,763.3455m	S5° 44' 13"E
1+080.00	8,027,285.4389m	482,765.4833m	S7° 52' 35"E
1+100.00	8,027,265.7975m	482,769.2092m	S13° 36' 21"E
1+120.00	8,027,246.4200m	482,774.1597m	S14° 23' 02"E
1+140.00	8,027,227.0469m	482,779.1280m	S14° 23' 02"E
1+160.00	8,027,207.6117m	482,783.8352m	S11° 24' 54"E
1+180.00	8,027,187.8422m	482,786.8075m	S5° 41' 08"E
1+200.00	8,027,167.8757m	482,787.8522m	S1° 22' 13"E
1+220.00	8,027,147.8814m	482,788.3305m	S1° 22' 13"E
1+240.00	8,027,127.8871m	482,788.8087m	S1° 22' 13"E
1+260.00	8,027,107.8928m	482,789.2869m	S1° 22' 13"E
1+280.00	8,027,087.8986m	482,789.7652m	S1° 22' 13"E
1+300.00	8,027,067.9043m	482,790.2434m	S1° 22' 13"E
1+320.00	8,027,047.9100m	482,790.7217m	S1° 22' 13"E
1+340.00	8,027,027.9157m	482,791.1999m	S1° 22' 13"E
1+360.00	8,027,007.9214m	482,791.6781m	S1° 22' 13"E
1+380.00	8,026,987.9272m	482,792.1564m	S1° 22' 13"E
1+400.00	8,026,967.9329m	482,792.6346m	S1° 22' 13"E
1+420.00	8,026,947.9386m	482,793.1129m	S1° 22' 13"E
1+440.00	8,026,927.9443m	482,793.5911m	S1° 22' 13"E
1+460.00	8,026,907.9500m	482,794.0693m	S1° 22' 13"E
1+480.00	8,026,887.9558m	482,794.5476m	S1° 22' 13"E
1+500.00	8,026,867.9615m	482,795.0258m	S1° 22' 13"E
1+520.00	8,026,847.9672m	482,795.5041m	S1° 50' 53"W
1+540.00	8,026,828.0415m	482,793.5460m	S7° 34' 39"W

Curve Point Data			
Description	Station	Northing	Easting
PC:	10+72.532	8027292.854	482764.596
RP:		8027312.846	482963.597
PT:	11+02.716	8027263.162	482769.866

Circular Curve Data			
Parameter	Value	Parameter	Value
Delta:	08° 38' 49.6087"	Type:	LEFT
Radius:	200		
Length:	30.184	Tangent:	15.121
Mid-Ord:	0.569	External:	0.571
Chord:	30.155	Course:	S 10° 03' 37.5422" E

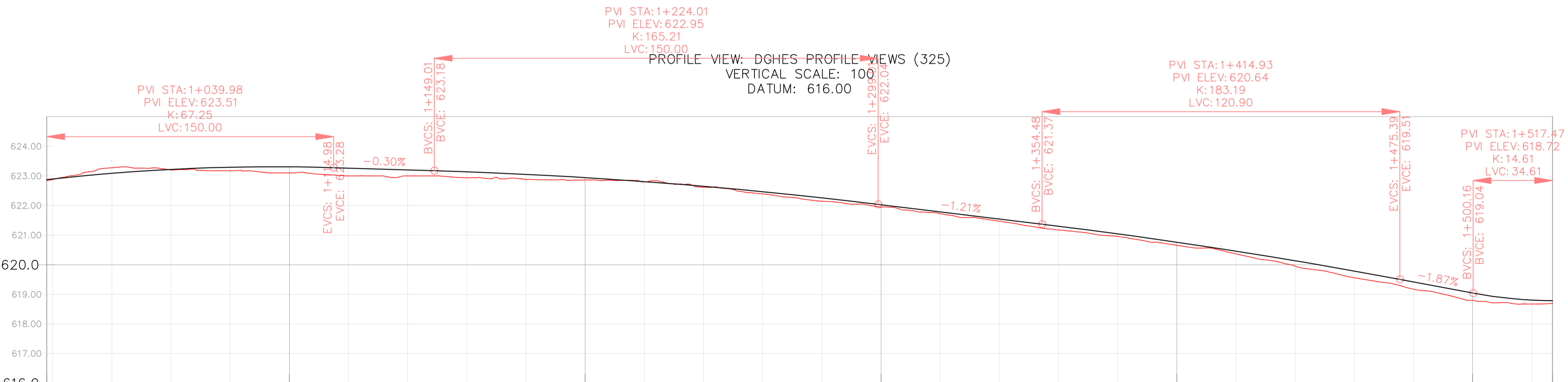
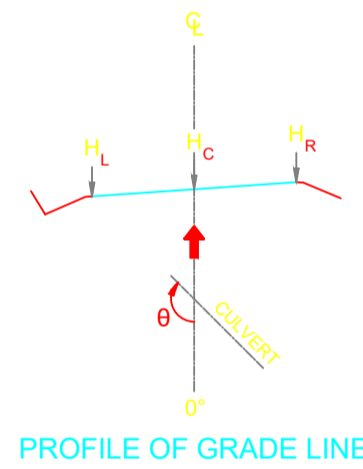
Curve Point Data			
Description	Station	Northing	Easting
PC:	11+49.636	8027217.713	482781.522
RP:		8027168.029	482587.791
PT:	11+95.063	8027172.811	482787.734

Circular Curve Data			
Parameter	Value	Parameter	Value
Delta:	13° 00' 49.6929"	Type:	RIGHT
Radius:	200		
Length:	45.427	Tangent:	22.612
Mid-Ord:	1.288	External:	1.297
Chord:	45.329	Course:	S 07° 52' 37.5001" E

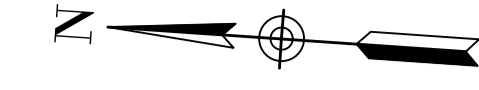


Curve Point Data			
Description	Station	Northing	Easting
PC:	15+08.766	8026859.196	482795.235
RP:		8026854.415	482595.293
PT:	15+51.260	8026816.928	482791.748

Circular Curve Data			
Parameter	Value	Parameter	Value
Delta:	12° 10' 24.6369"	Type:	RIGHT
Radius:	200		
Length:	42.494	Tangent:	21.327
Mid-Ord:	1.128	External:	1.134
Chord:	42.414	Course:	S 04° 42' 59.6648" W



LEVELS	VERTICAL CURVES GRADE		FINAL ROAD LEVELS		GROUND LEVELS AT GRADE LINE		KILOMETER DISTANCE
	H _L	H _R	H _C	H _R	H _L	H _R	
	622.780	622.780	622.873	622.873	622.840	622.840	1+016
	622.895	622.895	622.895	622.895	622.874	622.874	1+020
	622.987	622.987	623.087	623.087	623.278	623.278	1+040
	623.130	623.130	623.220	623.220	623.202	623.202	1+060
	623.203	623.203	623.293	623.293	623.175	623.175	1+080
	623.217	623.217	623.307	623.307	623.100	623.100	1+100
	623.173	623.173	623.263	623.263	623.000	623.000	1+120
	623.113	623.113	623.203	623.203	623.000	623.000	1+140
	623.048	623.048	623.138	623.138	622.937	622.937	1+160
	622.982	622.982	623.052	623.052	622.879	622.879	1+180
	622.852	622.852	622.942	622.942	622.862	622.862	1+200
	622.718	622.718	622.808	622.808	622.799	622.799	1+220
	622.559	622.559	622.649	622.649	622.619	622.619	1+240
	622.376	622.376	622.466	622.466	622.392	622.392	1+260
	622.169	622.169	622.259	622.259	622.147	622.147	1+280
	621.938	621.938	622.028	622.028	621.944	621.944	1+300
	621.696	621.696	621.786	621.786	621.721	621.721	1+320
	621.454	621.454	621.544	621.544	621.470	621.470	1+340
	621.201	621.201	621.301	621.301	621.177	621.177	1+360
	620.927	620.927	621.042	621.042	620.955	620.955	1+380
	620.633	620.633	620.761	620.761	620.656	620.656	1+400
	620.317	620.317	620.458	620.458	620.365	620.365	1+420
	619.981	619.981	620.133	620.133	619.953	619.953	1+440
	619.624	619.624	619.787	619.787	619.559	619.559	1+460
	619.246	619.246	619.419	619.419	619.175	619.175	1+480
	618.878	618.878	619.045	619.045	618.800	618.800	1+500
	618.743	618.743	618.805	618.805	618.672	618.672	1+520
	618.761	618.761	618.786	618.786	618.689	618.689	1+527



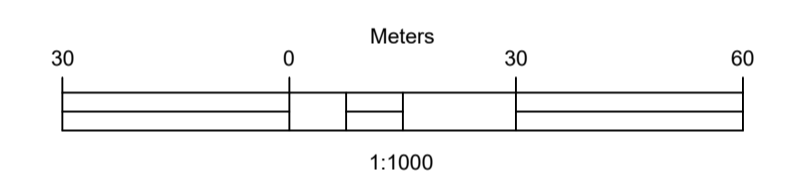
REFERENCE
Do not scale from this drawing, use stated dimensions only

DISCLAIMER
SHOULD THESE DRAWINGS AND PROJECT SPECIFICATIONS BE USED OR RELIED UPON FOR ANY OTHER PURPOSES OTHER THAN WHAT THEY WERE INTENDED FOR ON THIS SPECIFIC SITE WITHOUT CONSULTING ENGINEERS' PRIOR KNOWLEDGE AND WRITTEN CONSENT, THEN THE USER SHALL INDEMNIFY THE COPYRIGHT HOLDER AGAINST ALL LIABILITIES, CLAIMS, DAMAGES, LOSSES, FINES AND/OR PENALTIES (EITHER IN CONTRACT OR DELICT) INSTITUTED BY THE USER OR ANY OTHER PARTY AS RESULT OF THEIR REUSE OF, OR RELIANCE ON THESE DRAWINGS AND PROJECT SPECIFICATIONS.

GENERAL NOTES

LEGEND

- Vented/Non-vented Drift
- Road Boundary
- Road Centerline



No.	DESCRIPTION	BY	DATE

REVISIONS

CLIENT
ZAMBEZI RIVER AUTHORITY

CONSULTANT
ZAMBEZI RIVER AUTHORITY

PROJECT
CONSTRUCTION OF 28.2KM GRAVEL ROAD MAAMBA-SIAMUSAMBA SCHOOL JUNCTION TO DEVILS GORGE HYDRO-ELECTRIC SCHEME SITE

DESIGNED	SIGNED	DATE

REVISION APPROVAL
TITLE

ROAD PLAN AND PROFILE

SCALE
HORIZONTAL SCALE: 1:1000 VERTICAL SCALE: 1:100

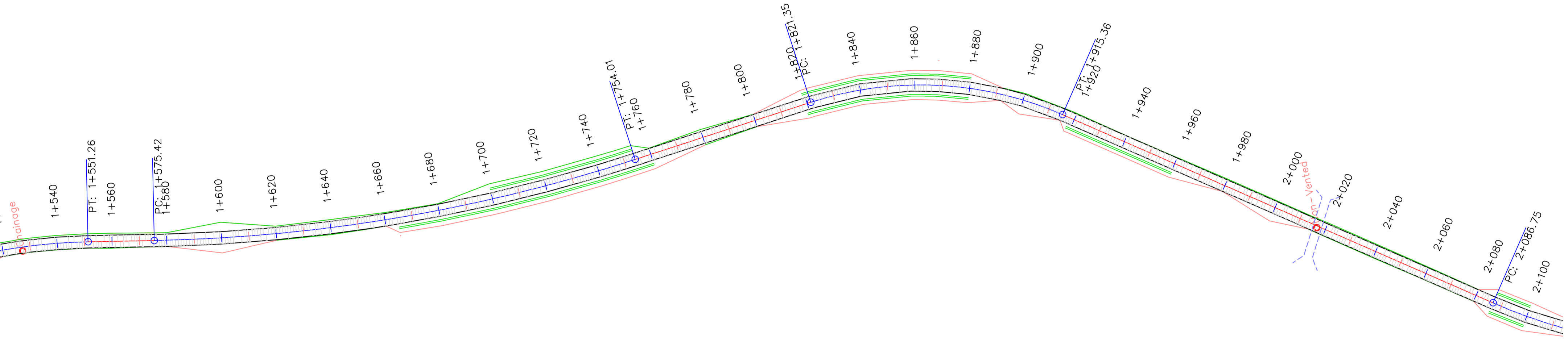
DRAWING NO. **DGHES-PP-01** REVISION NO. **0**

REFERENCE
Do not scale from this drawing, use stated dimensions only

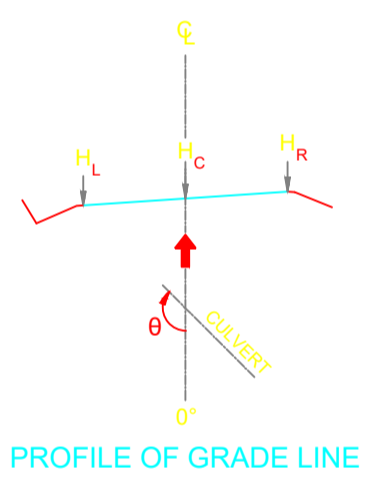
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GENERAL NOTES

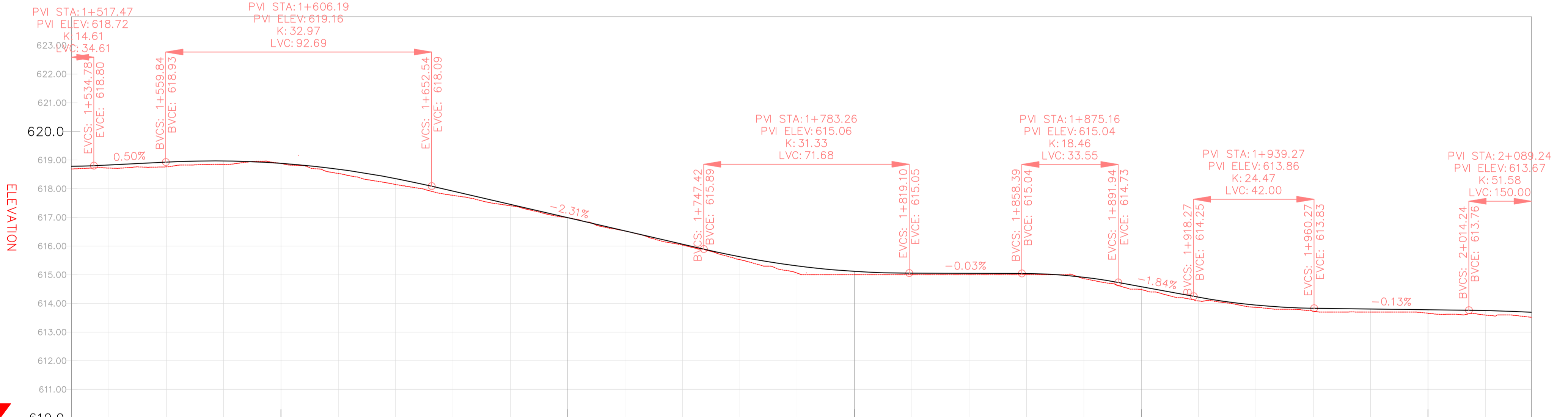
1+520.00	8,026,847.9656m	482,795.1886m	S1° 50' 53"W
1+540.00	8,026,828.0415m	482,793.5460m	S7° 34' 39"W
1+560.00	8,026,808.3424m	482,790.1097m	S10° 48' 12"W
1+580.00	8,026,788.6937m	482,786.3779m	S10° 22' 10"W
1+600.00	8,026,768.9644m	482,783.1040m	S8° 28' 27"W
1+620.00	8,026,749.1376m	482,780.4844m	S6° 34' 45"W
1+640.00	8,026,729.2350m	482,778.5218m	S4° 41' 03"W
1+660.00	8,026,709.2785m	482,777.2185m	S2° 47' 20"W
1+680.00	8,026,689.2897m	482,776.5759m	S0° 53' 38"W
1+700.00	8,026,669.2906m	482,776.5947m	S1° 00' 05"E
1+720.00	8,026,649.3031m	482,777.2748m	S2° 53' 47"E
1+740.00	8,026,629.3490m	482,778.6155m	S4° 47' 29"E
1+760.00	8,026,609.4469m	482,780.5859m	S6° 07' 08"E
1+780.00	8,026,589.5608m	482,782.7177m	S6° 07' 08"E
1+800.00	8,026,569.6748m	482,784.8496m	S6° 07' 08"E
1+820.00	8,026,549.7887m	482,786.9815m	S6° 07' 08"E
1+840.00	8,026,529.8238m	482,787.7715m	S2° 08' 47"W
1+860.00	8,026,509.9753m	482,785.4823m	S11° 00' 43"W
1+880.00	8,026,490.7168m	482,780.1614m	S19° 52' 39"W
1+900.00	8,026,472.5084m	482,771.9360m	S28° 44' 36"W
1+920.00	8,026,455.7360m	482,761.0698m	S35° 33' 09"W
1+940.00	8,026,439.4643m	482,749.4408m	S35° 33' 09"W
1+960.00	8,026,423.1927m	482,737.8119m	S35° 33' 09"W
1+980.00	8,026,406.9210m	482,726.1829m	S35° 33' 09"W
2+000.00	8,026,390.6493m	482,714.5540m	S35° 33' 09"W
2+020.00	8,026,374.3776m	482,702.9251m	S35° 33' 09"W
2+040.00	8,026,358.1059m	482,691.2961m	S35° 33' 09"W



DGHES Access-Zam



PROFILE VIEW: DGHES PROFILE VIEWS (326)
VERTICAL SCALE: 100
DATUM: 610.00

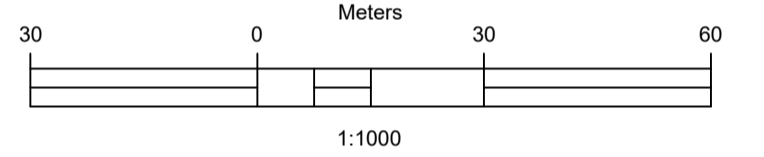


VERTICAL CURVES GRADE

FINAL ROAD LEVELS	H _L LEFT	H _C ON CL	H _R RIGHT	VERTICAL CURVES GRADE	
				Grade	Station
				0.50%	1+527 to 1+560
				-2.31%	1+560 to 1+700
				-0.03%	1+700 to 1+860
				-1.84%	1+860 to 1+960
				-0.13%	1+960 to 2+036

LEGEND

- Vented/Non-vented Drift
- Road Boundary
- Road Centerline



No.	DESCRIPTION	BY	DATE

REVISIONS

No.	DESCRIPTION	BY	DATE

CLIENT
ZAMBEZI RIVER AUTHORITY

CONSULTANT
ZAMBEZI RIVER AUTHORITY

PROJECT
CONSTRUCTION OF 28.2KM GRAVEL ROAD
MAAMBA-SIAMUSAMBA SCHOOL JUNCTION
TO DEVILS GORGE HYDRO-ELECTRIC
SCHEME SITE

DESIGNED	SIGNED	DATE
DRAWN	PS	Oct 2023
DESIGNED	PS	Oct 2023
CHECKED	AN	Oct 2023
APPROVED	AN	Oct 2023

REVISION APPROVAL
TITLE

ROAD PLAN AND PROFILE

SCALE
HORIZONTAL SCALE: 1:1000
VERTICAL SCALE: 1:100

DRAWING NO. **DGHES-PP-01**
REVISION NO. **0**

REFERENCE
Do not scale from this drawing, use stated dimensions only

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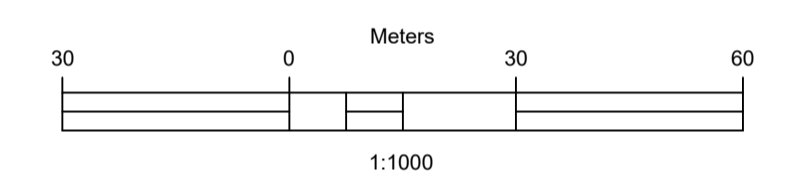
GENERAL NOTES

Station	Northing	Easting	Tangential Direction
2+040.00	8,026,358.1059m	482,691.2961m	S35° 33' 09"W
2+060.00	8,026,341.8343m	482,679.6672m	S35° 33' 09"W
2+080.00	8,026,325.5626m	482,668.0382m	S35° 33' 09"W
2+100.00	8,026,309.0437m	482,656.7718m	S31° 45' 24"W
2+120.00	8,026,291.5403m	482,647.1127m	S26° 01' 38"W
2+140.00	8,026,273.1601m	482,639.2492m	S20° 17' 51"W
2+160.00	8,026,254.0867m	482,633.2600m	S14° 34' 05"W
2+180.00	8,026,234.5106m	482,629.2048m	S8° 50' 18"W
2+200.00	8,026,214.6275m	482,627.1243m	S3° 06' 32"W
2+220.00	8,026,194.6355m	482,627.0248m	S1° 56' 00"E
2+240.00	8,026,174.6468m	482,627.6995m	S1° 56' 00"E
2+260.00	8,026,154.6582m	482,628.3742m	S1° 56' 00"E
2+280.00	8,026,134.6696m	482,629.0489m	S1° 56' 00"E
2+300.00	8,026,114.6810m	482,629.7236m	S1° 56' 00"E
2+320.00	8,026,094.6924m	482,630.3983m	S1° 56' 00"E
2+340.00	8,026,074.7038m	482,631.0729m	S1° 56' 00"E
2+360.00	8,026,054.7297m	482,632.0309m	S4° 59' 05"E
2+380.00	8,026,034.9254m	482,634.7612m	S10° 42' 52"E
2+400.00	8,026,015.4926m	482,639.4550m	S16° 28' 38"E
2+420.00	8,025,996.6254m	482,646.0654m	S22° 10' 25"E
2+440.00	8,025,978.4481m	482,654.3970m	S25° 43' 31"E
2+460.00	8,025,960.4304m	482,663.0782m	S25° 43' 31"E
2+480.00	8,025,942.4203m	482,671.7749m	S26° 40' 24"E
2+500.00	8,025,925.3305m	482,682.1241m	S35° 43' 22"E
2+520.00	8,025,910.0812m	482,695.0326m	S44° 46' 21"E
2+540.00	8,025,897.0520m	482,710.1789m	S53° 49' 20"E



LEGEND

- Vented/Non-vented Drift
- Road Boundary
- Road Centerline



No.	DESCRIPTION	BY	DATE

CLIENT
ZAMBEZI RIVER AUTHORITY

CONSULTANT
ZAMBEZI RIVER AUTHORITY

PROJECT
**CONSTRUCTION OF 28.2KM GRAVEL ROAD
MAAMBA-SIAMUSAMBA SCHOOL JUNCTION
TO DEVILS GORGE HYDRO-ELECTRIC
SCHEME SITE**

DESIGNED	SIGNED	DATE
DRAWN	PS	Oct 2023
DESIGNED	PS	Oct 2023
CHECKED	AN	Oct 2023
APPROVED	AN	Oct 2023

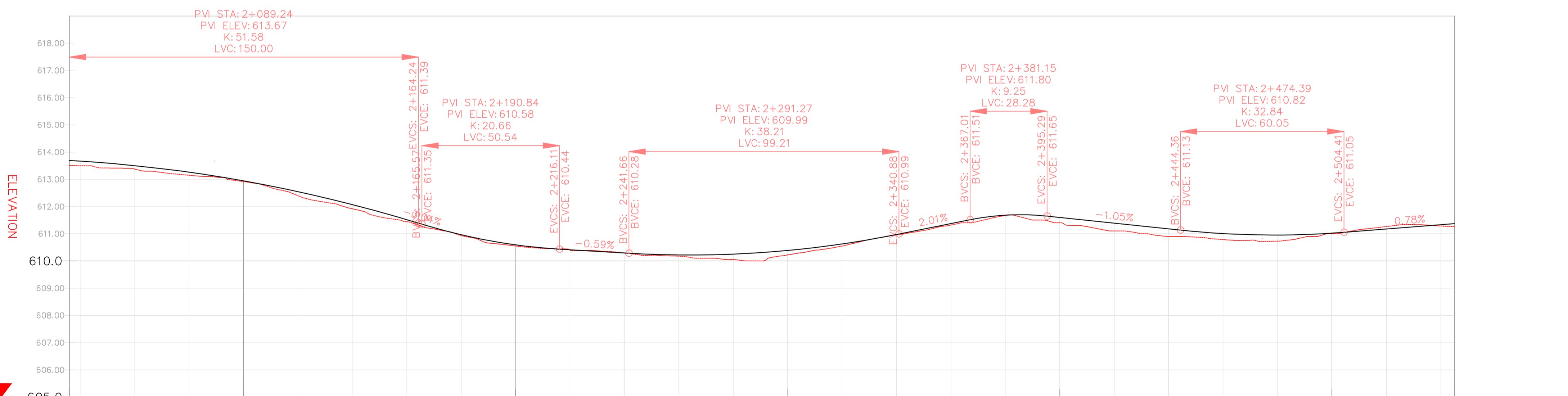
REVISION APPROVAL
TITLE

**ROAD PLAN AND
PROFILE**

SCALE
HORIZONTAL SCALE: 1:1000 VERTICAL SCALE: 1:100

DRAWING NO. **DGHES-PP-01** REVISION NO. **0**

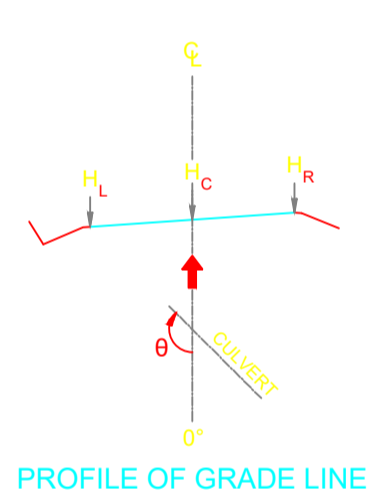
PROFILE VIEW: DGHES PROFILE VIEWS (327)
VERTICAL SCALE: 100
DATUM: 605.00



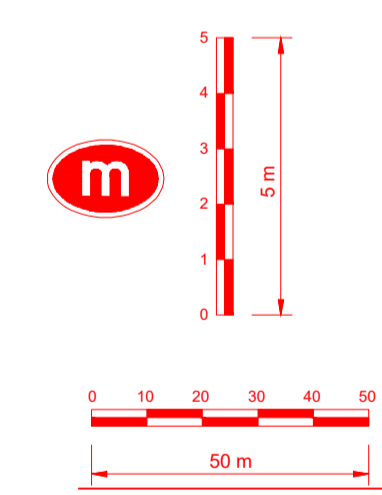
**VERTICAL CURVES
GRADE**

FINAL ROAD LEVELS	H _L LEFT	H _C ON CL	H _R RIGHT	VERTICAL CURVES GRADE	
				Grade (%)	Station
2+036	613.518	613.594	613.594	-3.04%	2+036
2+040	613.500	613.576	613.576	-3.04%	2+040
2+060	613.376	613.412	613.412	-3.04%	2+060
2+080	613.150	613.171	613.171	-3.04%	2+080
2+100	612.915	612.941	612.941	-3.04%	2+100
2+120	612.398	612.455	612.455	-3.04%	2+120
2+140	611.916	611.980	611.980	-3.04%	2+140
2+160	611.447	611.428	611.428	-3.04%	2+160
2+180	610.932	610.874	610.874	-3.04%	2+180
2+200	610.551	610.503	610.503	-3.04%	2+200
2+220	610.396	610.322	610.322	-0.59%	2+220
2+240	610.301	610.204	610.204	-0.59%	2+240
2+260	610.176	610.131	610.131	-0.59%	2+260
2+280	610.056	610.161	610.161	-0.59%	2+280
2+300	610.223	610.296	610.296	2.01%	2+300
2+320	610.548	610.536	610.536	2.01%	2+320
2+340	610.964	610.881	610.881	2.01%	2+340
2+360	611.318	611.282	611.282	2.01%	2+360
2+380	611.667	611.592	611.592	2.01%	2+380
2+400	611.400	611.509	611.509	2.01%	2+400
2+420	611.100	611.299	611.299	2.01%	2+420
2+440	610.900	611.090	611.090	2.01%	2+440
2+460	610.785	610.917	610.917	2.01%	2+460
2+480	610.728	610.864	610.864	2.01%	2+480
2+500	611.000	610.932	610.932	2.01%	2+500
2+520	611.265	611.085	611.085	2.01%	2+520
2+540	611.285	611.241	611.241	2.01%	2+540
2+545	611.268	611.280	611.280	0.78%	2+545

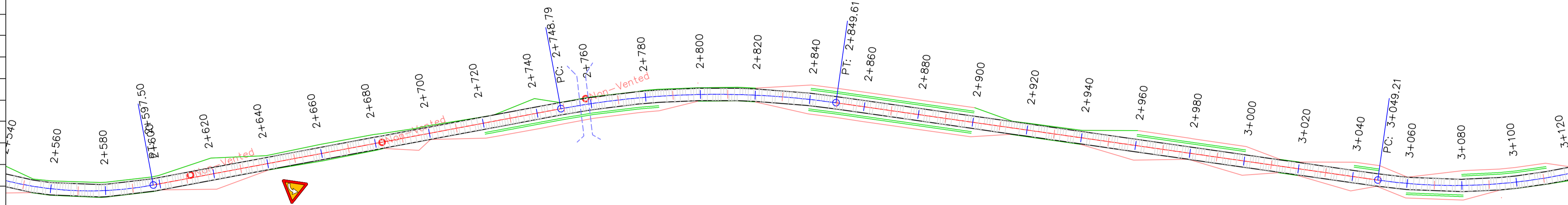
DGHES Access-Zam



PROFILE OF GRADE LINE



Station	Northing	Easting	Tangential Direction
2+540.00	8,025,897.0520m	482,710.1789m	S53° 49' 20"E
2+560.00	8,025,886.5675m	482,727.1860m	S62° 52' 18"E
2+580.00	8,025,878.8884m	482,745.6306m	S71° 55' 17"E
2+600.00	8,025,874.1819m	482,765.0492m	S79° 50' 25"E
2+620.00	8,025,870.6540m	482,784.7356m	S79° 50' 25"E
2+640.00	8,025,867.1261m	482,804.4220m	S79° 50' 25"E
2+660.00	8,025,863.5982m	482,824.1084m	S79° 50' 25"E
2+680.00	8,025,860.0704m	482,843.7948m	S79° 50' 25"E
2+700.00	8,025,856.5425m	482,863.4812m	S79° 50' 25"E
2+720.00	8,025,853.0146m	482,883.1676m	S79° 50' 25"E
2+740.00	8,025,849.4868m	482,902.8540m	S79° 50' 25"E
2+760.00	8,025,845.9590m	482,922.5404m	S77° 45' 50"E
2+780.00	8,025,842.4312m	482,941.8972m	S74° 03' 36"E
2+800.00	8,025,834.7818m	482,960.9373m	S70° 21' 22"E
2+820.00	8,025,827.4544m	482,979.5429m	S66° 39' 08"E
2+840.00	8,025,818.9403m	482,997.6363m	S62° 56' 53"E
2+860.00	8,025,809.4269m	483,015.2277m	S61° 10' 03"E
2+880.00	8,025,799.7819m	483,032.7484m	S61° 10' 03"E
2+900.00	8,025,790.1369m	483,050.2690m	S61° 10' 03"E
2+920.00	8,025,780.4919m	483,067.7897m	S61° 10' 03"E
2+940.00	8,025,770.8469m	483,085.3104m	S61° 10' 03"E
2+960.00	8,025,761.2019m	483,102.8310m	S61° 10' 03"E
2+980.00	8,025,751.5568m	483,120.3517m	S61° 10' 03"E
3+000.00	8,025,741.9118m	483,137.8724m	S61° 10' 03"E
3+020.00	8,025,732.2668m	483,155.3930m	S61° 10' 03"E
3+040.00	8,025,722.6218m	483,172.9137m	S61° 10' 03"E



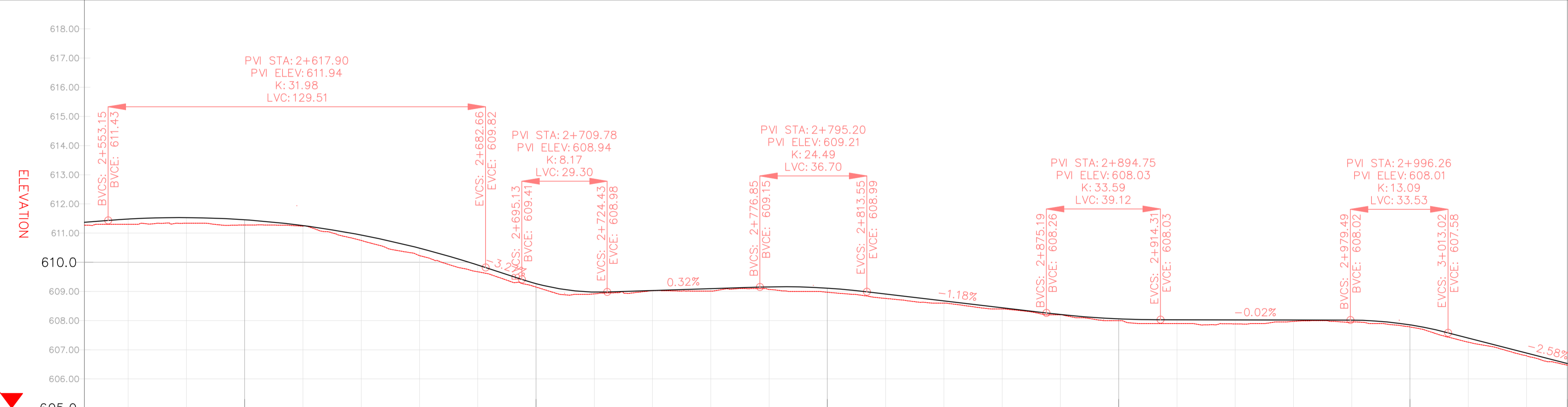
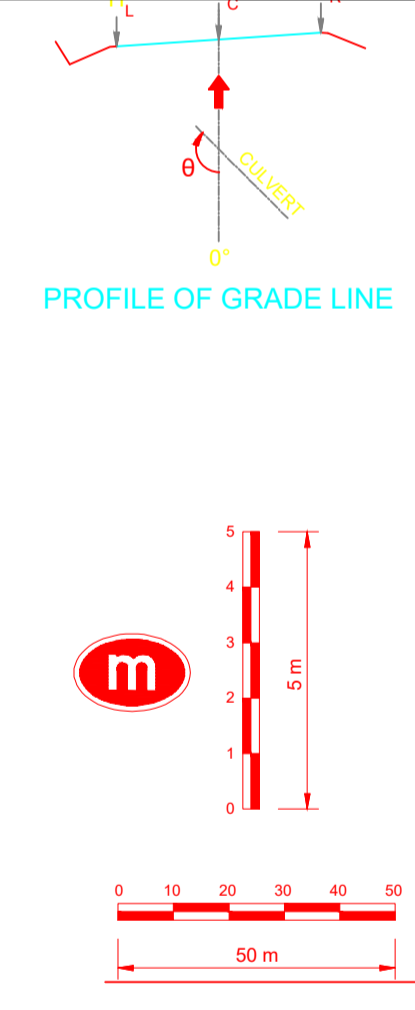
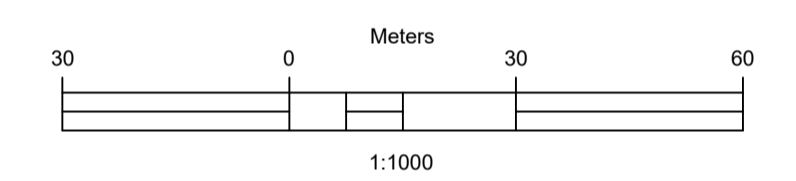
REFERENCE
Do not scale from this drawing, use stated dimensions only

DISCLAIMER
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GENERAL NOTES

LEGEND

- Vented/Non-vented Drift
- Road Boundary
- Road Centerline



VERTICAL CURVES GRADE

FINAL ROAD LEVELS	H _L LEFT	H _C ON CL	H _R RIGHT	VERTICAL CURVES GRADE	
				Grade	Curve
	611.280	611.370	611.280	0.78%	VCL=130 m K=32.0
	611.390	611.480	611.390	-3.27%	VCL=29 m K=8.2
	611.440	611.530	611.440	0.32%	VCL=37 m K=24.5
	611.456	611.456	611.456	-1.18%	VCL=39 m K=33.6
	611.167	611.257	611.167	-0.02%	VCL=34 m K=13.1
	610.842	610.932	610.842	-2.58%	
	610.392	610.482	610.392		
	609.818	609.908	609.818		
	609.179	609.269	609.179		
	608.890	608.980	608.890		
	608.941	609.031	608.941		
	609.005	609.095	609.005		
	609.066	609.156	609.066		
	609.022	609.112	609.022		
	608.823	608.913	608.823		
	608.587	608.677	608.587		
	608.351	608.441	608.351		
	608.118	608.208	608.118		
	607.970	608.060	607.970		
	607.937	608.027	607.937		
	607.933	608.023	607.933		
	607.930	608.020	607.930		
	607.927	608.017	607.927		
	607.763	607.853	607.763		
	607.312	607.402	607.312		
	606.797	606.887	606.797		
	606.436	606.526	606.436		

No.	DESCRIPTION	BY	DATE

CLIENT
ZAMBEZI RIVER AUTHORITY

CONSULTANT
ZAMBEZI RIVER AUTHORITY

PROJECT
CONSTRUCTION OF 28.2KM GRAVEL ROAD
MAAMBA-SIAMUSAMBA SCHOOL JUNCTION
TO DEVILS GORGE HYDRO-ELECTRIC
SCHEME SITE

DESIGNED	SIGNED	DATE
DRAWN	PS	Oct 2023
DESIGNED	PS	Oct 2023
CHECKED	AN	Oct 2023
APPROVED	AN	Oct 2023

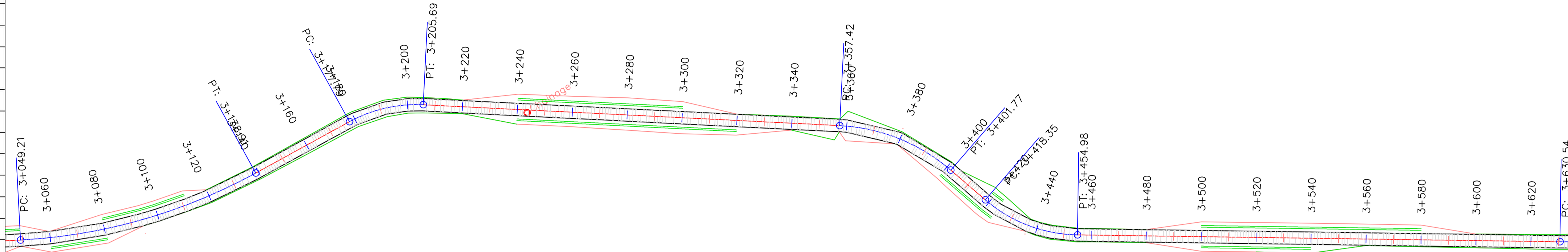
REVISION APPROVAL
TITLE

ROAD PLAN AND PROFILE

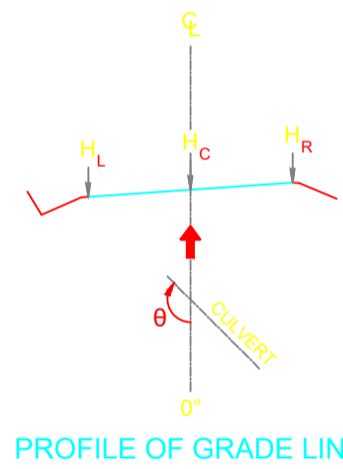
SCALE	HORIZONTAL SCALE: 1:1000	VERTICAL SCALE: 1:100
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DRAWING NO.	DGHES-PP-01	REVISION NO.	0
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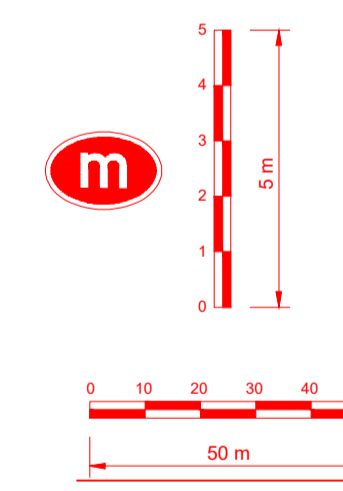
Station	Northing	Easting	Tangential Direction
3+040.00	8,025,722.6218m	483,172.9137m	S61° 10' 03"E
3+060.00	8,025,713.2342m	483,190.5701m	S64° 15' 31"E
3+080.00	8,025,705.4625m	483,208.9893m	S69° 59' 17"E
3+100.00	8,025,699.5684m	483,228.0924m	S75° 43' 03"E
3+120.00	8,025,695.6109m	483,247.6884m	S81° 26' 50"E
3+140.00	8,025,693.6265m	483,267.5815m	S86° 51' 47"E
3+160.00	8,025,692.5321m	483,287.5515m	S86° 51' 47"E
3+180.00	8,025,691.3894m	483,307.5182m	S84° 21' 33"E
3+200.00	8,025,685.5900m	483,326.5230m	S61° 42' 04"E
3+220.00	8,025,674.4602m	483,343.1287m	S55° 15' 03"E
3+240.00	8,025,663.0605m	483,359.5618m	S55° 15' 03"E
3+260.00	8,025,651.6608m	483,375.9948m	S55° 15' 03"E
3+280.00	8,025,640.2611m	483,392.4279m	S55° 15' 03"E
3+300.00	8,025,628.8614m	483,408.8610m	S55° 15' 03"E
3+320.00	8,025,617.4617m	483,425.2941m	S55° 15' 03"E
3+340.00	8,025,606.0620m	483,441.7272m	S55° 15' 03"E
3+360.00	8,025,594.6217m	483,458.1314m	S53° 02' 25"E
3+380.00	8,025,580.4055m	483,472.0933m	S35° 55' 33"E
3+400.00	8,025,562.7101m	483,481.2534m	S18° 48' 40"E
3+420.00	8,025,543.6294m	483,487.2460m	S19° 05' 52"E
3+440.00	8,025,526.4164m	483,497.1906m	S40° 56' 07"E
3+460.00	8,025,513.9316m	483,512.7010m	S57° 17' 25"E
3+480.00	8,025,503.1239m	483,529.5294m	S57° 17' 25"E
3+500.00	8,025,492.3162m	483,546.3577m	S57° 17' 25"E
3+520.00	8,025,481.5085m	483,563.1861m	S57° 17' 25"E
3+540.00	8,025,470.7008m	483,580.0145m	S57° 17' 25"E
3+560.00	8,025,459.8931m	483,596.8428m	S57° 17' 25"E



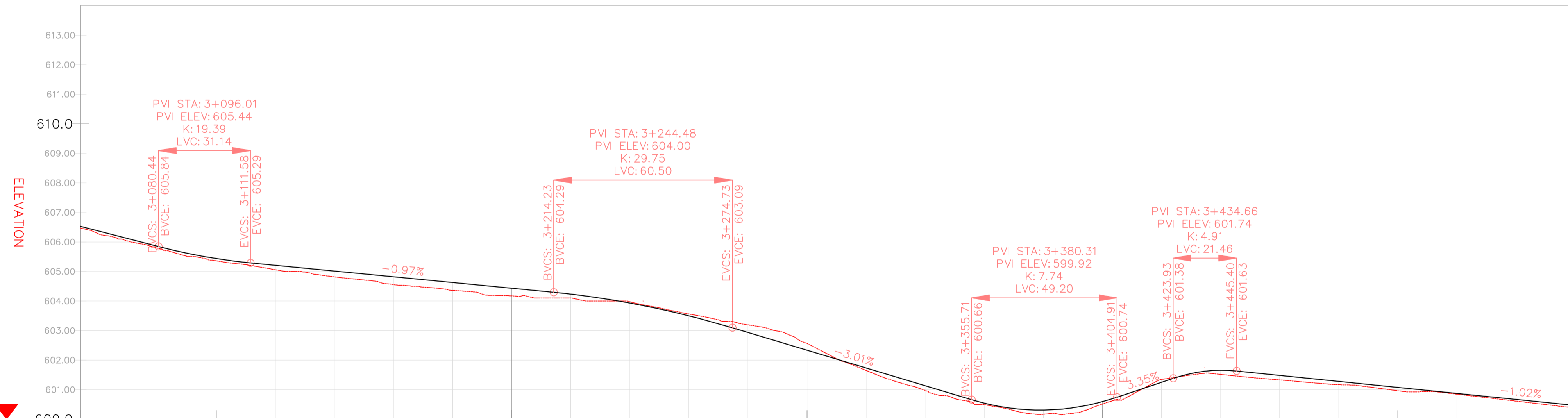
DGHES Access-Zam



PROFILE OF GRADE LINE



PROFILE VIEW: DGHES PROFILE VIEWS (329)
VERTICAL SCALE: 100
DATUM: 600.00



VERTICAL CURVES GRADE

FINAL ROAD LEVELS	H _L	LEFT	Stationing																										
			3+054	3+060	3+080	3+100	3+120	3+140	3+160	3+180	3+200	3+220	3+240	3+260	3+280	3+300	3+320	3+340	3+360	3+380	3+400	3+420	3+440	3+460	3+480	3+500	3+520	3+540	3+560
H _L	606.436	606.281	605.765	605.349	605.120	604.925	604.731	604.537	604.342	604.142	603.942	603.842	603.407	602.842	602.241	601.640	601.039	600.450	600.218	600.503	601.157	601.565	601.391	601.188	600.985	600.781	600.578	600.374	600.170
H _C	606.526	606.371	605.855	605.439	605.210	605.015	604.821	604.627	604.432	604.232	604.032	603.842	603.497	602.932	602.331	601.730	601.129	600.540	600.308	600.593	601.247	601.655	601.481	601.278	601.075	600.871	600.668	600.464	600.260
H _R	606.471	606.280	605.794	605.360	605.120	604.925	604.731	604.537	604.342	604.142	603.942	603.842	603.407	602.842	602.241	601.640	601.039	600.450	600.218	600.503	601.157	601.565	601.391	601.188	600.985	600.781	600.578	600.374	600.170
GROUND LEVELS AT GRADE LINE	606.471	606.280	605.794	605.360	605.120	604.925	604.731	604.537	604.342	604.142	603.942	603.842	603.407	602.842	602.241	601.640	601.039	600.450	600.218	600.503	601.157	601.565	601.391	601.188	600.985	600.781	600.578	600.374	600.170
KILOMETER DISTANCE	3+054	3+060	3+080	3+100	3+120	3+140	3+160	3+180	3+200	3+220	3+240	3+260	3+280	3+300	3+320	3+340	3+360	3+380	3+400	3+420	3+440	3+460	3+480	3+500	3+520	3+540	3+560	3+580	

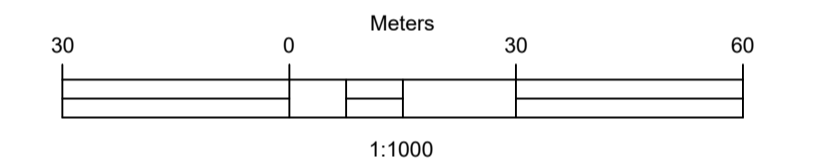
REFERENCE
Do not scale from this drawing, use stated dimensions only

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GENERAL NOTES

LEGEND

- Vented/Non-vented Drift
- Road Boundary
- Road Centerline



No.	DESCRIPTION	BY	DATE

REVISIONS

CLIENT: ZAMBEZI RIVER AUTHORITY

CONSULTANT: ZAMBEZI RIVER AUTHORITY

PROJECT
CONSTRUCTION OF 28.2KM GRAVEL ROAD
MAAMBA-SIAMUSAMBA SCHOOL JUNCTION
TO DEVILS GORGE HYDRO-ELECTRIC
SCHEME SITE

DESIGNED	SIGNED	DATE
DRAWN	PS	Oct 2023
DESIGNED	PS	Oct 2023
CHECKED	AN	Oct 2023
APPROVED	AN	Oct 2023

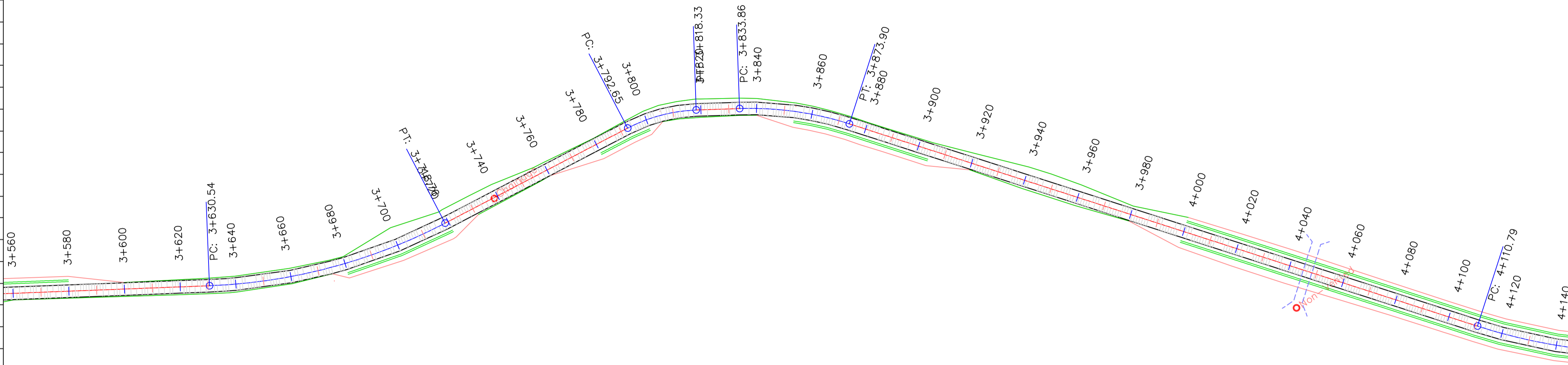
REVISION APPROVAL

TITLE
ROAD PLAN AND PROFILE

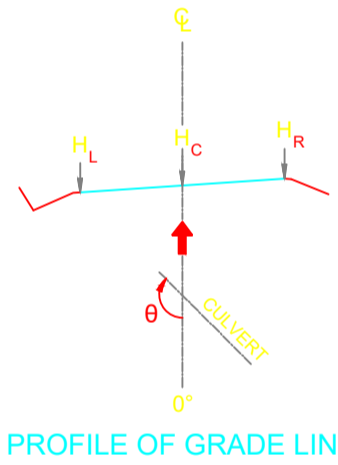
SCALE
HORIZONTAL SCALE: 1:1000
VERTICAL SCALE: 1:100

DRAWING NO. **DGHES-PP-01**
REVISION NO. **0**

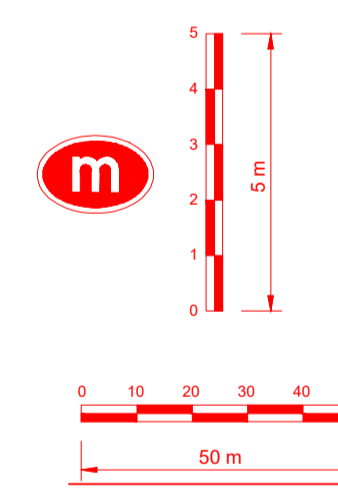
Station	Northing	Easting	Tangential Direction
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3+580.00	8,025,449.0854m	483,613.6712m	S57° 17' 25"E
3+600.00	8,025,438.2777m	483,630.4996m	S57° 17' 25"E
3+620.00	8,025,427.4700m	483,647.3279m	S57° 17' 25"E
3+640.00	8,025,416.8525m	483,664.2742m	S60° 00' 03"E
3+660.00	8,025,407.7347m	483,682.0656m	S65° 43' 49"E
3+680.00	8,025,400.4387m	483,700.6783m	S71° 27' 36"E
3+700.00	8,025,395.0372m	483,719.9265m	S77° 11' 22"E
3+720.00	8,025,391.5806m	483,739.6172m	S82° 33' 53"E
3+740.00	8,025,388.9925m	483,759.4491m	S82° 33' 53"E
3+760.00	8,025,386.4043m	483,779.2809m	S82° 33' 53"E
3+780.00	8,025,383.8162m	483,799.1127m	S82° 33' 53"E
3+800.00	8,025,380.7664m	483,818.8642m	S75° 15' 30"E
3+820.00	8,025,372.4779m	483,836.9599m	S57° 02' 51"E
3+840.00	8,025,361.4642m	483,853.6515m	S54° 00' 43"E
3+860.00	8,025,348.3765m	483,868.7420m	S44° 07' 09"E
3+880.00	8,025,332.9858m	483,881.4890m	S37° 14' 31"E
3+900.00	8,025,317.0641m	483,893.5926m	S37° 14' 31"E
3+920.00	8,025,301.1423m	483,905.6963m	S37° 14' 31"E
3+940.00	8,025,285.2206m	483,917.8000m	S37° 14' 31"E
3+960.00	8,025,269.2989m	483,929.9037m	S37° 14' 31"E
3+980.00	8,025,253.3772m	483,942.0074m	S37° 14' 31"E
4+000.00	8,025,237.4555m	483,954.1110m	S37° 14' 31"E
4+020.00	8,025,221.5338m	483,966.2147m	S37° 14' 31"E
4+040.00	8,025,205.6121m	483,978.3184m	S37° 14' 31"E
4+060.00	8,025,189.6903m	483,990.4221m	S37° 14' 31"E
4+080.00	8,025,173.7686m	484,002.5257m	S37° 14' 31"E



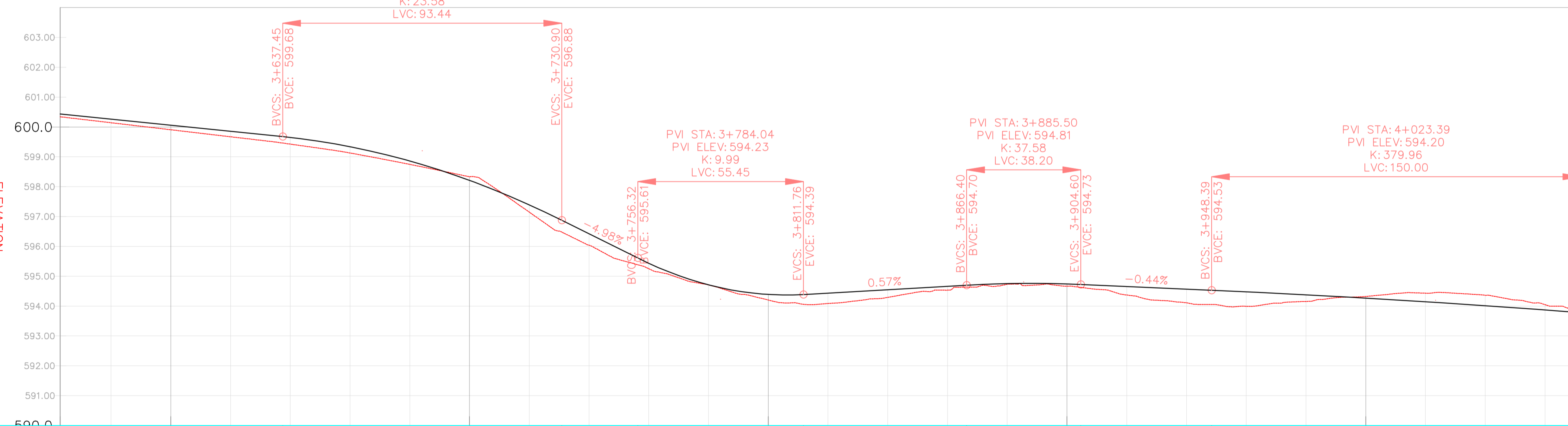
DGHES Access-Zam



PROFILE OF GRADE LINE



PROFILE VIEW: DGHES PROFILE VIEWS (330)
VERTICAL SCALE: 100
DATUM: 590.00



VERTICAL CURVES GRADE

FINAL ROAD LEVELS	H _L	LEFT	VERTICAL CURVES GRADE																										
			3+563	3+580	3+600	3+620	3+640	3+660	3+680	3+700	3+720	3+740	3+760	3+780	3+800	3+820	3+840	3+860	3+880	3+900	3+920	3+940	3+960	3+980	4+000	4+020	4+040	4+060	4+072
			600.344	600.171	599.968	599.764	599.560	599.250	598.771	598.122	597.303	596.332	595.343	594.622	594.300	594.345	594.460	594.664	594.864	594.653	594.567	594.478	594.387	594.287	594.176	594.055	593.923	593.781	593.689
			600.434	600.261	600.058	599.854	599.650	599.340	598.861	598.212	597.393	596.422	595.433	594.712	594.390	594.435	594.550	594.754	594.954	594.743	594.657	594.568	594.477	594.377	594.266	594.145	594.013	593.871	593.781
			600.342	600.142	599.907	599.764	599.560	599.250	598.771	598.122	597.303	596.332	595.343	594.622	594.300	594.345	594.460	594.664	594.864	594.653	594.567	594.478	594.387	594.287	594.176	594.055	593.923	593.781	593.689
			600.342	600.142	599.907	599.764	599.560	599.250	598.771	598.122	597.303	596.332	595.343	594.622	594.300	594.345	594.460	594.664	594.864	594.653	594.567	594.478	594.387	594.287	594.176	594.055	593.923	593.781	593.689

KILOMETER DISTANCE

REFERENCE

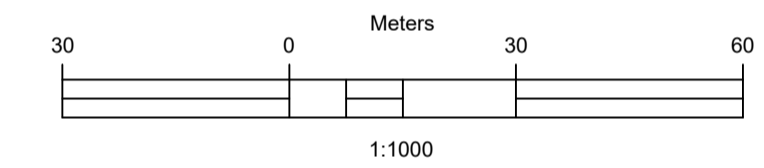
Do not scale from this drawing, use stated dimensions only

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GENERAL NOTES

LEGEND

- Vented/Non-vented Drift
- Road Boundary
- Road Centerline



No.	DESCRIPTION	BY	DATE

REVISIONS

CLIENT	CONSULTANT
ZAMBEZI RIVER AUTHORITY	ZAMBEZI RIVER AUTHORITY

PROJECT
CONSTRUCTION OF 28.2KM GRAVEL ROAD
MAAMBA-SIAMUSAMBA SCHOOL JUNCTION
TO DEVILS GORGE HYDRO-ELECTRIC
SCHEME SITE

DESIGNED	SIGNED	DATE
PS	PS	Oct 2023
AN	AN	Oct 2023
AN	AN	Oct 2023

REVISION APPROVAL

TITLE

ROAD PLAN AND PROFILE

SCALE	HORIZONTAL SCALE: 1:1000	VERTICAL SCALE: 1:100

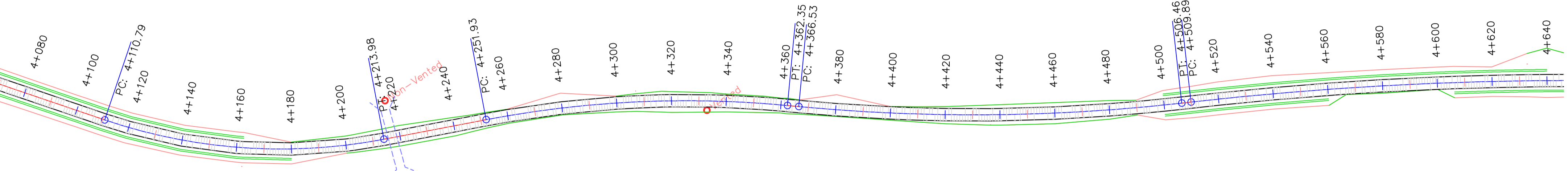
DRAWING NO.	REVISION NO.
DGHES-PP-01	0

REFERENCE
Do not scale from this drawing, use stated dimensions only

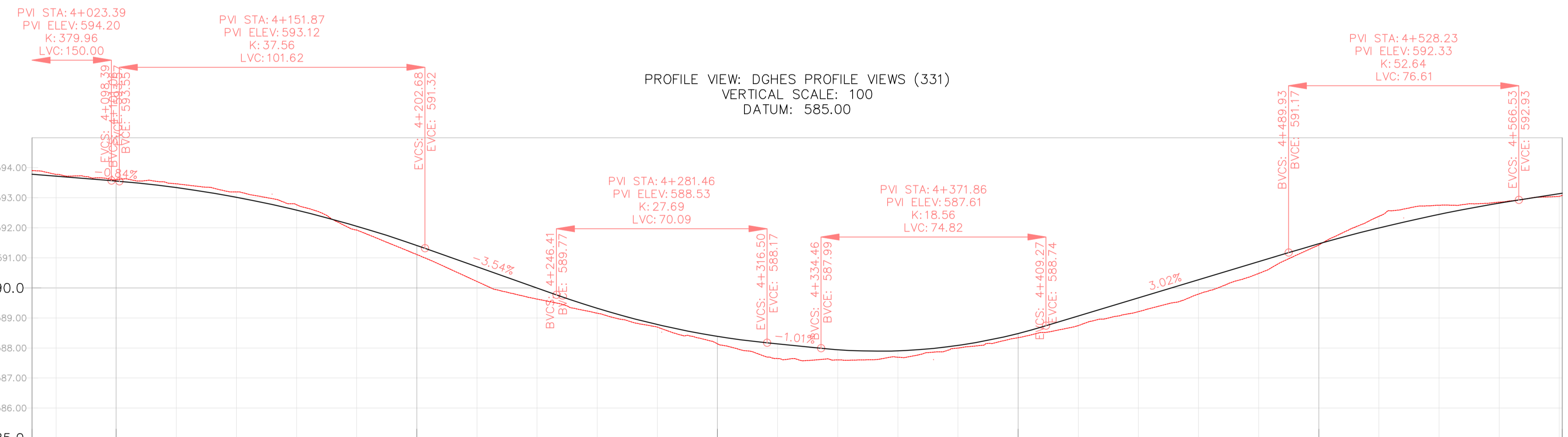
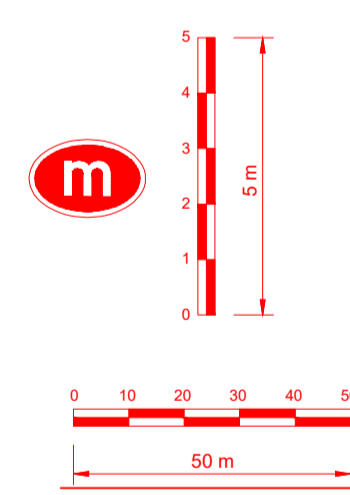
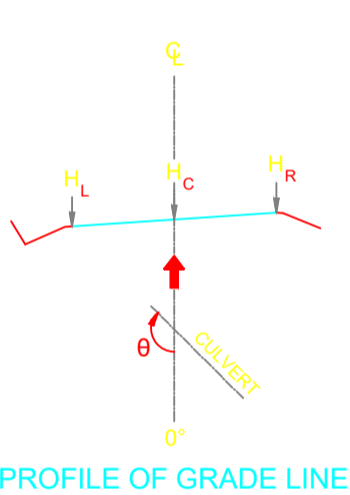
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GENERAL NOTES

Station	Northing	Easting	Tangential Direction
4+080.00	8,025,173.7686m	484,002.5257m	S37° 14' 31"E
4+100.00	8,025,157.8469m	484,014.6294m	S37° 14' 31"E
4+120.00	8,025,142.0561m	484,026.8999m	S39° 52' 50"E
4+140.00	8,025,127.3746m	484,040.4691m	S45° 36' 36"E
4+160.00	8,025,114.1212m	484,055.4361m	S51° 20' 23"E
4+180.00	8,025,102.4281m	484,071.6515m	S57° 04' 09"E
4+200.00	8,025,092.4124m	484,088.9533m	S62° 47' 56"E
4+220.00	8,025,084.0903m	484,107.1337m	S66° 48' 15"E
4+240.00	8,025,076.2128m	484,125.5170m	S66° 48' 15"E
4+260.00	8,025,068.2587m	484,143.8668m	S65° 37' 01"E
4+280.00	8,025,059.5379m	484,161.8629m	S62° 40' 27"E
4+300.00	8,025,049.9048m	484,179.3876m	S59° 43' 53"E
4+320.00	8,025,039.3847m	484,196.3946m	S56° 47' 20"E
4+340.00	8,025,028.0053m	484,212.8392m	S53° 50' 46"E
4+360.00	8,025,015.7968m	484,228.6778m	S50° 54' 13"E
4+380.00	8,025,003.2008m	484,244.2125m	S51° 42' 07"E
4+400.00	8,024,991.0401m	484,260.0898m	S53° 24' 00"E
4+420.00	8,024,979.3553m	484,276.3204m	S55° 05' 52"E
4+440.00	8,024,968.1564m	484,292.8902m	S56° 47' 45"E
4+460.00	8,024,957.4535m	484,309.7845m	S58° 29' 38"E
4+480.00	8,024,947.2559m	484,326.9886m	S60° 11' 30"E
4+500.00	8,024,937.5725m	484,344.4872m	S61° 53' 23"E
4+520.00	8,024,928.2547m	484,362.1840m	S61° 58' 21"E
4+540.00	8,024,918.7152m	484,379.7621m	S61° 03' 02"E
4+560.00	8,024,908.8941m	484,397.1844m	S60° 07' 43"E
4+580.00	8,024,898.7939m	484,414.4464m	S59° 12' 24"E



DGHES Access-Zam

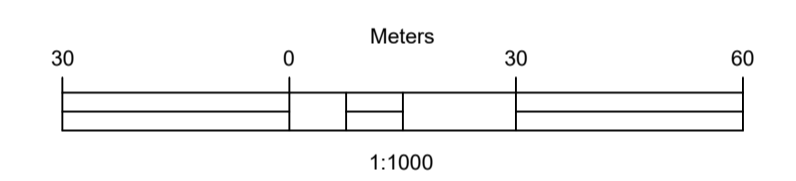


VERTICAL CURVES GRADE

FINAL ROAD LEVELS	H _L LEFT	H _C ON CL	H _R RIGHT	VERTICAL CURVES GRADE	
				Grade	Curve
				VCL=150 m K=380.0	-0.84%
				VCL=102 m K=37.6	-3.54%
				VCL=70 m K=27.7	-1.01%
				VCL=75 m K=18.6	3.02%
				VCL=77 m K=52.6	1.56%
GROUND LEVELS AT GRADE LINE	593.689	593.781	593.689	593.906	593.781
KILOMETER DISTANCE	4+072	4+080	4+100	4+120	4+140
	593.689	593.628	593.465	593.249	592.927
	593.689	593.628	593.465	593.339	592.927
	593.689	593.628	593.465	592.589	592.499
	593.689	593.628	593.465	591.964	591.964
	593.689	593.628	593.465	591.323	591.323
	593.689	593.628	593.465	590.615	590.615
	593.689	593.628	593.465	589.906	589.906
	593.689	593.628	593.465	589.231	589.231
	593.689	593.628	593.465	588.692	588.692
	593.689	593.628	593.465	588.268	588.268
	593.689	593.628	593.465	588.136	588.136
	593.689	593.628	593.465	587.852	587.852
	593.689	593.628	593.465	587.817	587.817
	593.689	593.628	593.465	587.997	587.997
	593.689	593.628	593.465	588.393	588.393
	593.689	593.628	593.465	588.973	588.973
	593.689	593.628	593.465	589.667	589.667
	593.689	593.628	593.465	590.180	590.180
	593.689	593.628	593.465	590.784	590.784
	593.689	593.628	593.465	591.378	591.378
	593.689	593.628	593.465	591.905	591.905
	593.689	593.628	593.465	592.356	592.356
	593.689	593.628	593.465	592.732	592.732
	593.689	593.628	593.465	593.048	593.048
	593.689	593.628	593.465	593.154	593.154

LEGEND

- Vented/Non-vented Drift
- Road Boundary
- Road Centerline



No.	DESCRIPTION	BY	DATE

REVISIONS

CLIENT	ZAMBEZI RIVER AUTHORITY
CONSULTANT	ZAMBEZI RIVER AUTHORITY

PROJECT
CONSTRUCTION OF 28.2KM GRAVEL ROAD
MAAMBA-SIAMUSAMBA SCHOOL JUNCTION
TO DEVILS GORGE HYDRO-ELECTRIC
SCHEME SITE

DESIGNED	SIGNED	DATE
DRAWN	PS	Oct 2023
DESIGNED	PS	Oct 2023
CHECKED	AN	Oct 2023
APPROVED	AN	Oct 2023

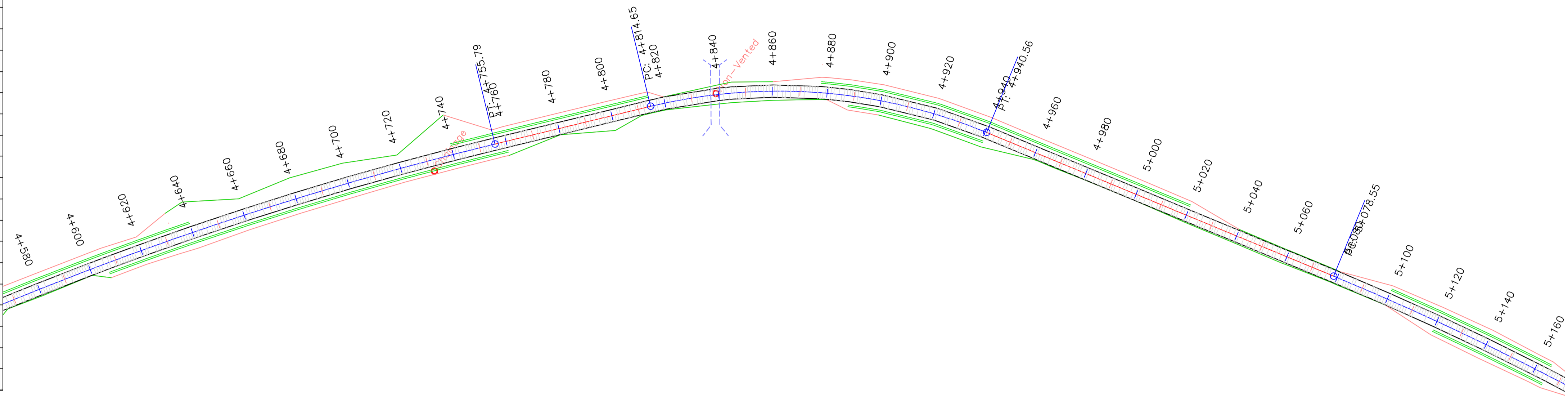
REVISION APPROVAL
TITLE

ROAD PLAN AND PROFILE

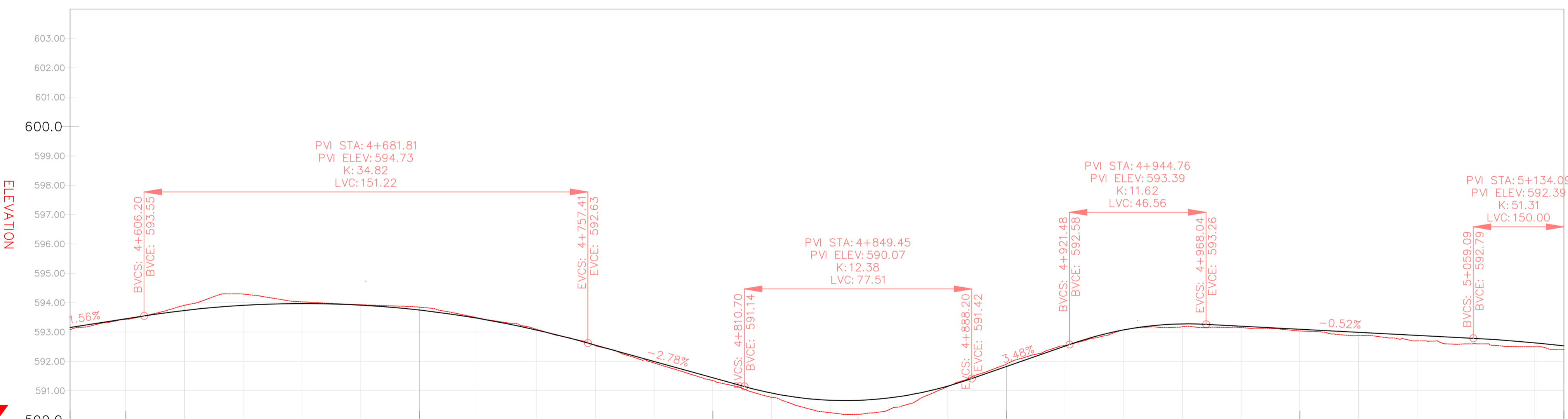
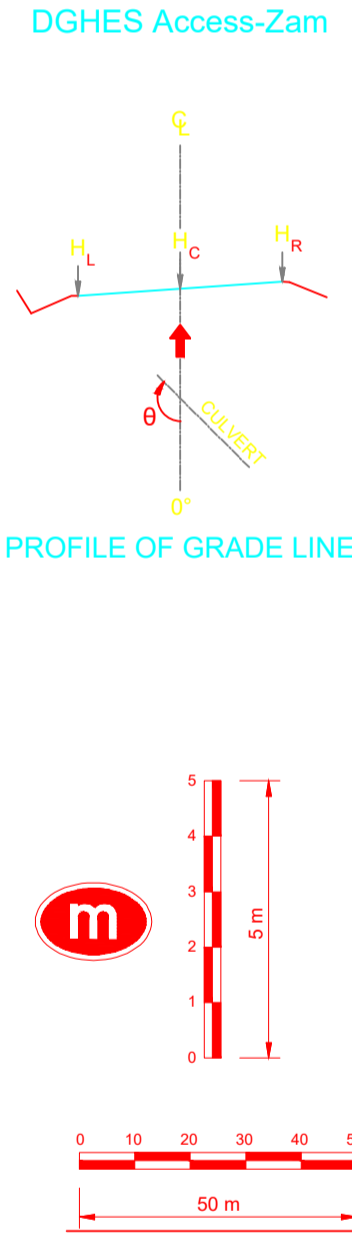
SCALE
HORIZONTAL SCALE: 1:1000
VERTICAL SCALE: 1:100

DRAWING NO. **DGHES-PP-01**
REVISION NO. **0**

Station	Northing	Easting	Tangential Direction
4+580.00	8,024,898.7939m	484,414.4464m	S59° 12' 24"E
4+600.00	8,024,888.4173m	484,431.5437m	S58° 17' 06"E
4+620.00	8,024,877.7670m	484,448.4718m	S57° 21' 47"E
4+640.00	8,024,866.8456m	484,465.2264m	S56° 26' 28"E
4+660.00	8,024,855.6562m	484,481.8031m	S55° 31' 09"E
4+680.00	8,024,844.2014m	484,498.1976m	S54° 36' 50"E
4+700.00	8,024,832.4844m	484,514.4057m	S53° 40' 31"E
4+720.00	8,024,820.5081m	484,530.4232m	S52° 45' 13"E
4+740.00	8,024,808.2756m	484,546.2459m	S51° 49' 54"E
4+760.00	8,024,795.7957m	484,561.8742m	S51° 06' 14"E
4+780.00	8,024,783.2374m	484,577.4399m	S51° 06' 14"E
4+800.00	8,024,770.6792m	484,593.0056m	S51° 06' 14"E
4+820.00	8,024,758.0656m	484,608.5258m	S49° 34' 12"E
4+840.00	8,024,744.3563m	484,623.0765m	S43° 50' 26"E
4+860.00	8,024,729.2628m	484,636.1858m	S38° 06' 39"E
4+880.00	8,024,712.9360m	484,647.7228m	S32° 22' 53"E
4+900.00	8,024,695.5390m	484,657.5722m	S26° 39' 06"E
4+920.00	8,024,677.2456m	484,665.6356m	S20° 59' 20"E
4+940.00	8,024,658.2386m	484,671.8324m	S15° 11' 33"E
4+960.00	8,024,638.9231m	484,677.0202m	S15° 01' 54"E
4+980.00	8,024,619.6075m	484,682.2073m	S15° 01' 54"E
5+000.00	8,024,600.2918m	484,687.3943m	S15° 01' 54"E
5+020.00	8,024,580.9762m	484,692.5814m	S15° 01' 54"E
5+040.00	8,024,561.6605m	484,697.7685m	S15° 01' 54"E
5+060.00	8,024,542.3449m	484,702.9555m	S15° 01' 54"E
5+080.00	8,024,523.0290m	484,708.1416m	S14° 57' 07"E
5+100.00	8,024,503.6580m	484,713.1167m	S13° 51' 21"E



PROFILE VIEW: DGHE'S PROFILE VIEWS (332)
VERTICAL SCALE: 100
DATUM: 590.00



VERTICAL CURVES GRADE

KILOMETER DISTANCE	VERTICAL CURVES GRADE		
	FINAL ROAD LEVELS	ROAD LEVELS	GROUND LEVELS AT GRADE LINE
4+581	H _L LEFT: 593.064	H _C ON CL: 593.154	H _R RIGHT: 593.081
4+600	593.390	593.450	593.433
4+620	593.646	593.736	593.911
4+640	593.821	593.911	594.294
4+660	593.882	593.972	594.029
4+680	593.828	593.918	593.930
4+700	593.659	593.749	593.848
4+720	593.375	593.465	593.482
4+740	593.067	593.067	593.092
4+760	592.464	592.554	592.540
4+780	591.908	591.998	591.948
4+800	591.352	591.442	591.345
4+820	590.831	590.921	590.778
4+840	590.587	590.677	590.253
4+860	590.666	590.756	590.354
4+880	591.068	591.158	591.141
4+900	591.737	591.827	591.910
4+920	592.434	592.524	592.545
4+940	592.983	593.073	593.076
4+960	593.188	593.278	593.178
4+980	593.111	593.201	593.153
5+000	593.006	593.096	593.038
5+020	592.901	592.991	592.879
5+040	592.796	592.886	592.700
5+060	592.691	592.781	592.600
5+080	592.544	592.634	592.500
5+090	592.431	592.531	592.400

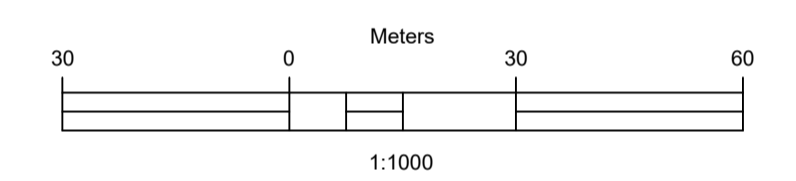
REFERENCE
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GENERAL NOTES

LEGEND

- Vented/Non-vented Drift
- Road Boundary
- Road Centerline



No.	DESCRIPTION	BY	DATE

REVISIONS

CLIENT: ZAMBEZI RIVER AUTHORITY

CONSULTANT: ZAMBEZI RIVER AUTHORITY

PROJECT
CONSTRUCTION OF 28.2KM GRAVEL ROAD
MAAMBA-SIAMUSAMBA SCHOOL JUNCTION
TO DEVILS GORGE HYDRO-ELECTRIC
SCHEME SITE

DESIGNED	SIGNED	DATE
DRAWN	PS	Oct 2023
DESIGNED	PS	Oct 2023
CHECKED	AN	Oct 2023
APPROVED	AN	Oct 2023

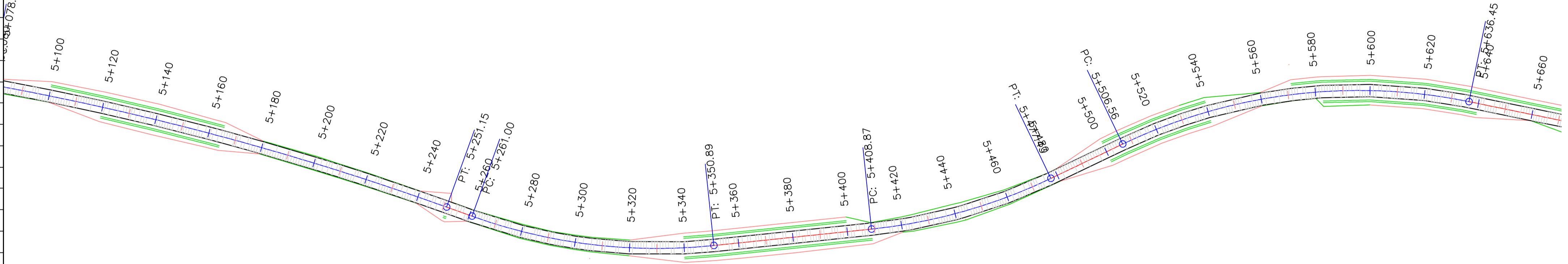
REVISION APPROVAL
TITLE

ROAD PLAN AND PROFILE

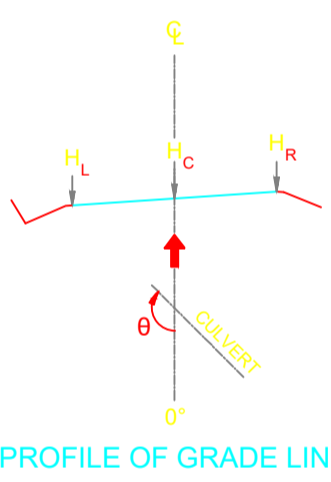
SCALE
HORIZONTAL SCALE: 1:1000
VERTICAL SCALE: 1:100

DRAWING NO. DGHE'S-PP-01
REVISION NO. 0

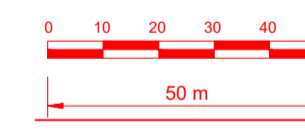
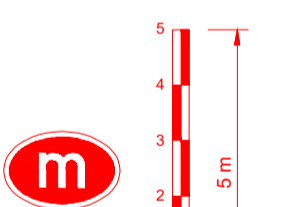
Station	Northing	Easting	Tangential Direction
5+080.00	8,024,523.0290m	484,708.1416m	S14° 57' 07"E
5+100.00	8,024,503.6580m	484,713.1167m	S13° 51' 21"E
5+120.00	8,024,484.1953m	484,717.7203m	S12° 45' 36"E
5+140.00	8,024,464.6482m	484,721.9508m	S11° 39' 50"E
5+160.00	8,024,445.0237m	484,725.8066m	S10° 34' 04"E
5+180.00	8,024,425.3290m	484,729.2863m	S9° 28' 18"E
5+200.00	8,024,405.5714m	484,732.3887m	S8° 22' 33"E
5+220.00	8,024,385.7581m	484,735.1126m	S7° 16' 47"E
5+240.00	8,024,365.8963m	484,737.4569m	S6° 11' 01"E
5+260.00	8,024,345.9968m	484,739.4582m	S5° 34' 22"E
5+280.00	8,024,326.2073m	484,742.2951m	S11° 00' 56"E
5+300.00	8,024,306.7994m	484,747.0911m	S16° 44' 43"E
5+320.00	8,024,287.9673m	484,753.8006m	S22° 28' 29"E
5+340.00	8,024,269.8991m	484,762.3567m	S28° 12' 16"E
5+360.00	8,024,252.6647m	484,772.4981m	S31° 19' 22"E
5+380.00	8,024,235.5796m	484,782.8953m	S31° 19' 22"E
5+400.00	8,024,218.4946m	484,793.2924m	S31° 19' 22"E
5+420.00	8,024,201.5755m	484,803.9513m	S34° 30' 45"E
5+440.00	8,024,185.6890m	484,816.0875m	S40° 14' 31"E
5+460.00	8,024,171.0935m	484,829.7490m	S45° 58' 18"E
5+480.00	8,024,157.9219m	484,844.7891m	S50° 57' 54"E
5+500.00	8,024,145.3260m	484,860.3243m	S50° 57' 54"E
5+520.00	8,024,132.3860m	484,875.5675m	S47° 06' 56"E
5+540.00	8,024,118.0661m	484,889.5177m	S41° 23' 10"E
5+560.00	8,024,102.4251m	484,901.9689m	S35° 39' 23"E
5+580.00	8,024,085.6192m	484,912.7958m	S29° 55' 37"E
5+600.00	8,024,067.8163m	484,921.8911m	S24° 11' 50"E



DGHES Access-Zam

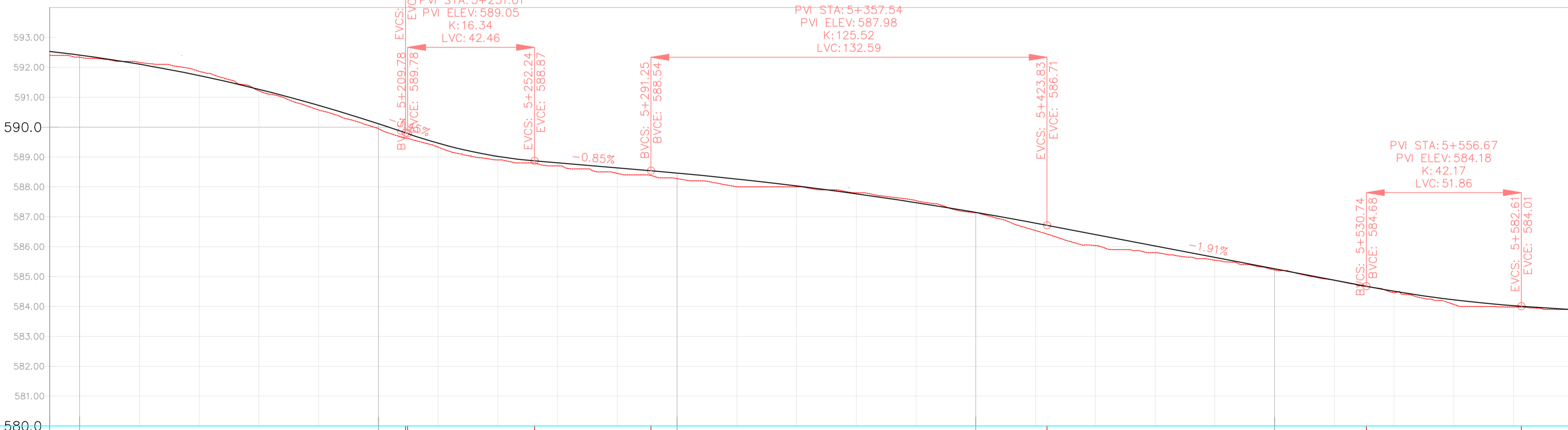


PROFILE OF GRADE LINE



PVI STA: 5+134.09
PVI ELEV: 592.39
K: 51.31
LVC: 150.00

PROFILE VIEW: DGHES PROFILE VIEWS (333)
VERTICAL SCALE: 100
DATUM: 580.00



VERTICAL CURVES GRADE

FINAL ROAD LEVELS	H _L	LEFT	ELEVATION																											
			5+090	5+100	5+120	5+140	5+160	5+180	5+200	5+220	5+240	5+260	5+280	5+300	5+320	5+340	5+360	5+380	5+400	5+420	5+440	5+460	5+480	5+500	5+520	5+540	5+560	5+580	5+599	
	H _L	LEFT	592.431	592.531	592.631	592.731	592.831	592.931	593.031	593.131	593.231	593.331	593.431	593.531	593.631	593.731	593.831	593.931	594.031	594.131	594.231	594.331	594.431	594.531	594.631	594.731	594.831	594.931	595.031	595.131
	H _C	ON CL	592.431	592.531	592.631	592.731	592.831	592.931	593.031	593.131	593.231	593.331	593.431	593.531	593.631	593.731	593.831	593.931	594.031	594.131	594.231	594.331	594.431	594.531	594.631	594.731	594.831	594.931	595.031	595.131
	H _R	RIGHT	592.431	592.531	592.631	592.731	592.831	592.931	593.031	593.131	593.231	593.331	593.431	593.531	593.631	593.731	593.831	593.931	594.031	594.131	594.231	594.331	594.431	594.531	594.631	594.731	594.831	594.931	595.031	595.131
GROUND LEVELS AT GRADE LINE			592.400	592.338	592.164	591.867	591.216	590.573	590.022	589.462	588.930	588.405	587.880	587.355	586.830	586.305	585.780	585.255	584.730	584.205	583.680	583.155	582.630	582.105	581.580	581.055	580.530	580.005	594.931	594.807
KILOMETER DISTANCE			5+090	5+100	5+120	5+140	5+160	5+180	5+200	5+220	5+240	5+260	5+280	5+300	5+320	5+340	5+360	5+380	5+400	5+420	5+440	5+460	5+480	5+500	5+520	5+540	5+560	5+580	5+599	

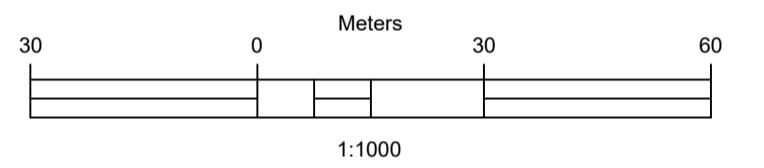
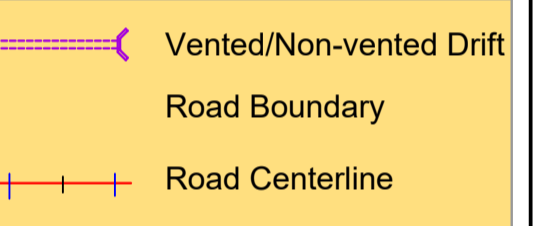
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GENERAL NOTES

LEGEND



No.	DESCRIPTION	BY	DATE

REVISIONS

CLIENT
ZAMBEZI RIVER AUTHORITY

CONSULTANT
ZAMBEZI RIVER AUTHORITY

PROJECT
**CONSTRUCTION OF 28.2KM GRAVEL ROAD
MAAMBA-SIAMUSAMBA SCHOOL JUNCTION
TO DEVILS GORGE HYDRO-ELECTRIC
SCHEME SITE**

DESIGNED	SIGNED	DATE
DRAWN	PS	Oct 2023
DESIGNED	PS	Oct 2023
CHECKED	AN	Oct 2023
APPROVED	AN	Oct 2023

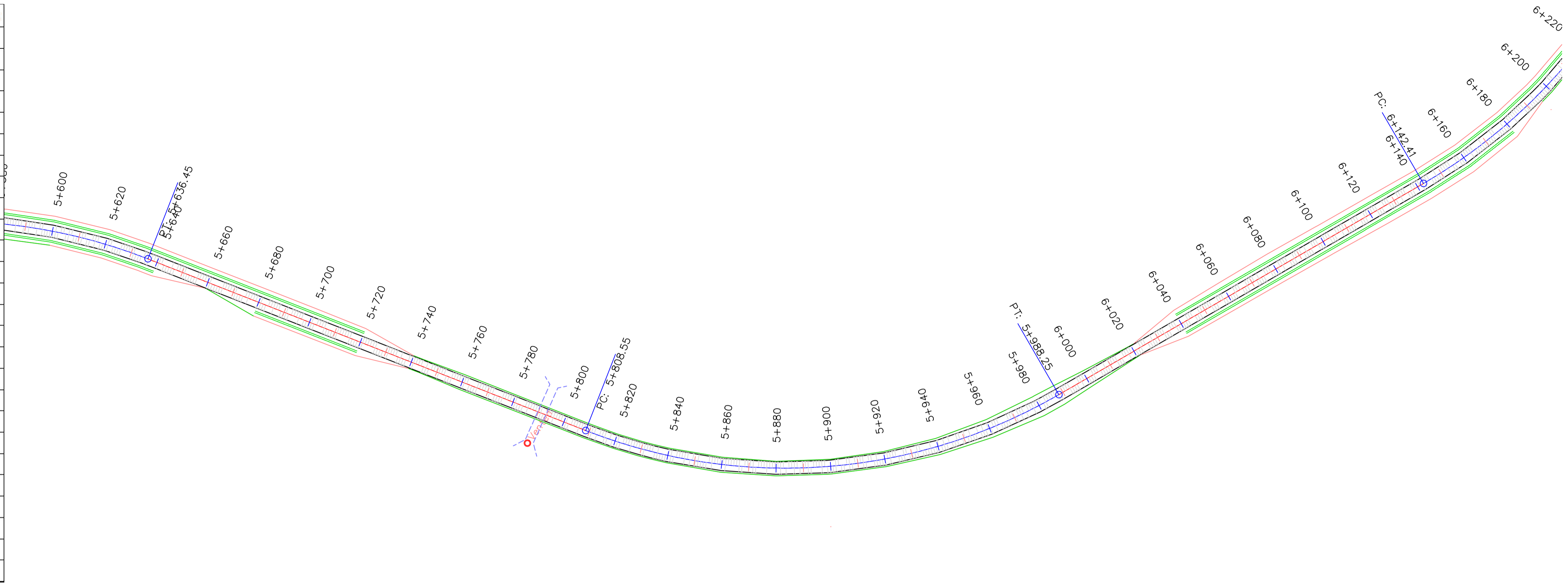
REVISION APPROVAL
TITLE

**ROAD PLAN AND
PROFILE**

SCALE
HORIZONTAL SCALE: 1:1000
VERTICAL SCALE: 1:100

DRAWING NO. **DGHES-PP-01** REVISION NO. **0**

Station	Northing	Easting	Tangential Direction
5+600.00	8,024,067.8163m	484,921.8911m	S24° 11' 50"E
5+620.00	8,024,049.1944m	484,929.1637m	S18° 28' 04"E
5+640.00	8,024,029.9468m	484,934.5715m	S13° 45' 18"E
5+660.00	8,024,010.5203m	484,939.3269m	S13° 45' 18"E
5+680.00	8,023,991.0939m	484,944.0823m	S13° 45' 18"E
5+700.00	8,023,971.6675m	484,948.8377m	S13° 45' 18"E
5+720.00	8,023,952.2411m	484,953.5932m	S13° 45' 18"E
5+740.00	8,023,932.8146m	484,958.3486m	S13° 45' 18"E
5+760.00	8,023,913.3882m	484,963.1040m	S13° 45' 18"E
5+780.00	8,023,893.9618m	484,967.8594m	S13° 45' 18"E
5+800.00	8,023,874.5354m	484,972.6148m	S13° 45' 18"E
5+820.00	8,023,855.1090m	484,977.3702m	S17° 02' 08"E
5+840.00	8,023,836.3951m	484,984.4920m	S22° 29' 41"E
5+860.00	8,023,818.3705m	484,993.1396m	S28° 29' 41"E
5+880.00	8,023,801.2992m	485,003.5434m	S34° 13' 28"E
5+900.00	8,023,785.3519m	485,015.5995m	S39° 57' 14"E
5+920.00	8,023,770.6878m	485,029.1874m	S45° 41' 01"E
5+940.00	8,023,757.4536m	485,044.1715m	S51° 24' 47"E
5+960.00	8,023,745.7814m	485,060.4019m	S57° 08' 34"E
5+980.00	8,023,735.7878m	485,077.7165m	S62° 52' 20"E
6+000.00	8,023,727.2564m	485,095.8038m	S65° 14' 06"E
6+020.00	8,023,718.8785m	485,113.9645m	S65° 14' 06"E
6+040.00	8,023,710.5006m	485,132.1252m	S65° 14' 06"E
6+060.00	8,023,702.1227m	485,150.2859m	S65° 14' 06"E
6+080.00	8,023,693.7448m	485,168.4466m	S65° 14' 06"E
6+100.00	8,023,685.3669m	485,186.6072m	S65° 14' 06"E

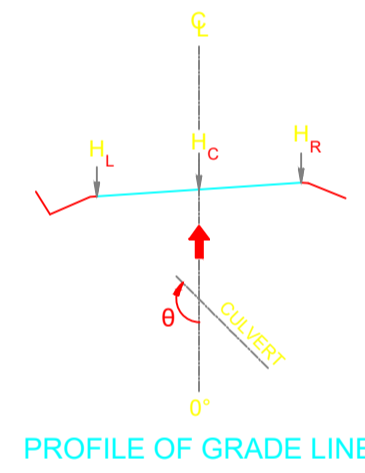


REFERENCE
Do not scale from this drawing, use stated dimensions only

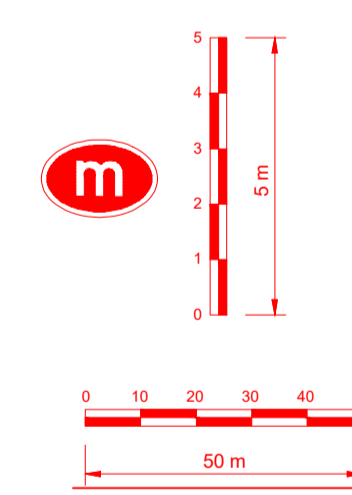
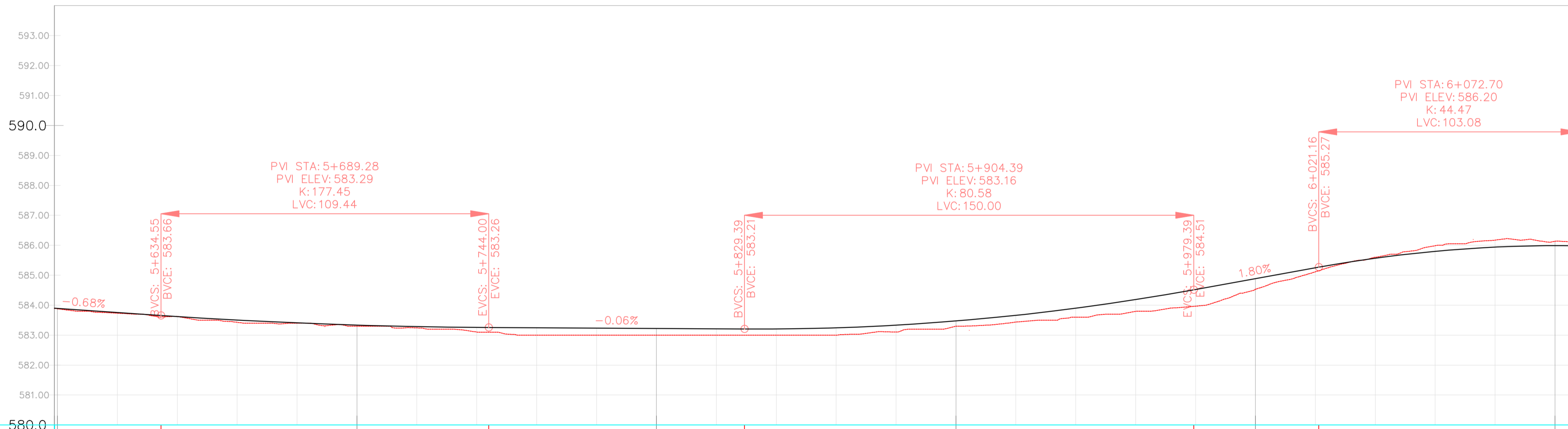
DISCLAIMER
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GENERAL NOTES

DGHES Access-Zam



PROFILE VIEW: DGHES PROFILE VIEWS (334)
VERTICAL SCALE: 100
DATUM: 580.00

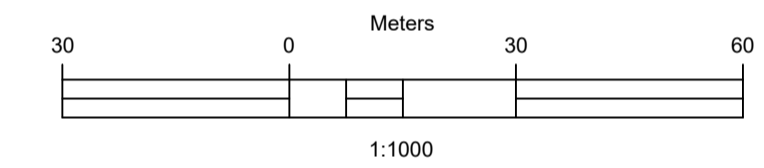


VERTICAL CURVES GRADE

KILOMETER DISTANCE	FINAL ROAD LEVELS			GROUND LEVELS AT GRADE LINE
	H _L	H _C	H _R	
5+590	583.907	583.907	583.907	583.907
5+600	583.890	583.890	583.890	583.890
5+620	583.733	583.665	583.755	583.665
5+640	583.624	583.621	583.621	583.621
5+660	583.430	583.413	583.503	583.413
5+680	583.400	583.318	583.408	583.318
5+700	583.300	583.246	583.336	583.246
5+720	583.241	583.196	583.286	583.196
5+740	583.104	583.168	583.258	583.168
5+760	583.000	583.156	583.246	583.156
5+780	583.000	583.144	583.234	583.144
5+800	583.000	583.132	583.222	583.132
5+820	583.000	583.121	583.211	583.121
5+840	583.000	583.116	583.206	583.116
5+860	583.000	583.155	583.245	583.155
5+880	583.104	583.245	583.335	583.245
5+900	583.297	583.383	583.473	583.383
5+920	583.436	583.572	583.662	583.572
5+940	583.600	583.810	583.900	583.810
5+960	583.793	584.097	584.187	584.097
5+980	583.988	584.435	584.525	584.435
6+000	584.531	584.795	584.885	584.795
6+020	585.117	585.156	585.246	585.156
6+040	585.600	585.476	585.566	585.476
6+060	585.986	585.707	585.797	585.707
6+080	586.172	585.948	585.938	585.948
6+100	586.134	585.899	585.969	585.899
6+108	586.101	585.885	585.954	585.885

LEGEND

- Vented/Non-vented Drift
- Road Boundary
- Road Centerline



No.	DESCRIPTION	BY	DATE

REVISIONS

CLIENT: ZAMBEZI RIVER AUTHORITY

CONSULTANT: ZAMBEZI RIVER AUTHORITY

PROJECT
CONSTRUCTION OF 28.2KM GRAVEL ROAD
MAAMBA-SIAMUSAMBA SCHOOL JUNCTION
TO DEVILS GORGE HYDRO-ELECTRIC
SCHEME SITE

DESIGNED	SIGNED	DATE
DRAWN	PS	Oct 2023
DESIGNED	PS	Oct 2023
CHECKED	AN	Oct 2023
APPROVED	AN	Oct 2023

TITLE

ROAD PLAN AND PROFILE

SCALE: HORIZONTAL SCALE: 1:1000 VERTICAL SCALE: 1:100

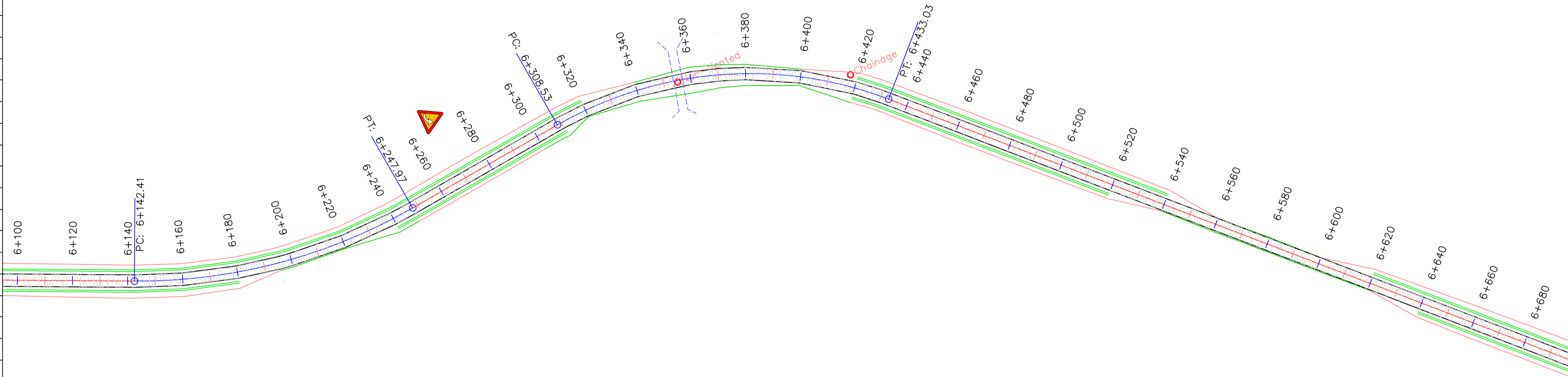
DRAWING NO. **DGHES-PP-01** REVISION NO. **0**

REFERENCE
Do not scale from this drawing, use stated dimensions only

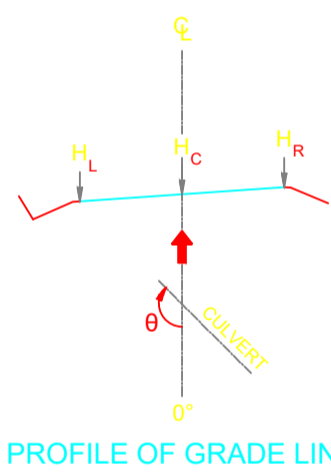
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GENERAL NOTES

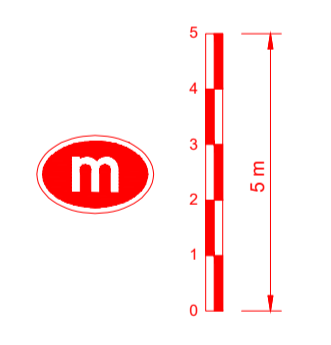
Station	Northing	Easting	Tangential Direction
6+100.00	8,023,685.3669m	485,186.6072m	S65° 14' 06"E
6+120.00	8,023,676.9890m	485,204.7679m	S65° 14' 06"E
6+140.00	8,023,668.6110m	485,222.9286m	S65° 14' 06"E
6+160.00	8,023,660.9442m	485,241.3924m	S70° 16' 23"E
6+180.00	8,023,655.1452m	485,260.5245m	S76° 00' 10"E
6+200.00	8,023,651.2852m	485,280.1400m	S81° 43' 56"E
6+220.00	8,023,649.4028m	485,300.0429m	S87° 27' 42"E
6+240.00	8,023,649.5168m	485,320.0342m	N86° 48' 31"E
6+260.00	8,023,651.2668m	485,339.9560m	N84° 31' 29"E
6+280.00	8,023,653.1751m	485,359.8648m	N84° 31' 29"E
6+300.00	8,023,655.0835m	485,379.7735m	N84° 31' 29"E
6+320.00	8,023,656.5251m	485,399.7142m	N89° 12' 04"E
6+340.00	8,023,655.3819m	485,419.6646m	S82° 38' 32"E
6+360.00	8,023,651.4198m	485,439.2510m	S74° 29' 08"E
6+380.00	8,023,644.7189m	485,458.0771m	S66° 19' 45"E
6+400.00	8,023,635.4147m	485,475.7620m	S58° 10' 21"E
6+420.00	8,023,623.6955m	485,491.9480m	S50° 00' 58"E
6+440.00	8,023,609.9179m	485,506.4323m	S44° 42' 01"E
6+460.00	8,023,595.7019m	485,520.5003m	S44° 42' 01"E
6+480.00	8,023,581.4860m	485,534.5682m	S44° 42' 01"E
6+500.00	8,023,567.2701m	485,548.6361m	S44° 42' 01"E
6+520.00	8,023,553.0541m	485,562.7041m	S44° 42' 01"E
6+540.00	8,023,538.8382m	485,576.7720m	S44° 42' 01"E
6+560.00	8,023,524.6222m	485,590.8400m	S44° 42' 01"E
6+580.00	8,023,510.4063m	485,604.9079m	S44° 42' 01"E
6+600.00	8,023,496.1904m	485,618.9759m	S44° 42' 01"E
6+620.00	8,023,481.9744m	485,633.0438m	S44° 42' 01"E



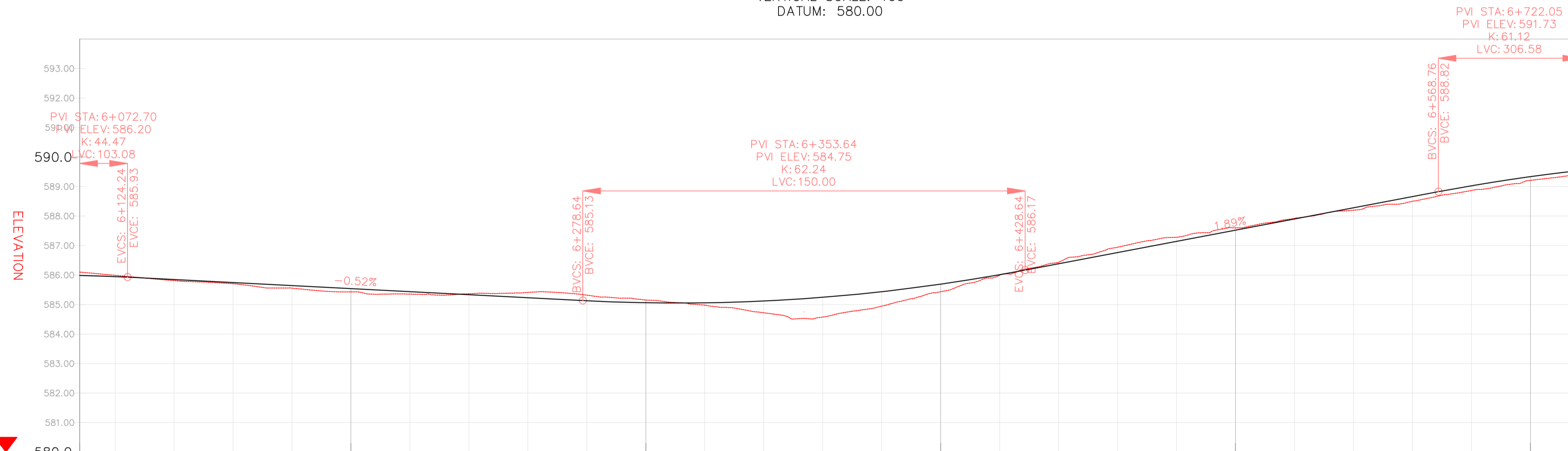
DGHES Access-Zam



PROFILE OF GRADE LINE



PROFILE VIEW: DGHES PROFILE VIEWS (335)
VERTICAL SCALE: 100
DATUM: 580.00

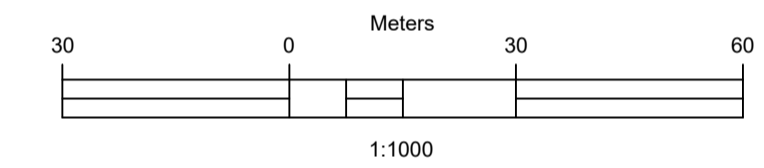


VERTICAL CURVES GRADE

FINAL ROAD LEVELS	H _L	LEFT	VERTICAL CURVES GRADE																												
			6+108	6+120	6+140	6+160	6+180	6+200	6+220	6+240	6+260	6+300	6+320	6+340	6+360	6+380	6+400	6+420	6+440	6+460	6+480	6+500	6+520	6+540	6+560	6+580	6+600	6+617			
	H _L	LEFT	585.885	585.984	585.984	585.984	585.984	585.984	585.984	585.984	585.984	585.984	585.984	585.984	585.984	585.984	585.984	585.984	585.984	585.984	585.984	585.984	585.984	585.984	585.984	585.984	585.984	585.984	585.984		
	H _C	ON CL	585.984	585.984	585.984	585.984	585.984	585.984	585.984	585.984	585.984	585.984	585.984	585.984	585.984	585.984	585.984	585.984	585.984	585.984	585.984	585.984	585.984	585.984	585.984	585.984	585.984	585.984	585.984		
	H _R	RIGHT	585.885	585.984	585.984	585.984	585.984	585.984	585.984	585.984	585.984	585.984	585.984	585.984	585.984	585.984	585.984	585.984	585.984	585.984	585.984	585.984	585.984	585.984	585.984	585.984	585.984	585.984	585.984		
GROUND LEVELS AT GRADE LINE			586.101	585.991	585.811	585.709	585.557	585.431	585.354	585.366	585.412	585.320	585.155	584.971	584.969	584.981	584.722	584.577	584.947	585.436	585.995	586.431	586.944	587.280	587.600	587.924	588.199	588.501	588.868	589.211	589.427
KILOMETER DISTANCE			6+108	6+120	6+140	6+160	6+180	6+200	6+220	6+240	6+260	6+300	6+320	6+340	6+360	6+380	6+400	6+420	6+440	6+460	6+480	6+500	6+520	6+540	6+560	6+580	6+600	6+617			

LEGEND

- Vented/Non-vented Drift
- Road Boundary
- Road Centerline



No.	DESCRIPTION	BY	DATE

REVISIONS

CLIENT	ZAMBEZI RIVER AUTHORITY		
CONSULTANT	ZAMBEZI RIVER AUTHORITY		

PROJECT
CONSTRUCTION OF 28.2KM GRAVEL ROAD
MAAMBA-SIAMUSAMBA SCHOOL JUNCTION
TO DEVILS GORGE HYDRO-ELECTRIC
SCHEME SITE

DESIGNED	SIGNED	DATE
DRAWN	PS	Oct 2023
DESIGNED	PS	Oct 2023
CHECKED	AN	Oct 2023
APPROVED	AN	Oct 2023

REVISION APPROVAL
TITLE

ROAD PLAN AND PROFILE

SCALE
HORIZONTAL SCALE: 1:1000
VERTICAL SCALE: 1:100

DRAWING NO. DGHES-PP-01
REVISION NO. 0

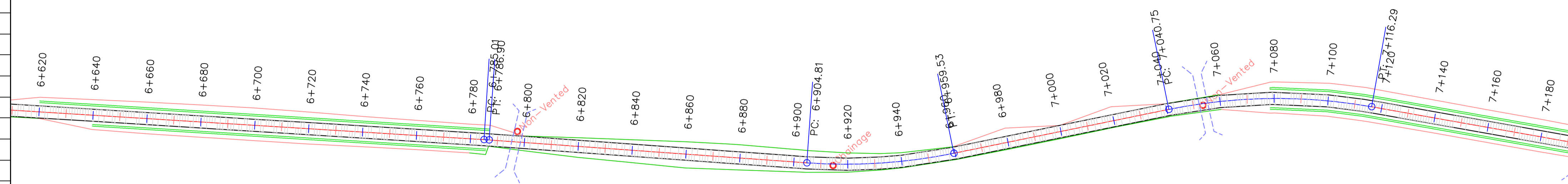
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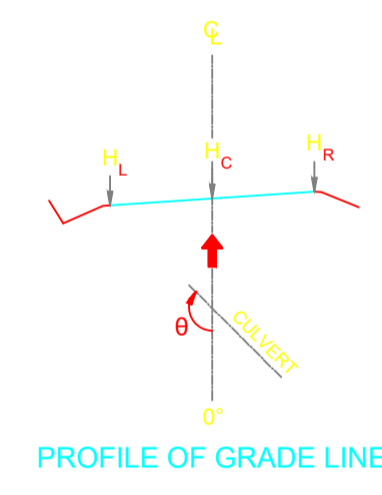
GENERAL NOTES

Station	Northing	Easting	Tangential Direction
6+620.00	8,023,481.9744m	485,633.0438m	S44° 42' 01"E
6+640.00	8,023,467.7585m	485,647.1117m	S44° 42' 01"E
6+660.00	8,023,453.5425m	485,661.1797m	S44° 42' 01"E
6+680.00	8,023,439.3266m	485,675.2476m	S44° 42' 01"E
6+700.00	8,023,425.1106m	485,689.3156m	S44° 42' 01"E
6+720.00	8,023,410.8947m	485,703.3835m	S44° 42' 01"E
6+740.00	8,023,396.6788m	485,717.4514m	S44° 42' 01"E
6+760.00	8,023,382.4628m	485,731.5194m	S44° 42' 01"E
6+780.00	8,023,368.2469m	485,745.5873m	S44° 42' 01"E
6+800.00	8,023,353.9379m	485,759.6552m	S44° 09' 29"E
6+820.00	8,023,339.5895m	485,773.7231m	S44° 09' 29"E
6+840.00	8,023,325.2411m	485,787.7910m	S44° 09' 29"E
6+860.00	8,023,310.8927m	485,801.8589m	S44° 09' 29"E
6+880.00	8,023,296.5443m	485,815.9268m	S44° 09' 29"E
6+900.00	8,023,282.1959m	485,829.9947m	S44° 09' 29"E
6+920.00	8,023,267.8475m	485,844.0626m	S48° 30' 33"E
6+940.00	8,023,253.4991m	485,858.1305m	S54° 14' 20"E
6+960.00	8,023,239.1507m	485,872.1984m	S59° 50' 03"E
6+980.00	8,023,224.8023m	485,886.2663m	S59° 50' 03"E
7+000.00	8,023,210.4539m	485,900.3342m	S59° 50' 03"E
7+020.00	8,023,196.1055m	485,914.4021m	S59° 50' 03"E
7+040.00	8,023,181.7571m	485,928.4700m	S59° 50' 03"E

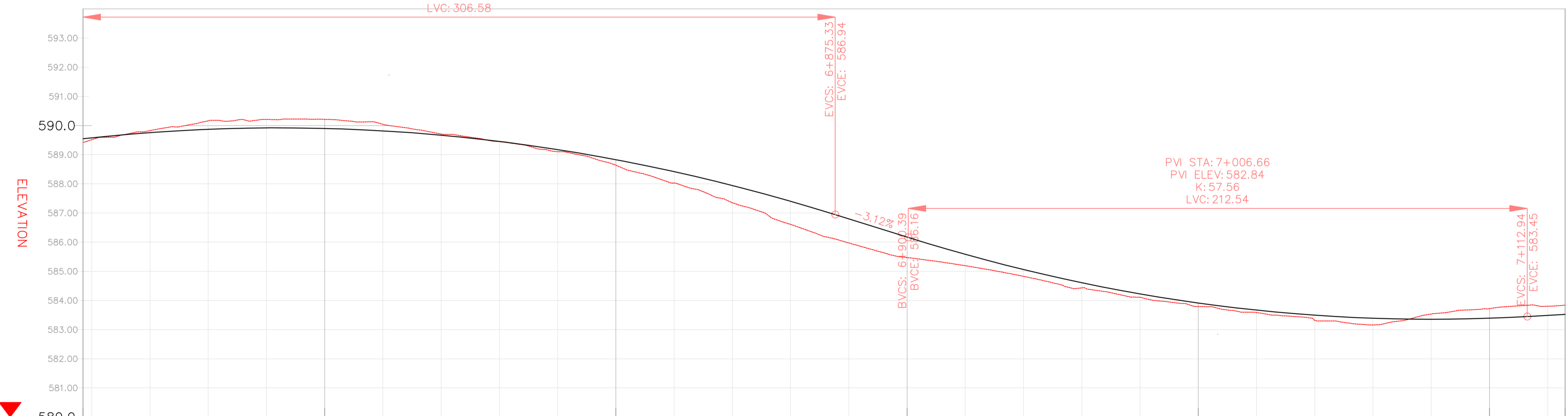
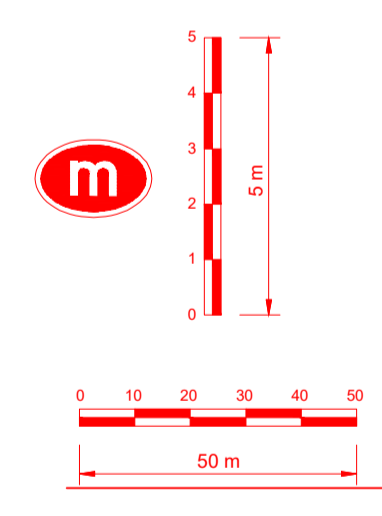
DGHES Access-Zam



PROFILE VIEW: DGHES PROFILE VIEWS (336)
VERTICAL SCALE: 100
DATUM: 580.00



PROFILE OF GRADE LINE

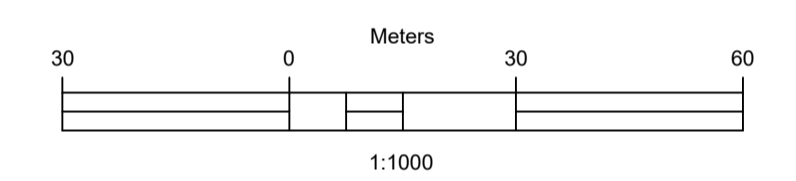


VERTICAL CURVES GRADE

FINAL ROAD LEVELS	H _L	LEFT	STATIONING																																																										
			6+617	6+620	6+640	6+660	6+680	6+700	6+720	6+740	6+760	6+780	6+800	6+820	6+840	6+860	6+880	6+900	6+920	6+940	6+960	6+980	7+000	7+020	7+040	7+060	7+080	7+100	7+120	7+126																															
H _L	LEFT		589.453	589.453	589.548	589.548	589.490	589.490	589.669	589.669	589.782	589.782	589.829	589.829	589.811	589.811	589.728	589.728	589.579	589.579	589.365	589.365	589.086	589.086	588.741	588.741	588.330	588.330	587.854	587.854	587.313	587.313	586.707	586.707	586.083	586.083	585.492	585.492	584.971	584.971	584.519	584.519	584.136	584.136	583.823	583.823	583.580	583.580	583.406	583.406	583.301	583.301	583.266	583.266	583.301	583.301	583.400	583.400	583.435	583.435	
H _C	ON CL		589.427	589.514	589.626	589.626	589.490	589.490	589.759	589.759	589.872	589.872	589.919	589.919	589.901	589.901	589.818	589.818	589.669	589.669	589.455	589.455	589.176	589.176	588.831	588.831	588.420	588.420	587.944	587.944	587.403	587.403	586.797	586.797	586.173	586.173	585.582	585.582	585.061	585.061	584.609	584.609	584.226	584.226	583.913	583.913	583.670	583.670	583.496	583.496	583.391	583.391	583.356	583.356	583.391	583.391	583.490	583.490	583.525	583.525	
H _R	RIGHT		589.453	589.453	589.548	589.548	589.490	589.490	589.669	589.669	589.782	589.782	589.829	589.829	589.811	589.811	589.728	589.728	589.579	589.579	589.365	589.365	589.086	589.086	588.741	588.741	588.330	588.330	587.854	587.854	587.313	587.313	586.707	586.707	586.083	586.083	585.492	585.492	584.971	584.971	584.519	584.519	584.136	584.136	583.823	583.823	583.580	583.580	583.406	583.406	583.301	583.301	583.266	583.266	583.301	583.301	583.400	583.400	583.435	583.435	
GROUND LEVELS AT GRADE LINE				589.427	589.514	589.626	589.626	589.490	589.490	589.759	589.759	589.872	589.872	589.919	589.919	589.901	589.901	589.818	589.818	589.669	589.669	589.455	589.455	589.176	589.176	588.831	588.831	588.420	588.420	587.944	587.944	587.403	587.403	586.797	586.797	586.173	586.173	585.582	585.582	585.061	585.061	584.609	584.609	584.226	584.226	583.913	583.913	583.670	583.670	583.496	583.496	583.391	583.391	583.356	583.356	583.391	583.391	583.490	583.490	583.525	583.525
KILOMETER DISTANCE				6+617	6+620	6+640	6+660	6+680	6+700	6+720	6+740	6+760	6+780	6+800	6+820	6+840	6+860	6+880	6+900	6+920	6+940	6+960	6+980	7+000	7+020	7+040	7+060	7+080	7+100	7+120	7+126																														

LEGEND

- Vented/Non-vented Drift
- Road Boundary
- Road Centerline



No.	DESCRIPTION	BY	DATE

CLIENT
ZAMBEZI RIVER AUTHORITY

CONSULTANT
ZAMBEZI RIVER AUTHORITY

PROJECT
CONSTRUCTION OF 28.2KM GRAVEL ROAD MAAMBA-SIAMUSAMBA SCHOOL JUNCTION TO DEVILS GORGE HYDRO-ELECTRIC SCHEME SITE

DESIGNED	SIGNED	DATE
DRAWN	PS	Oct 2023
DESIGNED	PS	Oct 2023
CHECKED	AN	Oct 2023
APPROVED	AN	Oct 2023

TITLE
ROAD PLAN AND PROFILE

SCALE
HORIZONTAL SCALE: 1:1000 VERTICAL SCALE: 1:100

DRAWING NO. **DGHES-PP-01** REVISION NO. **0**

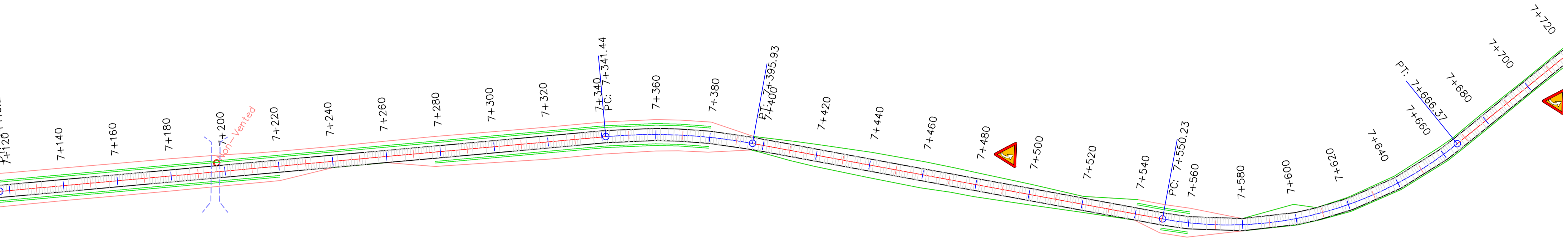
REFERENCE
Do not scale from this drawing, use stated dimensions only

DISCLAIMER
SHOULD THESE DRAWINGS AND PROJECT SPECIFICATIONS BE USED OR RELIED UPON FOR ANY OTHER PURPOSES OTHER THAN WHAT THEY WERE INTENDED FOR ON THIS SPECIFIC SITE WITHOUT CONSULTING ENGINEERS' PRIOR KNOWLEDGE AND WRITTEN CONSENT, THEN THE USER SHALL INDEMNIFY THE COPYRIGHT HOLDER AGAINST ALL LIABILITIES, CLAIMS, DAMAGES, LOSSES, FINES AND/OR PENALTIES (EITHER IN CONTRACT OR DELICT) INSTITUTED BY THE USER, OR ANY OTHER PARTY AS RESULT OF THEIR REUSE OF, OR RELIANCE ON THESE DRAWINGS AND PROJECT SPECIFICATIONS.

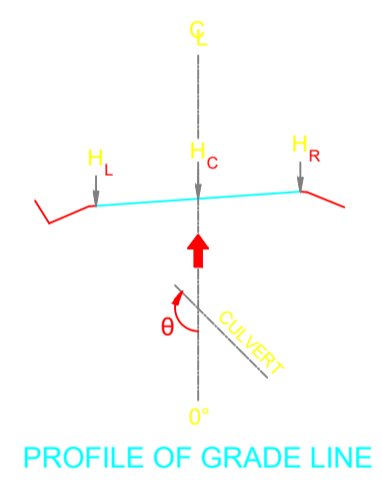
GENERAL NOTES

7+120
7+140
7+160
7+180
7+200
7+220
7+240
7+260
7+280
7+300
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7+360
7+380
7+400
7+420
7+440
7+460
7+480
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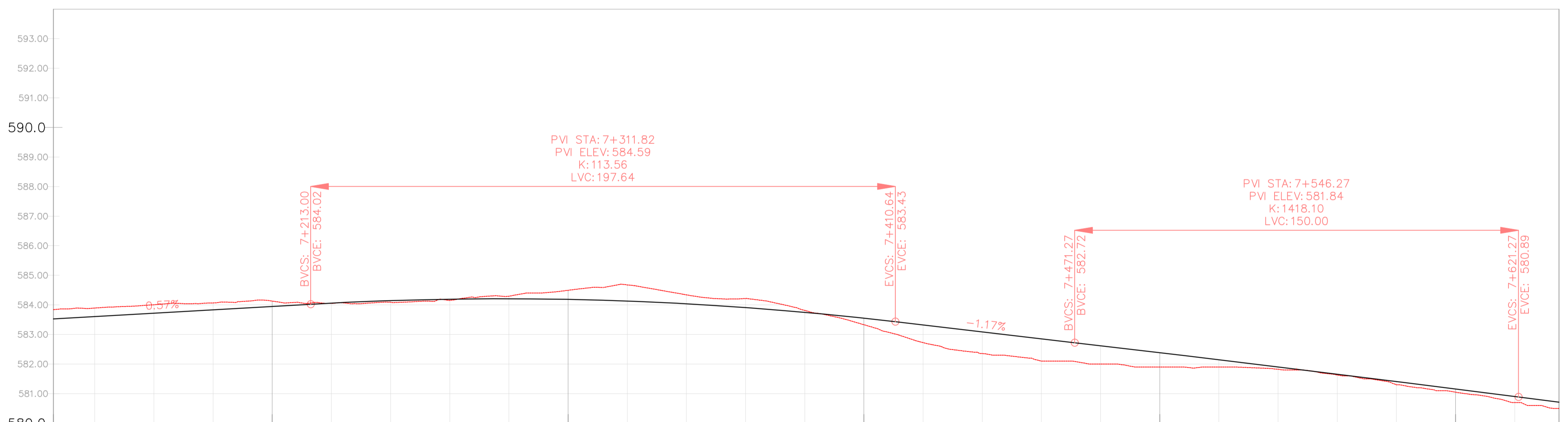
Station	Northing	Easting	Tangential Direction
7+040.00	8,023,204.7215m	485,945.1308m	S59° 50' 03"E
7+060.00	8,023,193.8863m	485,961.9316m	S54° 19' 14"E
7+080.00	8,023,181.4291m	485,977.5677m	S48° 35' 27"E
7+100.00	8,023,167.4731m	485,991.8819m	S42° 51' 41"E
7+120.00	8,023,152.1789m	486,004.7585m	S38° 11' 35"E
7+140.00	8,023,136.4603m	486,017.1248m	S38° 11' 35"E
7+160.00	8,023,120.7417m	486,029.4910m	S38° 11' 35"E
7+180.00	8,023,105.0230m	486,041.8573m	S38° 11' 35"E
7+200.00	8,023,089.3044m	486,054.2236m	S38° 11' 35"E
7+220.00	8,023,073.5858m	486,066.5899m	S38° 11' 35"E
7+240.00	8,023,057.8672m	486,078.9562m	S38° 11' 35"E
7+260.00	8,023,042.1486m	486,091.3225m	S38° 11' 35"E
7+280.00	8,023,026.4300m	486,103.6888m	S38° 11' 35"E
7+300.00	8,023,010.7114m	486,116.0551m	S38° 11' 35"E
7+320.00	8,022,994.9928m	486,128.4214m	S38° 11' 35"E
7+340.00	8,022,979.2742m	486,140.7877m	S38° 11' 35"E
7+360.00	8,022,963.0446m	486,152.4615m	S32° 52' 38"E
7+380.00	8,022,945.7335m	486,162.4612m	S27° 08' 52"E
7+400.00	8,022,927.5262m	486,170.7209m	S22° 35' 02"E
7+420.00	8,022,909.0599m	486,178.4016m	S22° 35' 02"E
7+440.00	8,022,890.5935m	486,186.0823m	S22° 35' 02"E
7+460.00	8,022,872.1271m	486,193.7630m	S22° 35' 02"E
7+480.00	8,022,853.6607m	486,201.4437m	S22° 35' 02"E
7+500.00	8,022,835.1944m	486,209.1244m	S22° 35' 02"E
7+520.00	8,022,816.7280m	486,216.8051m	S22° 35' 02"E
7+540.00	8,022,798.2616m	486,224.4858m	S22° 35' 02"E
7+560.00	8,022,779.9396m	486,232.4911m	S26° 45' 02"E



DGHES Access-Zam



PROFILE VIEW: DGHES PROFILE VIEWS (337)
VERTICAL SCALE: 100
DATUM: 580.00

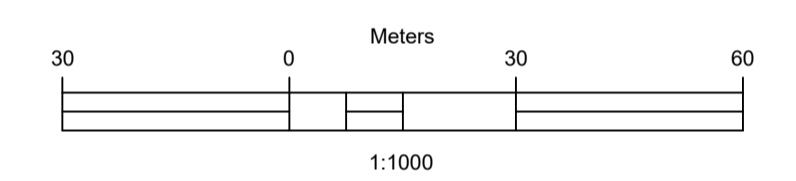


VERTICAL CURVES GRADE

FINAL ROAD LEVELS	H _L	LEFT	Stationing																										
			7+126	7+140	7+160	7+180	7+200	7+220	7+240	7+260	7+280	7+300	7+320	7+340	7+360	7+380	7+400	7+420	7+440	7+460	7+480	7+500	7+520	7+540	7+560	7+580	7+600	7+620	7+635
H _L	LEFT		583.435	583.515	583.629	583.743	583.857	583.969	584.054	584.103	584.116	584.095	584.038	583.946	583.819	583.657	583.459	583.231	582.997	582.763	582.529	582.292	582.053	581.811	581.566	581.318	581.067	580.814	580.622
H _C	ON CL		583.525	583.605	583.719	583.833	583.947	584.059	584.144	584.193	584.206	584.185	584.128	584.036	583.909	583.747	583.549	583.321	583.087	582.853	582.619	582.382	582.143	581.901	581.656	581.408	581.157	580.904	580.712
H _R	RIGHT		583.435	583.515	583.629	583.743	583.857	583.969	584.054	584.103	584.116	584.095	584.038	583.946	583.819	583.657	583.459	583.231	582.997	582.763	582.529	582.292	582.053	581.811	581.566	581.318	581.067	580.814	580.622
GROUND LEVELS AT GRADE LINE			583.839	583.892	584.006	584.067	584.128	584.050	584.088	584.151	584.295	584.493	584.676	584.340	584.215	583.812	583.329	582.724	582.363	582.100	582.000	581.900	581.900	581.821	581.630	581.300	581.049	580.700	580.500
KILOMETER DISTANCE			7+126	7+140	7+160	7+180	7+200	7+220	7+240	7+260	7+280	7+300	7+320	7+340	7+360	7+380	7+400	7+420	7+440	7+460	7+480	7+500	7+520	7+540	7+560	7+580	7+600	7+620	7+635

LEGEND

- Vented/Non-vented Drift
- Road Boundary
- Road Centerline



No.	DESCRIPTION	BY	DATE

REVISIONS

CLIENT	ZAMBEZI RIVER AUTHORITY	
CONSULTANT	ZAMBEZI RIVER AUTHORITY	

PROJECT
CONSTRUCTION OF 28.2KM GRAVEL ROAD
MAAMBA-SIAMUSAMBA SCHOOL JUNCTION
TO DEVILS GORGE HYDRO-ELECTRIC
SCHEME SITE

DESIGNED	SIGNED	DATE
DRAWN	PS	Oct 2023
DESIGNED	PS	Oct 2023
CHECKED	AN	Oct 2023
APPROVED	AN	Oct 2023

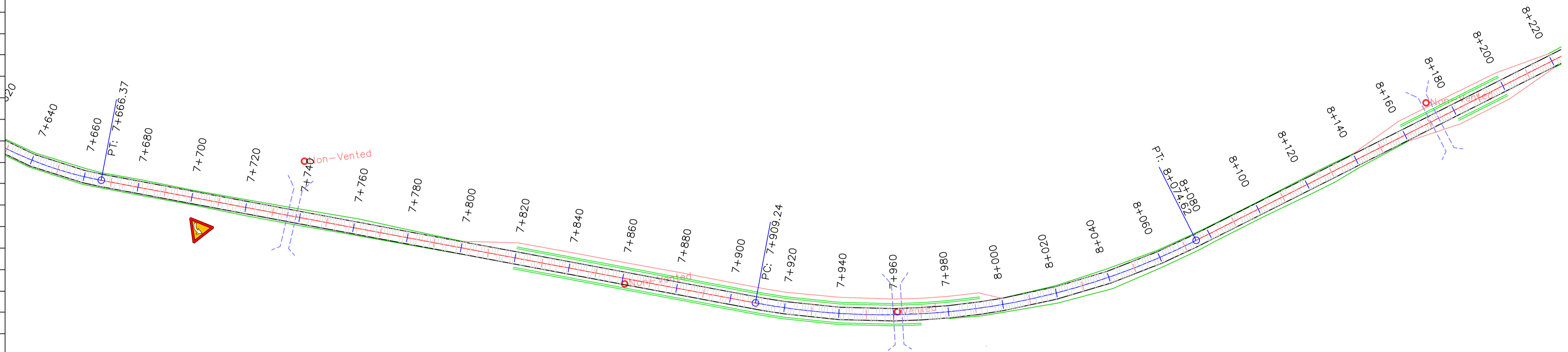
REVISION APPROVAL
TITLE

ROAD PLAN AND PROFILE

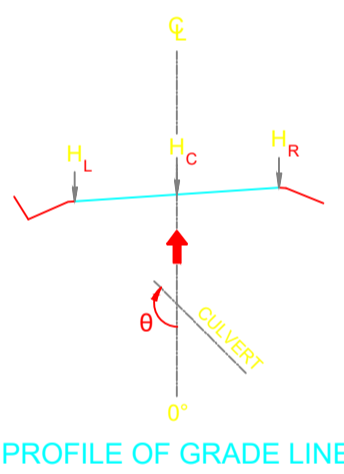
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HORIZONTAL SCALE: 1:1000
VERTICAL SCALE: 1:100

DRAWING NO. **DGHES-PP-01**
REVISION NO. **0**

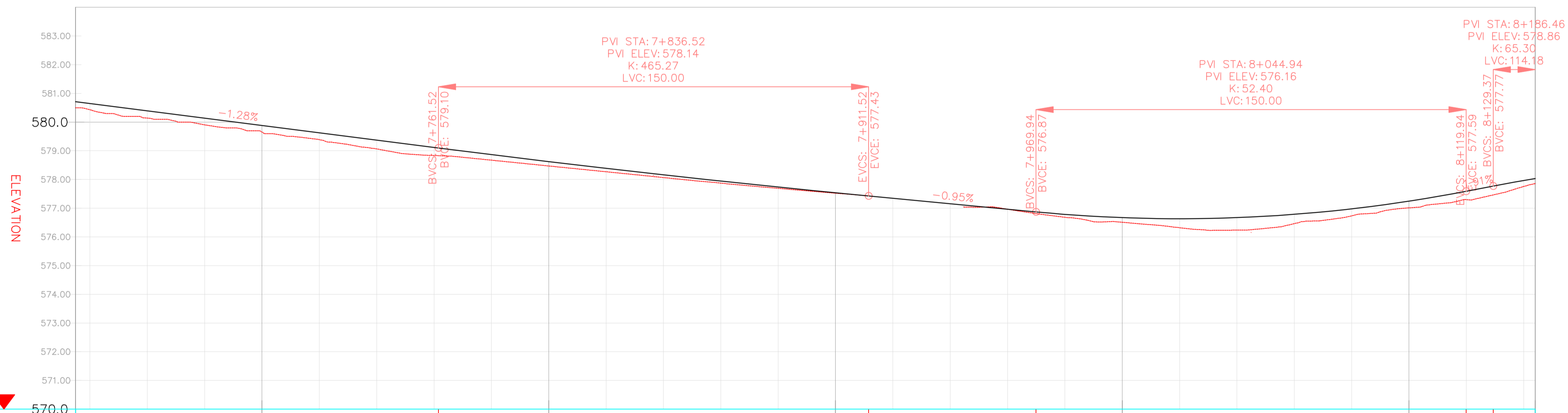
Station	Northing	Easting	Tangential Direction
7+640.00	8,022,723.0562m	486,287.0567m	S60° 52' 00"E
7+660.00	8,022,714.6531m	486,305.1854m	S69° 23' 45"E
7+680.00	8,022,708.3667m	486,324.1699m	S72° 06' 38"E
7+700.00	8,022,702.2232m	486,343.2029m	S72° 06' 38"E
7+720.00	8,022,696.0796m	486,362.2359m	S72° 06' 38"E
7+740.00	8,022,689.9360m	486,381.2690m	S72° 06' 38"E
7+760.00	8,022,683.7924m	486,400.3020m	S72° 06' 38"E
7+780.00	8,022,677.6488m	486,419.3350m	S72° 06' 38"E
7+800.00	8,022,671.5052m	486,438.3681m	S72° 06' 38"E
7+820.00	8,022,665.3616m	486,457.4011m	S72° 06' 38"E
7+840.00	8,022,659.2181m	486,476.4341m	S72° 06' 38"E
7+860.00	8,022,653.0745m	486,495.4672m	S72° 06' 38"E
7+880.00	8,022,646.9309m	486,514.5002m	S72° 06' 38"E
7+900.00	8,022,640.7873m	486,533.5332m	S72° 06' 38"E
7+920.00	8,022,634.6437m	486,552.5662m	S74° 32' 33"E
7+940.00	8,022,630.2971m	486,572.1001m	S79° 03' 48"E
7+960.00	8,022,627.2809m	486,591.8661m	S83° 35' 03"E
7+980.00	8,022,625.8320m	486,611.8083m	S88° 06' 17"E
8+000.00	8,022,625.9594m	486,631.8027m	N87° 22' 28"E
8+020.00	8,022,627.6624m	486,651.7249m	N82° 51' 14"E
8+040.00	8,022,630.9303m	486,671.4508m	N78° 19' 59"E
8+060.00	8,022,635.7429m	486,690.8578m	N73° 48' 44"E
8+080.00	8,022,642.0164m	486,709.8446m	N70° 30' 29"E
8+100.00	8,022,648.6899m	486,728.6983m	N70° 30' 29"E
8+120.00	8,022,655.3634m	486,747.5521m	N70° 30' 29"E
8+140.00	8,022,662.0368m	486,766.4059m	N70° 30' 29"E



DGHES Access-Zam



PROFILE VIEW: DGHES PROFILE VIEWS (338)
VERTICAL SCALE: 100
DATUM: 570.00



VERTICAL CURVES GRADE

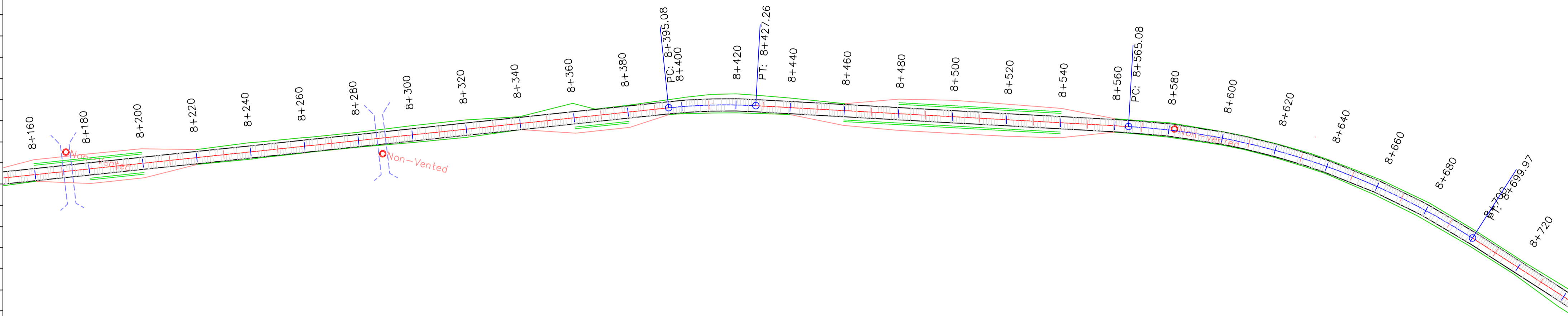
FINAL ROAD LEVELS	LEVELS		GRADE																													
	H _L	H _R	LEFT	ON CL	RIGHT	GRADE																										
			580.622	580.712	580.802	580.892	580.982	581.072	581.162	581.252	581.342	581.432	581.522	581.612	581.702	581.792	581.882	581.972	582.062	582.152	582.242	582.332	582.422	582.512	582.602	582.692	582.782	582.872	582.962	583.052		
			580.500	580.427	580.354	580.281	580.208	580.135	580.062	579.989	579.916	579.843	579.770	579.697	579.624	579.551	579.478	579.405	579.332	579.259	579.186	579.113	579.040	578.967	578.894	578.821	578.748	578.675	578.602	578.529	578.456	578.383
			580.500	580.427	580.354	580.281	580.208	580.135	580.062	579.989	579.916	579.843	579.770	579.697	579.624	579.551	579.478	579.405	579.332	579.259	579.186	579.113	579.040	578.967	578.894	578.821	578.748	578.675	578.602	578.529	578.456	578.383
			580.500	580.427	580.354	580.281	580.208	580.135	580.062	579.989	579.916	579.843	579.770	579.697	579.624	579.551	579.478	579.405	579.332	579.259	579.186	579.113	579.040	578.967	578.894	578.821	578.748	578.675	578.602	578.529	578.456	578.383
			580.500	580.427	580.354	580.281	580.208	580.135	580.062	579.989	579.916	579.843	579.770	579.697	579.624	579.551	579.478	579.405	579.332	579.259	579.186	579.113	579.040	578.967	578.894	578.821	578.748	578.675	578.602	578.529	578.456	578.383
			580.500	580.427	580.354	580.281	580.208	580.135	580.062	579.989	579.916	579.843	579.770	579.697	579.624	579.551	579.478	579.405	579.332	579.259	579.186	579.113	579.040	578.967	578.894	578.821	578.748	578.675	578.602	578.529	578.456	578.383
			580.500	580.427	580.354	580.281	580.208	580.135	580.062	579.989	579.916	579.843	579.770	579.697	579.624	579.551	579.478	579.405	579.332	579.259	579.186	579.113	579.040	578.967	578.894	578.821	578.748	578.675	578.602	578.529	578.456	578.383
			580.500	580.427	580.354	580.281	580.208	580.135	580.062	579.989	579.916	579.843	579.770	579.697	579.624	579.551	579.478	579.405	579.332	579.259	579.186	579.113	579.040	578.967	578.894	578.821	578.748	578.675	578.602	578.529	578.456	578.383
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			580.500	580.427	580.354	580.281	580.208	580.135	580.062	579.989	579.916	579.843	579.770	579.697	579.624	579.551	579.478	579.405	579.332	579.259	579.186	579.113	579.040	578.967	578.894	578.821	578.748	578.675	578.602	578.529	578.456	578.383
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			580.500	580.427	580.354	580.281	580.208	580.135	580.062	579.989	579.916	579.843	579.770	579.697	579.624	579.551	579.478	579.405	579.332	579.259	579.186	579.113	579.040	578.967	578.894	578.821	578.748	578.675	578.602	578.529	578.456	578.383
			580.500	580.427	580.354	580.281	580.208	580.135	580.062	579.989	579.916	579.843	579.770	579.697	579.624	579.551	579.478	579.405	579.332	579.259	579.186	579.113	579.040	578.967	578.894	578.821	578.748	578.675	578.602	578.529	578.456	578.383
			580.500	580.427	580.354	580.281	580.208	580.135	580.062	579.989	579.916	579.843	579.770	579.697	579.624	579.551	579.478	579.405	579.332	579.259	579.186	579.113	579.040	578.967	578.894	578.821	578.748	578.675	578.602	578.529	578.456	578.383
			580.500	580.427	580.354	580.281	580.208	580.135	580.062	579.989	579.916	579.843	579.770	579.697	579.624	579.551	579.478	579.405	579.332	579.259	579.186	579.113	579.040	578.967	578.894	578.821	578.748	578.675	578.602	578.529	578.456	578.383
			580.500	580.427	580.354	580.281	580.208	580.135	580.062	579.989	579.916	579.843	579.770	579.697	579.624	579.551	579.478	579.405	579.332	579.259	579.186	579.113	579.040	578.967	578.894	578.821	578.748	578.675	578.602	578.529	578.456	578.383
			580.500	580.427	580.354	580.281	580.208	580.135	580.062	579.989	579.916	579.843	579.770	579.697	579.624	579.551	579.478	579.405	579.332	579.259	579.186	579.113	579.040	578.967	578.894	578.821	578.748	578.675	578.602	578.529	578.456	578.383
			580.500	580.427	580.354	580.281	580.208	580.135	580.062	579.989	579.916	579.843	579.770	579.697	579.624	579.551	579.478	579.405	579.332	579.259	579.186	579.113	579.040	578.967	578.894	578.821	578.748	578.675	578.602	578.529	578.456	578.383
			580.500	580.427	580.354	580.281	580.208	580.135	580.062	579.989	579.916	579.843	579.770	579.697	579.624	579.551	579.478	579.405	579.332	579.259	579.186	579.113	579.040	578.967	578.894	578.821	578.748	578.675	578.602	578.529	578.456	578.383
			580.500	580.427	580.354	580.281	580.208	580.135	580.062	579.989	579.916	579.843	579.770	579.697	579.624	579.551	579.478	579.405	579.332	579.259	579.186	579.113	579.040	578.967	578.894	578.821	578.748	578.675	578.602	578.529	578.456	578.383
			580.500	580.427	580.354	580.281	580.208	580.135	580.062	579.989	579.916	579.843	579.770	579.697	579.624	579.551	579.478	579.405	579.332	579.259	579.186	579.113	579.040	578.967	578.894	578.821	578.748	578.675	578.602	578.529	578.456	578.383
			580.500	580.427	580.354	580.281	580.208	580.135	580.062	579.989	579.916	579.843	579.770	579.697	579.624	579.551	579.478	579.405	579.332	579.259	579.186	579.113	579.040	578.967	578.894	578.821	578.748	578.675	578.602	578.529	578.456	578.383
			580.500	580.427	580.354	580.281	580.208	580.135	580.062	579.989	579.916	579.843	579.770	579.697	579.624	579.551	579.478	579.405	579.332	579.259	579.186	579.113	579.040	578.967	578.894	578.821	578.748	578.675	578.602	578.529	578.456	578.383
			580.500	580.427	580.354	580.281	580.208	580.135	580.062	579.989	579.916	579.84																				

REFERENCE
Do not scale from this drawing, use stated dimensions only

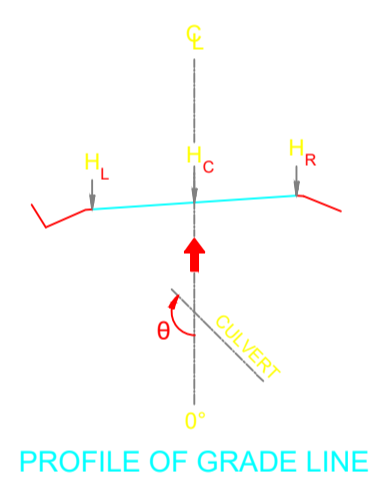
DISCLAIMER
SHOULD THESE DRAWINGS AND PROJECT SPECIFICATIONS BE USED OR RELIED UPON FOR ANY OTHER PURPOSES OTHER THAN WHAT THEY WERE INTENDED FOR ON THIS SPECIFIC SITE WITHOUT CONSULTING ENGINEERS' PRIOR KNOWLEDGE AND WRITTEN CONSENT, THEN THE USER SHALL INDEMNIFY THE COPYRIGHT HOLDER AGAINST ALL LIABILITIES, CLAIMS, DAMAGES, LOSSES, FINES AND/OR PENALTIES (EITHER IN CONTRACT OR DELICT) INSTITUTED BY THE USER, OR ANY OTHER PARTY AS RESULT OF THEIR REUSE OF, OR RELIANCE ON THESE DRAWINGS AND PROJECT SPECIFICATIONS

GENERAL NOTES

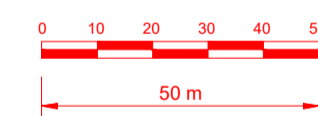
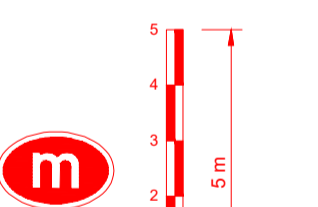
Station	Northing	Easting	Tangential Direction
8+140.00	8,022,662.0368m	486,766.4059m	N70° 30' 29"E
8+160.00	8,022,668.7103m	486,785.2597m	N70° 30' 29"E
8+180.00	8,022,675.3838m	486,804.1134m	N70° 30' 29"E
8+200.00	8,022,682.0573m	486,822.9672m	N70° 30' 29"E
8+220.00	8,022,688.7307m	486,841.8210m	N70° 30' 29"E
8+240.00	8,022,695.4042m	486,860.6747m	N70° 30' 29"E
8+260.00	8,022,702.0777m	486,879.5285m	N70° 30' 29"E
8+280.00	8,022,708.7512m	486,898.3823m	N70° 30' 29"E
8+300.00	8,022,715.4247m	486,917.2361m	N70° 30' 29"E
8+320.00	8,022,722.0981m	486,936.0898m	N70° 30' 29"E
8+340.00	8,022,728.7716m	486,954.9436m	N70° 30' 29"E
8+360.00	8,022,735.4451m	486,973.7974m	N70° 30' 29"E
8+380.00	8,022,742.1186m	486,992.6511m	N70° 30' 29"E
8+400.00	8,022,748.7921m	487,011.5049m	N71° 55' 04"E
8+420.00	8,022,755.4656m	487,030.3587m	N77° 38' 50"E
8+440.00	8,022,757.6787m	487,050.4696m	N79° 43' 33"E
8+460.00	8,022,761.2459m	487,070.1489m	N79° 43' 33"E
8+480.00	8,022,764.8131m	487,089.8282m	N79° 43' 33"E
8+500.00	8,022,768.3803m	487,109.5075m	N79° 43' 33"E
8+520.00	8,022,771.9475m	487,129.1868m	N79° 43' 33"E
8+540.00	8,022,775.5147m	487,148.8661m	N79° 43' 33"E
8+560.00	8,022,779.0819m	487,168.5454m	N79° 43' 33"E
8+580.00	8,022,782.2295m	487,188.2247m	N82° 59' 31"E
8+600.00	8,022,783.9090m	487,208.2171m	N87° 22' 16"E
8+620.00	8,022,784.0623m	487,226.2116m	S88° 14' 59"E
8+640.00	8,022,782.6884m	487,248.1595m	S83° 52' 13"E
8+660.00	8,022,779.7953m	487,267.9442m	S79° 29' 28"E



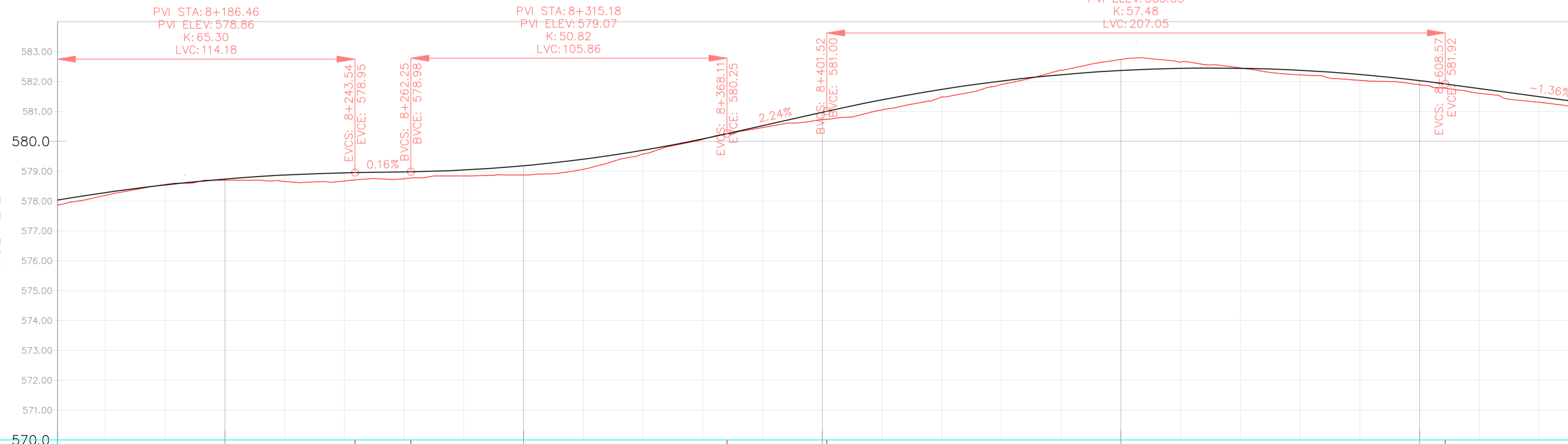
DGHES Access-Zam



PROFILE OF GRADE LINE



PROFILE VIEW: DGHES PROFILE VIEWS (339)
VERTICAL SCALE: 100
DATUM: 570.00

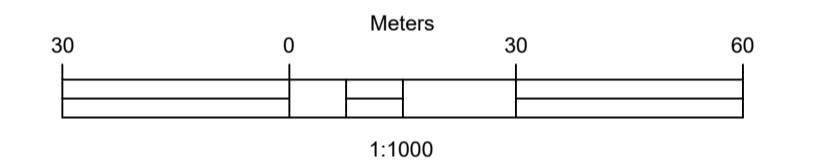


VERTICAL CURVES GRADE

FINAL ROAD LEVELS	H _L	LEFT	Stationing																													
			8+144	8+160	8+180	8+200	8+220	8+240	8+260	8+280	8+300	8+320	8+340	8+360	8+380	8+400	8+420	8+440	8+460	8+480	8+500	8+520	8+540	8+560	8+580	8+600	8+620	8+640	8+653			
	H _L	LEFT	577.937	578.032	578.192	578.450	578.646	578.781	578.855	578.888	579.041	579.093	579.313	579.612	579.989	580.432	580.880	581.300	581.649	581.929	582.019	582.140	582.281	582.353	582.444	582.354	582.287	582.149	581.942	581.677	581.406	581.229
	H _C	ON CL	578.032	578.192	578.450	578.736	578.871	578.945	578.978	579.041	579.183	579.403	579.702	580.079	580.522	580.970	581.390	581.739	582.019	582.230	582.371	582.443	582.444	582.377	582.239	582.032	581.767	581.496	581.319	581.229		
	H _R	RIGHT	577.937	578.192	578.450	578.646	578.781	578.855	578.888	578.951	579.093	579.313	579.612	579.989	580.432	580.880	581.300	581.649	581.929	582.140	582.281	582.353	582.444	582.354	582.287	582.149	581.942	581.677	581.406	581.229		
GROUND LEVELS AT GRADE LINE			577.880	578.192	578.553	578.700	578.656	578.672	578.672	578.746	578.839	578.872	579.063	579.575	580.067	580.458	580.724	581.051	581.488	581.903	582.380	582.740	582.653	582.455	582.227	582.041	581.894	581.608	581.309	581.101		
KILOMETER DISTANCE			8+144	8+160	8+180	8+200	8+220	8+240	8+260	8+280	8+300	8+320	8+340	8+360	8+380	8+400	8+420	8+440	8+460	8+480	8+500	8+520	8+540	8+560	8+580	8+600	8+620	8+640	8+653			

LEGEND

- Vented/Non-vented Drift
- Road Boundary
- Road Centerline



No.	DESCRIPTION	BY	DATE

REVISIONS

CLIENT: ZAMBEZI RIVER AUTHORITY

CONSULTANT: ZAMBEZI RIVER AUTHORITY

PROJECT: CONSTRUCTION OF 28.2KM GRAVEL ROAD MAAMBA-SIAMUSAMBA SCHOOL JUNCTION TO DEVILS GORGE HYDRO-ELECTRIC SCHEME SITE

DESIGNED	SIGNED	DATE
DRAWN	PS	Oct 2023
DESIGNED	PS	Oct 2023
CHECKED	AN	Oct 2023
APPROVED	AN	Oct 2023

REVISION APPROVAL

TITLE: ROAD PLAN AND PROFILE

SCALE: HORIZONTAL SCALE: 1:1000 VERTICAL SCALE: 1:100

DRAWING NO. DGHES-PP-01 REVISION NO. 0

REFERENCE
Do not scale from this drawing, use stated dimensions only

DISCLAIMER
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GENERAL NOTES

GENERAL NOTES

GENERAL NOTES

GENERAL NOTES

GENERAL NOTES

GENERAL NOTES

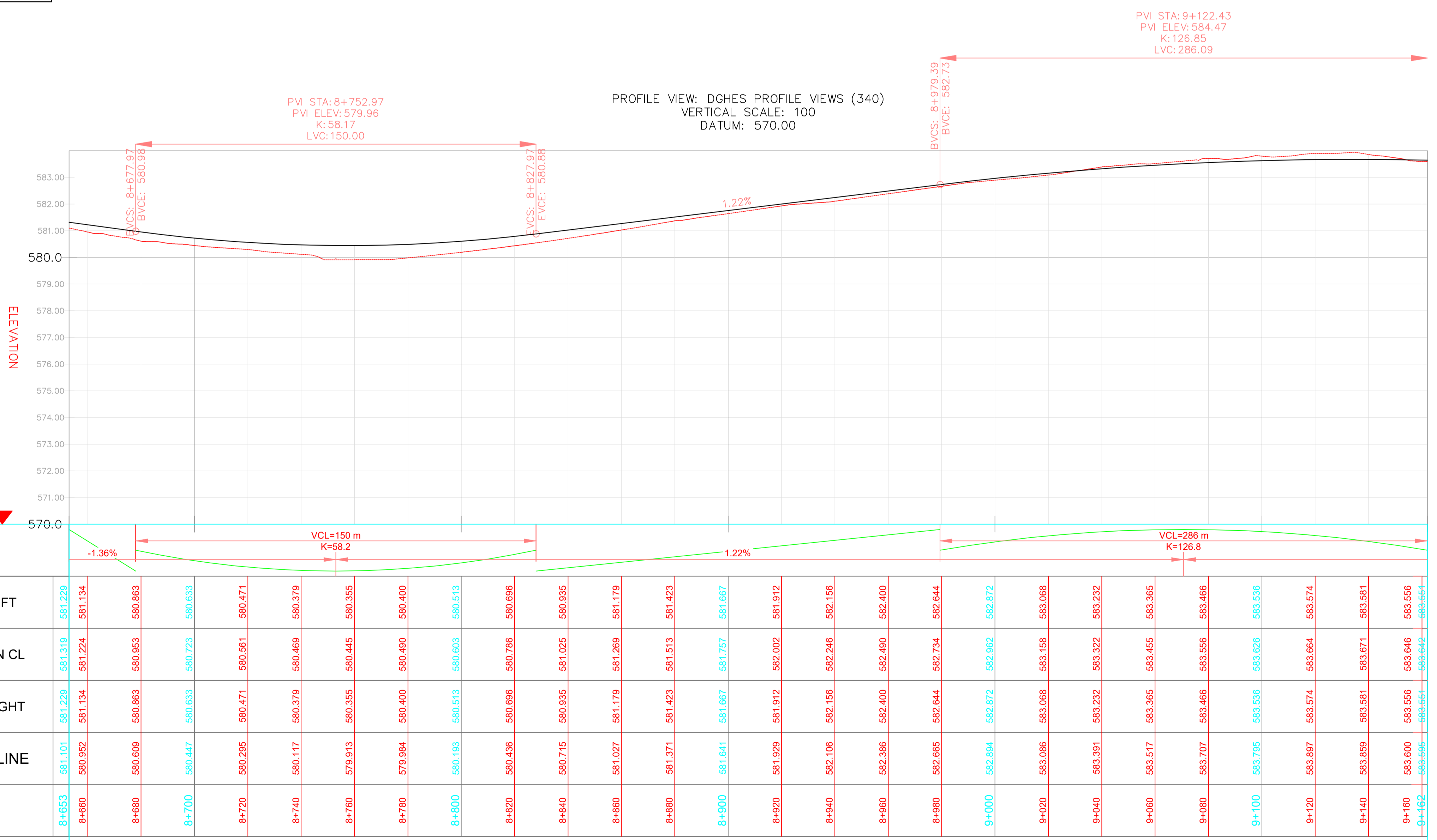
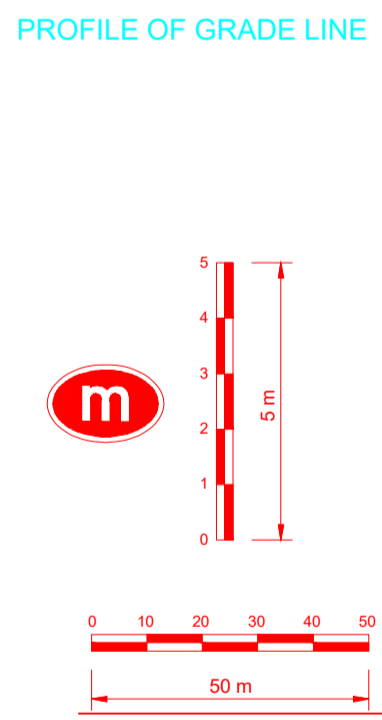
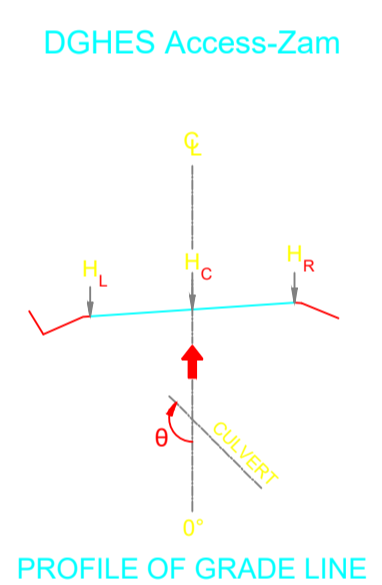
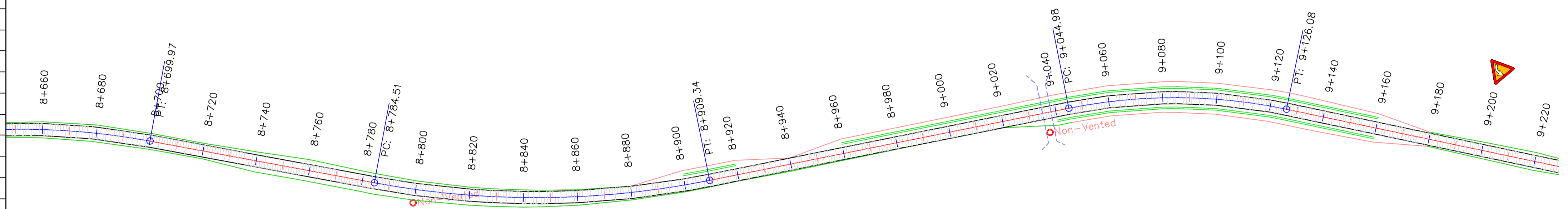
GENERAL NOTES

GENERAL NOTES

GENERAL NOTES

GENERAL NOTES

Station	Northing	Easting	Tangential Direction
8+660.00	8,022,779.7953m	487,267.9442m	S79° 29' 28"E
8+680.00	8,022,775.4000m	487,287.4503m	S75° 06' 43"E
8+700.00	8,022,769.5280m	487,306.5638m	S70° 44' 19"E
8+720.00	8,022,762.9305m	487,325.4442m	S70° 44' 19"E
8+740.00	8,022,756.3329m	487,344.3247m	S70° 44' 19"E
8+760.00	8,022,749.7354m	487,363.2052m	S70° 44' 19"E
8+780.00	8,022,743.1378m	487,382.0857m	S70° 44' 19"E
8+800.00	8,022,736.5386m	487,401.0817m	S73° 27' 13"E
8+820.00	8,022,731.7825m	487,420.4157m	S76° 57' 29"E
8+840.00	8,022,727.8677m	487,440.0257m	S80° 27' 46"E
8+860.00	8,022,725.1590m	487,459.8382m	S83° 58' 02"E
8+880.00	8,022,723.6665m	487,479.7793m	S87° 28' 19"E
8+900.00	8,022,723.3957m	487,499.7744m	N89° 01' 25"E
8+920.00	8,022,724.1744m	487,519.7584m	N87° 23' 10"E
8+940.00	8,022,725.0865m	487,539.7376m	N87° 23' 10"E
8+960.00	8,022,725.9986m	487,559.7168m	N87° 23' 10"E
8+980.00	8,022,726.9107m	487,579.6960m	N87° 23' 10"E
9+000.00	8,022,727.8229m	487,599.6752m	N87° 23' 10"E
9+020.00	8,022,728.7350m	487,619.6544m	N87° 23' 10"E
9+040.00	8,022,729.6471m	487,639.6335m	N87° 23' 10"E
9+060.00	8,022,729.9951m	487,659.6243m	S88° 18' 35"E
9+080.00	8,022,728.4074m	487,679.5529m	S82° 34' 49"E
9+100.00	8,022,724.8381m	487,699.2233m	S76° 51' 02"E
9+120.00	8,022,719.3229m	487,718.4392m	S71° 07' 16"E
9+140.00	8,022,712.3664m	487,737.1896m	S69° 22' 49"E
9+160.00	8,022,705.3232m	487,755.9084m	S69° 22' 49"E
9+180.00	8,022,698.2799m	487,774.6272m	S69° 22' 49"E

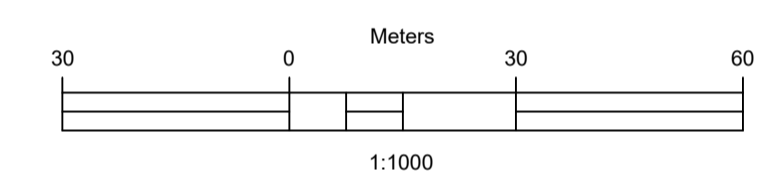


VERTICAL CURVES GRADE

KILOMETER DISTANCE	FINAL ROAD LEVELS			GROUND LEVELS AT GRADE LINE		
	H _L	H _C	H _R	H _L	H _C	H _R
8+653	581.101	581.229	581.134	581.101	581.229	581.134
8+660	580.982	581.134	581.224	580.982	581.134	581.224
8+680	580.609	580.953	580.863	580.609	580.953	580.863
8+700	580.447	580.633	580.723	580.447	580.633	580.723
8+720	580.295	580.471	580.561	580.295	580.471	580.561
8+740	580.117	580.379	580.469	580.117	580.379	580.469
8+760	579.913	580.355	580.445	579.913	580.355	580.445
8+780	579.984	580.400	580.490	579.984	580.400	580.490
8+800	580.183	580.513	580.603	580.183	580.513	580.603
8+820	580.436	580.696	580.796	580.436	580.696	580.796
8+840	580.715	580.935	581.025	580.715	580.935	581.025
8+860	581.027	581.179	581.269	581.027	581.179	581.269
8+880	581.371	581.513	581.423	581.371	581.513	581.423
8+900	581.641	581.667	581.667	581.641	581.667	581.667
8+920	581.929	581.912	582.002	581.929	581.912	582.002
8+940	582.106	582.156	582.246	582.106	582.156	582.246
8+960	582.386	582.400	582.490	582.386	582.400	582.490
8+980	582.665	582.644	582.734	582.665	582.644	582.734
9+000	582.894	582.872	582.962	582.894	582.872	582.962
9+020	583.086	583.068	583.158	583.086	583.068	583.158
9+040	583.391	583.322	583.322	583.391	583.322	583.322
9+060	583.517	583.365	583.455	583.517	583.365	583.455
9+080	583.707	583.466	583.556	583.707	583.466	583.556
9+100	583.795	583.536	583.626	583.795	583.536	583.626
9+120	583.897	583.574	583.664	583.897	583.574	583.664
9+140	583.859	583.581	583.671	583.859	583.581	583.671
9+160	583.600	583.556	583.646	583.600	583.556	583.646
9+162	583.556	583.554	583.554	583.556	583.554	583.554

LEGEND

- Vented/Non-vented Drift
- Road Boundary
- Road Centerline



No.	DESCRIPTION	BY	DATE

REVISIONS

CLIENT	CONSULTANT
ZAMBEZI RIVER AUTHORITY	ZAMBEZI RIVER AUTHORITY

PROJECT
CONSTRUCTION OF 28.2KM GRAVEL ROAD
MAAMBA-SIAMUSAMBA SCHOOL JUNCTION
TO DEVILS GORGE HYDRO-ELECTRIC
SCHEME SITE

DESIGNED	SIGNED	DATE
DRAWN	PS	Oct 2023
DESIGNED	PS	Oct 2023
CHECKED	AN	Oct 2023
APPROVED	AN	Oct 2023

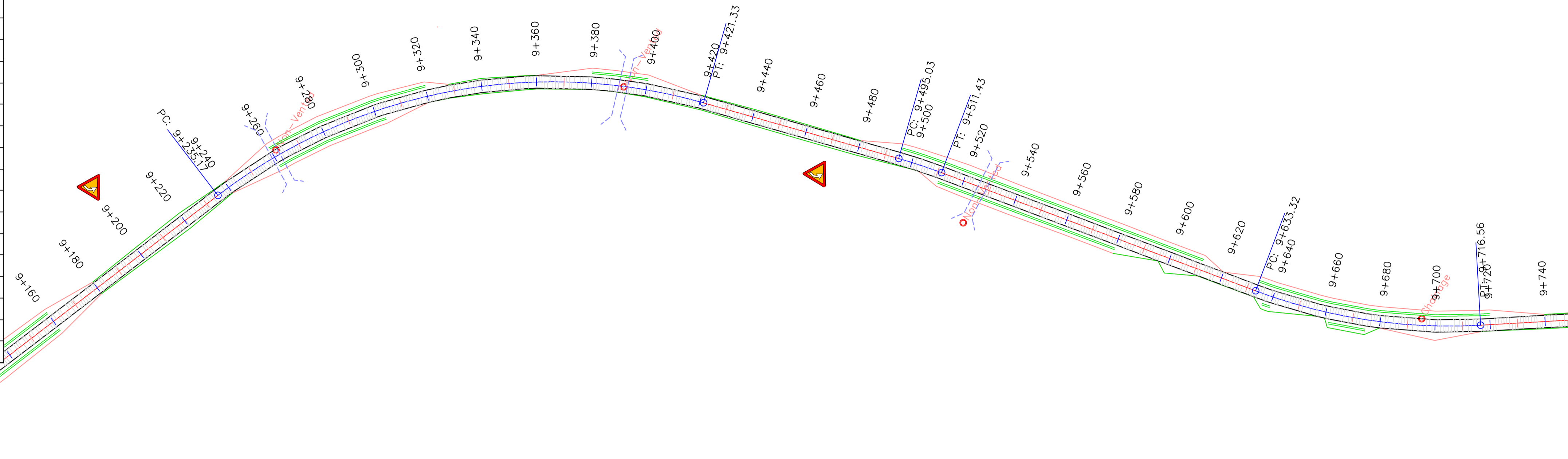
REVISION APPROVAL
TITLE

ROAD PLAN AND PROFILE

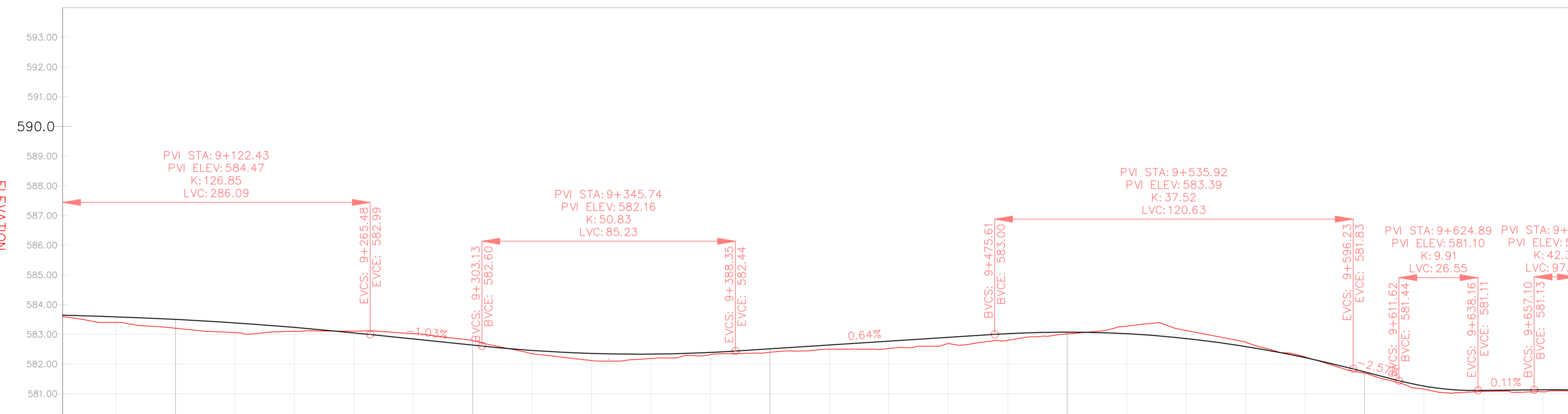
SCALE
HORIZONTAL SCALE: 1:1000
VERTICAL SCALE: 1:100

DRAWING NO. DGHES-PP-01
REVISION NO. 0

Station	Northing	Easting	Tangential Direction
9+180.00	8,022,698.2799m	487,774.6272m	S69° 22' 49"E
9+200.00	8,022,691.2367m	487,793.3460m	S69° 22' 49"E
9+220.00	8,022,684.1935m	487,812.0647m	S69° 22' 49"E
9+240.00	8,022,677.0958m	487,830.7625m	S67° 59' 49"E
9+260.00	8,022,668.6888m	487,848.9006m	S62° 16' 02"E
9+280.00	8,022,658.5129m	487,866.1087m	S56° 32' 16"E
9+300.00	8,022,646.6700m	487,882.2149m	S50° 48' 29"E
9+320.00	8,022,633.2782m	487,897.0584m	S45° 04' 43"E
9+340.00	8,022,618.4715m	487,910.4908m	S39° 20' 56"E
9+360.00	8,022,602.3978m	487,922.3778m	S33° 37' 10"E
9+380.00	8,022,585.2177m	487,932.6008m	S27° 53' 23"E
9+400.00	8,022,567.1028m	487,941.0575m	S22° 09' 37"E
9+420.00	8,022,548.2341m	487,947.6636m	S16° 25' 50"E
9+440.00	8,022,529.0148m	487,953.1970m	S10° 02' 56"E
9+460.00	8,022,509.7942m	487,958.7261m	S16° 02' 56"E
9+480.00	8,022,490.5737m	487,964.2522m	S16° 02' 56"E
9+500.00	8,022,471.3366m	487,969.7249m	S14° 37' 30"E
9+520.00	8,022,451.7981m	487,973.9798m	S11° 20' 58"E
9+540.00	8,022,432.1892m	487,977.9157m	S11° 20' 58"E
9+560.00	8,022,412.5803m	487,981.8515m	S11° 20' 58"E
9+580.00	8,022,392.9714m	487,985.7874m	S11° 20' 58"E
9+600.00	8,022,373.3625m	487,989.7232m	S11° 20' 58"E
9+620.00	8,022,353.7536m	487,993.6590m	S11° 20' 58"E
9+640.00	8,022,334.1679m	487,997.7040m	S13° 15' 48"E
9+660.00	8,022,314.9630m	488,003.2575m	S18° 59' 35"E
9+680.00	8,022,296.4085m	488,010.7005m	S24° 43' 21"E



PROFILE VIEW: DGHES PROFILE VIEWS (341)
VERTICAL SCALE: 100
DATUM: 580.00



VERTICAL CURVES GRADE

LEVELS	VERTICAL CURVES GRADE		STATIONING																											
	H _L	H _R	9+162	9+180	9+200	9+220	9+240	9+260	9+280	9+300	9+320	9+340	9+360	9+380	9+400	9+420	9+440	9+460	9+480	9+500	9+520	9+540	9+560	9+580	9+600	9+620	9+640	9+660	9+671	
FINAL ROAD LEVELS	LEFT	RIGHT	583.551	583.500	583.412	583.293	583.142	582.959	582.754	582.547	582.368	582.267	582.245	582.301	582.423	582.551	582.680	582.808	582.934	583.076	583.211	583.349	583.490	583.633	583.779	583.927	584.077	584.229	584.383	584.539
ROAD LEVELS	ON CL		583.642	583.590	583.502	583.383	583.232	583.049	582.844	582.637	582.458	582.357	582.335	582.391	582.513	582.641	582.770	582.898	583.024	583.156	583.291	583.428	583.567	583.708	583.851	583.996	584.143	584.292	584.443	584.595
GROUND LEVELS AT GRADE LINE			583.595	583.400	583.206	583.058	583.100	583.108	583.026	582.791	582.348	582.118	582.189	582.318	582.397	582.500	582.523	582.685	582.799	583.016	583.126	583.241	583.360	583.483	583.609	583.737	583.866	584.000	584.139	584.282
KILOMETER DISTANCE			9+162	9+180	9+200	9+220	9+240	9+260	9+280	9+300	9+320	9+340	9+360	9+380	9+400	9+420	9+440	9+460	9+480	9+500	9+520	9+540	9+560	9+580	9+600	9+620	9+640	9+660	9+671	

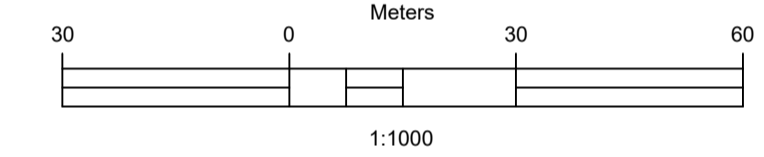
REFERENCE
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GENERAL NOTES

LEGEND

- Vented/Non-vented Drift
- Road Boundary
- Road Centerline



No.	DESCRIPTION	BY	DATE

REVISIONS

CLIENT: ZAMBEZI RIVER AUTHORITY

CONSULTANT: ZAMBEZI RIVER AUTHORITY

PROJECT
CONSTRUCTION OF 28.2KM GRAVEL ROAD
MAAMBA-SIAMUSAMBA SCHOOL JUNCTION
TO DEVILS GORGE HYDRO-ELECTRIC
SCHEME SITE

DESIGNED	SIGNED	DATE
DRAWN	PS	Oct 2023
DESIGNED	PS	Oct 2023
CHECKED	AN	Oct 2023
APPROVED	AN	Oct 2023

REVISION APPROVAL

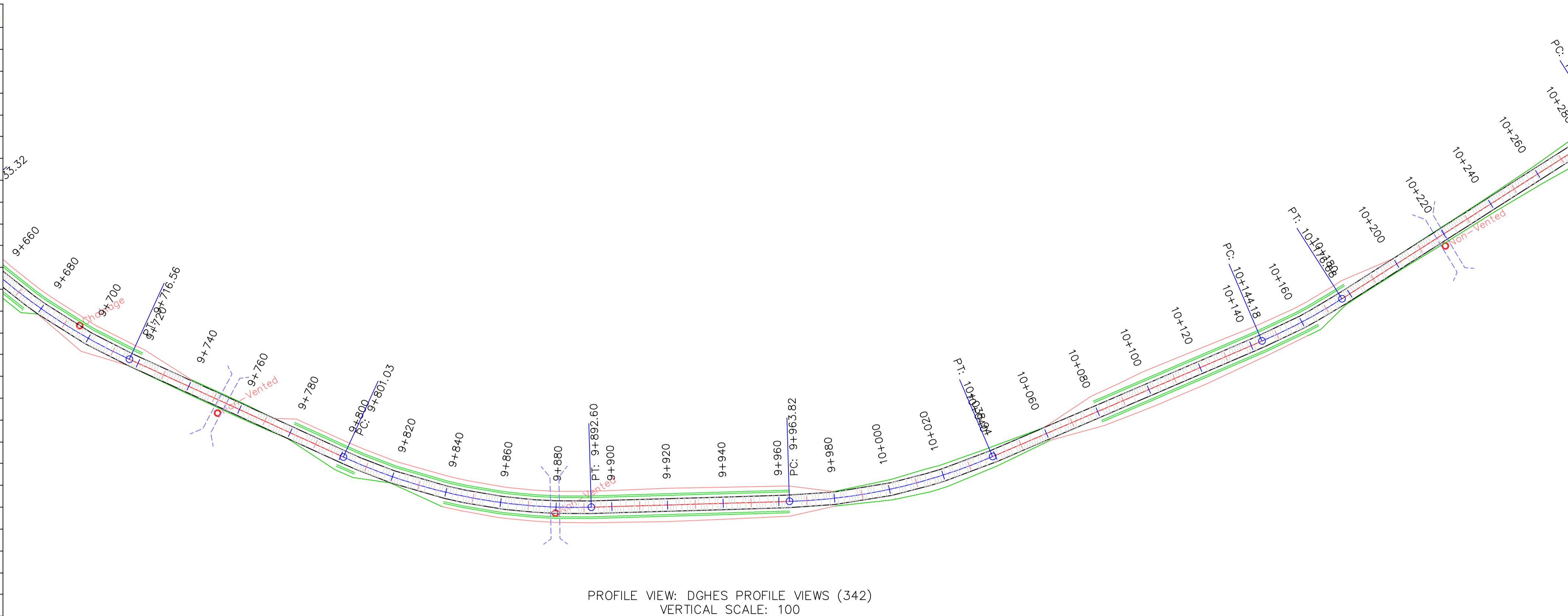
TITLE
ROAD PLAN AND PROFILE

SCALE
HORIZONTAL SCALE: 1:1000
VERTICAL SCALE: 1:100

DRAWING NO. DGHES-PP-01

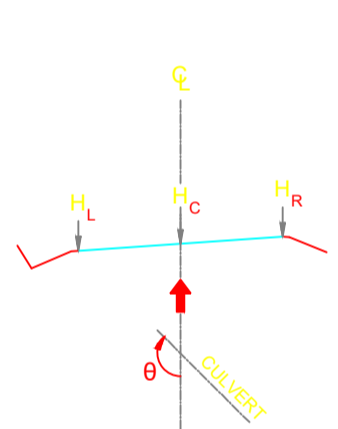
REVISION NO. 0

Station	Northing	Easting	Tangential Direction
9+660.00	8,022,314.9630m	488,003.2575m	S18° 59' 35"E
9+680.00	8,022,296.4085m	488,010.7005m	S24° 43' 21"E
9+700.00	8,022,278.6898m	488,019.9587m	S30° 27' 08"E
9+720.00	8,022,261.9667m	488,030.9154m	S35° 11' 48"E
9+740.00	8,022,245.6231m	488,042.4431m	S35° 11' 48"E
9+760.00	8,022,229.2796m	488,053.9708m	S35° 11' 48"E
9+780.00	8,022,212.9360m	488,065.4985m	S35° 11' 48"E
9+800.00	8,022,196.5925m	488,077.0262m	S35° 11' 48"E
9+820.00	8,022,180.2490m	488,089.2720m	S40° 37' 50"E
9+840.00	8,022,166.2876m	488,103.0322m	S46° 21' 37"E
9+860.00	8,022,153.2313m	488,118.1715m	S52° 05' 23"E
9+880.00	8,022,141.7515m	488,134.5387m	S57° 49' 10"E
9+900.00	8,022,131.8422m	488,151.9061m	S61° 25' 48"E
9+920.00	8,022,122.2775m	488,169.4708m	S61° 25' 48"E
9+940.00	8,022,112.7129m	488,187.0354m	S61° 25' 48"E
9+960.00	8,022,103.1482m	488,204.6001m	S61° 25' 48"E
9+980.00	8,022,094.1666m	488,222.4622m	S66° 03' 57"E
10+000.00	8,022,086.9797m	488,241.1173m	S71° 47' 44"E
10+020.00	8,022,081.6911m	488,260.3968m	S77° 31' 30"E
10+040.00	8,022,078.3508m	488,280.1075m	S82° 57' 06"E
10+060.00	8,022,075.8967m	488,299.9564m	S82° 57' 06"E
10+080.00	8,022,073.4426m	488,319.8053m	S82° 57' 06"E
10+100.00	8,022,070.9885m	488,339.6541m	S82° 57' 06"E
10+120.00	8,022,068.5344m	488,359.5030m	S82° 57' 06"E
10+140.00	8,022,066.0803m	488,379.3519m	S82° 57' 06"E
10+160.00	8,022,064.2491m	488,399.2511m	S87° 29' 06"E
10+180.00	8,022,064.3436m	488,419.2537m	N87° 44' 16"E

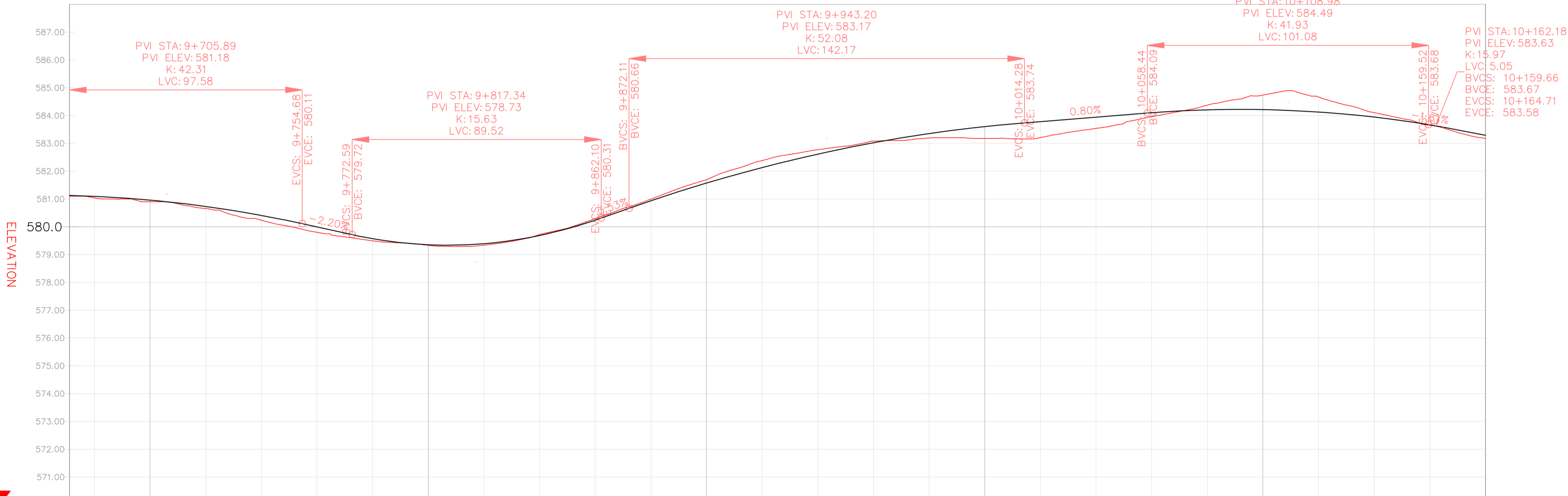
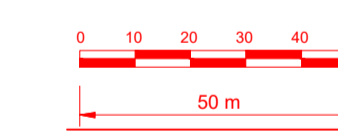
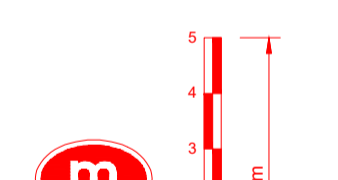


PROFILE VIEW: DGHS PROFILE VIEWS (342)
VERTICAL SCALE: 100
DATUM: 570.00

DGHES Access-Zam



PROFILE OF GRADE LINE



VERTICAL CURVES GRADE

FINAL ROAD LEVELS	H _L	LEFT	ELEVATION																													
			581.029	581.124	581.004	581.094	580.870	580.642	580.318	579.904	579.482	579.265	579.304	579.394	579.688	579.598	580.149	580.847	581.483	582.043	582.526	582.932	583.352	583.604	583.514	583.693	583.852	584.011	584.116	584.125	584.038	583.856
	H _C	ON CL	581.100	581.037	581.004	580.900	580.655	580.238	579.801	579.495	579.334	579.339	579.724	579.724	580.300	580.996	581.694	582.383	582.774	583.082	583.194	583.177	583.208	583.538	583.960	584.374	584.738	584.666	584.105	583.652	583.178	583.178
	H _R	RIGHT	581.029	581.004	580.870	580.642	580.318	579.904	579.482	579.265	579.304	579.394	579.688	579.598	580.149	580.847	581.483	582.043	582.526	582.932	583.262	583.514	583.693	583.852	584.011	584.116	584.125	584.038	583.856	583.578	583.199	583.199
GROUND LEVELS AT GRADE LINE			581.100	581.037	580.900	580.655	580.238	579.801	579.495	579.334	579.339	579.724	579.724	580.300	580.996	581.694	582.383	582.774	583.082	583.194	583.177	583.208	583.538	583.960	584.374	584.738	584.666	584.105	583.652	583.178	583.178	
KILOMETER DISTANCE			9+671	9+680	9+700	9+720	9+740	9+760	9+780	9+800	9+820	9+840	9+860	9+880	9+900	9+920	9+940	9+960	9+980	10+000	10+020	10+040	10+060	10+080	10+100	10+120	10+140	10+160	10+180			

REFERENCE

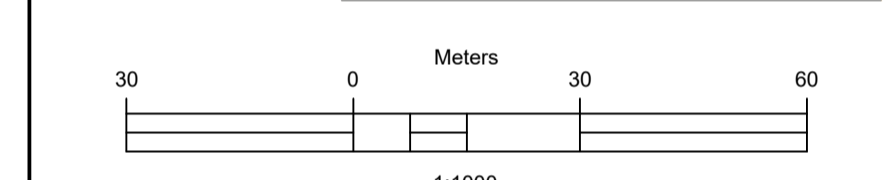
Do not scale from this drawing, use stated dimensions only

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GENERAL NOTES

LEGEND

- Vented/Non-vented Drift
- Road Boundary
- Road Centerline



No.	DESCRIPTION	BY	DATE

REVISIONS

CLIENT
ZAMBEZI RIVER AUTHORITY

CONSULTANT
ZAMBEZI RIVER AUTHORITY

PROJECT
CONSTRUCTION OF 28.2KM GRAVEL ROAD MAAMBA-SIAMUSAMBA SCHOOL JUNCTION TO DEVILS GORGE HYDRO-ELECTRIC SCHEME SITE

DESIGNED	SIGNED	DATE

REVISION APPROVAL

TITLE

ROAD PLAN AND PROFILE

SCALE	HORIZONTAL SCALE: 1:1000	VERTICAL SCALE: 1:100

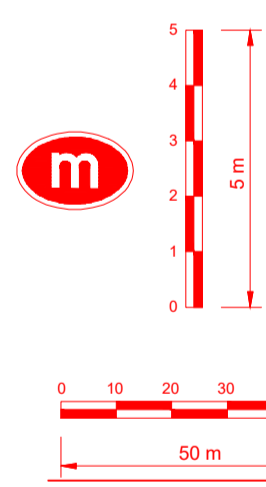
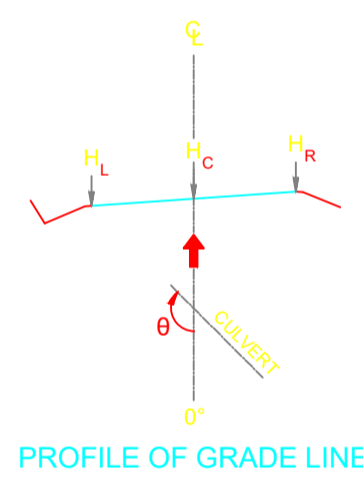
DRAWING NO.	REVISION NO.

DGHES-PP-01

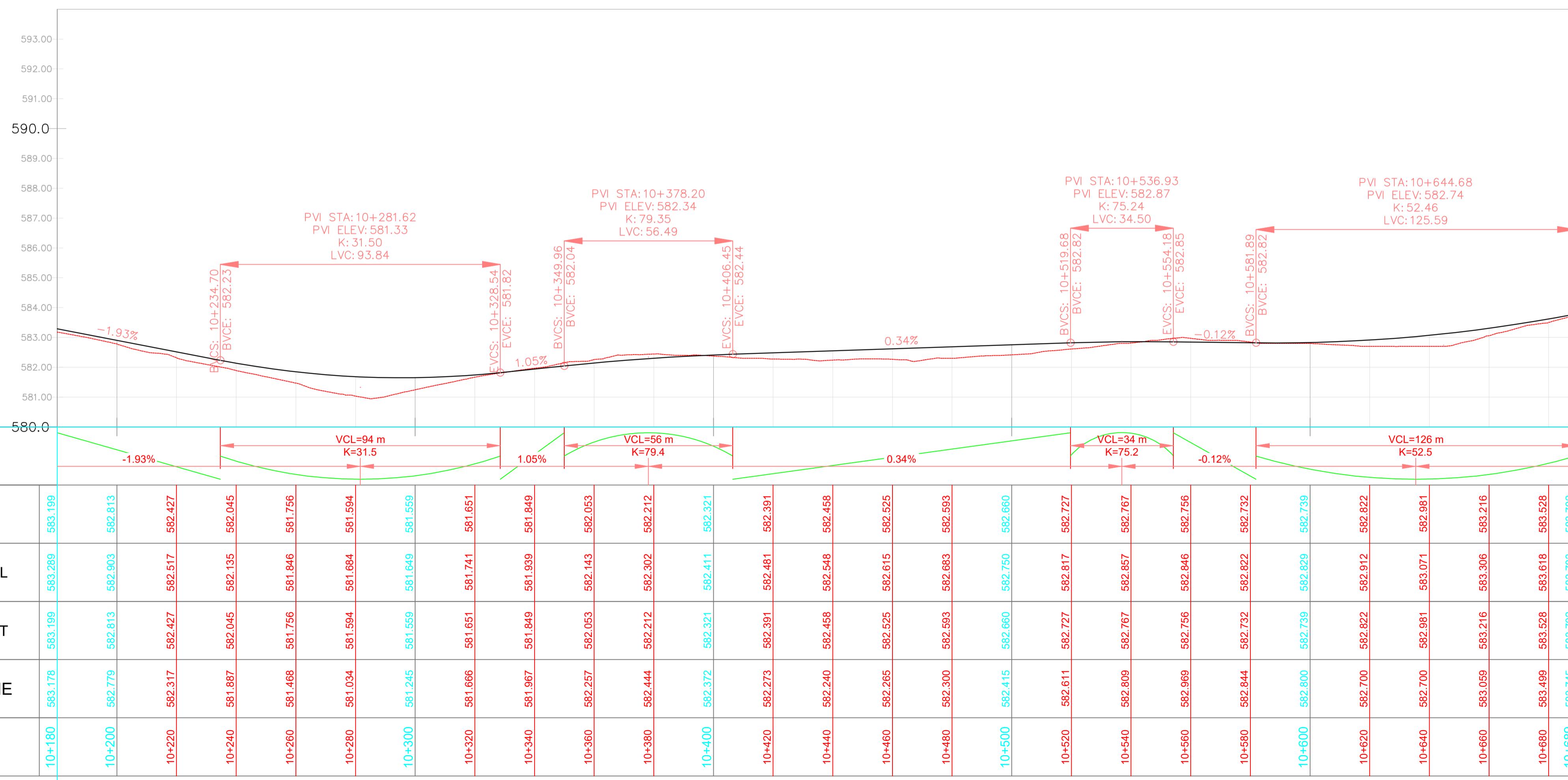
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Station	Northing	Easting	Tangential Direction
10+180.00	8,022,064.3436m	488,419.2537m	N87° 44' 16"E
10+200.00	8,022,065.1330m	488,439.2381m	N87° 44' 16"E
10+220.00	8,022,065.9225m	488,459.2225m	N87° 44' 16"E
10+240.00	8,022,066.7120m	488,479.2069m	N87° 44' 16"E
10+260.00	8,022,067.5014m	488,499.1913m	N87° 44' 16"E
10+280.00	8,022,068.2909m	488,519.1757m	N87° 44' 16"E
10+300.00	8,022,068.7575m	488,539.1668m	S89° 00' 22"E
10+320.00	8,022,067.4121m	488,559.1131m	S83° 16' 35"E
10+340.00	8,022,064.0853m	488,578.8262m	S77° 52' 18"E
10+360.00	8,022,059.8833m	488,598.3799m	S77° 52' 18"E
10+380.00	8,022,055.6812m	488,617.9333m	S77° 52' 18"E
10+400.00	8,022,051.4791m	488,637.4869m	S77° 52' 18"E
10+420.00	8,022,047.2771m	488,657.0405m	S77° 52' 18"E
10+440.00	8,022,043.0750m	488,676.5941m	S77° 52' 18"E
10+460.00	8,022,038.8730m	488,696.1477m	S77° 52' 18"E
10+480.00	8,022,034.6709m	488,715.7013m	S77° 52' 18"E
10+500.00	8,022,030.4688m	488,735.2549m	S77° 52' 18"E
10+520.00	8,022,026.2667m	488,754.8085m	S80° 25' 01"E
10+540.00	8,022,024.1215m	488,774.3621m	S86° 08' 48"E
10+560.00	8,022,023.7766m	488,794.9157m	N88° 07' 26"E
10+580.00	8,022,025.4289m	488,814.4693m	N82° 23' 39"E
10+600.00	8,022,029.0620m	488,834.0229m	N76° 39' 53"E
10+620.00	8,022,034.6395m	488,853.5765m	N70° 56' 07"E
10+640.00	8,022,042.1057m	488,872.1301m	N65° 12' 20"E
10+660.00	8,022,051.3861m	488,889.7223m	N59° 28' 34"E
10+680.00	8,022,061.7986m	488,906.7978m	N58° 33' 03"E
10+700.00	8,022,072.2335m	488,923.8599m	N58° 33' 03"E

DGHES Access-Zam



PROFILE VIEW: DGHES PROFILE VIEWS (343)
VERTICAL SCALE: 100
DATUM: 580.00



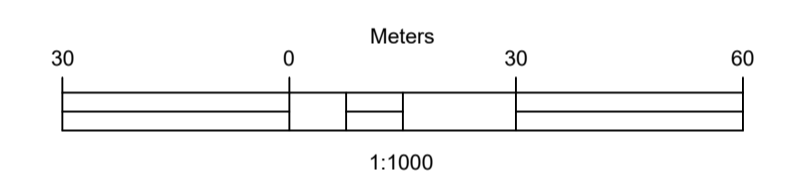
REFERENCE
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GENERAL NOTES

LEGEND

- Vented/Non-vented Drift
- Road Boundary
- Road Centerline



No.	DESCRIPTION	BY	DATE

REVISIONS

CLIENT	ZAMBEZI RIVER AUTHORITY
CONSULTANT	ZAMBEZI RIVER AUTHORITY

PROJECT
CONSTRUCTION OF 28.2KM GRAVEL ROAD
MAAMBA-SIAMUSAMBA SCHOOL JUNCTION
TO DEVILS GORGE HYDRO-ELECTRIC
SCHEME SITE

DESIGNED	SIGNED	DATE
DRAWN	PS	Oct 2023
DESIGNED	PS	Oct 2023
CHECKED	AN	Oct 2023
APPROVED	AN	Oct 2023

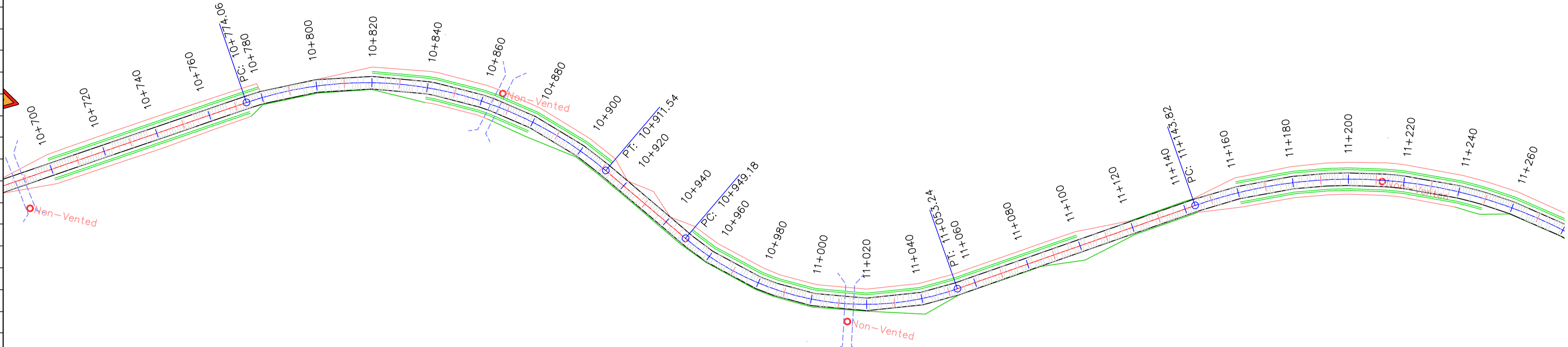
REVISION APPROVAL
TITLE

ROAD PLAN AND PROFILE

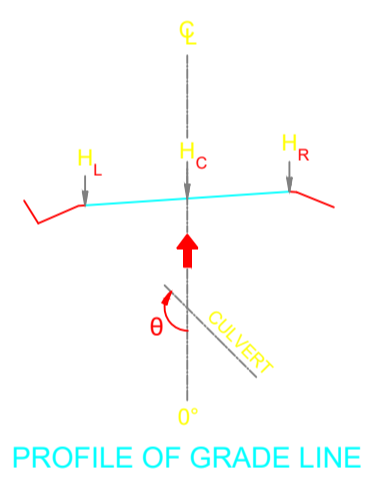
SCALE
HORIZONTAL SCALE: 1:1000
VERTICAL SCALE: 1:100

DRAWING NO. **DGHES-PP-01**
REVISION NO. **0**

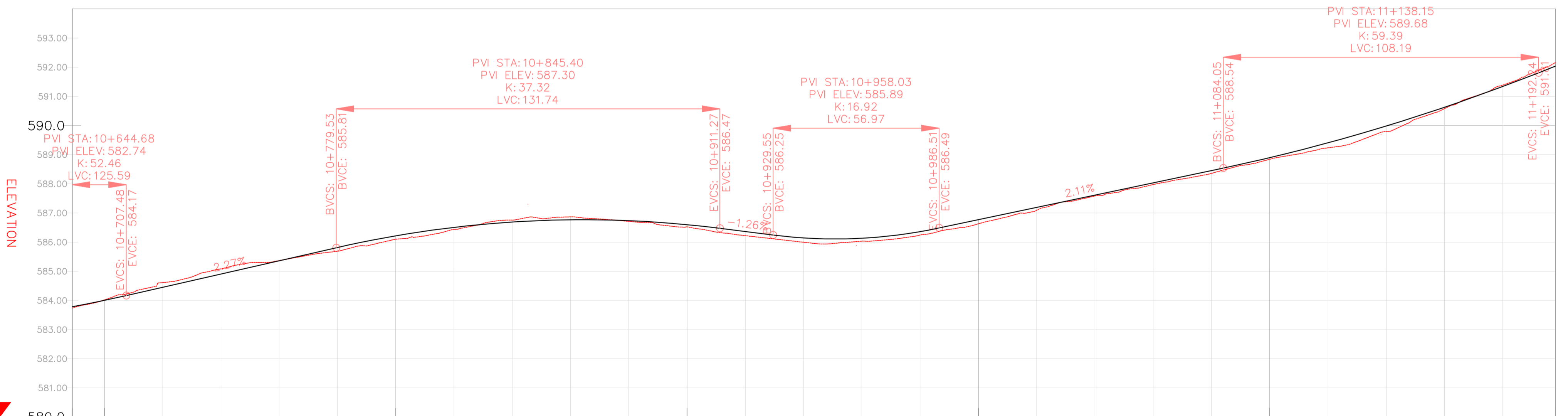
Station	Northing	Easting	Tangential Direction
10+700.00	8,022,072.2335m	488,923.8599m	N58° 33' 03"E
10+720.00	8,022,082.6683m	488,940.9220m	N58° 33' 03"E
10+740.00	8,022,093.1031m	488,957.9840m	N58° 33' 03"E
10+760.00	8,022,103.5380m	488,975.0461m	N58° 33' 03"E
10+780.00	8,022,113.8587m	488,992.1756m	N61° 06' 34"E
10+800.00	8,022,122.1703m	489,010.3460m	N69° 43' 48"E
10+820.00	8,022,127.6644m	489,029.5570m	N78° 21' 02"E
10+840.00	8,022,130.2168m	489,049.3744m	N86° 58' 16"E
10+860.00	8,022,129.7700m	489,069.3506m	S84° 24' 30"E
10+880.00	8,022,126.3340m	489,089.0341m	S75° 47' 16"E
10+900.00	8,022,119.9864m	489,107.9802m	S67° 10' 02"E
10+920.00	8,022,111.1059m	489,125.8913m	S62° 11' 30"E
10+940.00	8,022,101.7756m	489,143.5815m	S62° 11' 30"E
10+960.00	8,022,092.9729m	489,161.5262m	S68° 23' 47"E
10+980.00	8,022,087.5129m	489,180.7318m	S79° 51' 48"E
11+000.00	8,022,085.9800m	489,200.6395m	N88° 40' 11"E
11+020.00	8,022,088.4354m	489,220.4546m	N77° 12' 10"E
11+040.00	8,022,094.7810m	489,239.3860m	N65° 44' 09"E
11+060.00	8,022,104.5723m	489,256.8030m	N58° 08' 41"E
11+080.00	8,022,115.1278m	489,273.7907m	N58° 08' 41"E
11+100.00	8,022,125.6833m	489,290.7784m	N58° 08' 41"E
11+120.00	8,022,136.2388m	489,307.7660m	N58° 08' 41"E
11+140.00	8,022,146.7943m	489,324.7537m	N58° 08' 41"E
11+160.00	8,022,156.6776m	489,342.1299m	N63° 38' 39"E
11+180.00	8,022,164.4740m	489,360.5349m	N70° 26' 27"E
11+200.00	8,022,170.0375m	489,379.7333m	N77° 14' 18"E



DGHES Access-Zam



PROFILE VIEW: DGHES PROFILE VIEWS (344)
VERTICAL SCALE: 100
DATUM: 580.00



VERTICAL CURVES GRADE

KILOMETER DISTANCE	VERTICAL CURVES GRADE		
	Final Road Levels	Ground Levels at Grade Line	Kilometer Distance
10+689	583.702	583.745	10+689
10+700	583.915	584.020	10+700
10+720	584.365	584.614	10+720
10+740	584.819	585.085	10+740
10+760	585.273	585.388	10+760
10+780	585.728	585.689	10+780
10+800	586.126	586.102	10+800
10+820	586.417	586.439	10+820
10+840	586.691	586.759	10+840
10+860	586.768	586.868	10+860
10+880	586.647	586.714	10+880
10+900	586.510	586.526	10+900
10+920	586.275	586.223	10+920
10+940	586.056	586.056	10+940
10+960	586.046	586.036	10+960
10+980	586.272	586.245	10+980
11+000	586.681	586.630	11+000
11+020	587.103	587.093	11+020
11+040	587.524	587.584	11+040
11+060	587.946	587.976	11+060
11+080	588.367	588.359	11+080
11+100	588.810	588.845	11+100
11+120	589.319	589.235	11+120
11+140	589.895	589.800	11+140
11+160	590.539	590.581	11+160
11+180	591.250	591.389	11+180
11+198	591.945	592.158	11+198

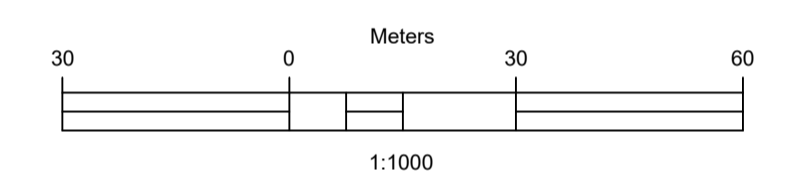
REFERENCE
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GENERAL NOTES

LEGEND

- Vented/Non-vented Drift
- Road Boundary
- Road Centerline



No.	DESCRIPTION	BY	DATE

CLIENT: ZAMBEZI RIVER AUTHORITY

CONSULTANT: ZAMBEZI RIVER AUTHORITY

PROJECT
CONSTRUCTION OF 28.2KM GRAVEL ROAD
MAAMBA-SIAMUSAMBA SCHOOL JUNCTION
TO DEVILS GORGE HYDRO-ELECTRIC
SCHEME SITE

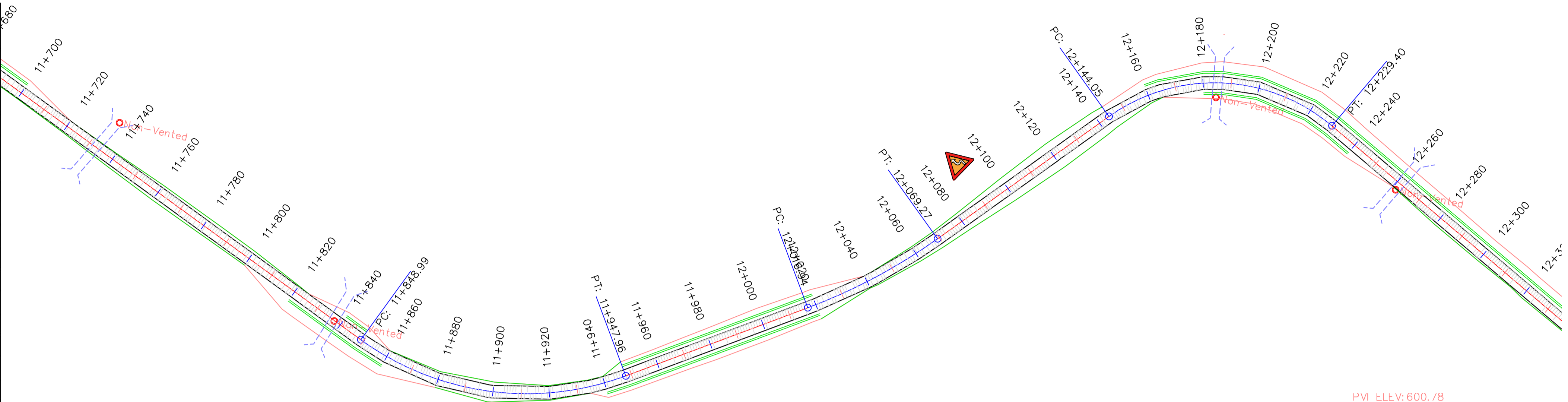
DESIGNED	SIGNED	DATE
DRAWN	PS	Oct 2023
DESIGNED	PS	Oct 2023
CHECKED	AN	Oct 2023
APPROVED	AN	Oct 2023

REVISION APPROVAL
TITLE
ROAD PLAN AND PROFILE

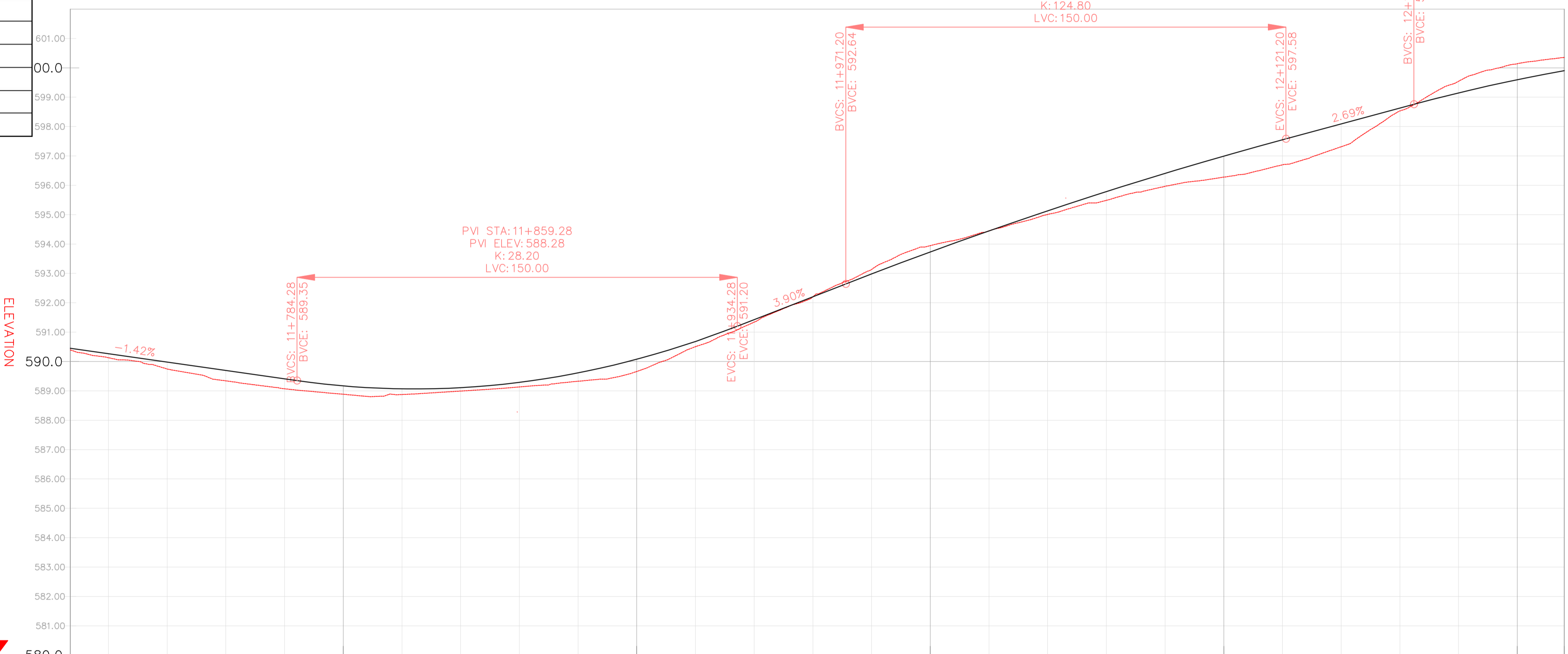
SCALE
HORIZONTAL SCALE: 1:1000
VERTICAL SCALE: 1:100

DRAWING NO. **DGHES-PP-01**
REVISION NO. **0**

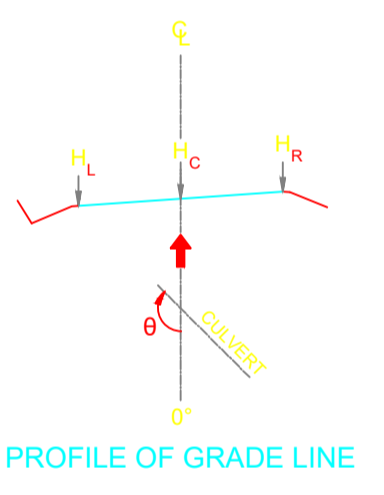
Station	Northing	Easting	Tangential Direction
11+700.00	8,022,002.1055m	489,844.1057m	S65° 52' 39"E
11+720.00	8,021,993.9317m	489,862.3592m	S65° 52' 39"E
11+740.00	8,021,985.7579m	489,880.6127m	S65° 52' 39"E
11+760.00	8,021,977.5841m	489,898.8661m	S65° 52' 39"E
11+780.00	8,021,969.4103m	489,917.1196m	S65° 52' 39"E
11+800.00	8,021,961.2365m	489,935.3731m	S65° 52' 39"E
11+820.00	8,021,953.0627m	489,953.6265m	S65° 52' 39"E
11+840.00	8,021,944.8889m	489,971.8800m	S65° 52' 39"E
11+860.00	8,021,937.2745m	489,990.3598m	S72° 09' 44"E
11+880.00	8,021,933.0795m	490,009.8810m	S83° 34' 55"E
11+900.00	8,021,932.8328m	490,029.8464m	N84° 59' 53"E
11+920.00	8,021,936.5440m	490,049.4654m	N73° 34' 42"E
11+940.00	8,021,944.0663m	490,067.9612m	N62° 09' 30"E
11+960.00	8,021,954.5078m	490,085.0123m	N57° 36' 51"E
11+980.00	8,021,965.2202m	490,101.9015m	N57° 36' 51"E
12+000.00	8,021,975.9326m	490,118.7907m	N57° 36' 51"E
12+020.00	8,021,986.6646m	490,135.6672m	N56° 44' 18"E
12+040.00	8,021,998.4511m	490,151.8149m	N51° 00' 32"E
12+060.00	8,022,011.7907m	490,166.7052m	N45° 16' 45"E
12+080.00	8,022,026.3591m	490,180.4046m	N42° 37' 27"E
12+100.00	8,022,041.0753m	490,193.9484m	N42° 37' 27"E
12+120.00	8,022,055.7916m	490,207.4921m	N42° 37' 27"E
12+140.00	8,022,070.5078m	490,221.0358m	N42° 37' 27"E
12+160.00	8,022,083.7767m	490,235.9130m	N56° 47' 10"E
12+180.00	8,022,091.9853m	490,254.0632m	N74° 32' 36"E
12+200.00	8,022,094.2674m	490,273.8521m	S87° 41' 59"E



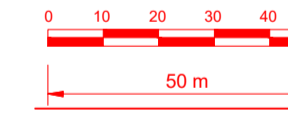
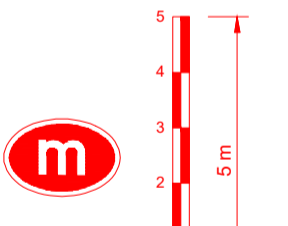
PROFILE VIEW: DGHES PROFILE VIEWS (346)
VERTICAL SCALE: 100
DATUM: 580.00



DGHES Access-Zam



PROFILE OF GRADE LINE



VERTICAL CURVES GRADE

FINAL ROAD LEVELS	H _L LEFT	H _C ON CL	H _R RIGHT	VERTICAL CURVES GRADE																										
				11+707	11+720	11+740	11+760	11+780	11+800	11+820	11+840	11+860	11+880	11+900	11+920	11+940	11+960	11+980	12+000	12+020	12+040	12+060	12+080	12+100	12+120	12+140	12+160	12+180	12+200	12+216
	590.360	590.450	590.360	590.395	590.175	590.990	590.605	590.321	590.080	590.978	590.017	590.198	590.522	590.987	590.594	591.336	592.115	592.891	593.640	594.357	595.042	595.695	596.315	596.904	597.461	597.999	598.538	599.056	599.504	599.805
GROUND LEVELS AT GRADE LINE	590.395	590.128	590.746	590.341	590.069	590.321	590.884	590.875	590.993	590.132	590.327	590.660	590.503	591.339	592.201	593.135	592.891	593.944	594.449	595.007	595.486	595.965	596.315	596.278	596.697	597.313	597.531	598.056	600.141	600.356
KILOMETER DISTANCE	11+707	11+720	11+740	11+760	11+780	11+800	11+820	11+840	11+860	11+880	11+900	11+920	11+940	11+960	11+980	12+000	12+020	12+040	12+060	12+080	12+100	12+120	12+140	12+160	12+180	12+200	12+216			

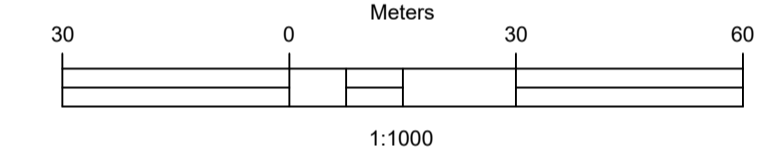
REFERENCE
Do not scale from this drawing, use stated dimensions only

DISCLAIMER
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GENERAL NOTES

LEGEND

- Vented/Non-vented Drift
- Road Boundary
- Road Centerline



No.	DESCRIPTION	BY	DATE

REVISIONS

CLIENT
ZAMBEZI RIVER AUTHORITY

CONSULTANT
ZAMBEZI RIVER AUTHORITY

PROJECT
CONSTRUCTION OF 28.2KM GRAVEL ROAD MAAMBA-SIAMUSAMBA SCHOOL JUNCTION TO DEVILS GORGE HYDRO-ELECTRIC SCHEME SITE

DESIGNED	SIGNED	DATE
DRAWN	PS	Oct 2023
DESIGNED	PS	Oct 2023
CHECKED	AN	Oct 2023
APPROVED	AN	Oct 2023

REVISION APPROVAL

TITLE
ROAD PLAN AND PROFILE

SCALE
HORIZONTAL SCALE: 1:1000
VERTICAL SCALE: 1:100

DRAWING NO.
DGHES-PP-01

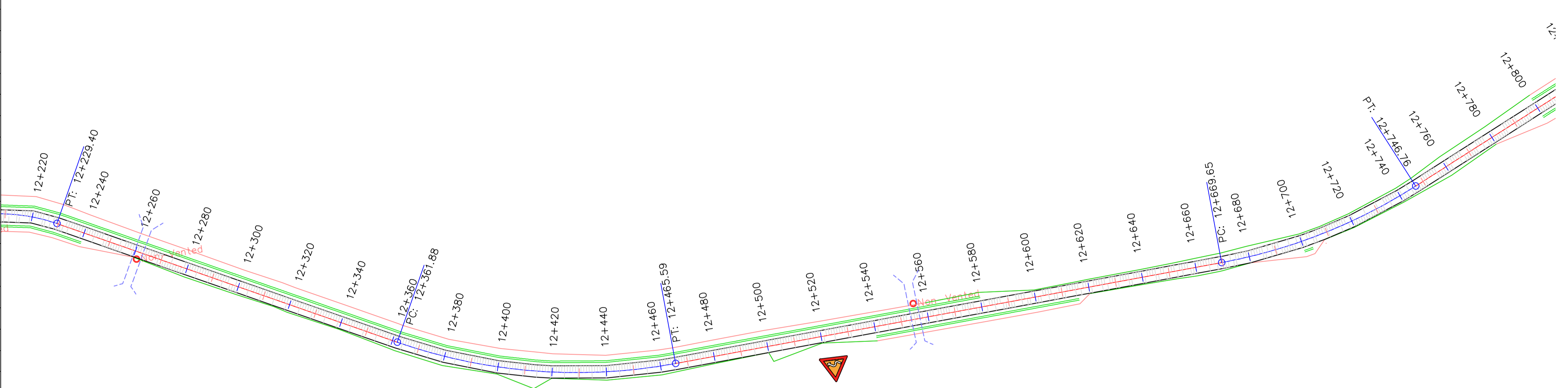
REVISION NO.
0

REFERENCE
Do not scale from this drawing, use stated dimensions only

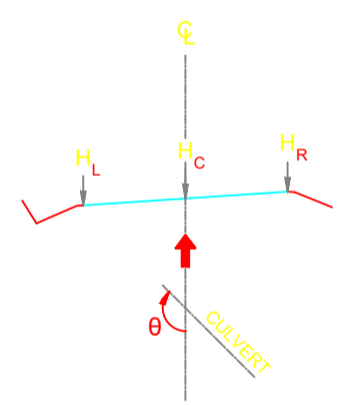
DISCLAIMER
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GENERAL NOTES

Station	Northing	Easting	Tangential Direction
12+200.00	8,022,094.2674m	490,273.8521m	S87° 41' 59"E
12+220.00	8,022,090.4054m	490,293.3942m	S69° 56' 33"E
12+240.00	8,022,081.5092m	490,311.2827m	S61° 35' 57"E
12+260.00	8,022,071.9965m	490,328.8756m	S61° 35' 57"E
12+280.00	8,022,062.4838m	490,346.4684m	S61° 35' 57"E
12+300.00	8,022,052.9710m	490,364.0612m	S61° 35' 57"E
12+320.00	8,022,043.4583m	490,381.6540m	S61° 35' 57"E
12+340.00	8,022,033.9456m	490,399.2469m	S61° 35' 57"E
12+360.00	8,022,024.4328m	490,416.8397m	S61° 35' 57"E
12+380.00	8,022,015.9201m	490,434.4325m	S66° 47' 24"E
12+400.00	8,022,008.7028m	490,453.5454m	S72° 31' 11"E
12+420.00	8,022,003.6582m	490,472.8901m	S78° 14' 57"E
12+440.00	8,022,000.5701m	490,492.6418m	S83° 58' 44"E
12+460.00	8,021,999.4693m	490,512.6032m	S89° 42' 30"E
12+480.00	8,021,999.8486m	490,532.5990m	N88° 41' 22"E
12+500.00	8,022,000.3060m	490,552.5938m	N88° 41' 22"E
12+520.00	8,022,000.7635m	490,572.5885m	N88° 41' 22"E
12+540.00	8,022,001.2209m	490,592.5833m	N88° 41' 22"E
12+560.00	8,022,001.6783m	490,612.5781m	N88° 41' 22"E
12+580.00	8,022,002.1358m	490,632.5728m	N88° 41' 22"E
12+600.00	8,022,002.5932m	490,652.5676m	N88° 41' 22"E
12+620.00	8,022,003.0507m	490,672.5624m	N88° 41' 22"E
12+640.00	8,022,003.5081m	490,692.5571m	N88° 41' 22"E
12+660.00	8,022,003.9656m	490,712.5519m	N88° 41' 22"E
12+680.00	8,022,004.4230m	490,732.5467m	N85° 43' 27"E
12+700.00	8,022,007.1757m	490,752.3725m	N79° 59' 40"E
12+720.00	8,022,011.6287m	490,771.8620m	N74° 15' 54"E



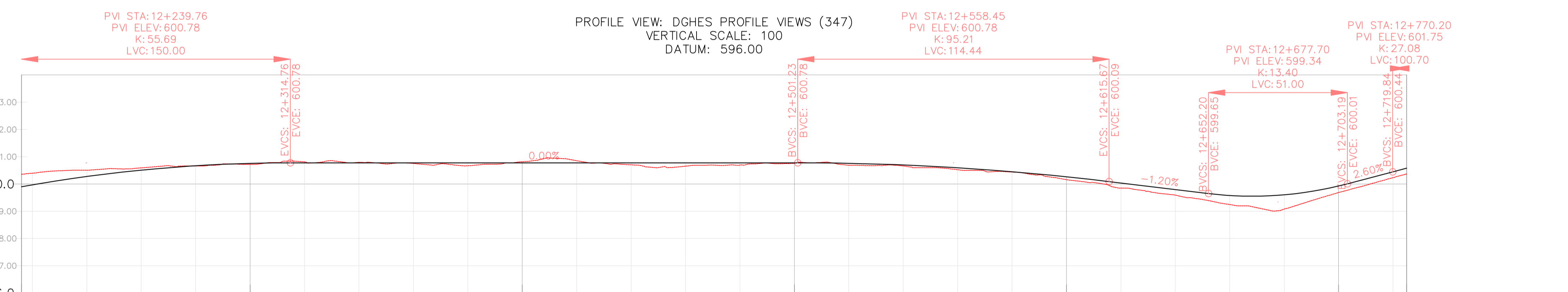
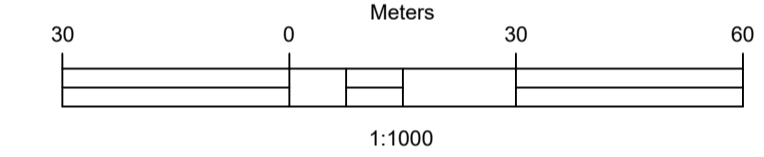
DGHES Access-Zam



PROFILE OF GRADE LINE

LEGEND

- Vented/Non-vented Drift
- Road Boundary
- Road Centerline



VERTICAL CURVES GRADE

FINAL ROAD LEVELS	H _L	LEFT	Stationing																												
			12+216	12+220	12+240	12+260	12+280	12+300	12+320	12+340	12+360	12+380	12+400	12+420	12+440	12+460	12+480	12+500	12+520	12+540	12+560	12+580	12+600	12+620	12+640	12+660	12+680	12+700	12+720	12+725	
H _R	RIGHT	599.805	599.880	600.184	600.417	600.578	600.666	600.686	600.686	600.686	600.686	600.686	600.686	600.686	600.686	600.686	600.686	600.686	600.686	600.686	600.686	600.686	600.686	600.686	600.686	600.686	600.686	600.686	600.686	600.686	600.686
H _C	ON CL	599.905	599.970	600.274	600.507	600.668	600.756	600.776	600.776	600.776	600.776	600.776	600.776	600.776	600.776	600.776	600.776	600.776	600.776	600.776	600.776	600.776	600.776	600.776	600.776	600.776	600.776	600.776	600.776	600.776	600.776
H _L	LEFT	600.356	600.385	600.507	600.591	600.662	600.717	600.813	600.853	600.886	600.904	600.917	600.924	600.928	600.931	600.933	600.934	600.935	600.935	600.935	600.935	600.935	600.935	600.935	600.935	600.935	600.935	600.935	600.935	600.935	600.935

KILOMETER DISTANCE

No.	DESCRIPTION	BY	DATE

REVISIONS

CLIENT: ZAMBEZI RIVER AUTHORITY

CONSULTANT: ZAMBEZI RIVER AUTHORITY

PROJECT
CONSTRUCTION OF 28.2KM GRAVEL ROAD
MAAMBA-SIAMUSAMBA SCHOOL JUNCTION
TO DEVILS GORGE HYDRO-ELECTRIC
SCHEME SITE

DESIGNED	SIGNED	DATE
DRAWN	PS	Oct 2023
DESIGNED	PS	Oct 2023
CHECKED	AN	Oct 2023
APPROVED	AN	Oct 2023

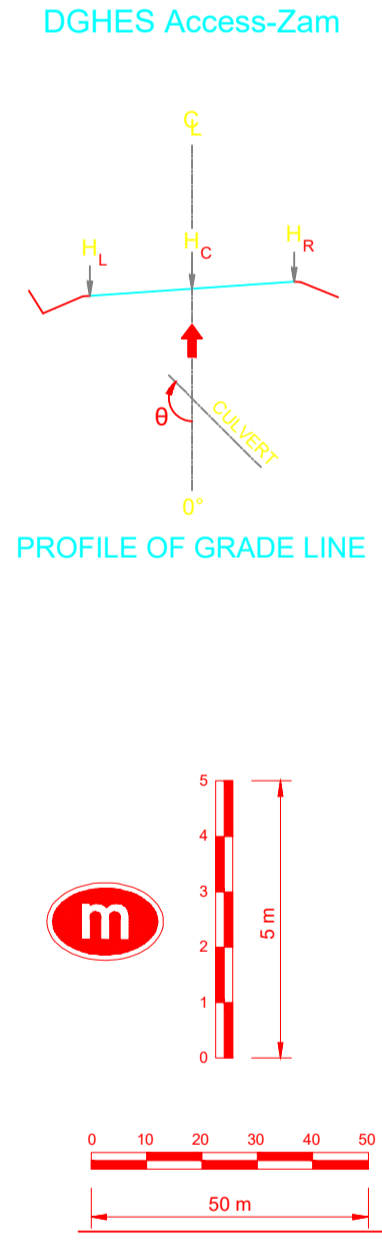
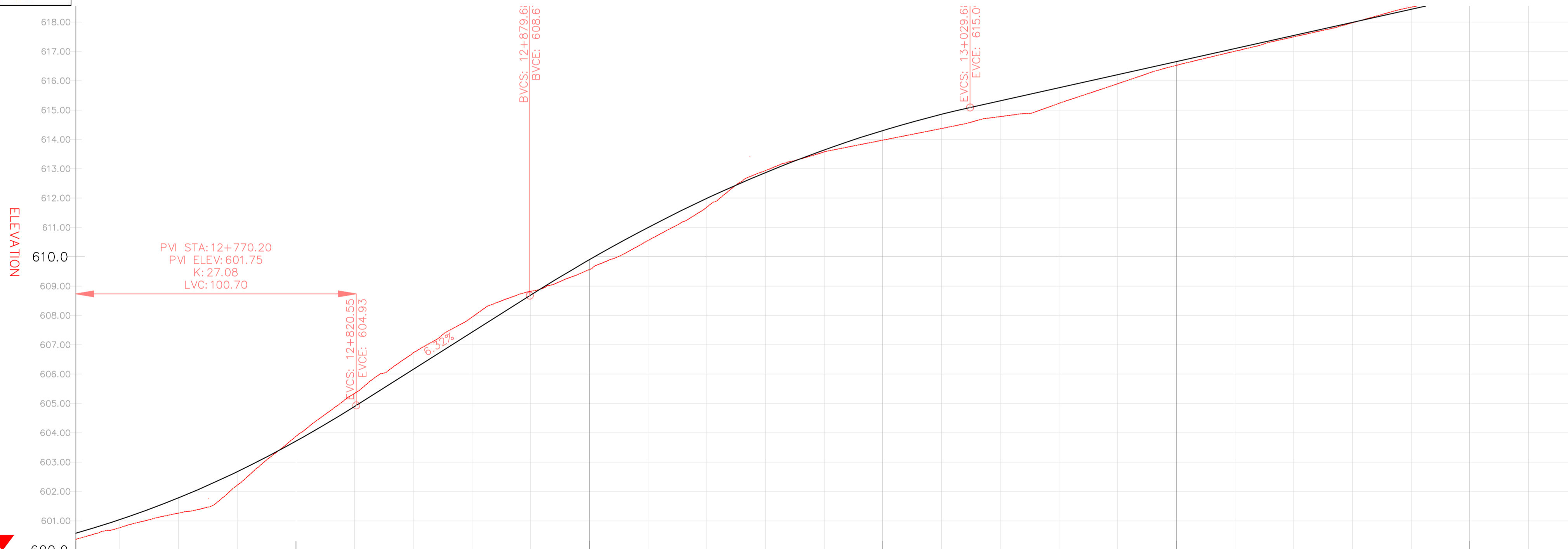
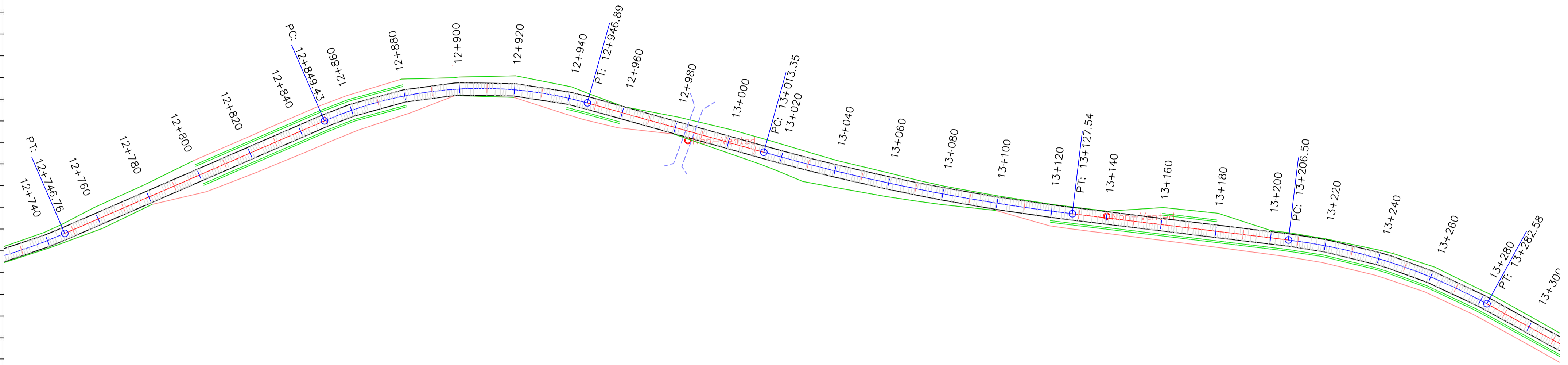
REVISION APPROVAL
TITLE

ROAD PLAN AND PROFILE

SCALE
HORIZONTAL SCALE: 1:1000
VERTICAL SCALE: 1:100

DRAWING NO. DGHEs-PP-01
REVISION NO. 0

Station	Northing	Easting	Tangential Direction
12+720.00	8,022,011.6287m	490,771.8620m	N74° 15' 54"E
12+740.00	8,022,018.0052m	490,790.8094m	N68° 32' 07"E
12+760.00	8,022,025.8434m	490,809.2085m	N66° 35' 53"E
12+780.00	8,022,033.7869m	490,827.5633m	N66° 35' 53"E
12+800.00	8,022,041.7305m	490,845.9181m	N66° 35' 53"E
12+820.00	8,022,049.6741m	490,864.2730m	N66° 35' 53"E
12+840.00	8,022,057.6177m	490,882.6278m	N66° 35' 53"E
12+860.00	8,022,065.5613m	490,901.0287m	N70° 49' 46"E
12+880.00	8,022,070.4280m	490,920.4163m	N78° 50' 07"E
12+900.00	8,022,072.9195m	490,940.2442m	N86° 50' 28"E
12+920.00	8,022,072.6251m	490,960.2257m	S85° 09' 12"E
12+940.00	8,022,069.5508m	490,979.9716m	S77° 08' 51"E
12+960.00	8,022,064.3297m	490,999.2760m	S74° 23' 29"E
12+980.00	8,022,058.9485m	491,018.5385m	S74° 23' 29"E
13+000.00	8,022,053.5672m	491,037.8009m	S74° 23' 29"E
13+020.00	8,022,048.2144m	491,057.0712m	S74° 53' 56"E
13+040.00	8,022,043.2614m	491,076.4476m	S76° 25' 24"E
13+060.00	8,022,038.8257m	491,095.9489m	S77° 56' 53"E
13+080.00	8,022,034.9105m	491,115.5613m	S79° 28' 22"E
13+100.00	8,022,031.5186m	491,135.2710m	S80° 59' 51"E
13+120.00	8,022,028.6522m	491,155.0639m	S82° 31' 20"E
13+140.00	8,022,025.2110m	491,174.9143m	S83° 05' 50"E
13+160.00	8,022,023.8073m	491,194.7693m	S83° 05' 50"E
13+180.00	8,022,021.4037m	491,214.6244m	S83° 05' 50"E
13+200.00	8,022,019.0000m	491,234.4794m	S83° 05' 50"E
13+220.00	8,022,016.1458m	491,254.2696m	S79° 13' 52"E



VERTICAL CURVES GRADE

FINAL ROAD LEVELS	VERTICAL CURVES GRADE		GRADE DATA																											
	H _L	H _R	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION								
H _L	LEFT	H _R	RIGHT	600.503	600.503	600.503	600.503	600.503	600.503	600.503	600.503	600.503	600.503	600.503	600.503	600.503	600.503	600.503	600.503	600.503	600.503	600.503	600.503							
H _C	ON CL			600.579	600.579	600.579	600.579	600.579	600.579	600.579	600.579	600.579	600.579	600.579	600.579	600.579	600.579	600.579	600.579	600.579	600.579	600.579	600.579	600.579						
H _R	RIGHT			600.503	600.503	600.503	600.503	600.503	600.503	600.503	600.503	600.503	600.503	600.503	600.503	600.503	600.503	600.503	600.503	600.503	600.503	600.503	600.503	600.503						
GROUND LEVELS AT GRADE LINE				600.370	600.370	600.370	600.370	600.370	600.370	600.370	600.370	600.370	600.370	600.370	600.370	600.370	600.370	600.370	600.370	600.370	600.370	600.370	600.370	600.370						
KILOMETER DISTANCE				12+725	12+740	12+760	12+780	12+800	12+820	12+840	12+860	12+880	12+900	12+920	12+940	12+960	12+980	13+000	13+020	13+040	13+060	13+080	13+100	13+120	13+140	13+160	13+180	13+200	13+220	13+234

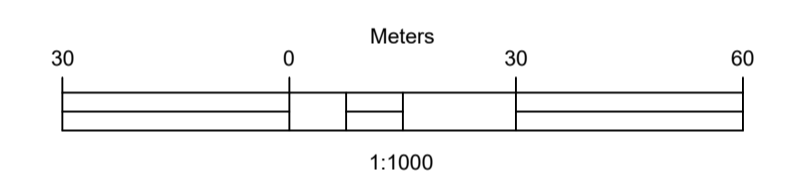
REFERENCE
Do not scale from this drawing, use stated dimensions only

DISCLAIMER
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GENERAL NOTES

LEGEND

- Vented/Non-vented Drift
- Road Boundary
- Road Centerline



No.	DESCRIPTION	BY	DATE

CLIENT
ZAMBEZI RIVER AUTHORITY

CONSULTANT
ZAMBEZI RIVER AUTHORITY

PROJECT
CONSTRUCTION OF 28.2KM GRAVEL ROAD
MAAMBA-SIAMUSAMBA SCHOOL JUNCTION
TO DEVILS GORGE HYDRO-ELECTRIC
SCHEME SITE

DESIGNED	SIGNED	DATE
DRAWN	PS	Oct 2023
DESIGNED	PS	Oct 2023
CHECKED	AN	Oct 2023
APPROVED	AN	Oct 2023

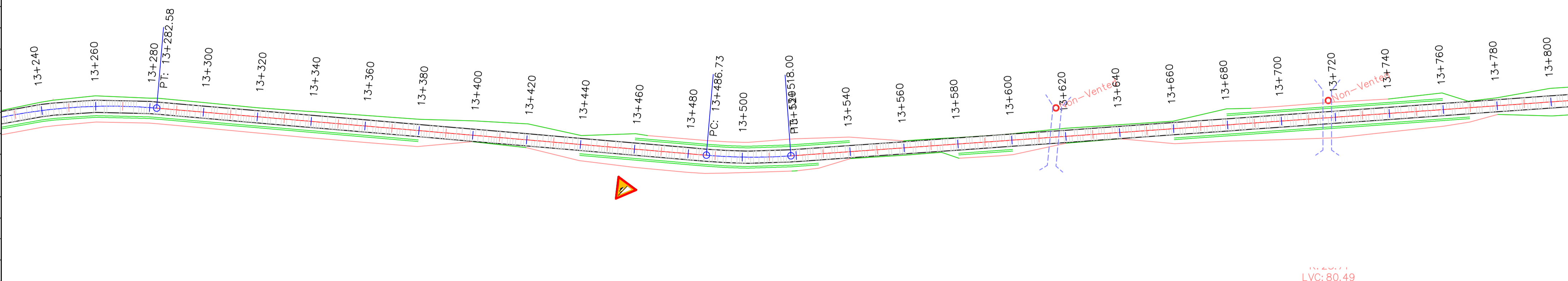
REVISION APPROVAL
TITLE

ROAD PLAN AND PROFILE

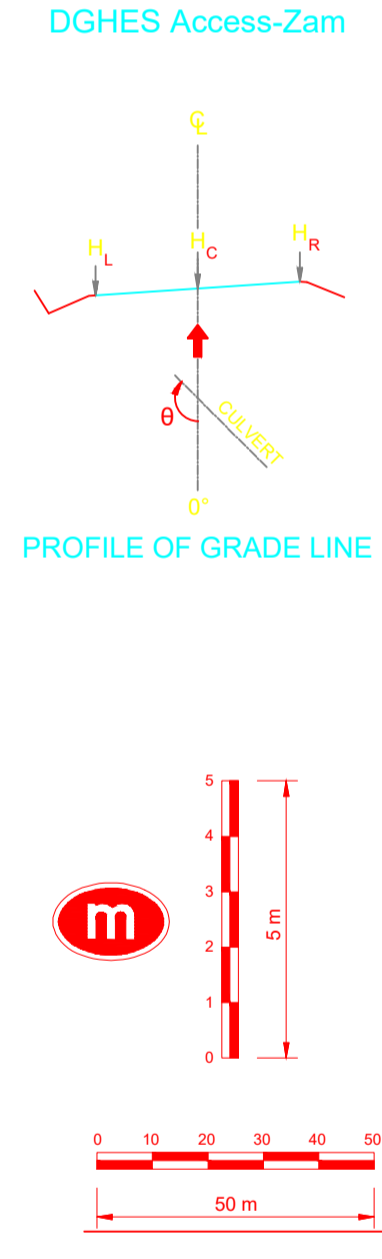
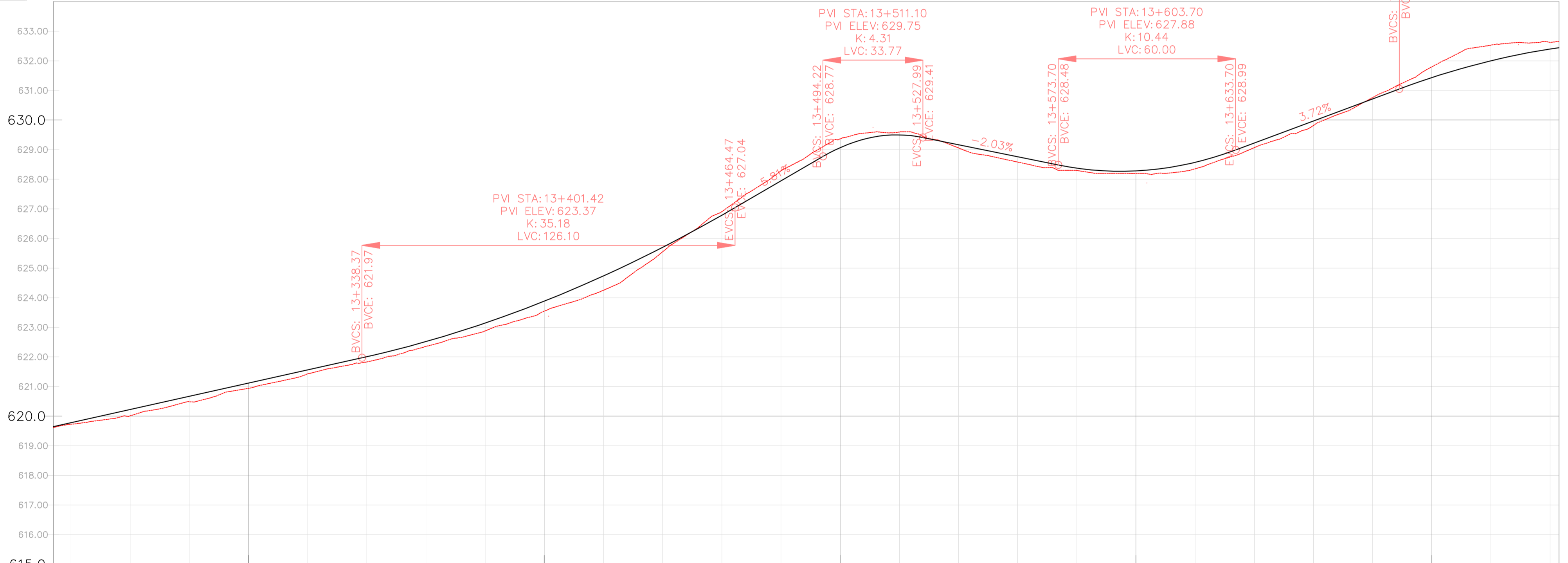
SCALE
HORIZONTAL SCALE: 1:1000
VERTICAL SCALE: 1:100

DRAWING NO. DGHES-PP-01
REVISION NO. 0

Station	Northing	Easting	Tangential Direction
13+220.00	8,022,016.1458m	491,254.2696m	S79° 13' 52"E
13+240.00	8,022,011.4335m	491,273.6980m	S73° 30' 06"E
13+260.00	8,022,004.8052m	491,292.5688m	S67° 46' 19"E
13+280.00	8,021,996.3270m	491,310.6637m	S62° 02' 33"E
13+300.00	8,021,986.7386m	491,328.2153m	S61° 18' 17"E
13+320.00	8,021,977.1355m	491,345.7590m	S61° 18' 17"E
13+340.00	8,021,967.5325m	491,363.3027m	S61° 18' 17"E
13+360.00	8,021,957.9294m	491,380.8464m	S61° 18' 17"E
13+380.00	8,021,948.3264m	491,398.3901m	S61° 18' 17"E
13+400.00	8,021,938.7234m	491,415.9339m	S61° 18' 17"E
13+420.00	8,021,929.1203m	491,433.4776m	S61° 18' 17"E
13+440.00	8,021,919.5173m	491,451.0213m	S61° 18' 17"E
13+460.00	8,021,909.9142m	491,468.5650m	S61° 18' 17"E
13+480.00	8,021,900.3112m	491,486.1087m	S61° 18' 17"E
13+500.00	8,021,891.0986m	491,503.8550m	S65° 06' 18"E
13+520.00	8,021,883.5903m	491,522.3836m	S70° 15' 40"E
13+540.00	8,021,876.8357m	491,541.2085m	S70° 15' 40"E
13+560.00	8,021,870.0810m	491,560.0333m	S70° 15' 40"E
13+580.00	8,021,863.3264m	491,578.8582m	S70° 15' 40"E
13+600.00	8,021,856.5717m	491,597.6830m	S70° 15' 40"E
13+620.00	8,021,849.8171m	491,616.5078m	S70° 15' 40"E
13+640.00	8,021,843.0624m	491,635.3327m	S70° 15' 40"E
13+660.00	8,021,836.3078m	491,654.1575m	S70° 15' 40"E
13+680.00	8,021,829.5531m	491,672.9824m	S70° 15' 40"E
13+700.00	8,021,822.7985m	491,691.8072m	S70° 15' 40"E
13+720.00	8,021,816.0438m	491,710.6321m	S70° 15' 40"E
13+740.00	8,021,809.2892m	491,729.4569m	S70° 15' 40"E
13+760.00	8,021,802.5345m	491,748.2817m	S70° 15' 40"E

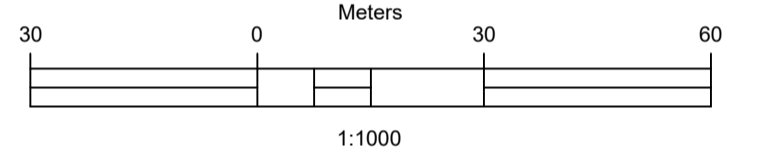


PROFILE VIEW: DGHE PROFILE VIEWS (349)
VERTICAL SCALE: 100
DATUM: 615.00



LEGEND

- Vented/Non-vented Drift
- Road Boundary
- Road Centerline



No.	DESCRIPTION	BY	DATE

REVISIONS

CLIENT	DESIGNED	SIGNED	DATE
ZAMBEZI RIVER AUTHORITY	PS		Oct 2023
ZAMBEZI RIVER AUTHORITY	AN		Oct 2023
ZAMBEZI RIVER AUTHORITY	AN		Oct 2023

PROJECT
CONSTRUCTION OF 28.2KM GRAVEL ROAD
MAAMBA-SIAMUSAMBA SCHOOL JUNCTION
TO DEVILS GORGE HYDRO-ELECTRIC
SCHEME SITE

DESIGNED	SIGNED	DATE
PS		Oct 2023
AN		Oct 2023
AN		Oct 2023

REVISION APPROVAL
TITLE

ROAD PLAN AND PROFILE

SCALE
HORIZONTAL SCALE: 1:1000
VERTICAL SCALE: 1:100

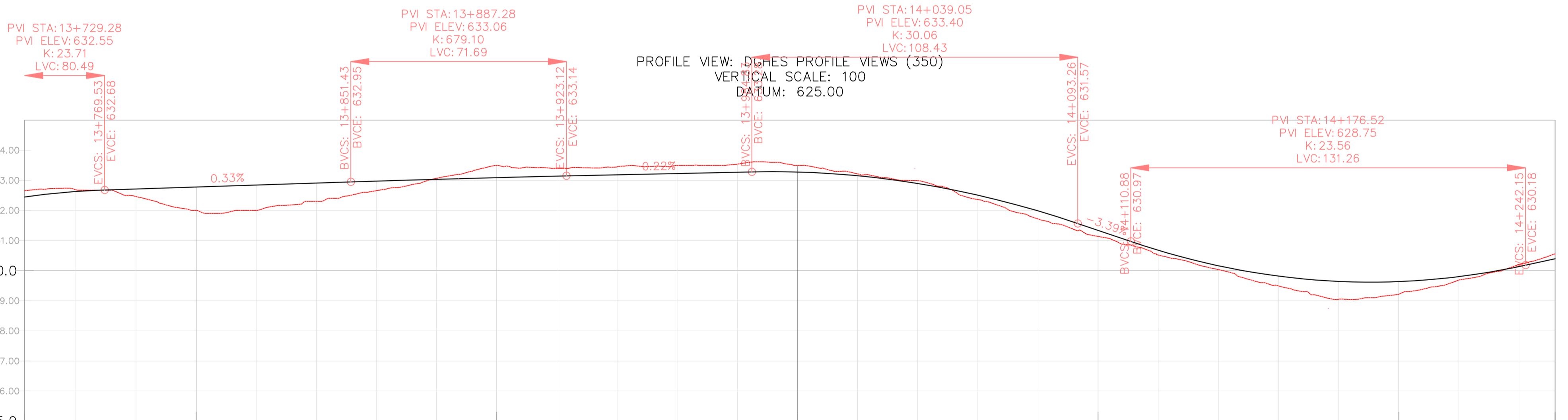
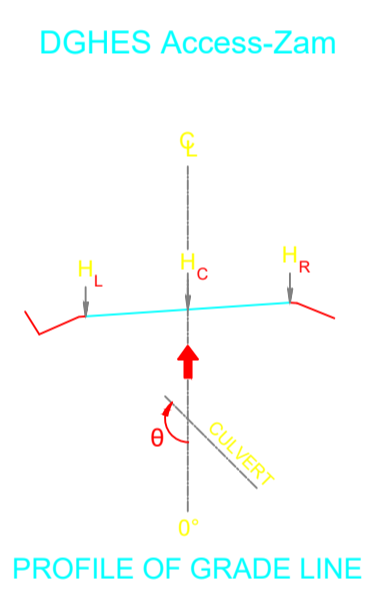
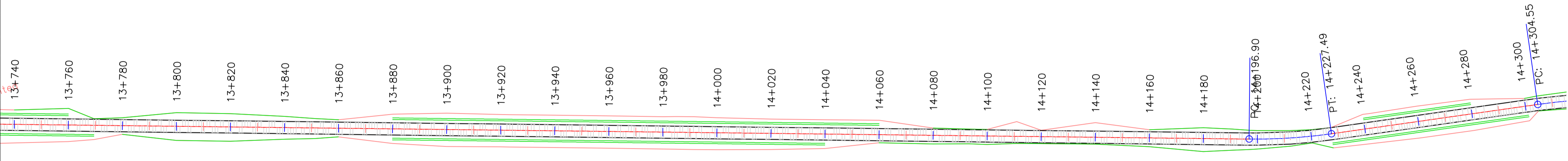
DRAWING NO.
DGHES-PP-01

REVISION NO.
0

VERTICAL CURVES GRADE

FINAL ROAD LEVELS	H _L	LEFT	VERTICAL CURVES GRADE																									
			H _C	ON CL	H _R	RIGHT	GROUND LEVELS AT GRADE LINE	KILOMETER DISTANCE	2.23%	VCL=128 m K=35.2	5.81%	VCL=34 m K=4.3	-2.03%	VCL=60 m K=10.4	3.72%	VCL=80 m K=23.7												
	619.551	619.641	619.685	619.775	620.131	620.577	621.023	621.469	621.916	622.428	623.054	623.793	624.646	625.613	626.694	627.854	629.077	628.671	628.285	628.192	628.482	629.136	629.880	630.625	631.343	631.911	632.310	632.944
	619.618	619.726	620.010	620.487	621.113	621.830	622.667	623.614	624.646	625.703	626.784	627.944	629.088	629.408	629.777	628.761	628.375	628.482	628.572	629.226	629.970	630.715	631.433	631.343	631.911	632.400	632.910	632.944
	619.551	619.685	620.131	620.577	621.023	621.469	621.916	622.428	623.054	623.793	624.646	625.613	626.694	627.854	629.077	628.671	628.285	628.192	628.482	629.136	629.880	630.625	631.343	631.343	631.911	632.400	632.910	632.944
	13+224	13+240	13+260	13+280	13+300	13+320	13+340	13+360	13+380	13+400	13+420	13+440	13+460	13+480	13+500	13+520	13+540	13+560	13+580	13+600	13+620	13+640	13+660	13+680	13+700	13+720	13+740	13+760

Station	Northing	Easting	Tangential Direction
13+760.00	8,021,802.5345m	491,748,2817m	S70° 15' 40"E
13+780.00	8,021,795.7799m	491,767,1066m	S70° 15' 40"E
13+800.00	8,021,789.0252m	491,785,9314m	S70° 15' 40"E
13+820.00	8,021,782.2706m	491,804,7563m	S70° 15' 40"E
13+840.00	8,021,775.5159m	491,823,5811m	S70° 15' 40"E
13+860.00	8,021,768.7613m	491,842,4060m	S70° 15' 40"E
13+880.00	8,021,762.0066m	491,861,2308m	S70° 15' 40"E
13+900.00	8,021,755.2520m	491,880,0556m	S70° 15' 40"E
13+920.00	8,021,748.4973m	491,898,8805m	S70° 15' 40"E
13+940.00	8,021,741.7427m	491,917,7053m	S70° 15' 40"E
13+960.00	8,021,734.9880m	491,936,5302m	S70° 15' 40"E
13+980.00	8,021,728.2334m	491,955,3550m	S70° 15' 40"E
14+000.00	8,021,721.4787m	491,974,1799m	S70° 15' 40"E
14+020.00	8,021,714.7241m	491,993,0047m	S70° 15' 40"E
14+040.00	8,021,707.9694m	492,011,8295m	S70° 15' 40"E
14+060.00	8,021,701.2148m	492,030,6544m	S70° 15' 40"E
14+080.00	8,021,694.4601m	492,049,4792m	S70° 15' 40"E
14+100.00	8,021,687.7055m	492,068,3041m	S70° 15' 40"E
14+120.00	8,021,680.9508m	492,087,1289m	S70° 15' 40"E
14+140.00	8,021,674.1962m	492,105,9538m	S70° 15' 40"E
14+160.00	8,021,667.4415m	492,124,7786m	S70° 15' 40"E
14+180.00	8,021,660.6869m	492,143,6034m	S70° 15' 40"E
14+200.00	8,021,653.9323m	492,162,4283m	S71° 09' 02"E
14+220.00	8,021,648.4496m	492,181,2531m	S76° 52' 48"E
14+240.00	8,021,644.5047m	492,201,2608m	S79° 01' 30"E
14+260.00	8,021,640.6971m	492,220,8950m	S79° 01' 30"E



VERTICAL CURVES GRADE			VCL=80 m K=23.7		VCL=72 m K=679.1		VCL=108 m K=30.1		VCL=131 m K=23.6			
FINAL ROAD LEVELS	H _L	LEFT	H _C	ON CL	H _R	RIGHT	H _L	LEFT	H _C	ON CL	H _R	RIGHT
13+743	632.344	632.344	632.445	632.445	632.344	632.344	632.655	632.655	632.655	632.655	632.655	632.655
13+760	632.540	632.540	632.630	632.630	632.540	632.540	632.686	632.686	632.686	632.686	632.686	632.686
13+780	632.624	632.624	632.714	632.714	632.624	632.624	632.462	632.462	632.462	632.462	632.462	632.462
13+800	632.689	632.689	632.779	632.779	632.689	632.689	632.000	632.000	632.000	632.000	632.000	632.000
13+820	632.755	632.755	632.845	632.845	632.755	632.755	632.000	632.000	632.000	632.000	632.000	632.000
13+840	632.820	632.820	632.910	632.910	632.820	632.820	632.300	632.300	632.300	632.300	632.300	632.300
13+860	632.885	632.885	632.975	632.975	632.885	632.885	632.657	632.657	632.657	632.657	632.657	632.657
13+880	632.945	632.945	633.035	633.035	632.945	632.945	633.069	633.069	633.069	633.069	633.069	633.069
13+900	632.999	632.999	633.089	633.089	632.999	632.999	633.500	633.500	633.500	633.500	633.500	633.500
13+920	633.047	633.047	633.137	633.137	633.047	633.047	633.400	633.400	633.400	633.400	633.400	633.400
13+940	633.091	633.091	633.181	633.181	633.091	633.091	633.447	633.447	633.447	633.447	633.447	633.447
13+960	633.136	633.136	633.226	633.226	633.136	633.136	633.500	633.500	633.500	633.500	633.500	633.500
13+980	633.180	633.180	633.270	633.270	633.180	633.180	633.537	633.537	633.537	633.537	633.537	633.537
14+000	633.186	633.186	633.276	633.276	633.186	633.186	633.500	633.500	633.500	633.500	633.500	633.500
14+020	633.063	633.063	633.153	633.153	633.063	633.063	633.215	633.215	633.215	633.215	633.215	633.215
14+040	632.807	632.807	632.897	632.897	632.807	632.807	632.989	632.989	632.989	632.989	632.989	632.989
14+060	632.417	632.417	632.507	632.507	632.417	632.417	632.361	632.361	632.361	632.361	632.361	632.361
14+080	631.895	631.895	631.985	631.985	631.895	631.895	631.718	631.718	631.718	631.718	631.718	631.718
14+100	631.247	631.247	631.337	631.337	631.247	631.247	631.138	631.138	631.138	631.138	631.138	631.138
14+120	630.588	630.588	630.678	630.678	630.588	630.588	630.521	630.521	630.521	630.521	630.521	630.521
14+140	630.073	630.073	630.163	630.163	630.073	630.073	630.035	630.035	630.035	630.035	630.035	630.035
14+160	629.728	629.728	629.818	629.818	629.728	629.728	629.483	629.483	629.483	629.483	629.483	629.483
14+180	629.553	629.553	629.643	629.643	629.553	629.553	629.050	629.050	629.050	629.050	629.050	629.050
14+200	629.547	629.547	629.637	629.637	629.547	629.547	629.218	629.218	629.218	629.218	629.218	629.218
14+220	629.711	629.711	629.801	629.801	629.711	629.711	629.687	629.687	629.687	629.687	629.687	629.687
14+240	630.045	630.045	630.135	630.135	630.045	630.045	630.207	630.207	630.207	630.207	630.207	630.207
14+252	630.306	630.306	630.396	630.396	630.306	630.306	630.558	630.558	630.558	630.558	630.558	630.558

REFERENCE
Do not scale from this drawing, use stated dimensions only

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GENERAL NOTES

LEGEND

- Vented/Non-vented Drift
- Road Boundary
- Road Centerline

30 0 Meters 30 60
1:1000

No.	DESCRIPTION	BY	DATE

REVISIONS

CLIENT	ZAMBEZI RIVER AUTHORITY
CONSULTANT	ZAMBEZI RIVER AUTHORITY

PROJECT
CONSTRUCTION OF 28.2KM GRAVEL ROAD
MAAMBA-SIAMUSAMBA SCHOOL JUNCTION
TO DEVILS GORGE HYDRO-ELECTRIC
SCHEME SITE

DESIGNED	SIGNED	DATE
DRAWN	PS	Oct 2023
DESIGNED	PS	Oct 2023
CHECKED	AN	Oct 2023
APPROVED	AN	Oct 2023

REVISION APPROVAL

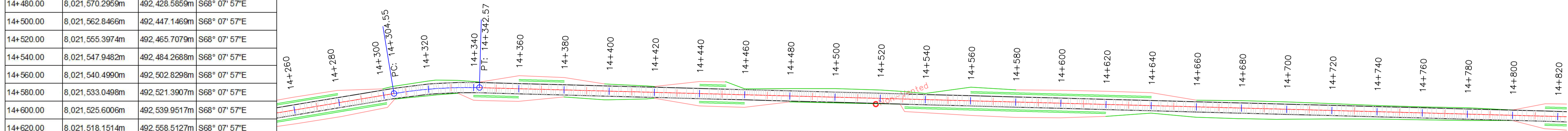
TITLE
ROAD PLAN AND PROFILE

SCALE
HORIZONTAL SCALE: 1:1000 VERTICAL SCALE: 1:100

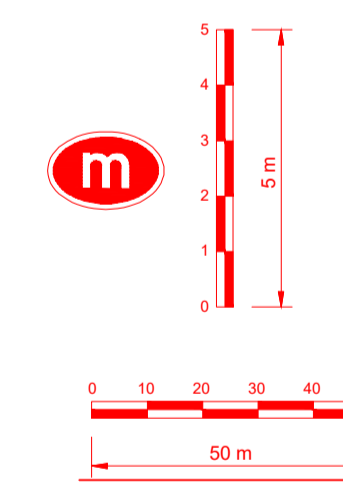
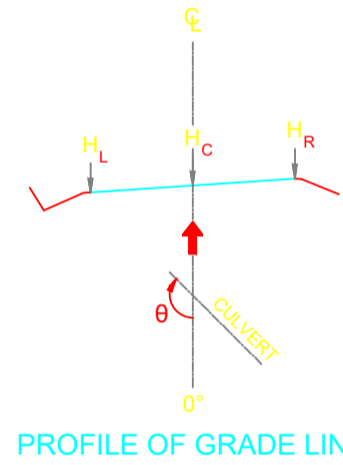
DRAWING NO.
DGHEs-PP-01

REVISION NO.
0

Station	Northing	Easting	Tangential Direction
14+260.00	8,021,640.6971m	492,220.8950m	S79° 01' 30"E
14+280.00	8,021,636.8894m	492,240.5292m	S79° 01' 30"E
14+300.00	8,021,633.0818m	492,260.1634m	S79° 01' 30"E
14+320.00	8,021,628.6913m	492,279.6689m	S74° 35' 52"E
14+340.00	8,021,622.4250m	492,298.6531m	S68° 52' 06"E
14+360.00	8,021,614.9911m	492,317.2202m	S68° 07' 57"E
14+380.00	8,021,607.5419m	492,335.7811m	S68° 07' 57"E
14+400.00	8,021,600.0927m	492,354.3421m	S68° 07' 57"E
14+420.00	8,021,592.6435m	492,372.9031m	S68° 07' 57"E
14+440.00	8,021,585.1943m	492,391.4640m	S68° 07' 57"E
14+460.00	8,021,577.7451m	492,410.0250m	S68° 07' 57"E
14+480.00	8,021,570.2959m	492,428.5859m	S68° 07' 57"E
14+500.00	8,021,562.8466m	492,447.1469m	S68° 07' 57"E
14+520.00	8,021,555.3974m	492,465.7079m	S68° 07' 57"E
14+540.00	8,021,547.9482m	492,484.2688m	S68° 07' 57"E
14+560.00	8,021,540.4990m	492,502.8298m	S68° 07' 57"E
14+580.00	8,021,533.0498m	492,521.3907m	S68° 07' 57"E
14+600.00	8,021,525.6006m	492,539.9517m	S68° 07' 57"E
14+620.00	8,021,518.1514m	492,558.5127m	S68° 07' 57"E
14+640.00	8,021,510.7022m	492,577.0736m	S68° 07' 57"E
14+660.00	8,021,503.2530m	492,595.6346m	S68° 07' 57"E
14+680.00	8,021,495.8038m	492,614.1955m	S68° 07' 57"E
14+700.00	8,021,488.3545m	492,632.7565m	S68° 07' 57"E
14+720.00	8,021,480.9053m	492,651.3175m	S68° 07' 57"E
14+740.00	8,021,473.4561m	492,669.8784m	S68° 07' 57"E
14+760.00	8,021,466.0069m	492,688.4394m	S68° 07' 57"E

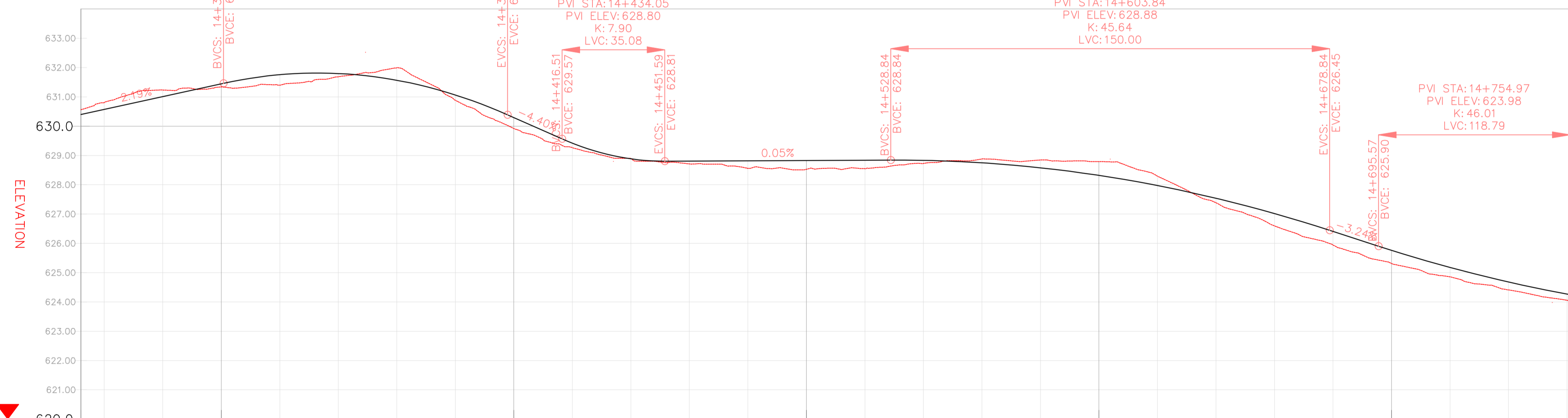


DGHES Access-Zam



PVI STA: 14+349.31
PVI ELEV: 632.52
K: 14.76
LVC: 97.14

PROFILE VIEW: DGHES PROFILE VIEWS (351)
VERTICAL SCALE: 100
DATUM: 620.00



VERTICAL CURVES GRADE

FINAL ROAD LEVELS	H _L LEFT	H _C ON CL	H _R RIGHT	VERTICAL CURVES GRADE	
				Grade (%)	Curve Data
	630.306	630.396	630.306	2.19%	VCL=97 m, K=14.8
	630.481	630.571	630.481	-4.40%	VCL=35 m, K=7.9
	630.918	631.008	630.918	0.05%	VCL=150 m, K=45.6
	631.355	631.445	631.355	-3.24%	VCL=119 m, K=46.0
	631.666	631.756	631.666		
	631.707	631.797	631.707		
	631.476	631.566	631.476		
	630.975	631.065	630.975		
	630.204	630.294	630.204		
	629.332	629.422	629.332		
	628.885	628.885	628.795		
	628.719	628.809	628.719		
	628.728	628.818	628.728		
	628.737	628.827	628.737		
	628.747	628.837	628.747		
	628.742	628.832	628.742		
	628.659	628.749	628.659		
	628.488	628.578	628.488		
	628.229	628.319	628.229		
	627.883	627.973	627.883		
	627.449	627.539	627.449		
	626.927	627.017	626.927		
	626.318	626.408	626.318		
	625.672	625.762	625.672		
	625.087	625.177	625.087		
	624.588	624.678	624.588		
	624.177	624.267	624.177		
	624.161	624.251	624.161		

KILOMETER DISTANCE

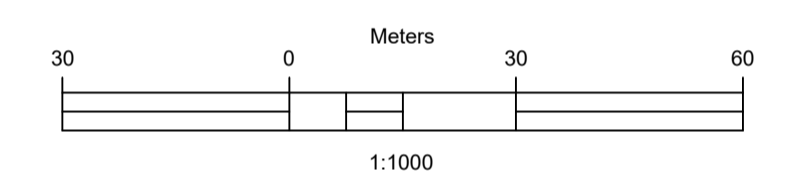
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GENERAL NOTES

LEGEND

- Vented/Non-vented Drift
- Road Boundary
- Road Centerline



No.	DESCRIPTION	BY	DATE

REVISIONS

CLIENT
ZAMBEZI RIVER AUTHORITY

CONSULTANT
ZAMBEZI RIVER AUTHORITY

PROJECT
CONSTRUCTION OF 28.2KM GRAVEL ROAD MAAMBA-SIAMUSAMBA SCHOOL JUNCTION TO DEVILS GORGE HYDRO-ELECTRIC SCHEME SITE

DESIGNED	SIGNED	DATE
DRAWN	PS	Oct 2023
DESIGNED	PS	Oct 2023
CHECKED	AN	Oct 2023
APPROVED	AN	Oct 2023

REVISION APPROVAL

TITLE
ROAD PLAN AND PROFILE

SCALE
HORIZONTAL SCALE: 1:1000 VERTICAL SCALE: 1:100

DRAWING NO. **DGHES-PP-01** REVISION NO. **0**

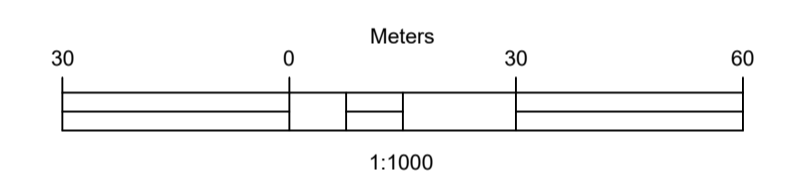
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GENERAL NOTES

LEGEND

- Vented/Non-vented Drift
- Road Boundary
- Road Centerline



No.	DESCRIPTION	BY	DATE

REVISIONS

CLIENT	CONSULTANT
ZAMBEZI RIVER AUTHORITY	ZAMBEZI RIVER AUTHORITY

PROJECT
**CONSTRUCTION OF 28.2KM GRAVEL ROAD
MAAMBA-SIAMUSAMBA SCHOOL JUNCTION
TO DEVILS GORGE HYDRO-ELECTRIC
SCHEME SITE**

DESIGNED	SIGNED	DATE
DRAWN	PS	Oct 2023
DESIGNED	PS	Oct 2023
CHECKED	AN	Oct 2023
APPROVED	AN	Oct 2023

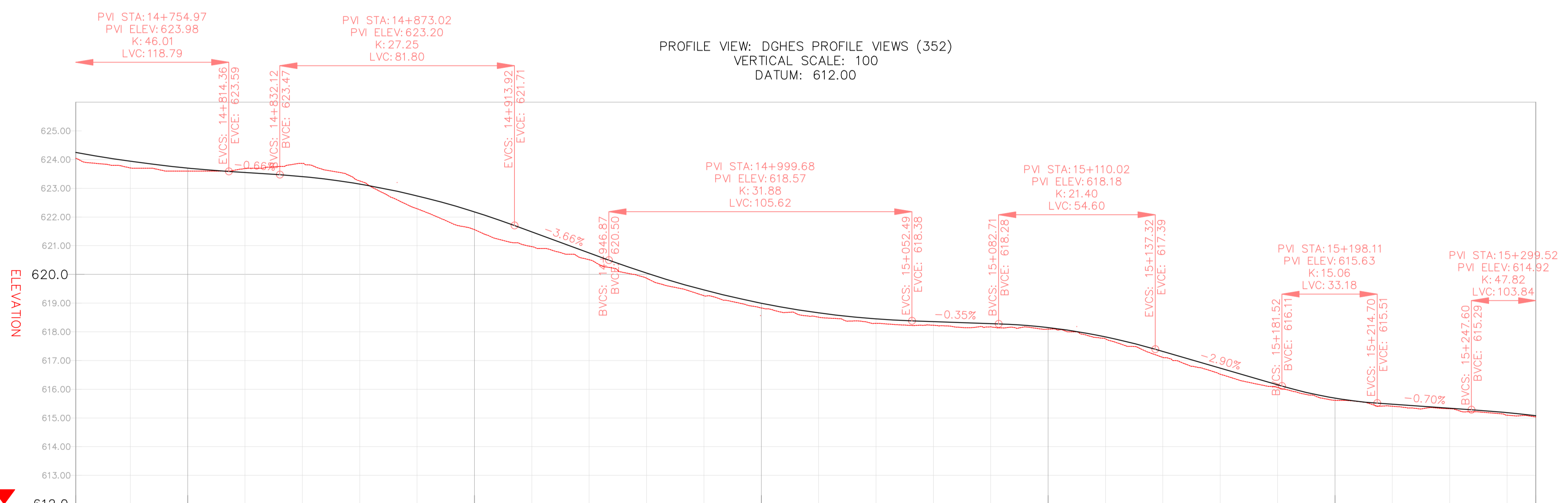
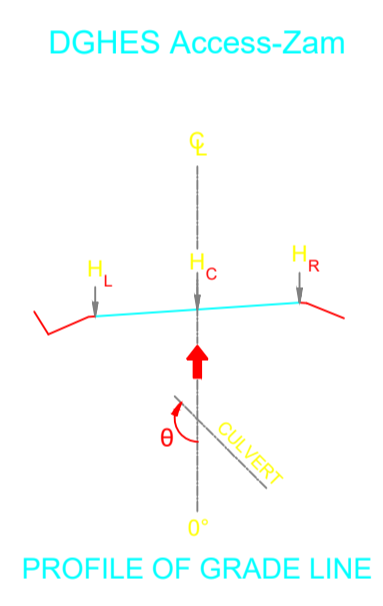
REVISION APPROVAL
TITLE

**ROAD PLAN AND
PROFILE**

SCALE
HORIZONTAL SCALE: 1:1000
VERTICAL SCALE: 1:100

DRAWING NO. **DGHES-PP-01**
REVISION NO. **0**

Station	Northing	Easting	Tangential Direction
14+760.00	8,021,466.0069m	492,688.4394m	S68° 07' 57"E
14+780.00	8,021,458.5577m	492,707.0003m	S68° 07' 57"E
14+800.00	8,021,451.1085m	492,725.5613m	S68° 07' 57"E
14+820.00	8,021,443.6593m	492,744.1223m	S68° 07' 57"E
14+840.00	8,021,436.2101m	492,762.6832m	S68° 07' 57"E
14+860.00	8,021,428.7609m	492,781.2442m	S68° 07' 57"E
14+880.00	8,021,421.3117m	492,799.8051m	S68° 07' 57"E
14+900.00	8,021,413.8624m	492,818.3661m	S68° 07' 57"E
14+920.00	8,021,406.4132m	492,836.9271m	S68° 07' 57"E
14+940.00	8,021,398.9640m	492,855.4880m	S68° 07' 57"E
14+960.00	8,021,391.5148m	492,874.0490m	S68° 07' 57"E
14+980.00	8,021,384.0656m	492,892.6100m	S68° 07' 57"E
15+000.00	8,021,376.6164m	492,911.1709m	S68° 07' 57"E
15+020.00	8,021,369.1672m	492,929.7319m	S68° 07' 57"E
15+040.00	8,021,361.7180m	492,948.2928m	S68° 07' 57"E
15+060.00	8,021,354.2688m	492,966.8538m	S68° 07' 57"E
15+080.00	8,021,346.8195m	492,985.4148m	S68° 07' 57"E
15+100.00	8,021,342.0148m	493,004.7392m	S85° 25' 43"E
15+120.00	8,021,343.7117m	493,024.5760m	N75° 38' 59"E
15+140.00	8,021,351.7496m	493,042.7906m	N56° 43' 41"E
15+160.00	8,021,365.2596m	493,057.4144m	N37° 48' 23"E
15+180.00	8,021,382.7604m	493,066.9240m	N21° 27' 16"E
15+200.00	8,021,401.3745m	493,074.2393m	N21° 27' 16"E
15+220.00	8,021,419.9887m	493,081.5545m	N21° 27' 16"E
15+240.00	8,021,438.6029m	493,088.8698m	N21° 27' 16"E
15+260.00	8,021,457.2170m	493,096.1850m	N21° 27' 16"E
15+280.00	8,021,475.8312m	493,103.5002m	N21° 27' 16"E



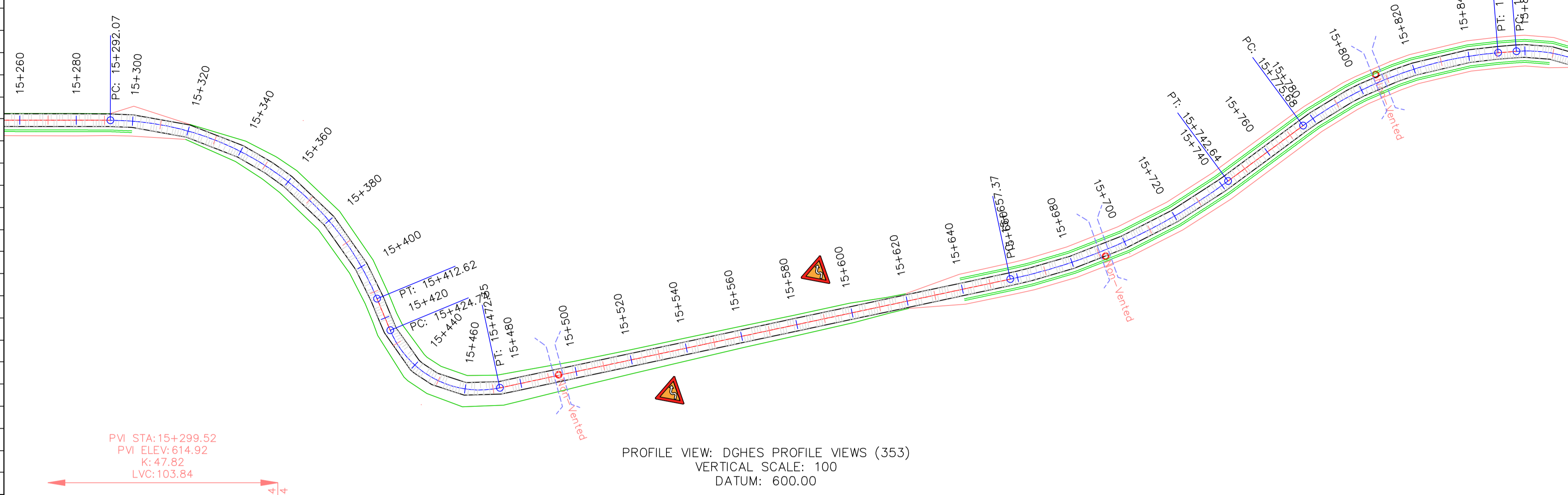
VERTICAL CURVES GRADE			VCL=119 m K=46.0	-0.66%	VCL=82 m K=27.2	-3.66%	VCL=106 m K=31.9	-0.35%	VCL=55 m K=21.4	-2.90%	VCL=33 m K=15.1	-0.70%	VCL=104 m K=47.8																		
FINAL ROAD LEVELS	H _L	LEFT	624.161	623.852	623.615	623.461	623.318	623.145	622.955	622.645	622.089	621.392	620.661	619.956	619.369	618.907	618.571	618.361	618.267	618.197	618.058	617.734	617.224	616.645	616.065	615.599	615.388	615.249	615.094	614.977	
	H _C	ON CL	624.249	623.942	623.705	623.551	623.408	623.145	622.735	622.179	621.482	620.751	620.046	619.369	618.907	618.661	618.451	618.357	618.287	618.197	618.148	617.734	617.224	616.645	616.155	615.669	615.388	615.249	615.184	615.094	614.977
	H _R	RIGHT	624.161	623.852	623.615	623.461	623.318	623.145	622.955	622.645	622.089	621.392	620.661	619.956	619.369	618.907	618.571	618.361	618.267	618.197	618.058	617.734	617.224	616.645	616.155	615.669	615.388	615.249	615.184	615.094	614.977
GROUND LEVELS AT GRADE LINE			624.040	623.711	623.600	623.689	623.867	623.256	622.287	621.563	620.988	620.509	620.061	619.888	619.259	618.832	618.511	618.292	618.227	618.173	618.093	617.734	617.224	616.645	616.060	615.614	615.320	615.249	615.094	615.036	614.977
KILOMETER DISTANCE			14+761	14+780	14+800	14+820	14+840	14+860	14+880	14+900	14+920	14+940	14+960	14+980	15+000	15+020	15+040	15+060	15+080	15+100	15+120	15+140	15+160	15+180	15+200	15+220	15+240	15+260	15+270		

REFERENCE
Do not scale from this drawing, use stated dimensions only

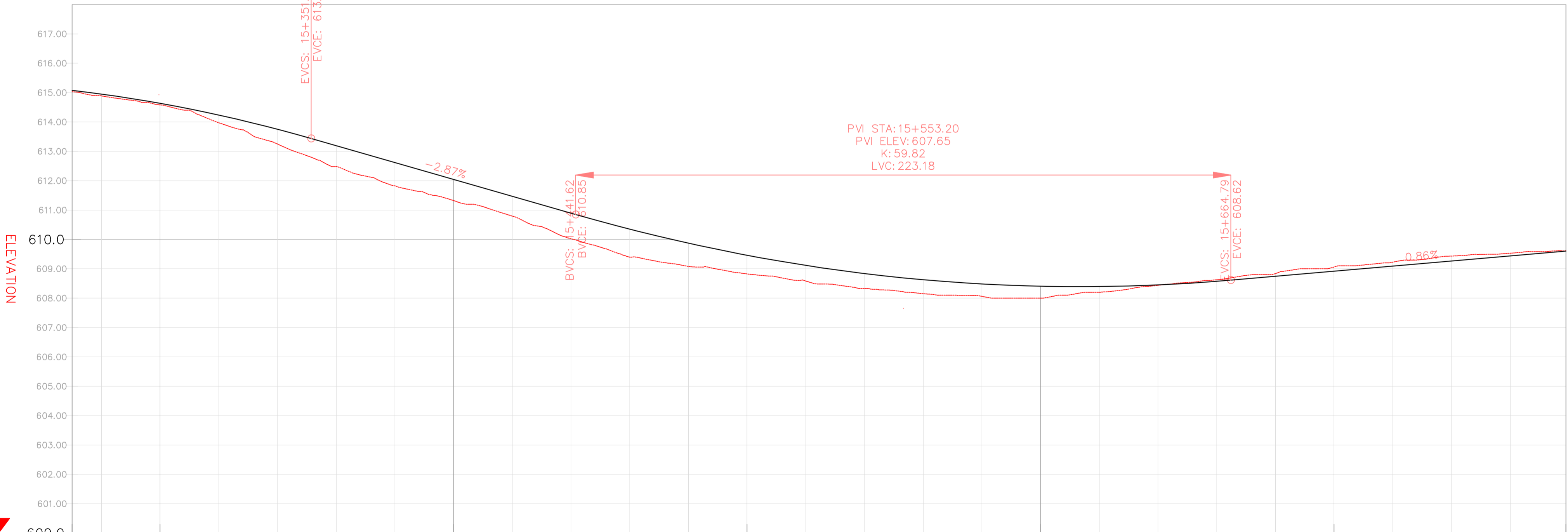
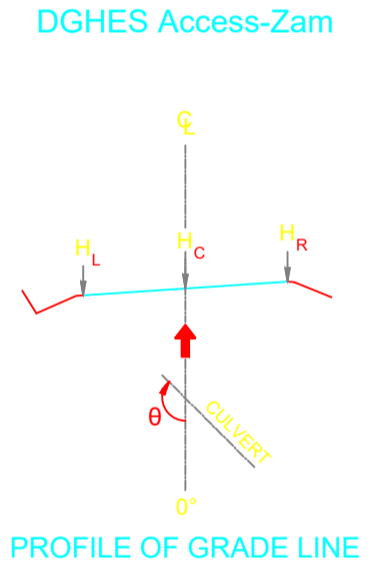
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GENERAL NOTES

Station	Northing	Easting	Tangential Direction
15+280.00	8,021,475.8312m	493,103.5002m	N21° 27' 16"E
15+300.00	8,021,494.3261m	493,111.0975m	N25° 52' 56"E
15+320.00	8,021,511.3575m	493,121.5216m	N37° 03' 19"E
15+340.00	8,021,526.0464m	493,135.0484m	N48° 13' 41"E
15+360.00	8,021,537.8357m	493,151.1650m	N59° 24' 03"E
15+380.00	8,021,546.2788m	493,169.2605m	N70° 34' 25"E
15+400.00	8,021,551.0555m	493,188.6491m	N81° 44' 47"E
15+420.00	8,021,552.2501m	493,208.5966m	N88° 47' 50"E
15+440.00	8,021,555.9932m	493,228.0251m	N63° 20' 12"E
15+460.00	8,021,569.5292m	493,242.3637m	N29° 57' 42"E
15+480.00	8,021,588.6451m	493,247.7395m	N9° 21' 24"E
15+500.00	8,021,608.3790m	493,250.9911m	N9° 21' 24"E
15+520.00	8,021,628.1129m	493,254.2426m	N9° 21' 24"E
15+540.00	8,021,647.8468m	493,257.4942m	N9° 21' 24"E
15+560.00	8,021,667.5807m	493,260.7458m	N9° 21' 24"E
15+580.00	8,021,687.3146m	493,263.9974m	N9° 21' 24"E
15+600.00	8,021,707.0486m	493,267.2490m	N9° 21' 24"E
15+620.00	8,021,726.7825m	493,270.5006m	N9° 21' 24"E
15+640.00	8,021,746.5164m	493,273.7522m	N9° 21' 24"E
15+660.00	8,021,766.2503m	493,276.9867m	N8° 36' 11"E
15+680.00	8,021,786.1445m	493,278.9856m	N2° 52' 24"E
15+700.00	8,021,806.1362m	493,278.9886m	N2° 51' 22"W
15+720.00	8,021,826.0283m	493,276.9957m	N8° 35' 09"W
15+740.00	8,021,845.6220m	493,273.0270m	N14° 18' 55"W
15+760.00	8,021,864.9385m	493,267.8433m	N15° 04' 17"W
15+780.00	8,021,884.2679m	493,262.7102m	N13° 13' 33"W



PROFILE VIEW: DGHS PROFILE VIEWS (353)
VERTICAL SCALE: 100
DATUM: 600.00

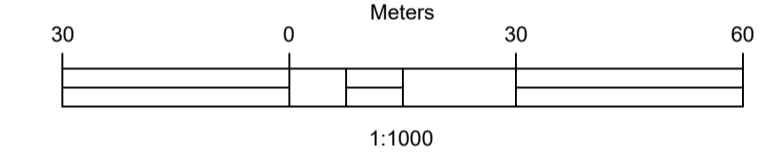


VERTICAL CURVES GRADE

FINAL ROAD LEVELS	H _L LEFT	H _C ON CL	H _R RIGHT	VERTICAL CURVES GRADE	
				VCL=104 m K=47.8	VCL=223 m K=59.8
15+270	615.036	614.977	614.977		
15+280	614.889	614.861	614.861		
15+300	614.583	614.635	614.545		
15+320	613.972	614.234	614.144		
15+340	613.249	613.661	613.751		
15+360	612.484	613.101	613.101		
15+380	611.824	612.528	612.528		
15+400	611.324	612.044	611.954		
15+420	610.796	611.471	611.381		
15+440	610.024	610.897	610.807		
15+460	609.394	610.352	610.262		
15+480	609.081	609.784	609.784		
15+500	608.825	609.372	609.372		
15+520	608.585	609.027	609.027		
15+540	608.334	608.750	608.750		
15+560	608.153	608.539	608.539		
15+580	608.063	608.394	608.394		
15+600	608.000	608.317	608.317		
15+620	608.202	608.307	608.307		
15+640	608.437	608.363	608.363		
15+660	608.627	608.487	608.487		
15+680	608.837	608.657	608.657		
15+700	609.062	608.920	608.920		
15+720	609.227	609.093	609.093		
15+740	609.435	609.176	609.176		
15+760	609.532	609.349	609.349		
15+779	609.613	609.513	609.513		

LEGEND

- Vented/Non-vented Drift
- Road Boundary
- Road Centerline



No.	DESCRIPTION	BY	DATE

CLIENT: ZAMBEZI RIVER AUTHORITY

CONSULTANT: ZAMBEZI RIVER AUTHORITY

PROJECT
CONSTRUCTION OF 28.2KM GRAVEL ROAD
MAAMBA-SIAMUSAMBA SCHOOL JUNCTION
TO DEVILS GORGE HYDRO-ELECTRIC
SCHEME SITE

DESIGNED	SIGNED	DATE
DRAWN	PS	Oct 2023
DESIGNED	PS	Oct 2023
CHECKED	AN	Oct 2023
APPROVED	AN	Oct 2023

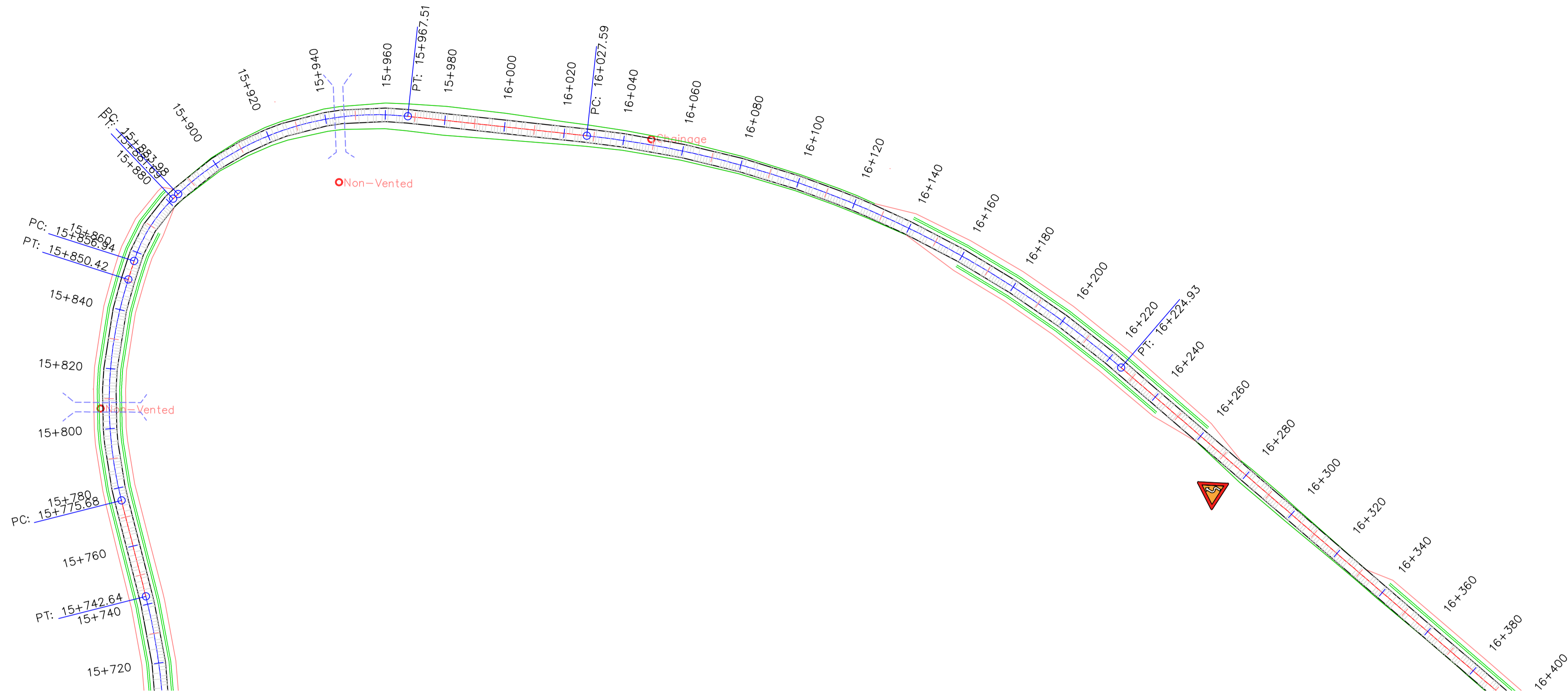
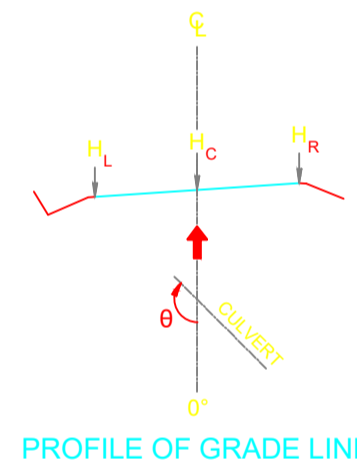
REVISION APPROVAL
TITLE
ROAD PLAN AND PROFILE

SCALE
HORIZONTAL SCALE: 1:1000
VERTICAL SCALE: 1:100

DRAWING NO. DGHS-PP-01
REVISION NO. 0

Station	Northing	Easting	Tangential Direction
15+780.00	8,021,884.2679m	493,262.7102m	N13° 13' 33"W
15+800.00	8,021,904.0060m	493,259.6010m	N4° 40' 41"W
15+820.00	8,021,923.9870m	493,259.4601m	N3° 52' 11"E
15+840.00	8,021,943.7669m	493,262.2906m	N12° 25' 03"E
15+860.00	8,021,962.9842m	493,267.7946m	N20° 25' 04"E
15+880.00	8,021,979.8254m	493,278.3272m	N43° 37' 35"E
15+900.00	8,021,992.8408m	493,293.4708m	N55° 07' 34"E
15+920.00	8,022,002.4941m	493,310.9458m	N67° 02' 28"E
15+940.00	8,022,008.3315m	493,330.0373m	N78° 57' 22"E
15+960.00	8,022,010.1015m	493,349.9226m	S89° 07' 44"E
15+980.00	8,022,008.5304m	493,369.8553m	S84° 39' 10"E
16+000.00	8,022,006.6666m	493,389.7683m	S84° 39' 10"E
16+020.00	8,022,004.8027m	493,409.6812m	S84° 39' 10"E
16+040.00	8,022,002.7049m	493,429.5693m	S82° 28' 47"E
16+060.00	8,021,999.4833m	493,449.3050m	S78° 58' 40"E
16+080.00	8,021,995.0621m	493,468.8070m	S75° 28' 33"E
16+100.00	8,021,989.4560m	493,488.0026m	S71° 58' 26"E
16+120.00	8,021,982.6918m	493,506.8200m	S68° 28' 19"E
16+140.00	8,021,974.7889m	493,525.1889m	S64° 58' 12"E
16+160.00	8,021,965.7787m	493,543.0409m	S61° 28' 05"E
16+180.00	8,021,955.6948m	493,560.3091m	S57° 57' 58"E
16+200.00	8,021,944.5750m	493,576.9291m	S54° 27' 51"E
16+220.00	8,021,932.4608m	493,592.8389m	S50° 57' 44"E
16+240.00	8,021,919.6603m	493,608.2058m	S50° 05' 59"E
16+260.00	8,021,906.8313m	493,623.5491m	S50° 05' 59"E
16+280.00	8,021,894.0022m	493,638.8923m	S50° 05' 59"E

DGHES Access-Zam

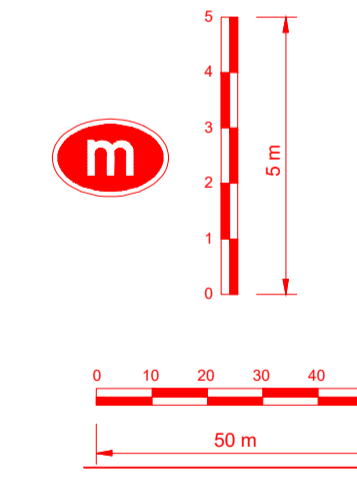


PROFILE VIEW: DGHES PROFILE VIEWS (354)
VERTICAL SCALE: 100
DATUM: 605.00



VERTICAL CURVES GRADE

FINAL ROAD LEVELS	H _L	LEFT	Stationing																														
			15+770	15+780	15+800	15+820	15+840	15+860	15+880	15+900	15+920	15+940	15+960	15+980	16+000	16+020	16+040	16+060	16+080	16+100	16+120	16+140	16+160	16+180	16+200	16+220	16+240	16+260	16+280	16+288			
	H _L	LEFT	609.613	609.613	609.613	609.613	609.613	609.613	609.613	609.613	609.613	609.613	609.613	609.613	609.613	609.613	609.613	609.613	609.613	609.613	609.613	609.613	609.613	609.613	609.613	609.613	609.613	609.613	609.613	609.613	609.613		
	H _C	ON CL	609.603	609.611	609.783	609.934	609.965	610.056	610.117	610.207	610.238	610.148	610.150	610.121	610.071	610.109	610.058	610.006	609.955	609.865	609.814	609.762	609.711	609.655	609.534	609.534	609.328	609.037	608.660	608.197	607.046	606.457	606.386
	H _R	RIGHT	609.613	609.618	609.712	609.900	609.965	610.056	610.117	610.148	610.148	610.150	610.150	610.121	610.071	610.019	609.968	609.916	609.865	609.814	609.762	609.711	609.655	609.534	609.534	609.328	609.037	608.660	608.197	607.046	606.457	606.386	
GROUND LEVELS AT GRADE LINE			609.613	609.618	609.712	609.900	609.965	610.056	610.117	610.148	610.148	610.150	610.150	610.121	610.071	610.019	609.968	609.916	609.865	609.814	609.762	609.711	609.655	609.534	609.534	609.328	609.037	608.660	608.197	607.046	606.457	606.386	
KILOMETER DISTANCE			15+780	15+800	15+820	15+840	15+860	15+880	15+900	15+920	15+940	15+960	15+980	16+000	16+020	16+040	16+060	16+080	16+100	16+120	16+140	16+160	16+180	16+200	16+220	16+240	16+260	16+280	16+288				



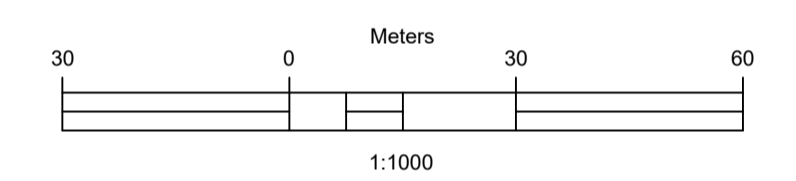
REFERENCE
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GENERAL NOTES

LEGEND

- Vented/Non-vented Drift
- Road Boundary
- Road Centerline



No.	DESCRIPTION	BY	DATE

REVISIONS

CLIENT
ZAMBEZI RIVER AUTHORITY

CONSULTANT
ZAMBEZI RIVER AUTHORITY

PROJECT
CONSTRUCTION OF 28.2KM GRAVEL ROAD MAAMBA-SIAMUSAMBA SCHOOL JUNCTION TO DEVILS GORGE HYDRO-ELECTRIC SCHEME SITE

DESIGNED	SIGNED	DATE
DRAWN	PS	Oct 2023
DESIGNED	PS	Oct 2023
CHECKED	AN	Oct 2023
APPROVED	AN	Oct 2023

REVISION APPROVAL

TITLE
ROAD PLAN AND PROFILE

SCALE
HORIZONTAL SCALE: 1:1000
VERTICAL SCALE: 1:100

DRAWING NO. **DGHES-PP-01**
REVISION NO. **0**

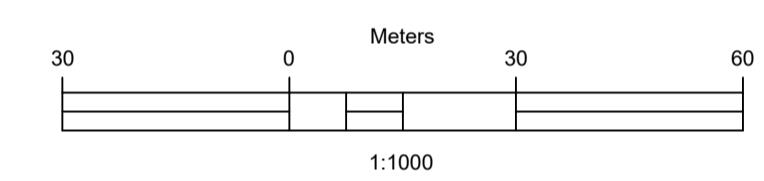
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GENERAL NOTES

LEGEND

- Vented/Non-vented Drift
- Road Boundary
- Road Centerline



No.	DESCRIPTION	BY	DATE

REVISIONS

No.	DESCRIPTION	BY	DATE

CLIENT
ZAMBEZI RIVER AUTHORITY

CONSULTANT
ZAMBEZI RIVER AUTHORITY

PROJECT
CONSTRUCTION OF 28.2KM GRAVEL ROAD
MAAMBA-SIAMUSAMBA SCHOOL JUNCTION
TO DEVILS GORGE HYDRO-ELECTRIC
SCHEME SITE

DESIGNED	SIGNED	DATE
DRAWN	PS	Oct 2023
DESIGNED	PS	Oct 2023
CHECKED	AN	Oct 2023
APPROVED	AN	Oct 2023

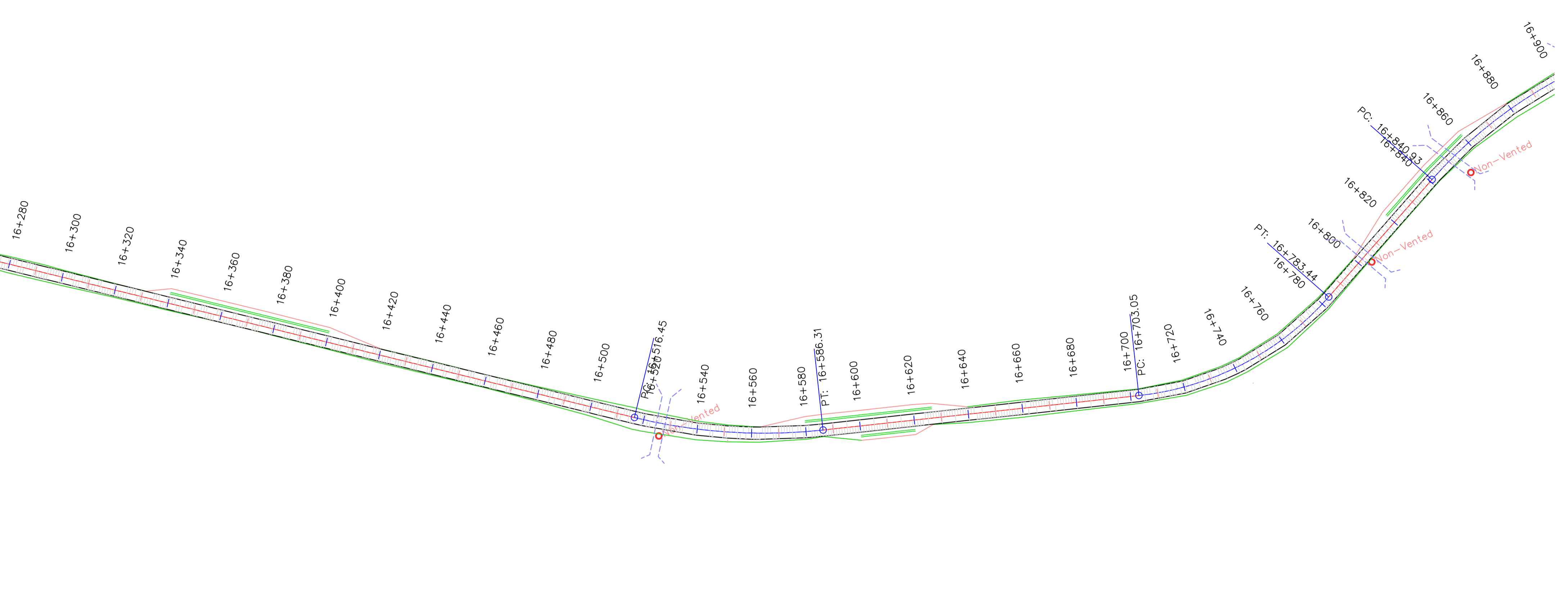
REVISION APPROVAL
TITLE

ROAD PLAN AND PROFILE

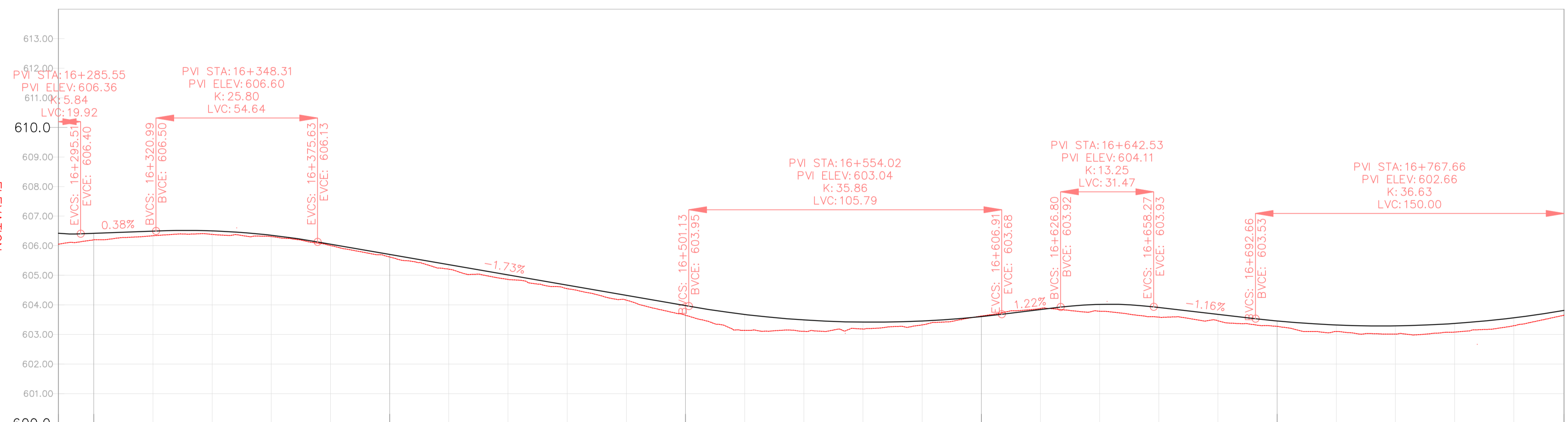
SCALE
HORIZONTAL SCALE: 1:1000
VERTICAL SCALE: 1:100

DRAWING NO. **DGHES-PP-01**
REVISION NO. **0**

Station	Northing	Easting	Tangential Direction
16+280.00	8,021,894.0022m	493,638.8823m	S50° 05' 59"E
16+300.00	8,021,881.1732m	493,654.2356m	S50° 05' 59"E
16+320.00	8,021,868.3441m	493,669.5788m	S50° 05' 59"E
16+340.00	8,021,855.5151m	493,684.9221m	S50° 05' 59"E
16+360.00	8,021,842.6860m	493,700.2653m	S50° 05' 59"E
16+380.00	8,021,829.8570m	493,715.6086m	S50° 05' 59"E
16+400.00	8,021,817.0279m	493,730.9518m	S50° 05' 59"E
16+420.00	8,021,804.1989m	493,746.2951m	S50° 05' 59"E
16+440.00	8,021,791.3698m	493,761.6384m	S50° 05' 59"E
16+460.00	8,021,778.5408m	493,776.9816m	S50° 05' 59"E
16+480.00	8,021,765.7117m	493,792.3249m	S50° 05' 59"E
16+500.00	8,021,752.8827m	493,807.6681m	S50° 05' 59"E
16+520.00	8,021,740.0779m	493,823.0114m	S51° 06' 57"E
16+540.00	8,021,728.3216m	493,839.2011m	S56° 50' 44"E
16+560.00	8,021,718.2384m	493,856.4636m	S62° 34' 30"E
16+580.00	8,021,709.9289m	493,874.6465m	S68° 18' 17"E
16+600.00	8,021,703.0323m	493,893.4190m	S70° 06' 48"E
16+620.00	8,021,696.2290m	493,912.2263m	S70° 06' 48"E
16+640.00	8,021,689.4258m	493,931.0336m	S70° 06' 48"E
16+660.00	8,021,682.6225m	493,949.8409m	S70° 06' 48"E
16+680.00	8,021,675.8192m	493,968.6483m	S70° 06' 48"E
16+700.00	8,021,669.0160m	493,987.4556m	S70° 06' 48"E
16+720.00	8,021,663.4778m	494,006.6474m	S79° 03' 32"E
16+740.00	8,021,661.5071m	494,026.5217m	S89° 36' 54"E
16+760.00	8,021,663.2107m	494,046.4206m	N79° 49' 44"E
16+780.00	8,021,668.5308m	494,065.6707m	N69° 16' 21"E
16+800.00	8,021,676.1481m	494,084.1628m	N67° 27' 21"E



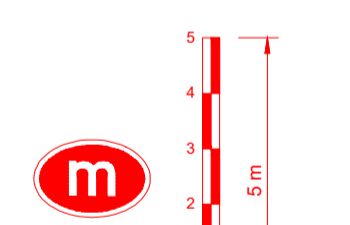
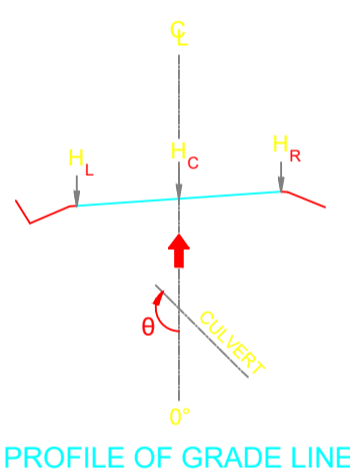
PROFILE VIEW: DGHES PROFILE VIEWS (355)
VERTICAL SCALE: 100
DATUM: 600.00



VERTICAL CURVES GRADE

FINAL ROAD LEVELS	H _L LEFT	H _C ON CL	H _R RIGHT	VERTICAL CURVES GRADE	
				GRADE	VERTICAL CURVE DATA
603.366	606.420	606.417	606.327	0.38%	VCL=24 m K=5.8
606.404	606.494	606.404	606.337	0.38%	VCL=55 m K=25.8
606.411	606.501	606.411	606.382	-1.73%	VCL=106 m K=35.9
606.263	606.353	606.263	606.307	-1.73%	VCL=31 m K=13.2
605.963	606.053	605.963	605.907	1.22%	VCL=150 m K=36.6
605.617	605.707	605.617	605.619	1.22%	
605.270	605.360	605.270	605.206	-1.16%	
604.923	605.013	604.923	604.858	-1.16%	
604.577	604.667	604.577	604.547		
604.230	604.320	604.230	604.161		
603.883	603.973	603.883	603.650		
603.536	603.676	603.536	603.136		
603.400	603.490	603.400	603.104		
603.326	603.416	603.326	603.182		
603.364	603.454	603.364	603.321		
603.513	603.603	603.513	603.621		
603.750	603.840	603.750	603.880		
603.927	604.017	603.927	603.785		
603.822	603.912	603.822	603.584		
603.590	603.680	603.590	603.463		
603.366	603.456	603.366	603.273		
603.229	603.319	603.229	603.100		
603.201	603.291	603.201	603.009		
603.282	603.372	603.282	603.079		
603.473	603.563	603.473	603.294		
603.727	603.811	603.727	603.649		

DGHES Access-Zam

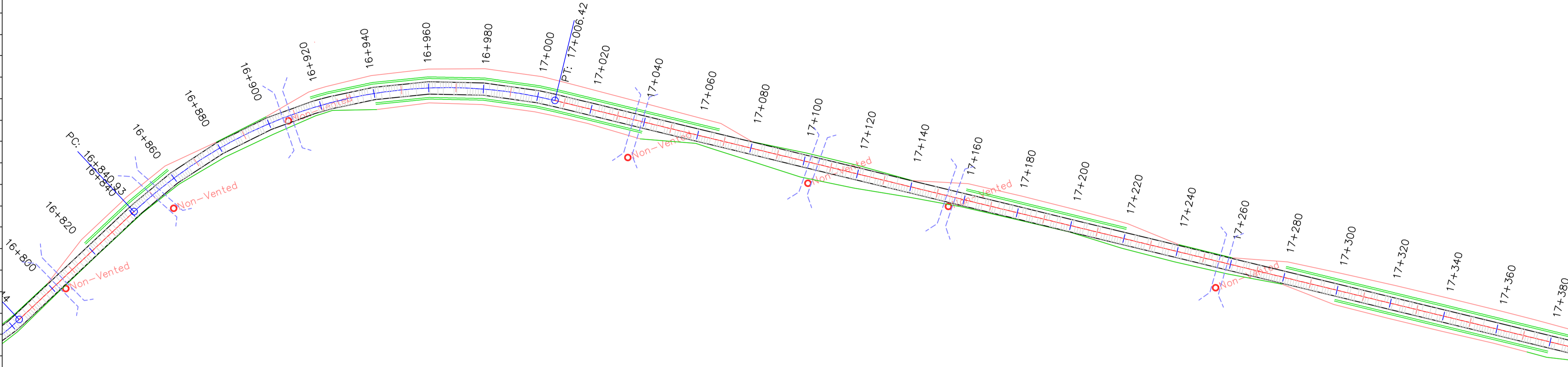


REFERENCE
Do not scale from this drawing, use stated dimensions only

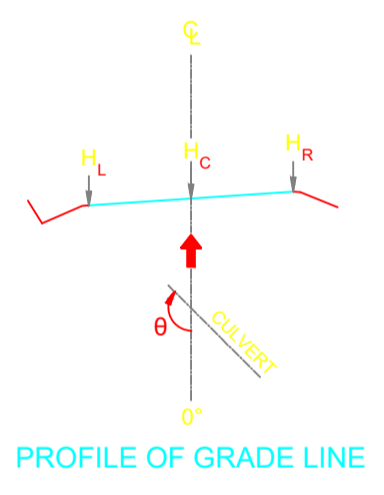
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GENERAL NOTES

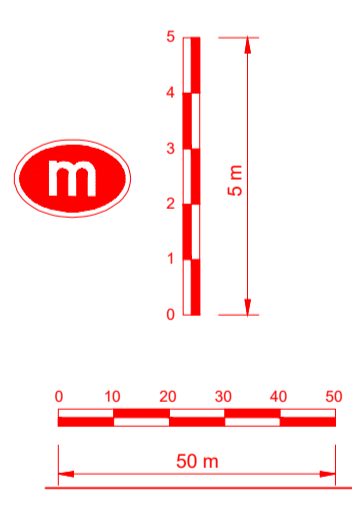
Station	Northing	Easting	Tangential Direction
16+800.00	8,021,676.1481m	494,084.1628m	N67° 27' 21"E
16+820.00	8,021,683.8160m	494,102.6345m	N67° 27' 21"E
16+840.00	8,021,691.4839m	494,121.1062m	N67° 27' 21"E
16+860.00	8,021,698.1301m	494,139.9570m	N74° 00' 21"E
16+880.00	8,021,702.4767m	494,159.4667m	N80° 52' 27"E
16+900.00	8,021,704.4591m	494,179.3562m	N87° 44' 32"E
16+920.00	8,021,704.0487m	494,199.3400m	S85° 23' 22"E
16+940.00	8,021,701.2515m	494,219.1314m	S78° 31' 16"E
16+960.00	8,021,696.1076m	494,238.4462m	S71° 39' 11"E
16+980.00	8,021,688.6908m	494,257.0072m	S64° 47' 05"E
17+000.00	8,021,679.1076m	494,274.5481m	S55° 55' 00"E
17+020.00	8,021,667.9435m	494,291.1408m	S55° 42' 45"E
17+040.00	8,021,656.6766m	494,307.6652m	S55° 42' 45"E
17+060.00	8,021,645.4097m	494,324.1896m	S55° 42' 45"E
17+080.00	8,021,634.1428m	494,340.7140m	S55° 42' 45"E
17+100.00	8,021,622.8759m	494,357.2385m	S55° 42' 45"E
17+120.00	8,021,611.6090m	494,373.7629m	S55° 42' 45"E
17+140.00	8,021,600.3421m	494,390.2873m	S55° 42' 45"E
17+160.00	8,021,589.0751m	494,406.8118m	S55° 42' 45"E
17+180.00	8,021,577.8082m	494,423.3362m	S55° 42' 45"E
17+200.00	8,021,566.5413m	494,439.8606m	S55° 42' 45"E
17+220.00	8,021,555.2744m	494,456.3850m	S55° 42' 45"E
17+240.00	8,021,544.0075m	494,472.9095m	S55° 42' 45"E
17+260.00	8,021,532.7406m	494,489.4339m	S55° 42' 45"E
17+280.00	8,021,521.4737m	494,505.9583m	S55° 42' 45"E
17+300.00	8,021,510.2068m	494,522.4828m	S55° 42' 45"E



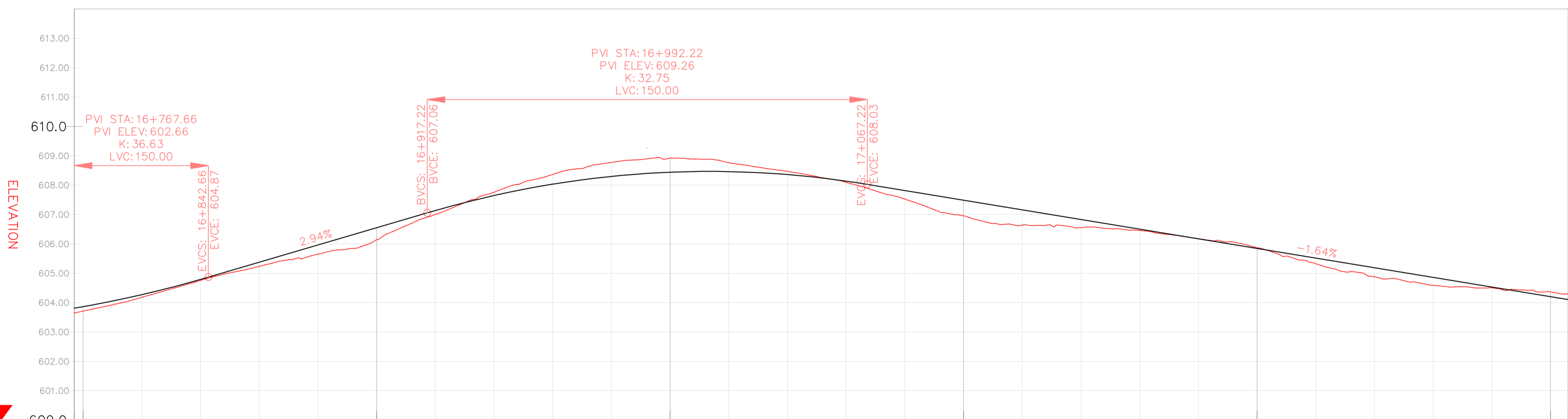
DGHES Access-Zam



PROFILE OF GRADE LINE



PROFILE VIEW: DGHES PROFILE VIEWS (356)
VERTICAL SCALE: 100
DATUM: 600.00

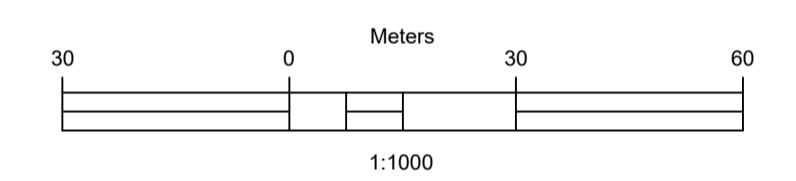


VERTICAL CURVES GRADE

FINAL ROAD LEVELS	H _L	LEFT	Stationing																											
			16+797	16+800	16+820	16+840	16+860	16+880	16+900	16+920	16+940	16+960	16+980	17+000	17+020	17+040	17+060	17+080	17+100	17+120	17+140	17+160	17+180	17+200	17+220	17+240	17+260	17+280	17+300	17+306
			603.727	603.811	604.182	604.700	605.287	605.874	606.461	607.047	607.557	607.944	608.209	608.352	608.373	608.271	608.048	607.727	607.398	607.070	606.741	606.412	606.084	605.755	605.426	605.098	604.769	604.440	604.112	604.013
			603.727	603.803	604.272	604.790	605.377	605.964	606.551	607.137	607.647	608.034	608.299	608.442	608.463	608.361	608.138	607.817	607.488	607.160	606.831	606.502	606.174	605.845	605.516	605.188	604.859	604.530	604.202	604.103
			603.727	603.713	604.182	604.700	605.287	605.874	606.461	607.047	607.557	607.944	608.209	608.352	608.373	608.271	608.048	607.727	607.398	607.070	606.741	606.412	606.084	605.755	605.426	605.098	604.769	604.440	604.112	604.013
GROUND LEVELS AT GRADE LINE			603.649	603.713	604.181	604.756	605.236	605.650	606.142	606.609	607.058	607.388	607.775	608.0918	608.375	608.469	608.095	607.526	606.957	606.639	606.556	606.457	606.177	605.871	605.327	604.880	604.590	604.503	604.367	604.299
KILOMETER DISTANCE			16+797	16+800	16+820	16+840	16+860	16+880	16+900	16+920	16+940	16+960	16+980	17+000	17+020	17+040	17+060	17+080	17+100	17+120	17+140	17+160	17+180	17+200	17+220	17+240	17+260	17+280	17+300	17+306

LEGEND

- Vented/Non-vented Drift
- Road Boundary
- Road Centerline



No.	DESCRIPTION	BY	DATE

CLIENT: ZAMBEZI RIVER AUTHORITY

CONSULTANT: ZAMBEZI RIVER AUTHORITY

PROJECT
CONSTRUCTION OF 28.2KM GRAVEL ROAD
MAAMBA-SIAMUSAMBA SCHOOL JUNCTION
TO DEVILS GORGE HYDRO-ELECTRIC
SCHEME SITE

DESIGNED	SIGNED	DATE
DRAWN	PS	Oct 2023
DESIGNED	PS	Oct 2023
CHECKED	AN	Oct 2023
APPROVED	AN	Oct 2023

REVISION APPROVAL

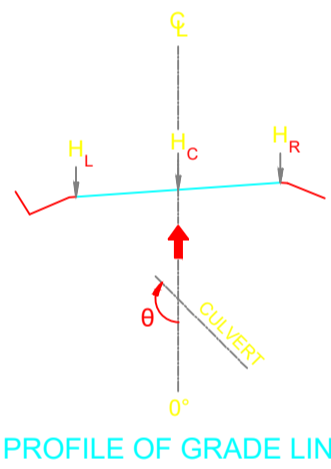
TITLE
ROAD PLAN AND PROFILE

SCALE
HORIZONTAL SCALE: 1:1000
VERTICAL SCALE: 1:100

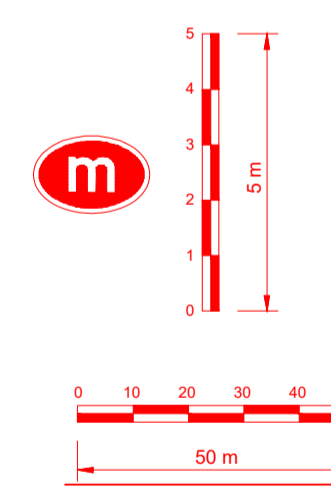
DRAWING NO. **DGHES-PP-01**
REVISION NO. **0**

Station	Northing	Easting	Tangential Direction
17+300.00	8,021,510.2068m	494,522.4828m	S55° 42' 45"E
17+320.00	8,021,498.9399m	494,539.0072m	S55° 42' 45"E
17+340.00	8,021,487.6729m	494,555.5316m	S55° 42' 45"E
17+360.00	8,021,476.4060m	494,572.0560m	S55° 42' 45"E
17+380.00	8,021,465.1391m	494,588.5805m	S55° 42' 45"E
17+400.00	8,021,453.8722m	494,605.1049m	S55° 42' 45"E
17+420.00	8,021,442.6053m	494,621.6293m	S55° 42' 45"E
17+440.00	8,021,431.3646m	494,638.1715m	S57° 07' 54"E
17+460.00	8,021,420.3597m	494,654.8713m	S57° 05' 57"E
17+480.00	8,021,409.6383m	494,671.7545m	S58° 04' 01"E
17+500.00	8,021,399.2035m	494,688.8163m	S59° 02' 04"E
17+520.00	8,021,388.9954m	494,706.0150m	S59° 21' 59"E
17+540.00	8,021,378.8045m	494,723.2238m	S59° 21' 59"E
17+560.00	8,021,368.6136m	494,740.4327m	S59° 21' 59"E
17+580.00	8,021,358.4227m	494,757.6416m	S59° 21' 59"E
17+600.00	8,021,348.2317m	494,774.8504m	S59° 21' 59"E
17+620.00	8,021,338.0408m	494,792.0593m	S59° 21' 59"E
17+640.00	8,021,327.8499m	494,809.2682m	S59° 21' 59"E
17+660.00	8,021,316.8444m	494,826.9579m	S53° 44' 05"E
17+680.00	8,021,304.2280m	494,841.4658m	S48° 00' 19"E
17+700.00	8,021,290.1265m	494,855.6366m	S42° 16' 32"E
17+720.00	8,021,274.6806m	494,868.3288m	S36° 32' 46"E
17+740.00	8,021,258.0448m	494,879.4156m	S30° 48' 59"E
17+760.00	8,021,240.3853m	494,888.7862m	S25° 05' 13"E
17+780.00	8,021,221.9029m	494,896.4126m	S20° 52' 21"E
17+800.00	8,021,203.2154m	494,903.5384m	S20° 52' 21"E
17+820.00	8,021,184.5278m	494,910.6641m	S20° 52' 21"E

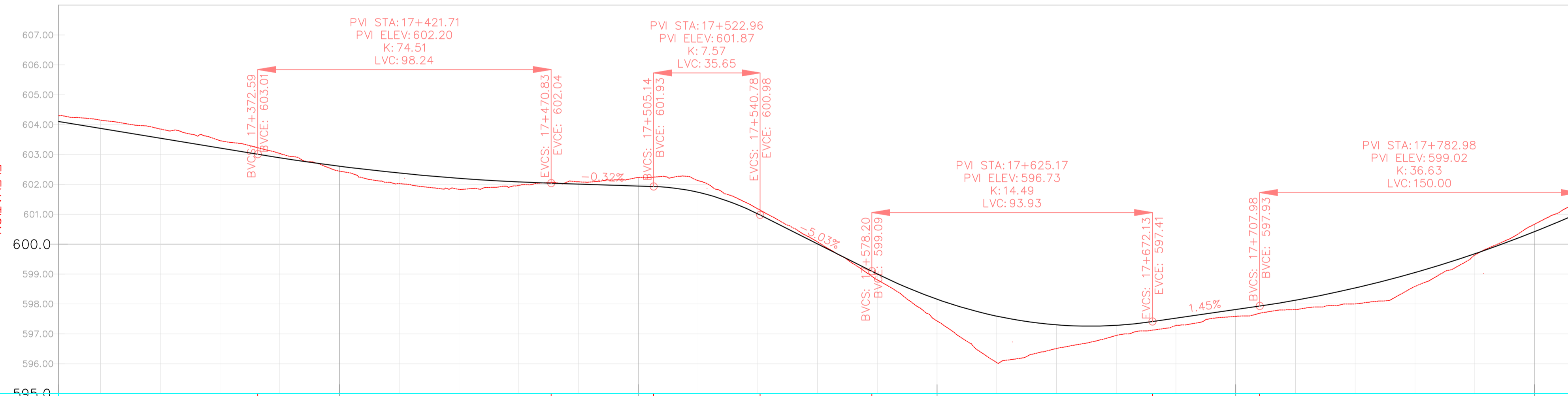
DGHES Access-Zam



PROFILE OF GRADE LINE



PROFILE VIEW: DGHES PROFILE VIEWS (357)
VERTICAL SCALE: 100
DATUM: 595.00



VERTICAL CURVES GRADE

KILOMETER DISTANCE	FINAL ROAD LEVELS			GROUND LEVELS AT GRADE LINE
	H _L	H _C	H _R	
17+306	604.299	604.013	604.013	604.013
17+320	604.150	603.873	603.783	603.783
17+340	603.855	603.544	603.454	603.454
17+360	603.463	603.216	603.126	603.126
17+380	603.036	602.891	602.801	602.801
17+400	602.447	602.609	602.519	602.519
17+420	602.028	602.380	602.290	602.290
17+440	601.834	602.116	602.116	602.116
17+460	601.968	602.085	601.995	601.995
17+480	602.088	602.012	601.922	601.922
17+500	602.230	601.947	601.857	601.857
17+520	602.130	601.646	601.646	601.646
17+540	601.185	601.015	600.925	600.925
17+560	600.077	599.919	599.919	599.919
17+580	598.808	598.914	598.914	598.914
17+600	597.434	598.160	598.070	598.070
17+620	596.042	597.593	597.503	597.503
17+640	596.509	597.211	597.301	597.211
17+660	596.946	597.195	597.285	597.195
17+680	597.284	597.435	597.525	597.435
17+700	597.585	597.724	597.814	597.724
17+720	597.810	598.034	598.124	598.034
17+740	598.000	598.444	598.534	598.444
17+760	598.585	598.963	599.053	598.963
17+780	599.630	599.662	599.592	599.592
17+800	600.666	600.419	600.329	600.329
17+815	601.452	601.044	600.964	600.964

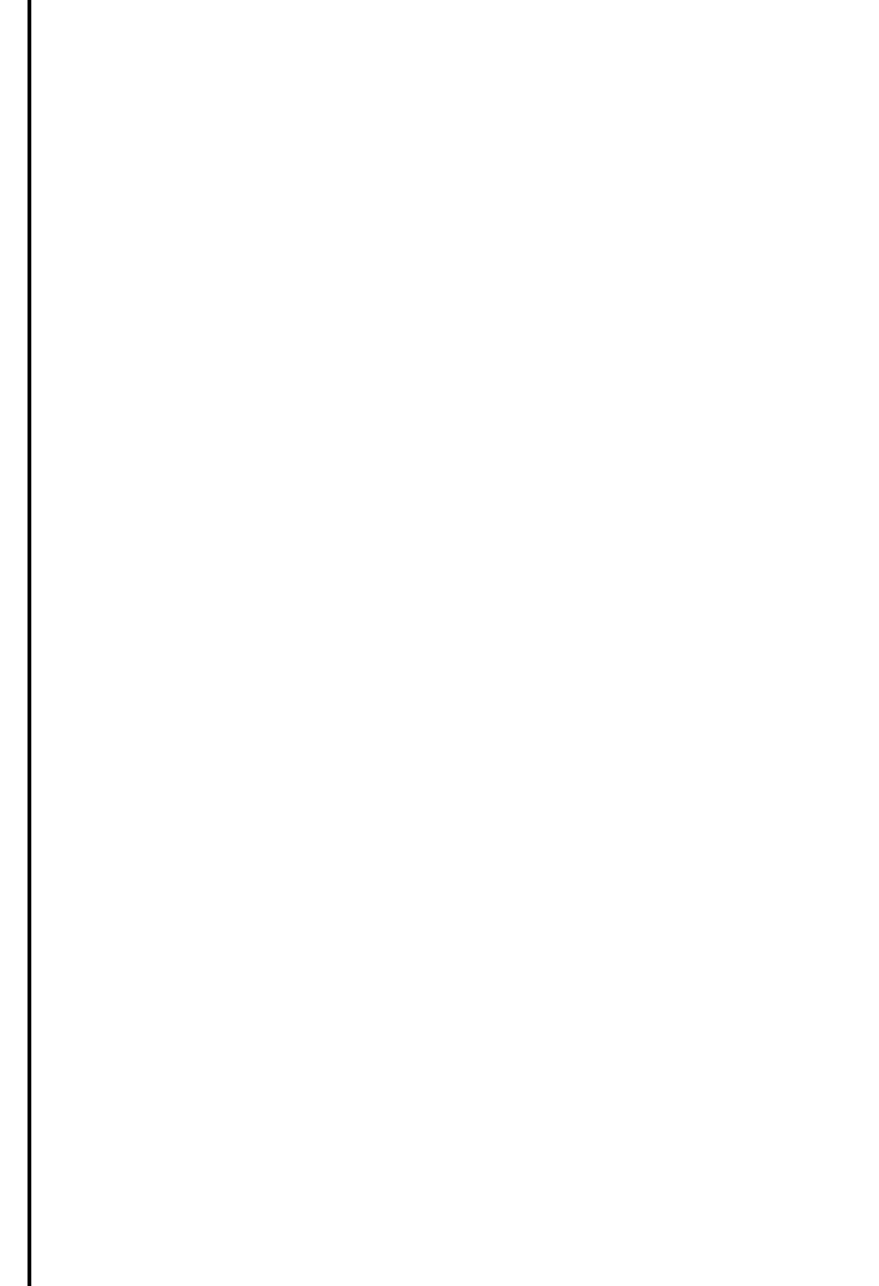


KILOMETER DISTANCE	Final Road Level (H _L)	Final Road Level (H _C)	Final Road Level (H _R)	Ground Level at Grade Line
17+306	604.299	604.013	604.013	604.013
17+320	604.150	603.873	603.783	603.783
17+340	603.855	603.544	603.454	603.454
17+360	603.463	603.216	603.126	603.126
17+380	603.036	602.891	602.801	602.801
17+400	602.447	602.609	602.519	602.519
17+420	602.028	602.380	602.290	602.290
17+440	601.834	602.116	602.116	602.116
17+460	601.968	602.085	601.995	601.995
17+480	602.088	602.012	601.922	601.922
17+500	602.230	601.947	601.857	601.857
17+520	602.130	601.646	601.646	601.646
17+540	601.185	601.015	600.925	600.925
17+560	600.077	599.919	599.919	599.919
17+580	598.808	598.914	598.914	598.914
17+600	597.434	598.160	598.070	598.070
17+620	596.042	597.593	597.503	597.503
17+640	596.509	597.211	597.301	597.211
17+660	596.946	597.195	597.285	597.195
17+680	597.284	597.435	597.525	597.435
17+700	597.585	597.724	597.814	597.724
17+720	597.810	598.034	598.124	598.034
17+740	598.000	598.444	598.534	598.444
17+760	598.585	598.963	599.053	598.963
17+780	599.630	599.662	599.592	599.592
17+800	600.666	600.419	600.329	600.329
17+815	601.452	601.044	600.964	600.964

REFERENCE
Do not scale from this drawing, use stated dimensions only

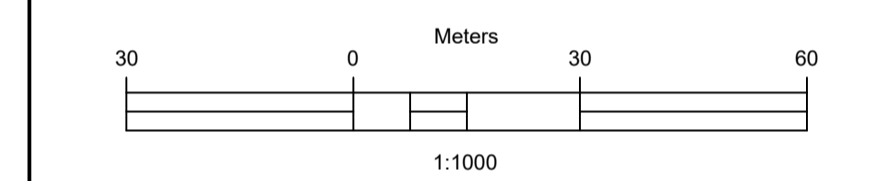
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GENERAL NOTES



LEGEND

- Vented/Non-vented Drift
- Road Boundary
- Road Centerline



No.	DESCRIPTION	BY	DATE

REVISIONS

CLIENT: ZAMBEZI RIVER AUTHORITY

CONSULTANT: ZAMBEZI RIVER AUTHORITY

PROJECT
CONSTRUCTION OF 28.2KM GRAVEL ROAD
MAAMBA-SIAMUSAMBA SCHOOL JUNCTION
TO DEVILS GORGE HYDRO-ELECTRIC
SCHEME SITE

DESIGNED	SIGNED	DATE
DRAWN	PS	Oct 2023
DESIGNED	PS	Oct 2023
CHECKED	AN	Oct 2023
APPROVED	AN	Oct 2023

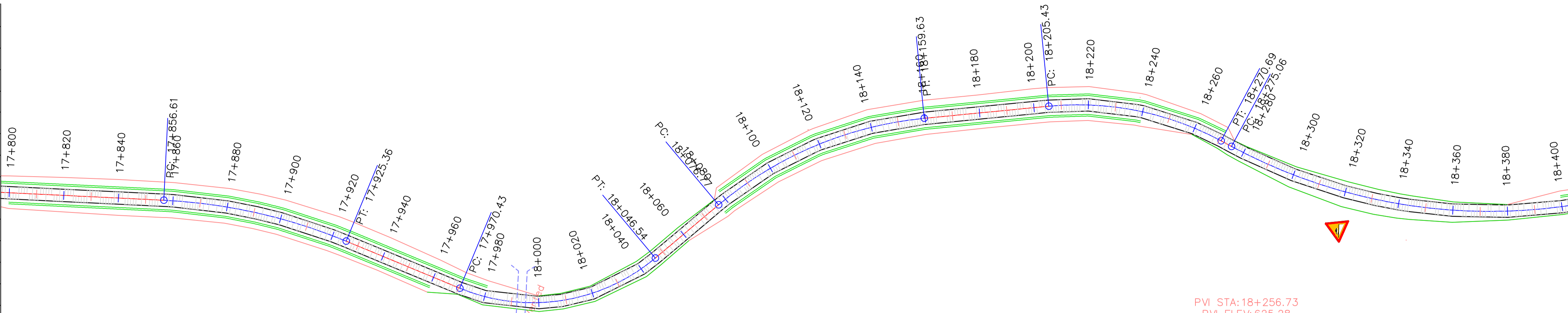
REVISION APPROVAL

TITLE
ROAD PLAN AND PROFILE

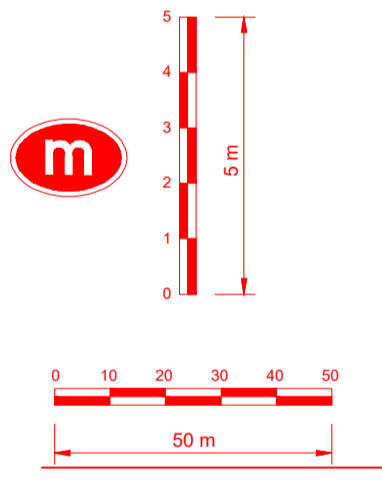
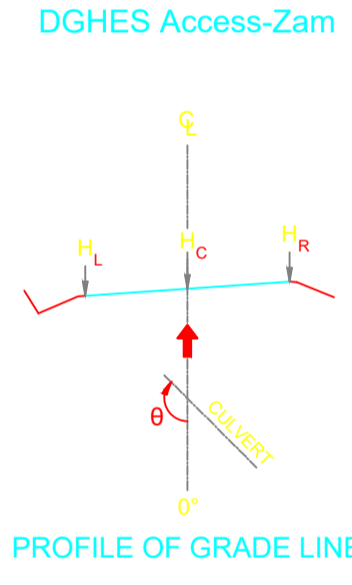
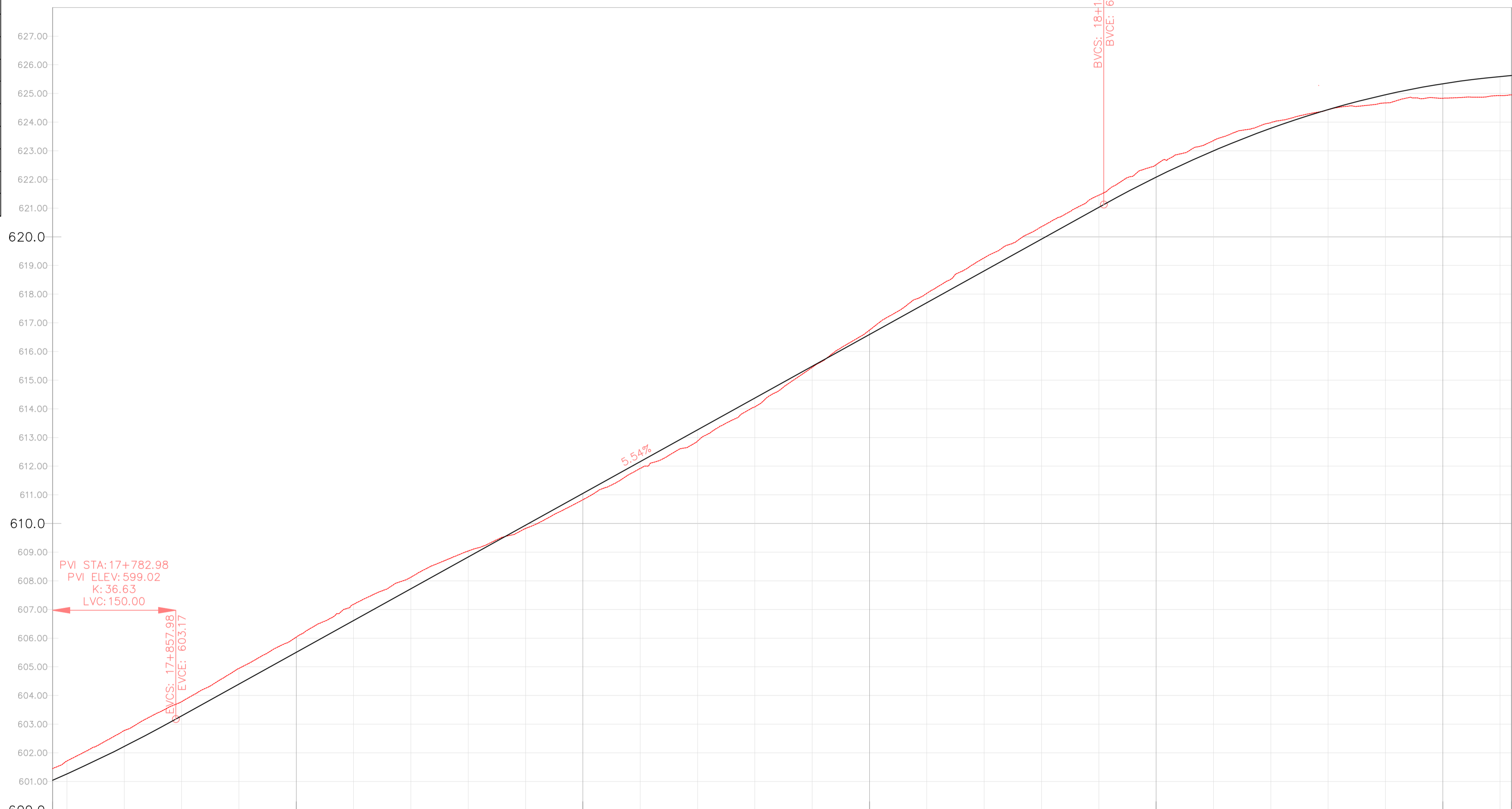
SCALE
HORIZONTAL SCALE: 1:1000
VERTICAL SCALE: 1:100

DRAWING NO. DGHES-PP-01
REVISION NO. 0

Station	Northing	Easting	Tangential Direction
17+820.00	8,021,184.5278m	494,910.6641m	S20° 52' 21"E
17+840.00	8,021,165.8403m	494,917.7899m	S20° 52' 21"E
17+860.00	8,021,147.1427m	494,924.8888m	S19° 54' 05"E
17+880.00	8,021,128.0283m	494,930.7460m	S14° 10' 18"E
17+900.00	8,021,108.4247m	494,934.6656m	S8° 26' 32"E
17+920.00	8,021,088.5276m	494,936.6086m	S2° 42' 45"E
17+940.00	8,021,068.5340m	494,937.0913m	S1° 10' 38"E
17+960.00	8,021,048.5382m	494,937.5021m	S1° 10' 38"E
17+980.00	8,021,028.5858m	494,938.5671m	S9° 01' 56"E
18+000.00	8,021,009.5500m	494,944.4752m	S25° 27' 11"E
18+020.00	8,020,992.9608m	494,955.5236m	S41° 52' 27"E
18+040.00	8,020,980.1715m	494,970.8110m	S58° 17' 42"E
18+060.00	8,020,971.0291m	494,988.5910m	S63° 39' 59"E
18+080.00	8,020,962.1234m	495,006.4985m	S62° 19' 21"E
18+100.00	8,020,951.5821m	495,023.4743m	S54° 00' 01"E
18+120.00	8,020,938.6948m	495,038.7456m	S45° 40' 42"E
18+140.00	8,020,923.7328m	495,051.9909m	S37° 21' 22"E
18+160.00	8,020,907.0115m	495,062.9316m	S29° 11' 16"E
18+180.00	8,020,889.5510m	495,072.6851m	S29° 11' 16"E
18+200.00	8,020,872.0905m	495,082.4386m	S29° 11' 16"E
18+220.00	8,020,854.2003m	495,091.3368m	S21° 39' 17"E
18+240.00	8,020,835.0483m	495,097.0038m	S11° 18' 42"E
18+260.00	8,020,815.1900m	495,099.1401m	S0° 58' 07"E
18+280.00	8,020,795.2245m	495,098.1258m	S3° 08' 43"W
18+300.00	8,020,775.2331m	495,098.0279m	S2° 35' 03"E
18+320.00	8,020,755.3318m	495,099.9263m	S8° 18' 50"E



PROFILE VIEW: DGHEs PROFILE VIEWS (358)
VERTICAL SCALE: 100
DATUM: 600.00



VERTICAL CURVES GRADE

FINAL ROAD LEVELS	H _L LEFT	H _C ON CL	H _R RIGHT	VERTICAL CURVES GRADE	
				PC	PT
				17+820.98	17+925.36
				18+046.54	18+140.00
				18+181.73	18+286.08
				18+256.73	18+360.00
				18+320.00	18+400.00

STATION	ELEVATION
17+815	601.452
17+820	601.715
17+840	602.777
17+860	603.787
17+880	604.946
17+900	606.038
17+920	607.181
17+940	608.128
17+960	609.040
17+980	609.825
18+000	610.827
18+020	611.921
18+040	612.872
18+060	614.066
18+080	615.447
18+100	616.746
18+120	618.029
18+140	619.266
18+160	620.353
18+180	621.453
18+200	622.518
18+220	623.359
18+240	623.984
18+260	624.436
18+280	624.671
18+300	624.835
18+320	624.928
18+340	624.949
18+360	625.501
18+380	625.530
18+400	625.530

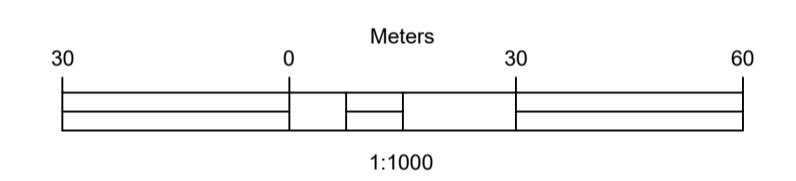
REFERENCE
Do not scale from this drawing, use stated dimensions only

DISCLAIMER
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GENERAL NOTES

LEGEND

- Vented/Non-vented Drift
- Road Boundary
- Road Centerline



No.	DESCRIPTION	BY	DATE

CLIENT
ZAMBEZI RIVER AUTHORITY

CONSULTANT
ZAMBEZI RIVER AUTHORITY

PROJECT
CONSTRUCTION OF 28.2KM GRAVEL ROAD
MAAMBA-SIAMUSAMBA SCHOOL JUNCTION
TO DEVILS GORGE HYDRO-ELECTRIC
SCHEME SITE

DESIGNED	SIGNED	DATE
DRAWN	PS	Oct 2023
DESIGNED	PS	Oct 2023
CHECKED	AN	Oct 2023
APPROVED	AN	Oct 2023

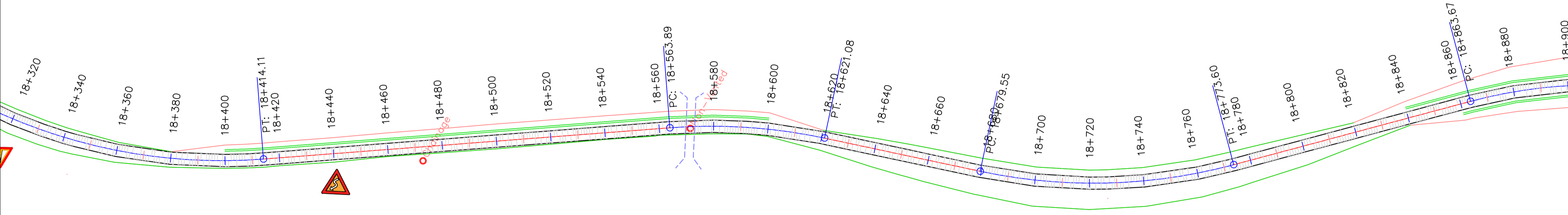
REVISION APPROVAL
TITLE

ROAD PLAN AND PROFILE

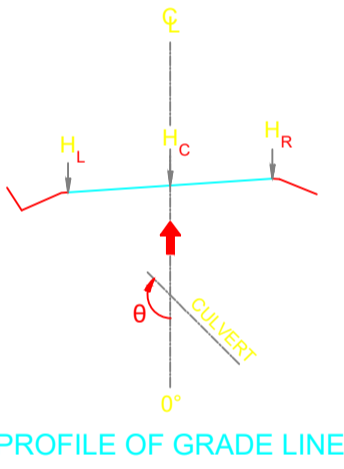
SCALE
HORIZONTAL SCALE: 1:1000
VERTICAL SCALE: 1:100

DRAWING NO. **DGHES-PP-01**
REVISION NO. **0**

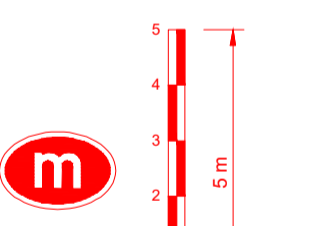
Station	Northing	Easting	Tangential Direction
18+320.00	8,020,755.3318m	495,099.9263m	S8° 18' 50"E
18+340.00	8,020,735.7194m	495,103.8020m	S14° 02' 36"E
18+360.00	8,020,716.5919m	495,109.6163m	S19° 46' 23"E
18+380.00	8,020,698.1404m	495,117.3112m	S25° 30' 09"E
18+400.00	8,020,680.5494m	495,126.8097m	S31° 13' 56"E
18+420.00	8,020,663.9437m	495,137.9466m	S35° 16' 26"E
18+440.00	8,020,647.6157m	495,149.4963m	S35° 16' 26"E
18+460.00	8,020,631.2877m	495,161.0460m	S35° 16' 26"E
18+480.00	8,020,614.9597m	495,172.5957m	S35° 16' 26"E
18+500.00	8,020,598.6317m	495,184.1455m	S35° 16' 26"E
18+520.00	8,020,582.3036m	495,195.6952m	S35° 16' 26"E
18+540.00	8,020,565.9756m	495,207.2449m	S35° 16' 26"E
18+560.00	8,020,549.6476m	495,218.7947m	S35° 16' 26"E
18+580.00	8,020,532.9594m	495,229.8051m	S30° 39' 34"E
18+600.00	8,020,515.2743m	495,239.1272m	S24° 55' 47"E
18+620.00	8,020,496.7469m	495,246.6372m	S19° 12' 01"E
18+640.00	8,020,477.8252m	495,253.1157m	S18° 53' 32"E
18+660.00	8,020,458.9026m	495,259.5914m	S18° 53' 32"E
18+680.00	8,020,439.9802m	495,266.0677m	S19° 01' 17"E
18+700.00	8,020,421.4294m	495,273.5198m	S24° 45' 03"E
18+720.00	8,020,403.7152m	495,282.7867m	S30° 28' 50"E
18+740.00	8,020,387.0147m	495,293.7758m	S36° 12' 36"E
18+760.00	8,020,371.4947m	495,306.3772m	S41° 56' 23"E
18+780.00	8,020,357.2360m	495,320.3945m	S45° 50' 08"E
18+800.00	8,020,343.3016m	495,334.7414m	S45° 50' 08"E
18+820.00	8,020,329.3672m	495,349.0882m	S45° 50' 08"E
18+840.00	8,020,315.4328m	495,363.4351m	S45° 50' 08"E



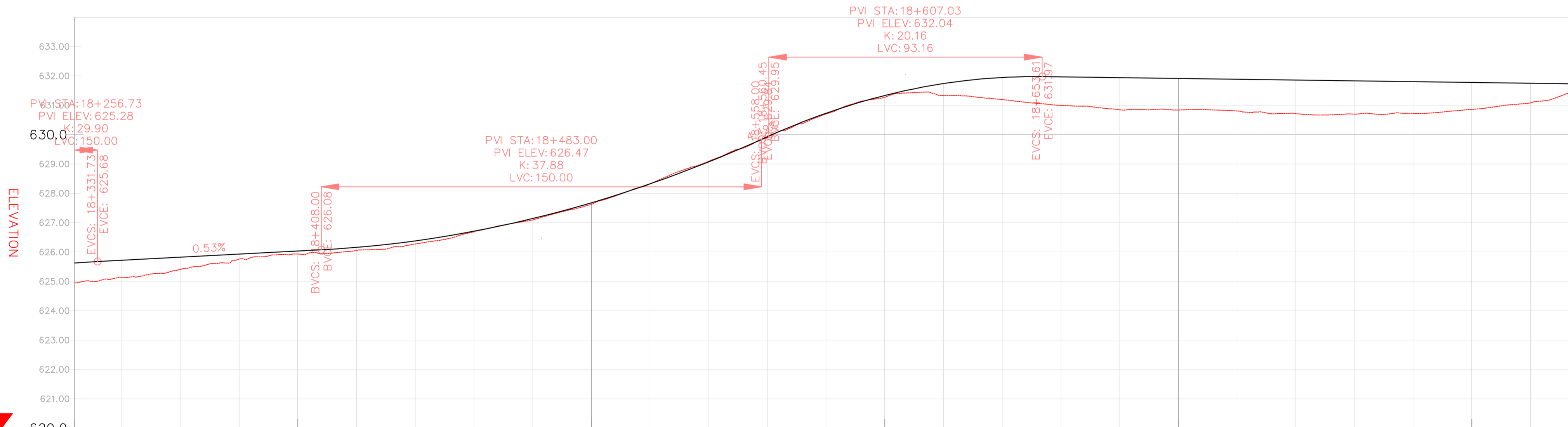
DGHES Access-Zam



PROFILE OF GRADE LINE



PROFILE VIEW: DGHES PROFILE VIEWS (359)
VERTICAL SCALE: 100
DATUM: 620.00



VERTICAL CURVES GRADE

FINAL ROAD LEVELS	H _L	LEFT	VERTICAL CURVES GRADE																																																																																																		
			18+324	18+340	18+360	18+380	18+400	18+420	18+440	18+460	18+480	18+500	18+520	18+540	18+560	18+580	18+600	18+620	18+640	18+660	18+680	18+700	18+720	18+740	18+760	18+780	18+800	18+820	18+833																																																																								
			625.530	625.629	625.734	625.840	625.945	626.069	626.201	626.341	626.488	626.642	626.802	626.968	627.140	627.318	627.502	627.692	627.888	628.090	628.298	628.512	628.732	628.958	629.190	629.428	629.672	629.922	630.178	630.440	630.708	630.982	631.262	631.548	631.840	632.138	632.442	632.752	633.068	633.390	633.718	634.052	634.392	634.738	635.090	635.448	635.812	636.182	636.558	636.940	637.328	637.722	638.122	638.528	638.940	639.358	639.782	640.212	640.648	641.090	641.538	641.992	642.452	642.922	643.398	643.880	644.368	644.862	645.362	645.868	646.380	646.898	647.422	647.952	648.488	649.030	649.578	650.132	650.692	651.252	651.818	652.390	652.968	653.552	654.142	654.738	655.340	655.948	656.562	657.182	657.808	658.440	659.078	659.722	660.372	661.028	661.690	662.358	663.032	663.712	664.4
			625.530	625.629	625.734	625.840	625.945	626.069	626.201	626.341	626.488	626.642	626.802	626.968	627.140	627.318	627.502	627.692	627.888	628.090	628.298	628.512	628.732	628.958	629.190	629.428	629.672	629.922	630.178	630.440	630.708	630.982	631.262	631.548	631.840	632.138	632.442	632.752	633.068	633.390	633.718	634.052	634.392	634.738	635.090	635.448	635.812	636.182	636.558	636.940	637.328	637.722	638.122	638.528	638.940	639.358	639.782	640.212	640.648	641.090	641.538	641.992	642.452	642.922	643.398	643.880	644.368	644.862	645.362	645.868	646.380	646.898	647.422	647.952	648.488	649.030	649.578	650.132	650.692	651.252	651.818	652.390	652.968	653.552	654.142	654.738	655.340	655.948	656.562	657.182	657.808	658.440	659.078	659.722	660.372	661.028	661.690	662.358	663.032	663.712	664.4
			625.530	625.629	625.734	625.840	625.945	626.069	626.201	626.341	626.488	626.642	626.802	626.968	627.140	627.318	627.502	627.692	627.888	628.090	628.298	628.512	628.732	628.958	629.190	629.428	629.672	629.922	630.178	630.440	630.708	630.982	631.262	631.548	631.840	632.138	632.442	632.752	633.068	633.390	633.718	634.052	634.392	634.738	635.090	635.448	635.812	636.182	636.558	636.940	637.328	637.722	638.122	638.528	638.940	639.358	639.782	640.212	640.648	641.090	641.538	641.992	642.452	642.922	643.398	643.880	644.368	644.862	645.362	645.868	646.380	646.898	647.422	647.952	648.488	649.030	649.578	650.132	650.692	651.252	651.818	652.390	652.968	653.552	654.142	654.738	655.340	655.948	656.562	657.182	657.808	658.440	659.078	659.722	660.372	661.028	661.690	662.358	663.032	663.712	664.4
			625.530	625.629	625.734	625.840	625.945	626.069	626.201	626.341	626.488	626.642	626.802	626.968	627.140	627.318	627.502	627.692	627.888	628.090	628.298	628.512	628.732	628.958	629.190	629.428	629.672	629.922	630.178	630.440	630.708	630.982	631.262	631.548	631.840	632.138	632.442	632.752	633.068	633.390	633.718	634.052	634.392	634.738	635.090	635.448	635.812	636.182	636.558	636.940	637.328	637.722	638.122	638.528	638.940	639.358	639.782	640.212	640.648	641.090	641.538	641.992	642.452	642.922	643.398	643.880	644.368	644.862	645.362	645.868	646.380	646.898	647.422	647.952	648.488	649.030	649.578	650.132	650.692	651.252	651.818	652.390	652.968	653.552	654.142	654.738	655.340	655.948	656.562	657.182	657.808	658.440	659.078	659.722	660.372	661.028	661.690	662.358	663.032	663.712	664.4

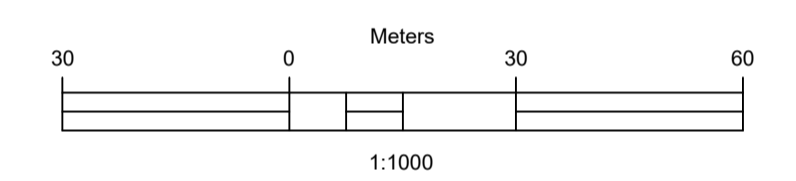
REFERENCE
Do not scale from this drawing, use stated dimensions only

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GENERAL NOTES

LEGEND

- Vented/Non-vented Drift
- Road Boundary
- Road Centerline



No.	DESCRIPTION	BY	DATE

REVISIONS

CLIENT	ZAMBEZI RIVER AUTHORITY	
CONSULTANT	ZAMBEZI RIVER AUTHORITY	

PROJECT
CONSTRUCTION OF 28.2KM GRAVEL ROAD
MAAMBA-SIAMUSAMBA SCHOOL JUNCTION
TO DEVILS GORGE HYDRO-ELECTRIC
SCHEME SITE

DESIGNED	SIGNED	DATE
DRAWN	PS	Oct 2023
DESIGNED	PS	Oct 2023
CHECKED	AN	Oct 2023
APPROVED	AN	Oct 2023

REVISION APPROVAL
TITLE

ROAD PLAN AND PROFILE

SCALE
HORIZONTAL SCALE: 1:1000
VERTICAL SCALE: 1:100

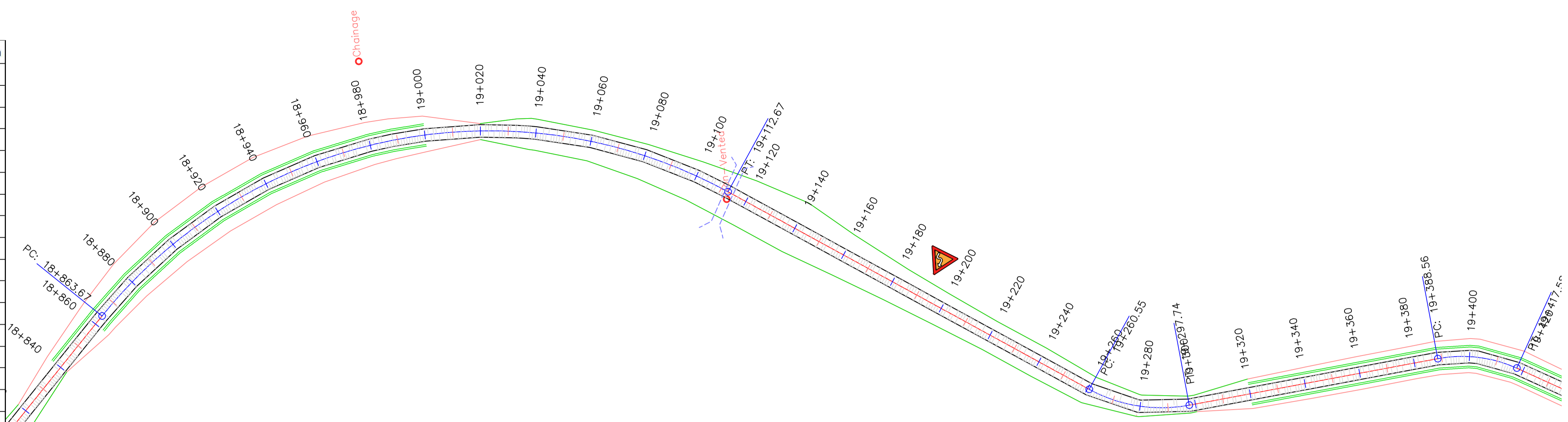
DRAWING NO. **DGHES-PP-01**
REVISION NO. **0**

REFERENCE
Do not scale from this drawing, use stated dimensions only

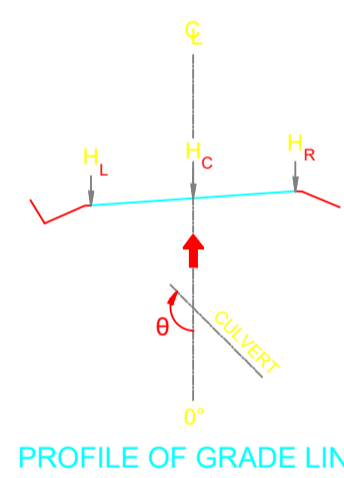
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GENERAL NOTES

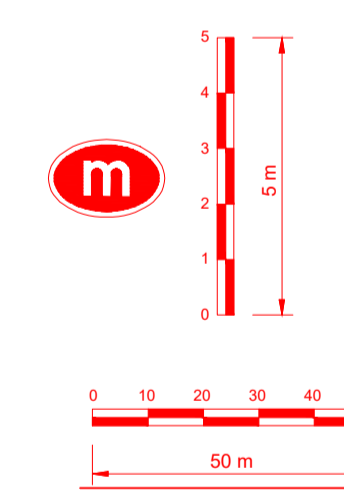
Station	Northing	Easting	Tangential Direction
18+840.00	8,020,315.4328m	495,363.4351m	S45° 50' 08"E
18+860.00	8,020,301.4984m	495,377.7819m	S45° 50' 08"E
18+880.00	8,020,287.0449m	495,391.5930m	S40° 35' 56"E
18+900.00	8,020,271.1631m	495,403.7318m	S34° 11' 02"E
18+920.00	8,020,254.0245m	495,414.0202m	S27° 46' 09"E
18+940.00	8,020,235.8437m	495,422.3293m	S21° 21' 16"E
18+960.00	8,020,216.8485m	495,428.5552m	S14° 56' 23"E
18+980.00	8,020,197.2765m	495,432.6198m	S8° 31' 29"E
19+000.00	8,020,177.3730m	495,434.4724m	S2° 06' 36"E
19+020.00	8,020,157.3871m	495,434.0895m	S4° 18' 17"W
19+040.00	8,020,137.5691m	495,431.4762m	S10° 43' 10"W
19+060.00	8,020,118.1672m	495,426.6650m	S17° 08' 03"W
19+080.00	8,020,099.4242m	495,419.7163m	S23° 32' 57"W
19+100.00	8,020,081.5750m	495,410.7170m	S29° 57' 50"W
19+120.00	8,020,064.7570m	495,399.9035m	S34° 01' 34"W
19+140.00	8,020,048.1813m	495,388.7121m	S34° 01' 34"W
19+160.00	8,020,031.6057m	495,377.5207m	S34° 01' 34"W
19+180.00	8,020,015.0300m	495,366.3293m	S34° 01' 34"W
19+200.00	8,019,998.4544m	495,355.1379m	S34° 01' 34"W
19+220.00	8,019,981.8787m	495,343.9465m	S34° 01' 34"W
19+240.00	8,019,965.3030m	495,332.7551m	S34° 01' 34"W
19+260.00	8,019,948.7274m	495,321.5637m	S34° 01' 34"W
19+280.00	8,019,930.5639m	495,310.3723m	S34° 01' 34"W
19+300.00	8,019,910.6976m	495,300.1809m	S34° 01' 34"W
19+320.00	8,019,890.7828m	495,289.9895m	S34° 01' 34"W
19+340.00	8,019,870.8681m	495,279.7981m	S34° 01' 34"W



DGHES Access-Zam

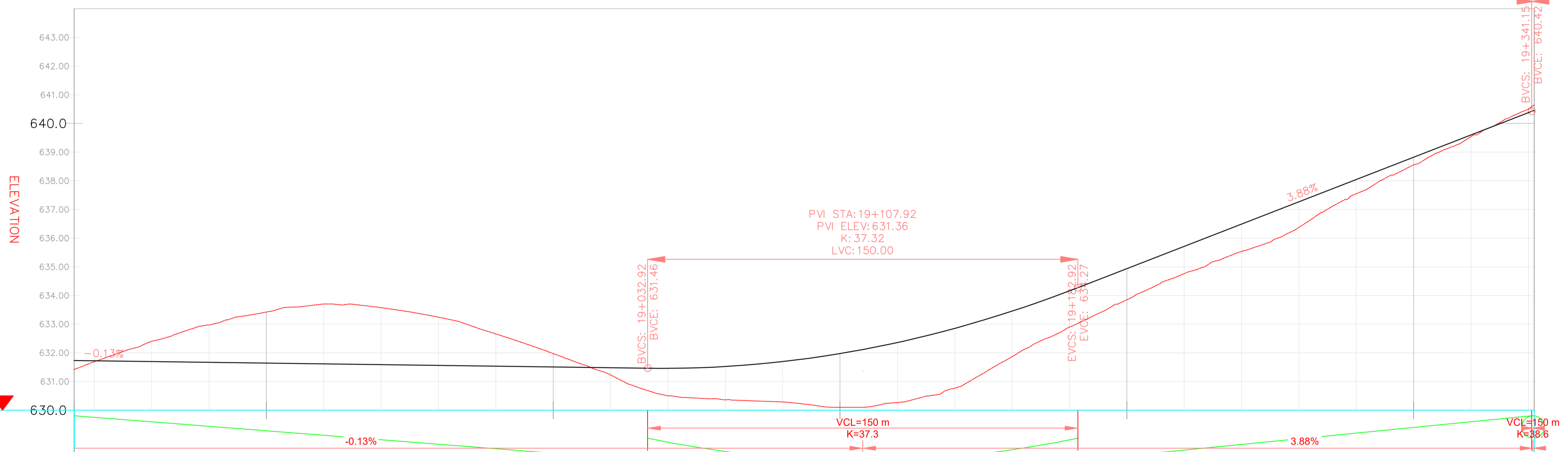


PROFILE OF GRADE LINE



PROFILE VIEW: DGHES PROFILE VIEWS (360)
VERTICAL SCALE: 100
DATUM: 630.00

PVI STA: 19+416.15
PVI ELEV: 643.33
K: 38.62
LVC: 150.00



VERTICAL CURVES GRADE

FINAL ROAD LEVELS	H _L LEFT	H _C ON CL	H _R RIGHT	VERTICAL CURVES GRADE	
				GRADE	GRADE
	631.642	631.732	631.642	-0.13%	3.88%
	631.632	631.722	631.632		
	631.606	631.696	631.606		
	631.579	631.669	631.579		
	631.552	631.642	631.552		
	631.525	631.615	631.525		
	631.498	631.588	631.498		
	631.471	631.561	631.471		
	631.444	631.534	631.444		
	631.417	631.507	631.417		
	631.390	631.480	631.390		
	631.370	631.460	631.370		
	631.434	631.524	631.434		
	631.606	631.696	631.606		
	631.885	631.975	631.885		
	632.271	632.361	632.271		
	632.765	632.855	632.765		
	633.365	633.455	633.365		
	634.073	634.163	634.073		
	634.848	634.938	634.848		
	635.625	635.715	635.625		
	636.402	636.492	636.402		
	637.179	637.269	637.179		
	637.956	638.046	637.956		
	638.732	638.822	638.732		
	639.509	639.599	639.509		
	640.286	640.376	640.286		
	641.063	641.153	641.063		
	641.840	641.930	641.840		
	642.617	642.707	642.617		
	643.394	643.484	643.394		
	644.171	644.261	644.171		
	644.948	645.038	644.948		
	645.725	645.815	645.725		
	646.502	646.592	646.502		
	647.279	647.369	647.279		
	648.056	648.146	648.056		
	648.833	648.923	648.833		
	649.610	649.700	649.610		
	650.387	650.477	650.387		
	651.164	651.254	651.164		
	651.941	652.031	651.941		
	652.718	652.808	652.718		
	653.495	653.585	653.495		
	654.272	654.362	654.272		
	655.049	655.139	655.049		
	655.826	655.916	655.826		
	656.603	656.693	656.603		
	657.380	657.470	657.380		
	658.157	658.247	658.157		
	658.934	659.024	658.934		
	659.711	659.801	659.711		
	660.488	660.578	660.488		
	661.265	661.355	661.265		
	662.042	662.132	662.042		
	662.819	662.909	662.819		
	663.596	663.686	663.596		
	664.373	664.463	664.373		
	665.150	665.240	665.150		
	665.927	666.017	665.927		
	666.704	666.794	666.704		
	667.481	667.571	667.481		
	668.258	668.348	668.258		
	669.035	669.125	669.035		
	669.812	669.902	669.812		
	670.589	670.679	670.589		
	671.366	671.456	671.366		
	672.143	672.233	672.143		
	672.920	673.010	672.920		
	673.697	673.787	673.697		
	674.474	674.564	674.474		
	675.251	675.341	675.251		
	676.028	676.118	676.028		
	676.805	676.895	676.805		
	677.582	677.672	677.582		
	678.359	678.449	678.359		
	679.136	679.226	679.136		
	679.913	680.006	679.913		
	680.690	680.786	680.690		
	681.467	681.557	681.467		
	682.244	682.334	682.244		
	683.021	683.111	683.021		
	683.798	683.888	683.798		
	684.575	684.665	684.575		
	685.352	685.442	685.352		
	686.129	686.219	686.129		
	686.906	686.996	686.906		
	687.683	687.773	687.683		
	688.460	688.550	688.460		
	689.237	689.340	689.237		
	690.014	690.114	690.014		
	690.791	690.891	690.791		
	691.568	691.668	691.568		
	692.345	692.445	692.345		
	693.122	693.222	693.122		
	693.899	693.999	693.899		
	694.676	694.776	694.676		
	695.453	695.553	695.453		
	696.230	696.330	696.230		
	697.007	697.107	697.007		
	697.784	697.884	697.784		
	698.561	698.661	698.561		
	699.338	699.438	699.338		
	700.115	700.215	700.115		
	700.892	700.992	700.892		
	701.669	701.769	701.669		
	702.446	702.546	702.446		
	703.223	703.323	703.223		
	704.000	704.100	704.000		
	704.777	704.877	704.777		
	705.554	705.654	705.554		
	706.331	706.431	706.331		
	707.108	707.208	707.108		
	707.885	707.985	707.885		
	708.662	708.762	708.662		
	709.439	709.539	709.439		
	710.216	710.316	710.216		
	710.993	711.093	710.993		
	711.770	711.870	711.770		
	712.547	712.647	712.547		
	713.324	713.424	713.324		
	714.101	714.201	714.101		
	714.878	714.978	714.878		
	715.655	715.755	715.655		
	716.432	716.532	716.432		
	717.209	717.309	717.209		
	717.986	718.086	717.986		
	718.763	718.863	718.763		
	719.540	719.640	719.540		
	720.317	720.417	720.317		
	721.094	721.194	721.094		
	721.871	721.971	721.871		
	722.648	722.748	722.648		
	723.425	723.525	723.425		
	724.202	724.302	724.202		
	724.979	725.079	724.979		
	725.756	725.856	725.756		
	726.533	726.633	726.533		
	727.310	727.410	727.310		
	728.087	728.187	728.087		
	728.864	728.964	728.864		
	729.641	729.741	729.641		
	730.418	730.518	730.418		
	731.195	731.295	731.195		
	731.972	732.072	731.972		
	732.749	732.849	732.749		
	733.526	733.626	733.526		
	734.303	734.403	734.303		
	735.080	735.180	735.080		
	735.857	735.957	735.857		
	736.634	736.734	736.634		
	737.411	737.511	737.411		
	738.188	738.288	738.188		
	738.965	739.065	738.965		
	739.742	739.842	739.742		
	740.519	740.619	740.519		
	741.296	741.396	741.296		
	742.073	742.173	742.073		
	742.850	742.950	742.850		
	743.627	743.727	743.627		
	744.404	744.504	744.404		
	745.181	745.281	745.181		
	745.958	746.058	745.958		
	746.735	746.835	746.735		
	747.512	747.612	747.512		
	748.289	748.389	748.289		
	749.066	749.166	749.066		
	749.843	749.943	749.843		
	750.620	750.720	750.620		
	751.397	751.497	751.397		
	752.174	752.274	752.174		
	752.951	753.051	752.951		
	753.728	753.828	753.728		
	754.505	754.605	754.505		
	755.282	755.382	755.282		
	756.059	756.159	756		

REFERENCE
Do not scale from this drawing, use stated dimensions only

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GENERAL NOTES

LEGEND

- Vented/Non-vented Drift
- Road Boundary
- Road Centerline

30 0 Meters 30 60
1:1000

No.	DESCRIPTION	BY	DATE

REVISIONS

CLIENT	CONSULTANT
ZAMBEZI RIVER AUTHORITY	ZAMBEZI RIVER AUTHORITY

PROJECT
CONSTRUCTION OF 28.2KM GRAVEL ROAD
MAAMBA-SIAMUSAMBA SCHOOL JUNCTION
TO DEVILS GORGE HYDRO-ELECTRIC
SCHEME SITE

DESIGNED	SIGNED	DATE

REVISION APPROVAL

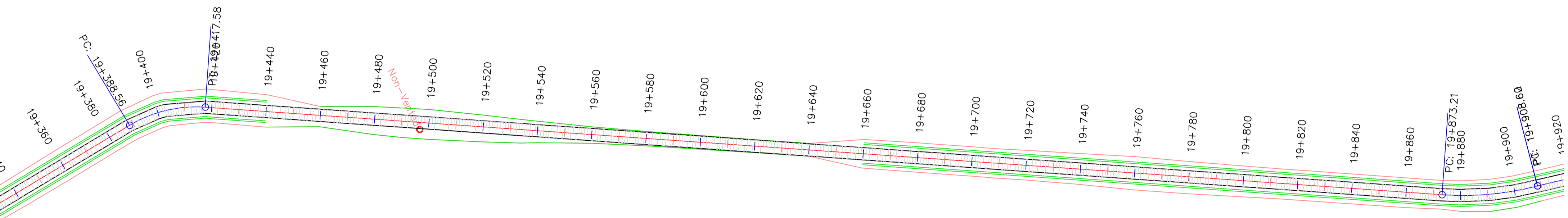
TITLE
ROAD PLAN AND PROFILE

SCALE
HORIZONTAL SCALE: 1:1000 VERTICAL SCALE: 1:100

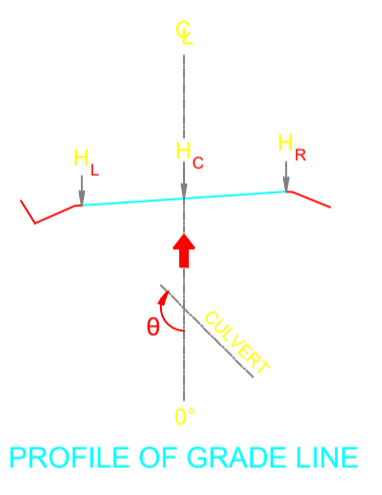
DRAWING NO.
DGHES-PP-01

REVISION NO.
0

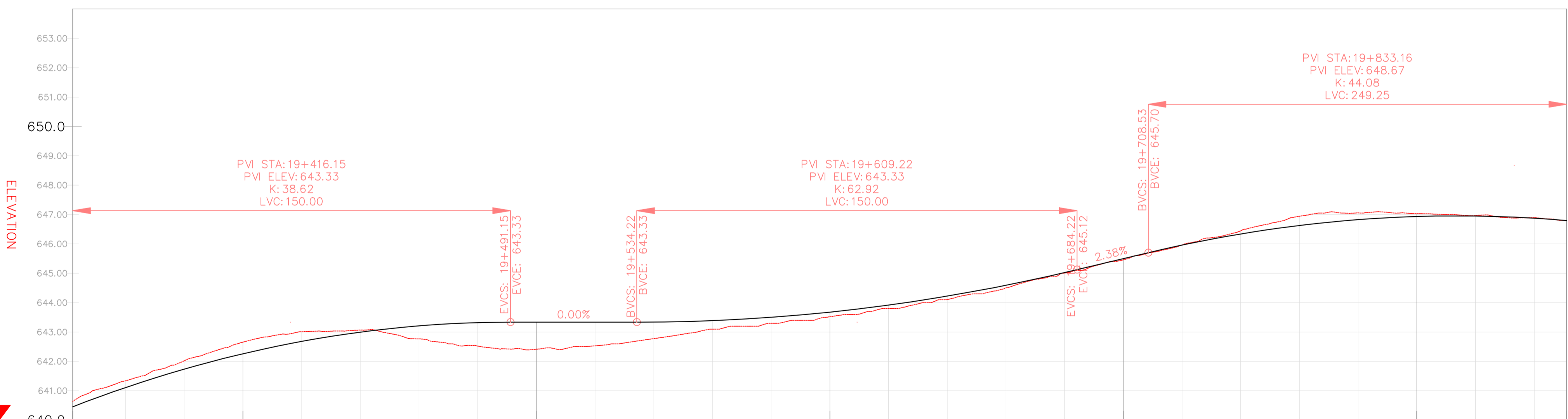
Station	Northing	Easting	Tangential Direction
19+340.00	8,019,870.8681m	495,316.1043m	S5° 17' 31"E
19+360.00	8,019,850.9533m	495,317.9489m	S5° 17' 31"E
19+380.00	8,019,831.0386m	495,319.7936m	S5° 17' 31"E
19+400.00	8,019,811.1072m	495,320.2619m	S8° 30' 44"W
19+420.00	8,019,792.4895m	495,313.3381m	S29° 43' 16"W
19+440.00	8,019,775.1205m	495,303.4226m	S29° 43' 16"W
19+460.00	8,019,757.7515m	495,293.5070m	S29° 43' 16"W
19+480.00	8,019,740.3825m	495,283.5915m	S29° 43' 16"W
19+500.00	8,019,723.0135m	495,273.6759m	S29° 43' 16"W
19+520.00	8,019,705.6445m	495,263.7604m	S29° 43' 16"W
19+540.00	8,019,688.2755m	495,253.8449m	S29° 43' 16"W
19+560.00	8,019,670.9065m	495,243.9293m	S29° 43' 16"W
19+580.00	8,019,653.5375m	495,234.0138m	S29° 43' 16"W
19+600.00	8,019,636.1685m	495,224.0982m	S29° 43' 16"W
19+620.00	8,019,618.7996m	495,214.1827m	S29° 43' 16"W
19+640.00	8,019,601.4306m	495,204.2671m	S29° 43' 16"W
19+660.00	8,019,584.0616m	495,194.3516m	S29° 43' 16"W
19+680.00	8,019,566.6926m	495,184.4360m	S29° 43' 16"W
19+700.00	8,019,549.3236m	495,174.5205m	S29° 43' 16"W
19+720.00	8,019,531.9546m	495,164.6049m	S29° 43' 16"W
19+740.00	8,019,514.5856m	495,154.6894m	S29° 43' 16"W
19+760.00	8,019,497.2166m	495,144.7738m	S29° 43' 16"W
19+780.00	8,019,479.8476m	495,134.8583m	S29° 43' 16"W
19+800.00	8,019,462.4786m	495,124.9428m	S29° 43' 16"W
19+820.00	8,019,445.1096m	495,115.0272m	S29° 43' 16"W
19+840.00	8,019,427.7406m	495,105.1117m	S29° 43' 16"W
19+860.00	8,019,410.3716m	495,095.1961m	S29° 43' 16"W



DGHES Access-Zam



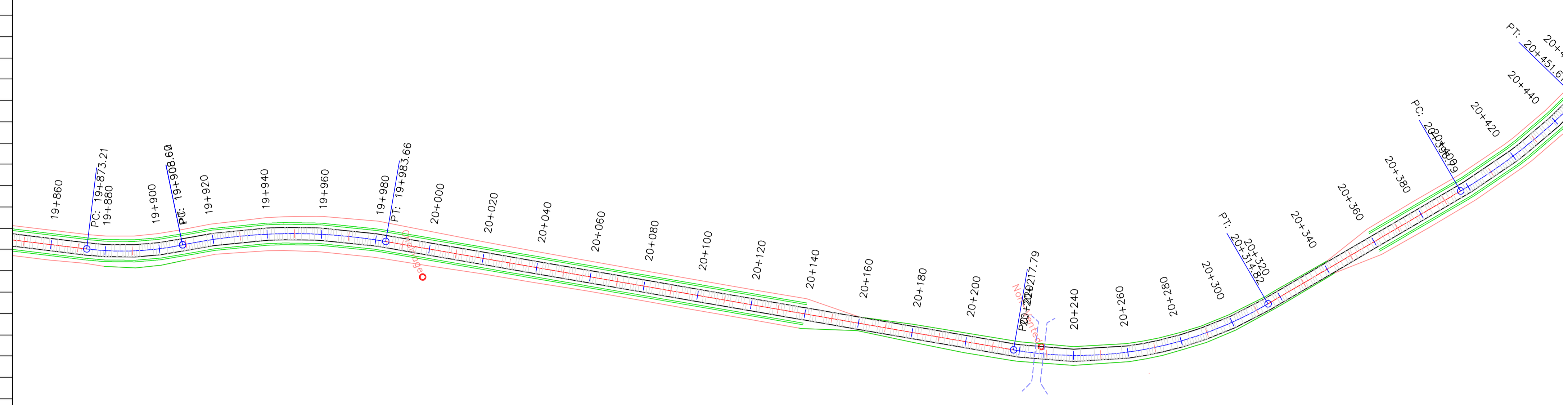
PROFILE VIEW: DGHES PROFILE VIEWS (361)
VERTICAL SCALE: 100
DATUM: 640.00



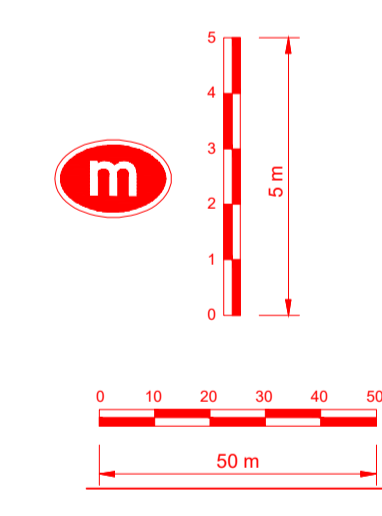
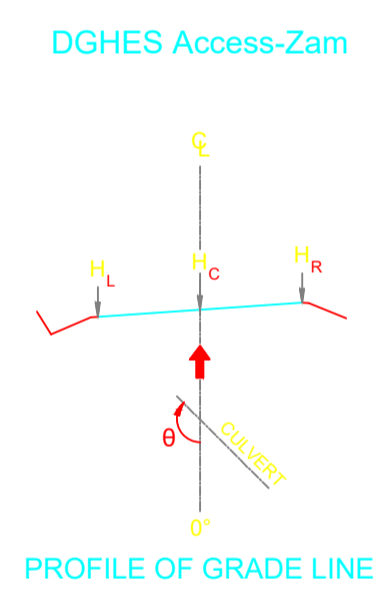
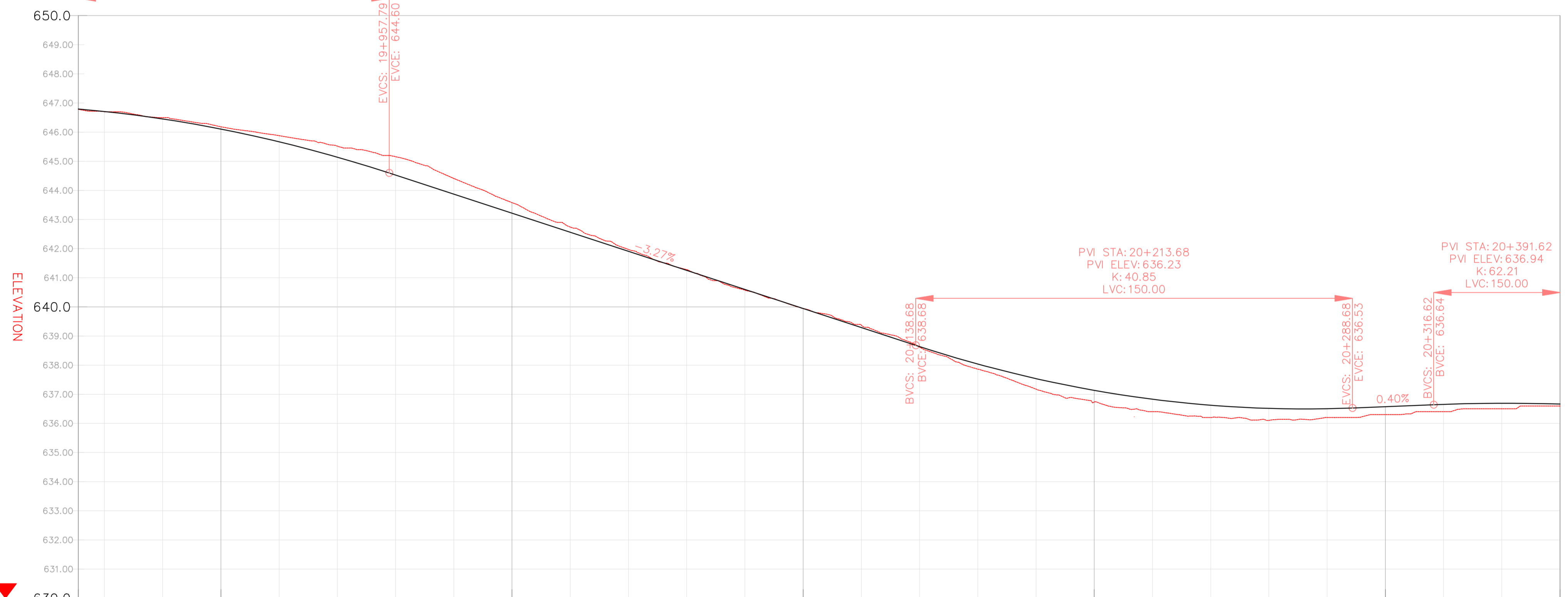
VERTICAL CURVES
GRADE

FINAL ROAD LEVELS	H _L	LEFT	Stationing																										
			19+342	19+360	19+380	19+400	19+420	19+440	19+460	19+480	19+500	19+520	19+540	19+560	19+580	19+600	19+620	19+640	19+660	19+680	19+700	19+720	19+740	19+760	19+780	19+800	19+820	19+840	19+851
			640.382	641.017	641.644	642.168	642.588	642.905	643.118	643.228	643.244	643.244	643.246	643.297	643.410	643.588	643.828	644.133	644.501	644.933	645.408	645.870	646.249	646.538	646.736	646.843	646.859	646.785	646.694
	H _C	ON CL	640.454	641.107	641.734	642.258	642.678	642.995	643.208	643.318	643.334	643.334	643.336	643.387	643.500	643.678	643.918	644.223	644.591	645.023	645.498	645.960	646.339	646.628	646.826	646.933	646.949	646.875	646.694
	H _R	RIGHT	640.382	641.017	641.644	642.168	642.588	642.905	643.118	643.228	643.244	643.244	643.246	643.297	643.410	643.588	643.828	644.133	644.501	644.933	645.408	645.870	646.249	646.538	646.736	646.843	646.859	646.785	646.694
GROUND LEVELS AT GRADE LINE			640.640	641.338	642.020	642.655	643.011	643.066	643.118	643.228	643.244	643.244	643.246	643.300	643.410	643.519	643.800	644.101	644.504	645.010	645.459	645.965	646.448	646.941	647.056	647.031	646.969	646.895	646.787
KILOMETER DISTANCE			19+342	19+360	19+380	19+400	19+420	19+440	19+460	19+480	19+500	19+520	19+540	19+560	19+580	19+600	19+620	19+640	19+660	19+680	19+700	19+720	19+740	19+760	19+780	19+800	19+820	19+840	19+851

Station	Northing	Easting	Tangential Direction
19+860.00	8,019,410.3716m	495,095,1961m	S29° 43' 16"W
19+880.00	8,019,392.9016m	495,085,4665m	S26° 08' 56"W
19+900.00	8,019,374.2422m	495,078,3457m	S15° 37' 37"W
19+920.00	8,019,354.7592m	495,073,8459m	S14° 21' 59"W
19+940.00	8,019,335.6648m	495,067,9239m	S20° 05' 45"W
19+960.00	8,019,317.2570m	495,060,1251m	S25° 49' 32"W
19+980.00	8,019,299.7197m	495,050,5276m	S31° 33' 18"W
20+000.00	8,019,282.8537m	495,039,7791m	S32° 36' 18"W
20+020.00	8,019,266.0056m	495,029,0022m	S32° 36' 18"W
20+040.00	8,019,249.1575m	495,018,2253m	S32° 36' 18"W
20+060.00	8,019,232.3094m	495,007,4484m	S32° 36' 18"W
20+080.00	8,019,215.4613m	494,996,6715m	S32° 36' 18"W
20+100.00	8,019,198.6132m	494,985,8947m	S32° 36' 18"W
20+120.00	8,019,181.7651m	494,975,1178m	S32° 36' 18"W
20+140.00	8,019,164.9170m	494,964,3409m	S32° 36' 18"W
20+160.00	8,019,148.0689m	494,953,5640m	S32° 36' 18"W
20+180.00	8,019,131.2208m	494,942,7871m	S32° 36' 18"W
20+200.00	8,019,114.3727m	494,932,0102m	S32° 36' 18"W
20+220.00	8,019,097.5152m	494,921,2482m	S31° 41' 36"W
20+240.00	8,019,079.8003m	494,912,0020m	S23° 25' 50"W
20+260.00	8,019,060.9406m	494,905,3977m	S15° 10' 04"W
20+280.00	8,019,041.3275m	494,901,5723m	S6° 54' 19"W
20+300.00	8,019,021.3682m	494,900,6053m	S1° 21' 27"E
20+320.00	8,019,001.4634m	494,902,4211m	S7° 28' 53"E
20+340.00	8,018,981.6336m	494,905,0251m	S7° 28' 53"E
20+360.00	8,018,961.8039m	494,907,6292m	S7° 28' 53"E



PROFILE VIEW: DGES PROFILE VIEWS (362)
VERTICAL SCALE: 100
DATUM: 630.00



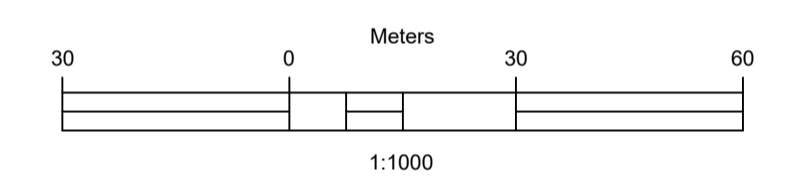
REFERENCE
Do not scale from this drawing, use stated dimensions only

DISCLAIMER
SHOULD THESE DRAWINGS AND PROJECT SPECIFICATIONS BE USED OR RELIED UPON FOR ANY OTHER PURPOSES OTHER THAN WHAT THEY WERE INTENDED FOR ON THIS SPECIFIC SITE WITHOUT CONSULTING ENGINEERS' PRIOR KNOWLEDGE AND WRITTEN CONSENT, THEN THE USER SHALL INDEMNIFY THE COPYRIGHT HOLDER AGAINST ALL LIABILITIES, CLAIMS, DAMAGES, LOSSES, FINES AND/OR PENALTIES (EITHER IN CONTRACT OR DELICT) INSTITUTED BY THE USER, OR ANY OTHER PARTY AS RESULT OF THEIR REUSE OF, OR RELIANCE ON THESE DRAWINGS AND PROJECT SPECIFICATIONS

GENERAL NOTES

LEGEND

- Vented/Non-vented Drift
- Road Boundary
- Road Centerline



No.	DESCRIPTION	BY	DATE

REVISIONS

CLIENT	CONSULTANT
ZAMBEZI RIVER AUTHORITY	ZAMBEZI RIVER AUTHORITY

PROJECT
CONSTRUCTION OF 28.2KM GRAVEL ROAD
MAAMBA-SIAMUSAMBA SCHOOL JUNCTION
TO DEVILS GORGE HYDRO-ELECTRIC
SCHEME SITE

DESIGNED	SIGNED	DATE
DRAWN	PS	Oct 2023
DESIGNED	PS	Oct 2023
CHECKED	AN	Oct 2023
APPROVED	AN	Oct 2023

REVISION APPROVAL
TITLE

ROAD PLAN AND PROFILE

SCALE
HORIZONTAL SCALE: 1:1000
VERTICAL SCALE: 1:100

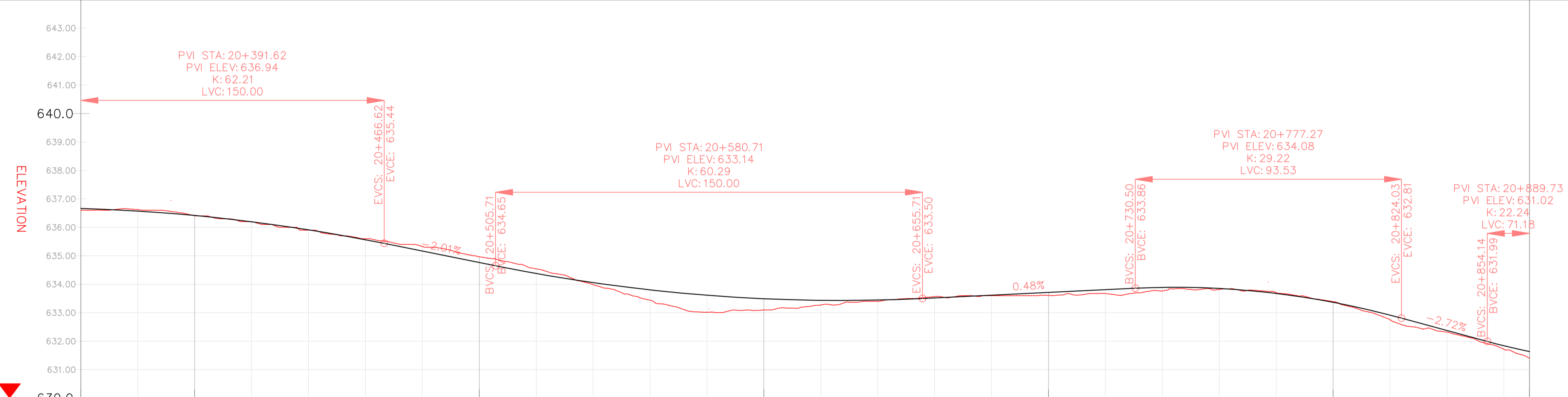
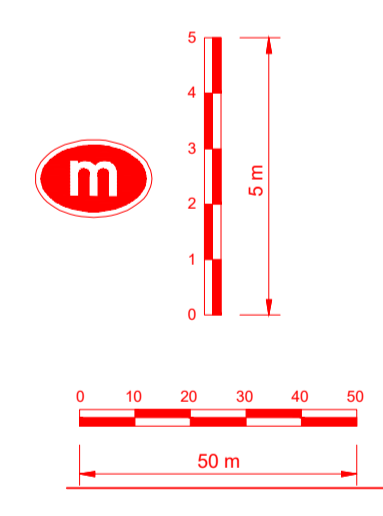
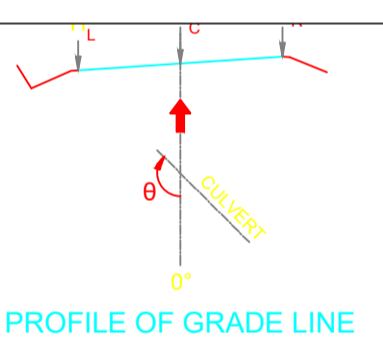
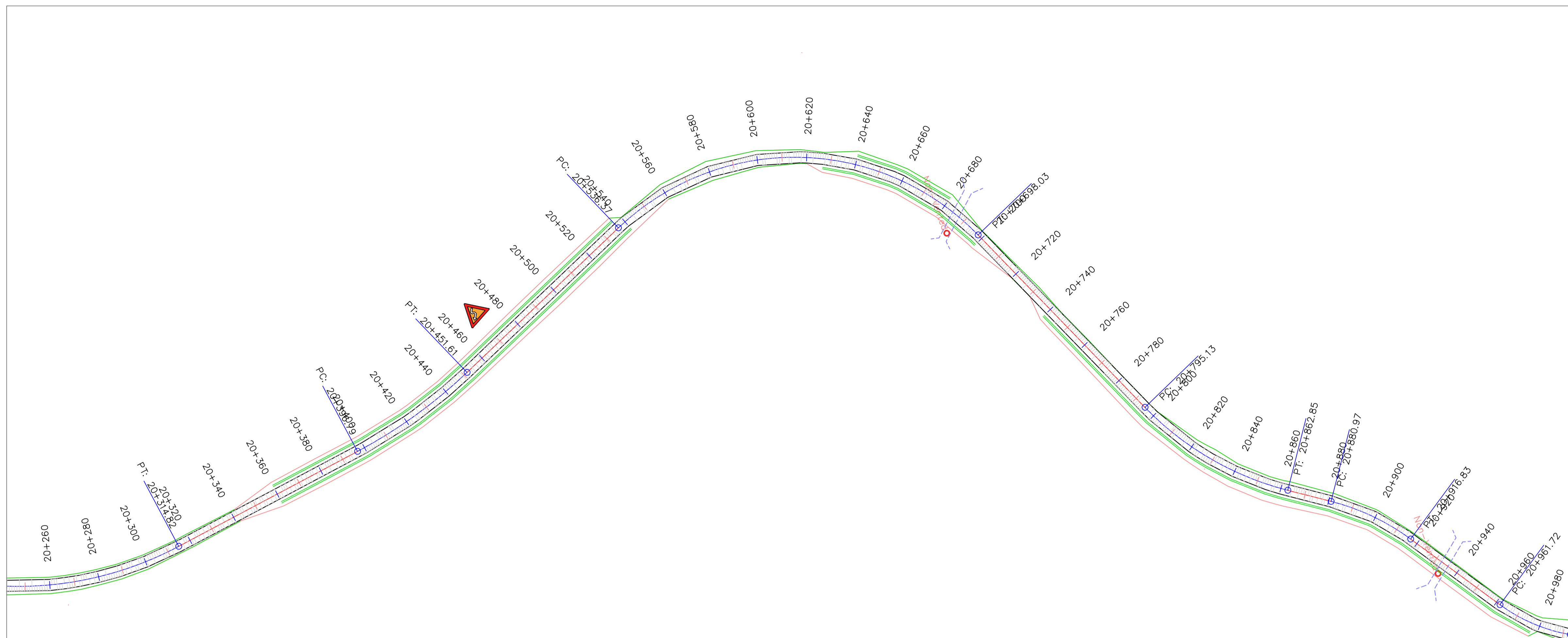
DRAWING NO. **DGHES-PP-01**
REVISION NO. **0**

VERTICAL CURVES GRADE			VCL=249 m K=44.1		VCL=150 m K=40.8		VCL=150 m K=62.2		
FINAL ROAD LEVELS	H _L LEFT	H _C ON CL	H _R RIGHT	GROUND LEVELS AT GRADE LINE	KILOMETER DISTANCE	GROUND LEVELS AT GRADE LINE	KILOMETER DISTANCE	GROUND LEVELS AT GRADE LINE	KILOMETER DISTANCE
646.694	646.795	646.710	646.364	646.787	19+851	646.701	19+860	646.500	19+880
646.018	646.108	646.670	646.454	646.185	19+900	645.879	19+920	645.520	19+940
644.434	644.524	644.434	644.434	645.157	19+960	643.870	19+980	641.164	20+060
643.126	643.126	642.562	642.472	643.579	20+000	641.818	20+040	639.945	20+100
639.855	639.855	639.291	639.201	642.744	20+080	638.637	20+140	637.045	20+200
636.601	636.601	636.637	636.547	641.254	20+160	636.830	20+220	636.533	20+240
636.604	636.604	637.949	637.949	641.164	20+180	636.623	20+260	636.485	20+300
636.574	636.574	637.448	637.448	641.254	20+200	636.503	20+280	636.564	20+320
636.574	636.574	637.045	637.045	637.135	20+220	636.485	20+300	636.601	20+340
636.740	636.740	637.135	637.135	636.400	20+240	636.575	20+320	636.604	20+360
636.533	636.533	637.448	637.448	636.200	20+260	636.604	20+340	636.604	20+360
636.424	636.424	637.448	637.448	636.104	20+280	636.575	20+320	636.574	20+360
636.413	636.413	637.448	637.448	636.000	20+300	636.564	20+340	636.574	20+360
636.485	636.485	637.448	637.448	636.000	20+320	636.564	20+340	636.574	20+360
636.564	636.564	637.448	637.448	636.000	20+340	636.564	20+340	636.574	20+360
636.601	636.601	637.448	637.448	636.000	20+360	636.564	20+340	636.574	20+360

REFERENCE
Do not scale from this drawing, use stated dimensions only

DISCLAIMER
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GENERAL NOTES

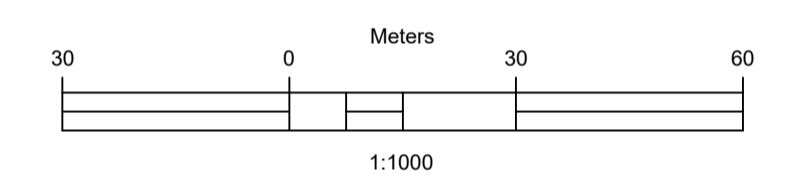


VERTICAL CURVES GRADE

FINAL ROAD LEVELS	H _L	LEFT	ELEVATION (m)																											
			636.574	636.664	636.483	636.328	636.108	635.824	635.475	635.077	634.675	634.290	633.969	633.714	633.525	633.403	633.347	633.357	633.432	633.528	633.624	633.720	633.800	633.762	633.588	633.276	632.828	632.286	631.749	631.562
	H _C	ON CL	636.574	636.664	636.573	636.418	636.198	635.914	635.565	635.167	634.765	634.380	634.059	633.804	633.615	633.493	633.437	633.447	633.522	633.618	633.714	633.810	633.800	633.762	633.588	633.366	632.918	632.376	631.839	631.636
	H _R	RIGHT	636.574	636.664	636.483	636.328	636.108	635.824	635.475	635.077	634.675	634.290	633.969	633.714	633.525	633.403	633.347	633.357	633.432	633.528	633.624	633.720	633.800	633.762	633.588	633.366	632.918	632.376	631.839	631.636
GROUND LEVELS AT GRADE LINE			636.600	636.626	636.408	636.200	635.900	635.600	635.329	634.987	634.542	634.200	633.987	633.440	633.019	633.099	633.273	633.400	633.566	633.600	633.608	633.676	633.720	633.765	633.819	633.709	633.392	632.751	631.719	631.412
KILOMETER DISTANCE			20+360	20+380	20+400	20+420	20+440	20+460	20+480	20+500	20+520	20+540	20+560	20+580	20+600	20+620	20+640	20+660	20+680	20+700	20+720	20+740	20+760	20+780	20+800	20+820	20+840	20+860	20+880	

LEGEND

- Vented/Non-vented Drift
- Road Boundary
- Road Centerline



No.	DESCRIPTION	BY	DATE

REVISIONS

CLIENT	CONSULTANT
ZAMBEZI RIVER AUTHORITY	ZAMBEZI RIVER AUTHORITY

PROJECT
CONSTRUCTION OF 28.2KM GRAVEL ROAD
MAAMBA-SIAMUSAMBA SCHOOL JUNCTION
TO DEVILS GORGE HYDRO-ELECTRIC
SCHEME SITE

DESIGNED	SIGNED	DATE
DRAWN	PS	Oct 2023
DESIGNED	PS	Oct 2023
CHECKED	AN	Oct 2023
APPROVED	AN	Oct 2023

TITLE
ROAD PLAN AND PROFILE

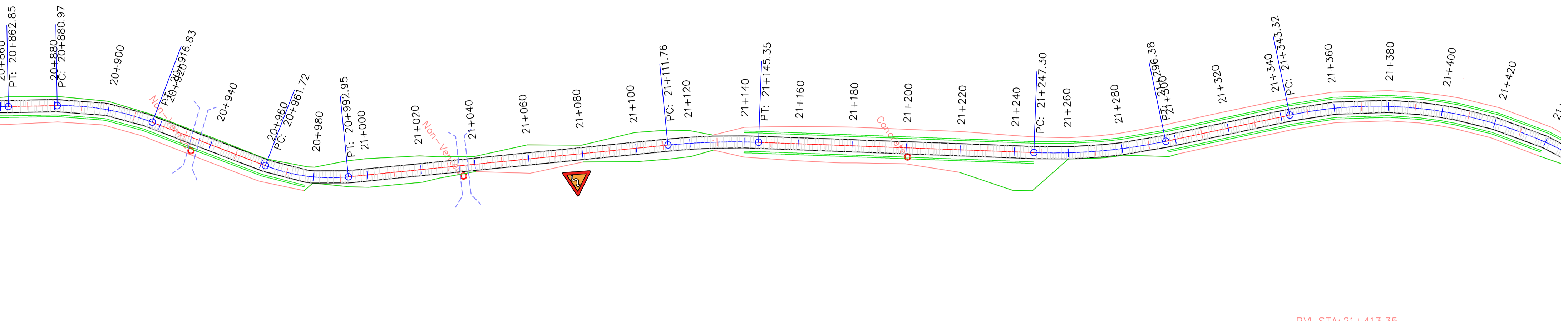
SCALE	HORIZONTAL SCALE: 1:1000	VERTICAL SCALE: 1:100
DRAWING NO.	REVISION NO.	
DGHES-PP-01	0	

REFERENCE
Do not scale from this drawing, use stated dimensions only

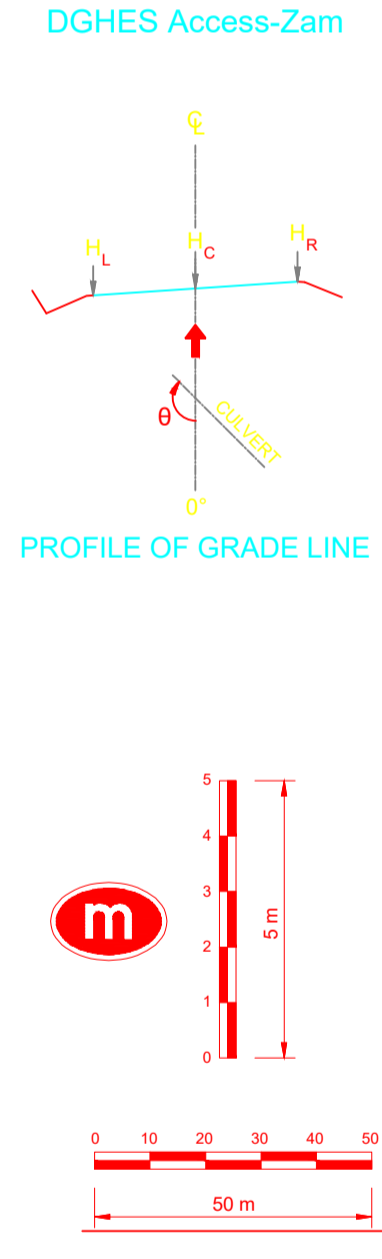
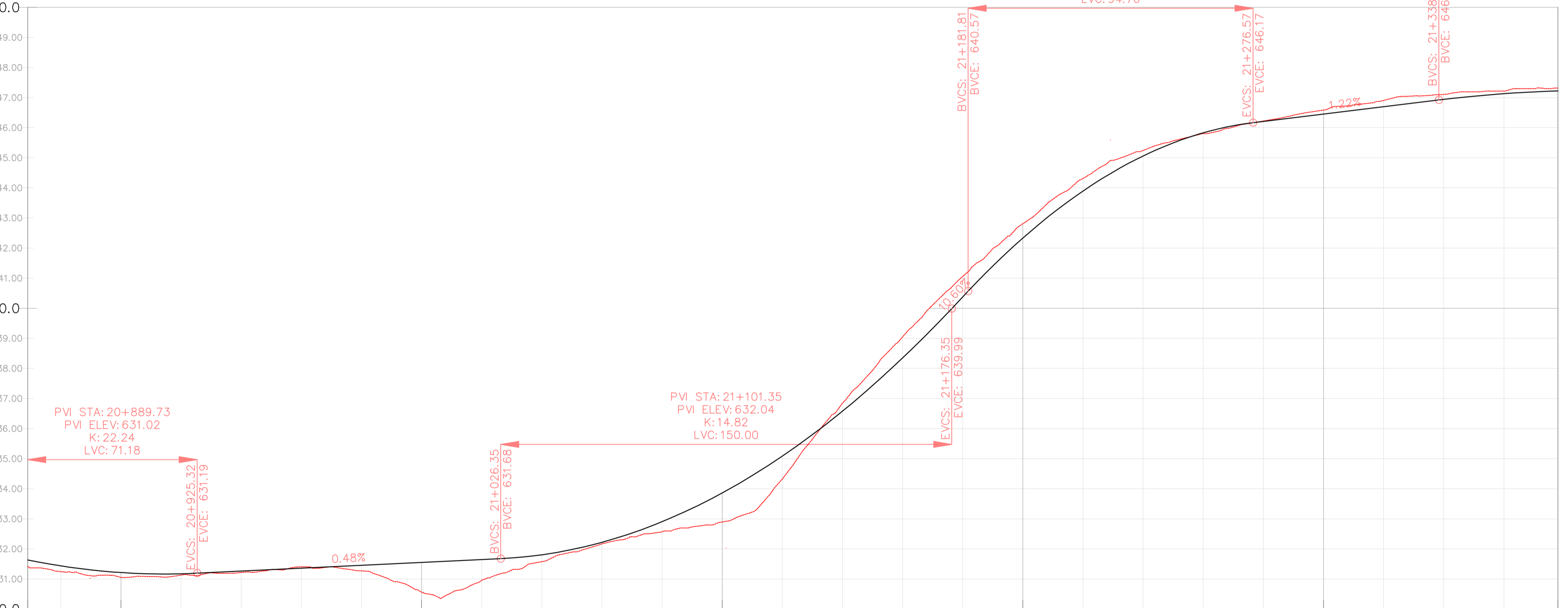
DISCLAIMER
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GENERAL NOTES

Station	Northing	Easting	Tangential Direction
20+860.00	8,018,580.4201m	494,767.4862m	S36° 09' 16"W
20+880.00	8,018,564.0208m	494,756.0384m	S34° 49' 21"W
20+900.00	8,018,548.8147m	494,743.1052m	S46° 30' 28"W
20+920.00	8,018,536.6585m	494,727.2660m	S56° 50' 41"W
20+940.00	8,018,525.7203m	494,710.5221m	S56° 50' 41"W
20+960.00	8,018,514.7821m	494,693.7783m	S56° 50' 41"W
20+980.00	8,018,501.8948m	494,678.5769m	S41° 14' 05"W
21+000.00	8,018,485.3012m	494,667.4863m	S30° 10' 51"W
21+020.00	8,018,468.0124m	494,657.4317m	S30° 10' 51"W
21+040.00	8,018,450.7235m	494,647.3770m	S30° 10' 51"W
21+060.00	8,018,433.4347m	494,637.3224m	S30° 10' 51"W
21+080.00	8,018,416.1458m	494,627.2677m	S30° 10' 51"W
21+100.00	8,018,398.8570m	494,617.2131m	S30° 10' 51"W
21+120.00	8,018,381.6387m	494,607.0402m	S32° 05' 51"W
21+140.00	8,018,365.1458m	494,596.7369m	S36° 45' 06"W
21+160.00	8,018,349.3494m	494,583.4707m	S37° 59' 47"W
21+180.00	8,018,333.5884m	494,571.1585m	S37° 59' 47"W
21+200.00	8,018,317.8274m	494,558.8462m	S37° 59' 47"W
21+220.00	8,018,302.0664m	494,546.5340m	S37° 59' 47"W
21+240.00	8,018,286.3054m	494,534.2218m	S37° 59' 47"W
21+260.00	8,018,270.3031m	494,522.2323m	S34° 21' 33"W
21+280.00	8,018,253.2564m	494,511.7883m	S28° 37' 47"W
21+300.00	8,018,235.2653m	494,503.0684m	S23° 56' 11"W
21+320.00	8,018,216.9854m	494,494.9539m	S23° 56' 11"W
21+340.00	8,018,198.7054m	494,486.8394m	S23° 56' 11"W
21+360.00	8,018,180.8212m	494,477.9138m	S30° 08' 16"W
21+380.00	8,018,164.2238m	494,466.7798m	S37° 34' 19"W

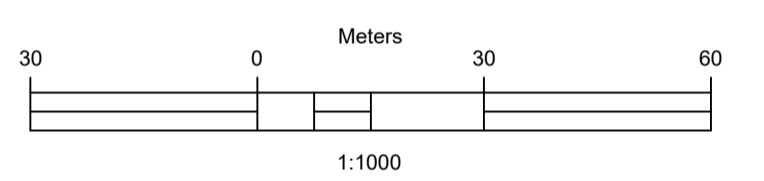


PROFILE VIEW: DGHE PROFILE VIEWS (364)
VERTICAL SCALE: 100
DATUM: 630.00



LEGEND

- Vented/Non-vented Drift
- Road Boundary
- Road Centerline



No.	DESCRIPTION	BY	DATE

REVISIONS

CLIENT	CONSULTANT
ZAMBEZI RIVER AUTHORITY	ZAMBEZI RIVER AUTHORITY

PROJECT
CONSTRUCTION OF 28.2KM GRAVEL ROAD
MAAMBA-SIAMUSAMBA SCHOOL JUNCTION
TO DEVILS GORGE HYDRO-ELECTRIC
SCHEME SITE

DESIGNED	SIGNED	DATE
DRAWN	PS	Oct 2023
DESIGNED	PS	Oct 2023
CHECKED	AN	Oct 2023
APPROVED	AN	Oct 2023

TITLE

ROAD PLAN AND PROFILE

SCALE
HORIZONTAL SCALE: 1:1000
VERTICAL SCALE: 1:100

DRAWING NO.
DGHE-PP-01

REVISION NO.
0

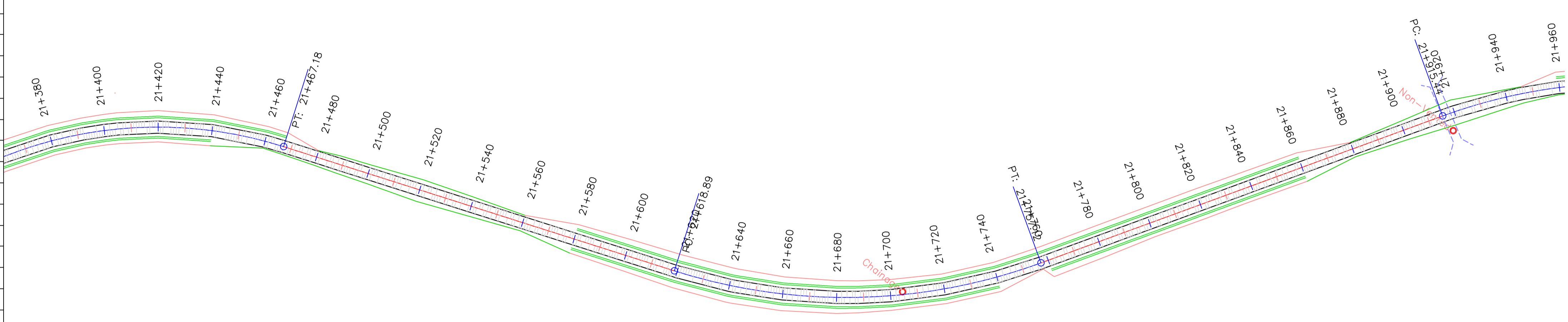
VERTICAL CURVES GRADE			VCL=71 m K=22.2	0.48%	VCL=150 m K=14.8	10.60%	VCL=95 m K=10.1	1.22%	VCL=150 m K=44.1																						
FINAL ROAD LEVELS	H _L	LEFT	631.582	631.348	631.173	631.269	631.385	631.461	631.557	631.715	632.130	632.815	633.770	634.995	636.490	638.255	640.285	642.242	643.804	644.970	645.739	646.119	646.392	646.606	646.849	647.040	647.130	647.224	647.130		
	H _C	ON CL	631.636	631.438	631.216	631.084	631.174	631.263	631.359	631.455	631.551	631.647	631.805	632.220	632.905	635.085	636.580	638.345	640.375	642.332	643.894	645.060	646.209	646.452	646.696	646.939	647.130	647.040	647.130	647.224	647.130
	H _R	RIGHT	631.592	631.348	631.126	631.084	631.174	631.263	631.359	631.455	631.551	631.647	631.805	632.220	632.905	635.085	636.580	638.345	640.375	642.332	643.894	645.060	646.209	646.452	646.696	646.939	647.130	647.040	647.130	647.224	647.130
GROUND LEVELS AT GRADE LINE			631.412	631.247	631.052	631.130	631.084	631.216	631.310	631.410	631.510	631.610	632.169	632.897	634.326	636.845	639.046	641.056	642.806	644.313	645.243	645.800	646.221	646.588	646.907	647.105	647.216	647.314	647.314	647.314	647.314
KILOMETER DISTANCE			20+869	20+880	20+900	20+920	20+940	20+960	20+980	21+000	21+020	21+040	21+060	21+080	21+100	21+120	21+140	21+160	21+180	21+200	21+220	21+240	21+260	21+280	21+300	21+320	21+340	21+360	21+378	21+378	

REFERENCE
Do not scale from this drawing, use stated dimensions only

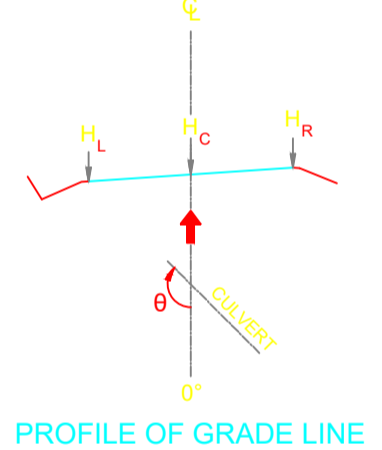
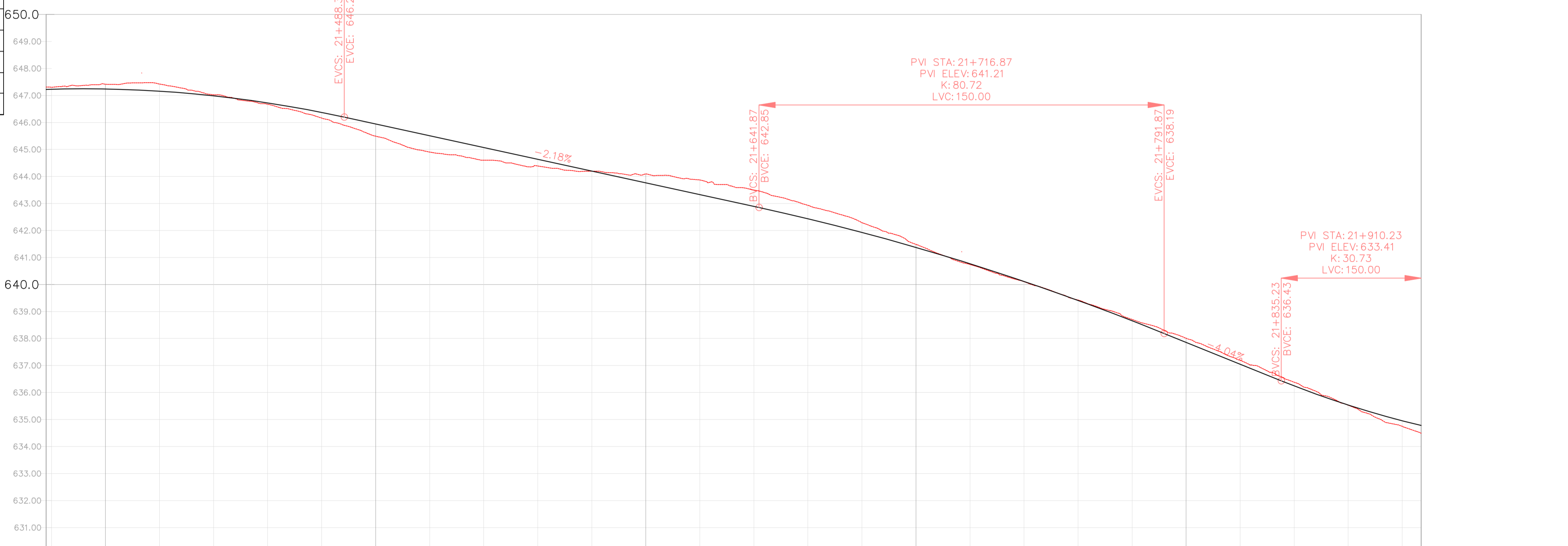
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GENERAL NOTES

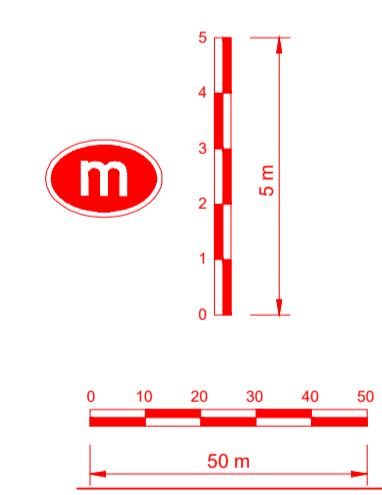
Station	Northing	Easting	Tangential Direction
21+380.00	8,018,164.2238m	494,466.7798m	S37° 34' 19"W
21+400.00	8,018,149.2066m	494,453.5919m	S45° 00' 22"W
21+420.00	8,018,136.0219m	494,438.5718m	S52° 25' 25"W
21+440.00	8,018,124.8914m	494,421.9720m	S59° 52' 28"W
21+460.00	8,018,116.0024m	494,404.0717m	S67° 18' 32"W
21+480.00	8,018,108.9982m	494,385.3402m	S69° 58' 36"W
21+500.00	8,018,102.1502m	494,366.5492m	S69° 58' 36"W
21+520.00	8,018,095.3022m	494,347.7581m	S69° 58' 36"W
21+540.00	8,018,088.4541m	494,328.9670m	S69° 58' 36"W
21+560.00	8,018,081.6061m	494,310.1760m	S69° 58' 36"W
21+580.00	8,018,074.7580m	494,291.3849m	S69° 58' 36"W
21+600.00	8,018,067.9100m	494,272.5938m	S69° 58' 36"W
21+620.00	8,018,061.0592m	494,253.8037m	S69° 40' 30"W
21+640.00	8,018,053.2312m	494,235.4075m	S64° 13' 23"W
21+660.00	8,018,043.6908m	494,217.8383m	S58° 46' 16"W
21+680.00	8,018,032.5242m	494,201.2550m	S53° 19' 09"W
21+700.00	8,018,019.8326m	494,185.8076m	S47° 52' 02"W
21+720.00	8,018,005.7307m	494,171.6360m	S42° 24' 55"W
21+740.00	8,017,990.3461m	494,158.8683m	S36° 57' 48"W
21+760.00	8,017,973.8286m	494,147.6033m	S32° 17' 51"W
21+780.00	8,017,956.9229m	494,136.9171m	S32° 17' 51"W
21+800.00	8,017,940.0172m	494,126.2308m	S32° 17' 51"W
21+820.00	8,017,923.1115m	494,115.5445m	S32° 17' 51"W
21+840.00	8,017,906.2057m	494,104.8582m	S32° 17' 51"W
21+860.00	8,017,889.3000m	494,094.1719m	S32° 17' 51"W
21+880.00	8,017,872.3943m	494,083.4856m	S32° 17' 51"W
21+900.00	8,017,855.4886m	494,072.7993m	S32° 17' 51"W



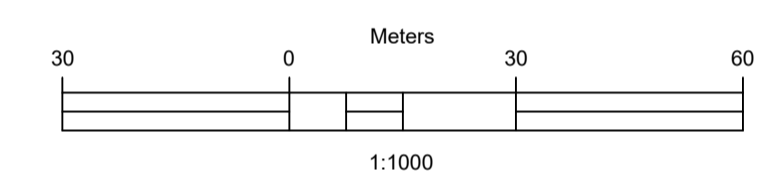
PROFILE VIEW: DGHE'S PROFILE VIEWS (365)
VERTICAL SCALE: 100
DATUM: 630.00



PROFILE OF GRADE LINE



LEGEND	
	Vented/Non-vented Drift
	Road Boundary
	Road Centerline



No.	DESCRIPTION	BY	DATE

REVISIONS			
CLIENT	ZAMBEZI RIVER AUTHORITY		
CONSULTANT	ZAMBEZI RIVER AUTHORITY		

PROJECT
CONSTRUCTION OF 28.2KM GRAVEL ROAD
MAAMBA-SIAMUSAMBA SCHOOL JUNCTION
TO DEVILS GORGE HYDRO-ELECTRIC
SCHEME SITE

DESIGNED	SIGNED	DATE
DRAWN	PS	Oct 2023
DESIGNED	PS	Oct 2023
CHECKED	AN	Oct 2023
APPROVED	AN	Oct 2023

REVISION APPROVAL
TITLE

ROAD PLAN AND PROFILE

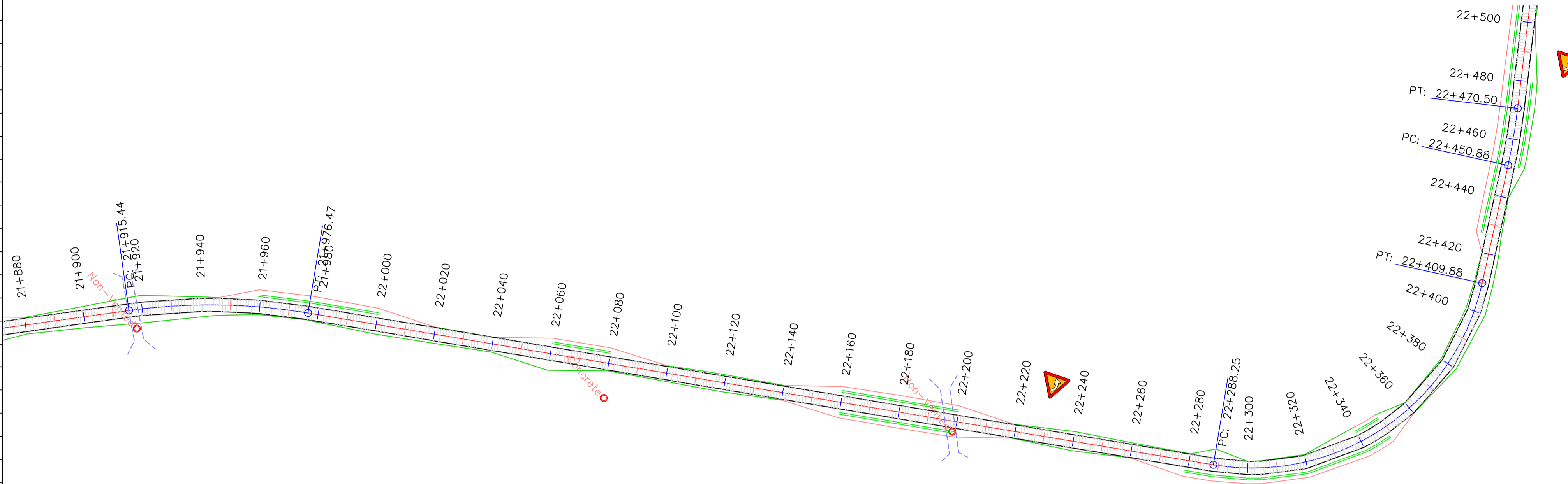
SCALE
HORIZONTAL SCALE: 1:1000
VERTICAL SCALE: 1:100

DRAWING NO.	DGHE'S-PP-01	REVISION NO.	0
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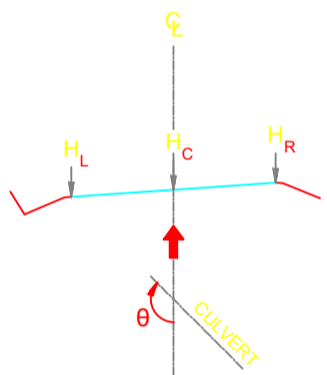
VERTICAL CURVES
GRADE

FINAL ROAD LEVELS	H _L LEFT	H _C ON CL	H _R RIGHT	VERTICAL CURVES		GROUND LEVELS AT GRADE LINE	KILOMETER DISTANCE
				VCL=150 m K=44.1	VCL=150 m K=80.7		
	647.130	647.224	647.140			647.130	21+378
	647.140	647.230	647.140			647.140	21+380
	647.149	647.239	647.149			647.149	21+400
	647.068	647.158	647.068			647.068	21+420
	646.897	646.987	646.897			646.897	21+440
	646.634	646.724	646.634			646.634	21+460
	646.281	646.371	646.281			646.281	21+480
	645.853	645.943	645.853			645.853	21+500
	645.417	645.507	645.417			645.417	21+520
	644.981	645.071	644.981			644.981	21+540
	644.545	644.635	644.545			644.545	21+560
	644.109	644.199	644.109			644.109	21+580
	643.673	643.763	643.673			643.673	21+600
	643.237	643.327	643.237			643.237	21+620
	642.801	642.891	642.801			642.801	21+640
	642.344	642.434	642.344			642.344	21+660
	641.898	641.928	641.898			641.898	21+680
	641.283	641.373	641.283			641.283	21+700
	640.678	640.768	640.678			640.678	21+720
	640.024	640.114	640.024			640.024	21+740
	639.320	639.410	639.320			639.320	21+760
	638.566	638.656	638.566			638.566	21+780
	637.767	637.857	637.767			637.767	21+800
	636.960	637.050	636.960			636.960	21+820
	636.156	636.246	636.156			636.156	21+840
	635.334	635.424	635.334			635.334	21+860
	634.493	634.583	634.493			634.493	21+880
	634.705	634.795	634.705			634.705	21+887

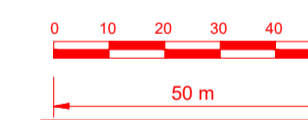
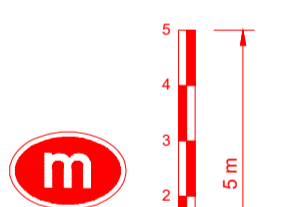
Station	Northing	Easting	Tangential Direction
21+900.00	8,017,855.4886m	494,072.7993m	S32° 17' 51"W
21+920.00	8,017,838.6110m	494,062.0693m	S33° 36' 11"W
21+940.00	8,017,822.5339m	494,050.1868m	S39° 19' 58"W
21+960.00	8,017,807.7234m	494,036.7586m	S45° 03' 44"W
21+980.00	8,017,794.3036m	494,021.9389m	S49° 46' 54"W
22+000.00	8,017,781.3895m	494,006.6671m	S49° 46' 54"W
22+020.00	8,017,768.4755m	493,991.3953m	S49° 46' 54"W
22+040.00	8,017,755.5614m	493,976.1236m	S49° 46' 54"W
22+060.00	8,017,742.6473m	493,960.8518m	S49° 46' 54"W
22+080.00	8,017,729.7333m	493,945.5800m	S49° 46' 54"W
22+100.00	8,017,716.8192m	493,930.3083m	S49° 46' 54"W
22+120.00	8,017,703.9051m	493,915.0365m	S49° 46' 54"W
22+140.00	8,017,690.9911m	493,899.7648m	S49° 46' 54"W
22+160.00	8,017,678.0770m	493,884.4930m	S49° 46' 54"W
22+180.00	8,017,665.1629m	493,869.2212m	S49° 46' 54"W
22+200.00	8,017,652.2488m	493,853.9495m	S49° 46' 54"W
22+220.00	8,017,639.3348m	493,838.6777m	S49° 46' 54"W
22+240.00	8,017,626.4207m	493,823.4059m	S49° 46' 54"W
22+260.00	8,017,613.5066m	493,808.1342m	S49° 46' 54"W
22+280.00	8,017,600.5926m	493,792.8624m	S49° 46' 54"W
22+300.00	8,017,587.0481m	493,778.1789m	S41° 21' 53"W
22+320.00	8,017,570.5495m	493,766.9668m	S27° 02' 01"W
22+340.00	8,017,551.7889m	493,760.1874m	S12° 42' 08"W
22+360.00	8,017,531.9341m	493,758.2628m	S1° 37' 44"E
22+380.00	8,017,512.2207m	493,761.3126m	S15° 57' 37"E
22+400.00	8,017,493.8757m	493,769.1472m	S30° 17' 29"E



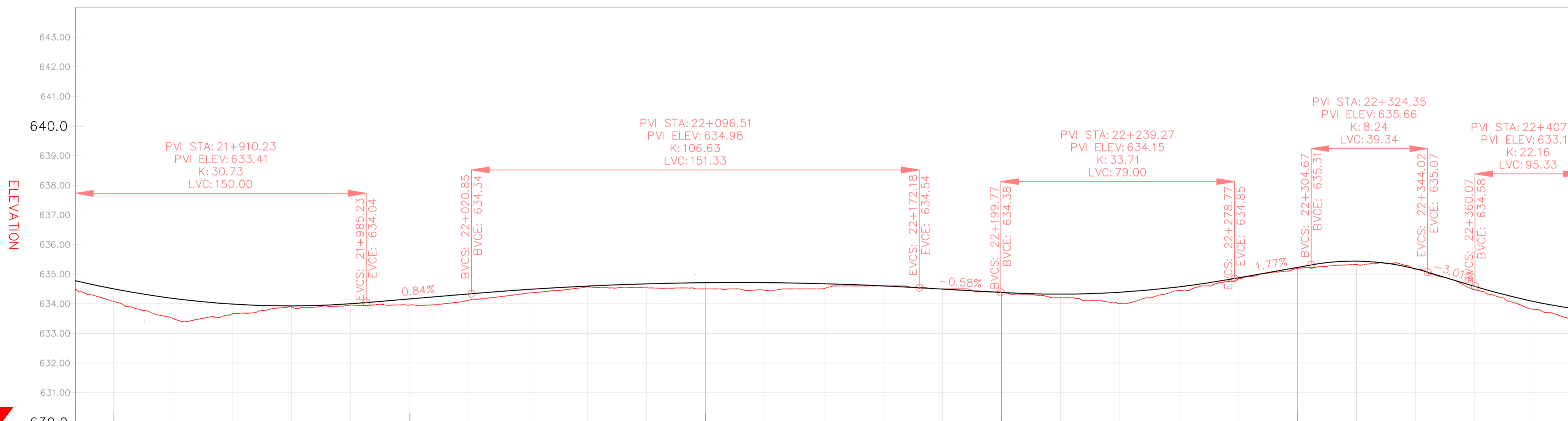
DGHES Access-Zam



PROFILE OF GRADE LINE



PROFILE VIEW: DGHES PROFILE VIEWS (366)
VERTICAL SCALE: 100
DATUM: 630.00



VERTICAL CURVES GRADE

FINAL ROAD LEVELS	VERTICAL CURVES GRADE		STATIONING																									
	H _L	H _R	21+887	21+900	21+920	21+940	21+960	21+980	22+000	22+020	22+040	22+060	22+080	22+100	22+120	22+140	22+160	22+180	22+200	22+220	22+240	22+260	22+280	22+300	22+320	22+340	22+360	22+380
LEFT	RIGHT	634.705	634.411	634.090	633.899	633.839	633.908	634.072	634.241	634.393	634.507	634.583	634.622	634.623	634.587	634.514	634.406	634.290	634.236	634.300	634.483	634.784	635.138	635.349	635.088	634.496	633.985	633.720
ON CL		634.780	634.501	634.180	633.989	633.929	633.998	634.162	634.331	634.483	634.597	634.673	634.712	634.713	634.677	634.604	634.496	634.380	634.326	634.390	634.573	634.874	635.228	635.439	635.178	634.586	634.075	633.795
GROUND LEVELS AT GRADE LINE		634.492	634.076	633.497	633.663	633.891	633.961	633.955	634.121	634.362	634.572	634.537	634.500	634.458	634.512	634.600	634.500	634.388	634.200	634.000	634.448	634.835	635.195	635.325	635.166	634.468	633.811	633.461
KILOMETER DISTANCE		21+887	21+900	21+920	21+940	21+960	21+980	22+000	22+020	22+040	22+060	22+080	22+100	22+120	22+140	22+160	22+180	22+200	22+220	22+240	22+260	22+280	22+300	22+320	22+340	22+360	22+380	22+396

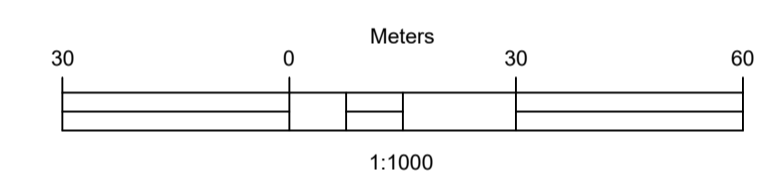
REFERENCE
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GENERAL NOTES

LEGEND

- Vented/Non-vented Drift
- Road Boundary
- Road Centerline



No.	DESCRIPTION	BY	DATE

REVISIONS

CLIENT: ZAMBEZI RIVER AUTHORITY

CONSULTANT: ZAMBEZI RIVER AUTHORITY

PROJECT
CONSTRUCTION OF 28.2KM GRAVEL ROAD
MAAMBA-SIAMUSAMBA SCHOOL JUNCTION
TO DEVILS GORGE HYDRO-ELECTRIC
SCHEME SITE

DESIGNED	SIGNED	DATE
DRAWN	PS	Oct 2023
DESIGNED	PS	Oct 2023
CHECKED	AN	Oct 2023
APPROVED	AN	Oct 2023

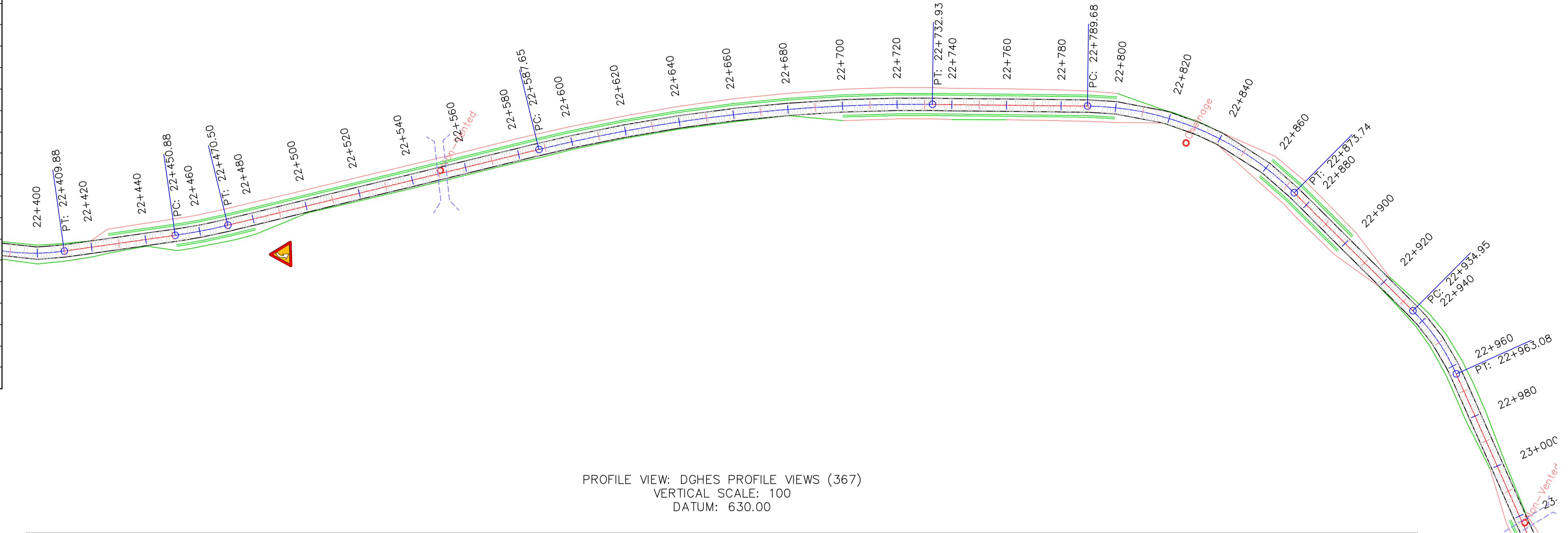
REVISION APPROVAL

TITLE
ROAD PLAN AND PROFILE

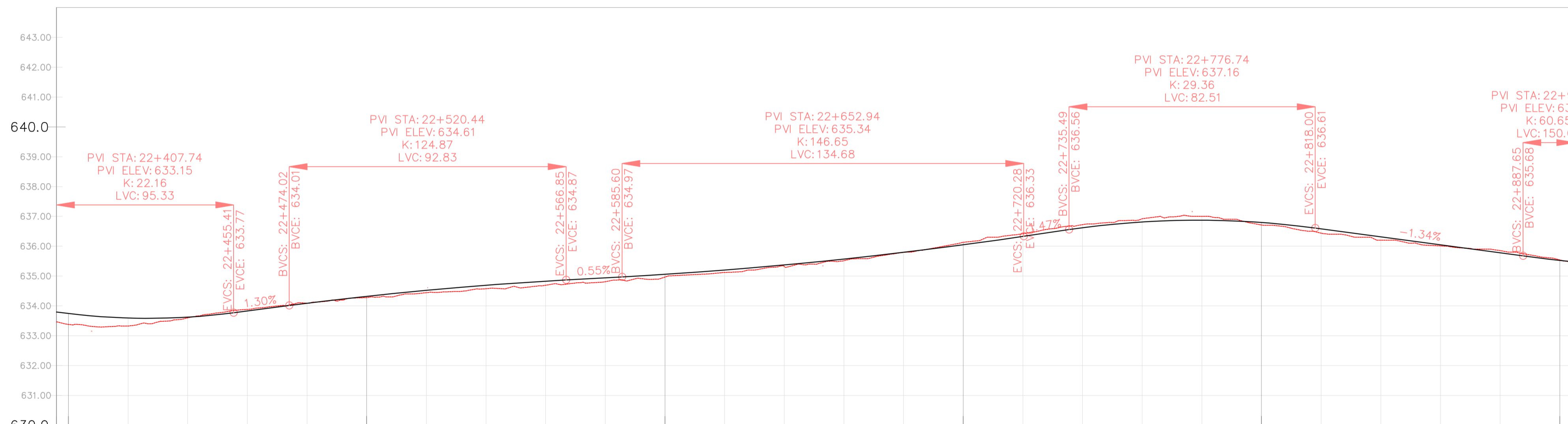
SCALE
HORIZONTAL SCALE: 1:1000
VERTICAL SCALE: 1:100

DRAWING NO. **DGHES-PP-01**
REVISION NO. **0**

Station	Northing	Easting	Tangential Direction
22+400.00	8,017,493.8757m	493,769.1472m	S30° 17' 29"E
22+420.00	8,017,477.6309m	493,780.7865m	S37° 22' 06"E
22+440.00	8,017,461.7359m	493,792.9253m	S37° 22' 06"E
22+460.00	8,017,445.9695m	493,805.2272m	S39° 58' 49"E
22+480.00	8,017,431.1554m	493,818.6595m	S42° 59' 22"E
22+500.00	8,017,416.5258m	493,832.2968m	S42° 59' 22"E
22+520.00	8,017,401.8963m	493,845.9341m	S42° 59' 22"E
22+540.00	8,017,387.2667m	493,859.5713m	S42° 59' 22"E
22+560.00	8,017,372.6371m	493,873.2086m	S42° 59' 22"E
22+580.00	8,017,358.0075m	493,886.8459m	S42° 59' 22"E
22+600.00	8,017,343.2892m	493,900.3866m	S41° 46' 20"E
22+620.00	8,017,328.1470m	493,913.4509m	S39° 48' 06"E
22+640.00	8,017,312.5646m	493,925.9867m	S37° 49' 51"E
22+660.00	8,017,296.5603m	493,937.9793m	S35° 51' 36"E
22+680.00	8,017,280.1530m	493,949.4145m	S33° 53' 22"E
22+700.00	8,017,263.3622m	493,960.2786m	S31° 55' 07"E
22+720.00	8,017,246.2077m	493,970.5589m	S29° 56' 53"E
22+740.00	8,017,228.7304m	493,980.2810m	S28° 40' 27"E
22+760.00	8,017,211.1831m	493,989.8776m	S28° 40' 27"E
22+780.00	8,017,193.6359m	493,999.4742m	S28° 40' 27"E
22+800.00	8,017,175.8677m	494,008.6346m	S23° 14' 42"E
22+820.00	8,017,156.8717m	494,014.8014m	S12° 43' 32"E
22+840.00	8,017,137.0691m	494,017.3965m	S2° 12' 22"E
22+860.00	8,017,117.1255m	494,016.3326m	S8° 18' 48"W
22+880.00	8,017,097.6598m	494,011.8180m	S15° 32' 20"W
22+900.00	8,017,078.3909m	494,006.4601m	S15° 32' 20"W



PROFILE VIEW: DGHEs PROFILE VIEWS (367)
VERTICAL SCALE: 100
DATUM: 630.00



VERTICAL CURVES GRADE

FINAL ROAD LEVELS	H _L LEFT	H _C ON CL	H _R RIGHT	VERTICAL CURVES GRADE	
				Grade	Station
				1.30%	22+400.00
				0.55%	22+500.00
				1.47%	22+700.00
				-1.34%	22+800.00

Station	H _L LEFT	H _C ON CL	H _R RIGHT	Ground Levels at Grade Line
22+396	633.720	633.795	633.720	633.461
22+400	633.654	633.744	633.654	633.379
22+420	633.593	633.593	633.593	633.324
22+440	633.533	633.623	633.533	633.598
22+460	633.738	633.828	633.738	633.881
22+480	633.996	634.086	633.996	634.091
22+500	634.229	634.319	634.229	634.275
22+520	634.430	634.520	634.430	634.443
22+540	634.600	634.690	634.600	634.576
22+560	634.737	634.827	634.737	634.692
22+580	634.849	634.939	634.849	634.810
22+600	634.967	635.057	634.967	634.963
22+620	635.110	635.200	635.110	635.120
22+640	635.281	635.371	635.281	635.320
22+660	635.480	635.570	635.480	635.513
22+680	635.705	635.795	635.705	635.796
22+700	635.958	636.048	635.958	636.131
22+720	636.238	636.328	636.238	636.418
22+740	636.528	636.618	636.528	636.724
22+760	636.723	636.813	636.723	636.920
22+780	636.782	636.872	636.782	637.000
22+800	636.705	636.795	636.705	636.713
22+820	636.492	636.582	636.492	636.439
22+840	636.224	636.314	636.224	636.200
22+860	635.956	636.046	635.956	636.009
22+880	635.688	635.778	635.688	635.853
22+900	635.432	635.522	635.432	635.538
22+905	635.384	635.467	635.384	635.391

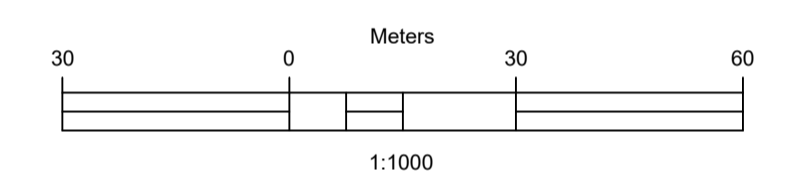
REFERENCE
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GENERAL NOTES

LEGEND

- Vented/Non-vented Drift
- Road Boundary
- Road Centerline



No.	DESCRIPTION	BY	DATE

CLIENT: ZAMBEZI RIVER AUTHORITY

CONSULTANT: ZAMBEZI RIVER AUTHORITY

PROJECT
CONSTRUCTION OF 28.2KM GRAVEL ROAD
MAAMBA-SIAMUSAMBA SCHOOL JUNCTION
TO DEVILS GORGE HYDRO-ELECTRIC
SCHEME SITE

DESIGNED	SIGNED	DATE
DRAWN	PS	Oct 2023
DESIGNED	PS	Oct 2023
CHECKED	AN	Oct 2023
APPROVED	AN	Oct 2023

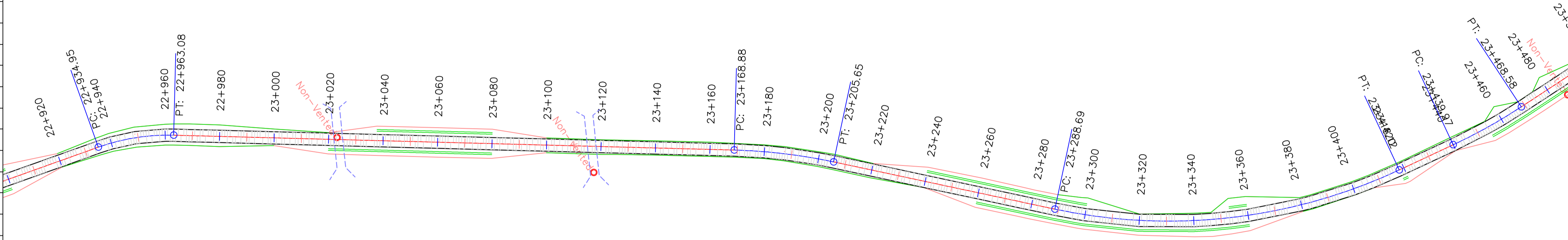
REVISION APPROVAL
TITLE

ROAD PLAN AND PROFILE

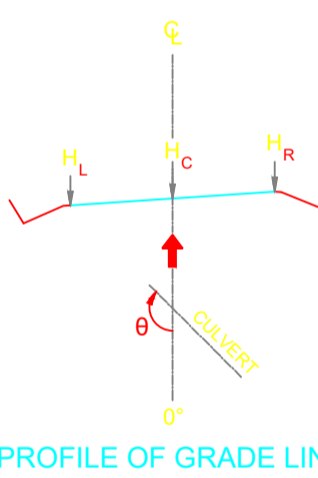
SCALE
HORIZONTAL SCALE: 1:1000
VERTICAL SCALE: 1:100

DRAWING NO. DGHEs-PP-01
REVISION NO. 0

Station	Northing	Easting	Tangential Direction
22+900.00	8,017,078.3909m	494,006.4601m	S15° 32' 20"W
22+920.00	8,017,059.1219m	494,001.1022m	S15° 32' 20"W
22+940.00	8,017,039.9013m	493,995.5843m	S19° 20' 06"W
22+960.00	8,017,022.1096m	493,986.5751m	S34° 22' 39"W
22+980.00	8,017,006.0367m	493,974.6742m	S36° 41' 47"W
23+000.00	8,016,990.0004m	493,962.7227m	S36° 41' 47"W
23+020.00	8,016,973.9642m	493,950.7713m	S36° 41' 47"W
23+040.00	8,016,957.9279m	493,938.8198m	S36° 41' 47"W
23+060.00	8,016,941.8916m	493,926.8683m	S36° 41' 47"W
23+080.00	8,016,925.8553m	493,914.9169m	S36° 41' 47"W
23+100.00	8,016,909.8190m	493,902.9654m	S36° 41' 47"W
23+120.00	8,016,893.7827m	493,891.0139m	S36° 41' 47"W
23+140.00	8,016,877.7464m	493,879.0625m	S36° 41' 47"W
23+160.00	8,016,861.7102m	493,867.1110m	S36° 41' 47"W
23+180.00	8,016,845.6739m	493,854.9153m	S39° 52' 51"W
23+200.00	8,016,831.1816m	493,841.3461m	S45° 36' 37"W
23+220.00	8,016,817.5423m	493,826.7193m	S47° 13' 46"W
23+240.00	8,016,803.9610m	493,812.0376m	S47° 13' 46"W
23+260.00	8,016,790.3798m	493,797.3560m	S47° 13' 46"W
23+280.00	8,016,776.7985m	493,782.6744m	S47° 13' 46"W
23+300.00	8,016,762.9668m	493,768.2142m	S43° 59' 25"W
23+320.00	8,016,747.9277m	493,755.0656m	S38° 15' 39"W
23+340.00	8,016,731.6311m	493,743.4858m	S32° 31' 52"W
23+360.00	8,016,714.2599m	493,733.5910m	S26° 48' 06"W
23+380.00	8,016,695.9676m	493,725.4798m	S21° 04' 19"W
23+400.00	8,016,676.9969m	493,719.2333m	S15° 20' 33"W
23+420.00	8,016,657.4790m	493,714.9052m	S10° 09' 08"W



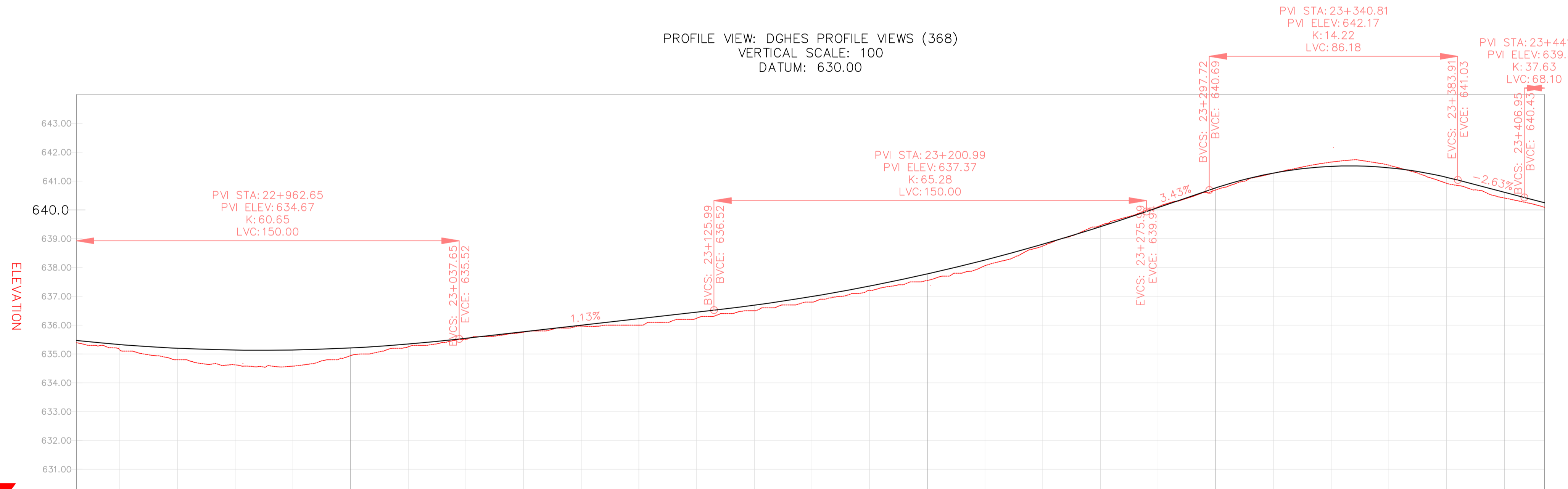
DGHES Access-Zam



PROFILE OF GRADE LINE



PROFILE VIEW: DGHES PROFILE VIEWS (368)
VERTICAL SCALE: 100
DATUM: 630.00



VERTICAL CURVES GRADE

FINAL ROAD LEVELS	H _L LEFT	H _C ON CL	H _R RIGHT	VERTICAL CURVES GRADE																								
				VCL=150 m K=60.7	VCL=150 m K=65.3																							
	635.384	635.467	635.384																									
	635.238	635.328	635.238																									
	635.109	635.199	635.109																									
	635.047	635.137	635.047																									
	635.050	635.140	635.050																									
	635.119	635.209	635.119																									
	635.255	635.345	635.255																									
	635.456	635.546	635.456																									
	635.682	635.772	635.682																									
	635.909	635.999	635.909																									
	636.135	636.225	636.135																									
	636.362	636.452	636.362																									
	636.603	636.693	636.603																									
	636.903	636.993	636.903																									
	637.265	637.355	637.265																									
	637.687	637.777	637.687																									
	638.171	638.261	638.171																									
	638.716	638.806	638.716																									
	639.323	639.413	639.323																									
	639.989	640.079	639.989																									
	640.673	640.763	640.673																									
	641.187	641.277	641.187																									
	641.419	641.509	641.419																									
	641.370	641.460	641.370																									
	641.040	641.130	641.040																									
	640.520	640.610	640.520																									
	640.162	640.248	640.162																									
GROUND LEVELS AT GRADE LINE	635.391	635.441	634.800	634.623	634.579	634.942	635.119	635.248	635.511	635.757	635.972	636.000	636.240	636.500	636.800	637.200	637.553	638.061	638.746	639.457	640.102	640.692	641.269	641.657	641.551	641.040	640.412	640.090
KILOMETER DISTANCE	22+905	22+920	22+940	22+960	22+980	23+000	23+020	23+040	23+060	23+080	23+100	23+120	23+140	23+160	23+180	23+200	23+220	23+240	23+260	23+280	23+300	23+320	23+340	23+360	23+380	23+400	23+414	

REFERENCE

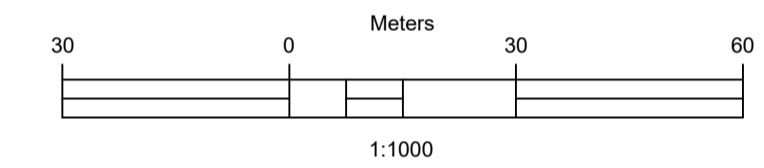
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GENERAL NOTES

LEGEND

- Vented/Non-vented Drift
- Road Boundary
- Road Centerline



No.	DESCRIPTION	BY	DATE

REVISIONS

CLIENT: ZAMBEZI RIVER AUTHORITY

CONSULTANT: ZAMBEZI RIVER AUTHORITY

PROJECT
CONSTRUCTION OF 28.2KM GRAVEL ROAD
MAAMBA-SIAMUSAMBA SCHOOL JUNCTION
TO DEVILS GORGE HYDRO-ELECTRIC
SCHEME SITE

DESIGNED	SIGNED	DATE
DRAWN	PS	Oct 2023
DESIGNED	PS	Oct 2023
CHECKED	AN	Oct 2023
APPROVED	AN	Oct 2023

REVISION APPROVAL

TITLE
ROAD PLAN AND PROFILE

SCALE
HORIZONTAL SCALE: 1:1000
VERTICAL SCALE: 1:100

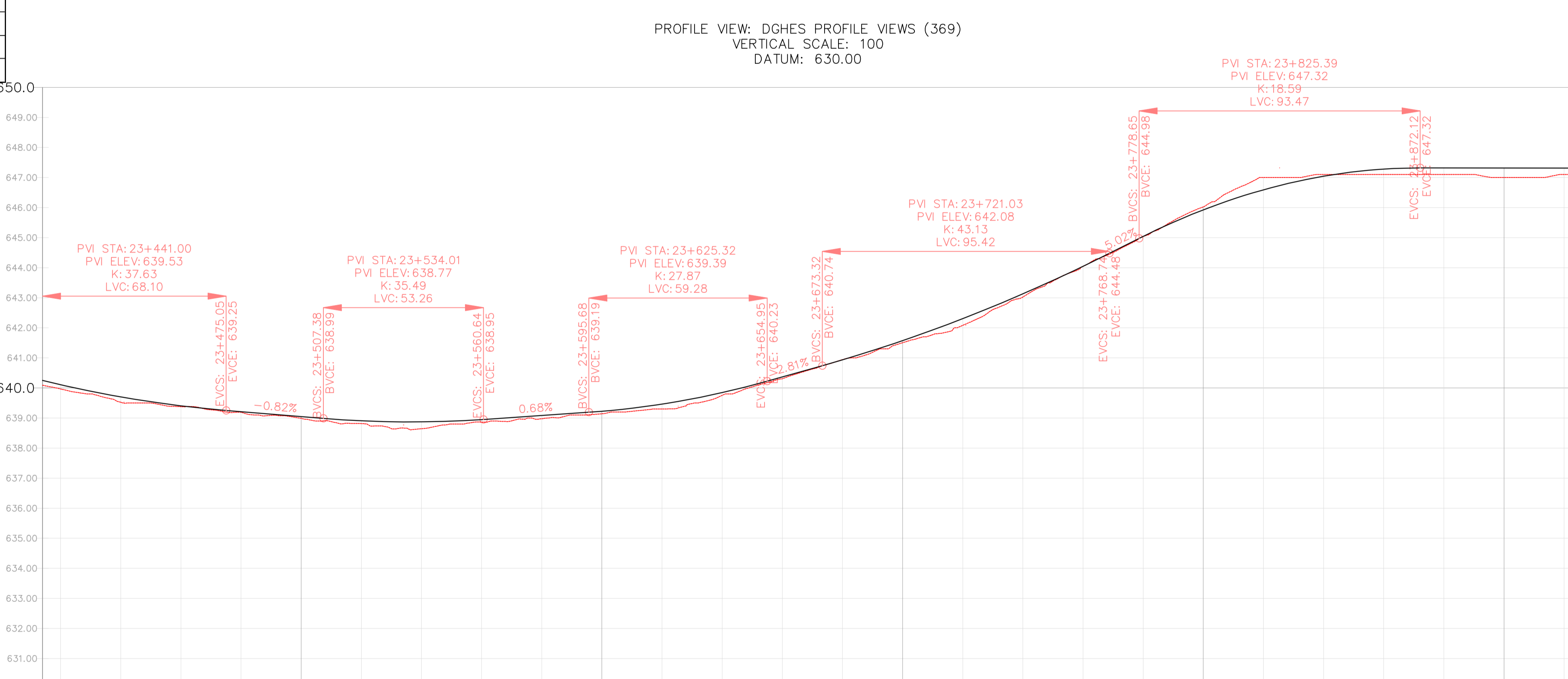
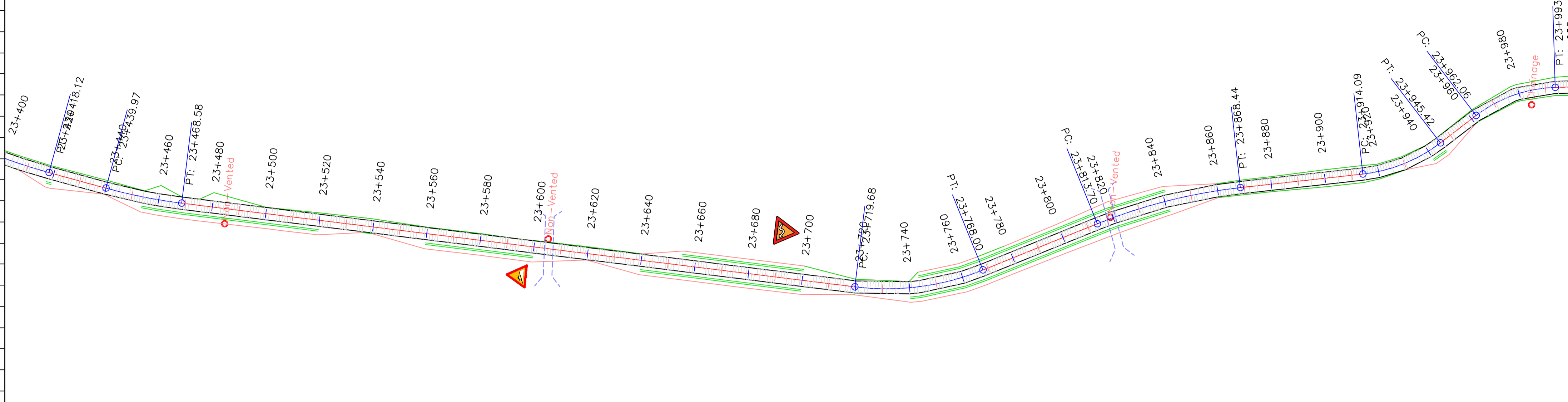
DRAWING NO. **DGHES-PP-01**
REVISION NO. **0**

REFERENCE
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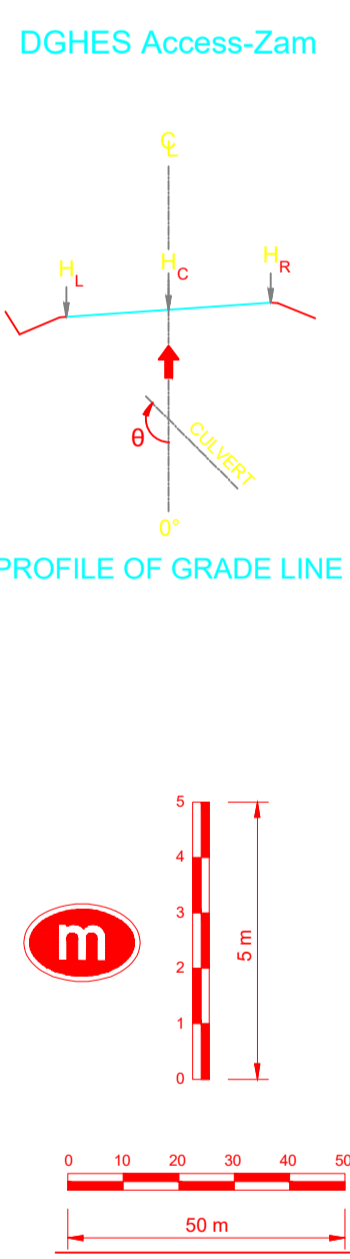
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GENERAL NOTES

Station	Northing	Easting	Tangential Direction
23+420.00	8,016,657.4790m	493,714.9052m	S10° 09' 08"W
23+440.00	8,016,637.7921m	493,711.3799m	S10° 08' 35"W
23+460.00	8,016,617.9615m	493,708.8472m	S4° 24' 49"W
23+480.00	8,016,597.9821m	493,707.9811m	S1° 57' 16"W
23+500.00	8,016,577.9937m	493,707.2991m	S1° 57' 16"W
23+520.00	8,016,558.0053m	493,706.6170m	S1° 57' 16"W
23+540.00	8,016,538.0170m	493,705.9349m	S1° 57' 16"W
23+560.00	8,016,518.0286m	493,705.2528m	S1° 57' 16"W
23+580.00	8,016,498.0402m	493,704.5708m	S1° 57' 16"W
23+600.00	8,016,478.0519m	493,703.8887m	S1° 57' 16"W
23+620.00	8,016,458.0635m	493,703.2066m	S1° 57' 16"W
23+640.00	8,016,438.0751m	493,702.5245m	S1° 57' 16"W
23+660.00	8,016,418.0868m	493,701.8425m	S1° 57' 16"W
23+680.00	8,016,398.0984m	493,701.1604m	S1° 57' 16"W
23+700.00	8,016,378.1100m	493,700.4783m	S1° 57' 16"W
23+720.00	8,016,358.1217m	493,699.7962m	S1° 45' 50"W
23+740.00	8,016,338.1334m	493,701.2777m	S10° 16' 22"E
23+760.00	8,016,319.0517m	493,706.8778m	S22° 18' 34"E
23+780.00	8,016,301.1064m	493,715.6926m	S27° 07' 22"E
23+800.00	8,016,283.3058m	493,724.8106m	S27° 07' 22"E
23+820.00	8,016,265.4609m	493,733.8399m	S25° 19' 05"E
23+840.00	8,016,246.9847m	493,741.4753m	S19° 35' 18"E
23+860.00	8,016,227.8386m	493,747.2280m	S13° 51' 32"E
23+880.00	8,016,208.2738m	493,751.3689m	S11° 26' 23"E
23+900.00	8,016,188.6711m	493,755.3357m	S11° 26' 23"E
23+920.00	8,016,169.1385m	493,759.5967m	S17° 18' 36"E
23+940.00	8,016,151.4471m	493,768.7081m	S37° 11' 19"E



Kilometer Distance	VERTICAL CURVES GRADE			Final Road Levels	Ground Levels at Grade Line
	Left (H _L)	Centerline (H _C)	Right (H _R)		
23+414	640.162	640.162	640.162	640.162	640.090
23+420	640.017	640.107	640.017	640.017	639.987
23+440	639.614	639.704	639.614	639.614	639.524
23+460	639.317	639.407	639.317	639.317	639.378
23+480	639.123	639.213	639.123	639.123	639.189
23+500	638.959	639.049	638.959	638.959	638.990
23+520	638.818	638.908	638.818	638.818	638.815
23+540	638.782	638.872	638.782	638.782	638.644
23+560	638.858	638.948	638.858	638.858	638.865
23+580	638.995	639.085	638.995	638.995	638.976
23+600	639.134	639.224	639.134	639.134	639.142
23+620	639.373	639.463	639.373	639.373	639.300
23+640	639.756	639.846	639.756	639.756	639.752
23+660	640.278	640.368	640.278	640.278	640.305
23+680	640.845	640.935	640.845	640.845	640.843
23+700	641.484	641.574	641.484	641.484	641.505
23+720	642.216	642.306	642.216	642.216	642.083
23+740	643.040	643.130	643.040	643.040	643.026
23+760	643.958	644.048	643.958	643.958	644.043
23+780	644.952	645.042	644.952	644.952	645.040
23+800	645.835	645.925	645.835	645.835	646.025
23+820	646.502	646.592	646.502	646.502	647.000
23+840	646.953	647.043	646.953	646.953	647.100
23+860	647.190	647.280	647.190	647.190	647.100
23+880	647.228	647.318	647.228	647.228	647.100
23+900	647.227	647.317	647.227	647.227	647.000
23+920	647.226	647.316	647.226	647.226	647.100
23+923	647.226	647.316	647.226	647.226	647.100



LEGEND

- Vented/Non-vented Drift
- Road Boundary
- Road Centerline

Scale: 1:1000

REVISIONS

No.	DESCRIPTION	BY	DATE

CLIENT: ZAMBEZI RIVER AUTHORITY

CONSULTANT: ZAMBEZI RIVER AUTHORITY

PROJECT: CONSTRUCTION OF 28.2KM GRAVEL ROAD MAAMBA-SIAMUSAMBA SCHOOL JUNCTION TO DEVILS GORGE HYDRO-ELECTRIC SCHEME SITE

DESIGNED	SIGNED	DATE
PS	PS	Oct 2023
AN	AN	Oct 2023
AN	AN	Oct 2023

REVISION APPROVAL

TITLE: ROAD PLAN AND PROFILE

SCALE: HORIZONTAL SCALE: 1:1000 VERTICAL SCALE: 1:100

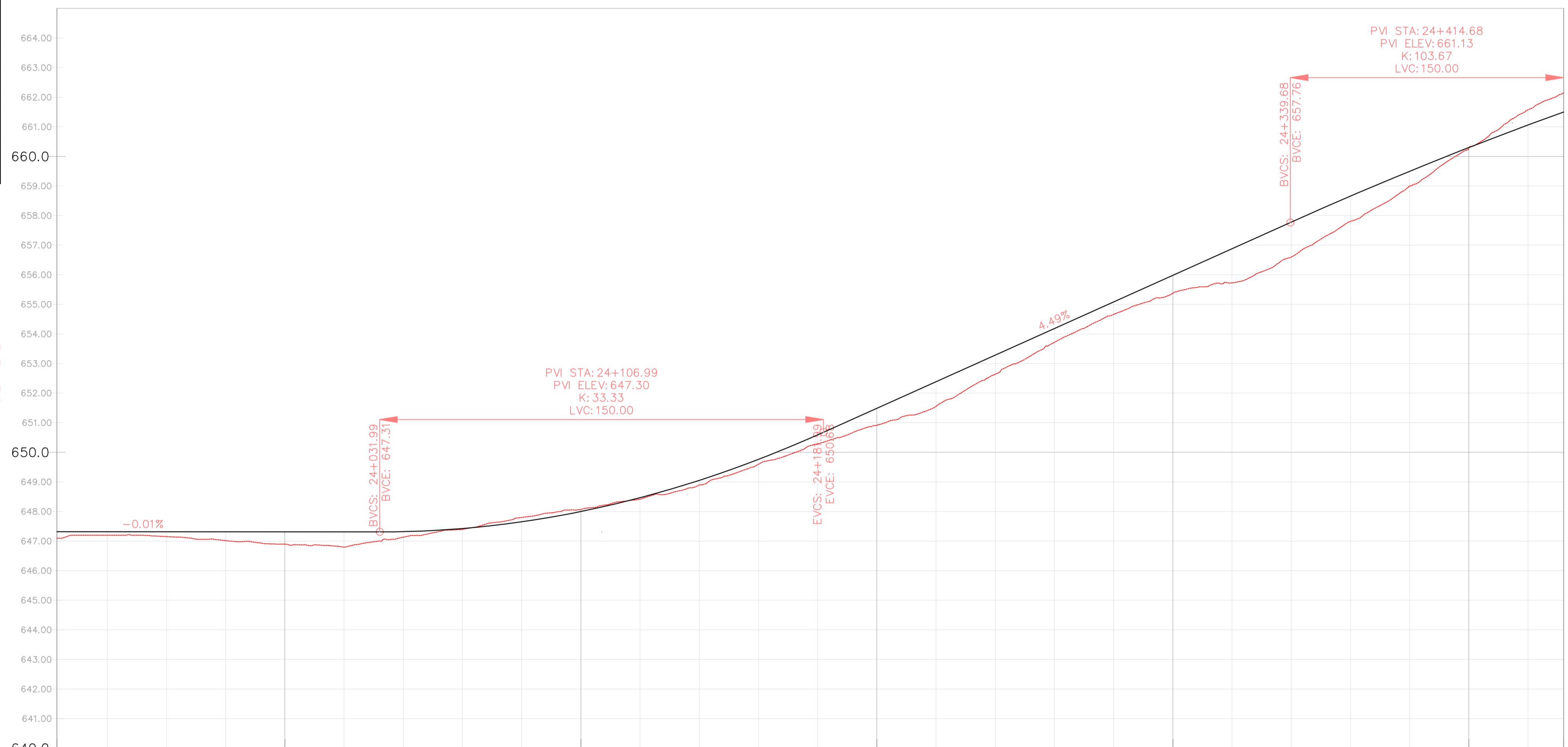
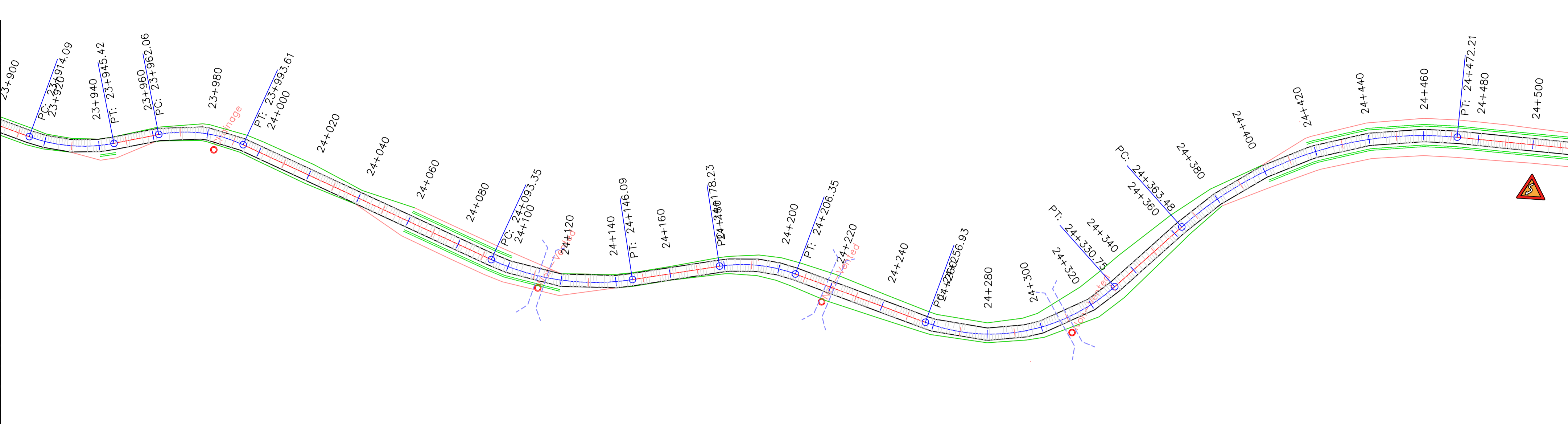
DRAWING NO.: DGHEs-PP-01 REVISION NO.: 0

REFERENCE
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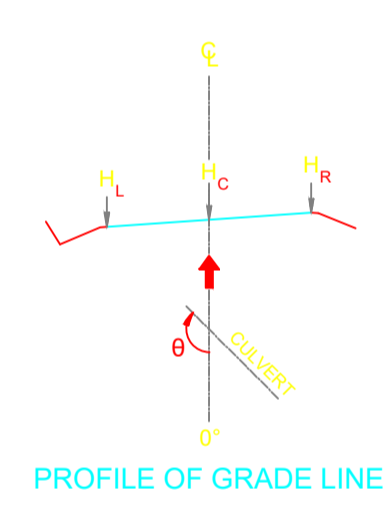
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GENERAL NOTES

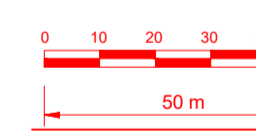
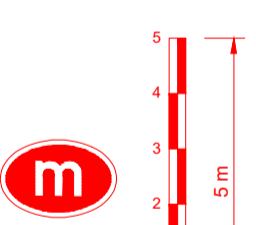
Station	Northing	Easting	Tangential Direction
23+940.00	8,016,151.4471m	493,768.7081m	S37° 11' 19"E
23+960.00	8,016,136.5530m	493,782.0465m	S42° 34' 33"E
23+980.00	8,016,119.9648m	493,792.9961m	S22° 10' 31"E
24+000.00	8,016,100.4782m	493,797.1244m	S6° 42' 03"E
24+020.00	8,016,080.6149m	493,799.4581m	S6° 42' 03"E
24+040.00	8,016,060.7515m	493,801.7918m	S6° 42' 03"E
24+060.00	8,016,040.8881m	493,804.1255m	S6° 42' 03"E
24+080.00	8,016,021.0247m	493,806.4592m	S6° 42' 03"E
24+100.00	8,016,001.1960m	493,809.0358m	S10° 55' 38"E
24+120.00	8,015,982.1378m	493,814.9645m	S23° 38' 00"E
24+140.00	8,015,964.8504m	493,824.9399m	S36° 20' 21"E
24+160.00	8,015,949.4474m	493,837.6916m	S40° 12' 37"E
24+180.00	8,015,934.1558m	493,850.5817m	S38° 22' 44"E
24+200.00	8,015,916.5980m	493,859.9303m	S17° 41' 12"E
24+220.00	8,015,897.0569m	493,864.1396m	S11° 06' 48"E
24+240.00	8,015,877.4319m	493,867.9948m	S11° 06' 48"E
24+260.00	8,015,857.8213m	493,871.9174m	S13° 41' 42"E
24+280.00	8,015,839.3579m	493,879.4165m	S30° 30' 53"E
24+300.00	8,015,823.8542m	493,891.9374m	S47° 20' 04"E
24+320.00	8,015,812.6368m	493,908.4088m	S64° 09' 15"E
24+340.00	8,015,806.0569m	493,927.2672m	S73° 11' 35"E
24+360.00	8,015,800.2739m	493,946.4129m	S73° 11' 35"E
24+380.00	8,015,793.5122m	493,965.2177m	S66° 00' 07"E
24+400.00	8,015,784.0242m	493,982.8020m	S57° 17' 53"E
24+420.00	8,015,771.9845m	493,998.7481m	S48° 35' 40"E
24+440.00	8,015,757.6704m	494,012.6886m	S39° 53' 26"E



DGHES Access-Zam



PROFILE OF GRADE LINE

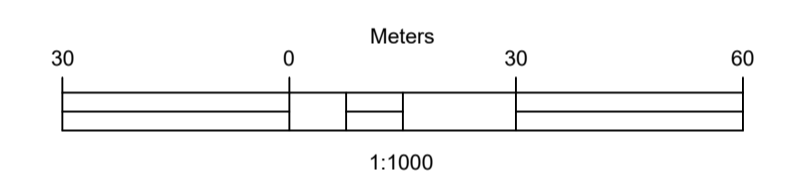


VERTICAL CURVES GRADE

FINAL ROAD LEVELS	H _L LEFT	H _C ON CL	H _R RIGHT	VERTICAL CURVES GRADE	
				Grade	Station
	647.226	647.316	647.226	-0.01%	23+923
	647.225	647.315	647.225		23+940
	647.223	647.313	647.223		23+960
	647.222	647.312	647.222		23+980
	647.221	647.311	647.221		24+000
	647.220	647.310	647.220		24+020
	647.228	647.318	647.228		24+040
	647.335	647.425	647.335		24+060
	647.562	647.652	647.562		24+080
	647.909	647.999	647.909		24+100
	648.376	648.466	648.376		24+120
	648.962	649.052	648.962		24+140
	649.669	649.759	649.669		24+160
	650.496	650.586	650.496		24+180
	651.395	651.485	651.395		24+200
	652.293	652.383	652.293		24+220
	653.192	653.282	653.192		24+240
	654.091	654.181	654.091		24+260
	654.990	655.080	654.990		24+280
	655.889	655.979	655.889		24+300
	656.788	656.878	656.788		24+320
	657.687	657.777	657.687		24+340
	658.586	658.676	658.586		24+360
	659.485	659.575	659.485		24+380
	660.384	660.474	660.384		24+400
	661.283	661.373	661.283		24+420
	662.182	662.272	662.182		24+440
	663.081	663.171	663.081		24+460
	663.980	664.070	663.980		24+480
	664.879	664.969	664.879		24+500

LEGEND

- Vented/Non-vented Drift
- Road Boundary
- Road Centerline



No.	DESCRIPTION	BY	DATE

REVISIONS

CLIENT
ZAMBEZI RIVER AUTHORITY

CONSULTANT
ZAMBEZI RIVER AUTHORITY

PROJECT
CONSTRUCTION OF 28.2KM GRAVEL ROAD MAAMBA-SIAMUSAMBA SCHOOL JUNCTION TO DEVILS GORGE HYDRO-ELECTRIC SCHEME SITE

DESIGNED	SIGNED	DATE
DRAWN	PS	Oct 2023
DESIGNED	PS	Oct 2023
CHECKED	AN	Oct 2023
APPROVED	AN	Oct 2023

REVISION APPROVAL

TITLE
ROAD PLAN AND PROFILE

SCALE
HORIZONTAL SCALE: 1:1000 VERTICAL SCALE: 1:100

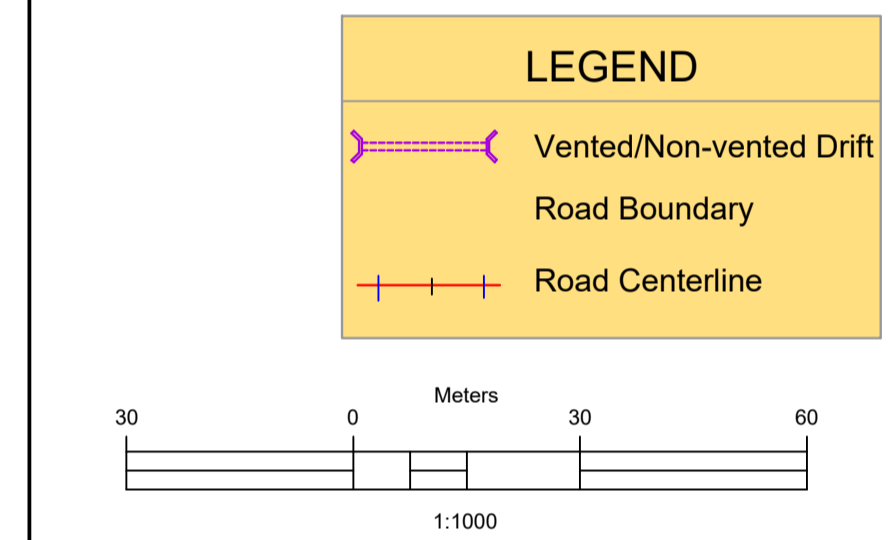
DRAWING NO. **DGHES-PP-01** REVISION NO. **0**

REFERENCE
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GENERAL NOTES

GENERAL NOTES



No.	DESCRIPTION	BY	DATE

REVISIONS

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CONSTRUCTION OF 28.2KM GRAVEL ROAD MAAMBA-SIAMUSAMBA SCHOOL JUNCTION TO DEVILS GORGE HYDRO-ELECTRIC SCHEME SITE

DESIGNED	SIGNED	DATE
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REVISION APPROVAL

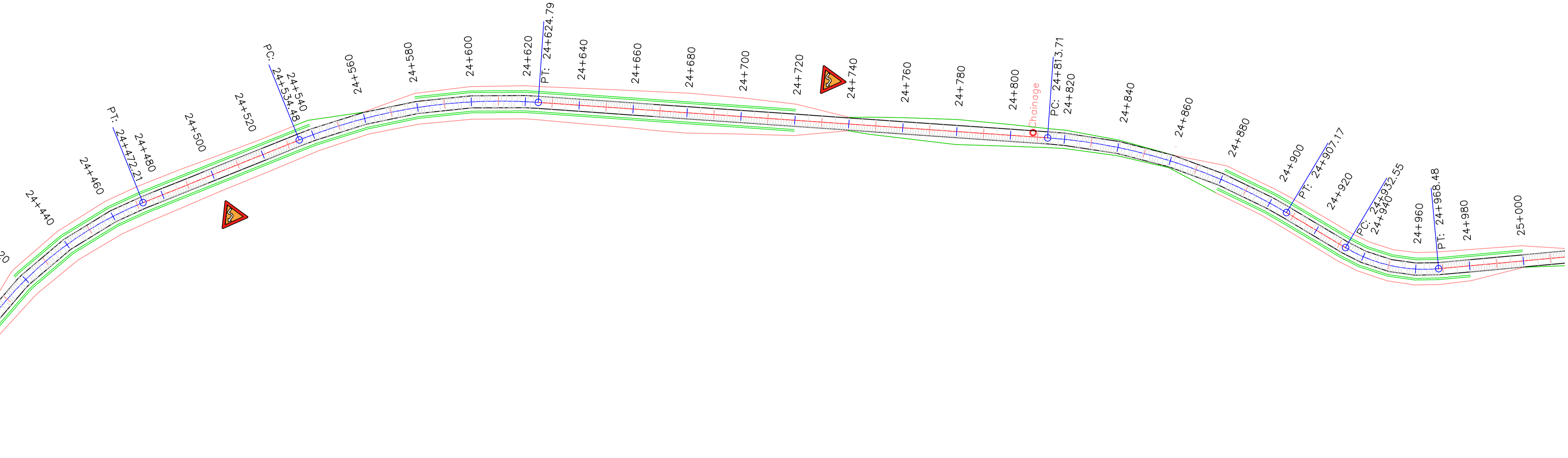
TITLE

ROAD PLAN AND PROFILE

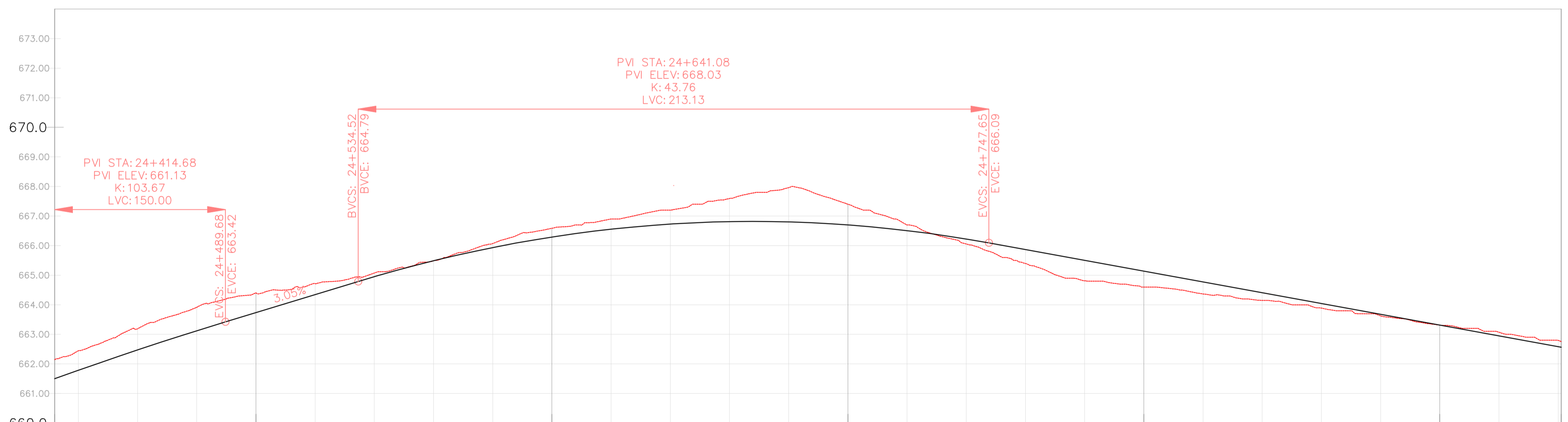
SCALE
HORIZONTAL SCALE: 1:1000 VERTICAL SCALE: 1:100

DRAWING NO. **DGHES-PP-01** REVISION NO. **0**

Station	Northing	Easting	Tangential Direction
24+440.00	8,015,757.6704m	494,012.6886m	S39° 53' 26"E
24+460.00	8,015,741.4116m	494,024.3024m	S31° 11' 12"E
24+480.00	8,015,723.6789m	494,033.5314m	S25° 52' 23"E
24+500.00	8,015,705.6837m	494,042.2590m	S25° 52' 23"E
24+520.00	8,015,687.6884m	494,050.9866m	S25° 52' 23"E
24+540.00	8,015,669.6605m	494,059.6453m	S24° 17' 27"E
24+560.00	8,015,651.0505m	494,066.9482m	S18° 33' 40"E
24+580.00	8,015,631.8043m	494,072.3567m	S12° 49' 54"E
24+600.00	8,015,612.1143m	494,075.8168m	S7° 06' 07"E
24+620.00	8,015,592.1773m	494,077.2939m	S1° 22' 21"E
24+640.00	8,015,572.1778m	494,077.3513m	S0° 00' 00"E
24+660.00	8,015,552.1778m	494,077.3513m	S0° 00' 00"E
24+680.00	8,015,532.1778m	494,077.3513m	S0° 00' 00"E
24+700.00	8,015,512.1778m	494,077.3513m	S0° 00' 00"E
24+720.00	8,015,492.1778m	494,077.3513m	S0° 00' 00"E
24+740.00	8,015,472.1778m	494,077.3513m	S0° 00' 00"E
24+760.00	8,015,452.1778m	494,077.3513m	S0° 00' 00"E
24+780.00	8,015,432.1778m	494,077.3513m	S0° 00' 00"E
24+800.00	8,015,412.1778m	494,077.3513m	S0° 00' 00"E
24+820.00	8,015,392.1788m	494,077.2523m	S1° 48' 09"W
24+840.00	8,015,372.2534m	494,075.6256m	S7° 31' 56"W
24+860.00	8,015,352.5900m	494,072.0177m	S13° 15' 42"W
24+880.00	8,015,333.3850m	494,066.4649m	S18° 59' 29"W
24+900.00	8,015,314.8303m	494,059.0224m	S24° 43' 15"W
24+920.00	8,015,296.9181m	494,050.1281m	S26° 46' 31"W
24+940.00	8,015,278.8627m	494,041.5610m	S19° 18' 14"W



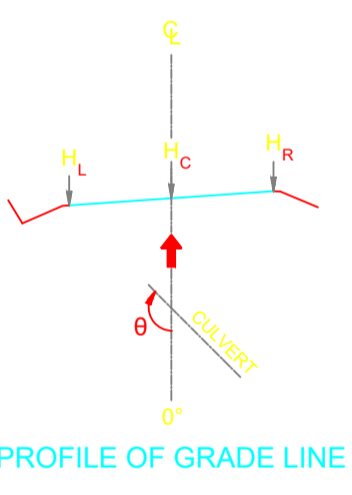
PROFILE VIEW: DGHES PROFILE VIEWS (371)
VERTICAL SCALE: 100
DATUM: 660.00



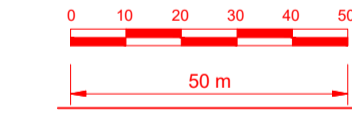
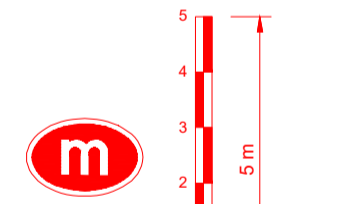
VERTICAL CURVES GRADE

FINAL ROAD LEVELS	VERTICAL CURVES GRADE		STATIONING																											
	H _L	H _R	24+432	24+440	24+460	24+480	24+500	24+520	24+540	24+560	24+580	24+600	24+620	24+640	24+660	24+680	24+700	24+720	24+740	24+760	24+780	24+800	24+820	24+840	24+860	24+880	24+900	24+920	24+940	24+941
LEFT	RIGHT	661.406	661.501	661.696	662.382	663.029	663.643	664.253	664.859	665.398	665.845	666.201	666.466	666.639	666.721	666.711	666.610	666.417	666.134	665.776	665.411	665.047	664.682	664.318	663.953	663.589	663.224	662.860	662.495	662.127
ON CL		661.501	661.786	662.472	663.119	663.733	664.343	664.949	665.488	665.935	666.291	666.556	666.729	666.811	666.801	666.700	666.507	666.224	665.866	665.501	665.137	664.772	664.408	664.043	663.679	663.314	662.950	662.585	662.217	
GROUND LEVELS AT GRADE LINE		662.145	662.448	663.191	663.916	664.402	664.716	665.075	665.489	665.945	666.357	666.700	667.000	667.254	667.461	667.619	667.726	667.781	667.784	667.735	667.632	667.475	667.263	667.006	666.714	666.396	666.061	665.718	665.377	665.037
KILOMETER DISTANCE		24+432	24+440	24+460	24+480	24+500	24+520	24+540	24+560	24+580	24+600	24+620	24+640	24+660	24+680	24+700	24+720	24+740	24+760	24+780	24+800	24+820	24+840	24+860	24+880	24+900	24+920	24+940	24+941	

DGHES Access-Zam



PROFILE OF GRADE LINE

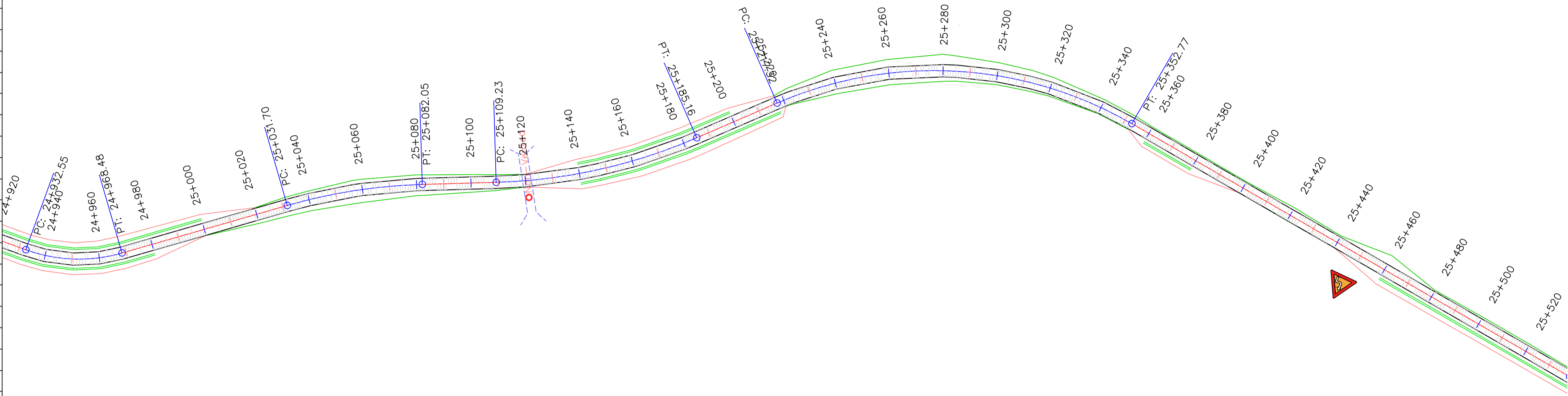


REFERENCE
Do not scale from this drawing, use stated dimensions only

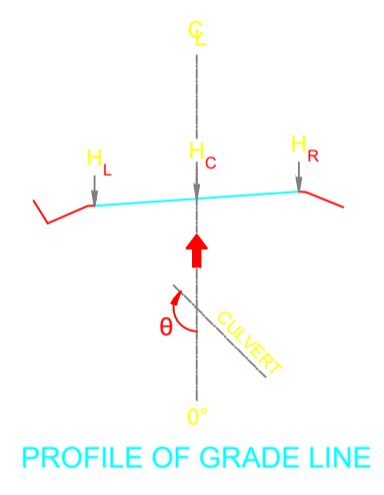
DISCLAIMER
SHOULD THESE DRAWINGS AND PROJECT SPECIFICATIONS BE USED OR RELIED UPON FOR ANY OTHER PURPOSES OTHER THAN WHAT THEY WERE INTENDED FOR ON THIS SPECIFIC SITE WITHOUT CONSULTING ENGINEERS' PRIOR KNOWLEDGE AND WRITTEN CONSENT, THEN THE USER SHALL INDEMNIFY THE COPYRIGHT HOLDER AGAINST ALL LIABILITIES, CLAIMS, DAMAGES, LOSSES, FINES AND/OR PENALTIES (EITHER IN CONTRACT OR DELICT) INSTITUTED BY THE USER OR ANY OTHER PARTY AS RESULT OF THEIR REUSE OF, OR RELIANCE ON THESE DRAWINGS AND PROJECT SPECIFICATIONS

GENERAL NOTES

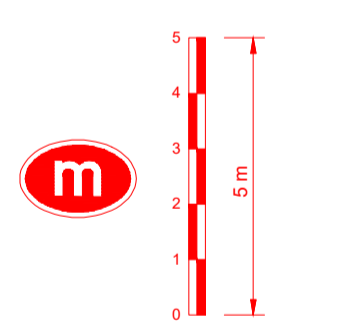
Station	Northing	Easting	Tangential Direction
24+940.00	8,015,278.8627m	494,041.5610m	S19° 18' 14"W
24+960.00	8,015,259.2251m	494,038.3521m	S0° 44' 36"E
24+980.00	8,015,239.4146m	494,040.9404m	S9° 14' 43"E
25+000.00	8,015,219.6744m	494,044.1536m	S9° 14' 43"E
25+020.00	8,015,199.9343m	494,047.3669m	S9° 14' 43"E
25+040.00	8,015,180.1688m	494,050.4099m	S6° 52' 06"E
25+060.00	8,015,160.2259m	494,051.8057m	S1° 08' 20"E
25+080.00	8,015,140.2433m	494,051.2036m	S4° 35' 27"W
25+100.00	8,015,120.3240m	494,049.4095m	S5° 10' 36"W
25+120.00	8,015,100.3846m	494,047.8941m	S2° 05' 29"W
25+140.00	8,015,080.3947m	494,048.1639m	S3° 38' 17"E
25+160.00	8,015,060.5317m	494,050.4280m	S9° 22' 04"E
25+180.00	8,015,040.9939m	494,054.6638m	S15° 05' 50"E
25+200.00	8,015,021.8066m	494,060.3056m	S16° 34' 35"E
25+220.00	8,015,002.6309m	494,065.9879m	S15° 31' 16"E
25+240.00	8,014,983.0533m	494,069.9982m	S7° 37' 55"E
25+260.00	8,014,963.1104m	494,071.2834m	S0° 15' 27"W
25+280.00	8,014,943.1799m	494,069.8190m	S8° 08' 48"W
25+300.00	8,014,923.6391m	494,065.6329m	S16° 02' 09"W
25+320.00	8,014,904.8578m	494,058.8043m	S23° 55' 31"W
25+340.00	8,014,887.1915m	494,049.4624m	S31° 48' 52"W
25+360.00	8,014,870.8643m	494,037.9263m	S36° 51' 04"W
25+380.00	8,014,854.8604m	494,025.9315m	S36° 51' 04"W
25+400.00	8,014,838.8565m	494,013.9368m	S36° 51' 04"W
25+420.00	8,014,822.8526m	494,001.9420m	S36° 51' 04"W
25+440.00	8,014,806.8486m	493,989.9472m	S36° 51' 04"W
25+460.00	8,014,790.8447m	493,977.9525m	S36° 51' 04"W
25+480.00	8,014,774.8408m	493,965.9577m	S36° 51' 04"W



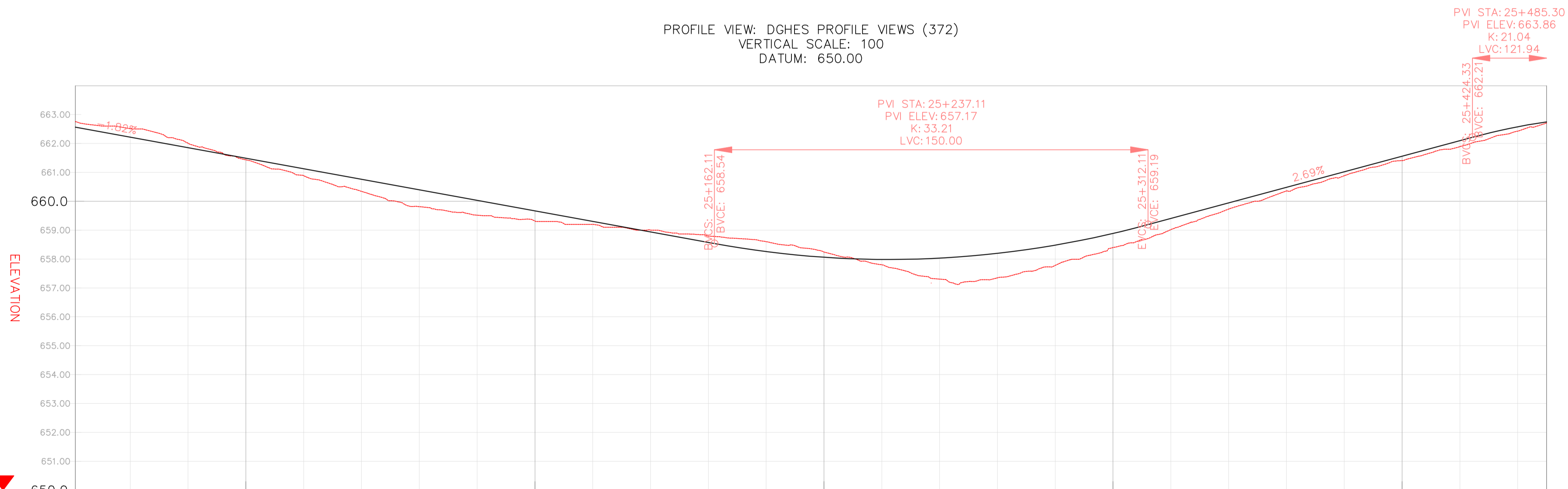
DGHES Access-Zam



PROFILE OF GRADE LINE



PROFILE VIEW: DGHES PROFILE VIEWS (372)
VERTICAL SCALE: 100
DATUM: 650.00



VERTICAL CURVES GRADE

FINAL ROAD LEVELS	H _L LEFT		H _C ON CL		H _R RIGHT	
	Station	Elevation	Station	Elevation	Station	Elevation
24+941	662.477	662.477	662.567	662.477	662.477	662.477
24+960	662.131	662.131	662.221	662.131	662.131	662.131
24+980	661.766	661.766	661.856	661.766	661.766	661.766
25+000	661.402	661.402	661.492	661.402	661.402	661.402
25+020	661.037	661.037	661.127	661.037	661.037	661.037
25+040	660.672	660.672	660.762	660.672	660.672	660.672
25+060	660.308	660.308	660.398	660.308	660.308	660.308
25+080	659.943	659.943	660.033	659.943	659.943	659.943
25+100	659.579	659.579	659.669	659.579	659.579	659.579
25+120	659.214	659.214	659.304	659.214	659.214	659.214
25+140	658.850	658.850	658.940	658.850	658.850	658.850
25+160	658.485	658.485	658.575	658.485	658.485	658.485
25+180	658.119	658.119	658.209	658.119	658.119	658.119
25+200	657.754	657.754	657.844	657.754	657.754	657.754
25+220	657.389	657.389	657.479	657.389	657.389	657.389
25+240	657.024	657.024	657.114	657.024	657.024	657.024
25+260	656.659	656.659	656.749	656.659	656.659	656.659
25+280	656.294	656.294	656.384	656.294	656.294	656.294
25+300	655.929	655.929	656.019	655.929	655.929	655.929
25+320	655.564	655.564	655.654	655.564	655.564	655.564
25+340	655.199	655.199	655.289	655.199	655.199	655.199
25+360	654.834	654.834	654.924	654.834	654.834	654.834
25+380	654.469	654.469	654.559	654.469	654.469	654.469
25+400	654.104	654.104	654.194	654.104	654.104	654.104
25+420	653.739	653.739	653.829	653.739	653.739	653.739
25+440	653.374	653.374	653.464	653.374	653.374	653.374
25+460	653.009	653.009	653.099	653.009	653.009	653.009
25+480	652.644	652.644	652.734	652.644	652.644	652.644
25+491	652.477	652.477	652.567	652.477	652.477	652.477

LEGEND

- Vented/Non-vented Drift
- Road Boundary
- Road Centerline

Scale: 1:1000

No.	DESCRIPTION	BY	DATE

CLIENT: ZAMBEZI RIVER AUTHORITY

CONSULTANT: ZAMBEZI RIVER AUTHORITY

PROJECT
CONSTRUCTION OF 28.2KM GRAVEL ROAD
MAAMBA-SIAMUSAMBA SCHOOL JUNCTION
TO DEVILS GORGE HYDRO-ELECTRIC
SCHEME SITE

DESIGNED	SIGNED	DATE
DRAWN	PS	Oct 2023
DESIGNED	PS	Oct 2023
CHECKED	AN	Oct 2023
APPROVED	AN	Oct 2023

TITLE
ROAD PLAN AND PROFILE

SCALE: HORIZONTAL SCALE: 1:1000 VERTICAL SCALE: 1:100

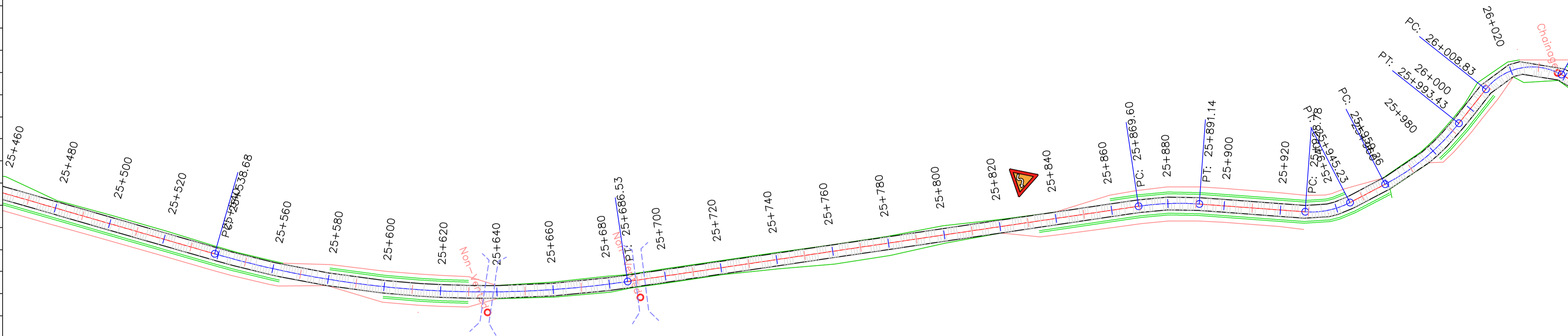
DRAWING NO. **DGHES-PP-01** REVISION NO. **0**

REFERENCE
Do not scale from this drawing, use stated dimensions only

DISCLAIMER
SHOULD THESE DRAWINGS AND PROJECT SPECIFICATIONS BE USED OR RELIED UPON FOR ANY OTHER PURPOSES OTHER THAN WHAT THEY WERE INTENDED FOR ON THIS SPECIFIC SITE WITHOUT CONSULTING ENGINEERS PRIOR KNOWLEDGE AND WRITTEN CONSENT, THEN THE USER SHALL INDEMNIFY THE COPYRIGHT HOLDER AGAINST ALL LIABILITIES, CLAIMS, DAMAGES, LOSSES, FINES AND/OR PENALTIES (EITHER IN CONTRACT OR DELICT) INSTITUTED BY THE USER OR ANY OTHER PARTY AS RESULT OF THEIR REUSE OF, OR RELIANCE ON THESE DRAWINGS AND PROJECT SPECIFICATIONS

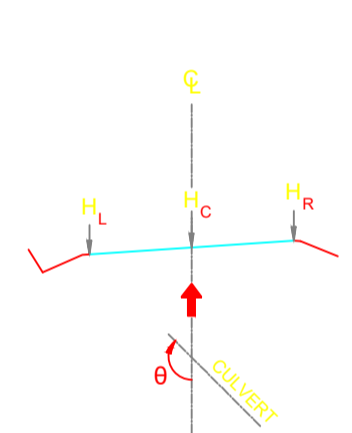
GENERAL NOTES

Station	Northing	Easting	Tangential Direction
25+480.00	8,014,774.8408m	493,965.9577m	S36° 51' 04"W
25+500.00	8,014,758.8369m	493,953.9630m	S36° 51' 04"W
25+520.00	8,014,742.8329m	493,941.9682m	S36° 51' 04"W
25+540.00	8,014,726.8275m	493,929.9754m	S36° 37' 59"W
25+560.00	8,014,710.4430m	493,918.5108m	S33° 19' 48"W
25+580.00	8,014,693.4253m	493,908.0091m	S30° 01' 38"W
25+600.00	8,014,675.8307m	493,898.5054m	S26° 43' 28"W
25+620.00	8,014,657.7178m	493,890.0311m	S23° 25' 18"W
25+640.00	8,014,639.1468m	493,882.6145m	S20° 07' 07"W
25+660.00	8,014,620.1794m	493,876.2801m	S16° 48' 57"W
25+680.00	8,014,600.8785m	493,871.0490m	S13° 30' 47"W
25+700.00	8,014,581.3613m	493,866.6824m	S12° 26' 07"W
25+720.00	8,014,561.8305m	493,862.3757m	S12° 26' 07"W
25+740.00	8,014,542.2996m	493,858.0690m	S12° 26' 07"W
25+760.00	8,014,522.7688m	493,853.7623m	S12° 26' 07"W
25+780.00	8,014,503.2380m	493,849.4557m	S12° 26' 07"W
25+800.00	8,014,483.7072m	493,845.1490m	S12° 26' 07"W
25+820.00	8,014,464.1764m	493,840.8423m	S12° 26' 07"W
25+840.00	8,014,444.6456m	493,836.5356m	S12° 26' 07"W
25+860.00	8,014,425.1148m	493,832.2289m	S12° 26' 07"W
25+880.00	8,014,405.5840m	493,827.9222m	S18° 30' 19"W
25+900.00	8,014,387.3509m	493,819.5169m	S25° 00' 18"W
25+920.00	8,014,369.2255m	493,811.0630m	S25° 00' 18"W
25+940.00	8,014,350.4561m	493,804.6134m	S3° 24' 48"W
25+960.00	8,014,330.5651m	493,806.4777m	S7° 11' 00"E

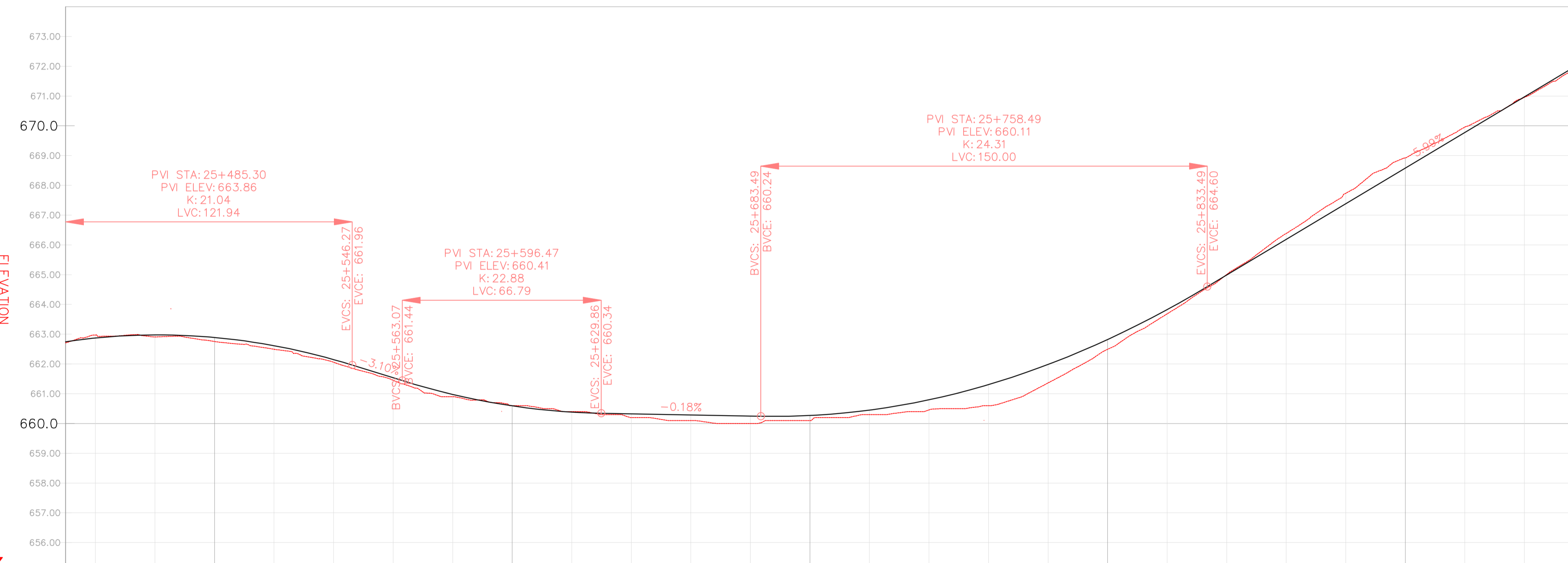
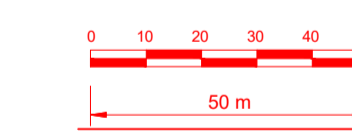
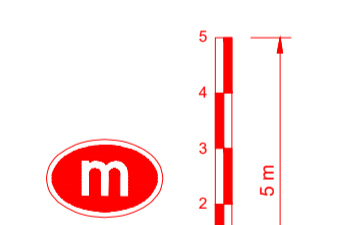


PROFILE VIEW: DGHES PROFILE VIEWS (373)
VERTICAL SCALE: 100
DATUM: 655.00

DGHES Access-Zam



PROFILE OF GRADE LINE



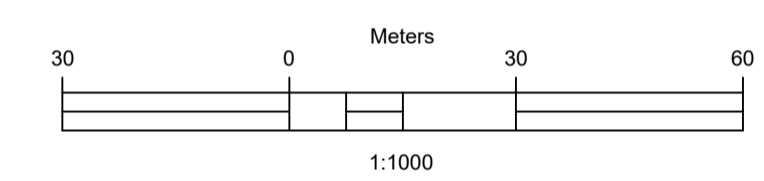
VERTICAL CURVES GRADE

FINAL ROAD LEVELS	H _L LEFT	H _C ON CL	H _R RIGHT	GROUND LEVELS AT GRADE LINE																													
				25+450	25+460	25+480	25+500	25+520	25+540	25+560	25+580	25+600	25+620	25+640	25+660	25+680	25+700	25+720	25+740	25+760	25+780	25+800	25+820	25+840	25+860	25+880	25+900	25+920	25+940	25+959			
	662.634	662.748	662.864	662.707	662.781	662.886	662.900	662.976	662.986	662.976	662.924	662.858	661.447	660.889	660.504	660.293	660.235	660.198	660.161	660.180	660.361	660.707	661.218	661.892	662.732	663.736	664.895	666.093	667.290	668.487	669.684	670.881	672.018

KILOMETER DISTANCE

LEGEND

- Vented/Non-vented Drift
- Road Boundary
- Road Centerline



No.	DESCRIPTION	BY	DATE

REVISIONS

CLIENT	ZAMBEZI RIVER AUTHORITY	
CONSULTANT	ZAMBEZI RIVER AUTHORITY	

PROJECT
CONSTRUCTION OF 28.2KM GRAVEL ROAD
MAAMBA-SIAMUSAMBA SCHOOL JUNCTION
TO DEVILS GORGE HYDRO-ELECTRIC
SCHEME SITE

DESIGNED	SIGNED	DATE
DRAWN	PS	Oct 2023
DESIGNED	PS	Oct 2023
CHECKED	AN	Oct 2023
APPROVED	AN	Oct 2023

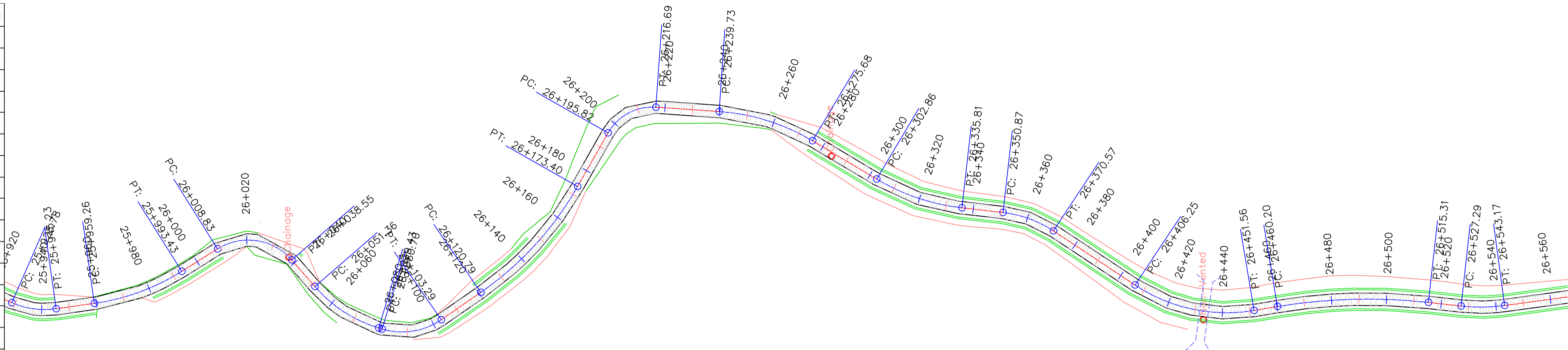
REVISION APPROVAL
TITLE

ROAD PLAN AND PROFILE

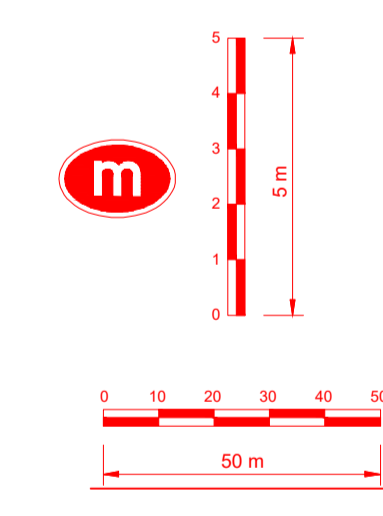
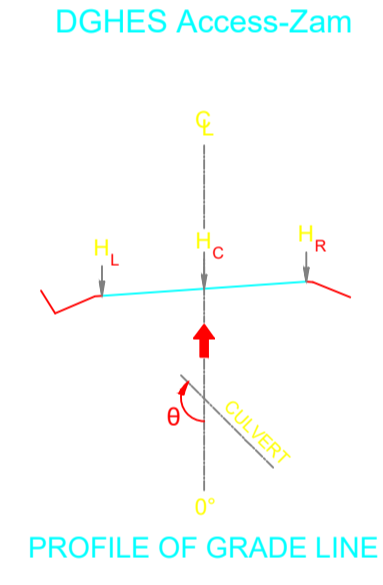
SCALE
HORIZONTAL SCALE: 1:1000
VERTICAL SCALE: 1:100

DRAWING NO. DGHES-PP-01
REVISION NO. 0

Station	Northing	Easting	Tangential Direction
25+960.00	8,014,330.5651m	493,806.4777m	S7° 11' 00"E
25+980.00	8,014,311.2293m	493,811.3873m	S21° 18' 39"E
26+000.00	8,014,293.5341m	493,820.6428m	S30° 47' 39"E
26+020.00	8,014,275.3129m	493,828.1154m	S0° 14' 16"E
26+040.00	8,014,258.1392m	493,819.3744m	S50° 29' 37"W
26+060.00	8,014,244.8663m	493,804.4527m	S40° 33' 03"W
26+080.00	8,014,227.5001m	493,794.8040m	S18° 11' 48"W
26+100.00	8,014,208.0486m	493,795.8404m	S25° 50' 24"E
26+120.00	8,014,191.2312m	493,806.6500m	S33° 20' 55"E
26+140.00	8,014,175.4603m	493,818.9103m	S42° 44' 39"E
26+160.00	8,014,161.9995m	493,833.6697m	S52° 31' 30"E
26+180.00	8,014,151.0804m	493,850.4086m	S59° 04' 39"E
26+200.00	8,014,140.4197m	493,867.2954m	S46° 11' 31"E
26+220.00	8,014,122.0062m	493,872.6244m	S5° 18' 38"W
26+240.00	8,014,102.0921m	493,870.7728m	S5° 30' 54"W
26+260.00	8,014,082.6595m	493,866.2888m	S20° 28' 17"W
26+280.00	8,014,064.9754m	493,857.0435m	S32° 11' 39"W
26+300.00	8,014,048.0505m	493,846.3877m	S32° 11' 39"W
26+320.00	8,014,030.2376m	493,837.4041m	S19° 30' 57"W
26+340.00	8,014,010.7508m	493,833.1051m	S7° 48' 57"W
26+360.00	8,013,991.1445m	493,829.4076m	S20° 22' 44"W
26+380.00	8,013,974.0748m	493,819.1171m	S34° 55' 16"W
26+400.00	8,013,957.6760m	493,807.6682m	S34° 55' 16"W
26+420.00	8,013,940.4813m	493,797.5666m	S21° 51' 45"W
26+440.00	8,013,921.0347m	493,793.3029m	S2° 52' 13"W
26+460.00	8,013,901.1488m	493,795.0211m	S8° 06' 42"E
26+480.00	8,013,881.2427m	493,796.8690m	S2° 26' 21"E



PROFILE VIEW: DGHES PROFILE VIEWS (374)
VERTICAL SCALE: 100
DATUM: 670.00



REFERENCE
Do not scale from this drawing, use stated dimensions only

DISCLAIMER
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GENERAL NOTES

LEGEND

- Vented/Non-vented Drift
- Road Boundary
- Road Centerline

Scale: 1:1000

No.	DESCRIPTION	BY	DATE

CLIENT
ZAMBEZI RIVER AUTHORITY

CONSULTANT
ZAMBEZI RIVER AUTHORITY

PROJECT
CONSTRUCTION OF 28.2KM GRAVEL ROAD
MAAMBA-SIAMUSAMBA SCHOOL JUNCTION
TO DEVILS GORGE HYDRO-ELECTRIC
SCHEME SITE

DESIGNED	SIGNED	DATE
DRAWN	PS	Oct 2023
DESIGNED	PS	Oct 2023
CHECKED	AN	Oct 2023
APPROVED	AN	Oct 2023

TITLE

ROAD PLAN AND PROFILE

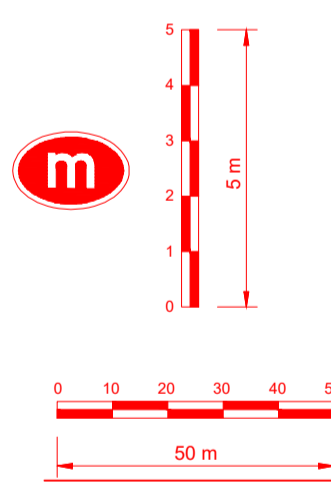
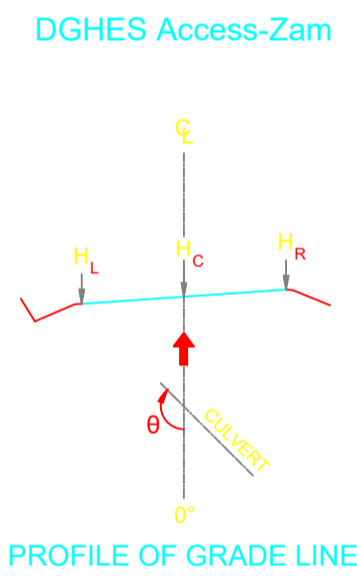
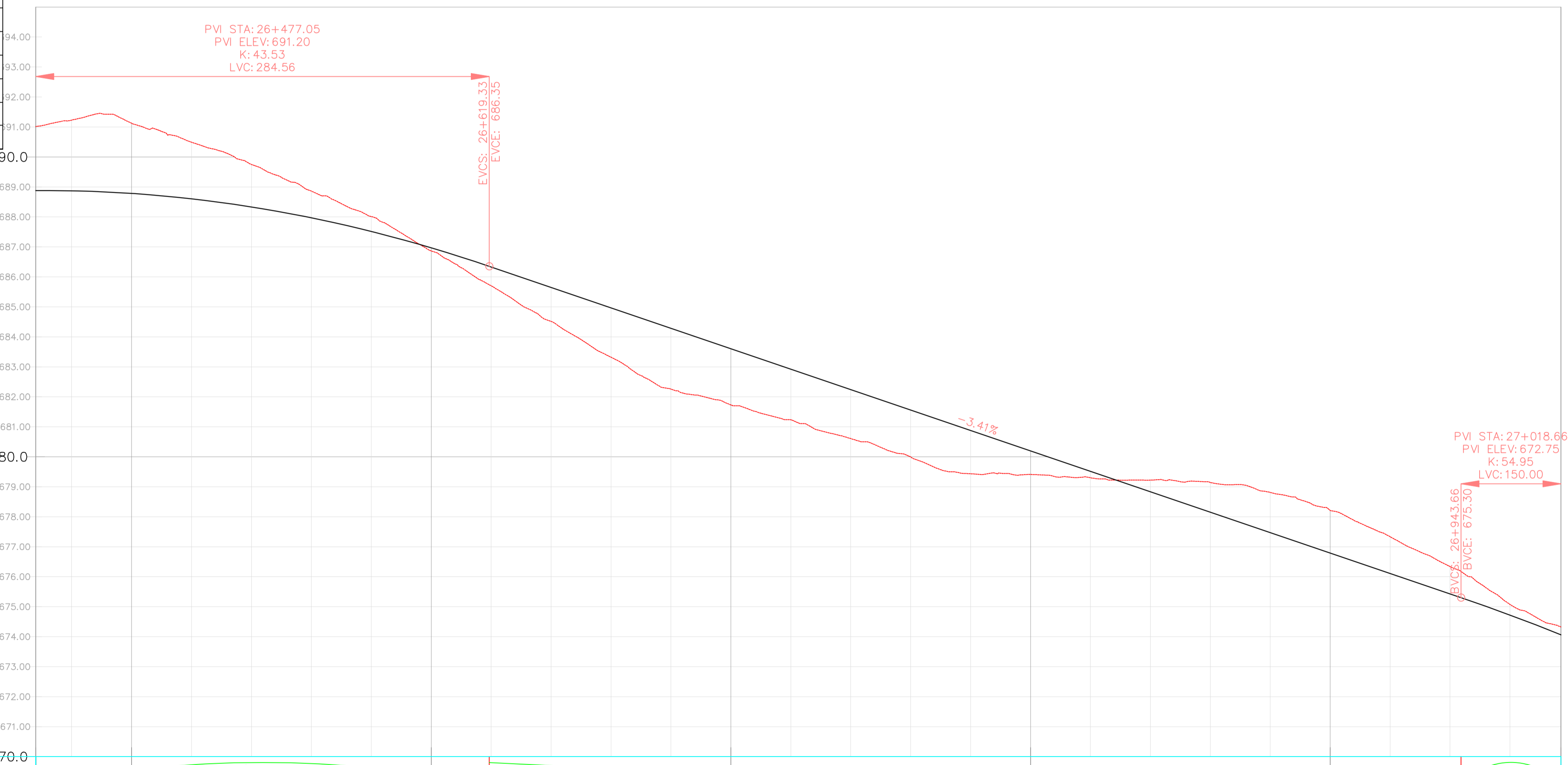
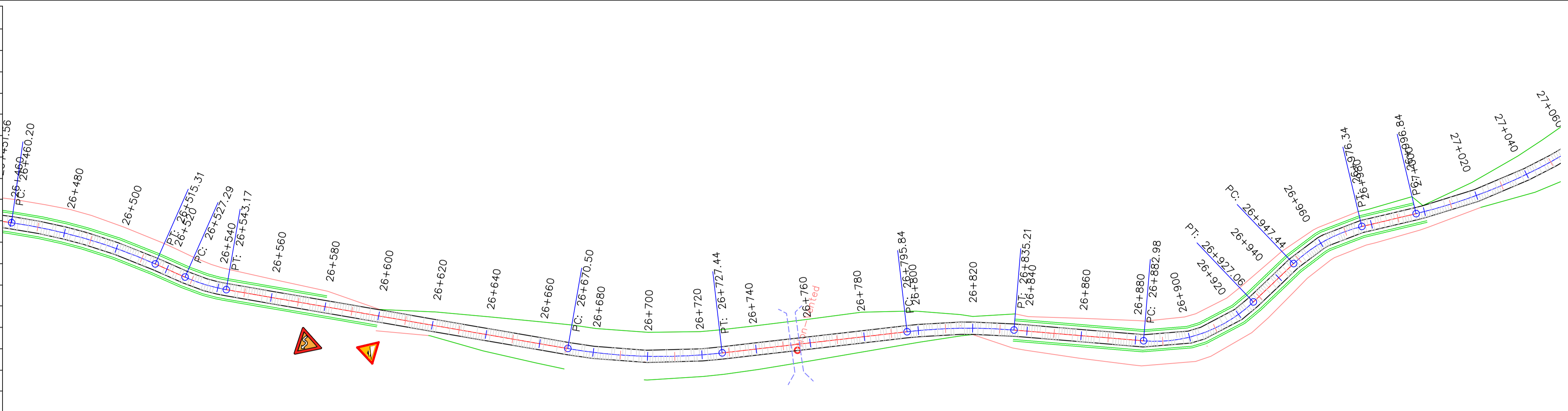
SCALE
HORIZONTAL SCALE: 1:1000
VERTICAL SCALE: 1:100

DRAWING NO.
DGHES-PP-01

REVISION NO.
0

FINAL ROAD LEVELS	VERTICAL CURVES GRADE		GROUND LEVELS AT GRADE LINE	KILOMETER DISTANCE
	H _L LEFT	H _C ON CL		
672.044	672.044	672.044	672.044	25+960
672.078	672.078	672.078	672.078	25+980
673.275	673.365	673.451	673.223	26+000
675.552	675.642	675.728	675.434	26+020
676.577	676.667	676.753	676.654	26+040
677.525	677.615	677.701	677.238	26+060
678.398	678.488	678.574	678.034	26+080
679.195	679.285	679.371	679.174	26+100
679.915	680.005	680.091	680.103	26+120
680.562	680.652	680.738	680.808	26+140
681.188	681.278	681.364	681.085	26+160
681.814	681.904	681.990	681.207	26+180
682.440	682.530	682.616	681.319	26+200
683.065	683.155	683.241	682.041	26+220
683.691	683.781	683.867	683.069	26+240
684.317	684.407	684.493	684.133	26+260
684.943	685.033	685.119	685.348	26+280
685.569	685.659	685.745	686.343	26+300
686.195	686.285	686.371	686.891	26+320
686.818	686.908	687.000	686.891	26+340
687.374	687.464	687.554	687.340	26+360
687.838	687.928	688.000	687.640	26+380
688.210	688.300	688.376	688.126	26+400
688.490	688.580	688.656	688.963	26+420
688.679	688.769	688.845	689.945	26+440
688.775	688.865	688.941	690.613	26+460
688.786	688.876	688.952	690.915	26+480
688.786	688.876	688.952	691.014	26+468

Station	Northing	Easting	Tangential Direction
26+480.00	8,013,881.2427m	493,796.8690m	S2° 26' 21"E
26+500.00	8,013,861.2516m	493,796.7205m	S3° 17' 26"W
26+520.00	8,013,841.3674m	493,794.6313m	S7° 40' 38"W
26+540.00	8,013,821.4613m	493,793.2061m	S3° 35' 53"E
26+560.00	8,013,801.5789m	493,795.3617m	S6° 24' 39"E
26+580.00	8,013,781.7040m	493,797.5949m	S6° 24' 39"E
26+600.00	8,013,761.8291m	493,799.8280m	S6° 24' 39"E
26+620.00	8,013,741.9541m	493,802.0611m	S6° 24' 39"E
26+640.00	8,013,722.0792m	493,804.2942m	S6° 24' 39"E
26+660.00	8,013,702.2042m	493,806.5273m	S6° 24' 39"E
26+680.00	8,013,682.3580m	493,808.9640m	S9° 07' 53"E
26+700.00	8,013,662.8029m	493,813.1392m	S14° 51' 39"E
26+720.00	8,013,643.7604m	493,819.2258m	S20° 35' 26"E
26+740.00	8,013,625.2607m	493,826.8227m	S22° 43' 19"E
26+760.00	8,013,606.8129m	493,834.5479m	S22° 43' 19"E
26+780.00	8,013,588.3651m	493,842.2731m	S22° 43' 19"E
26+800.00	8,013,569.9008m	493,849.9582m	S21° 31' 45"E
26+820.00	8,013,550.9606m	493,856.3561m	S15° 47' 59"E
26+840.00	8,013,531.4871m	493,860.8875m	S11° 26' 35"E
26+860.00	8,013,511.8847m	493,864.8554m	S11° 26' 35"E
26+880.00	8,013,492.2822m	493,868.8232m	S11° 26' 35"E
26+900.00	8,013,473.5193m	493,875.4269m	S30° 07' 18"E
26+920.00	8,013,458.5390m	493,888.4930m	S52° 04' 11"E
26+940.00	8,013,448.0830m	493,905.5236m	S59° 49' 09"E
26+960.00	8,013,436.8445m	493,921.9969m	S46° 40' 46"E
26+980.00	8,013,420.8558m	493,933.8551m	S29° 34' 37"E
27+000.00	8,013,403.4744m	493,943.7487m	S30° 28' 56"E



VERTICAL CURVES GRADE

FINAL ROAD LEVELS	H _L	LEFT	Kilometer Distance																										
			26+468	26+480	26+500	26+520	26+540	26+560	26+580	26+600	26+620	26+640	26+660	26+680	26+700	26+720	26+740	26+760	26+780	26+800	26+820	26+840	26+860	26+880	26+900	26+920	26+940	26+960	26+977
H _L	LEFT		688.786	688.780	688.693	688.514	688.243	687.880	687.425	686.878	686.240	685.558	684.877	684.195	683.514	682.832	682.151	681.469	680.788	680.106	679.425	678.743	678.062	677.381	676.699	676.018	675.336	674.650	673.974
H _C	ON CL		688.878	688.870	688.763	688.604	688.333	687.970	687.515	686.968	686.330	685.648	684.967	684.285	683.604	682.922	682.241	681.559	680.878	680.196	679.515	678.833	678.152	677.471	676.789	676.108	675.426	674.720	674.064
H _R	RIGHT		688.786	688.780	688.693	688.514	688.243	687.880	687.425	686.878	686.240	685.558	684.877	684.195	683.514	682.832	682.151	681.469	680.788	680.106	679.425	678.743	678.062	677.381	676.699	676.018	675.336	674.630	673.974
GROUND LEVELS AT GRADE LINE			691.014	691.229	691.124	690.492	689.751	688.882	688.012	686.865	685.703	684.515	683.320	682.256	681.730	681.235	680.607	679.995	679.434	679.411	679.302	679.222	679.144	679.062	678.981	678.912	678.841	678.778	678.726
KILOMETER DISTANCE			26+468	26+480	26+500	26+520	26+540	26+560	26+580	26+600	26+620	26+640	26+660	26+680	26+700	26+720	26+740	26+760	26+780	26+800	26+820	26+840	26+860	26+880	26+900	26+920	26+940	26+960	26+977

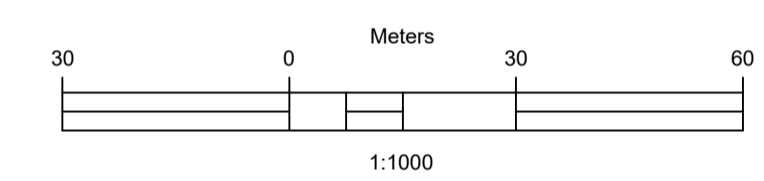
REFERENCE
Do not scale from this drawing, use stated dimensions only

DISCLAIMER
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GENERAL NOTES

LEGEND

- Vented/Non-vented Drift
- Road Boundary
- Road Centerline



No.	DESCRIPTION	BY	DATE

REVISIONS

CLIENT
ZAMBEZI RIVER AUTHORITY

CONSULTANT
ZAMBEZI RIVER AUTHORITY

PROJECT
CONSTRUCTION OF 28.2KM GRAVEL ROAD MAAMBA-SIAMUSAMBA SCHOOL JUNCTION TO DEVILS GORGE HYDRO-ELECTRIC SCHEME SITE

DESIGNED	SIGNED	DATE
DRAWN	PS	Oct 2023
DESIGNED	PS	Oct 2023
CHECKED	AN	Oct 2023
APPROVED	AN	Oct 2023

REVISION APPROVAL
TITLE

ROAD PLAN AND PROFILE

SCALE
HORIZONTAL SCALE: 1:1000
VERTICAL SCALE: 1:100

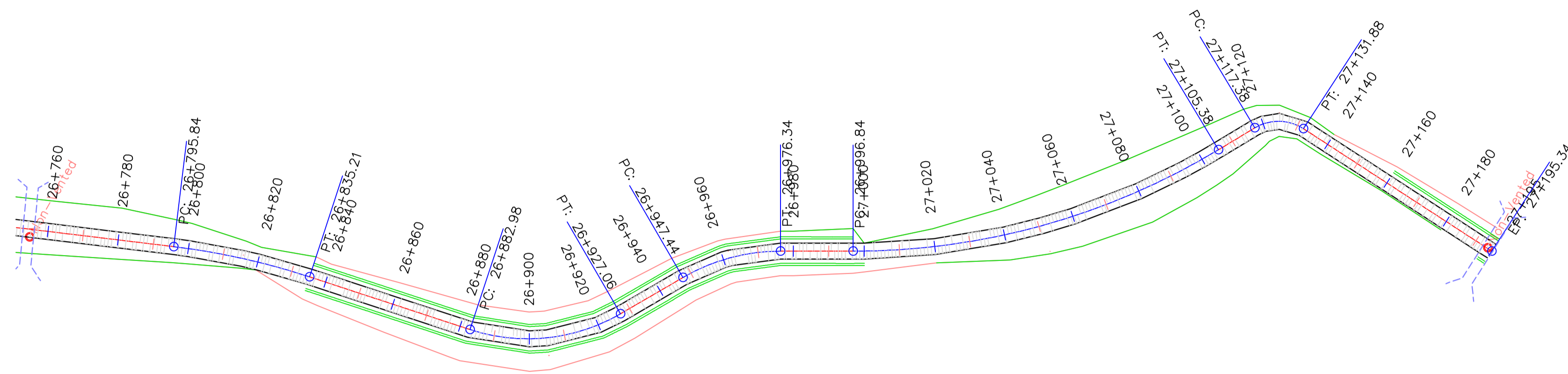
DRAWING NO. **DGHES-PP-01**
REVISION NO. **0**

REFERENCE
Do not scale from this drawing, use stated dimensions only

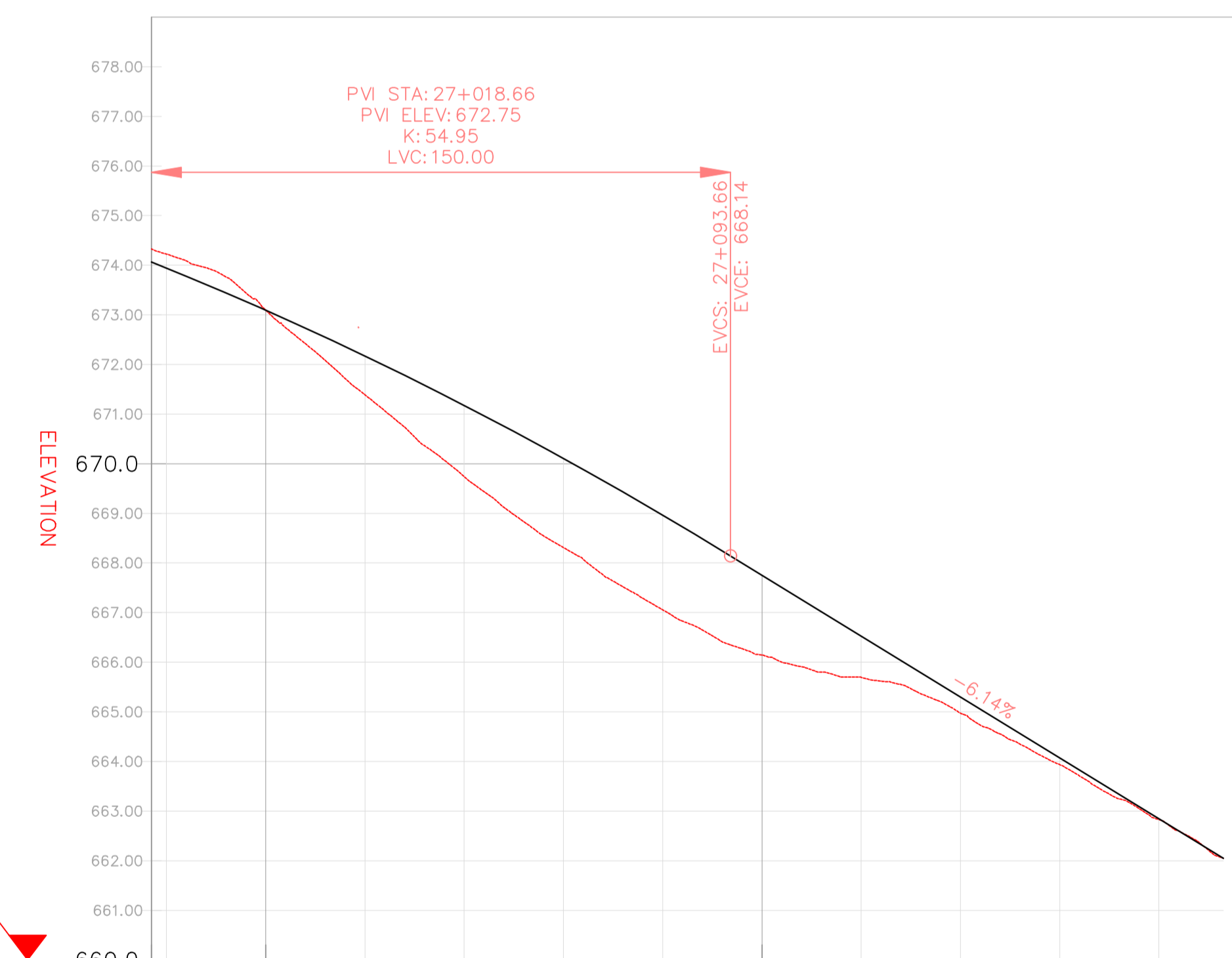
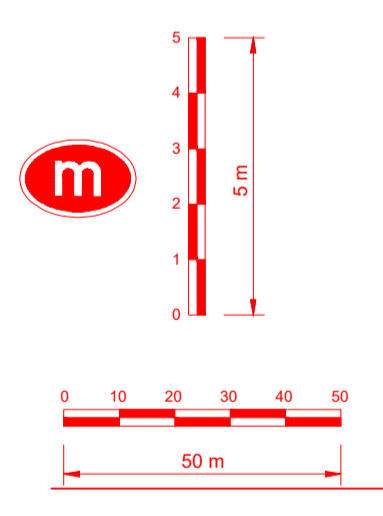
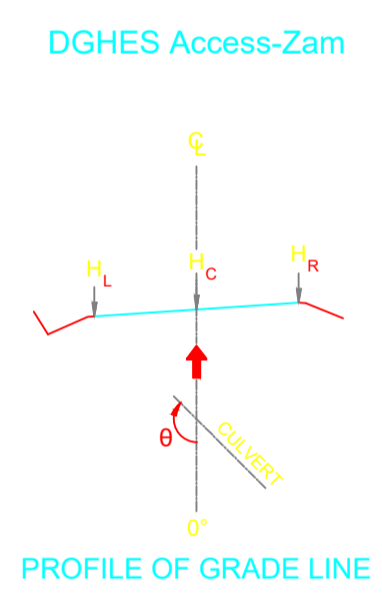
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GENERAL NOTES

Station	Northing	Easting	Tangential Direction
26+900.00	8,013,473.5193m	493,875.4269m	S30° 07' 18"E
26+920.00	8,013,458.5390m	493,888.4930m	S52° 04' 11"E
26+940.00	8,013,448.0830m	493,905.5236m	S59° 49' 09"E
26+960.00	8,013,436.8445m	493,921.9969m	S46° 40' 46"E
26+980.00	8,013,420.8558m	493,933.8551m	S29° 34' 37"E
27+000.00	8,013,403.4744m	493,943.7487m	S30° 28' 56"E
27+020.00	8,013,386.7742m	493,954.7382m	S36° 12' 42"E
27+040.00	8,013,371.2545m	493,967.3401m	S41° 56' 29"E
27+060.00	8,013,357.0705m	493,981.4284m	S47° 40' 15"E
27+080.00	8,013,344.3639m	493,996.8624m	S53° 24' 02"E
27+100.00	8,013,333.2615m	494,013.4878m	S59° 07' 48"E
27+120.00	8,013,323.1810m	494,030.7435m	S49° 05' 45"E
27+140.00	8,013,304.5061m	494,034.7124m	S3° 24' 42"W
27+160.00	8,013,284.5416m	494,033.5222m	S3° 24' 42"W
27+180.00	8,013,264.5770m	494,032.3321m	S3° 24' 42"W
27+195.34	8,013,249.2661m	494,031.4193m	S3° 24' 42"W



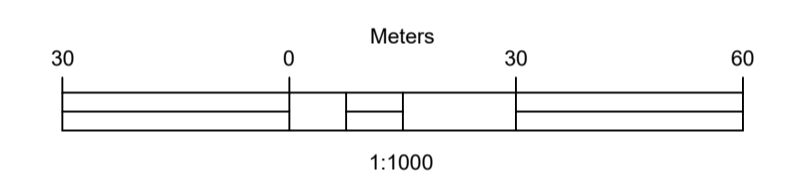
PROFILE VIEW: DGHES PROFILE VIEWS (376)
VERTICAL SCALE: 100
DATUM: 660.00



VERTICAL CURVES GRADE			26+977	26+980	27+000	27+020	27+040	27+060	27+080	27+100	27+120	27+140	27+160	27+180	27+195
FINAL ROAD LEVELS	H _L	LEFT	673.974	673.853	673.003	672.080	671.084	670.016	668.874	667.684	666.436	665.209	663.982	662.754	-0.090
	H _C	ON CL	674.064	673.943	673.093	672.170	671.174	670.106	668.964	667.754	666.506	665.299	664.072	662.844	-0.090
	H _R	RIGHT	673.974	673.853	673.003	672.080	671.084	670.016	668.874	667.684	666.436	665.209	663.982	662.754	-0.090
GROUND LEVELS AT GRADE LINE			674.326	674.224	673.092	671.390	669.742	668.313	667.054	666.147	665.697	664.972	663.936	662.827	
KILOMETER DISTANCE			26+977	26+980	27+000	27+020	27+040	27+060	27+080	27+100	27+120	27+140	27+160	27+180	27+195

LEGEND

- Vented/Non-vented Drift
- Road Boundary
- Road Centerline



No.	DESCRIPTION	BY	DATE

CLIENT: ZAMBEZI RIVER AUTHORITY

CONSULTANT: ZAMBEZI RIVER AUTHORITY

PROJECT: CONSTRUCTION OF 28.2KM GRAVEL ROAD MAAMBA-SIAMUSAMBA SCHOOL JUNCTION TO DEVILS GORGE HYDRO-ELECTRIC SCHEME SITE

DESIGNED	SIGNED	DATE
DRAWN	PS	Oct 2023
DESIGNED	PS	Oct 2023
CHECKED	AN	Oct 2023
APPROVED	AN	Oct 2023

REVISION APPROVAL

TITLE: ROAD PLAN AND PROFILE

SCALE: HORIZONTAL SCALE: 1:1000 VERTICAL SCALE: 1:100

DRAWING NO.: DGHES-PP-01

REVISION NO.: 0