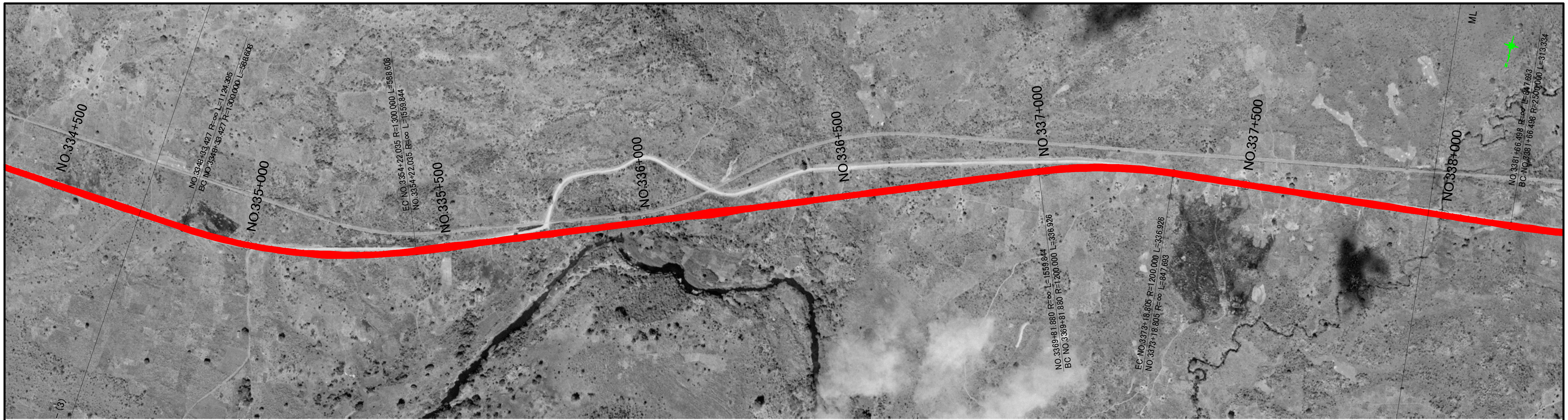
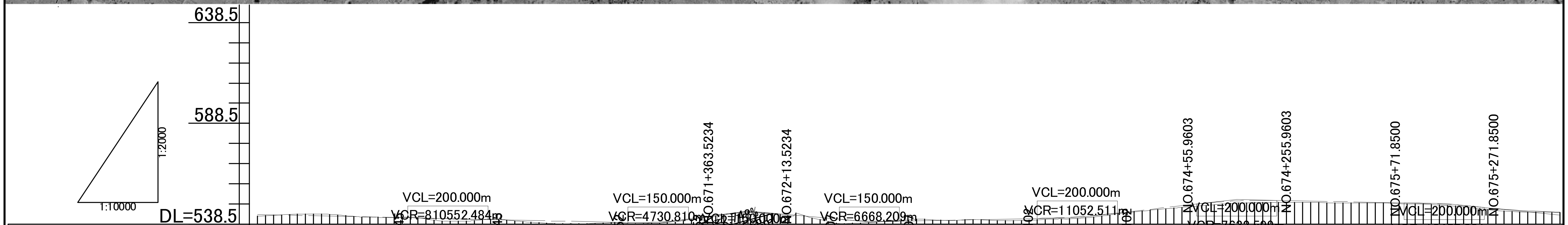




Gradient

543.192 — i=0.447% L=715.066m — NO.670+93.7345 — 541.074 — NO.670+293.7345 — i=0.422% L=523.221m — NO.671+141.955 — 538.864 — NO.671+291.955 — 544.954 — i=1.814% L=303.677m — NO.672+167.200 — 539.444 — NO.672+317.200 — i=0.435% L=517.109m — NO.673+159.3102 — 541.693 — NO.673+359.3102 — i=2.245% L=396.650m — 550.596 — i=0.376% L=515.890m — 548.658 — i=1.981% L=288.150m — 542.949

Station	Accumlative Length	Ground Height	Proposal Height
NO.334+720	334+720.0	542.43	543.192
NO.334+800	334+800.0	543.10	542.834
NO.334+900	334+900.0	543.25	542.387
NO.335+000	335+000.0	541.85	541.940
NO.335+100	335+100.0	541.95	541.493
NO.335+200	335+200.0	539.87	541.053
NO.335+300	335+300.0	540.90	540.625
NO.335+400	335+400.0	539.35	540.203
NO.335+500	335+500.0	538.54	539.781
NO.335+600	335+600.0	539.03	539.358
NO.335+700	335+700.0	538.79	539.292
NO.335+800	335+800.0	540.68	541.147
NO.335+900	335+900.0	543.66	543.693
NO.336+000	336+000.0	543.41	543.811
NO.336+100	336+100.0	541.42	542.024
NO.336+200	336+200.0	538.77	540.290
NO.336+300	336+300.0	540.05	539.717
NO.336+400	336+400.0	540.50	540.130
NO.336+500	336+500.0	540.67	540.565
NO.336+600	336+600.0	540.20	541.000
NO.336+700	336+700.0	540.92	541.510
NO.336+800	336+800.0	541.99	542.766
NO.336+900	336+900.0	544.54	544.851
NO.337+000	337+000.0	546.32	547.096
NO.337+100	337+100.0	548.02	549.213
NO.337+200	337+200.0	549.17	550.226
NO.337+300	337+300.0	549.11	550.055
NO.337+400	337+400.0	548.83	549.679
NO.337+500	337+500.0	548.93	549.304
NO.337+600	337+600.0	548.33	548.896
NO.337+700	337+700.0	547.36	547.893
NO.337+800	337+800.0	545.20	546.135
NO.337+900	337+900.0	544.35	544.809
NO.337+960	337+960.0	[illegible]	544.471

JAPAN INTERNATIONAL COOPERATION AGENCY

NATIONAL ROAD ADMINISTRATION

REMARKS:

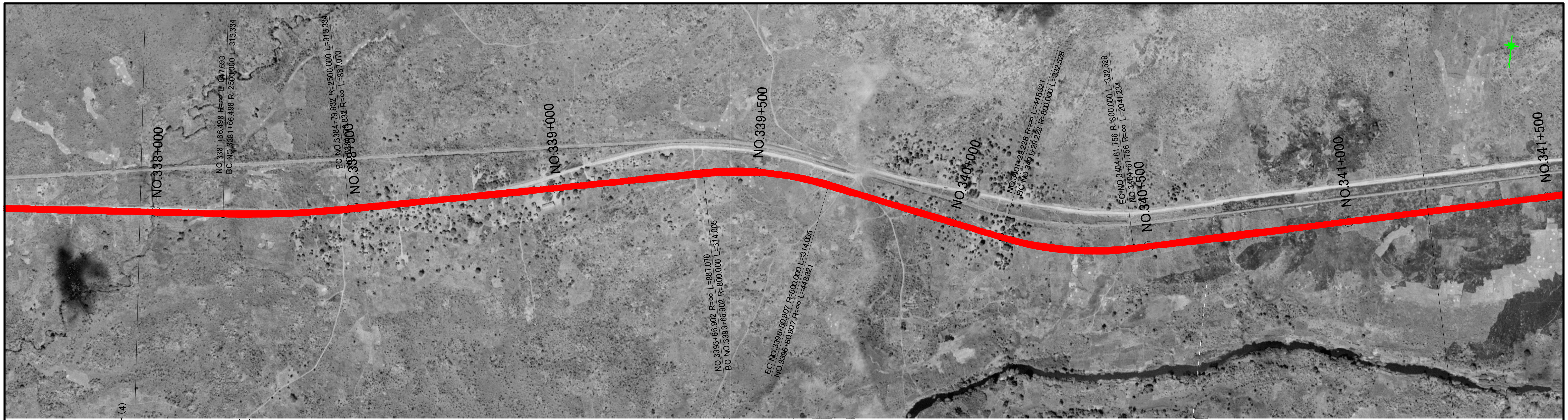
THE STUDY ON UPGRADING OF NAMPULA - CUAMBA ROAD

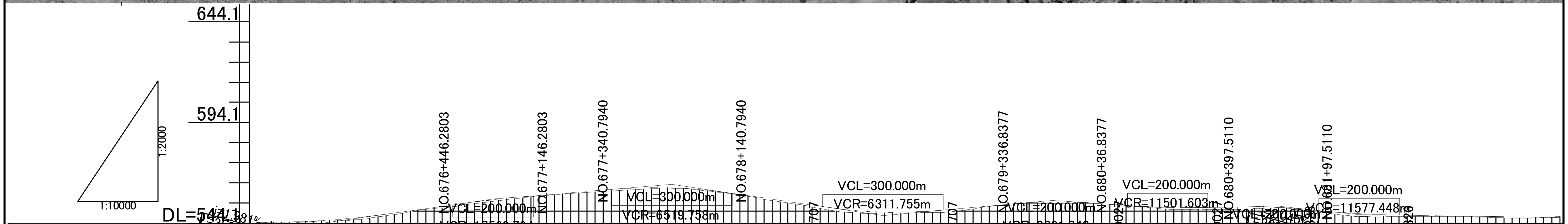
ORINTAL CONSULTANTS CO., LTD.
JAPAN ENGINEERING CONSULTANTS CO., LTD.

	PREPARED BY	CHECKED BY	APPROVED BY
NAME			
SIGNATURE			
DATE			

DRAWING TITLE: Plan and Profile (112/115)

SCALE	SHEET NO.	DRAWING NO.	REV. NO.
1: 10,000		113	-





Gradient: i=1.181% L=359.543m · 542.949 · 541.534 · i=2.791% L=514.887m · 555.907 · i=1.653% L=444.514m · 563.256 · i=2.948% L=525.377m · NO.678+366.1707 · 547.766 · i=1.805% L=420.667m · NO.679+166.1707 · 555.358 · i=1.374% L=287.165m · NO.680+124.0027 · 551.412 · i=0.365% L=233.508m · NO.680+324.0027 · 552.409 · NO.681+100 · 548.268 · NO.681+300.0326 · i=0.317% L=499.967m

Station	Accumlative Length	Ground Height	Proposal Height
NO.337+960	337+960.0	544.20	544.471
NO.338+000	338+000.0	544.10	544.437
NO.338+100	338+100.0	544.84	545.020
NO.338+200	338+200.0	545.62	546.557
NO.338+300	338+300.0	548.23	549.032
NO.338+400	338+400.0	551.29	551.824
NO.338+500	338+500.0	553.68	554.533
NO.338+600	338+600.0	556.14	556.734
NO.338+700	338+700.0	558.09	558.448
NO.338+800	338+800.0	559.52	560.102
NO.338+900	338+900.0	560.64	561.486
NO.339+000	339+000.0	561.35	561.464
NO.339+100	339+100.0	559.53	559.908
NO.339+200	339+200.0	556.79	557.088
NO.339+300	339+300.0	553.46	554.139
NO.339+400	339+400.0	549.90	551.282
NO.339+500	339+500.0	548.89	549.662
NO.339+600	339+600.0	549.09	549.626
NO.339+700	339+700.0	549.99	551.084
NO.339+800	339+800.0	552.62	552.889
NO.339+900	339+900.0	553.83	554.376
NO.340+000	340+000.0	553.90	554.382
NO.340+100	340+100.0	553.12	553.116
NO.340+200	340+200.0	551.27	551.992
NO.340+300	340+300.0	550.88	551.714
NO.340+400	340+400.0	550.88	552.053
NO.340+500	340+500.0	551.60	551.785
NO.340+600	340+600.0	549.49	550.313
NO.340+700	340+700.0	547.31	548.700
NO.340+800	340+800.0	547.22	547.950
NO.340+900	340+900.0	547.32	547.633
NO.341+000	341+000.0	547.01	547.316
NO.341+100	341+100.0	546.42	546.999
[illegible]	[illegible]	[illegible]	[illegible]

JAPAN INTERNATIONAL COOPERATION AGENCY

NATIONAL ROAD ADMINISTRATION

REMARKS:

THE STUDY ON UPGRADING OF NAMPULA - CUAMBA ROAD

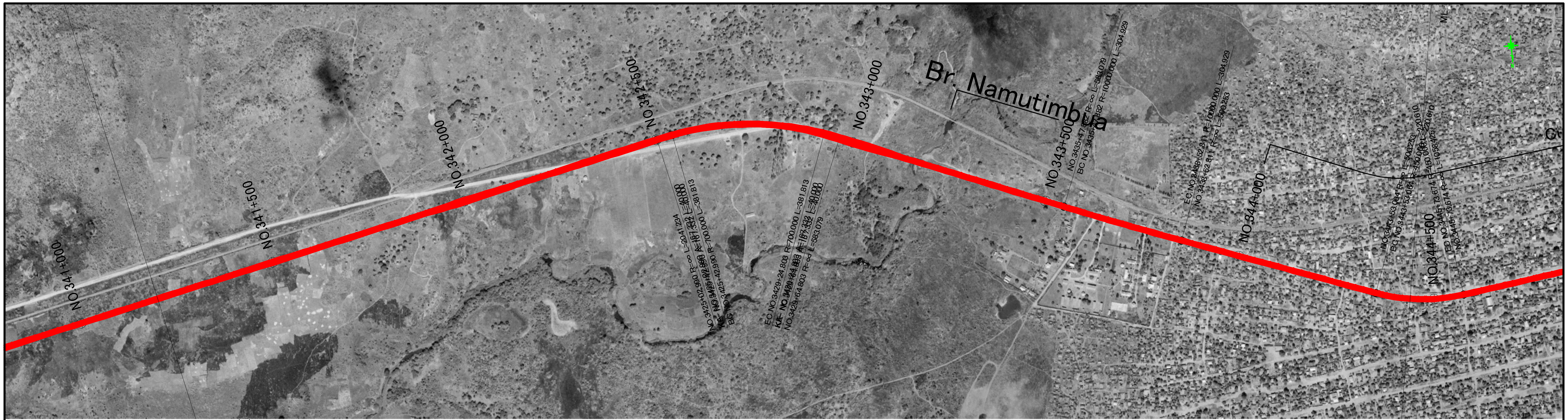
ORINTAL CONSULTANTS CO., LTD.
JAPAN ENGINEERING CONSULTANTS CO., LTD.

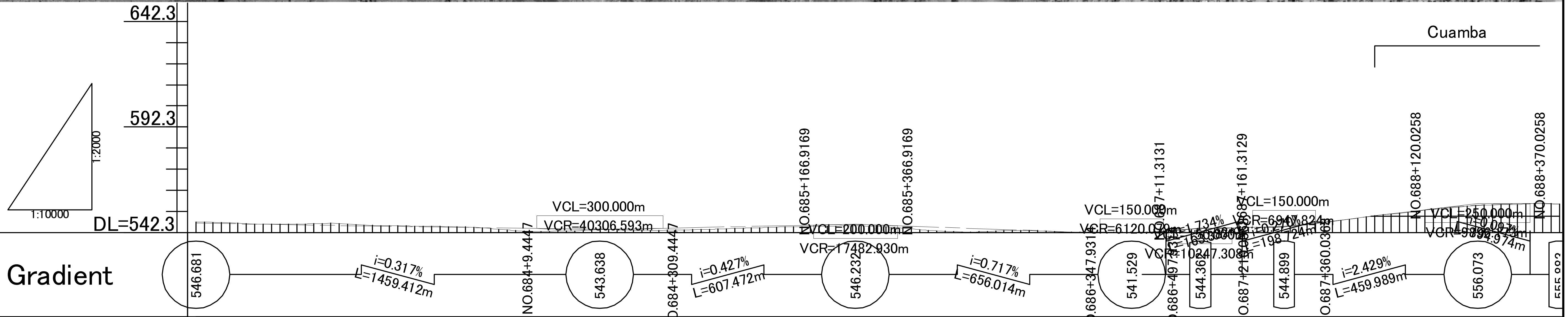
	PREPARED BY	CHECKED BY	APPROVED BY
NAME			
SIGNATURE			
DATE			

DRAWING TITLE

Plan and Profile (113/115)

SCALE	SHEET NO.	DRAWING NO.	REV. NO.
1: 10,000		114	-





Gradient

546.681 — i=0.317% L=1459.412m — 543.638 — i=0.427% L=607.472m — 546.232 — i=0.717% L=656.014m — 541.529 — i=1.734% — 544.361 — i=0.271% L=198.724m — 544.899 — i=2.429% L=459.989m — 556.073 — i=0.097% — 555.982

Station	Accumlative Length	Ground Height	Proposal Height
NO.341+200	341+200.0	547.24	546.681
NO.341+300	341+300.0	546.62	546.364
NO.341+400	341+400.0	546.14	546.047
NO.341+500	341+500.0	546.58	545.730
NO.341+600	341+600.0	545.82	545.412
NO.341+700	341+700.0	545.40	545.095
NO.341+800	341+800.0	545.08	544.778
NO.341+900	341+900.0	544.21	544.461
NO.342+000	342+000.0	542.74	544.143
NO.342+100	342+100.0	543.11	543.928
NO.342+200	342+200.0	543.64	543.959
NO.342+300	342+300.0	543.32	544.239
NO.342+400	342+400.0	543.69	544.665
NO.342+500	342+500.0	544.32	545.092
NO.342+600	342+600.0	544.95	545.519
NO.342+700	342+700.0	545.26	545.915
NO.342+800	342+800.0	545.33	545.866
NO.342+900	342+900.0	543.95	545.278
NO.343+000	343+000.0	542.70	544.561
NO.343+100	343+100.0	542.88	543.844
NO.343+200	343+200.0	543.12	543.127
NO.343+300	343+300.0	542.55	542.410
NO.343+400	343+400.0	542.33	541.914
NO.343+500	343+500.0	542.97	542.865
NO.343+600	343+600.0	544.34	544.215
NO.343+700	343+700.0	544.81	544.669
NO.343+800	343+800.0	545.16	545.522
NO.343+900	343+900.0	547.59	547.691
NO.344+000	344+000.0	550.20	550.120
NO.344+100	344+100.0	552.30	552.550
NO.344+200	344+200.0	554.36	554.656
NO.344+300	344+300.0	555.42	555.771
NO.344+400	344+400.0	556.16	555.922

JAPAN INTERNATIONAL COOPERATION AGENCY

NATIONAL ROAD ADMINISTRATION

REMARKS:

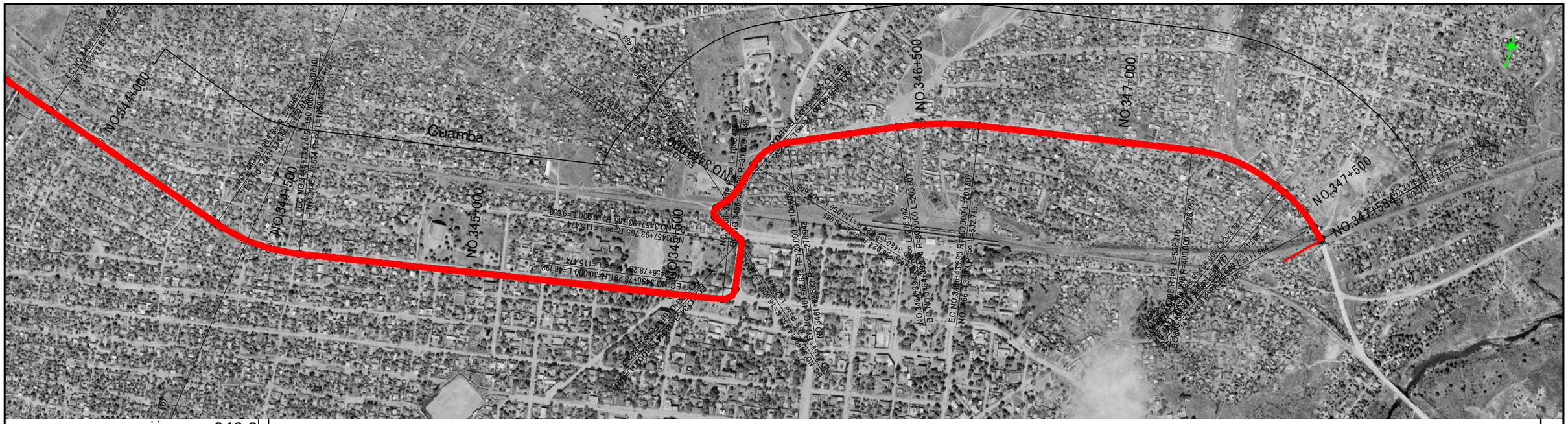
THE STUDY ON UPGRADING OF NAMPULA - CUAMBA ROAD

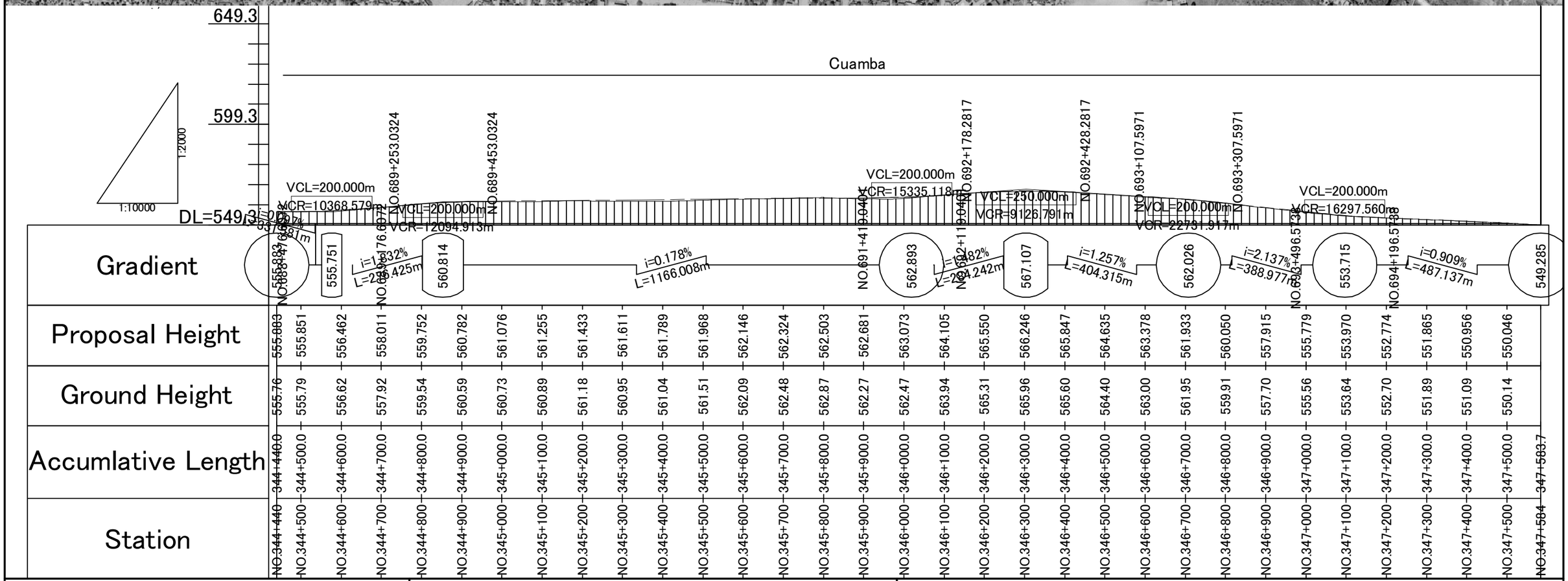
ORINTAL CONSULTANTS CO., LTD.
JAPAN ENGINEERING CONSULTANTS CO., LTD.

	PREPARED BY	CHECKED BY	APPROVED BY
NAME			
SIGNATURE			
DATE			

DRAWING TITLE: Plan and Profile (114/115)

SCALE	SHEET NO.	DRAWING NO.	REV. NO.
1: 10,000		115	-





JICA JAPAN INTERNATIONAL COOPERATION AGENCY

ANE NATIONAL ROAD ADMINISTRATION

REMARKS:

THE STUDY ON UPGRADING OF NAMPULA - CUAMBA ROAD

ORINTAL CONSULTANTS CO., LTD.
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	PREPARED BY	CHECKED BY	APPROVED BY
NAME			
SIGNATURE			
DATE			

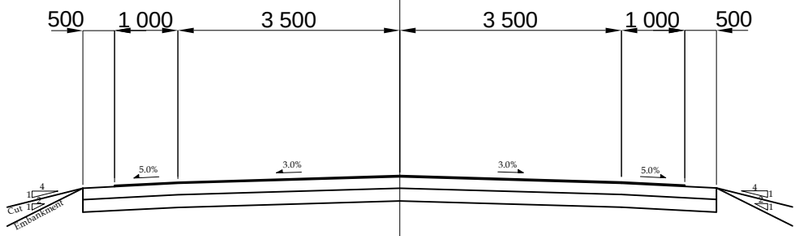
DRAWING TITLE

Plan and Profile (115/115)

SCALE	SHEET NO.	DRAWING NO.	REV. NO.
1: 10,000		116	-

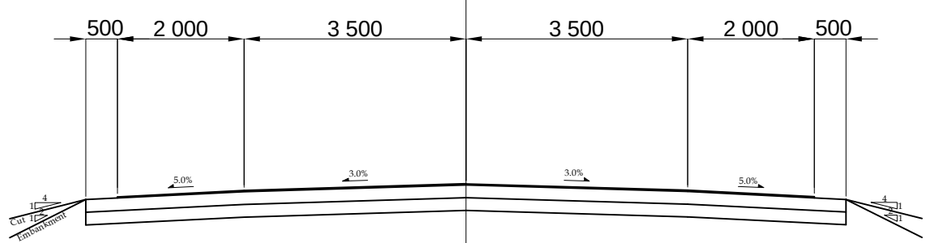
N13 Typical Cross Section for Normal Section

CL



N13 Typical Cross Section for Village Section

CL



JICA JAPAN INTERNATIONAL COOPERATION AGENCY

NATIONAL ROAD ADMINISTRATION

REMARKS:

THE STUDY ON UPGRADING OF NAMPULA - CUAMBA ROAD

ORINTAL CONSULTANTS CO., LTD.
JAPAN ENGINEERING CONSULTANTS CO., LTD.

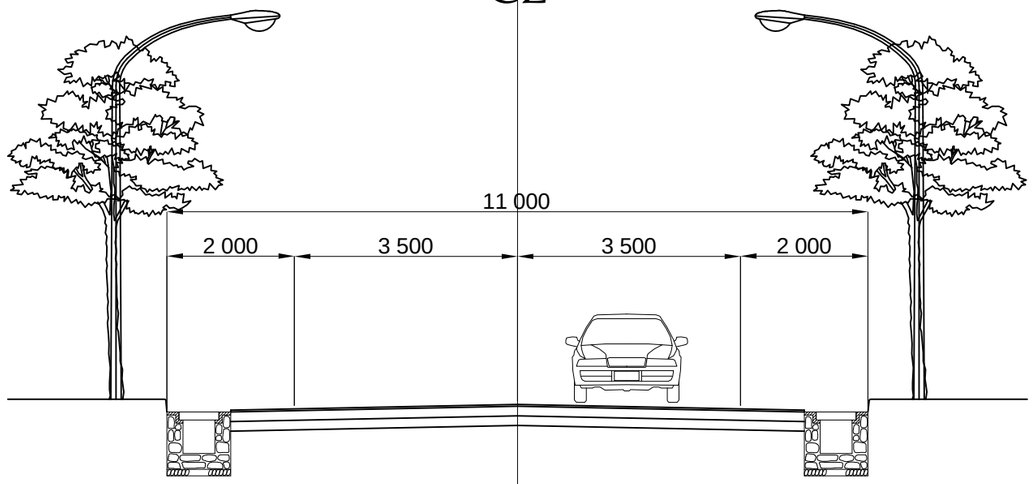
	PREPARED BY	CHECKED BY	APPROVED BY
NAME			
SIGNATURE			
DATE			

DRAWING TITLE: Typical Cross Section (1)

SCALE	SHEET NO.	DRAWING NO.	REV. NO.
1: 100		117	-

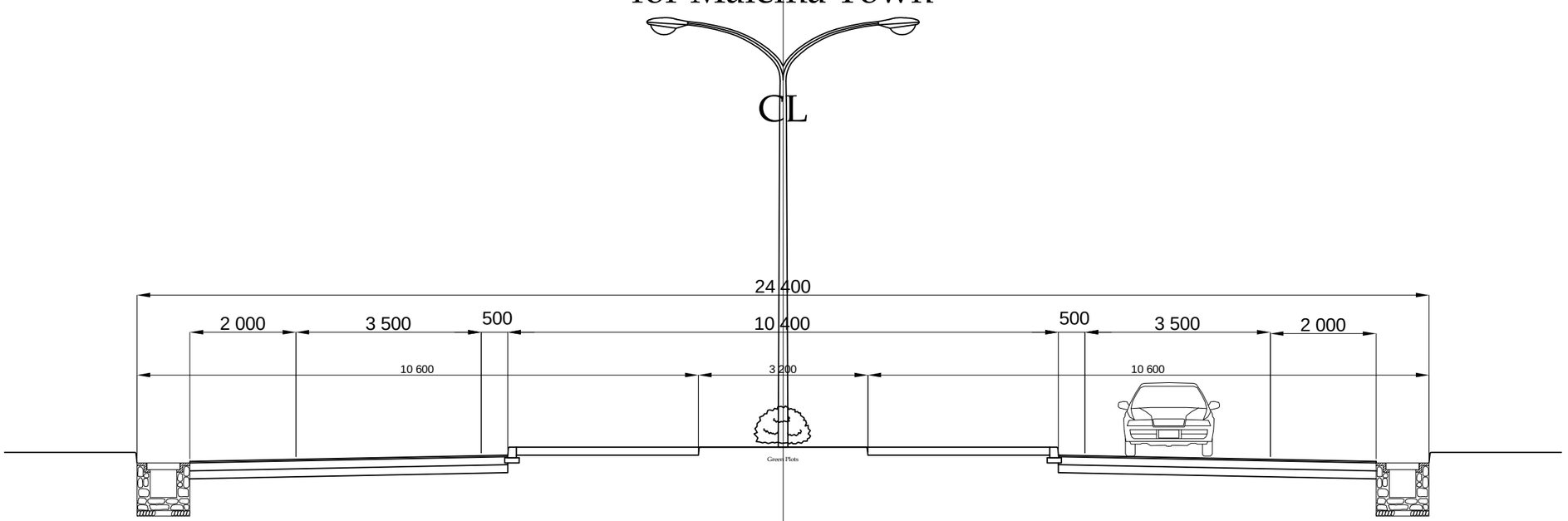
Typical Cross Section for Ribaue Town

CL



Typical Cross Section for Malema Town

CL



JAPAN INTERNATIONAL COOPERATION AGENCY

NATIONAL ROAD ADMINISTRATION

REMARKS:

THE STUDY ON UPGRADING OF NAMPULA - CUAMBA ROAD

ORIENTAL CONSULTANTS CO., LTD.
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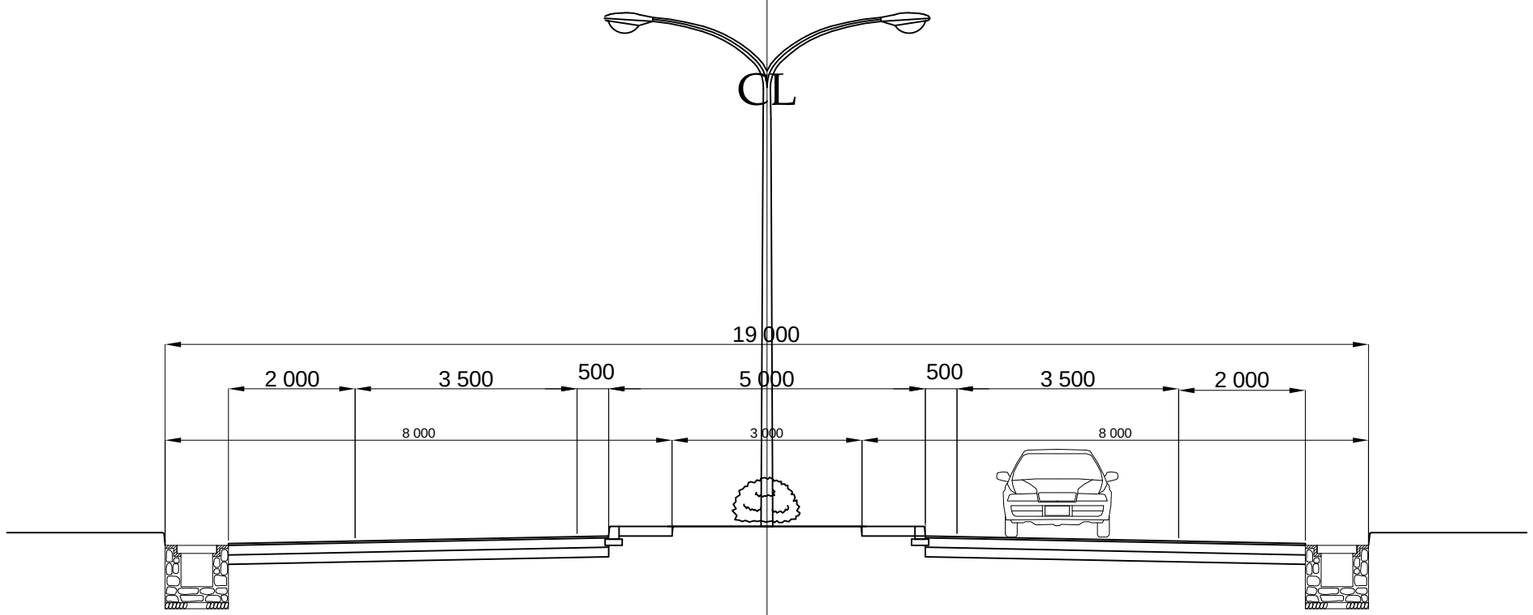
	PREPARED BY	CHECKED BY	APPROVED BY
NAME			
SIGNATURE			
DATE			

DRAWING TITLE

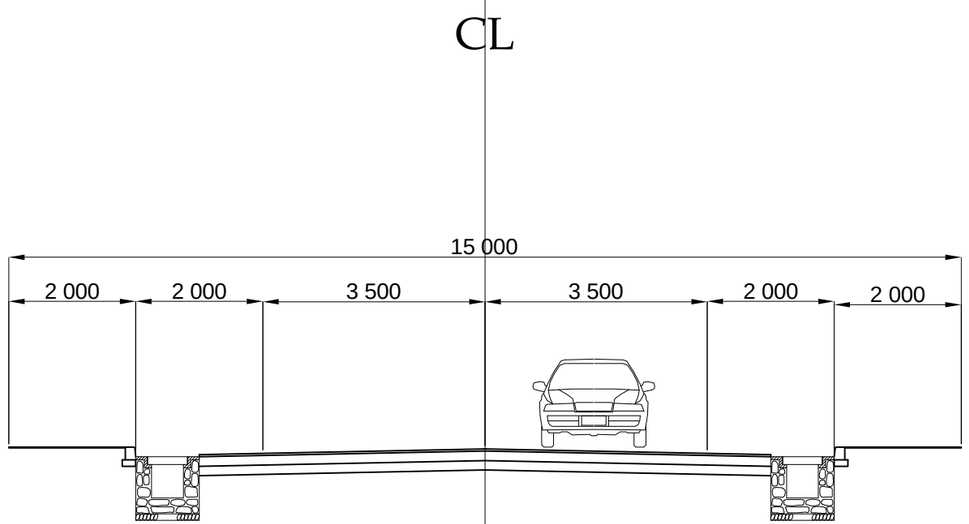
Typical Cross Section (2)

SCALE	SHEET NO.	DRAWING NO.	REV. NO.
1: 100		118	-

Typical Cross Section
for Cuamba Town



Typical Cross Section
for Nampula, Rapale, Namina, Namigonha Town



JAPAN INTERNATIONAL COOPERATION AGENCY

NATIONAL ROAD ADMINISTRATION

REMARKS:

THE STUDY ON UPGRADING OF NAMPULA - CUAMBA ROAD

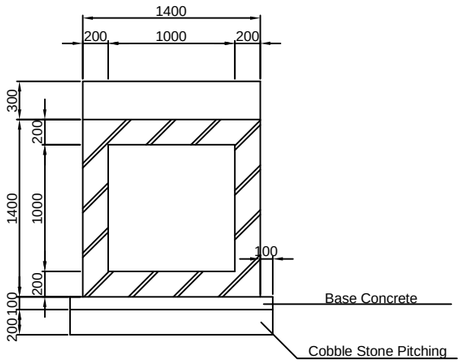
ORIENTAL CONSULTANTS CO., LTD.
JAPAN ENGINEERING CONSULTANTS CO., LTD.

	PREPARED BY	CHECKED BY	APPROVED BY
NAME			
SIGNATURE			
DATE			

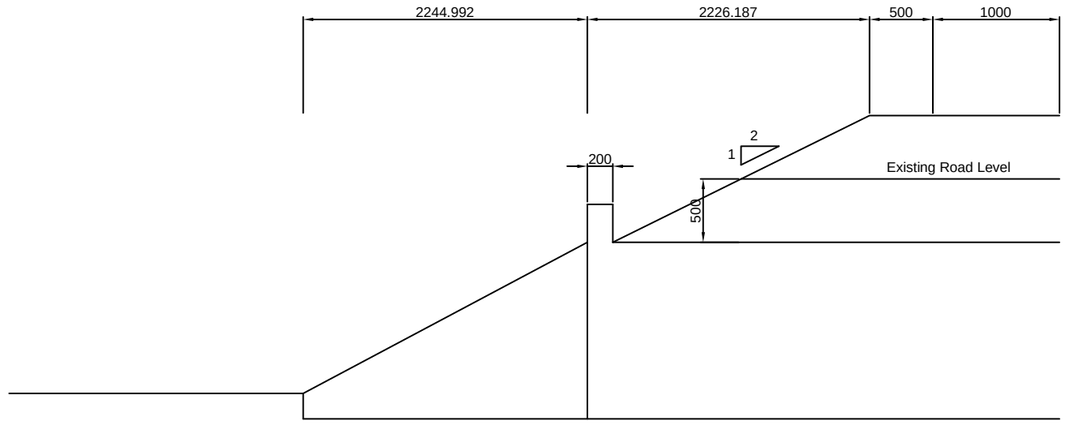
DRAWING TITLE

Typical Cross Section (3)

SCALE	SHEET NO.	DRAWING NO.	REV. NO.
1: 100		119	-

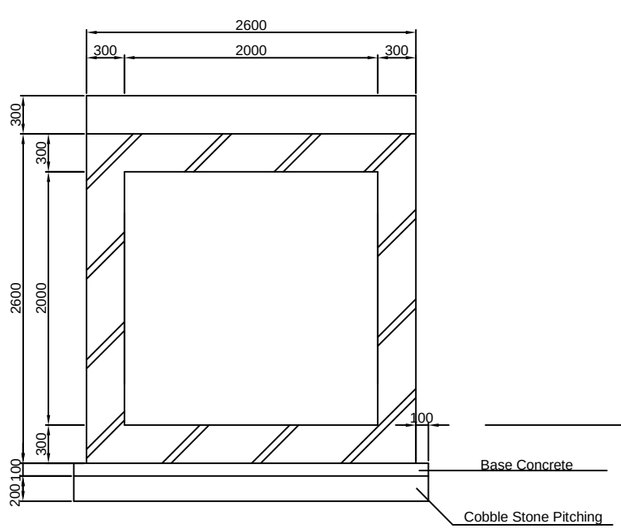


Type 1.0mx1.0m

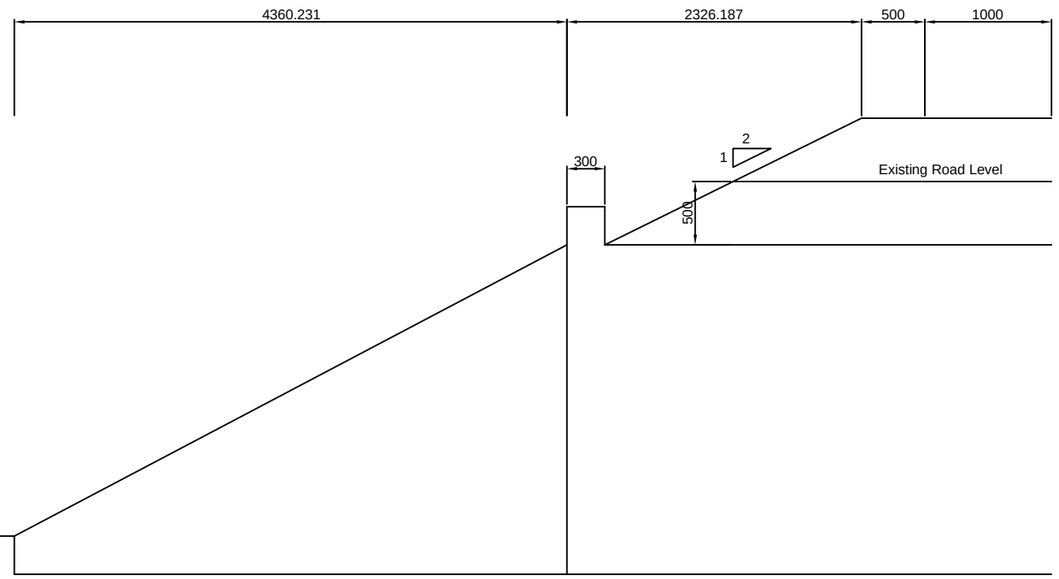


Materials List (Box Culvert 1.0x1.0)

Classification	Standard	Unit	Quantity	Remarks
Cobble Stone Pitching	t=10cm	m^2	30	
Base Concrete	18-8-25	m^3	3	
Concrete	24-8-25	m^3	16	
Reinforcing Bar		t	1.15	
Form		m^2	101	
Excavation of Foundation		m^3	94	
Backfill Soil		m^3	58	



Type 2.0mx2.0m



Plan of Box Culvert

Scale = 1:50

Materials List (Box Culvert 2.0x2.0)

Classification	Standard	Unit	Quantity	Remarks
Cobble Stone Pitching	t=10cm	m^2	65	
Base Concrete	18-8-25	m^3	7	
Concrete	24-8-25	m^3	54	
Reinforcing Bar		t	3.76	
Form		m^2	212	
Excavation of Foundation		m^3	459	
Backfill Soil		m^3	347	

JAPAN INTERNATIONAL COOPERATION AGENCY

NATIONAL ROAD ADMINISTRATION

REMARKS:

THE STUDY ON UPGRADING OF NAMPULA - CUAMBA ROAD

ORINTAL CONSULTANTS CO., LTD.

JAPAN ENGINEERING CONSULTANTS CO., LTD.

	PREPARED BY	CHECKED BY	APPROVED BY
NAME			
SIGNATURE			
DATE			

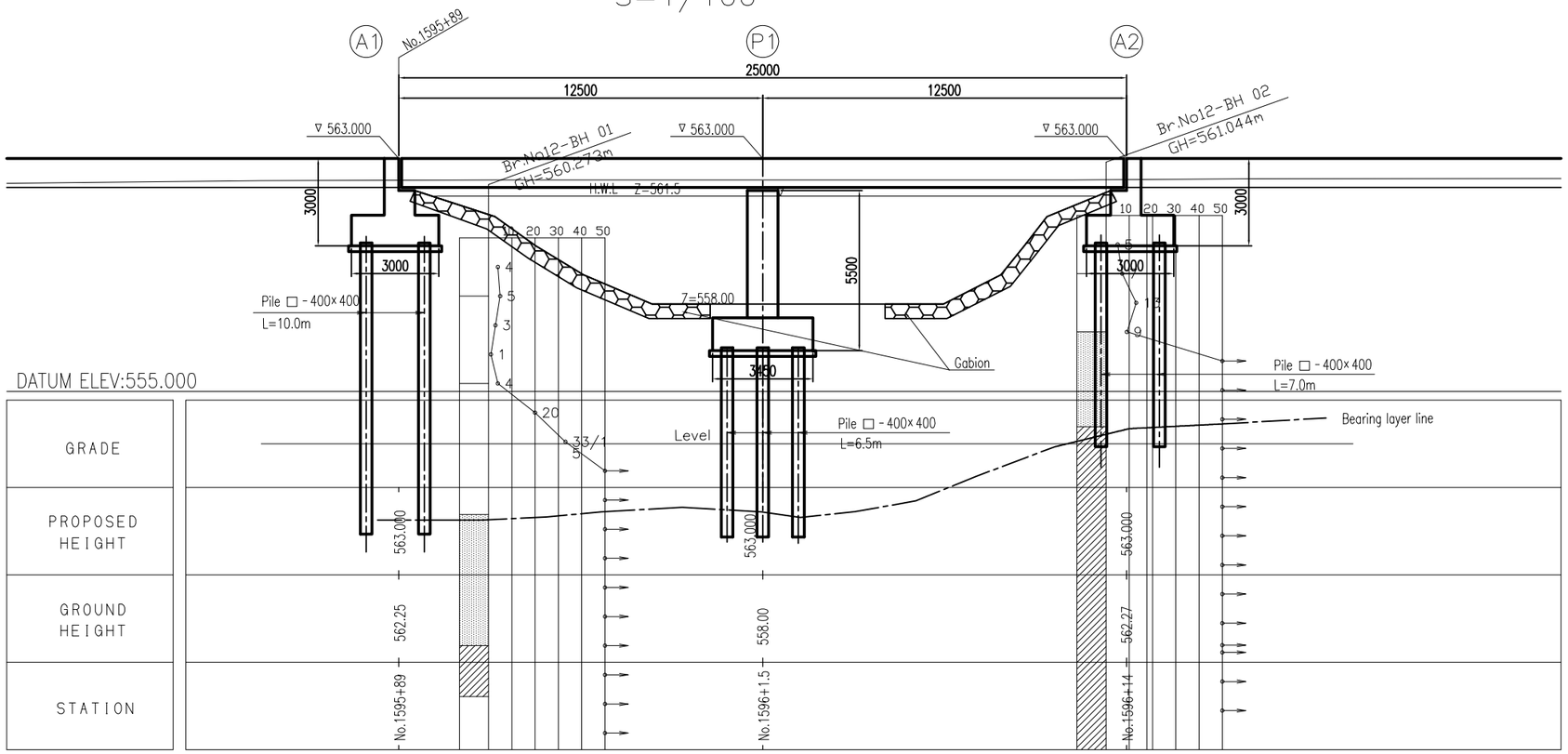
DRAWING TITLE

General Layout of Box Culvert

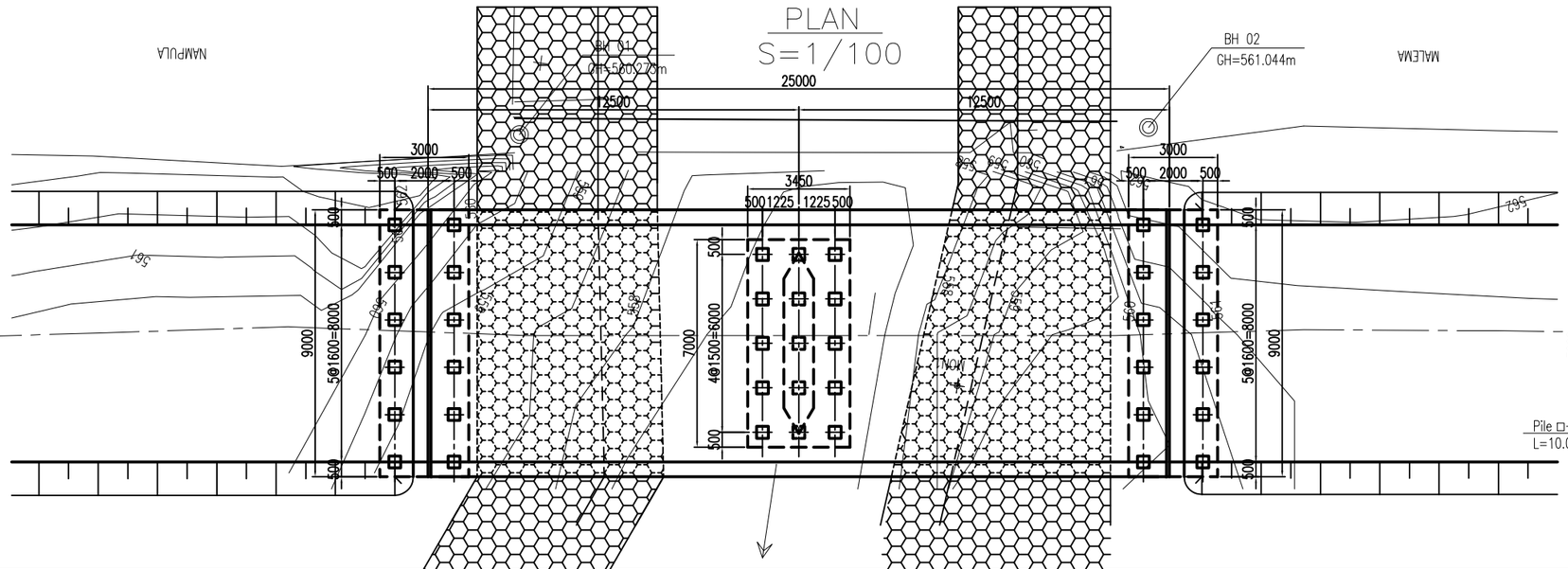
SCALE	SHEET NO.	DRAWING NO.	REV. NO.
-		120	-

BR.NO.12 MONAPO BRIDGE
GENERAL VIEW OF THE BRIDGE

PROFILE
S=1/100



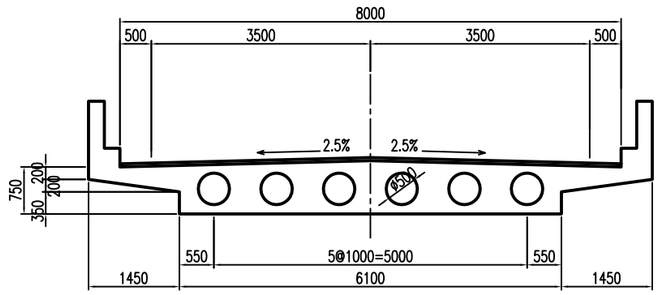
PLAN
S=1/100



DESIGN CRITERIA

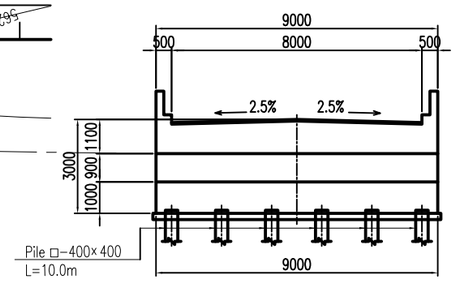
General Condition		
Design Live Load	NA,NB,NC Loading	
Design Speed	V=80km/h	
Bridge Length (Span Length)	25.00m (12.50m+12.50m)	
Freeboard	0.5m	
Longitudinal Gradient	Level	
Cross-fall of Carriage way	2.50%	
Super Structure Type	RC Hollow Slab	
Sub Structure Type	Abutment	RC Reversed-T
	Pier	RC Wall
Foundation Type	Abutment	A1:Pile foundation
		A2:Pile foundation
	Pier	P1:Pile foundation

CROSS SECTION
S=1/50

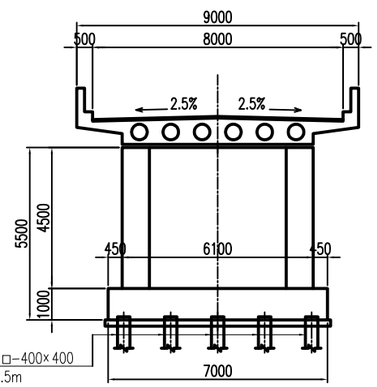


FRONT VIEW
S=1/100

ABUTMENT (A1)



PIER (P1)



JICA JAPAN INTERNATIONAL COOPERATION AGENCY

NATIONAL ROAD ADMISTRATION

REMARKS:

THE STUDY ON UPGRADING OF NAMPULA - CUAMBA ROAD

ORIENTAL CONSULTANTS CO., LTD.
JAPAN ENGINEERING CONSULTANTS CO., LTD.

	PREPARED BY	CHECKED BY	APPROVED BY
NAME			
SIGNATURE			
DATE			

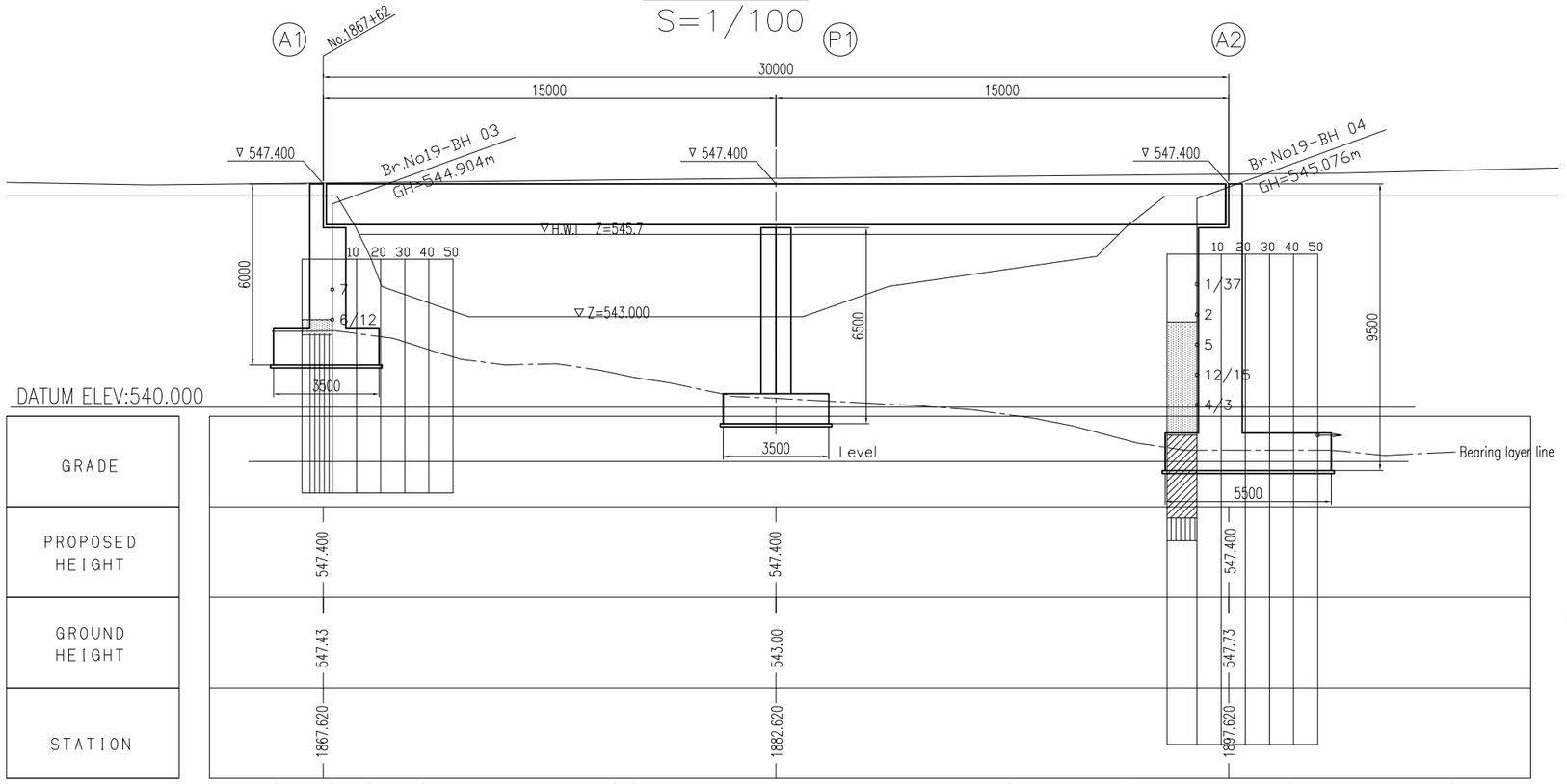
DRAWING TITLE

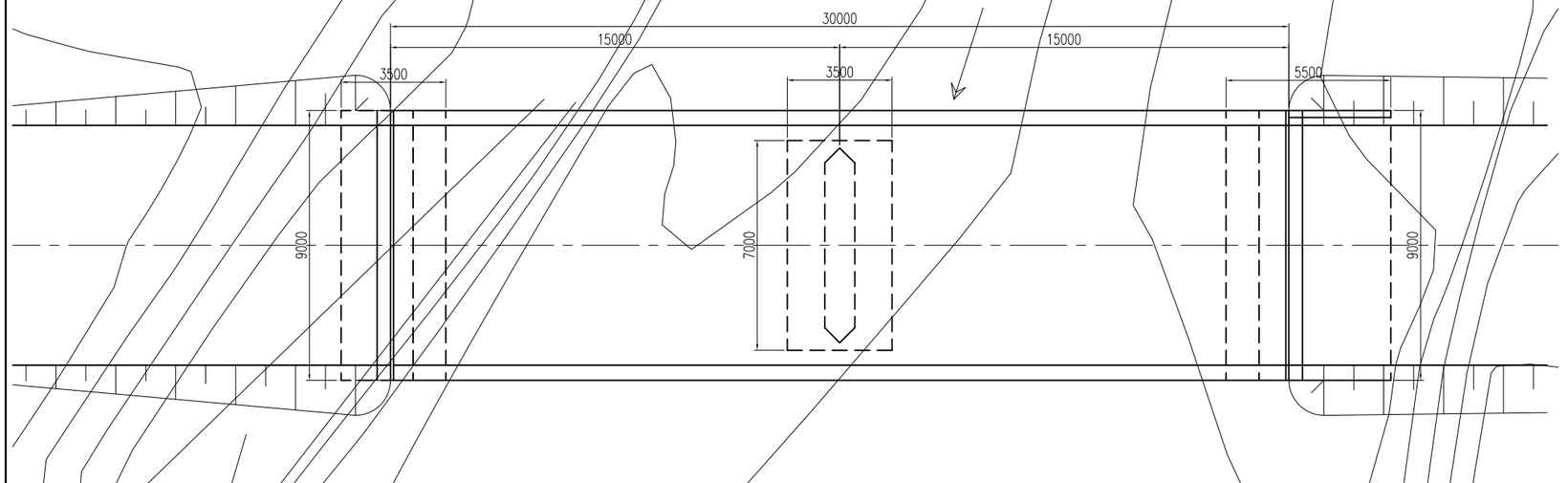
BRIDGE STRUCTURE
(BR.No12 MONAPO BRIDGE)

SCALE	SHEET NO.	DRAWING NO.	REV. NO.
		121	-

BR.NO.19 LALAUA BRIDGE
GENERAL VIEW OF THE BRIDGE

PROFILE
S=1/100

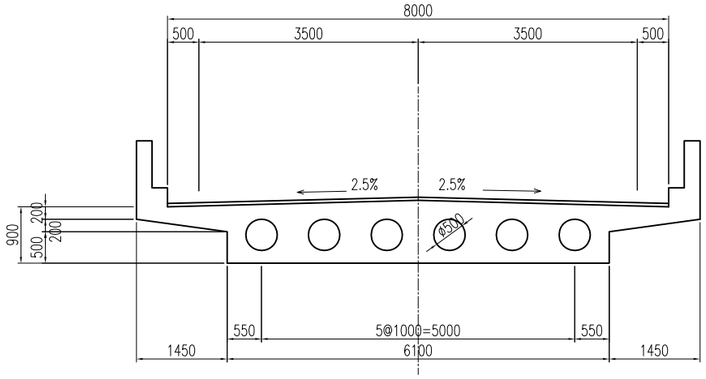




DESIGN CRITERIA

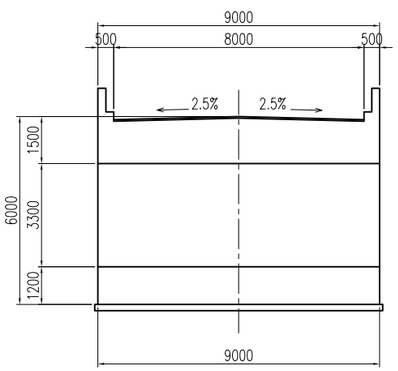
General Condition		
Design Live Load	NA,NB,NC Loading	
Design Speed	V=80km/h	
Bridge Length (Span Length)	30.00m (15.00m+15.00m)	
Freeboard	0.5m	
Longitudinal Gradient	Level	
Cross-fall of Carriage way	2.50%	
Super Structure Type	RC Hollow Slab	
Sub Structure Type	Abutment	RC Reversed-T
	Pier	RC Wall
Foundation Type	Abutment	A1:Spread foundation
		A2:Spread foundation
	Pier	P1:Spread foundation

CROSS SECTION
S=1/50

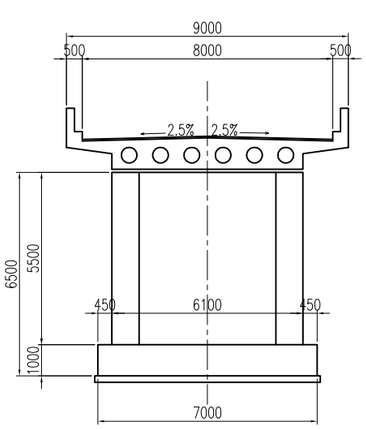


FRONT VIEW
S=1/100

ABUTMENT (A1)



PIER (P1)



JICA JAPAN INTERNATIONAL COOPERATION AGENCY

ANE NATIONAL ROAD ADMINISTRATION

REMARKS:

THE STUDY ON UPGRADING OF NAMPULA - CUAMBA ROAD

ORIENTAL CONSULTANTS CO., LTD.
JAPAN ENGINEERING CONSULTANTS CO., LTD.

	PREPARED BY	CHECKED BY	APPROVED BY
NAME			
SIGNATURE			
DATE			

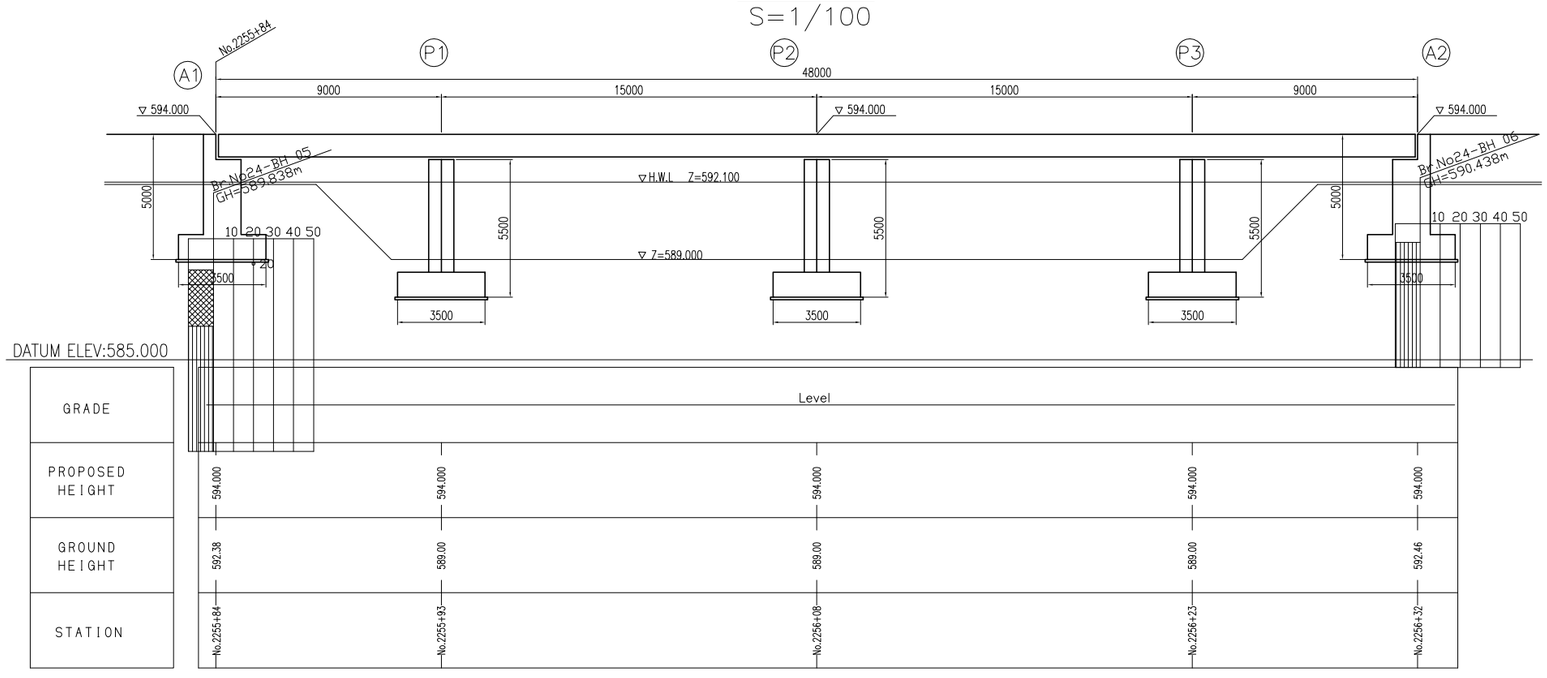
DRAWING TITLE

BRIDGE STRUCTURE
(BR.No19 LALAUA BRIDGE)

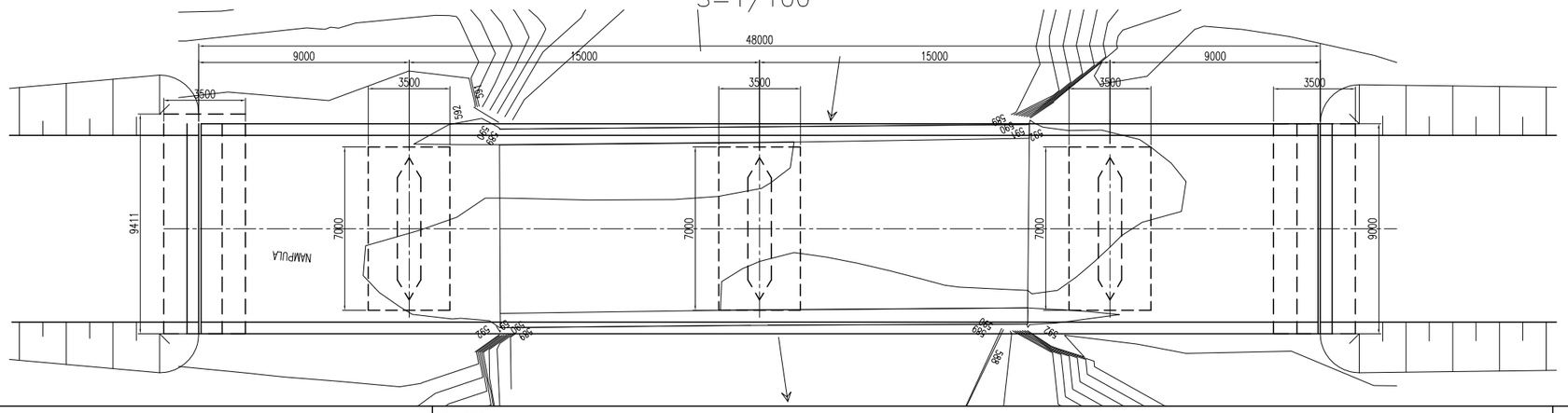
SCALE	SHEET NO.	DRAWING NO.	REV. NO.
			-

BR.NO.24 NATALEIA BRIDGE
GENERAL VIEW OF THE BRIDGE

PROFILE
S=1/100



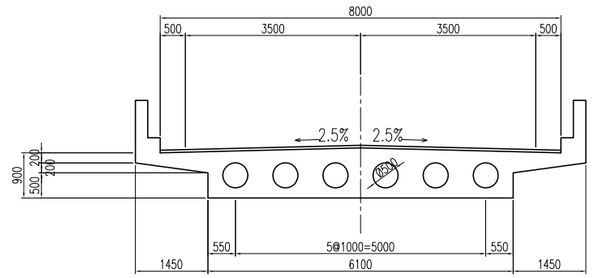
PLAN
S=1/100



DESIGN CRITERIA

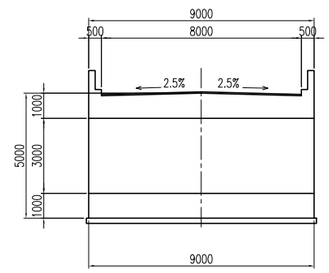
General Condition		
Design Live Load	NA,NB,NC Loading	
Design Speed	V=80km/h	
Bridge Length (Span Length)	48.00m (9.00m+15.00m+15.00m+9.00m)	
Freeboard	0.7m	
Longitudinal Gradient	Level	
Cross-fall of Carriage way	2.50%	
Super Structure Type	RC Hollow Slab	
Sub Structure Type	Abutment	RC Revered-T
	Pier	RC Wall
Foundation Type	Abutment	A1:Spread foundation
		A2:Spread foundation
	Pier	P1:Spread foundation
		P2:Spread foundation
		P3:Spread foundation

CROSS SECTION
S=1/50

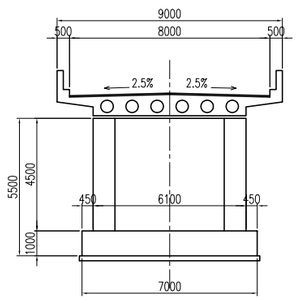


FRONT VIEW
S=1/100

ABUTMENT (A1)



PIER (P1)



JICA JAPAN INTERNATIONAL COOPERATION AGENCY

NATIONAL ROAD ADMINISTRATION

REMARKS:

THE STUDY ON UPGRADING OF NAMPULA - CUAMBA ROAD

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NAME			
SIGNATURE			
DATE			

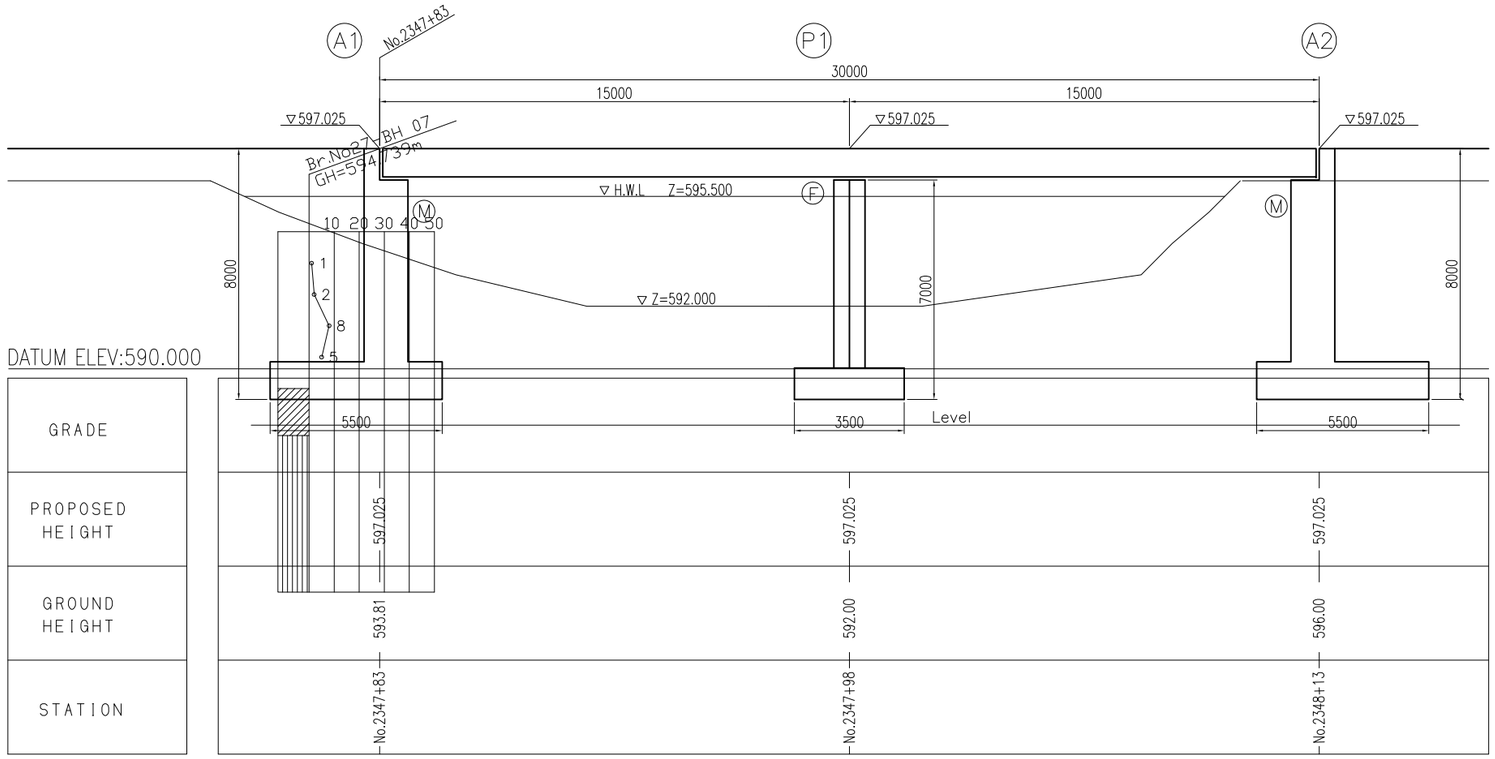
DRAWING TITLE

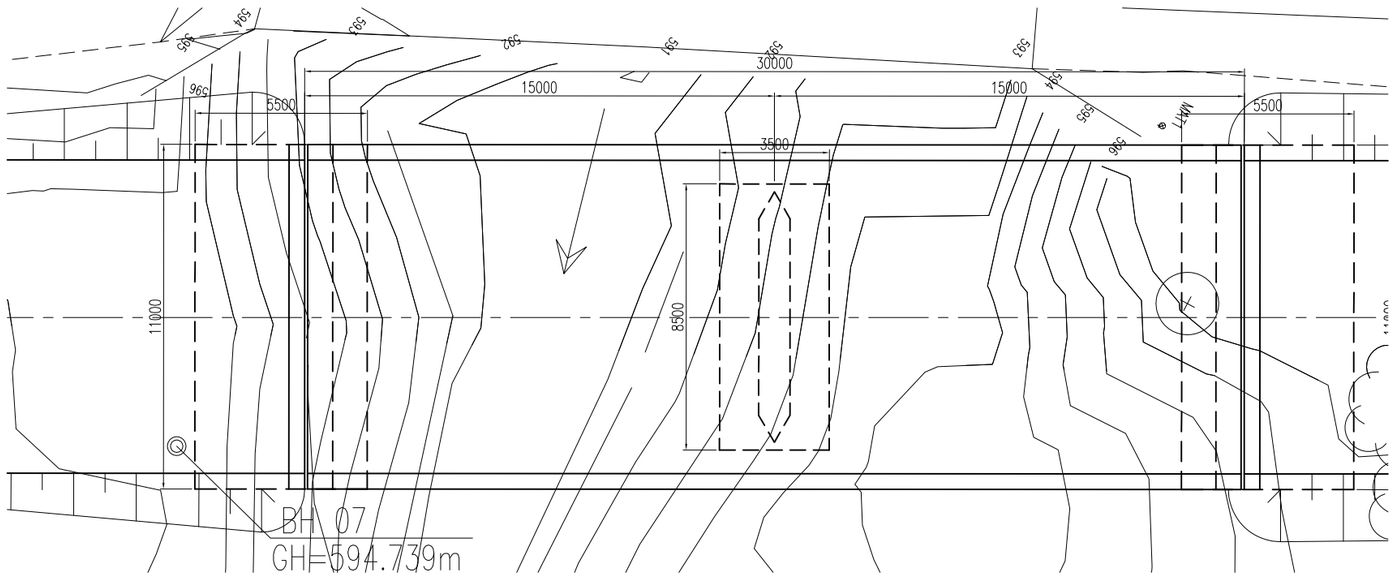
BRIDGE STRUCTURE
(BR.No24 NATALEIA BRIDGE)

SCALE	SHEET NO.	DRAWING NO.	REV. NO.
			-

BR.NO.27 MUTIVASSE BRIDGE
GENERAL VIEW OF THE BRIDGE

PROFILE
S=1/100

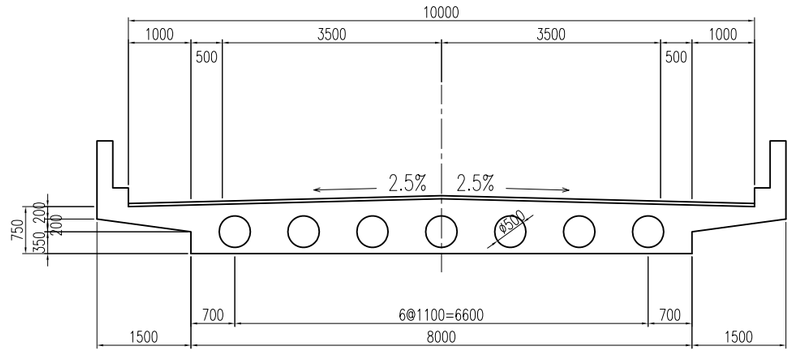




DESIGN CRITERIA

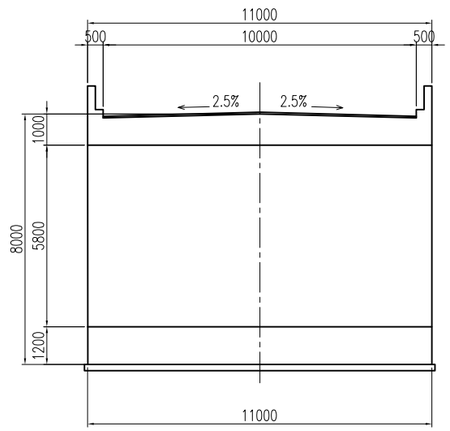
General Condition		
Design Live Load	NA,NB,NC Loading	
Design Speed	V=80km/h	
Bridge Length (Span Length)	30.00m(15.00m+15.00m)	
Freeboard	0.5m	
Longitudinal Gradient	Level	
Cross-fall of Carriage way	2.50%	
Super Structure Type	RC Hollow Slab	
Sub Structure Type	Abutment	RC Revered-T
	Pier	RC Wall
Foundation Type	Abutment	A1:Spread foundation
		A2:Spread foundation
	Pier	P1:Spread foundation

CROSS SECTION
S=1/50

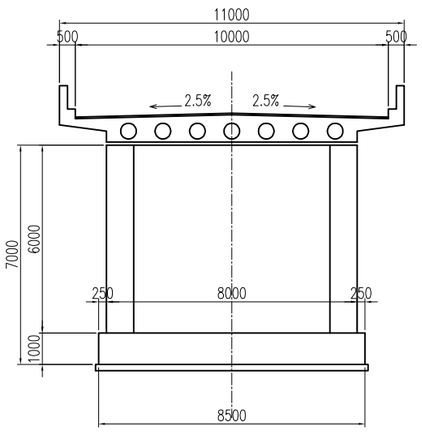


FRONT VIEW
S=1/100

ABUTMENT (A1)



PIER (P1)



JICA JAPAN INTERNATIONAL COOPERATION AGENCY

NATIONAL ROAD ADMINISTRATION

REMARKS:

THE STUDY ON UPGRADING OF NAMPULA - CUAMBA ROAD

ORIENTAL CONSULTANTS CO., LTD.
JAPAN ENGINEERING CONSULTANTS CO., LTD.

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NAME			
SIGNATURE			
DATE			

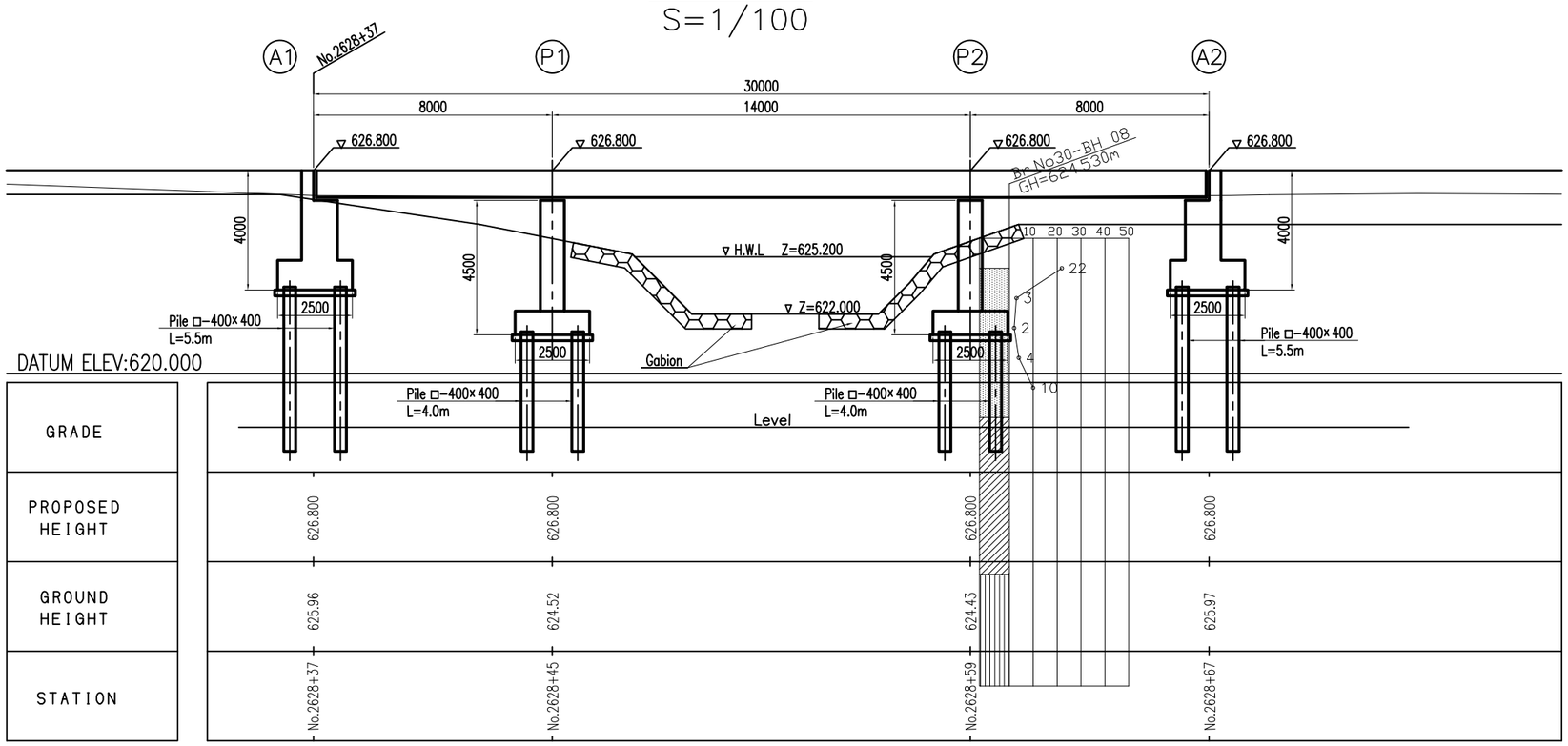
DRAWING TITLE

BRIDGE STRUCTURE
(BR.No27 MUTIVASSE BRIDGE)

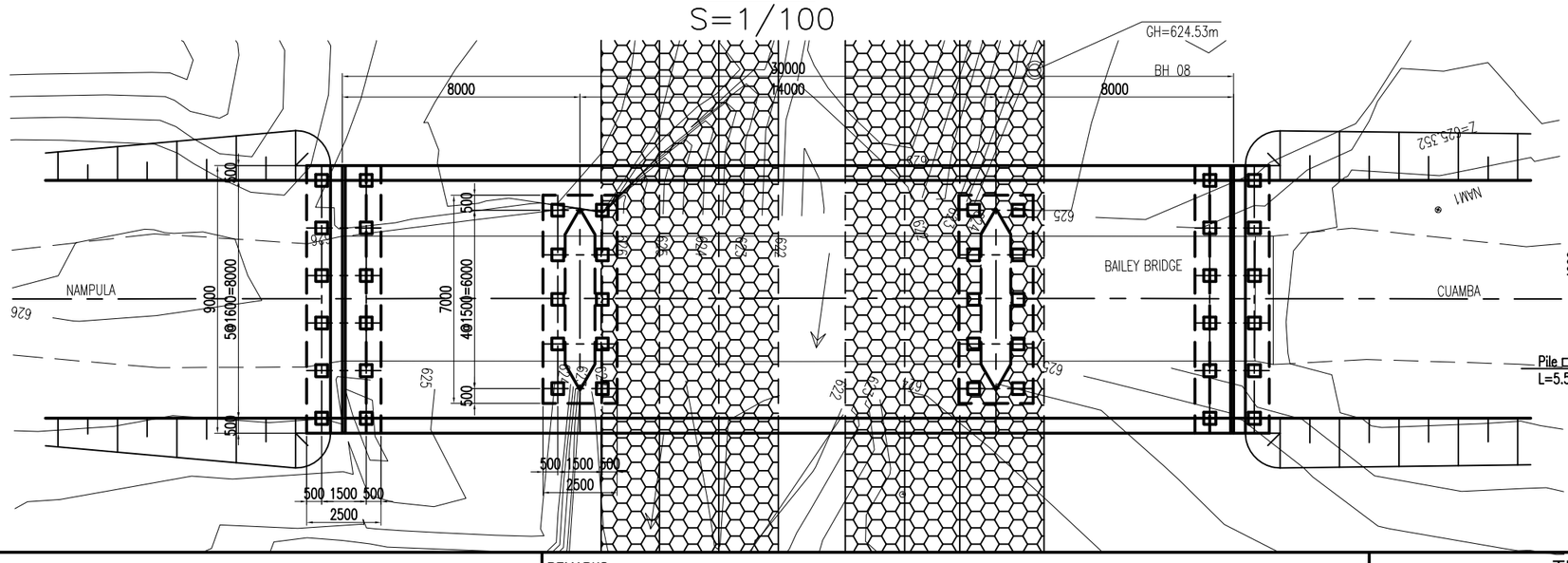
SCALE	SHEET NO.	DRAWING NO.	REV. NO.
			-

BR.NO.30 NAMUELA BRIDGE
GENERAL VIEW OF THE BRIDGE

PROFILE
S=1/100



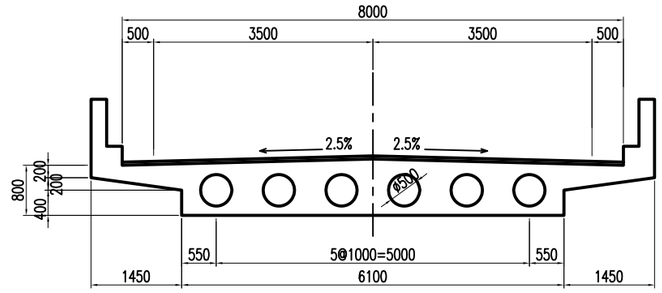
PLAN
S=1/100



DESIGN CRITERIA

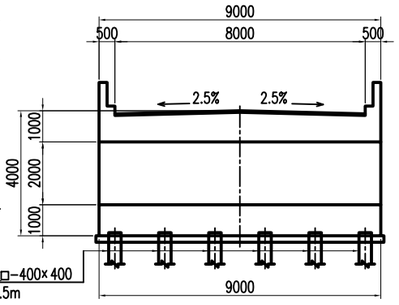
General Condition		
Design Live Load	NA,NB,NC Loading	
Design Speed	V=80km/h	
Bridge Length (Span Length)	30.00m (8.00m+14.00m+8.00m)	
Freeboard	0.5m	
Longitudinal Gradient	Level	
Cross-fall of Carriage way	2.50%	
Super Structure Type	RC Hollow Slab	
Sub Structure Type	Abutment	RC Revered-T
	Pier	RC Wall
Foundation Type	Abutment	A1:Pile foundation
		A2:Pile foundation
	Pier	P1:Pile foundation
		P2:Pile foundation

CROSS SECTION
S=1/50

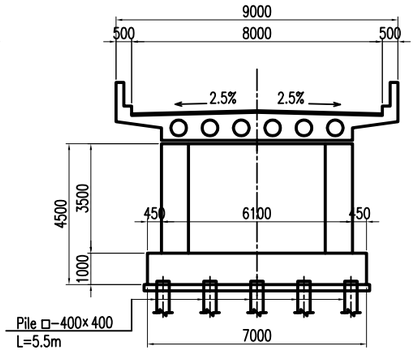


FRONT VIEW
S=1/100

ABUTMENT (A1)



PIER (P1)



JICA JAPAN INTERNATIONAL COOPERATION AGENCY

NATIONAL ROAD ADMINISTRATION

REMARKS:

THE STUDY ON UPGRADING OF NAMPULA - CUAMBA ROAD

ORIENTAL CONSULTANTS CO., LTD.
JAPAN ENGINEERING CONSULTANTS CO., LTD.

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NAME			
SIGNATURE			
DATE			

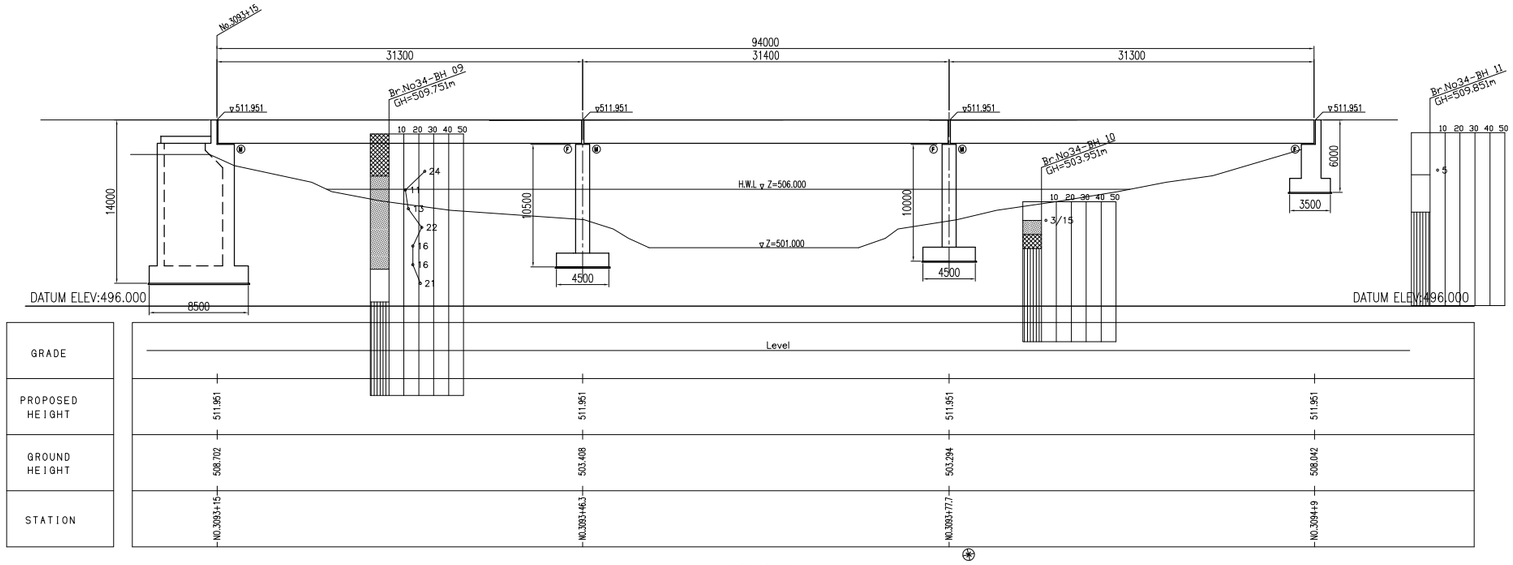
DRAWING TITLE

BRIDGE STRUCTURE
(BR.No30 NAMUELA BRIDGE)

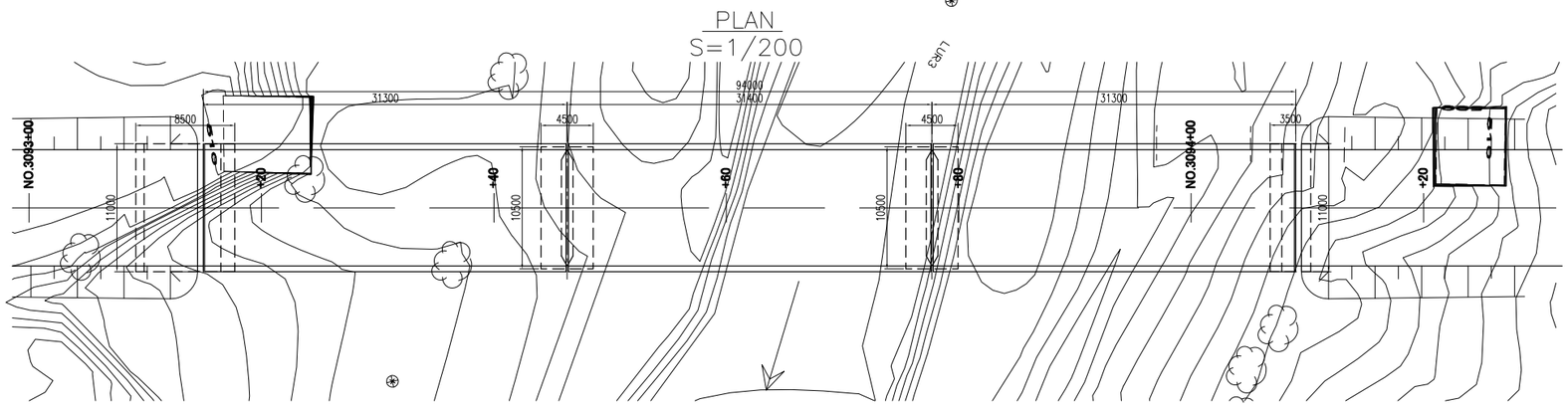
SCALE	SHEET NO.	DRAWING NO.	REV. NO.
			-

BR.NO.34 LURIO BRIDGE
GENERAL VIEW OF THE BRIDGE

PROFILE
S=1/200



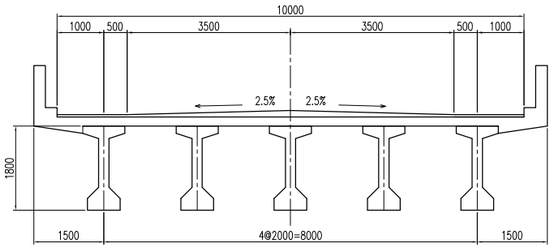
PLAN
S=1/200



DESIGN CRITERIA

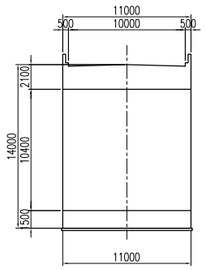
General Condition		
Design Live Load	NA. NB. NC Loading	
Design Speed	80km/h	
Bridge Length(Span Length)	94.00m(31.30m+31.40m+31.30m)	
Freeboard	1.0m	
Longitudinal Gradient	Level	
Cross-fall of Carriage way	2.5%	
Super Structure Type	PC-I Girder	
Sub Structure Type	Abutment	RC Revered-T
	Pier	RC Wall
Foundation Type	Abutment	A1:Spread foundation
		A2:Spread foundation
	Pier	P1:Spread foundation
		P2:Spread foundation

CROSS SECTION
S=1/50

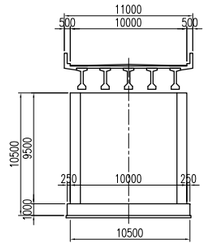


FRONT VIEW
S=1/200

ABUTMENT (A1)



PIER (P1)



JICA JAPAN INTERNATIONAL COOPERATION AGENCY

NATIONAL ROAD ADMINISTRATION

REMARKS:

THE STUDY ON UPGRADING OF NAMPULA - CUAMBA ROAD

ORIENTAL CONSULTANTS CO., LTD.
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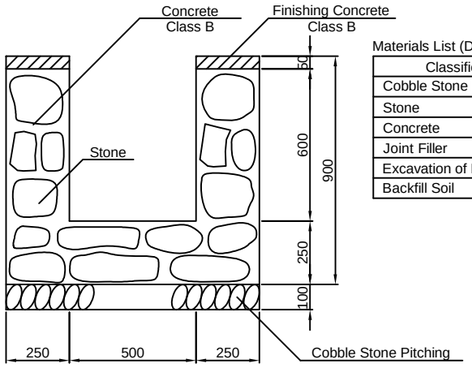
DRAWING TITLE
BRIDGE STRUCTURE
(BR.No34 LURIO BRIDGE)

	PREPARED BY	CHECKED BY	APPROVED BY
NAME			
SIGNATURE			
DATE			

SCALE	SHEET NO.	DRAWING NO.	REV. NO.
			-

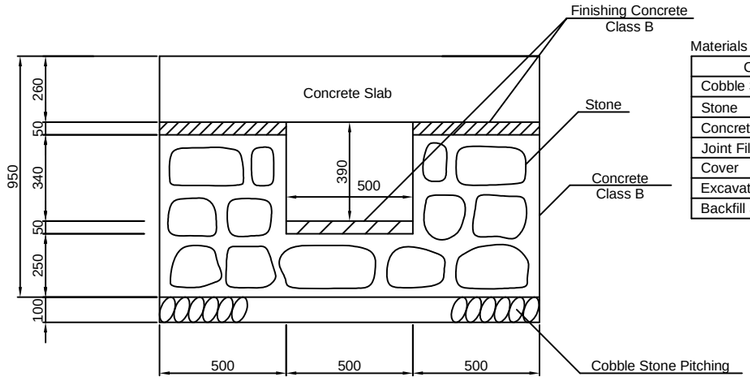


Materials List (Drainage Type-A) Per100m

Classification	Standard	Unit	Quantity	Remarks
Cobble Stone Pitching	t=10cm	m^2	100	
Stone		m^3	44	
Concrete	Class B	m^3	14	
Joint Filler	t=10mm	m^2	6	
Excavation of Foundation		m^3	200	
Backfill Soil		m^3	100	

Drainage Type-A

Scale = 1:25

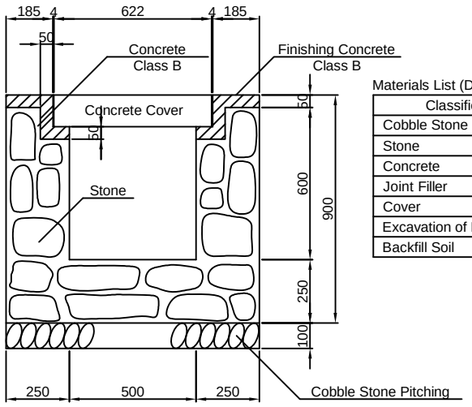


Materials List (Cross Culvert) Per100m

Classification	Standard	Unit	Quantity	Remarks
Cobble Stone Pitching	t=10cm	m^2	150	
Stone		m^3	61	
Concrete	Class B	m^3	23	
Joint Filler	t=10mm	m^2	8	
Cover		Piece	50	
Excavation of Foundation		m^3	263	
Backfill Soil		m^3	105	

Cross Culvert

Scale = 1:25

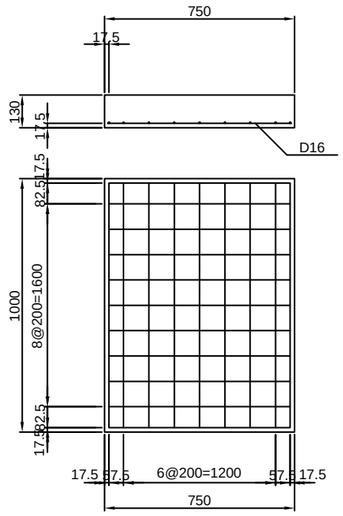


Materials List (Drainage Type-B) Per100m

Classification	Standard	Unit	Quantity	Remarks
Cobble Stone Pitching	t=10cm	m^2	100	
Stone		m^3	42	
Concrete	Class B	m^3	14	
Joint Filler	t=10mm	m^2	6	
Cover		Piece	200	
Excavation of Foundation		m^3	200	
Backfill Soil		m^3	100	

Drainage Type-B

Scale = 1:25

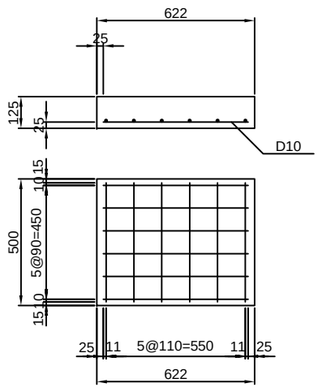


Materials List (Slab) Per100

Classification	Standard	Unit	Quantity	Remarks
Concrete	Class A	m^3	78	
Reinforcement	SD345 D16	t	5.16	
Form		m^2	482	

Plan of Slab

Scale = 1:50



Materials List (Cover) Per100

Classification	Standard	Unit	Quantity	Remarks
Concrete	Class A	m^3	4	
Reinforcement	SD345 D10	t	0.35	
Form		m^2	9	

Plan of Cover

Scale = 1:25

JICA JAPAN INTERNATIONAL COOPERATION AGENCY

NATIONAL ROAD ADMINISTRATION

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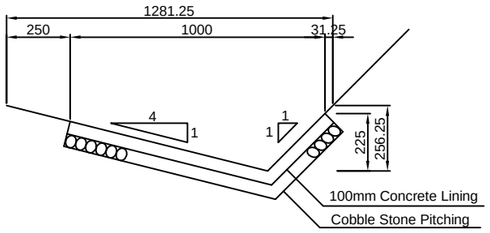
NAME			
SIGNATURE			
DATE			

DRAWING TITLE

Drainage Structure Details (1/2)

SCALE	SHEET NO.	DRAWING NO.	REV. NO.
-		127	-

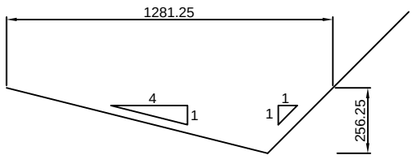


Concrete Lined Side Drain

Scale = 1:50

Materials List (Concrete Lined Side Drain) Per100m

Classification	Standard	Unit	Quantity	Remarks
Cobble Stone Pitching	t=10cm	m^2	235	
Concrete	Class B	m^3	29	
Joint Filler	t=10mm	m^2	3	
Excavation		m^3	124	



Soil Lined Side Drain

Scale = 1:50

Materials List (Soil Lined Side Drain) Per100m

Classification	Standard	Unit	Quantity	Remarks
Excavation		m^3	66	
Fairing		m^2	284	

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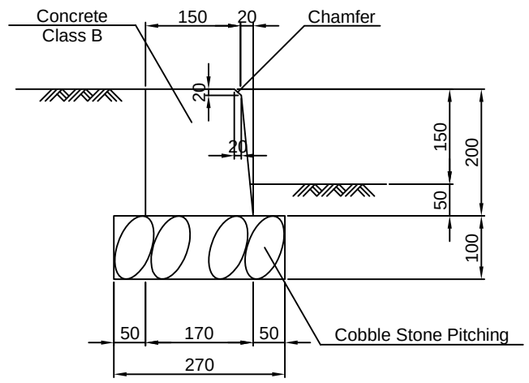
JAPAN ENGINEERING CONSULTANTS CO., LTD.

	PREPARED BY	CHECKED BY	APPROVED BY
NAME			
SIGNATURE			
DATE			

DRAWING TITLE

Drainage Structure Details (2/2)

SCALE	SHEET NO.	DRAWING NO.	REV. NO.
-		128	-



Concrete Kerb

Scale = 1:10

Materials List (Concrete Curve)

Per100m

Classification	Standard	Unit	Quantity	Remarks
Cobble Stone Pitching	t=10cm	m^2	27	
Concrete	Class B	m^3	3	
Form		m^2	40	
Joint Filler	t=10mm	m^2	0.3	

JAPAN INTERNATIONAL COOPERATION AGENCY

NATIONAL ROAD ADMINISTRATION

REMARKS:

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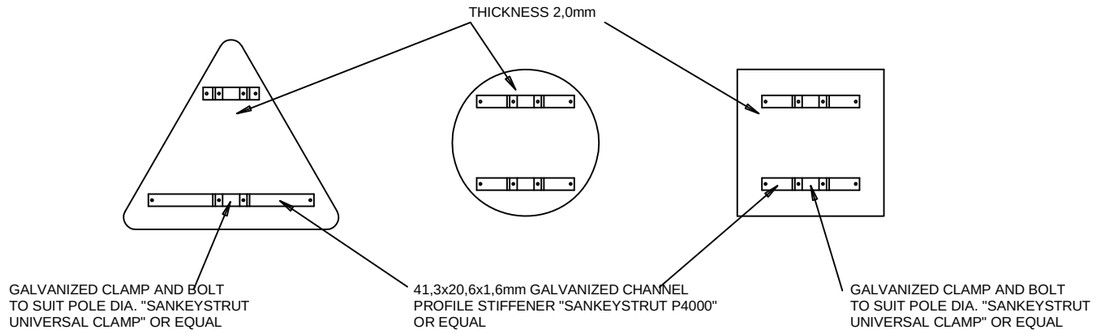
JAPAN ENGINEERING CONSULTANTS CO., LTD.

	PREPARED BY	CHECKED BY	APPROVED BY
NAME			
SIGNATURE			
DATE			

DRAWING TITLE

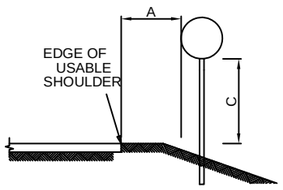
Ancillary Work Details

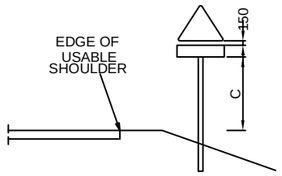
SCALE	SHEET NO.	DRAWING NO.	REV. NO.
-		129	-



TYPICAL FIXING DETAIL

NOT TO SCALE





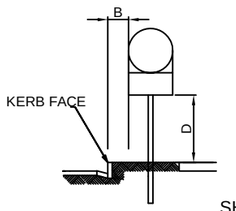
SHOULDER (NO KERB)

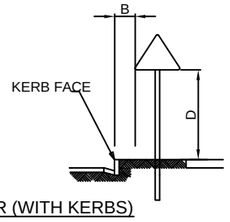
NOT TO SCALE

TABLE PERMANENT SIGN PLACEMENT DIMENSIONS			
POSITIONING VERTICAL	LATERAL	PREFERRED (mm)	RANGE (mm)
	A	2100	1800-4000
	B	600	300-600
C		2100	750-2500
D		2500	2100-3000
	F	1200	600-2000
G		1200	800-1600
K		2000	1600-2400
	R	1500	600-1500

NOTES:

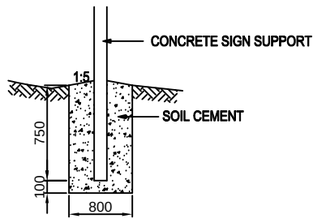
1. ALL FOUNDATION BACKFILL WILL BE DONE WITH A SOIL : CEMENT MIXTURE OF 10 : 1





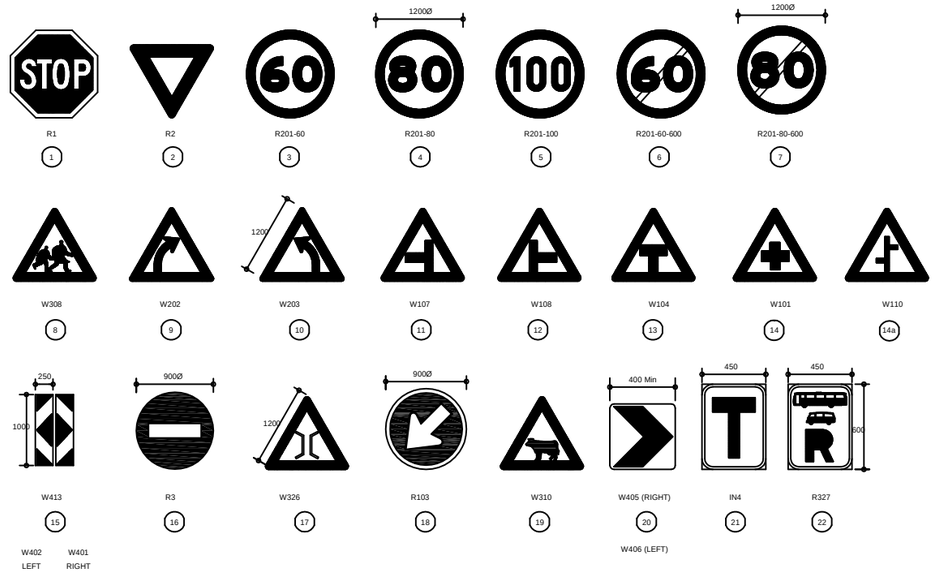
SHOULDER (WITH KERBS)

NOT TO SCALE



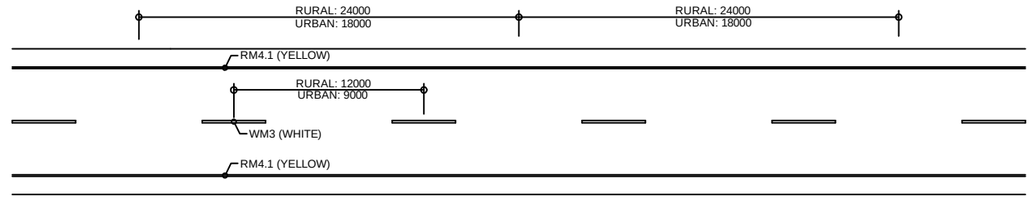
FOUNDATION DETAIL

NOT TO SCALE



REGULATORY AND WARNING SIGNS

NOT TO SCALE



NOTE:

50mm PREFERRED SEPERATION BETWEEN ROAD MARKINGS AND ROAD STUDS.

TYPICAL ROADSTUD USE ON TWO-WAY ROADS

NOT TO SCALE

JICA JAPAN INTERNATIONAL COOPERATION AGENCY

NATIONAL ROAD ADMINISTRATION

REMARKS:

THE STUDY ON UPGRADING OF NAMPULA - CUAMBA ROAD

ORINTAL CONSULTANTS CO., LTD.

JAPAN ENGINEERING CONSULTANTS CO., LTD.

	PREPARED BY	CHECKED BY	APPROVED BY
NAME			
SIGNATURE			
DATE			

DRAWING TITLE

Road Safety Facilities

SCALE	SHEET NO.	DRAWING NO.	REV. NO.
-		130	-