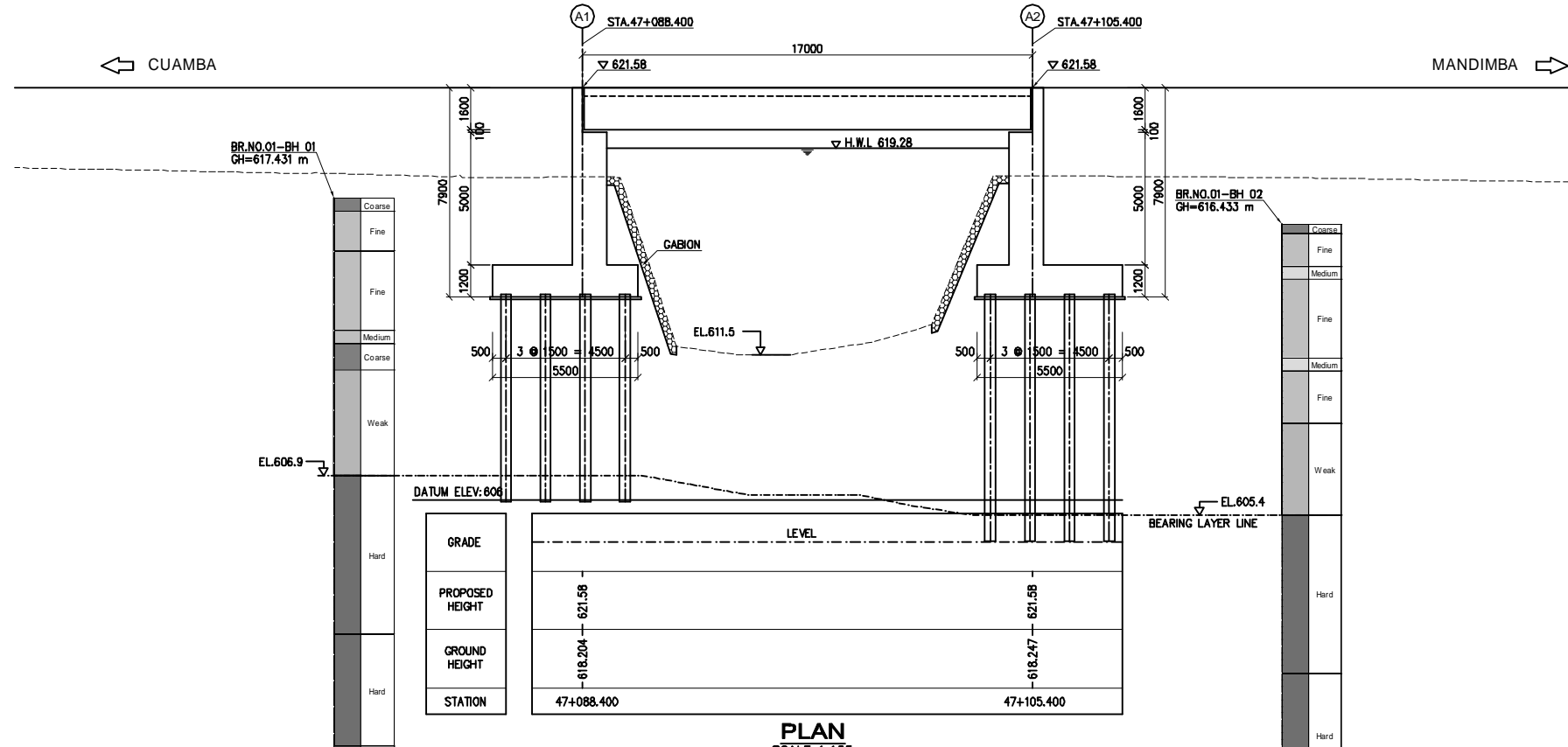
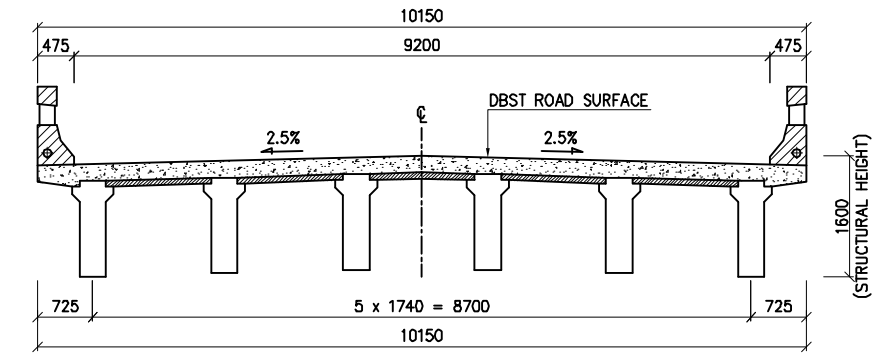


BR NO.1 MUAMBESSI BRIDGE GENERAL VIEW OF THE BRIDGE

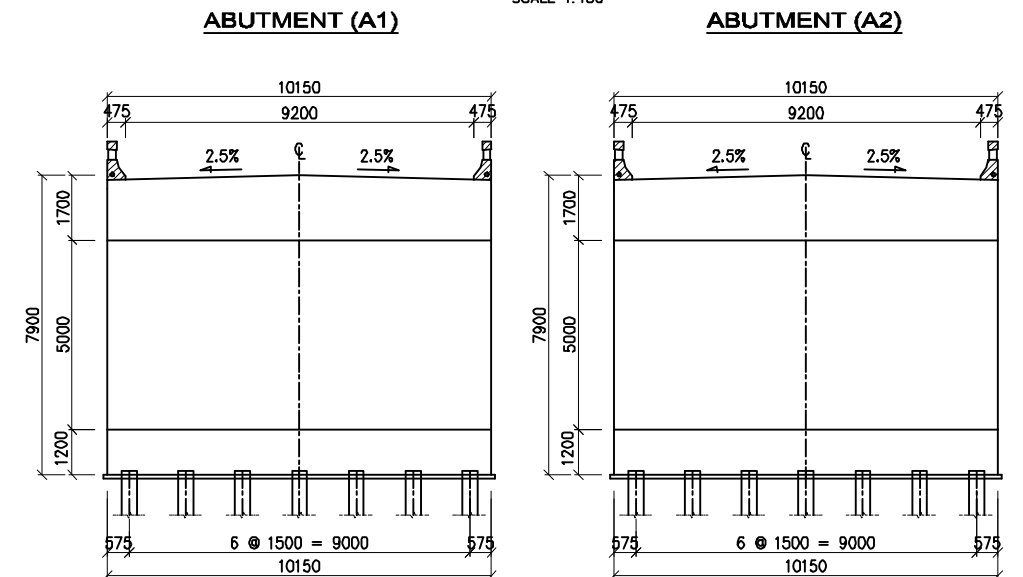
PROFILE
SCALE 1:125



CROSS SECTION
SCALE 1:50



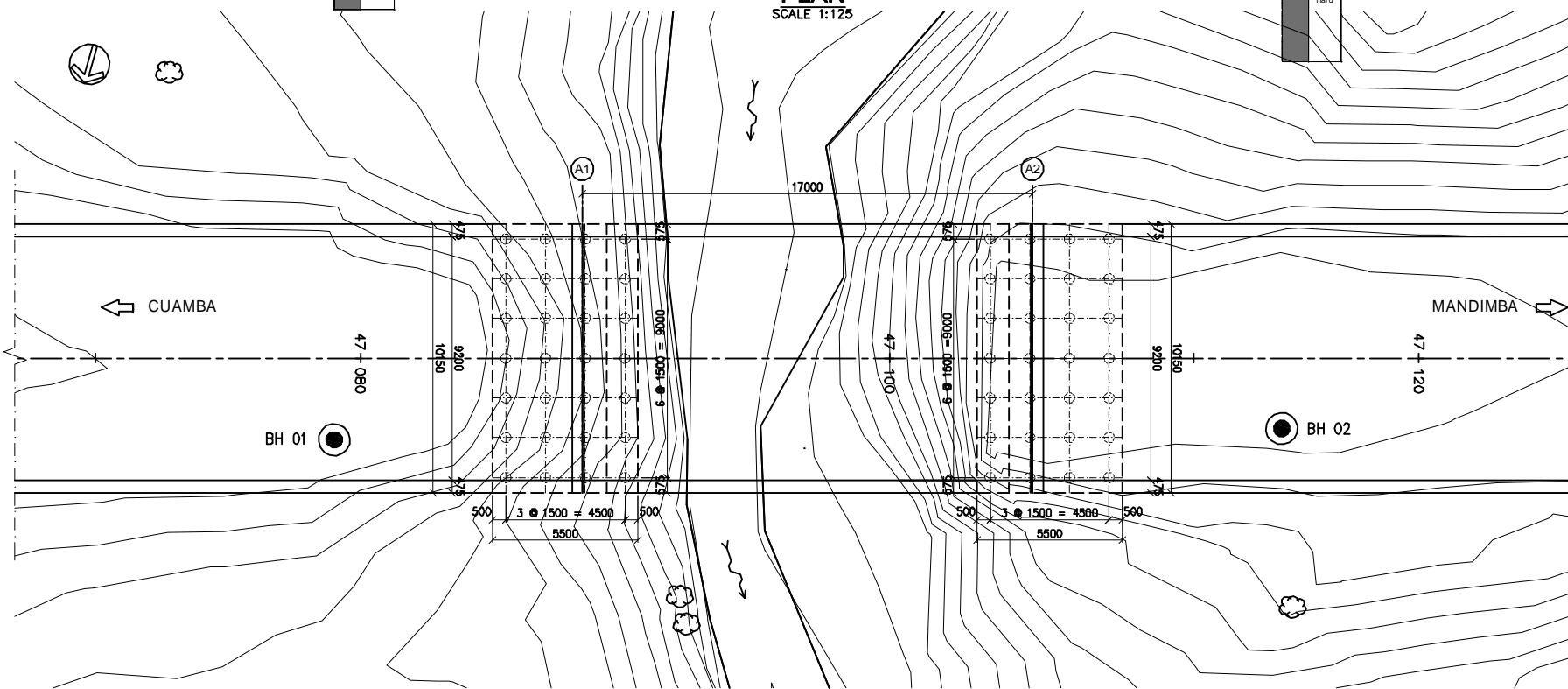
FRONT VIEW
SCALE 1:100



GRADE	LEVEL
PROPOSED HEIGHT	- 621.58
GROUND HEIGHT	- 618.204 - 621.58
STATION	47+088.400

GRADE	LEVEL
PROPOSED HEIGHT	- 621.58
GROUND HEIGHT	- 618.247 - 621.58
STATION	47+105.400

PLAN
SCALE 1:125



DESIGN CRITERIA

GENERAL CONDITION	
DESIGN LIVE LOAD	NA, NB, NC, LOADING
DESIGN SPEED	100 km/h
BRIDGE LENGTH (SPAN LENGTH)	17.0 m
FREEBOARD	0.7 m
DESIGN DISCHARGE	390.9 m ³ /sec
LONGITUDINAL GRADIENT	LEVEL
CROSS-FALL OF CARRIAGE WAY	2.5 %
SUPER STRUCTURE TYPE	RC GIRDER
SUB STRUCTURE TYPE	ABUTMENT
FOUNDATION TYPE	ABUTMENT

JAPAN INTERNATIONAL COOPERATION AGENCY

NATIONAL ROAD ADMINISTRATION

REMARKS:

THE PREPARATORY SURVEY ON ROAD IMPROVEMENT PLAN IN NACALA DEVELOPMENT CORRIDOR
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 Oriental Consultants Co., Ltd

DRAWING TITLE

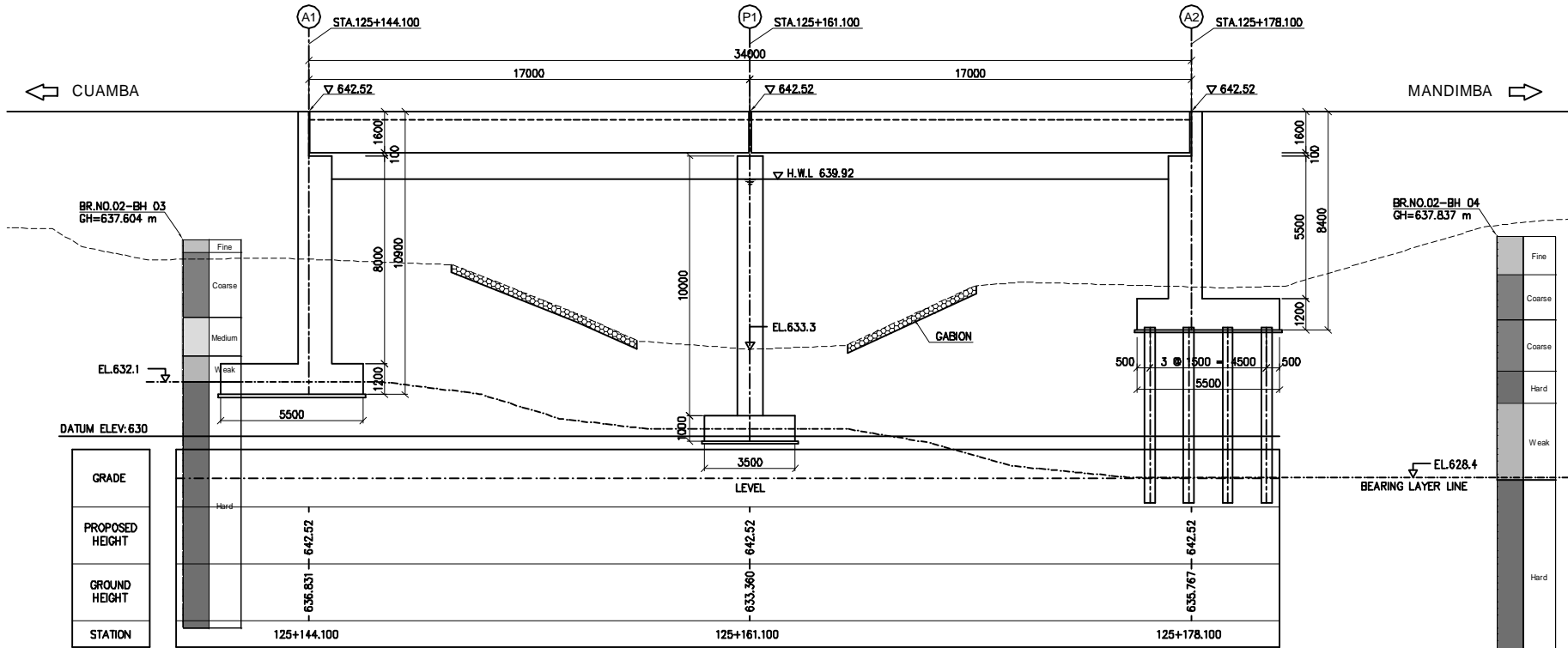
BR NO.1 MUAMBESSI BRIDGE
GENERAL VIEW OF THE BRIDGE

NAME	PREPARED BY	CHECKED BY	APPROVED BY
SIGNATURE			
DATE			

SCALE	SHEET NO.	DRAWING NO.	REV. NO.
As Shown		29	-

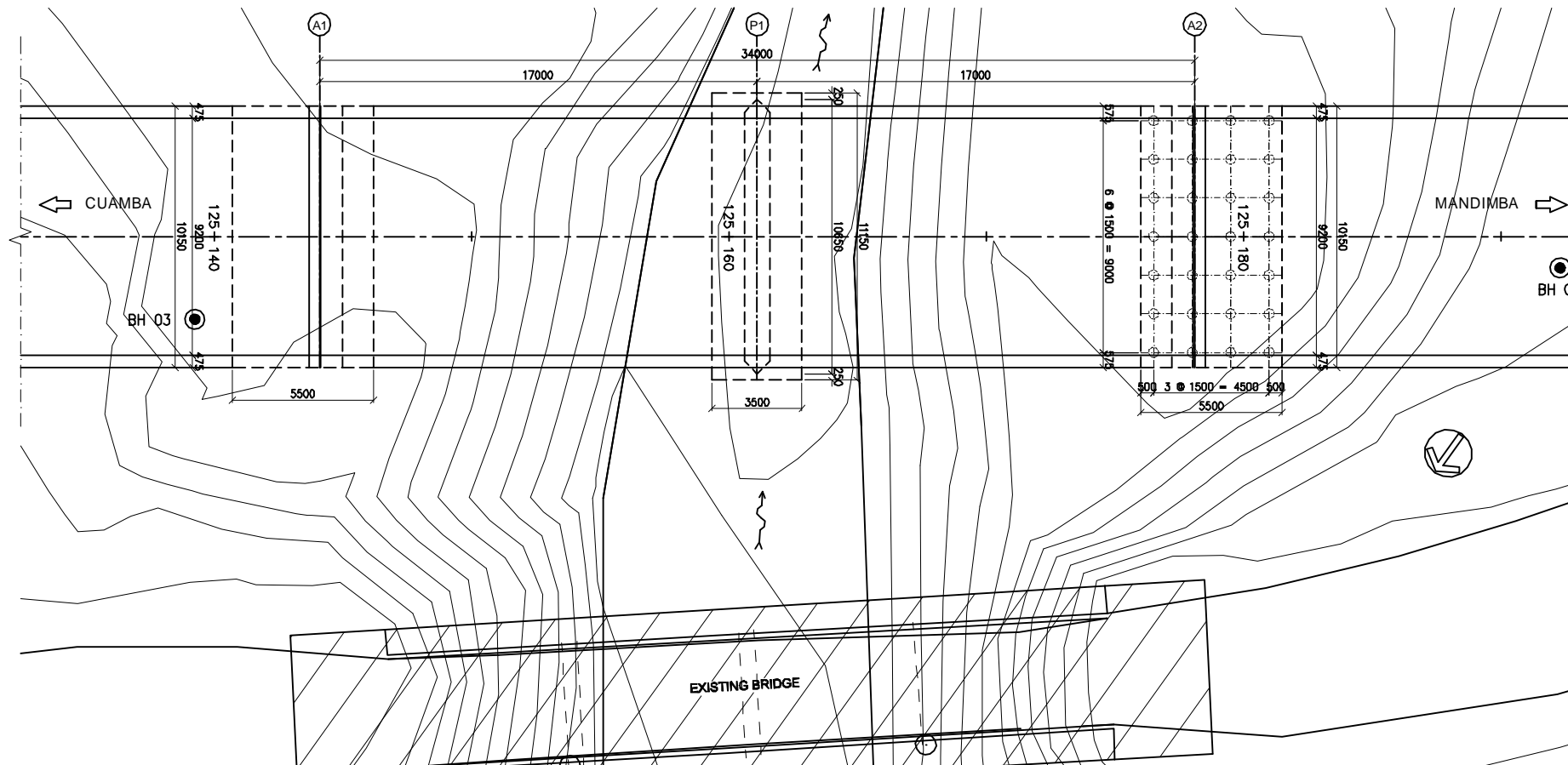
BR NO.2 LUSSANGASSI BRIDGE GENERAL VIEW OF THE BRIDGE

PROFILE
SCALE 1:125

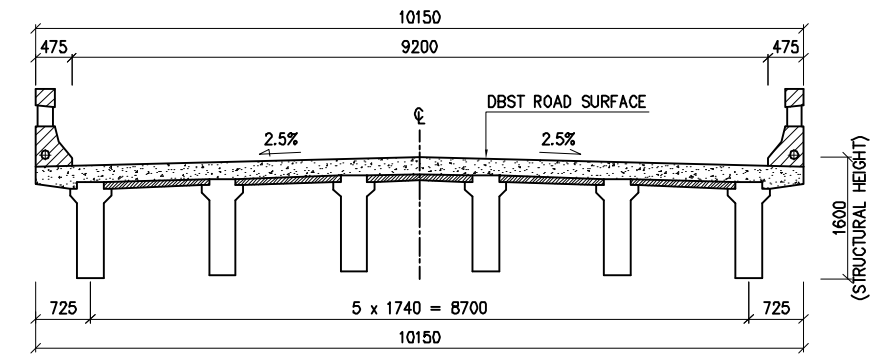


GRADE	
PROPOSED HEIGHT	642.52
GROUND HEIGHT	633.360
STATION	125+144.100

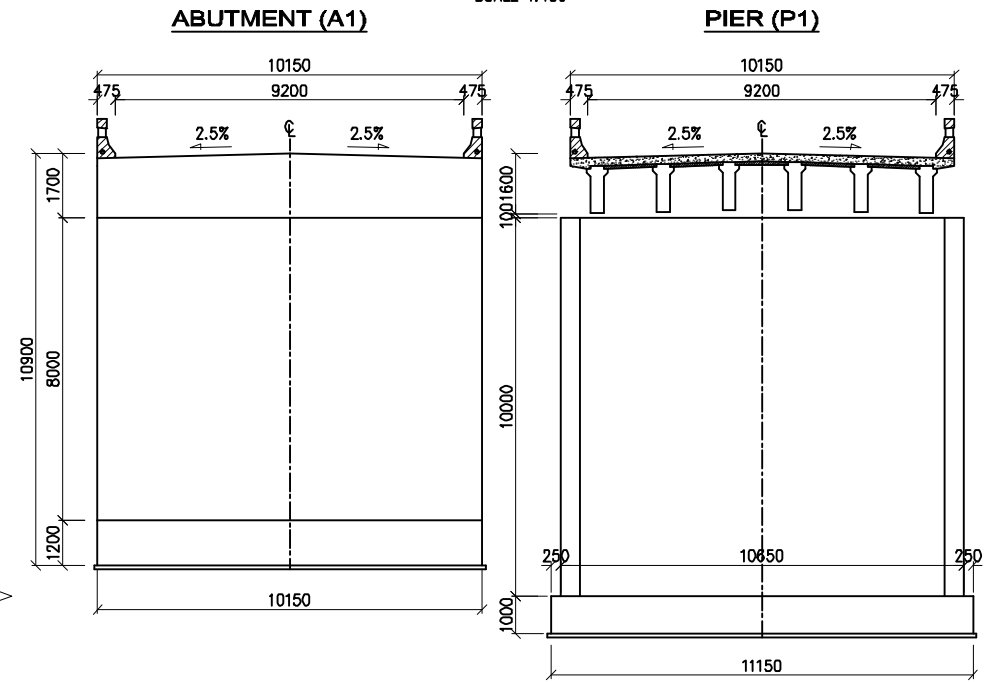
PLAN
SCALE 1:125



CROSS SECTION
SCALE 1:50



FRONT VIEW
SCALE 1:100



DESIGN CRITERIA

GENERAL CONDITION		
DESIGN LIVE LOAD	NA, NB, NC, LOADING	
DESIGN SPEED	100 km/h	
BRIDGE LENGTH (SPAN LENGTH)	34.0 m (17.0 m + 17.0 m)	
FREEBOARD	1.0 m	
DESIGN DISCHARGE	731.4 m ³ /sec	
LONGITUDINAL GRADIENT	LEVEL	
CROSS-FALL OF CARRIAGE WAY	2.5 %	
SUPER STRUCTURE TYPE	RC GIRDER	
SUB STRUCTURE TYPE	ABUTMENT	RC REVERED-T
	PIER	RC WALL
FOUNDATION TYPE	ABUTMENT	A1, SPREAD FOUNDATION A2, PILES FOUNDATION
	PIER	P1, SPREAD FOUNDATION

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ANE NATIONAL ROAD ADMINISTRATION

REMARKS:

THE PREPARATORY SURVEY ON ROAD IMPROVEMENT PLAN IN NACALA DEVELOPMENT CORRIDOR (N13: CUAMBA-MANDIMBA-LICHINGA)

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Oriental Consultants Co., Ltd

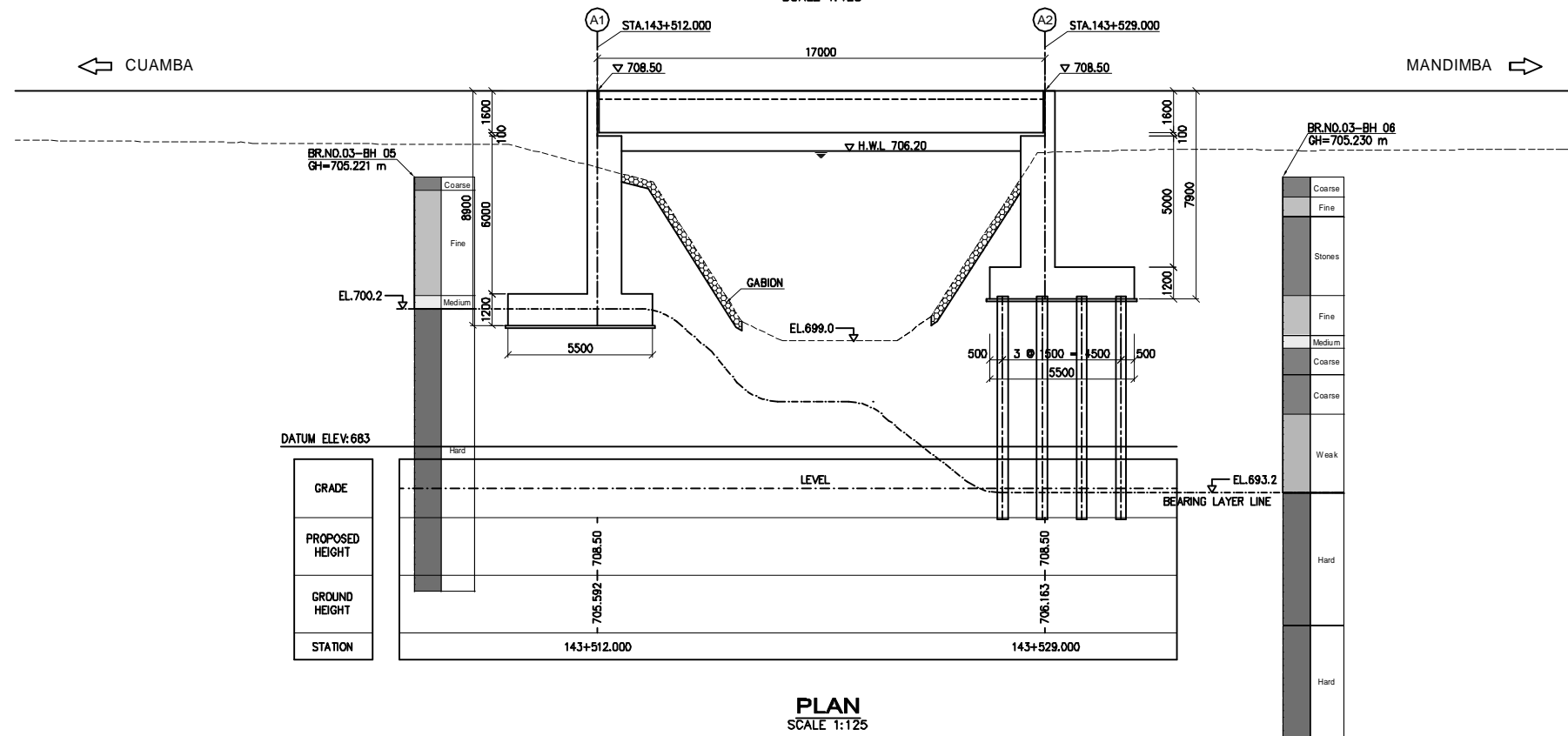
DRAWING TITLE
**BR NO.2 LUSSANGASSI BRIDGE
GENERAL VIEW OF THE BRIDGE**

NAME	PREPARED BY	CHECKED BY	APPROVED BY
SIGNATURE			
DATE			

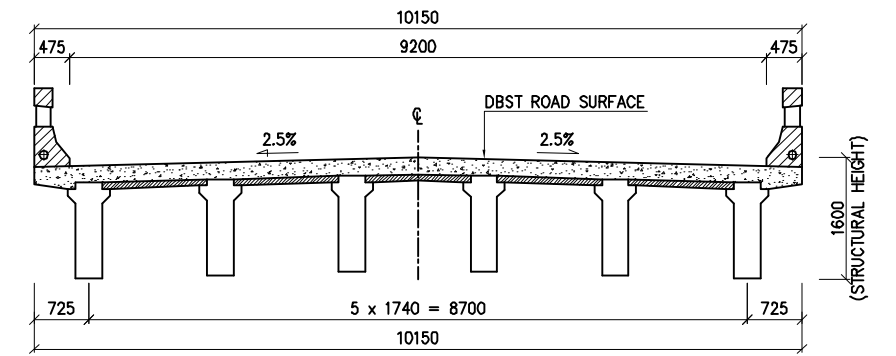
SCALE	SHEET NO.	DRAWING NO.	REV. NO.
As Shown		30	-

BR NO.3 NGOLUA BRIDGE GENERAL VIEW OF THE BRIDGE

PROFILE
SCALE 1:125



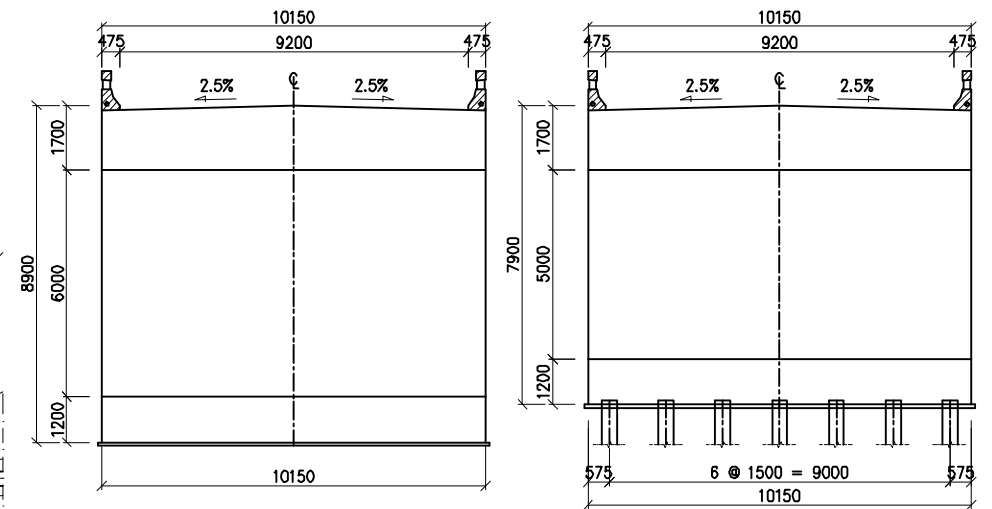
CROSS SECTION
SCALE 1:50



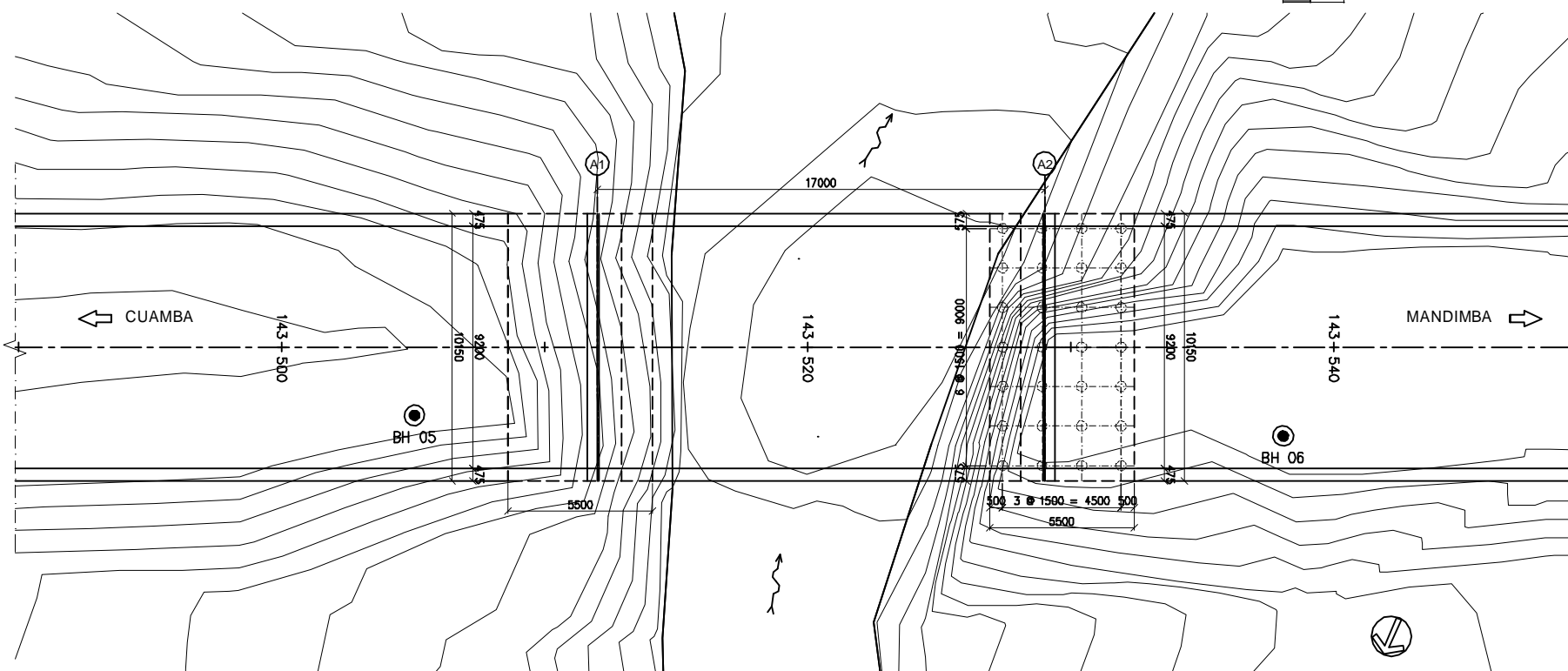
FRONT VIEW
SCALE 1:100

ABUTMENT (A1)

ABUTMENT (A2)



PLAN
SCALE 1:125



DESIGN CRITERIA

GENERAL CONDITION	
DESIGN LIVE LOAD	NA, NB, NC, LOADING
DESIGN SPEED	100 km/h
BRIDGE LENGTH (SPAN LENGTH)	17.0 m
FREEBOARD	0.7 m
DESIGN DISCHARGE	307.9 m ³ /sec
LONGITUDINAL GRADIENT	LEVEL
CROSS-FALL OF CARRIAGE WAY	2.5 %
SUPER STRUCTURE TYPE	RC GIRDER
SUB STRUCTURE TYPE	ABUTMENT
FOUNDATION TYPE	ABUTMENT
	RC REVERED-T A1, SPREAD FOUNDATION A2, PILES FOUNDATION

JAPAN INTERNATIONAL COOPERATION AGENCY

NATIONAL ROAD ADMINISTRATION

REMARKS:

THE PREPARATORY SURVEY ON ROAD IMPROVEMENT PLAN IN NACALA DEVELOPMENT CORRIDOR
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Oriental Consultants Co., Ltd

DRAWING TITLE

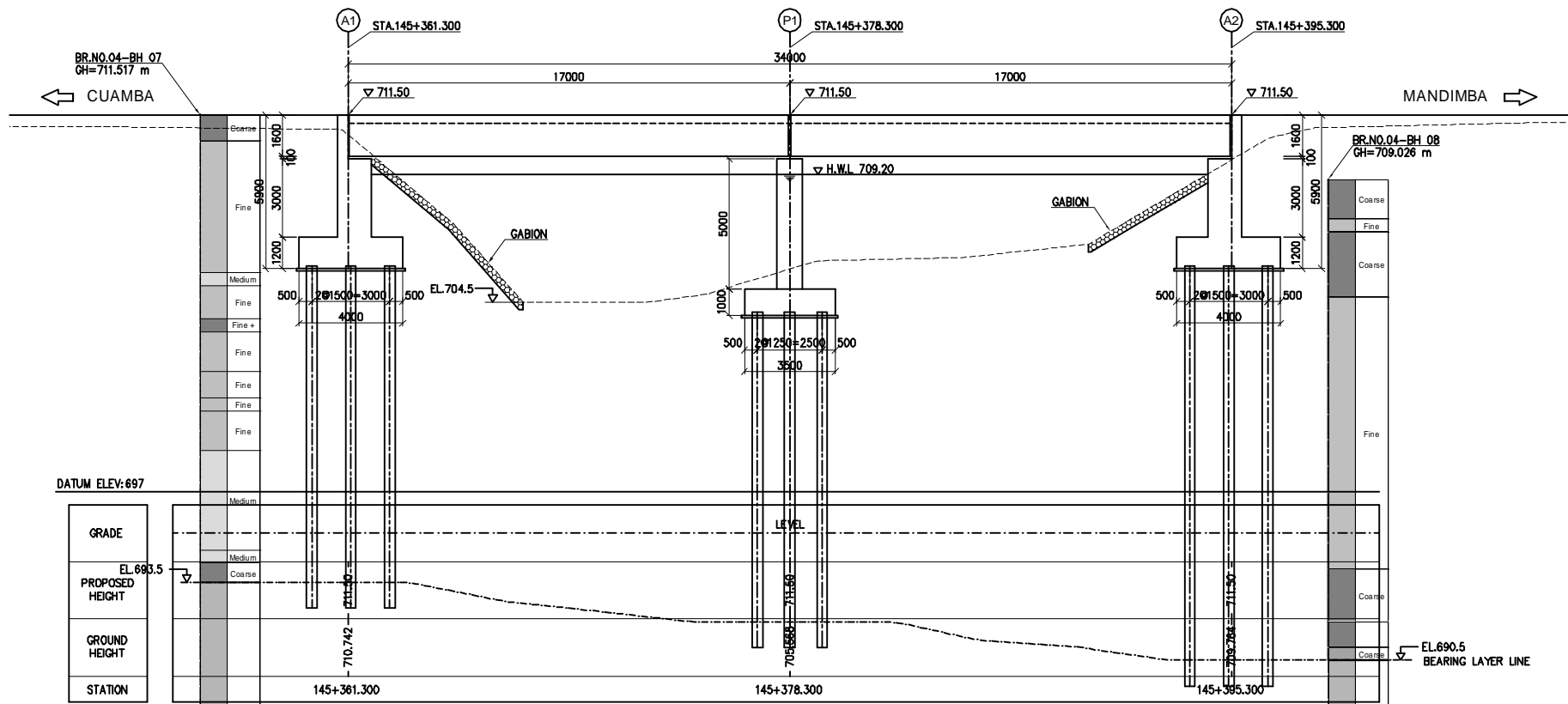
**BR NO.3 NGOLUA BRIDGE
GENERAL VIEW OF THE BRIDGE**

	PREPARED BY	CHECKED BY	APPROVED BY
NAME			
SIGNATURE			
DATE			

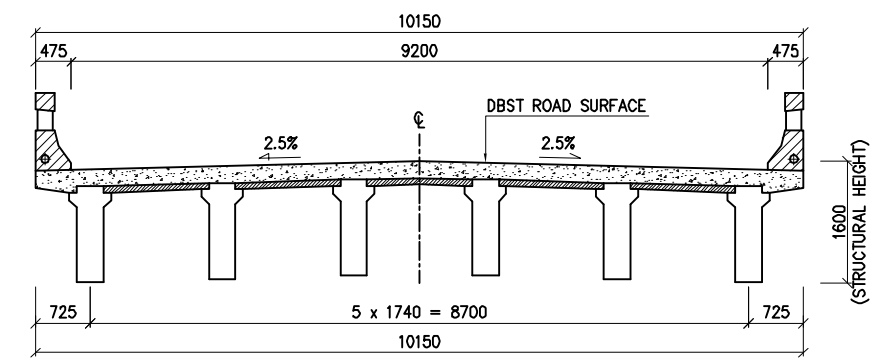
SCALE	SHEET NO.	DRAWING NO.	REV. NO.
As Shown		31	-

BR NO.4 NGAME II BRIDGE GENERAL VIEW OF THE BRIDGE

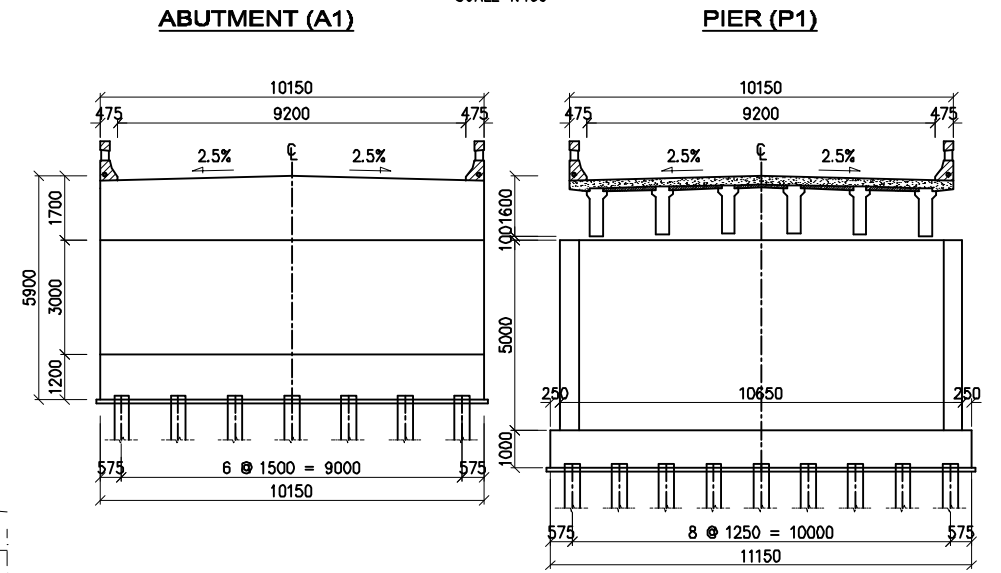
PROFILE
SCALE 1:125



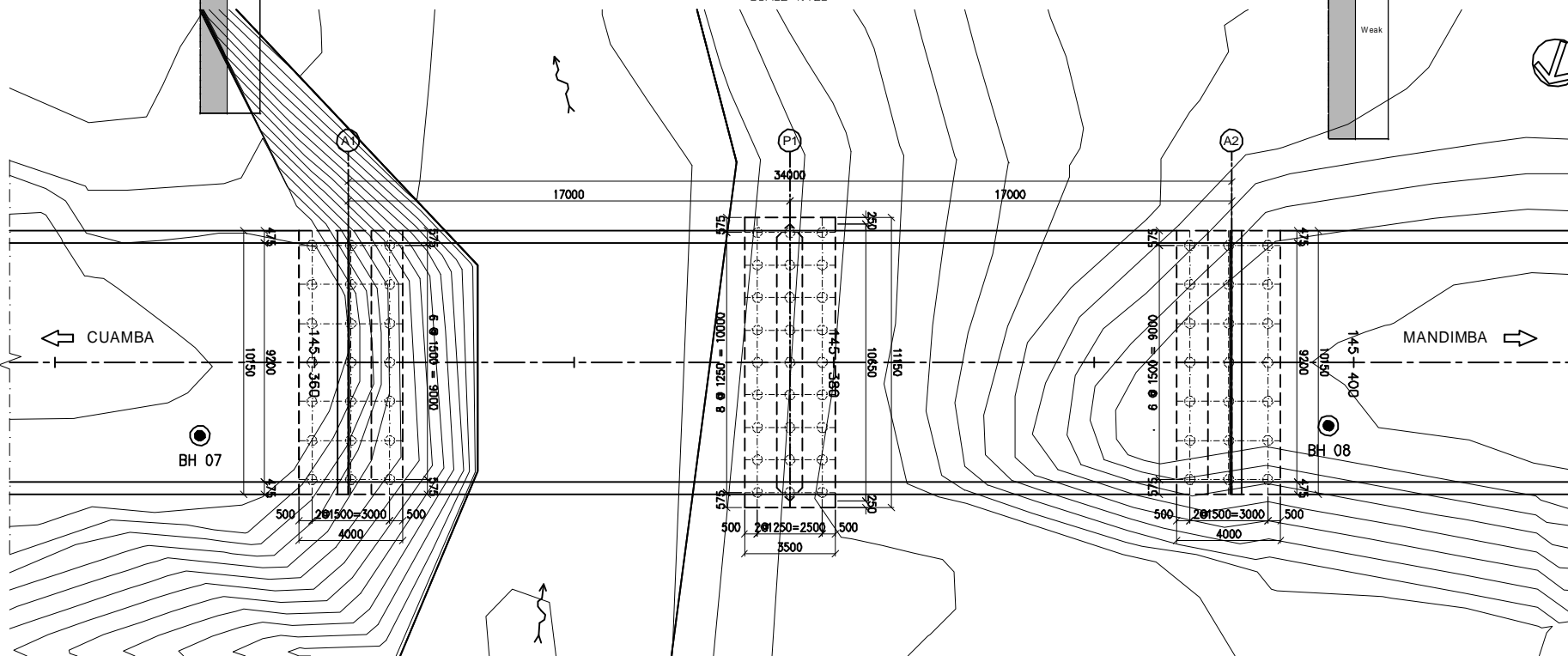
CROSS SECTION
SCALE 1:50



FRONT VIEW
SCALE 1:100



PLAN
SCALE 1:125



DESIGN CRITERIA

GENERAL CONDITION		
DESIGN LIVE LOAD	NA, NB, NC, LOADING	
DESIGN SPEED	100 km/h	
BRIDGE LENGTH (SPAN LENGTH)	34.0 m (17.0 m + 17.0 m)	
FREEBOARD	0.7 m	
DESIGN DISCHARGE	301.7 m ³ /sec	
LONGITUDINAL GRADIENT	LEVEL	
CROSS-FALL OF CARRIAGE WAY	2.5 %	
SUPER STRUCTURE TYPE	RC GIRDER	
SUB STRUCTURE TYPE	ABUTMENT	RC REVERED-T
	PIER	RC WALL
FOUNDATION TYPE	ABUTMENT	A1, PILES FOUNDATION A2, PILES FOUNDATION
	PIER	P1, PILES FOUNDATION

REMARKS:

JICA JAPAN INTERNATIONAL COOPERATION AGENCY

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THE PREPARATORY SURVEY ON ROAD IMPROVEMENT PLAN IN NACALA DEVELOPMENT CORRIDOR
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SIGNATURE			
DATE			

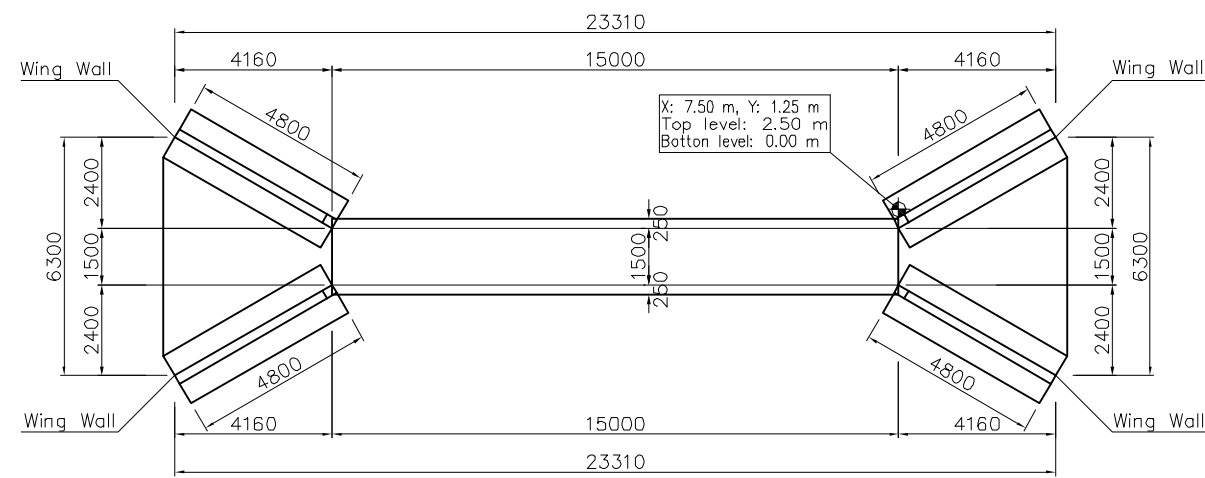
DRAWING TITLE

**BR NO.4 NGAME II BRIDGE
GENERAL VIEW OF THE BRIDGE**

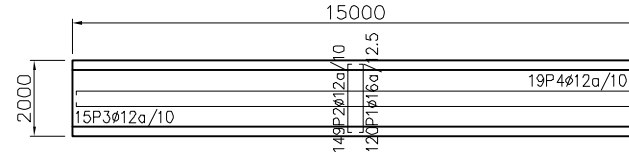
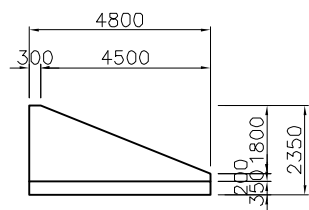
SCALE	SHEET NO.	DRAWING NO.	REV. NO.
As Shown		32	-

Box Culvert Structural Details (1)

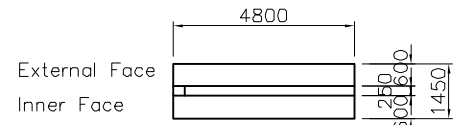
1500x1500 Type A (1 Cell)



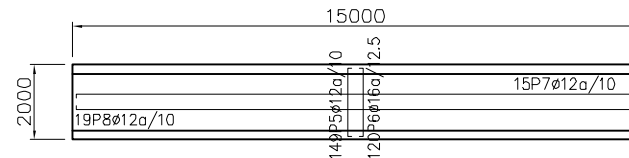
Plan View Scale:1/100



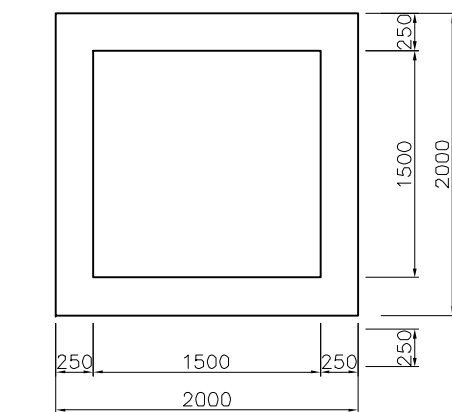
Top Slab Scale:1/100



Wing Walls Scale:1/100

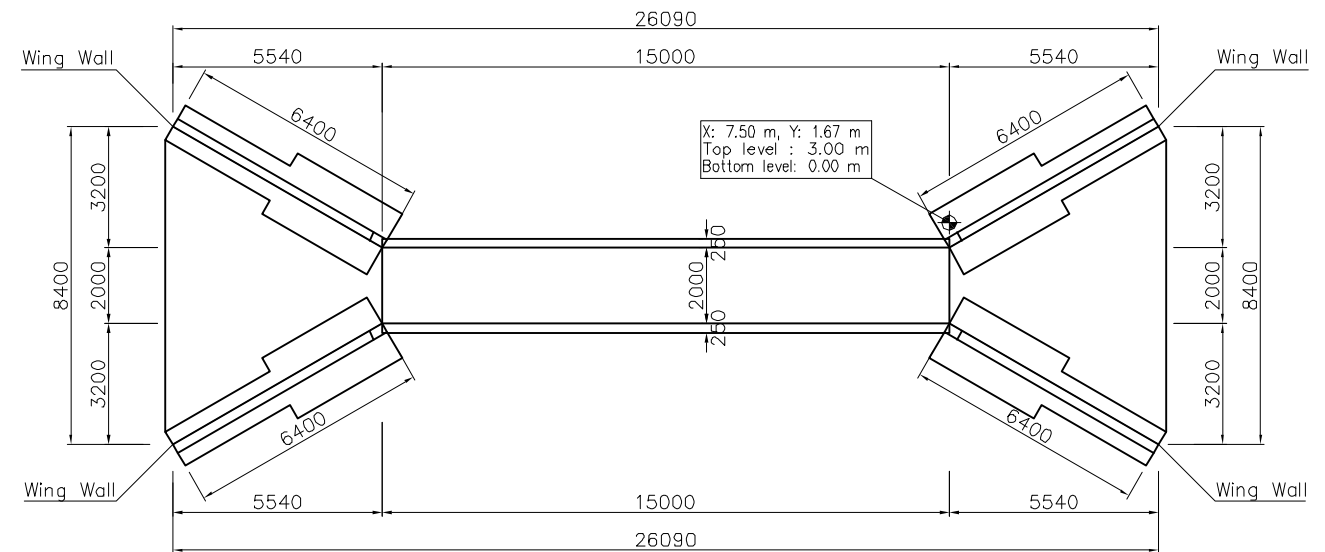


Bottom Slab Scale:1/100

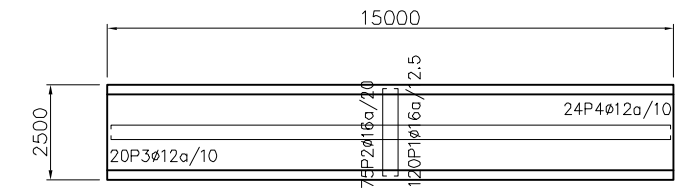
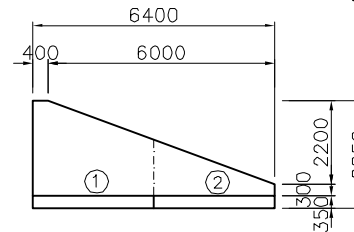


Section View Scale:1/25

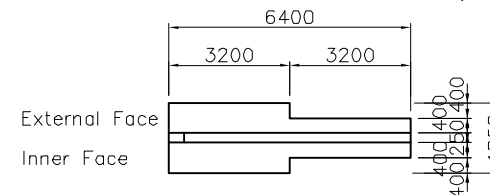
2000x2000 Type A (1 Cell)



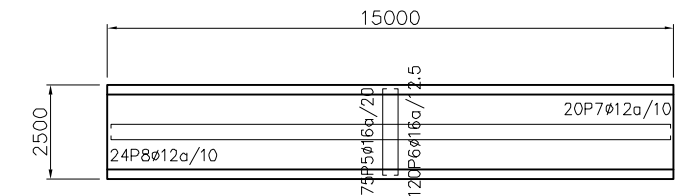
Plan View Scale:1/100



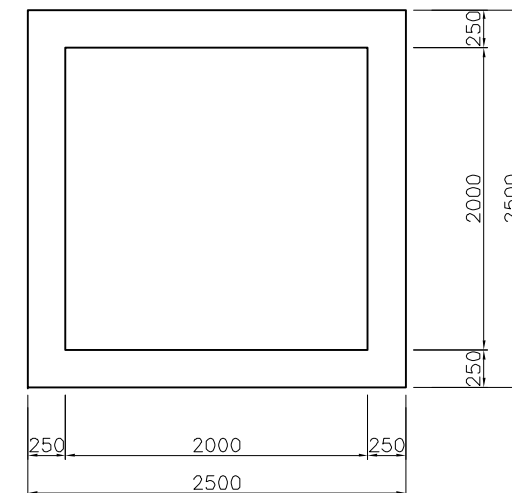
Top Slab Scale:1/100



Wing Walls Scale:1/100



Bottom Slab Scale:1/100



Section View Scale:1/25

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REMARKS:

THE PREPARATORY SURVEY ON ROAD IMPROVEMENT PLAN IN NACALA DEVELOPMENT CORRIDOR (N13: CUAMBA-MANDIMBA-LICHINGA)

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DRAWING TITLE

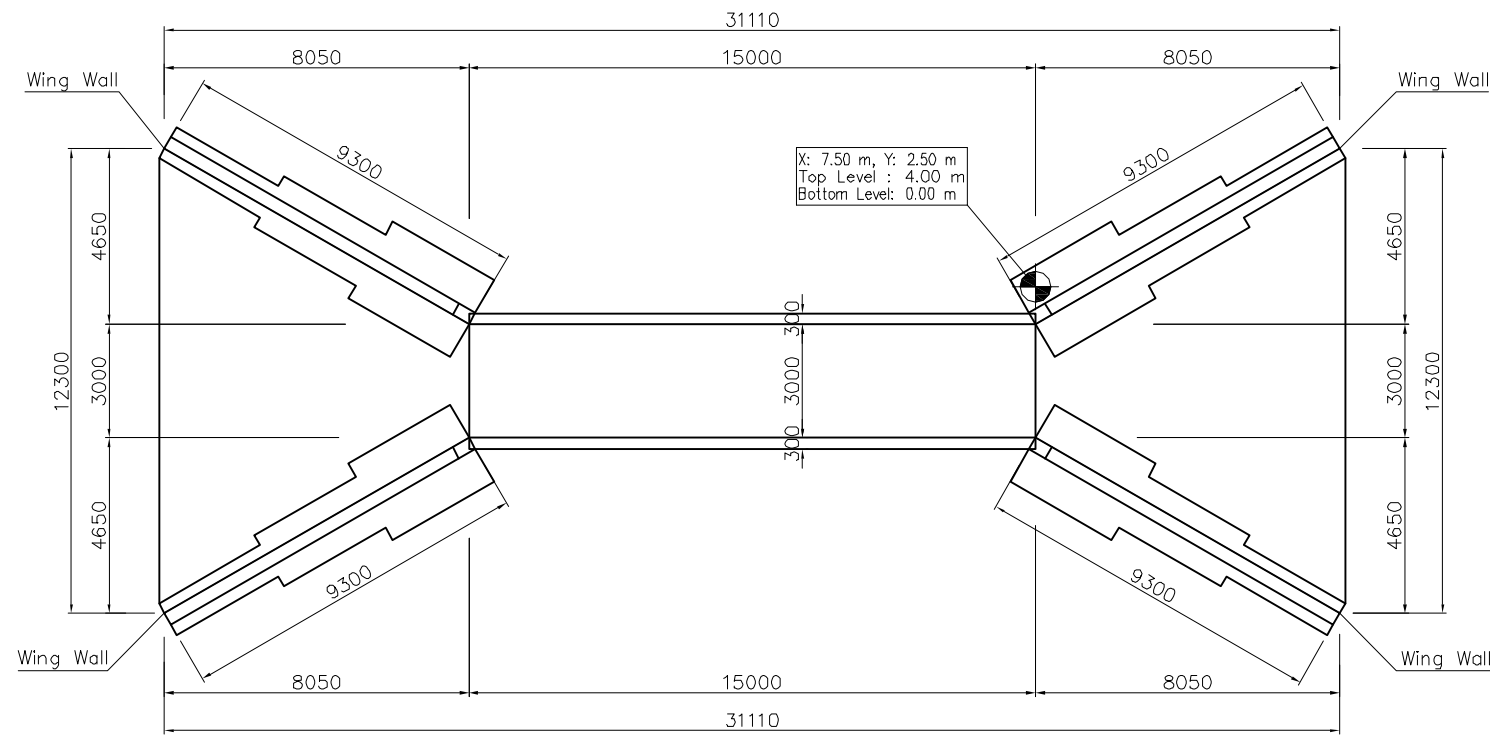
Box Culvert Structural Details (1)

	PREPARED BY	CHECKED BY	APPROVED BY
NAME			
SIGNATURE			
DATE			

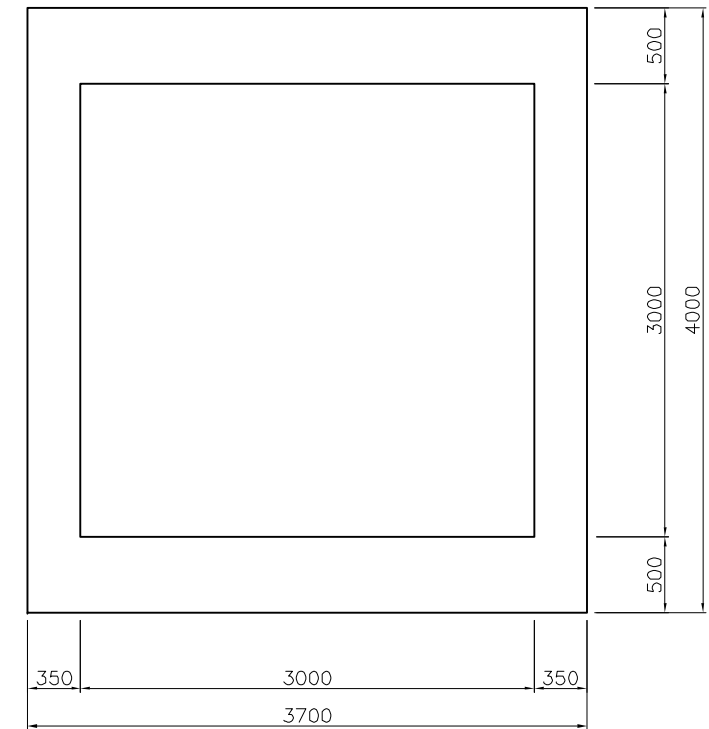
SCALE	SHEET NO.	DRAWING NO.	REV. NO.
As Shown		33	-

Box Culvert Structural Details (2)

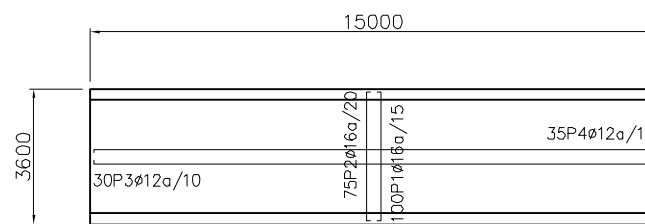
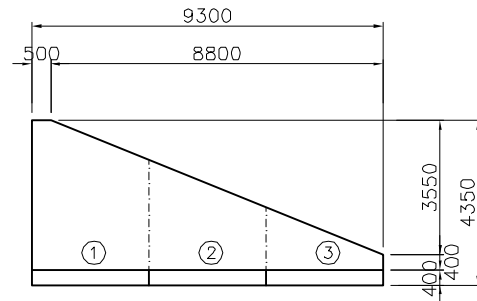
3000x3000 Type A (1 Cell)



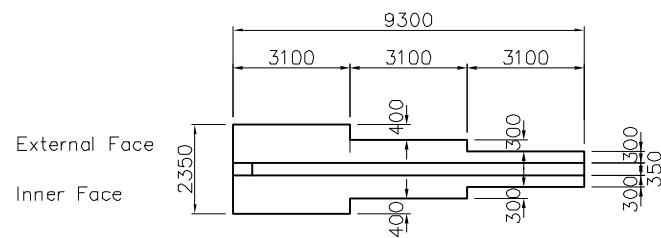
Plan View Scale: 1/100



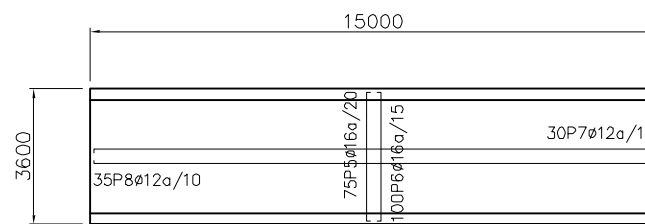
Section View Scale: 1/25



Top Slab Scale: 1/100



Wing Walls Scale: 1/100



Bottom Slab Scale: 1/100

JAPAN INTERNATIONAL COOPERATION AGENCY

NATIONAL ROAD ADMINISTRATION

REMARKS:

THE PREPARATORY SURVEY ON ROAD IMPROVEMENT PLAN IN NACALA DEVELOPMENT CORRIDOR
(N13: CUAMBA-MANDIMBA-LICHINGA)

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 Oriental Consultants Co., Ltd

DRAWING TITLE

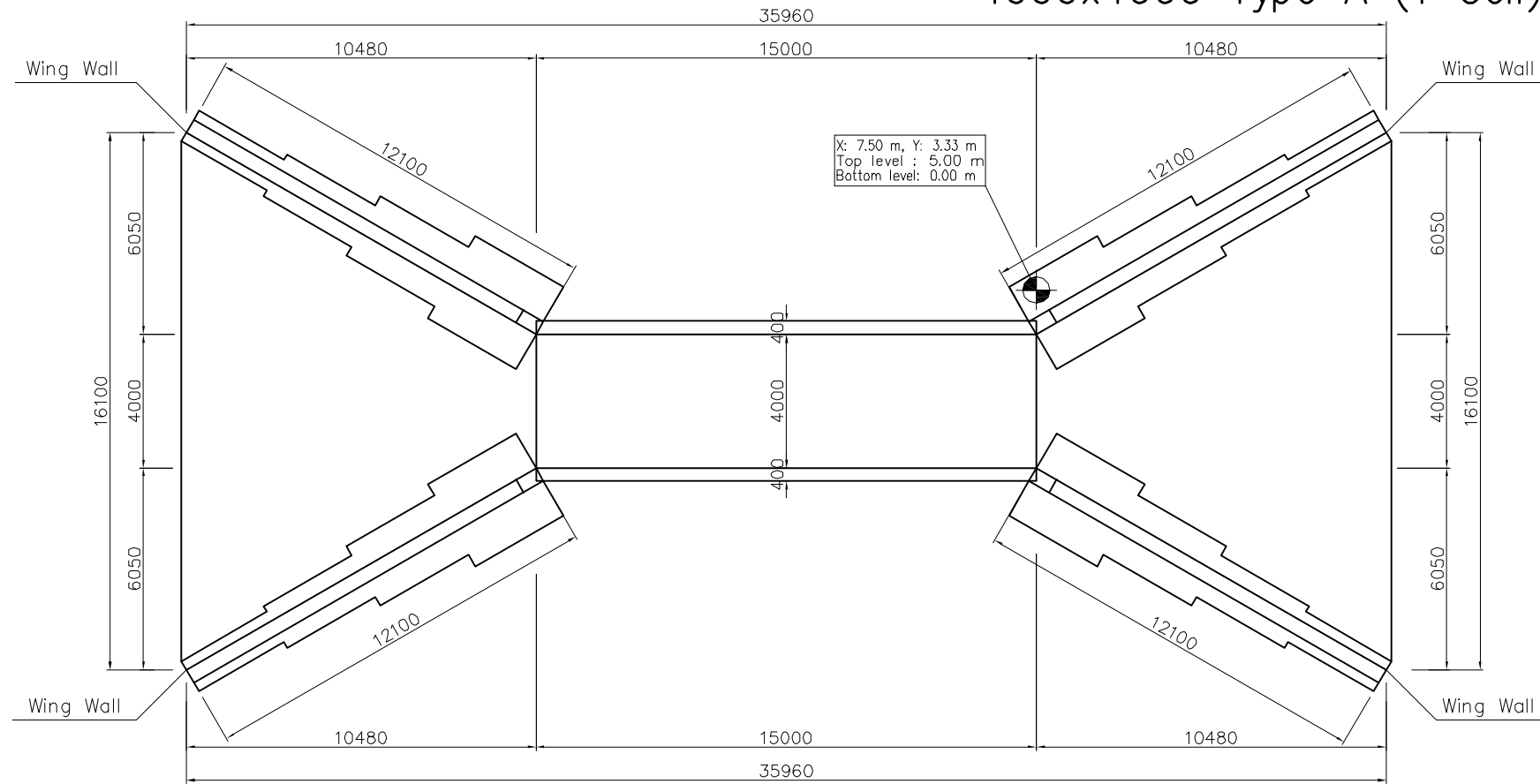
Box Culvert Structural Details (2)

	PREPARED BY	CHECKED BY	APPROVED BY
NAME			
SIGNATURE			
DATE			

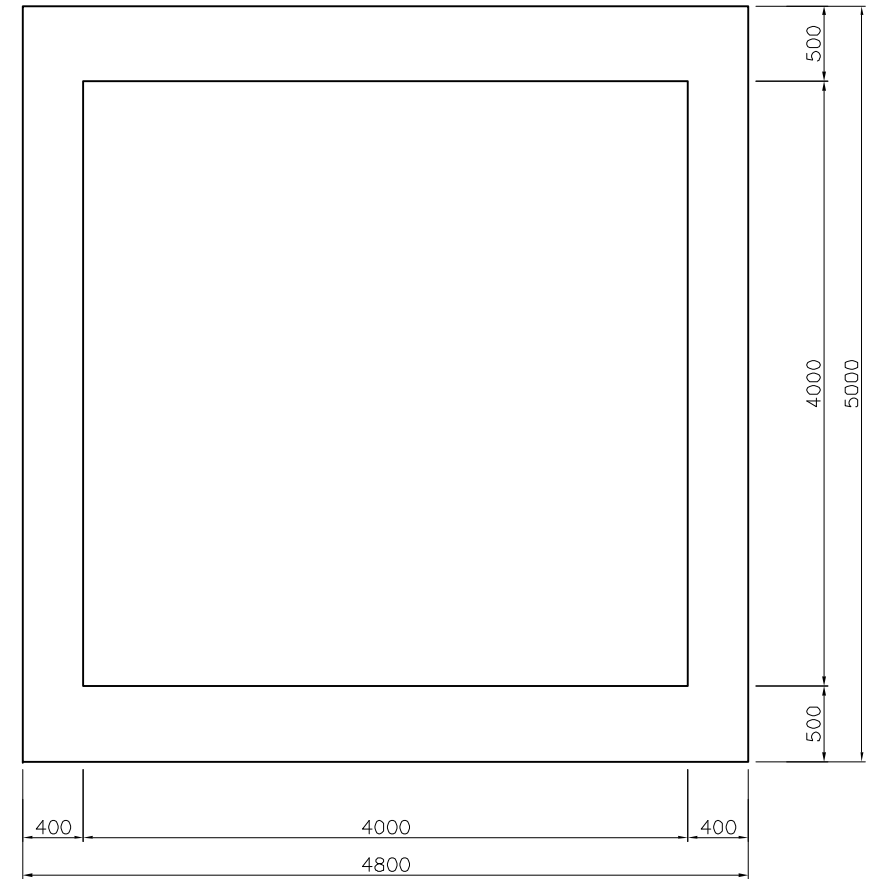
SCALE	SHEET NO.	DRAWING NO.	REV. NO.
As Shown	34	34	-

Box Culvert Structural Details (3)

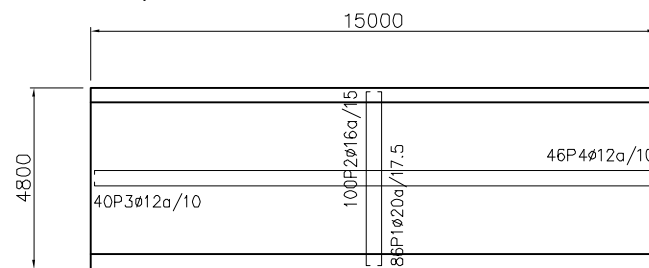
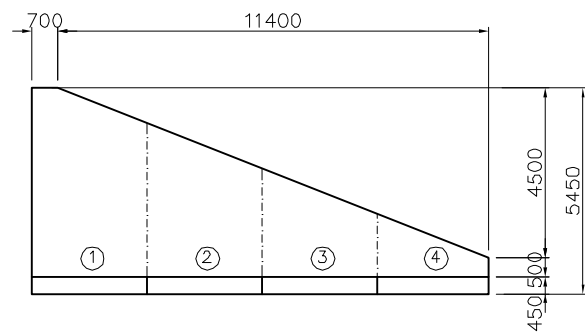
4000x4000 Type A (1 Cell)



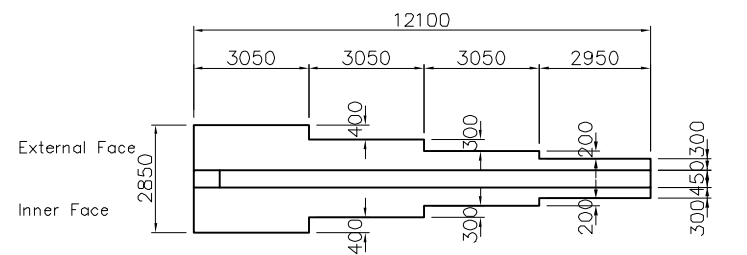
Plan View Scale: 1/100



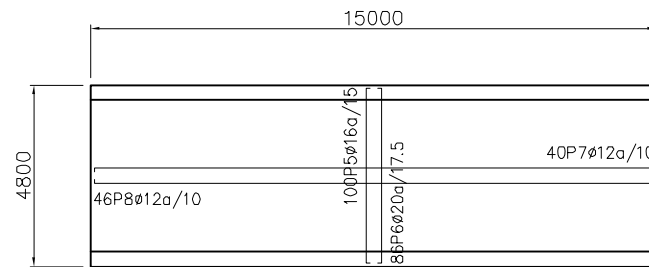
Section View Scale: 1/25



Top Slab Scale: 1/100



Wing Walls Scale: 1/100



Bottom Slab Scale: 1/100

REMARKS:

THE PREPARATORY SURVEY ON ROAD IMPROVEMENT PLAN IN NACALA DEVELOPMENT CORRIDOR
(N13: CUAMBA-MANDIMBA-LICHINGA)

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Box Culvert Structural Details (3)

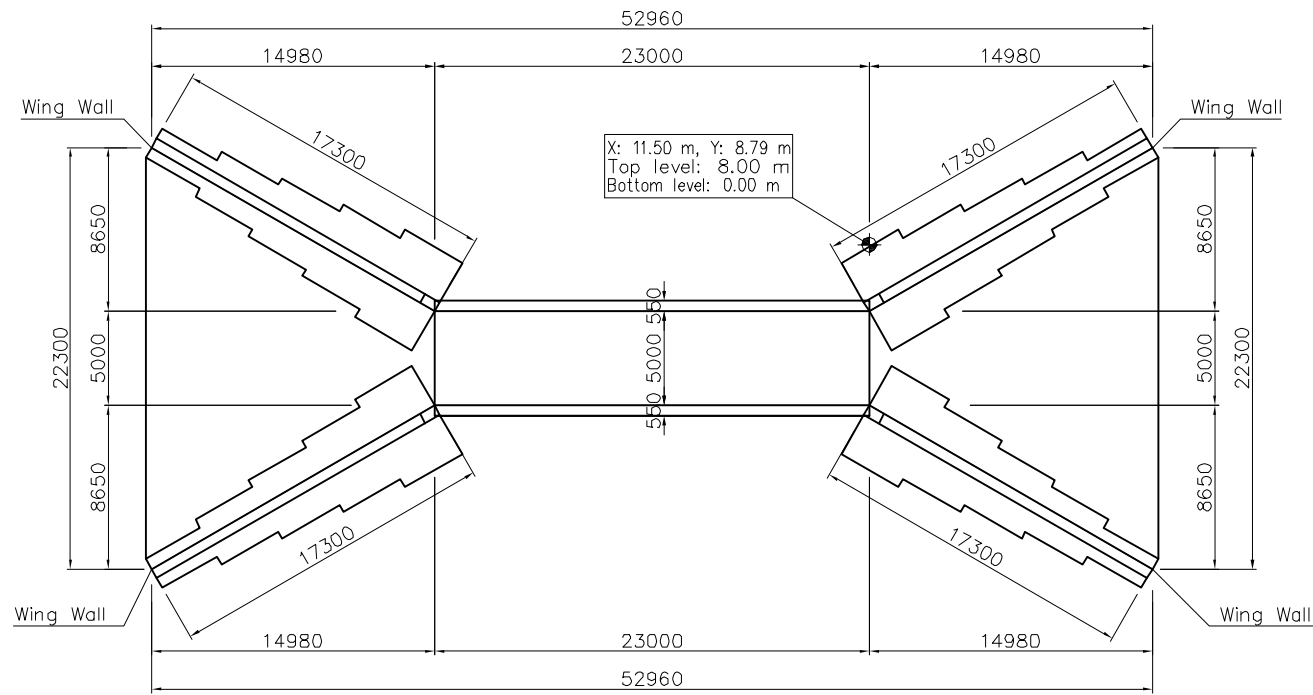
	PREPARED BY	CHECKED BY	APPROVED BY
NAME			
SIGNATURE			
DATE			

SCALE	SHEET NO.	DRAWING NO.	REV. NO.
As Shown		35	-

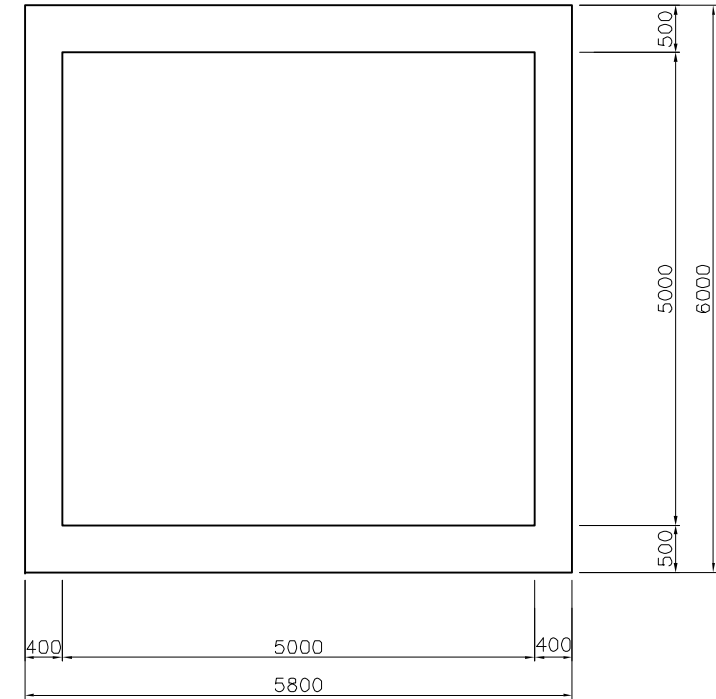
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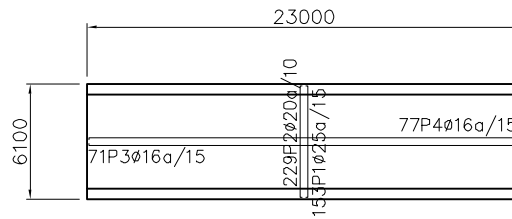
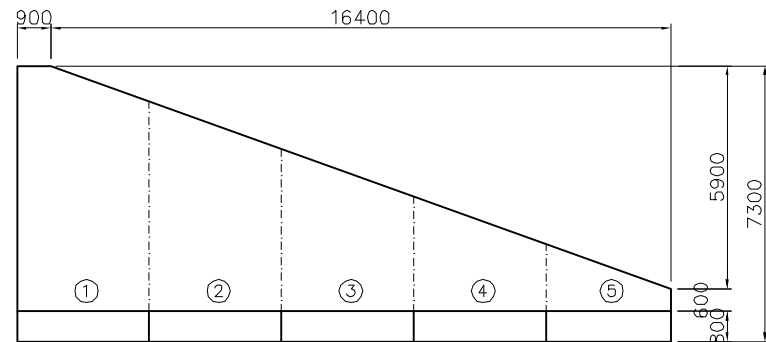
Box Culvert Structural Details (4) 5000x5000 Type A (1 Cell)



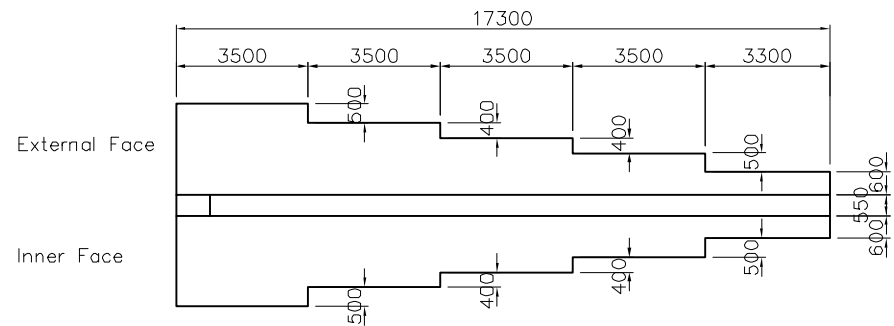
Plan View Scale: 1/200



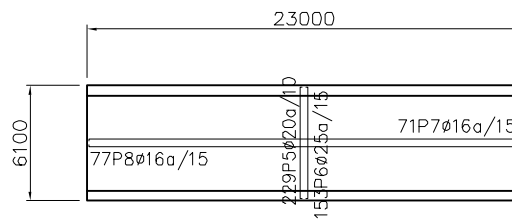
Section View Scale: 1/40



Top Slab Scale: 1/200



Wing Walls Scale: 1/100



Bottom Slab Scale: 1/200

JAPAN INTERNATIONAL COOPERATION AGENCY

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REMARKS:

THE PREPARATORY SURVEY ON ROAD IMPROVEMENT PLAN IN NACALA DEVELOPMENT CORRIDOR
(N13: CUAMBA-MANDIMBA-LICHINGA)

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DRAWING TITLE

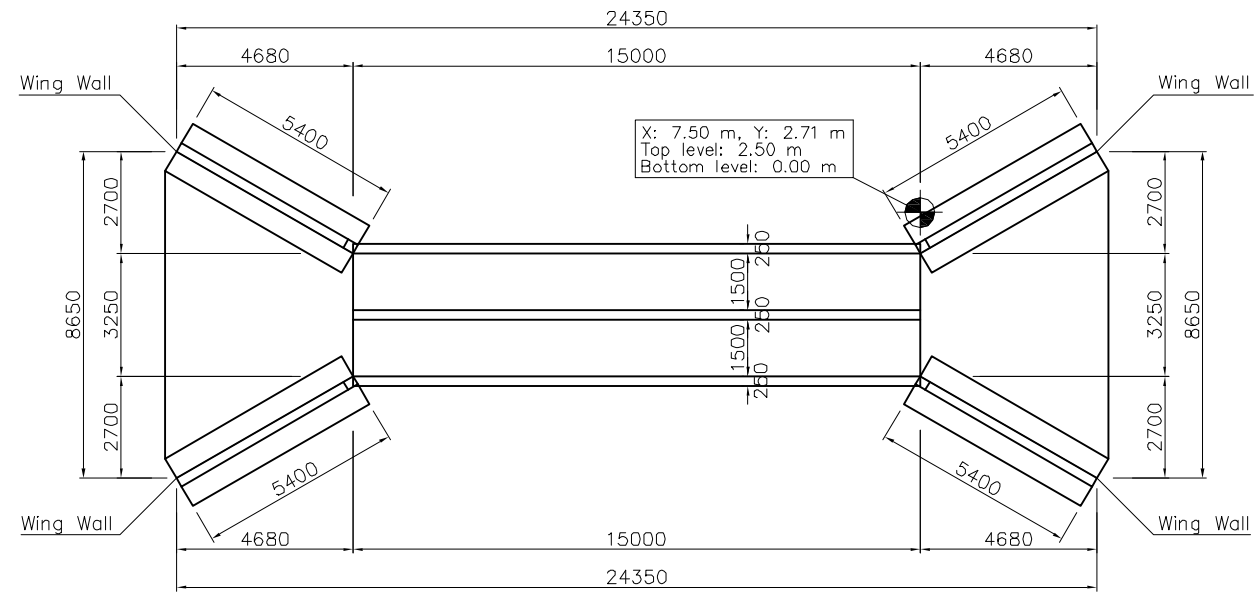
Box Culvert Structural Details (4)

	PREPARED BY	CHECKED BY	APPROVED BY
NAME			
SIGNATURE			
DATE			

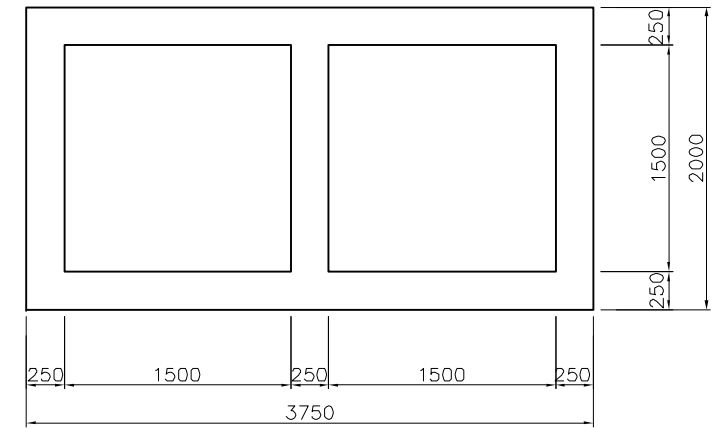
SCALE	SHEET NO.	DRAWING NO.	REV. NO.
As Shown	36	36	-

Box Culvert Structural Details (5)

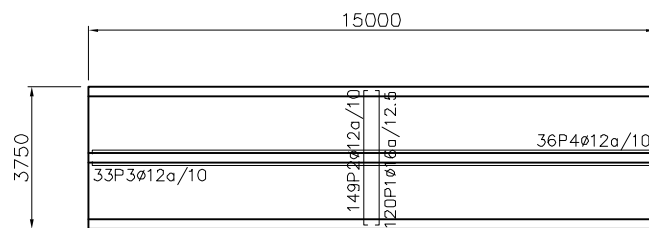
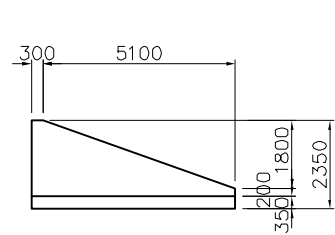
1500x1500 Type A (2 Cells)



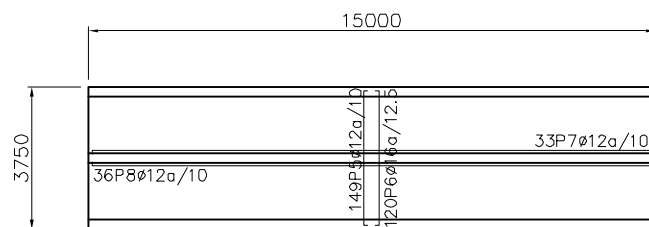
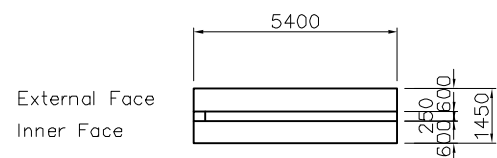
Plan View Scale: 1/100



Section View Scale: 1/25



Top Slab Scale: 1/100



Bottom Slab Scale: 1/100



Wing Walls Scale: 1/100

 JAPAN INTERNATIONAL COOPERATION AGENCY

 NATIONAL ROAD ADMINISTRATION

REMARKS:

THE PREPARATORY SURVEY ON ROAD IMPROVEMENT PLAN IN NACALA DEVELOPMENT CORRIDOR
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DRAWING TITLE

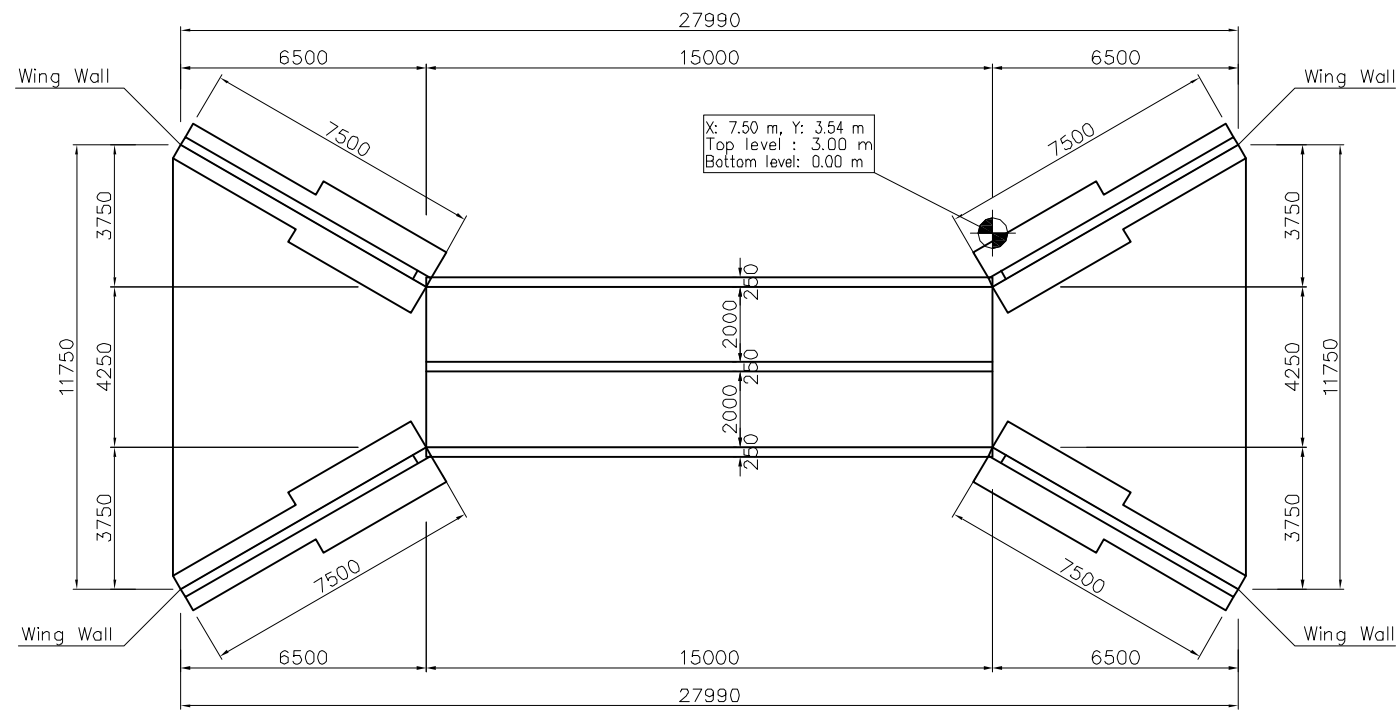
Box Culvert Structural Details (5)

	PREPARED BY	CHECKED BY	APPROVED BY
NAME			
SIGNATURE			
DATE			

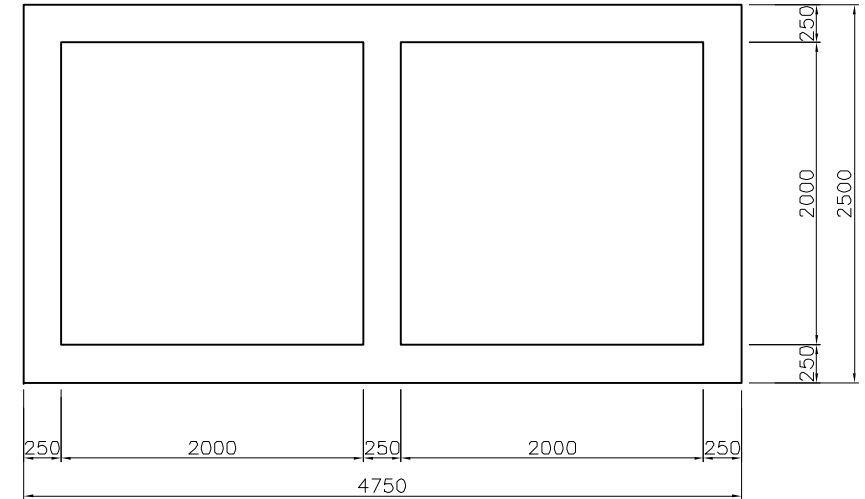
SCALE	SHEET NO.	DRAWING NO.	REV. NO.
As Shown		37	-

Box Culvert Structural Details (6)

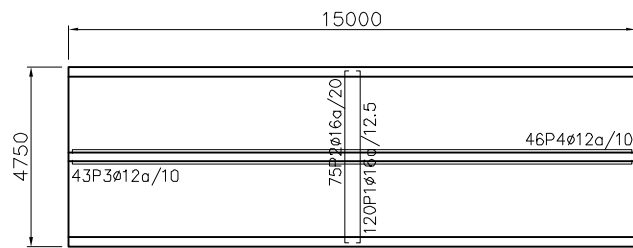
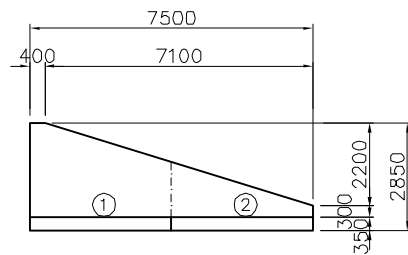
2000x2000 Type A (2 Cells)



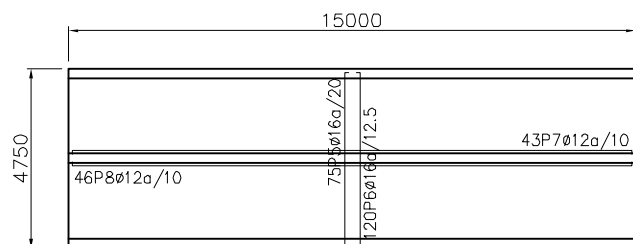
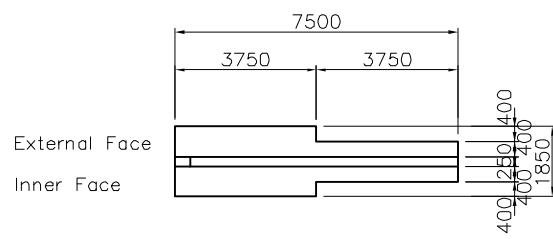
Plan View Scale: 1/100



Section View Scale: 1/25



Top Slab Scale: 1/100



Bottom Slab Scale: 1/100

Wing Walls Scale: 1/100

REMARKS:

THE PREPARATORY SURVEY ON ROAD IMPROVEMENT PLAN IN NACALA DEVELOPMENT CORRIDOR
(N13: CUAMBA-MANDIMBA-LICHINGA)

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Box Culvert Structural Details (6)

	PREPARED BY	CHECKED BY	APPROVED BY
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SIGNATURE			
DATE			

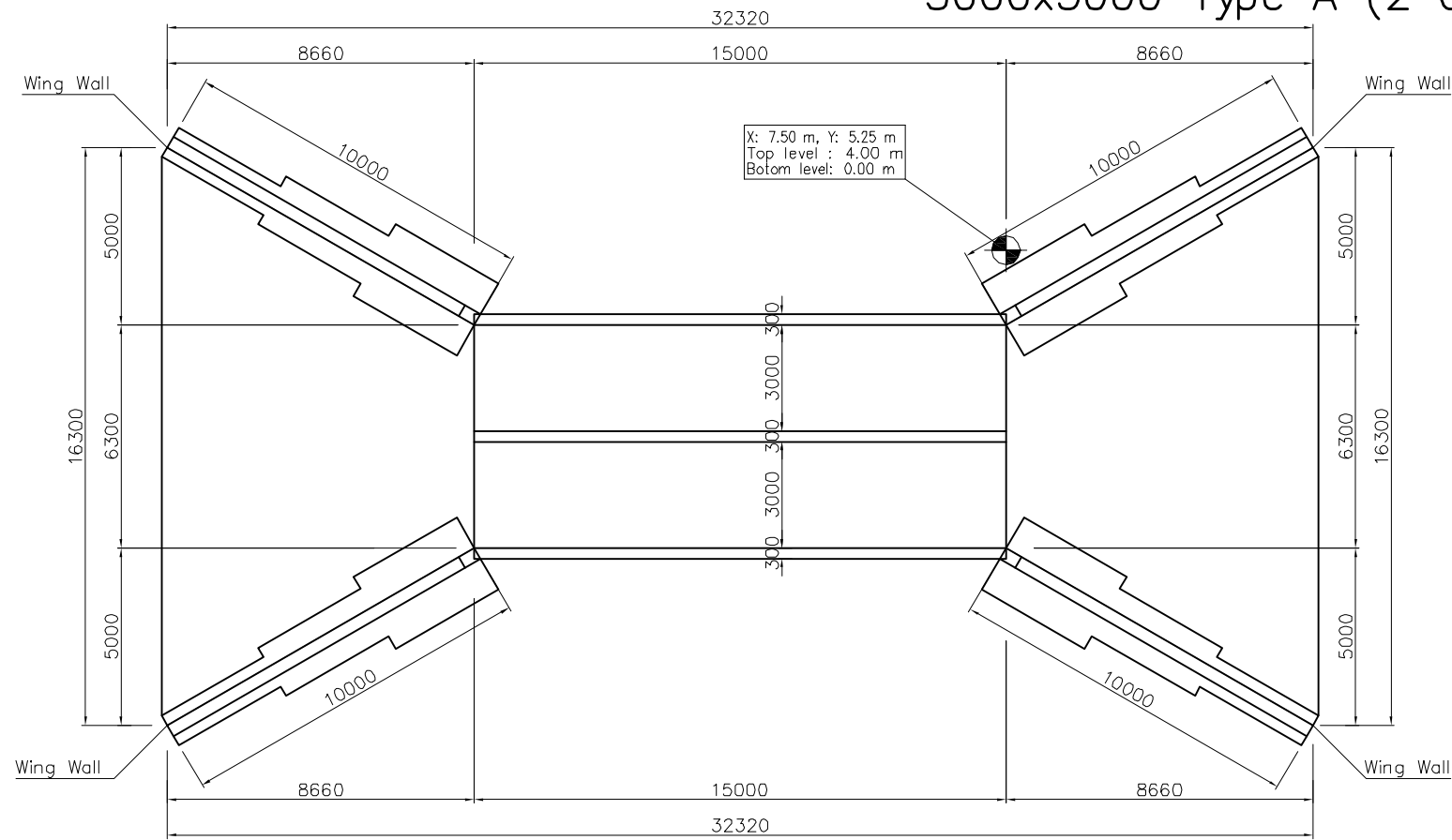
SCALE	SHEET NO.	DRAWING NO.	REV. NO.
As Shown		38	-

JAPAN INTERNATIONAL COOPERATION AGENCY

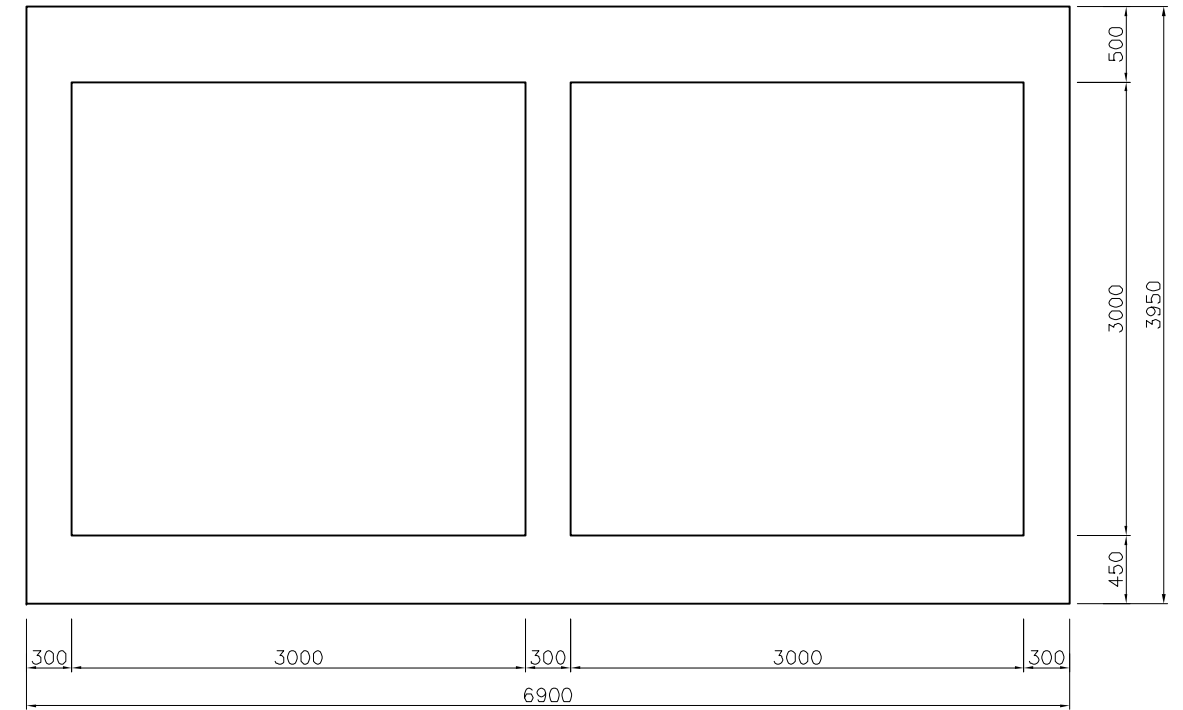
NATIONAL ROAD ADMINISTRATION

Box Culvert Structural Details (7)

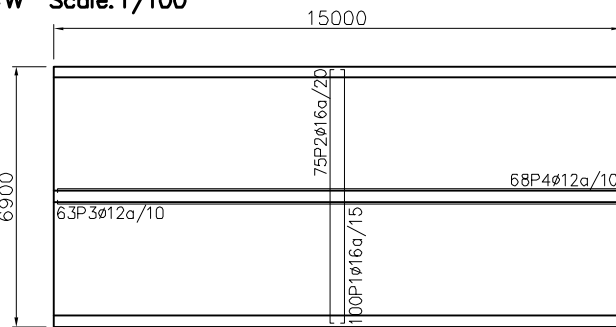
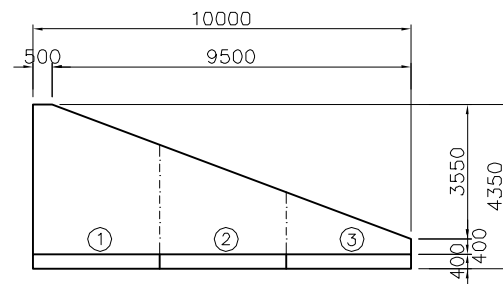
3000x3000 Type A (2 Cells)



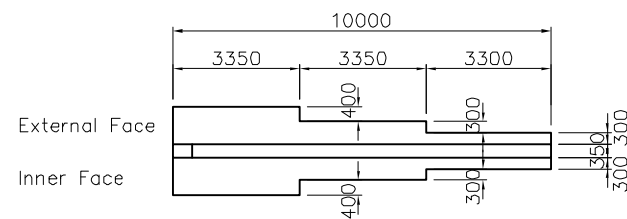
Plan View Scale: 1/100



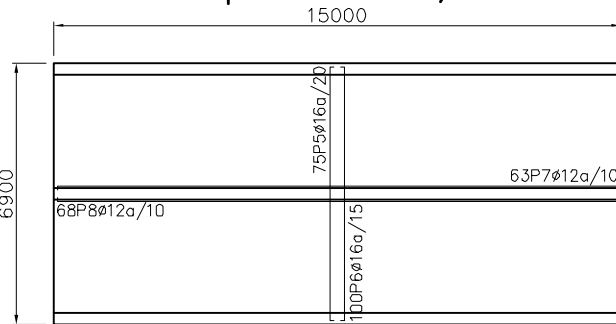
Section View Scale: 1/25



Top Slab Scale: 1/100



Wing Walls Scale: 1/100



Bottom Slab Scale: 1/100

REMARKS:

THE PREPARATORY SURVEY ON ROAD IMPROVEMENT PLAN IN NACALA DEVELOPMENT CORRIDOR
(N13: CUAMBA-MANDIMBA-LICHINGA)

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Oriental Consultants Co., Ltd

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Box Culvert Structural Details (7)

	PREPARED BY	CHECKED BY	APPROVED BY
NAME			
SIGNATURE			
DATE			

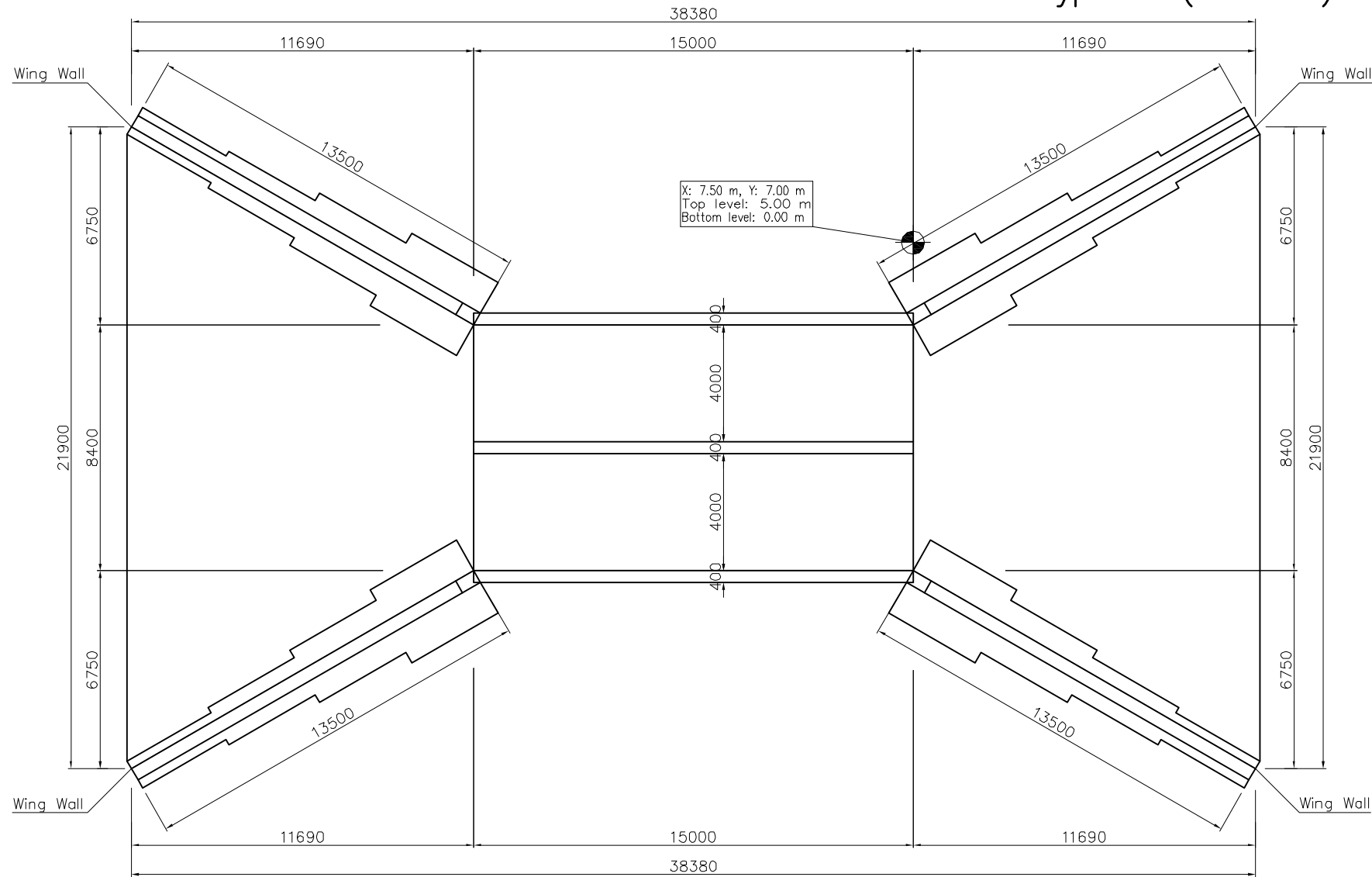
SCALE	SHEET NO.	DRAWING NO.	REV. NO.
As Shown		39	-

JAPAN INTERNATIONAL COOPERATION AGENCY

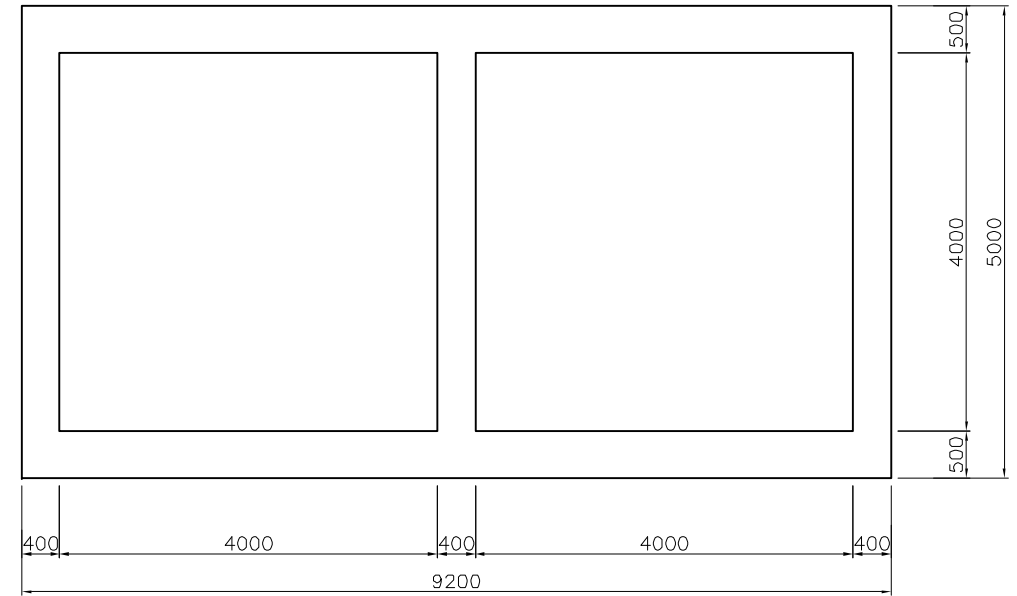
NATIONAL ROAD ADMINISTRATION

Box Culvert Structural Details (8)

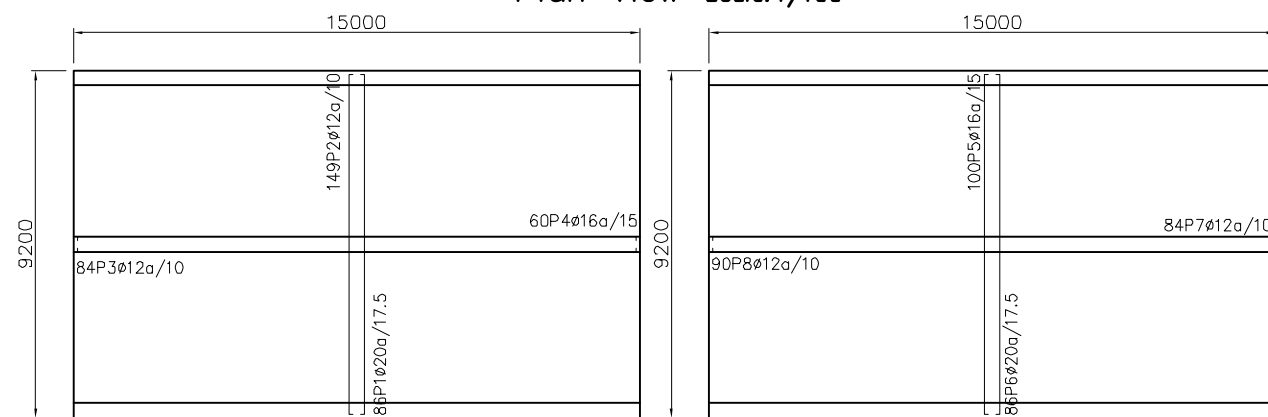
4000x4000 Type A (2 Cells)



Plan View Scale: 1/100

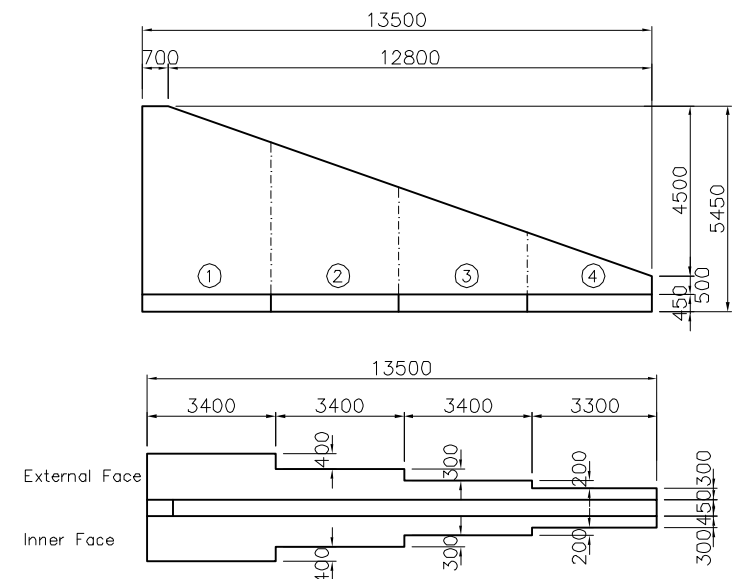


Section View Scale: 1/40



Top Slab Scale: 1/100

Bottom Slab Scale: 1/100



Wing Walls Scale: 1/100

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REMARKS:

THE PREPARATORY SURVEY ON ROAD IMPROVEMENT PLAN IN NACALA DEVELOPMENT CORRIDOR
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DRAWING TITLE

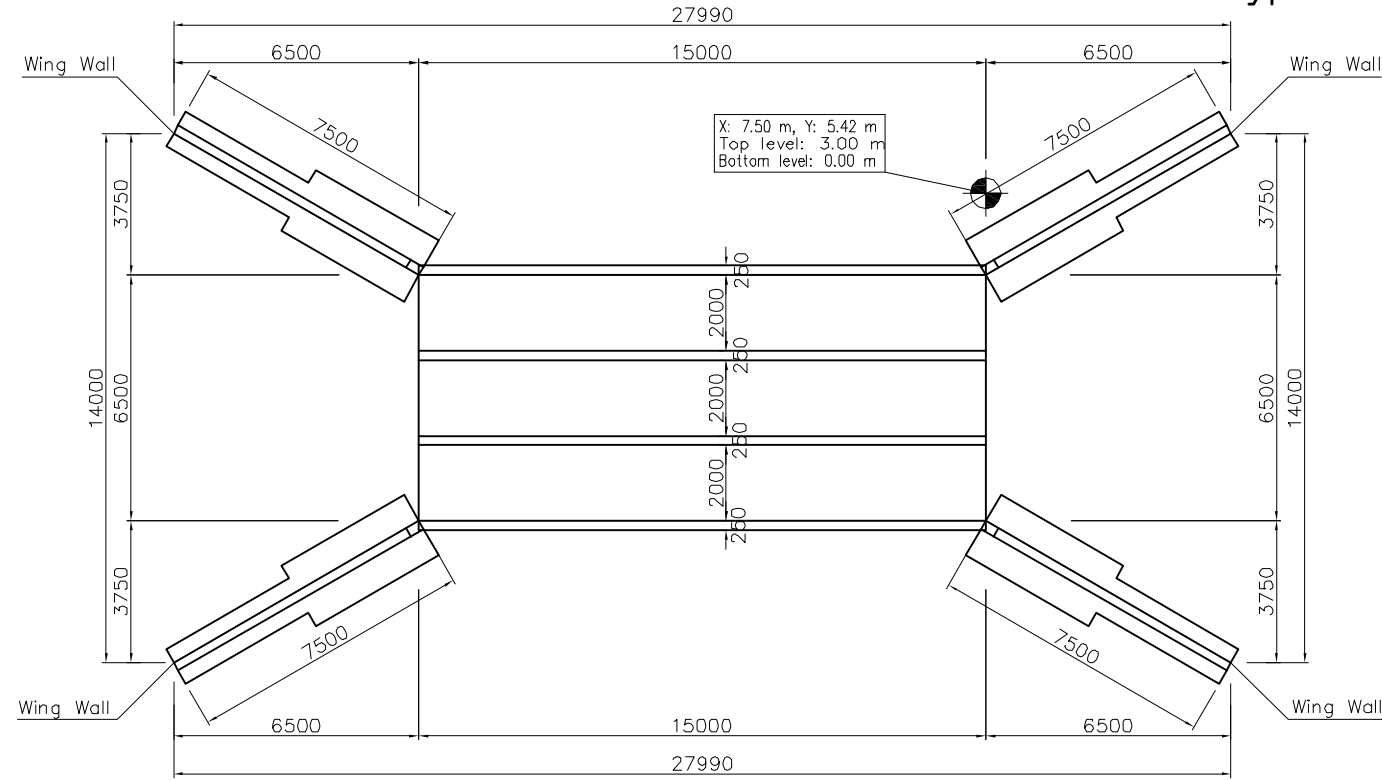
Box Culvert Structural Details (8)

	PREPARED BY	CHECKED BY	APPROVED BY
NAME			
SIGNATURE			
DATE			

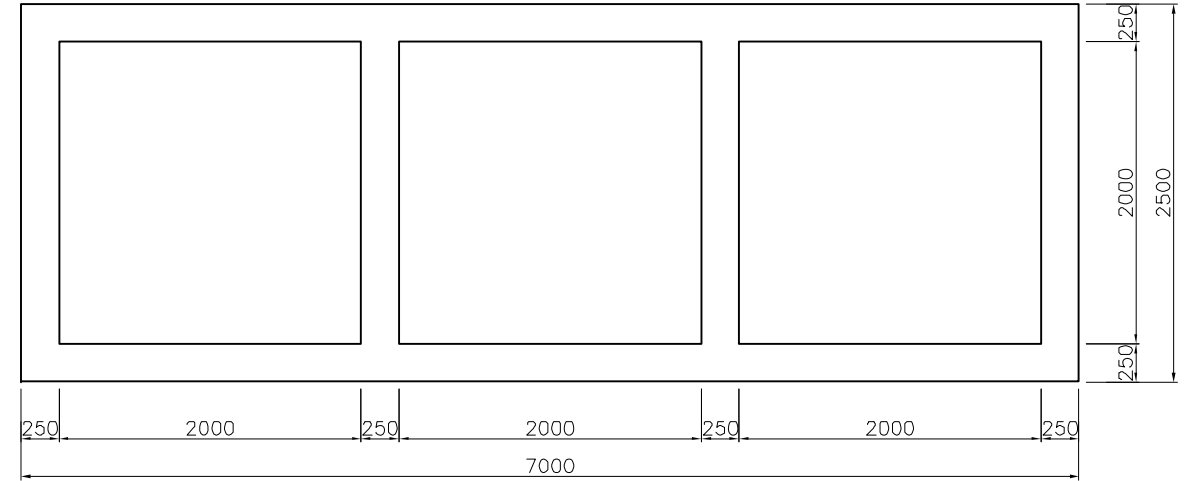
SCALE	SHEET NO.	DRAWING NO.	REV. NO.
As Shown	40	40	-

Box Culvert Structural Details (9)

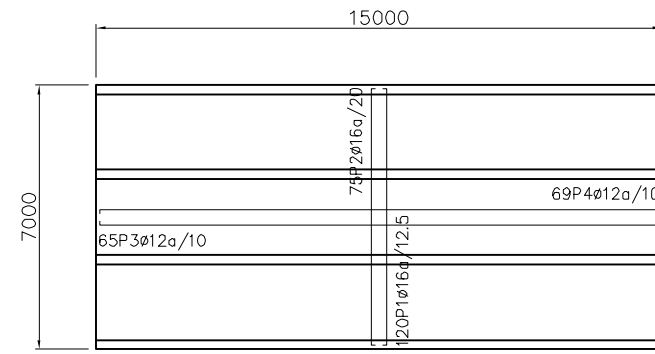
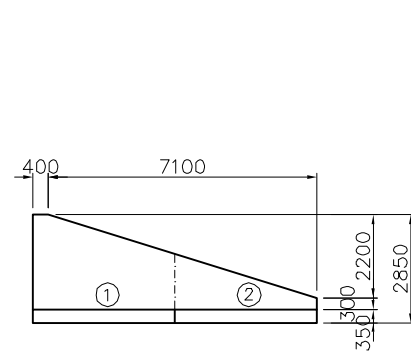
2000x2000 Type A (3 Cells)



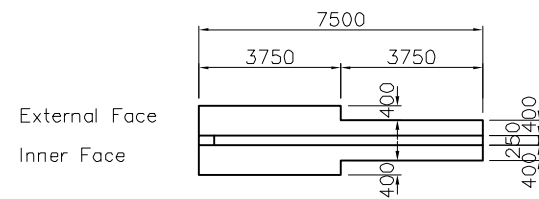
Plan View Scale: 1/100



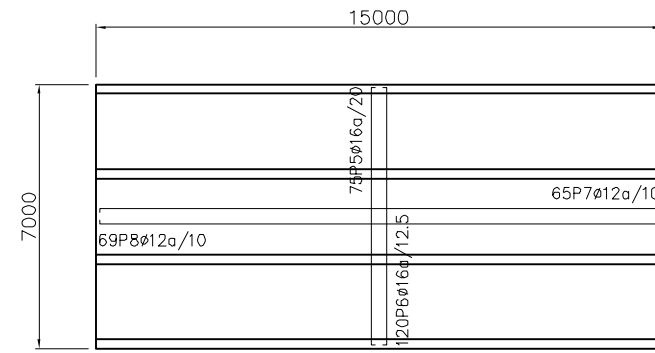
Section View Scale: 1/25



Top Slab Scale: 1/100



Wing Walls Scale: 1/100



Bottom Slab Scale: 1/100

REMARKS:

THE PREPARATORY SURVEY ON ROAD IMPROVEMENT PLAN IN NACALA DEVELOPMENT CORRIDOR
(N13: CUAMBA-MANDIMBA-LICHINGA)

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Box Culvert Structural Details (9)

	PREPARED BY	CHECKED BY	APPROVED BY
NAME			
SIGNATURE			
DATE			

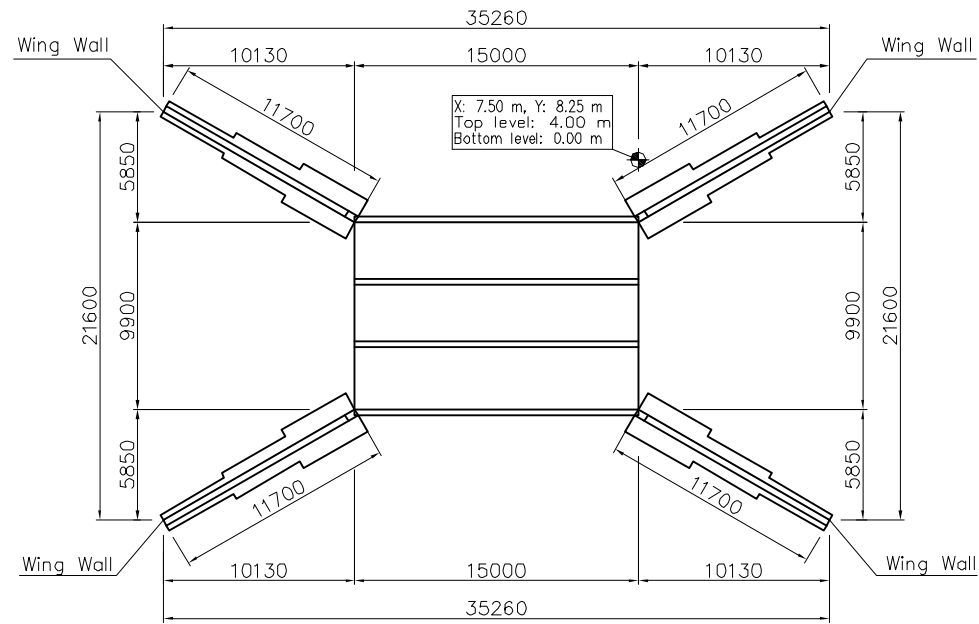
SCALE	SHEET NO.	DRAWING NO.	REV. NO.
As Shown		41	-

JAPAN INTERNATIONAL COOPERATION AGENCY

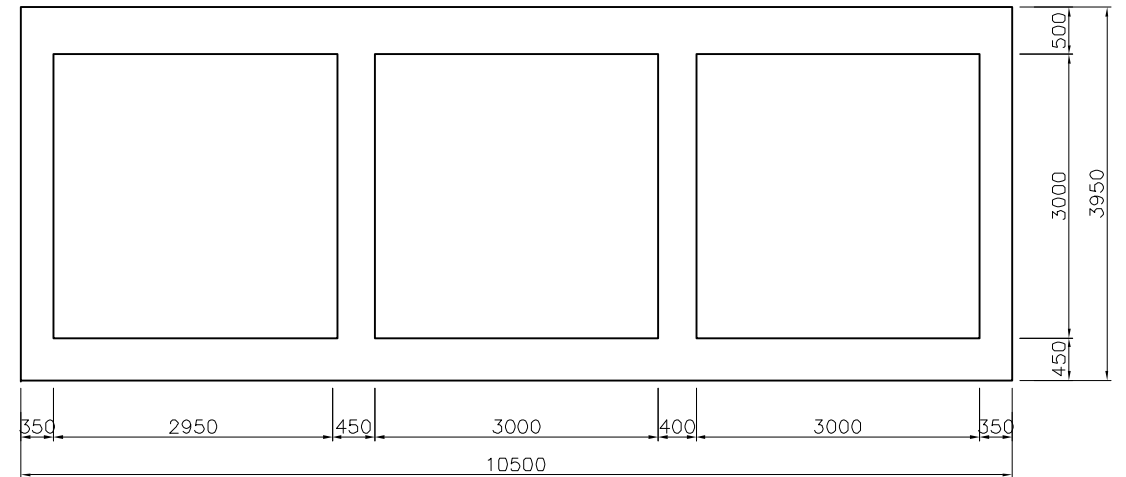
NATIONAL ROAD ADMINISTRATION

Box Culvert Structural Details (10)

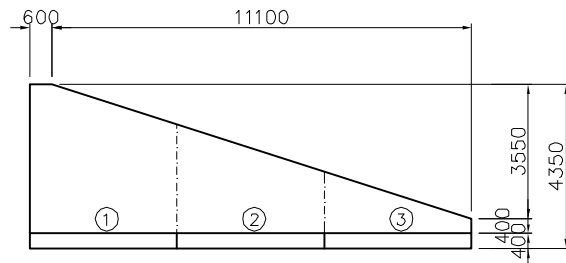
3000x3000 Type A (3 Cells)



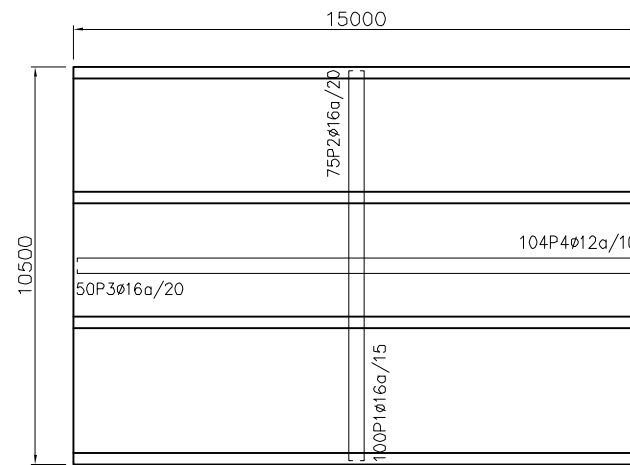
Plan View Scale: 1/200



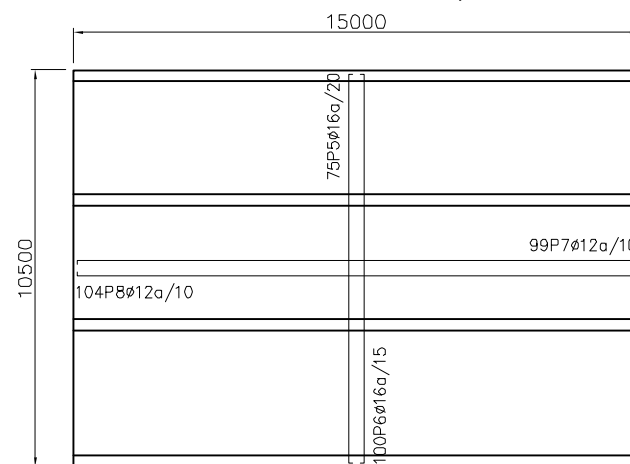
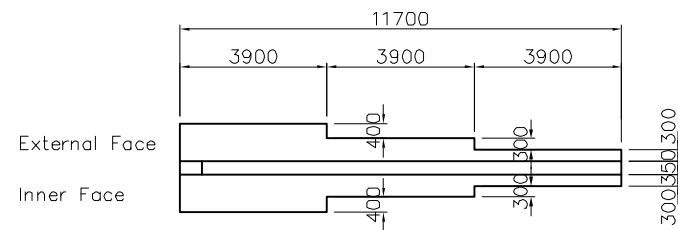
Section View Scale: 1/40



Wing Walls Scale: 1/100



Top Slab Scale: 1/100



Bottom Slab Scale: 1/100

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NATIONAL ROAD ADMINISTRATION

REMARKS:

THE PREPARATORY SURVEY ON ROAD IMPROVEMENT PLAN IN NACALA DEVELOPMENT CORRIDOR
(N13: CUAMBA-MANDIMBA-LICHINGA)

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DRAWING TITLE

Box Culvert Structural Details (10)

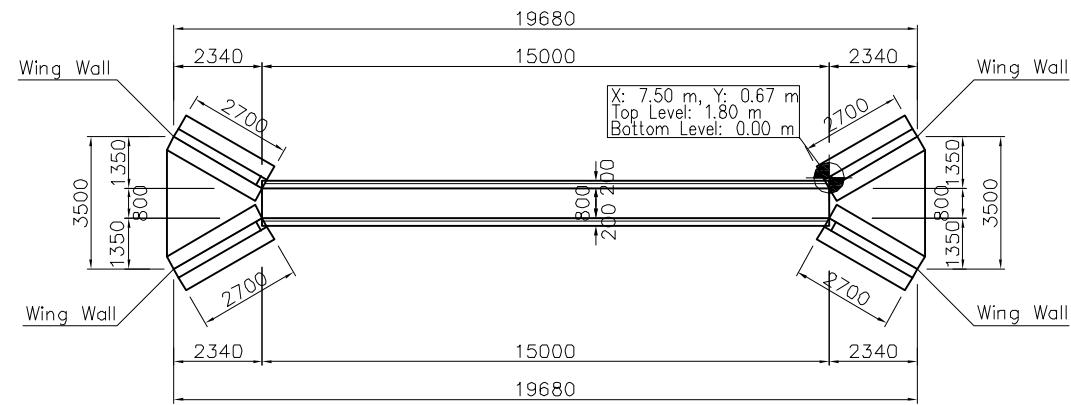
	PREPARED BY	CHECKED BY	APPROVED BY
NAME			
SIGNATURE			
DATE			

SCALE	SHEET NO.	DRAWING NO.	REV. NO.
As Shown		42	-

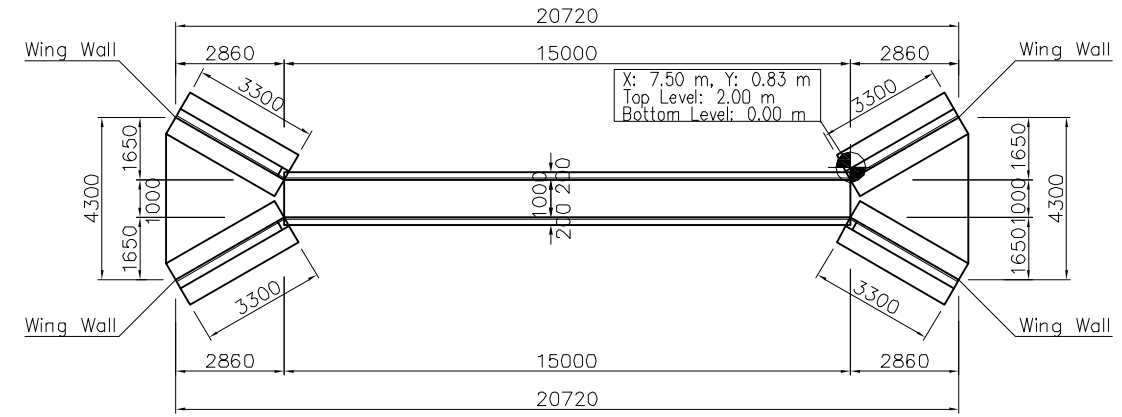
Pipe Culvert Structural Details (1)

∅ 800 Type A (1 Cell)

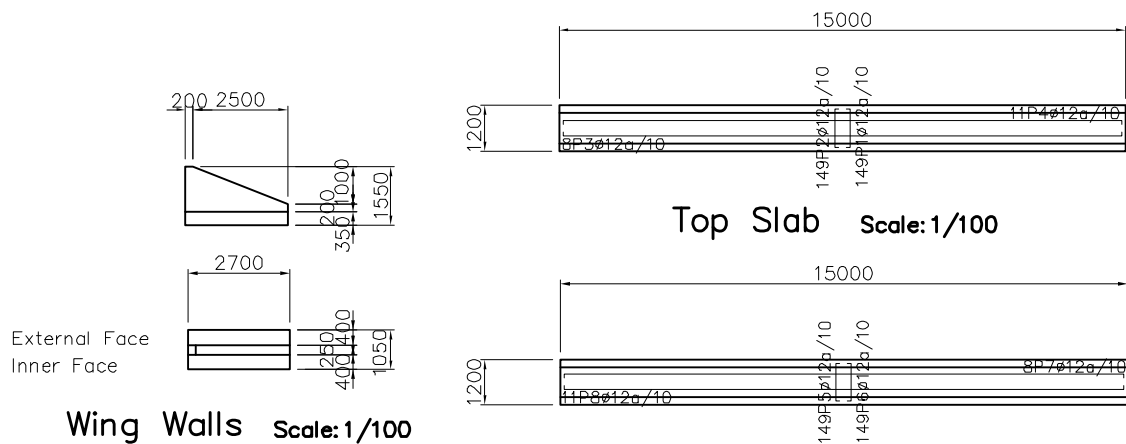
∅ 1000 Type A (1 Cell)



Plan View Scale: 1/100



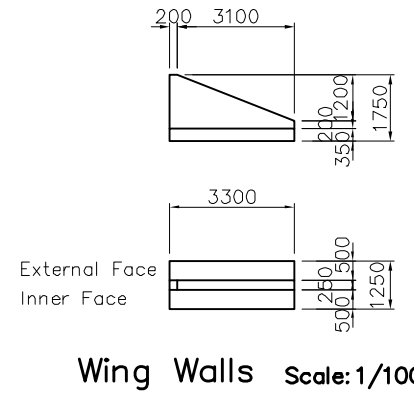
Plan View Scale: 1/100



Wing Walls Scale: 1/100

Top Slab Scale: 1/100

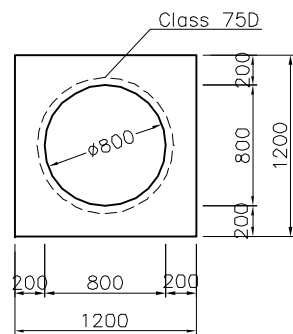
Bottom Slab Scale: 1/100



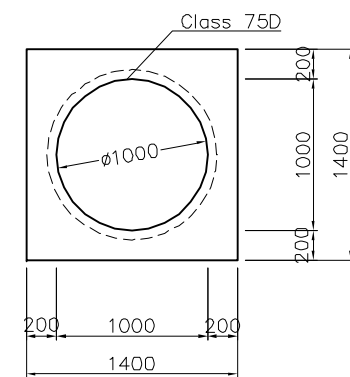
Wing Walls Scale: 1/100

Top Slab Scale: 1/100

Bottom Slab Scale: 1/100



Section View Scale: 1/25



Section View Scale: 1/25

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REMARKS:

THE PREPARATORY SURVEY ON ROAD IMPROVEMENT PLAN IN NACALA DEVELOPMENT CORRIDOR (N13: CUAMBA-MANDIMBA-LICHINGA)

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DRAWING TITLE

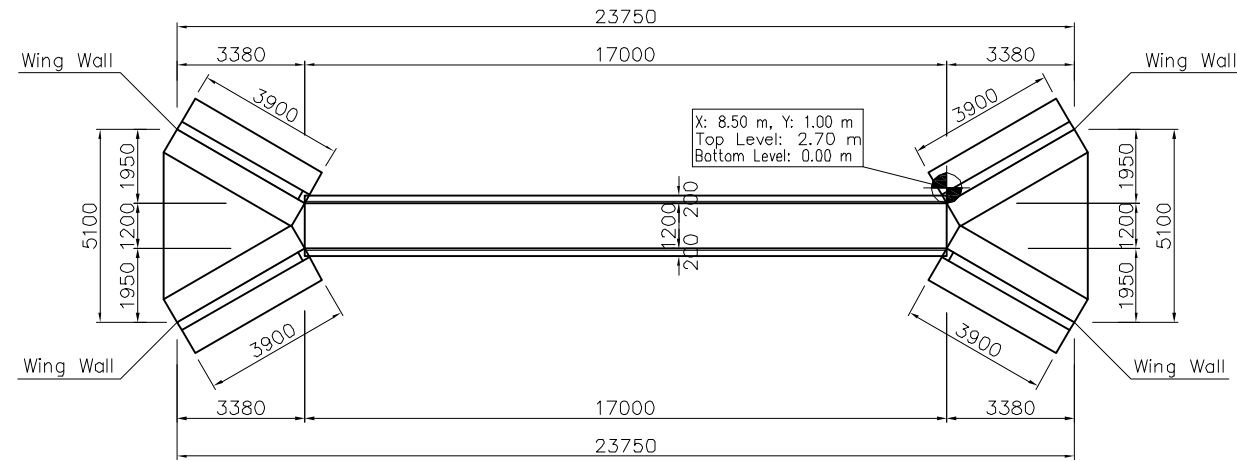
Pipe Culvert Structural Details (1)

	PREPARED BY	CHECKED BY	APPROVED BY
NAME			
SIGNATURE			
DATE			

SCALE	SHEET NO.	DRAWING NO.	REV. NO.
As Shown		43	-

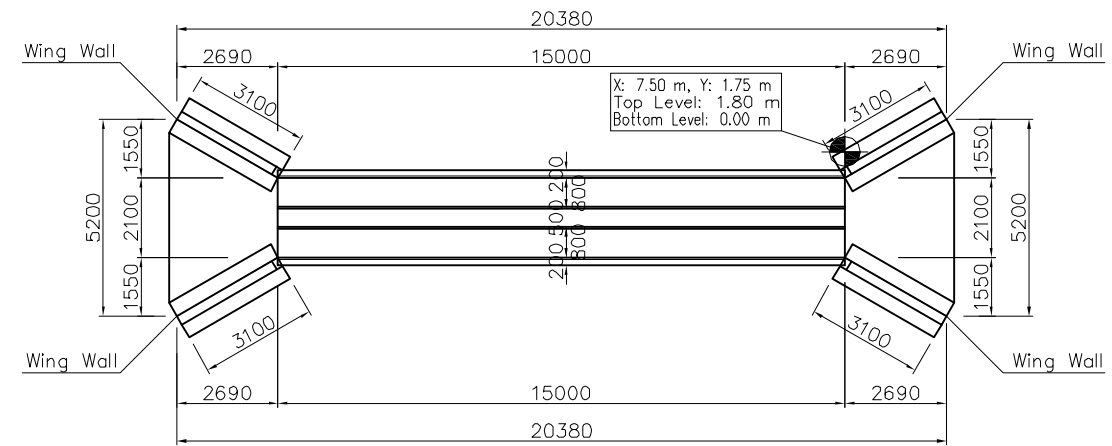
Pipe Culvert Structural Details (2)

Ø 1200 Type A (1 Cell)

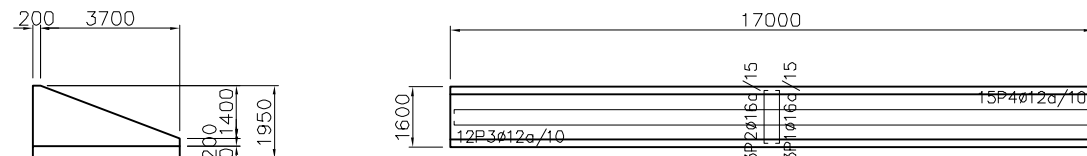


Plan View Scale: 1/100

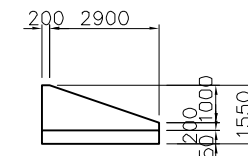
Ø 800 Type A (2 Cells)



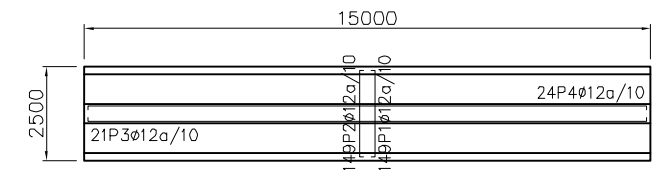
Plan View Scale: 1/100



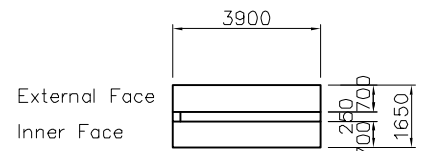
Top Slab Scale: 1/100



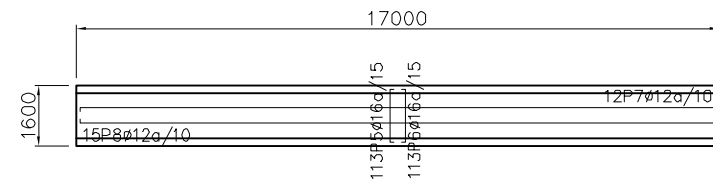
Wing Walls Scale: 1/100



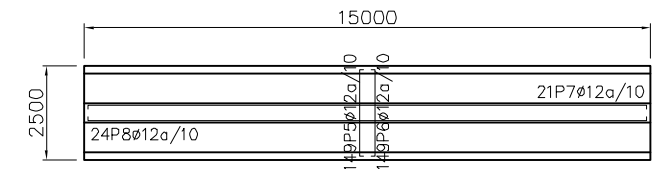
Top Slab Scale: 1/100



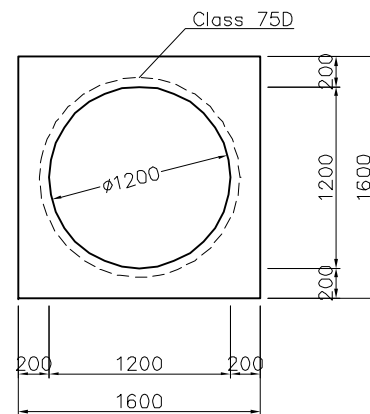
Wing Walls Scale: 1/100



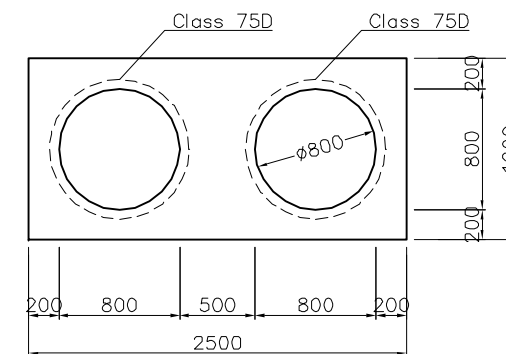
Bottom Slab Scale: 1/100



Bottom Slab Scale: 1/100



Section View Scale: 1/25



Section View Scale: 1/25

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REMARKS:

THE PREPARATORY SURVEY ON ROAD IMPROVEMENT PLAN IN NACALA DEVELOPMENT CORRIDOR (N13: CUAMBA-MANDIMBA-LICHINGA)

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Oriental Consultants Co., Ltd

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Pipe Culvert Structural Details (2)

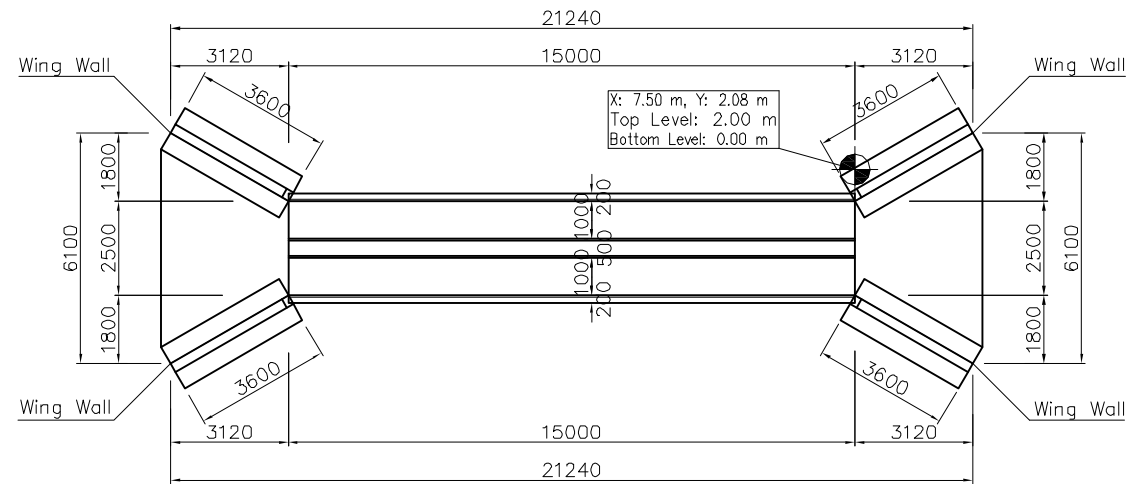
NAME	PREPARED BY	CHECKED BY	APPROVED BY
SIGNATURE			
DATE			

SCALE	SHEET NO.	DRAWING NO.	REV. NO.
As Shown		44	-

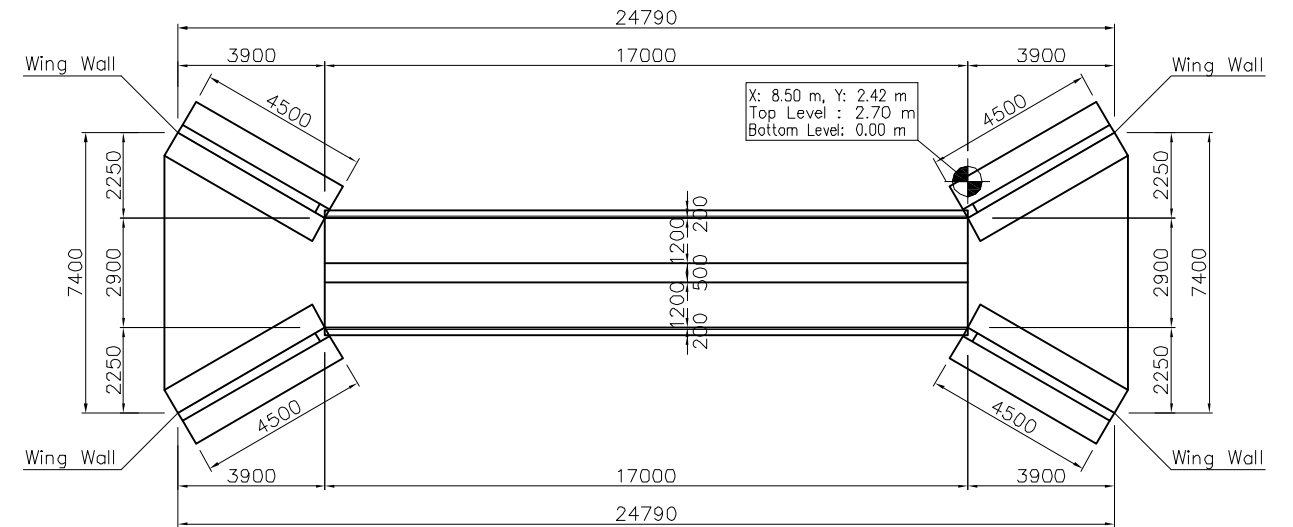
Pipe Culvert Structural Details (3)

ø 1000 Type A (2 Cells)

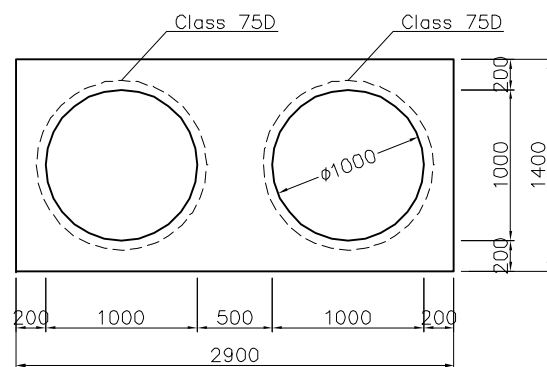
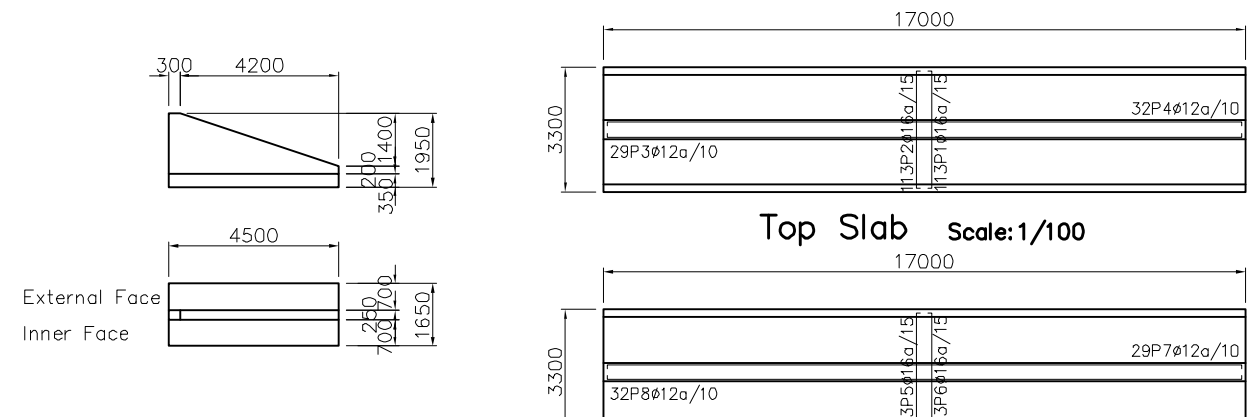
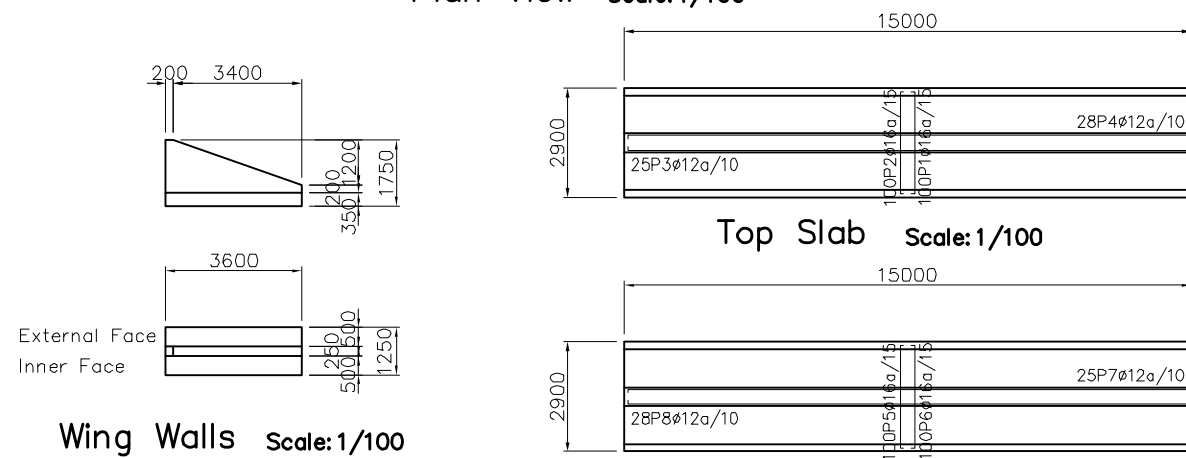
ø 1200 Type A (2 Cells)



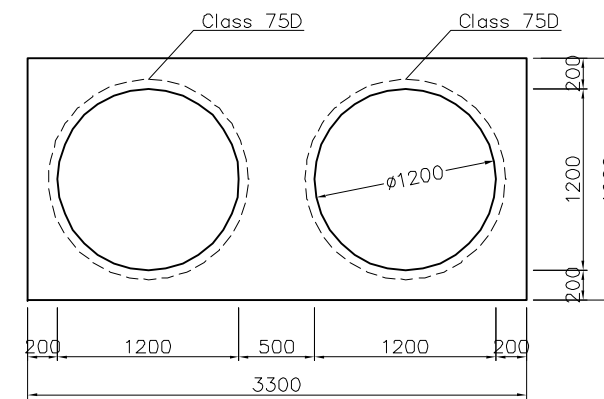
Plan View Scale: 1/100



Plan View Scale: 1/100



Section View Scale: 1/25



Section View Scale: 1/25

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REMARKS:

THE PREPARATORY SURVEY ON ROAD IMPROVEMENT PLAN IN NACALA DEVELOPMENT CORRIDOR (N13: CUAMBA-MANDIMBA-LICHINGA)

Eight-Japan Engineering Consultants Inc.
Oriental Consultants Co., Ltd

DRAWING TITLE

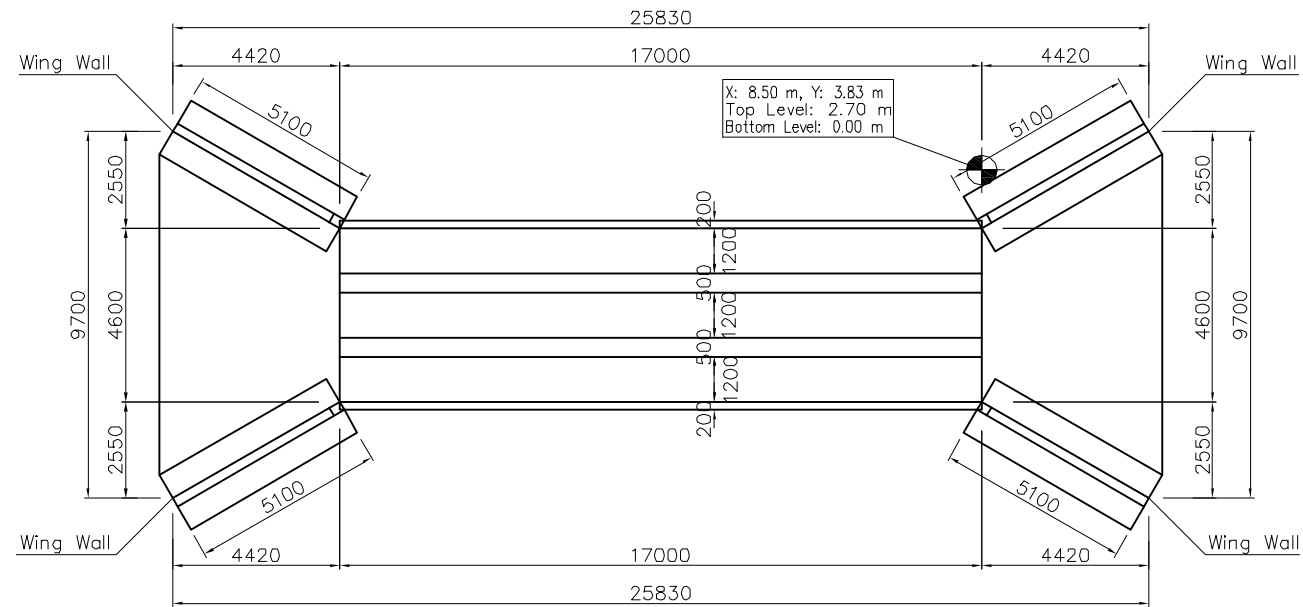
Pipe Culvert Structural Details (3)

NAME	PREPARED BY	CHECKED BY	APPROVED BY
SIGNATURE			
DATE			

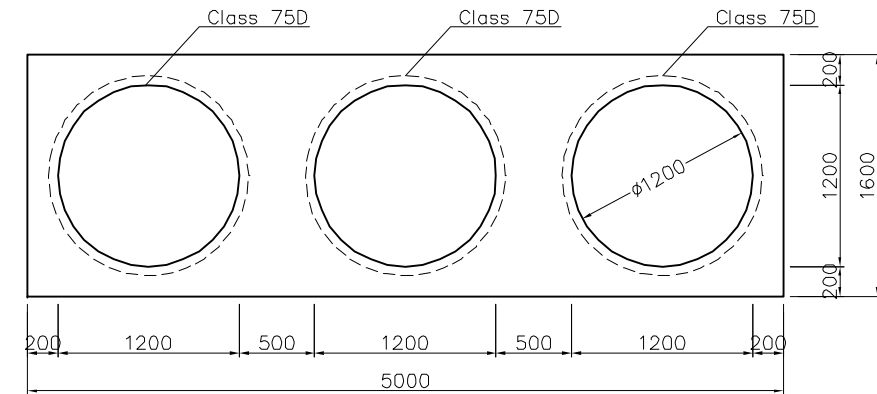
SCALE	SHEET NO.	DRAWING NO.	REV. NO.
As Shown		45	-

Pipe Culvert Structural Details (4)

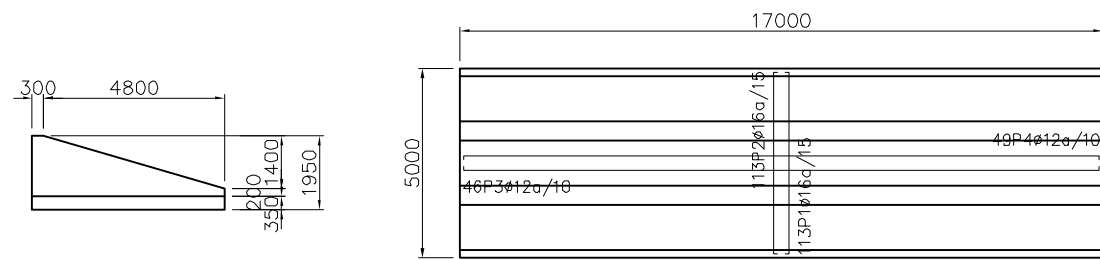
Ø 1200 Type A (3 Cells)



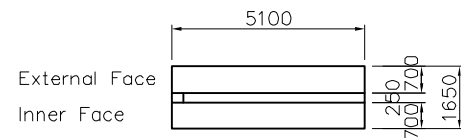
Plan View Scale: 1/100



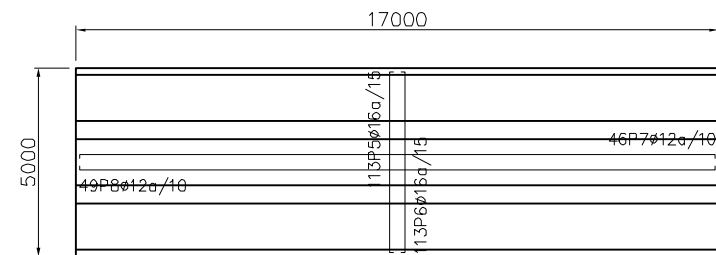
Section View Scale: 1/25



Top Slab Scale: 1/100



Wing Walls Scale: 1/100



Bottom Slab Scale: 1/100

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REMARKS:

THE PREPARATORY SURVEY ON ROAD IMPROVEMENT PLAN IN NACALA DEVELOPMENT CORRIDOR (N13: CUAMBA-MANDIMBA-LICHINGA)

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Oriental Consultants Co., Ltd

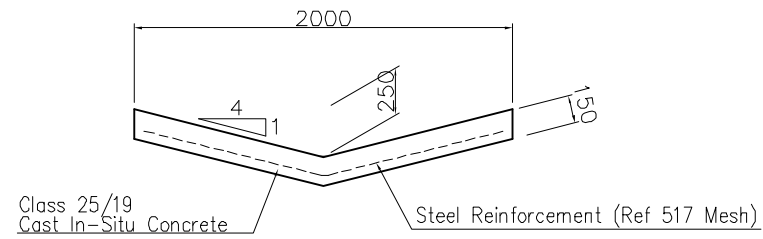
DRAWING TITLE

Pipe Culvert Structural Details (4)

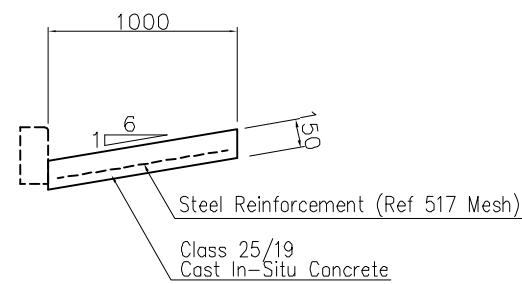
	PREPARED BY	CHECKED BY	APPROVED BY
NAME			
SIGNATURE			
DATE			

SCALE	SHEET NO.	DRAWING NO.	REV. NO.
As Shown		46	-

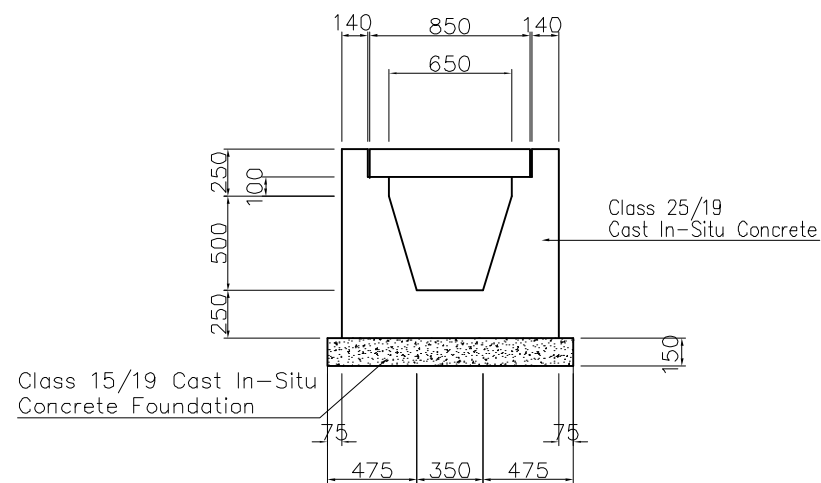
Drainage Details



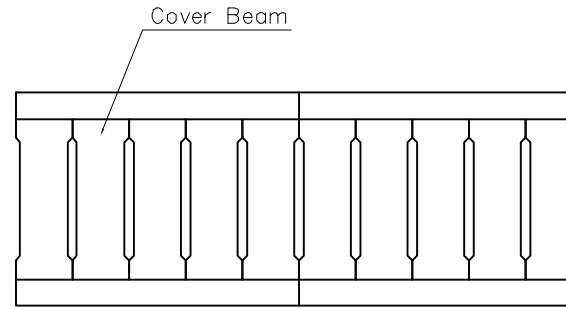
Type 1 Drain Scale: 1/20



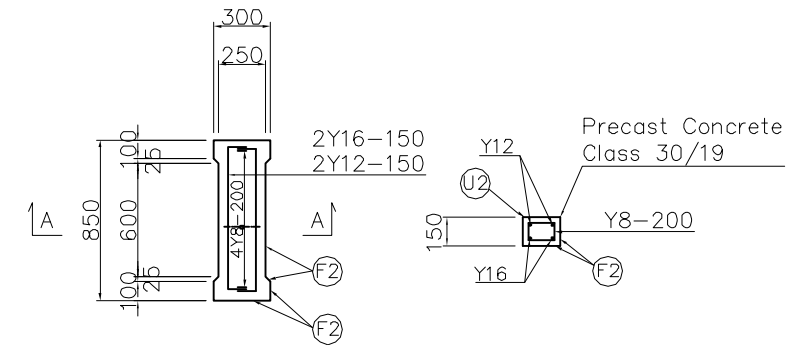
Type 2 Drain Scale: 1/20



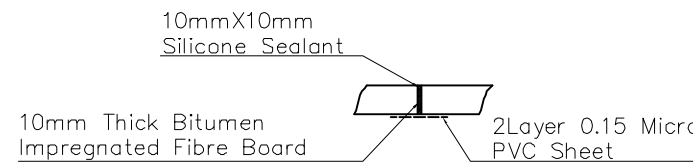
Type 3 Drain Scale: 1/20



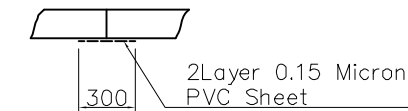
Plan View of Cover Beam



Section A-A



EXPANSION JOINT



CONSTRUCTION JOINT

Joint Details All Drains Not to Scale

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REMARKS:

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(N13: CUAMBA-MANDIMBA-LICHINGA)

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 Oriental Consultants Co., Ltd

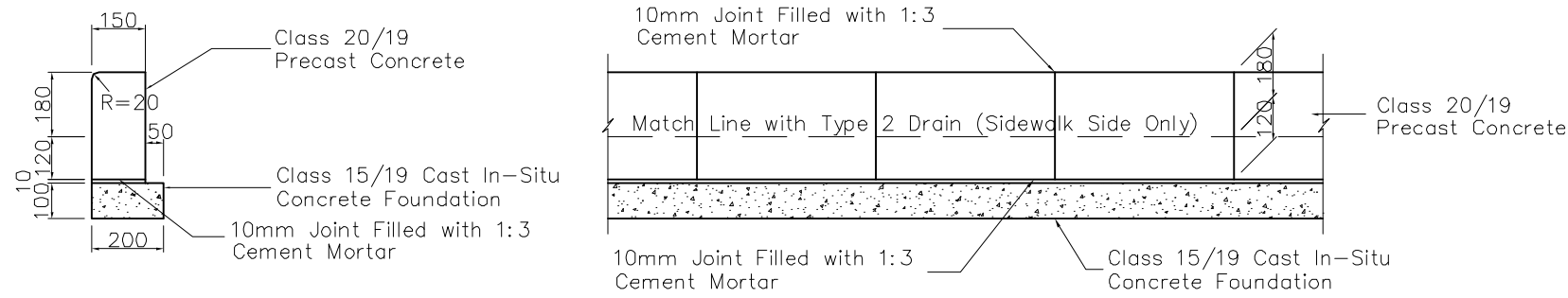
DRAWING TITLE

Drainage Details

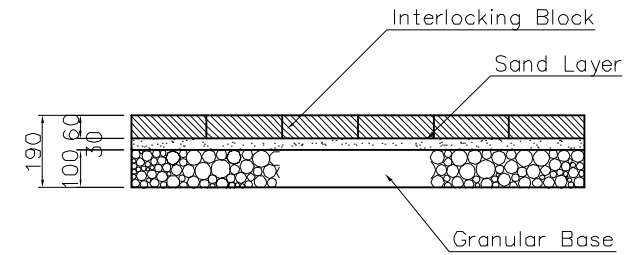
	PREPARED BY	CHECKED BY	APPROVED BY
NAME			
SIGNATURE			
DATE			

SCALE	SHEET NO.	DRAWING NO.	REV. NO.
As Shown		47	-

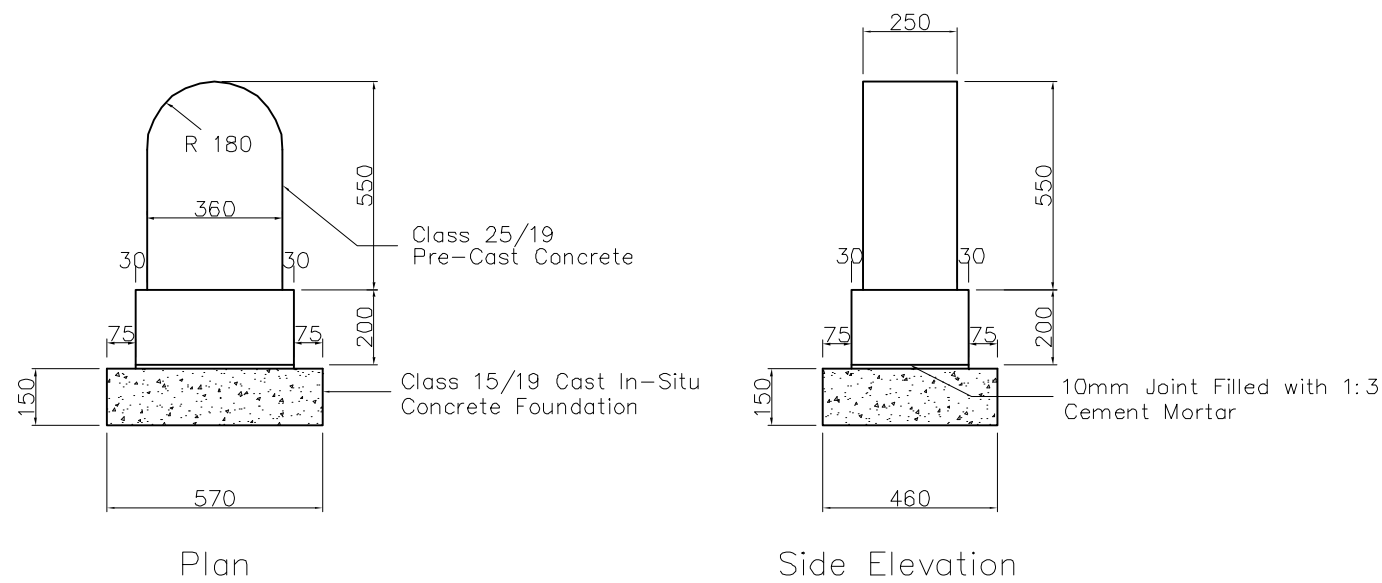
Ancillary Work



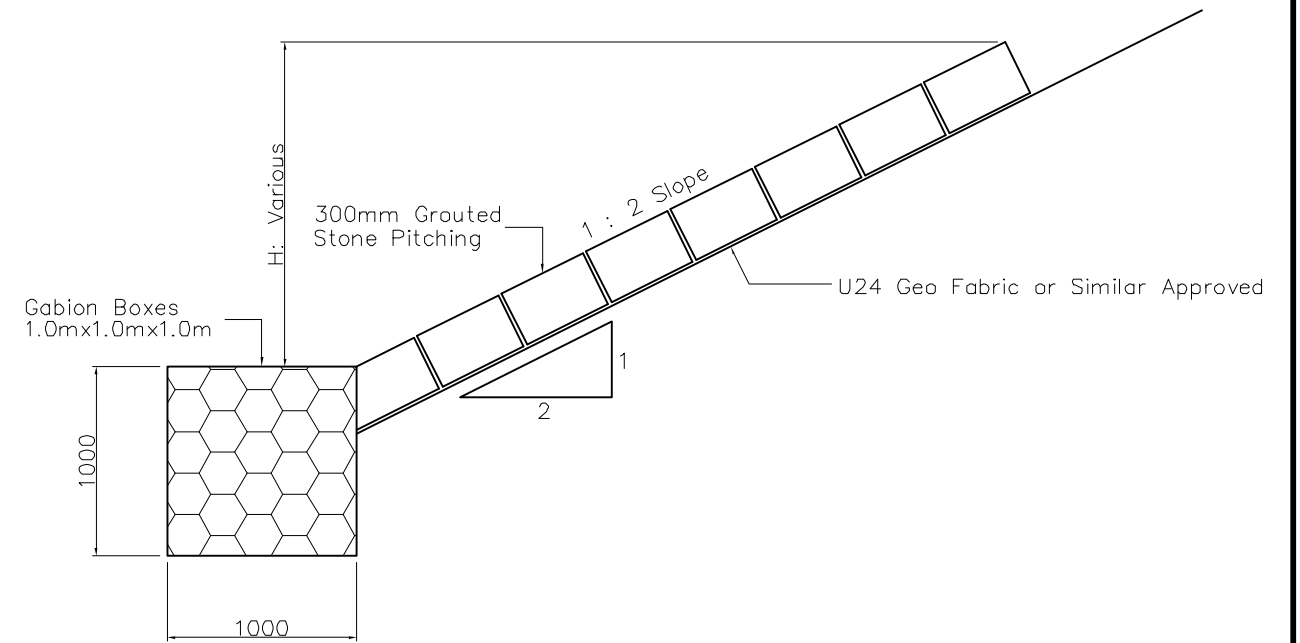
Concrete Kerb Scale: 1/10
SABS 927-1969 TYPE 1



Detail Composition of Sidewalk Scale: 1/10



Typical Detail of A km-Marker Scale: 1/10



Typical Detail of Bank Erosion Protection Scale: 1/20

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REMARKS:

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Eight-Japan Engineering Consultants Inc.
 Oriental Consultants Co., Ltd

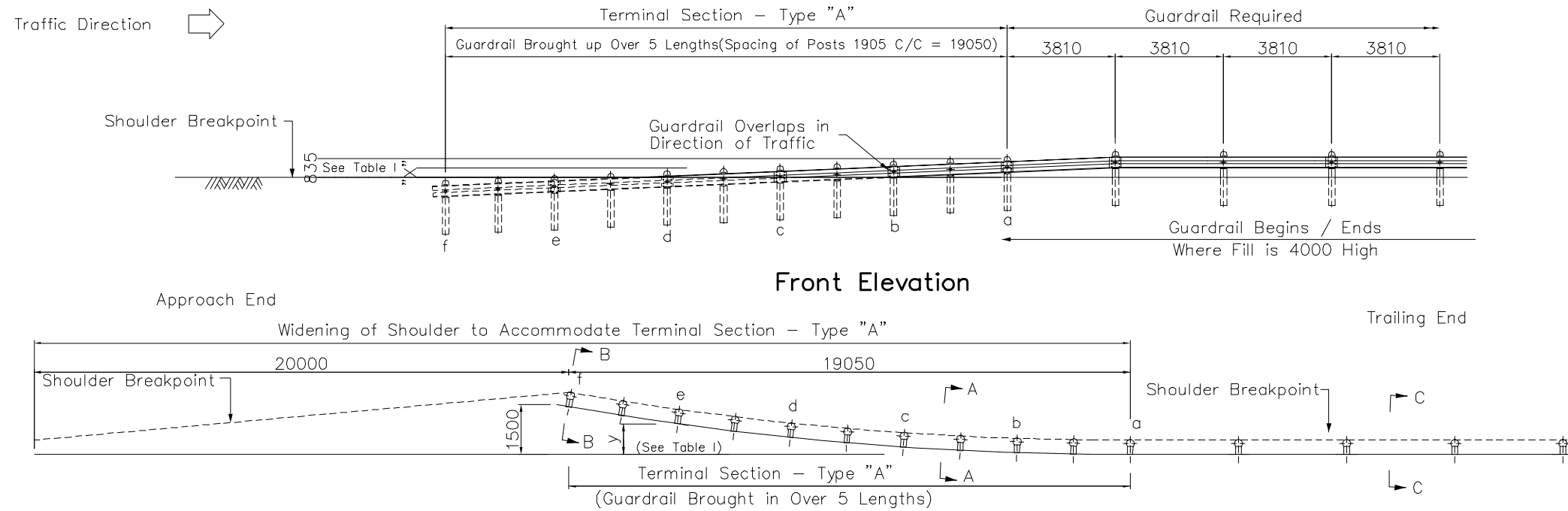
DRAWING TITLE

Ancillary Work

	PREPARED BY	CHECKED BY	APPROVED BY
NAME			
SIGNATURE			
DATE			

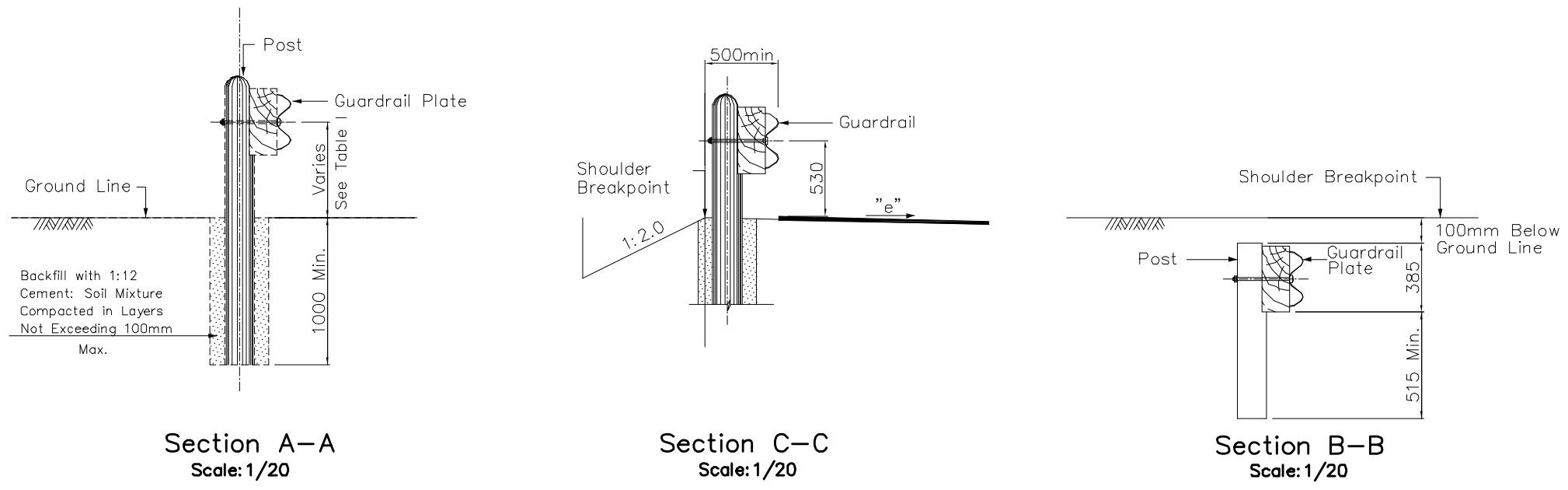
SCALE	SHEET NO.	DRAWING NO.	REV. NO.
		48	-

Guardrail Placing Details



	Horizontal Off - Sets for Parabolic Terminal Sections Y (mm)	Vertical Off-Sets for Parabolic Terminal Section (Measured from Top of Post) X (mm)
a	0	0
b	60	33
c	240	133
d	540	299
e	960	531
f	1500	835

Typical Details of Terminal Sections
Scale: 1/100

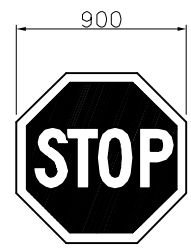


- Notes on Erection Details
1. The Holes for Timber Posts Shall be of Sufficient Size to Permit Proper Setting of the Posts and to Allow Sufficient Room for Backfilling.
 2. At Least 1.0m of Post Shall be Embedded in the Ground.
 3. Holes for Timber Posts Shall be Spaced to Suite the Standard Length of Guardrail Supplied.
 4. Holes Shall be Backfilled with 12:1 Soil : Cement Mixture at Optimum Moisture Content in Compacted Layers not Exceeding 100mm.

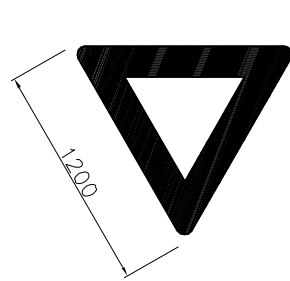
Without Concrete Side Drain

JAPAN INTERNATIONAL COOPERATION AGENCY	REMARKS:	THE PREPARATORY SURVEY ON ROAD IMPROVEMENT PLAN IN NACALA DEVELOPMENT CORRIDOR (N13: CUAMBA-MANDIMBA-LICHINGA)			
		Eight-Japan Engineering Consultants Inc. Oriental Consultants Co., Ltd		DRAWING TITLE	
NATIONAL ROAD ADMINISTRATION		PREPARED BY	CHECKED BY	APPROVED BY	Guardrail Placing Details
		NAME			
		SIGNATURE			SCALE
		DATE			As Shown
					SHEET NO.
					DRAWING NO.
					REV. NO.
					49
					-

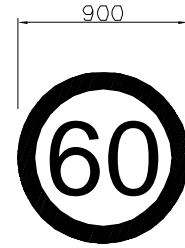
Traffic Signs



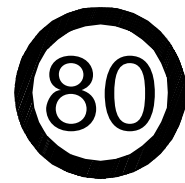
R1



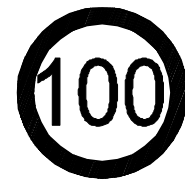
R2



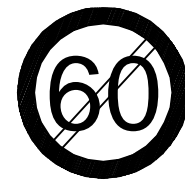
R201-60



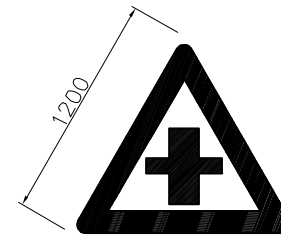
R201-80



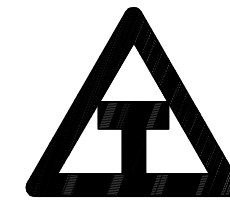
R201-100



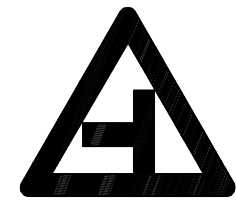
R201-60-600



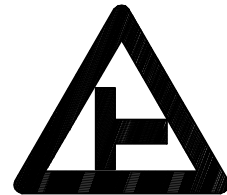
W102



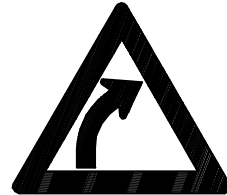
W104



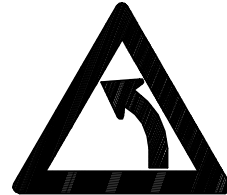
W107



W108



W202



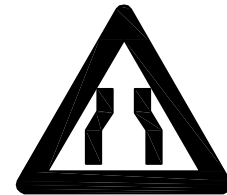
W203



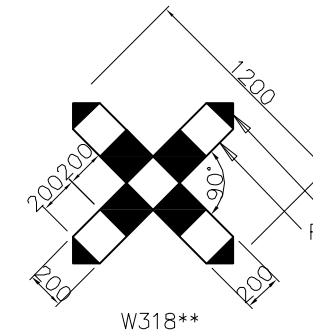
W306



W318*



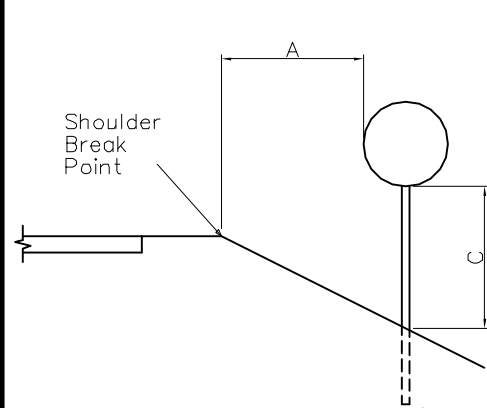
W328



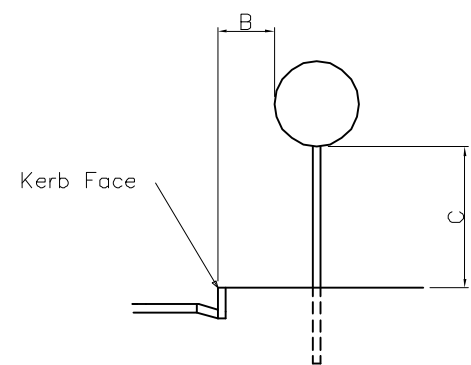
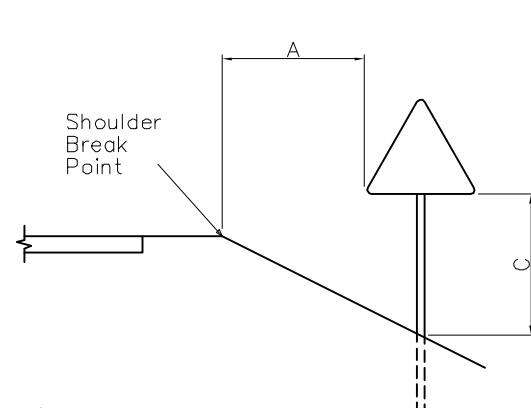
W318**

Paint with red stripe W=200
Paint with white stripe W=200

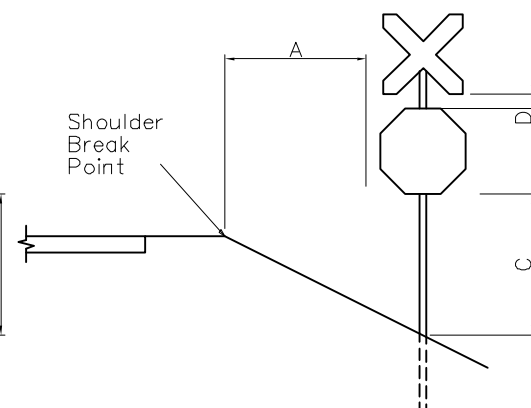
Regulatory And Warning Signs Scale: 1/20



Shoulder(No Kerb) Scale: 1/40

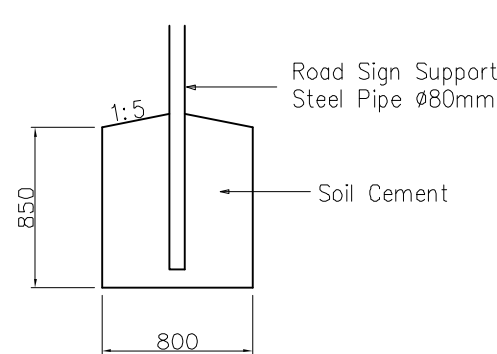


Shoulder(With Kerb) Scale: 1/40

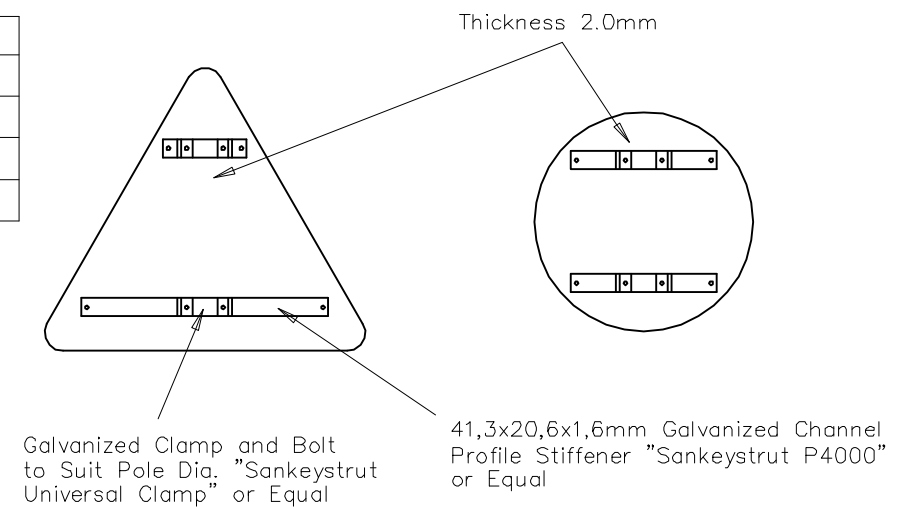


For Level Crossing Scale: 1/40

Positioning (mm)	
A	1500
B	600
C	1500
D	150



Foundation Detail Scale: 1/20



Notes:

- Details on This Drawing are Applicable to Road Signs Smaller than 1.5m Requiring a Single Support.
- All Steel Bolts and Nuts Shall Conform to Sabs 135 or Sabs 1143 and all Components Shall Have a Hot-Dip (Galvanized) Zinc Coating as Specified in Sabs 763 for C1 Articles.
- W318* and W318** are not standardized in SATCC Standard.

Typical Fixing Detail

JICA JAPAN INTERNATIONAL COOPERATION AGENCY

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REMARKS:

THE PREPARATORY SURVEY ON ROAD IMPROVEMENT PLAN IN NACALA DEVELOPMENT CORRIDOR (N13: CUAMBA-MANDIMBA-LICHINGA)

Eight-Japan Engineering Consultants Inc.
Oriental Consultants Co., Ltd

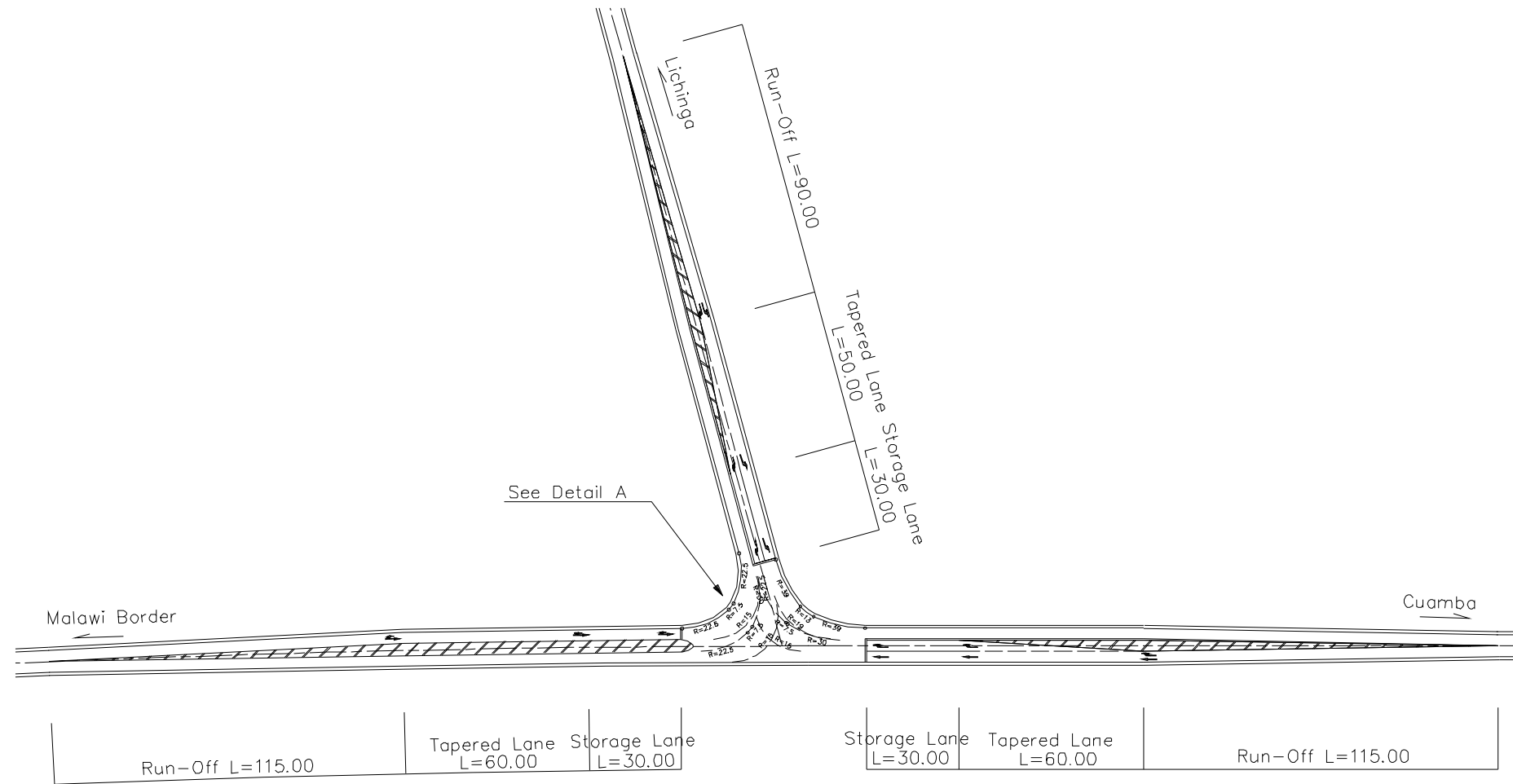
DRAWING TITLE

Traffic Signs

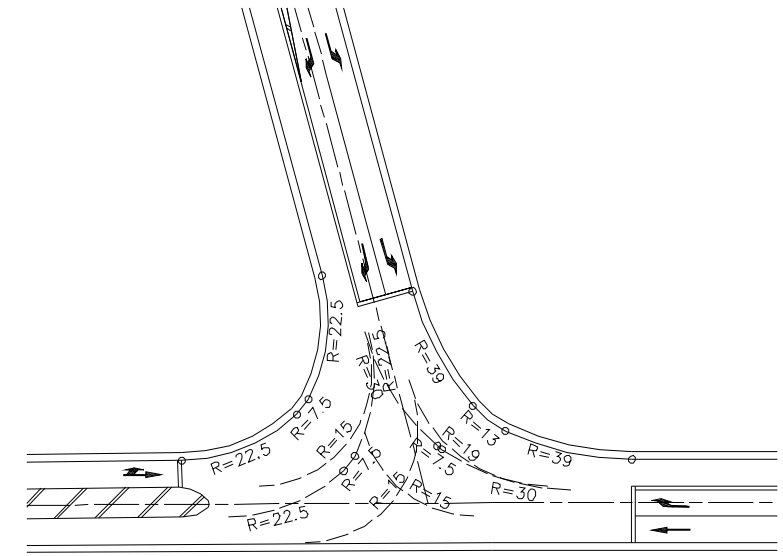
	PREPARED BY	CHECKED BY	APPROVED BY
NAME			
SIGNATURE			
DATE			

SCALE	SHEET NO.	DRAWING NO.	REV. NO.
As Shown		50	-

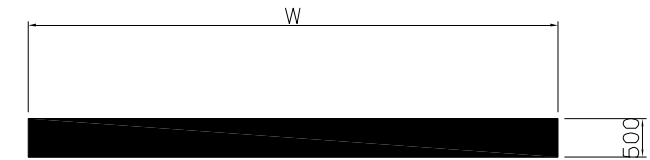
Traffic Marking



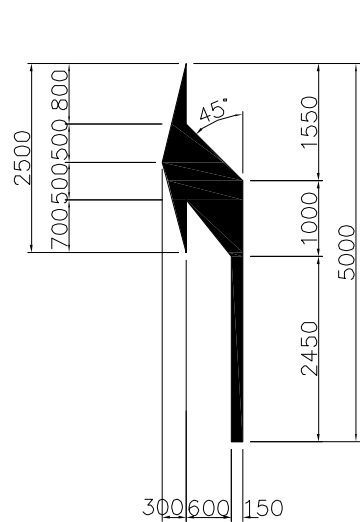
Plan Scale: 1/1000



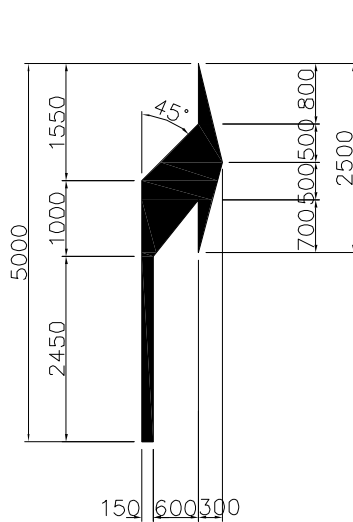
Detail A Scale: 1/500



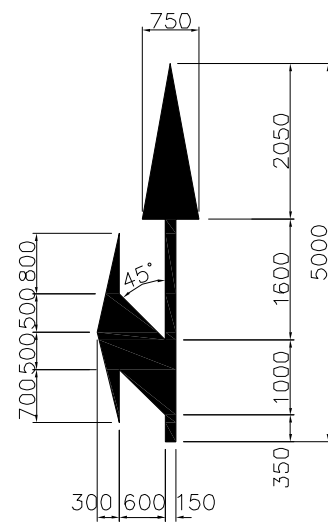
Stop Line Scale: 1/50



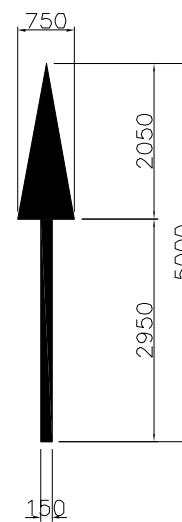
Left-Turn Scale: 1/50



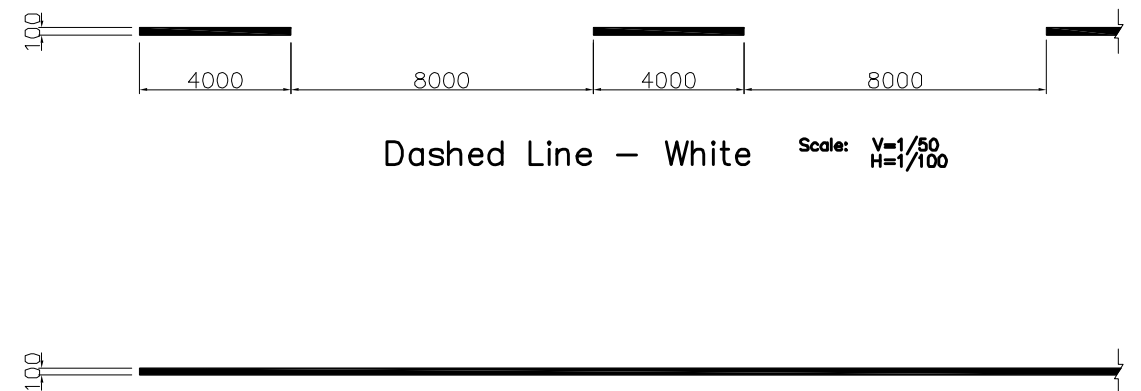
Right-Turn Scale: 1/50



Straight-Left-Turn Scale: 1/50



Straight Scale: 1/50



Dashed Line - White Scale: V=1/50, H=1/100

Continuous Line - Yellow, White Scale: 1/50

JICA JAPAN INTERNATIONAL COOPERATION AGENCY

ANE NATIONAL ROAD ADMINISTRATION

REMARKS:

THE PREPARATORY SURVEY ON ROAD IMPROVEMENT PLAN IN NACALA DEVELOPMENT CORRIDOR (N13: CUAMBA-MANDIMBA-LICHINGA)

Eight-Japan Engineering Consultants Inc.
Oriental Consultants Co., Ltd

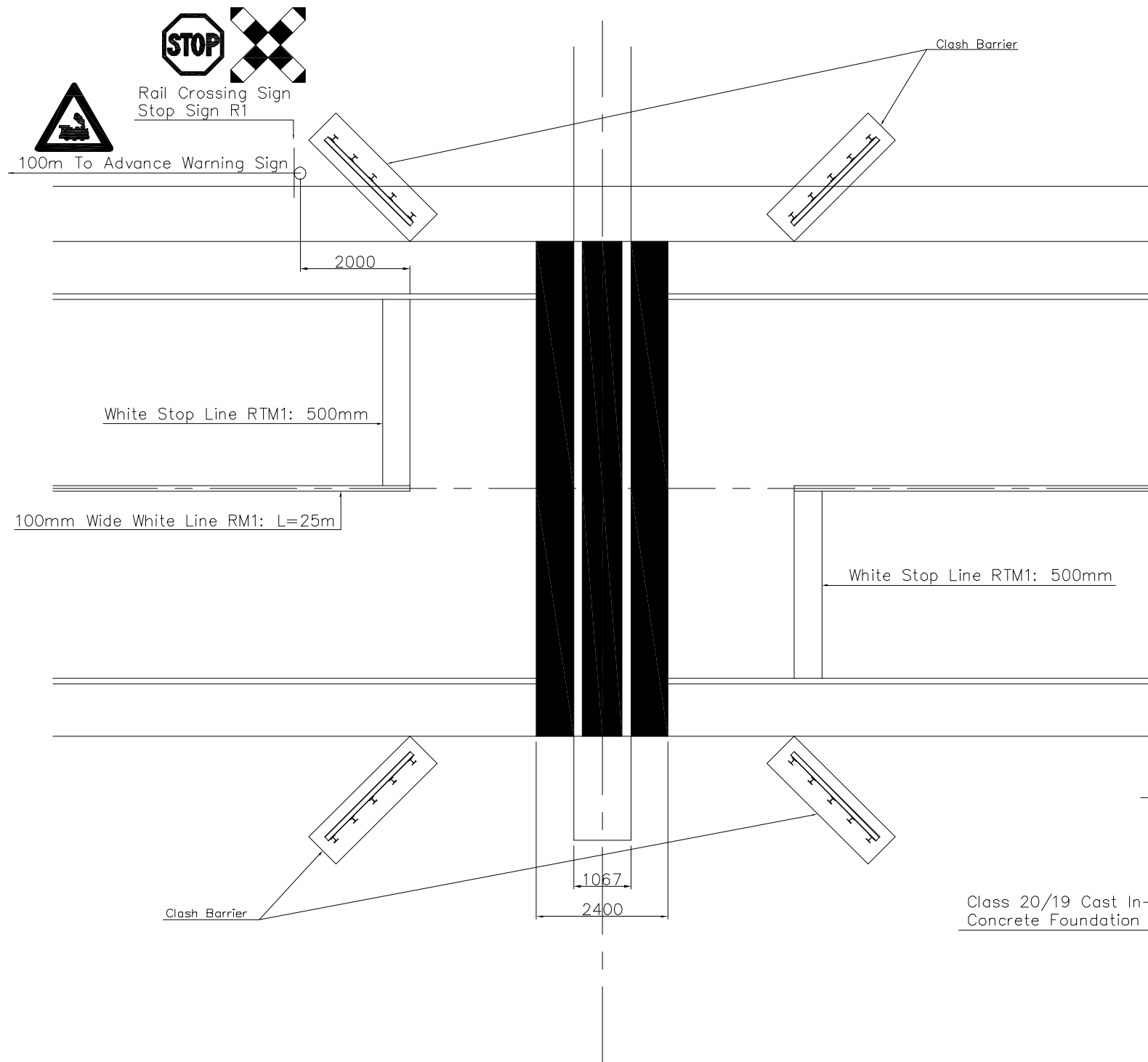
DRAWING TITLE

Traffic Marking

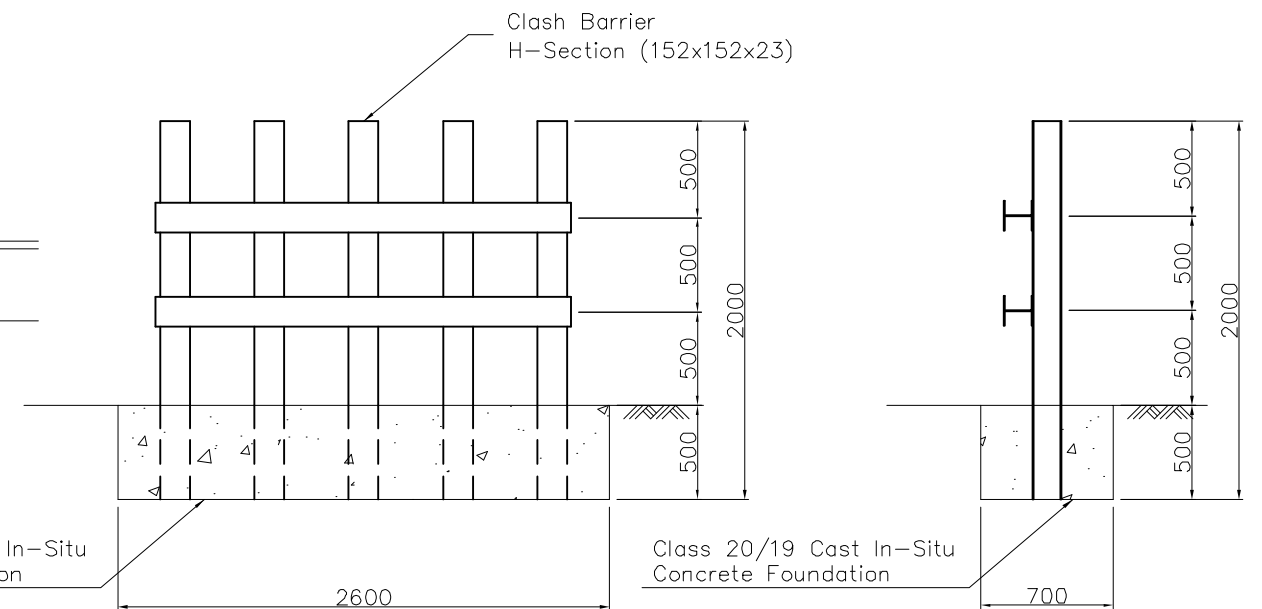
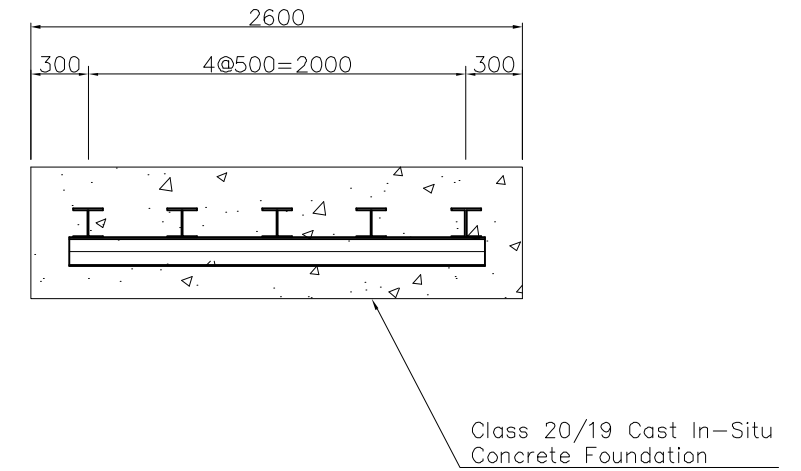
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NAME			
SIGNATURE			
DATE			

SCALE	SHEET NO.	DRAWING NO.	REV. NO.
As Shown		51	-

Level Crossing Details



General Layout of Level Crossing Scale: 1/50



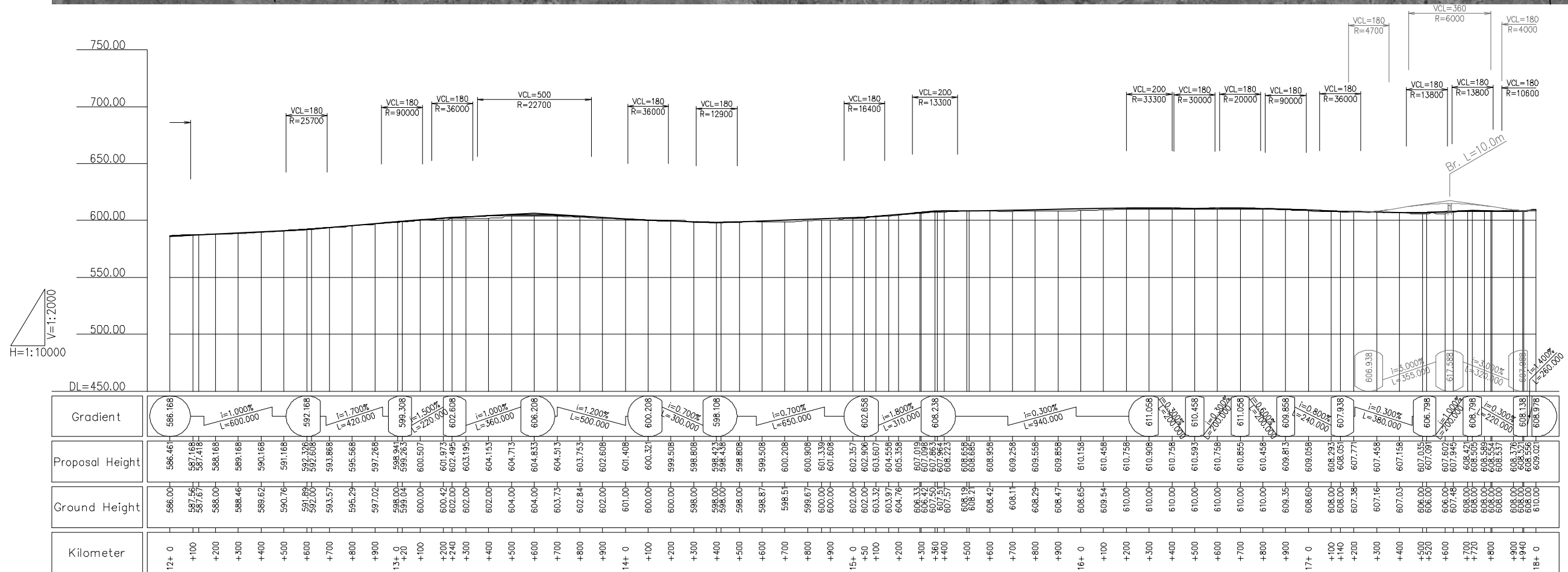
Detail of Clash Barrier Scale: 1/20

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ANR NATIONAL ROAD ADMINISTRATION

REMARKS:

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Eight-Japan Engineering Consultants Inc.		DRAWING TITLE	
Oriental Consultants Co., Ltd		Level Crossing Details	
PREPARED BY	CHECKED BY	APPROVED BY	
NAME			
SIGNATURE			
DATE			
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Station	Gradient	Proposal Height	Ground Height	Kilometer
12+0	586.168	586.461	586.00	12+0
+100	587.168	587.461	587.56	+100
+200	588.168	588.461	588.00	+200
+300	589.168	589.461	589.46	+300
+400	590.168	590.461	589.62	+400
+500	591.168	591.461	590.76	+500
+600	592.168	592.461	591.88	+600
+700	593.168	593.461	592.99	+700
+800	594.168	594.461	594.09	+800
+900	595.168	595.461	595.18	+900
+1000	596.168	596.461	596.26	+1000
13+0	597.168	597.461	597.33	13+0
+100	598.168	598.461	598.39	+100
+200	599.168	599.461	599.44	+200
+300	600.168	600.461	600.48	+300
+400	601.168	601.461	601.51	+400
+500	602.168	602.461	602.53	+500
+600	603.168	603.461	603.54	+600
+700	604.168	604.461	604.54	+700
+800	605.168	605.461	605.53	+800
+900	606.168	606.461	606.51	+900
+1000	607.168	607.461	607.48	+1000
14+0	608.168	608.461	608.44	14+0
+100	609.168	609.461	609.39	+100
+200	610.168	610.461	610.33	+200
+300	611.168	611.461	611.26	+300
+400	612.168	612.461	612.18	+400
+500	613.168	613.461	613.09	+500
+600	614.168	614.461	613.99	+600
+700	615.168	615.461	614.88	+700
+800	616.168	616.461	615.76	+800
+900	617.168	617.461	616.63	+900
+1000	618.168	618.461	617.48	+1000
15+0	619.168	619.461	618.32	15+0
+100	620.168	620.461	619.15	+100
+200	621.168	621.461	620.00	+200
+300	622.168	622.461	620.84	+300
+400	623.168	623.461	621.67	+400
+500	624.168	624.461	622.48	+500
+600	625.168	625.461	623.27	+600
+700	626.168	626.461	624.04	+700
+800	627.168	627.461	624.78	+800
+900	628.168	628.461	625.50	+900
+1000	629.168	629.461	626.19	+1000
16+0	630.168	630.461	626.86	16+0
+100	631.168	631.461	627.51	+100
+200	632.168	632.461	628.13	+200
+300	633.168	633.461	628.72	+300
+400	634.168	634.461	629.29	+400
+500	635.168	635.461	629.83	+500
+600	636.168	636.461	630.34	+600
+700	637.168	637.461	630.82	+700
+800	638.168	638.461	631.27	+800
+900	639.168	639.461	631.69	+900
+1000	640.168	640.461	632.08	+1000
17+0	641.168	641.461	632.44	17+0
+100	642.168	642.461	632.77	+100
+200	643.168	643.461	633.07	+200
+300	644.168	644.461	633.34	+300
+400	645.168	645.461	633.58	+400
+500	646.168	646.461	633.79	+500
+600	647.168	647.461	633.97	+600
+700	648.168	648.461	634.12	+700
+800	649.168	649.461	634.24	+800
+900	650.168	650.461	634.33	+900
+1000	651.168	651.461	634.39	+1000
18+0	652.168	652.461	634.42	18+0
+100	653.168	653.461	634.42	+100
+200	654.168	654.461	634.39	+200
+300	655.168	655.461	634.33	+300
+400	656.168	656.461	634.24	+400
+500	657.168	657.461	634.12	+500
+600	658.168	658.461	633.97	+600
+700	659.168	659.461	633.79	+700
+800	660.168	660.461	633.58	+800
+900	661.168	661.461	633.34	+900
+1000	662.168	662.461	633.07	+1000
18+500	663.168	663.461	632.77	18+500

JICA JAPAN INTERNATIONAL COOPERATION AGENCY

ANE NATIONAL ROAD ADMINISTRATION

REMARKS:

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Eight-Japan Engineering Consultants Inc.
Oriental Consultants Co., Ltd

DRAWING TITLE
Level Crossing with an Overpass (1)
(as a reference)

NAME	PREPARED BY	CHECKED BY	APPROVED BY
SIGNATURE			
DATE			

SCALE	SHEET NO.	DRAWING NO.	REV. NO.
1/10,000		53	-

