MATERIAL LIST OF SUBSTRUCTURE A1,A2

LIST OF REINFORCEMENT

MARK	SIZE	LENGTH	NO.	UNIT WT.	WT/ONE	WEIGHT	REMARKS
P1	D13	1600	38	0.995	1.59	60	
2	〃	1600	74	〃	1.59	118	
3	〃	9100	3	〃	9.05	27	
4	〃	9100	3	〃	9.05	27	
5	〃	9110	2	〃	9.06	18	
6	〃	1660	4	〃	1.65	7	
7	〃	630	38	〃	0.63	24	
8	〃	1420	4	〃	1.41	6	
9	〃	590	9	〃	0.59	5	
						292	kg
A1	D16	3950	38	1.56	6.16	234	
2	D19	4000	38	2.25	9.00	342	
3	D13	9510	12	0.995	9.46	114	
4	〃	9510	12	〃	9.46	114	
5	D16	10260	7	1.56	16.01	112	
6	〃	2200	40	〃	3.43	137	
7	〃	1620	40	〃	3.53	101	
8	〃	3950	6	〃	6.16	37	
9	D13	1510	4	0.995	1.50	6	
10	〃	1510	4	〃	1.50	6	
11	〃	1520	45	〃	1.51	68	
						1271	kg
H1	D16	1200	14	1.56	1.87	26	
2	〃	1500	12	〃	2.34	28	
						54	kg
F1	D16	1650	50	1.56	2.57	129	
2	D19	2490	50	2.25	5.60	280	
3	〃	4600	40	〃	10.35	414	
4	〃	2440	10	〃	5.49	55	
5	〃	1000	36	〃	2.25	81	
6	〃	580	4	〃	1.31	5	
7	D13	9100	11	0.995	9.05	100	
8	〃	9100	17	〃	9.05	154	
9	〃	950	18	〃	0.95	17	
10	D19	9100	6	2.25	20.48	123	
11	〃	3810	6	〃	8.57	51	
12	D13	1130	14	0.995	1.12	16	
13	D16	1210	10	1.56	1.89	19	
14	〃	1210	19	〃	1.89	36	
						1480	kg

MARK	SIZE	LENGTH	NO.	UNIT WT.	WT/ONE	WEIGHT	REMARKS
W_1^L	D16	3450	4	1.56	5.38	22	
2	〃	3000	7	〃	4.68	33	min
3	D13	1850	11	0.995	1.84	20	min
4	D16	1540	4	1.56	2.40	10	
5	〃	2810	6	〃	4.38	26	
6	〃	4900	2	〃	7.64	15	
7	D13	3400	4	0.995	3.38	14	
8	〃	2950	7	〃	2.94	21	min
9	〃	1850	11	〃	1.84	20	min
10	〃	570	11	〃	0.57	6	
11	〃	550	12	〃	0.55	7	
12	〃	410	9	〃	0.41	4	
						198	kg
K_1^L	D13	1500	27	0.995	1.49	40	
2	〃	3200	4	〃	3.18	13	
						53	kg
W_1^R	D16	3450	4	1.56	5.38	22	
2	〃	3000	7	〃	4.68	33	min
3	D13	1850	11	0.995	1.84	20	min
4	D16	1540	4	1.56	2.40	10	
5	〃	2810	6	〃	4.38	26	
6	〃	4900	2	〃	7.64	15	
7	D13	3400	4	0.995	3.38	14	
8	〃	2950	7	〃	2.94	21	min
9	〃	1850	11	〃	1.84	20	min
10	〃	570	11	〃	0.57	6	
11	〃	550	12	〃	0.55	7	
12	〃	410	9	〃	0.41	4	
						198	kg
K_1^R	D13	1500	27	0.995	1.49	40	
2	〃	3200	4	〃	3.18	13	
						53	kg

REINFORCEMENT BAR

D19	1351 kg	x2	=	2702	kg
D16	1071 kg	x2	=	2142	kg
D13	1177 kg	x2	=	2354	kg
TOTAL	3599 kg	x2	=	7198	kg

CONCRETE

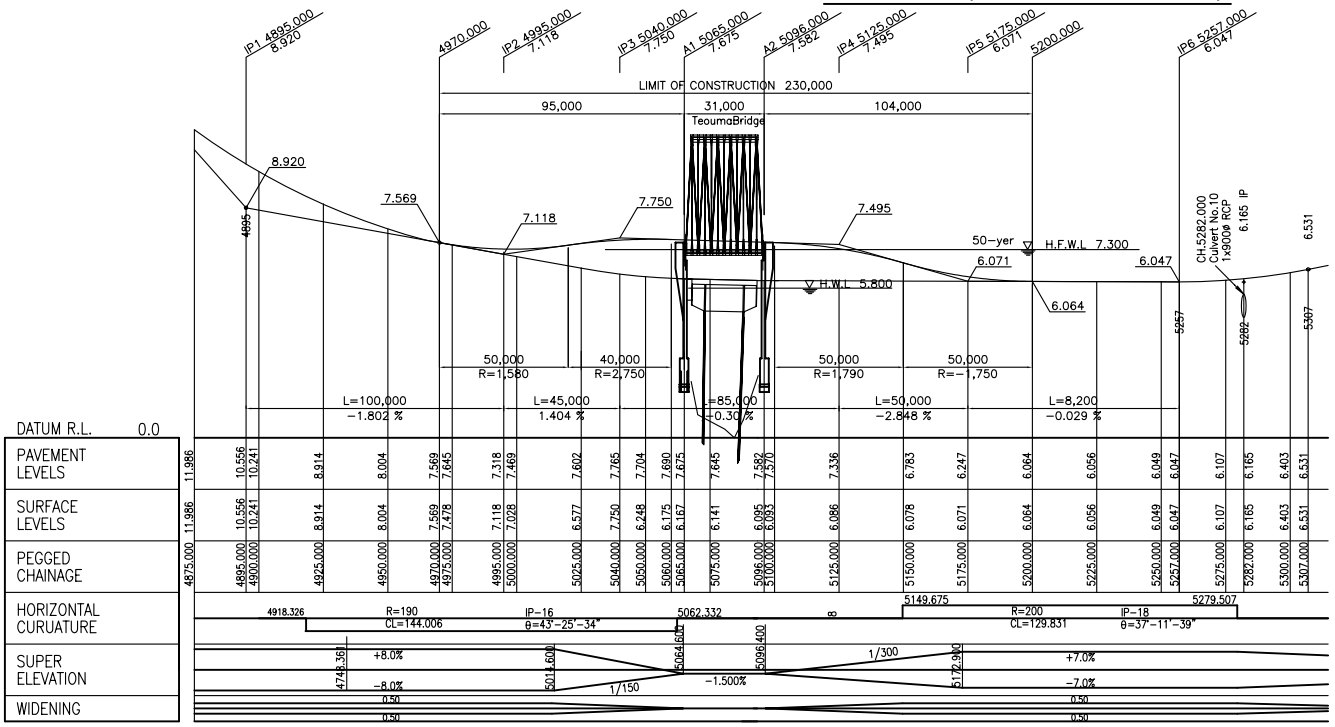
80.2m³ x2 = 160.4m³

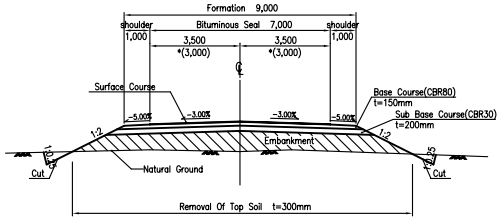
FORM

146.9m² x2 = 293.8m²

GOVERNMENT OF THE REPUBLIC OF VANUATU PUBLIC WORKS DEPARTMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	PROJECT : BASIC DESIGN STUDY ON THE PROJECT FOR THE REHABILITATION OF BRIDGES ON THE RING ROAD IN THE EFATE ISLAND	TITLE : MATERIAL LIST OF SUBSTRUCTURE A1,A2 (TEOUMA BRIDGE)	DRAWING No: 19 Rv.

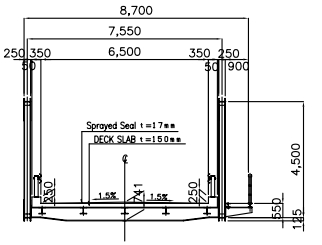
PROFILE (TEOUMA BRIDGE)





TYPICAL CROSS SECTION

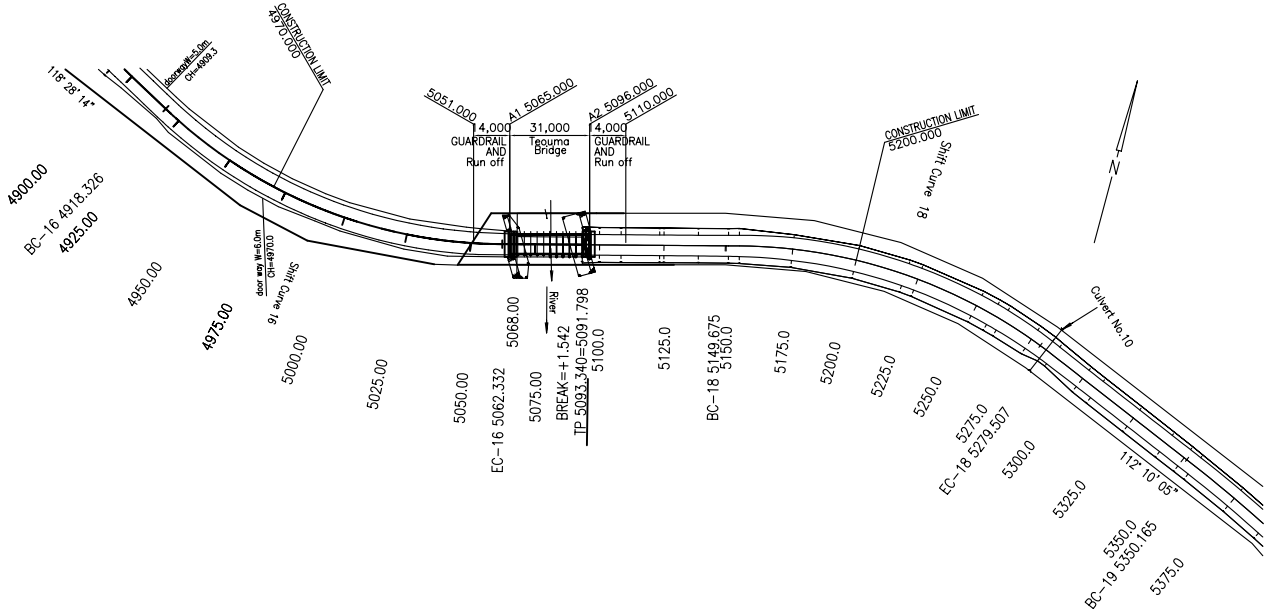
*)CH5065~CH5200



BRIDGE CROSS SECTION

QUANTITY LIST

ITEM	BEGINNING SIDE	ENDIND SIDE	TOTAL
CUT	19.8 m³	65.9 m³	85.7 m³
BANK	757.1 m³	744.2 m³	1501.3 m³



Vertical 2 1 0 2 4 6 8 1:100

Horizontal 20 10 0 20 40 60 80 1:1000

SCALE BEFORE REDUCTION

GOVERNMENT OF THE REPUBLIC OF VANUATU PUBLIC WORKS DEPARTMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	PROJECT : BASIC DESIGN STUDY ON THE PROJECT FOR THE REHABILITATION OF BRIDGES ON THE RING ROAD IN THE EFATE ISLAND	TITLE : PROFILE (TEOUMA BRIDGE)	DRAWING No: 20

CROSS SECTION(1) SCALE 1:100

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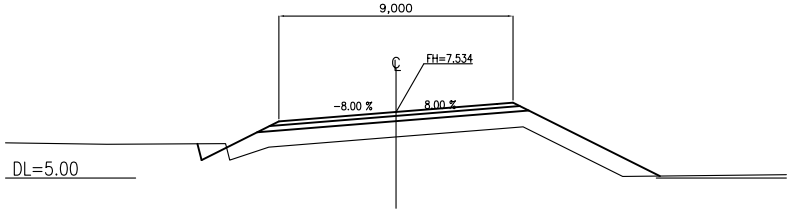
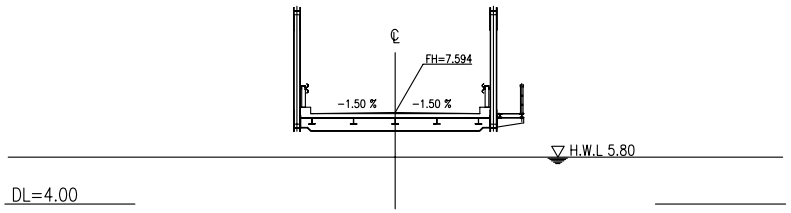
GH=6.499
FH=7.534
CA=0.4 ㎡
BA=10.3㎡



STATION.5091.798
FH=7.594



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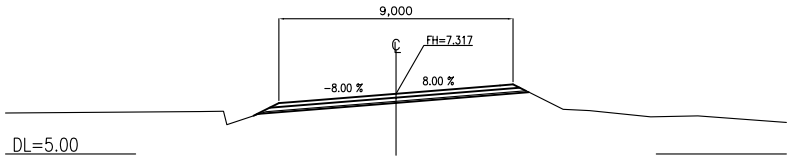
FH=7.317
CA= - ㎡
BA=0.6 ㎡



STATION.5065.0 (A1)
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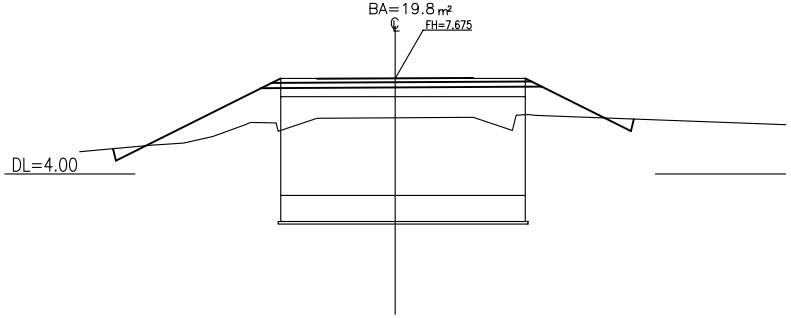
BA=19.8㎡



STATION.4975.0
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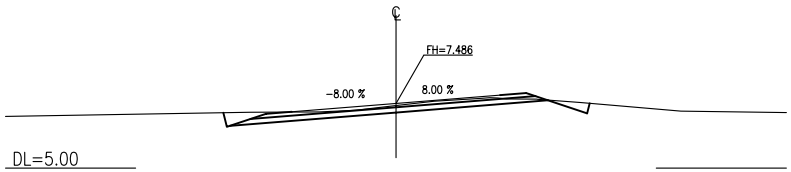
FH=7.486



STATION.5050.0
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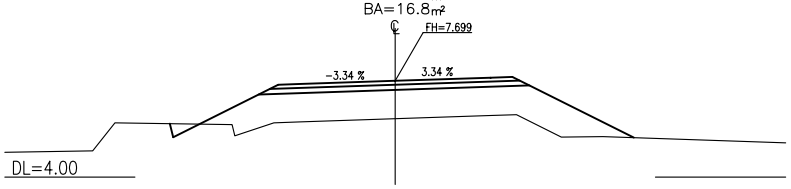
BA=16.8㎡



GOVERNMENT OF THE REPUBLIC OF VANUATU PUBLIC WORKS DEPARTMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	PROJECT : BASIC DESIGN STUDY ON THE PROJECT FOR THE REHABILITATION OF BRIDGES ON THE RING ROAD IN THE EFATE ISLAND	TITLE : CROSS SECTION(1) (TEOUMA BRIDGE)	DRAWING No: 21 Rv.

CROSS SECTION(2) SCALE 1:100

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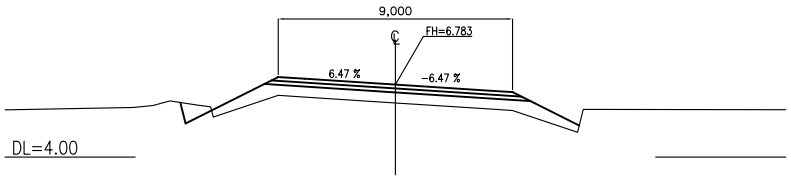
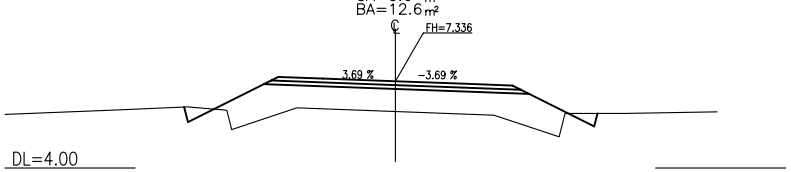
GH=5.980
FH=6.783
CA=0.5㎡
BA=6.0㎡



STATION.5125.0
GH=6.129
FH=7.336
CA=0.6 ㎡
BA=12.6㎡



STATION.5200.0
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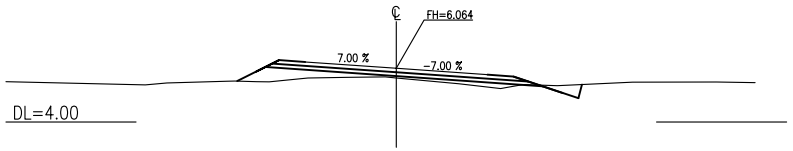
FH=6.064



STATION.5096.2 (A2)
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FH=7.582
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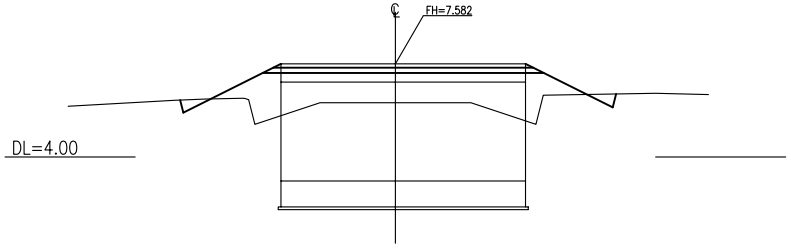
BA=17.2㎡



STATION.5175.0
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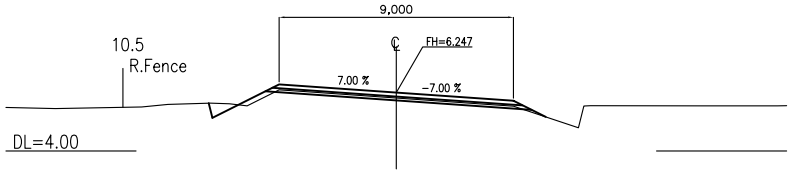
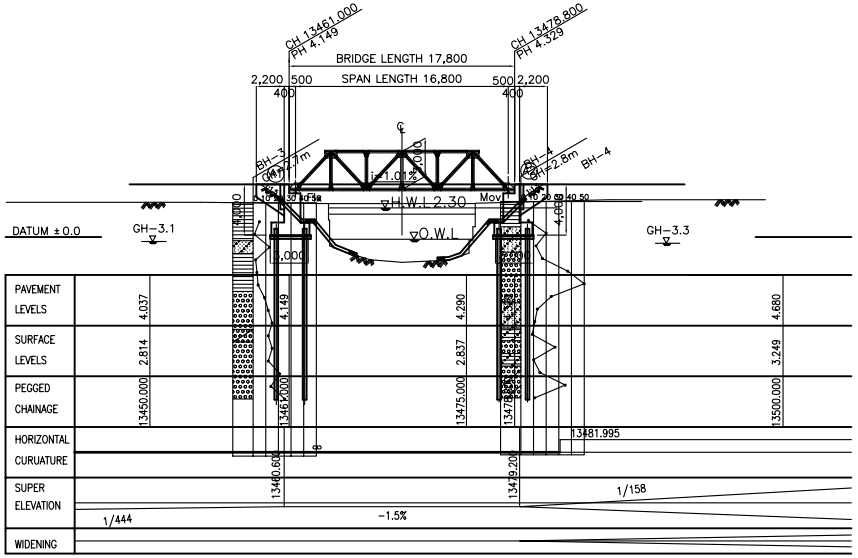
FH=6.247
CA=1.2㎡
BA=0.3㎡

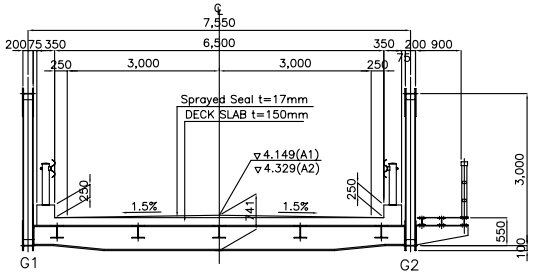


GOVERNMENT OF THE REPUBLIC OF VANUATU PUBLIC WORKS DEPARTMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	PROJECT : BASIC DESIGN STUDY ON THE PROJECT FOR THE REHABILITATION OF BRIDGES ON THE RING ROAD IN THE EFATE ISLAND	TITLE : CROSS SECTION(2) (TEOUMA BRIDGE)	DRAWING No: 22 Rv.

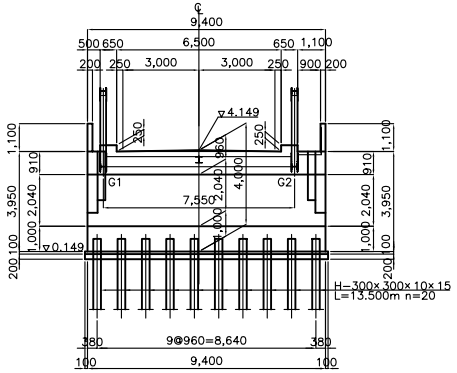
GENERAL VIEW (RENTAPAO BRIDGE)



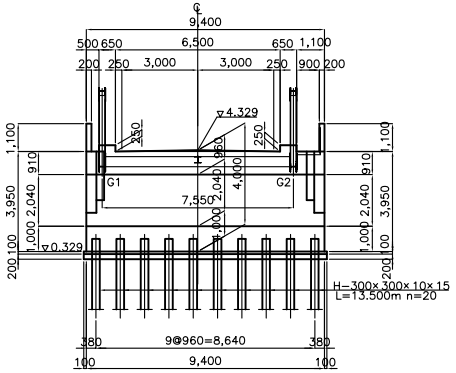
ELEVATION SCALE 1 : 200



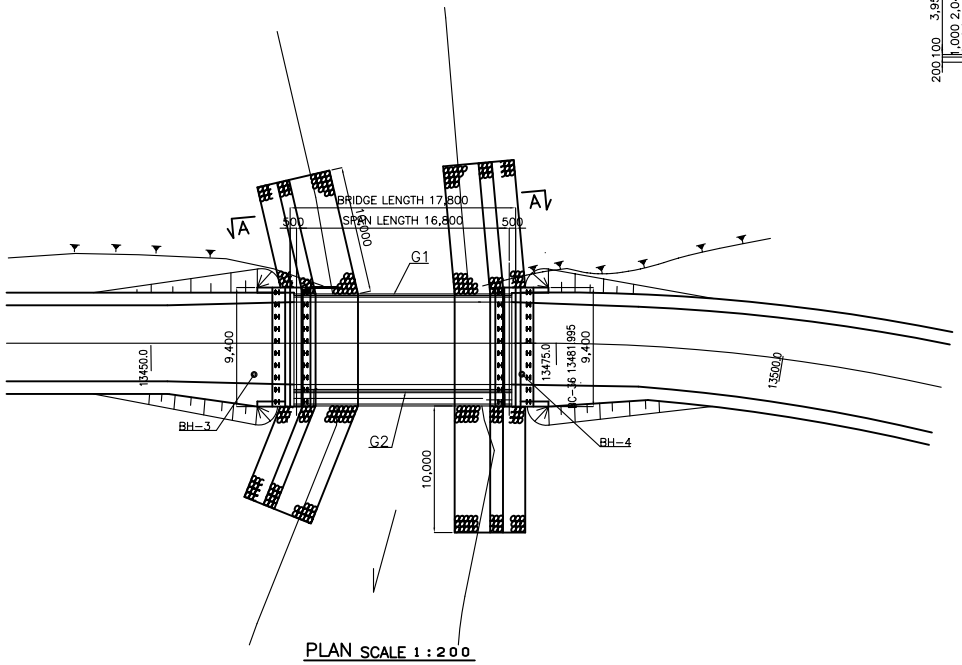
BRIDGE CROSS SECTION SCALE 1 : 50



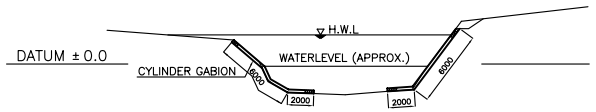
(A1) ABUTMENT SCALE 1 : 100



(A2) ABUTMENT SCALE 1 : 100

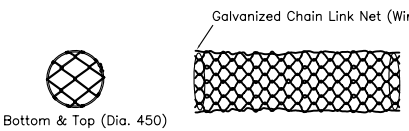


PLAN SCALE 1 : 200



A – A

RIVER SECTION SCALE 1 : 200

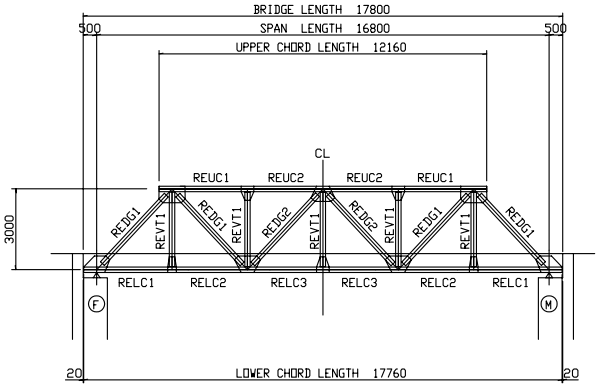


CYLINDER GABION DETAIL (non-scale)

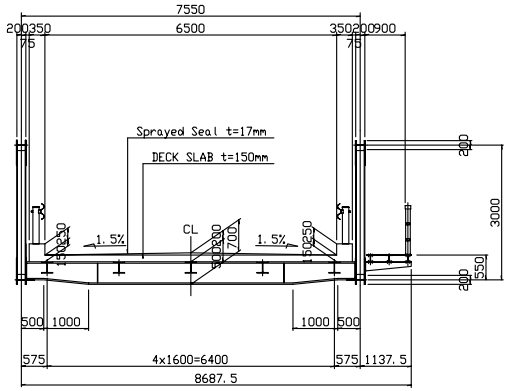
Note
All dimensions are shown in millimeter unless otherwise indicated.

GOVERNMENT OF THE REPUBLIC OF VANUATU PUBLIC WORKS DEPARTMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	PROJECT : BASIC DESIGN STUDY ON THE PROJECT FOR THE REHABILITATION OF BRIDGES ON THE RING ROAD IN THE EFATE ISLAND	TITLE : GENERAL VIEW (RENTAPAO BRIDGE)	DRAWING No: 23

GENERAL ARRANGEMENT (RENTAPAO BRIDGE)



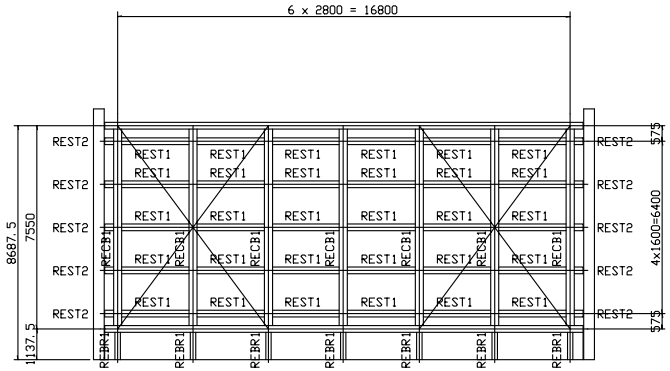
ELEVATION SCALE 1:100



CROSS SECTION SCALE 1:60

Design Criteria of Superstructure

1. Type of Superstructure
   Warren Type Poney Truss
2. Bridge Length
   17.8m
3. Span Length
   16.8 m
4. Width of Bridge
   Total Width = 8.688 m
   Road Width = 6.500 m
5. Design Live Load
   A–Live Load
   (by Japan Road Association)
6. Pavement
   Sprayed Seal t = 17 mm
7. Deck Slab
   Steel Deck Plate(t = 4.0 mm) with Concrete Slab t = 150 mm)
8. Earthquake Load
   Horizontal Seismic Coefficient = 0.26
   (for the design of Bearing Anchor Bolt and Unseating Prevention)
9. Steel Material
   SM490, SM400, SS400, F8T
10. Protective Coating
    Hot Dip Galvanizing (Str. Member: HDZ 55, Deck:HDZ 35)



PLAN SCALE 1:100

MARK	TYPE	SIZE (mm)	LENGTH (mm)	MATERIAL
		UPPER CHORD		
REUC1	H	200x200x 8x12	2895	SM490
REUC2	H	200x200x 8x12	2790	SM490
		LOWER CHORD		
RELC1	H	200x200x 8x12	2955	SS400
RELC2	H	200x200x 8x12	2790	SS400
RELC3	H	200x200x 8x12	2790	SM490
		DIAGONAL		
REDG1	PL	200x13	3535	SM490A
	PL	174x10	3535	SM409A
REDG2	H	200x200x 8x12	3470	SS400
		VERTICAL		
REVT1	H	200x200x 8x12	2760	SS400

MARK	TYPE	SIZE (mm)	LENGTH (mm)	MATERIAL
		CROSS BEAM		
RECB1	PL	300x30	7314	SM490B
RECB1	PL	440x11	7314	SM490A
		STRINGER		
REST1	H	250x250x 9x14	2750	SM490
REST2	H	250x250x 9x14	455	SM490
		BRACKET		
REBR1	H	400x200x8x13	1020	SM400
		LOWER LATERAL		
RELL1	L	90x 90x10x10	4315	SS400

Note
All dimensions are shown in millimeter unless otherwise indicated.

GOVERNMENT OF THE REPUBLIC OF VANUATU PUBLIC WORKS DEPARTMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	PROJECT : BASIC DESIGN STUDY ON THE PROJECT FOR THE REHABILITATION OF BRIDGES ON THE RING ROAD IN THE EFATE ISLAND	TITLE : GENERAL ARRANGEMENT (RENTAPAO BRIDGE)	DRAWING No: 24 Rv.