

Component B (Steel Girders Procurement)

General Views of the Bridges

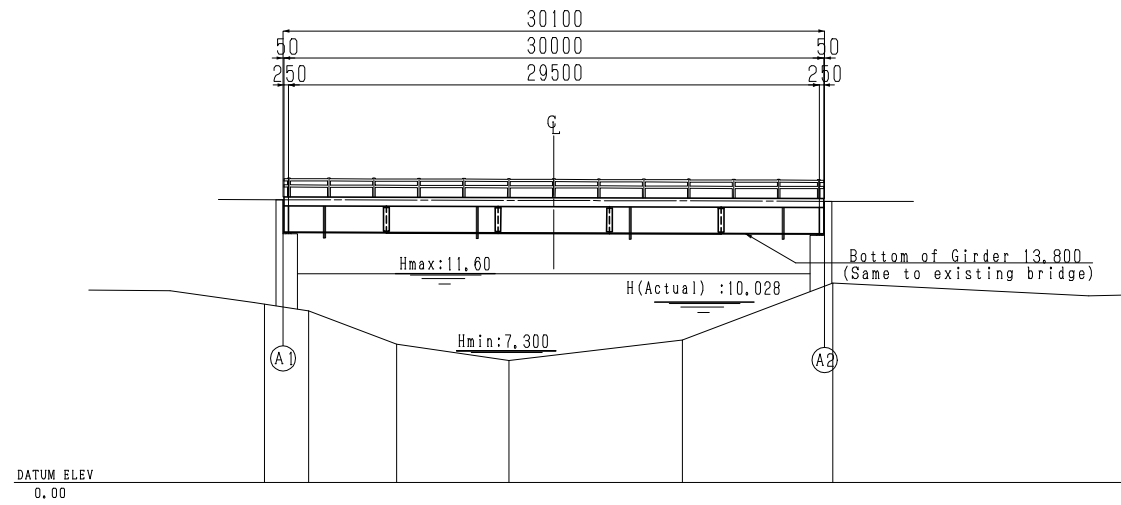
THE GOVERNMENT OF SOCIALIST REPUBLIC OF VIETNAM			
PROJECTS MANAGEMENT UNIT NO.18, MINISTRY OF TRANSPORT			
PROJECT	THE PROJECT FOR RECONSTRUCTION OF BRIDGES IN THE CENTRAL AREA OF VIETNAM		
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL		
DESIGNED BY	CHECKED BY	APPROVED BY	
NAME	Y. FURUKAWA	H. ENDOU	DZUNG
SIGNATURE			
DATE			

Br. No. 2 CHINH DAI BRIDGE

(General View of the Bridge)

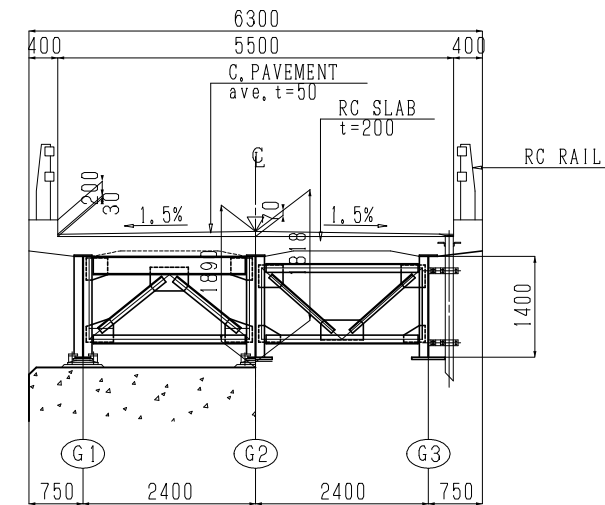
SECTION	SCALE	DRAWING NO.	SHEET NO.
	1/100, 1/400	CD-	OF
DRAWING TITLE	Br. No. 2 General View of the Bridge		
REV. NO	DATE	DESCRIPTION	SIGNATURE

PROFILE
SCALE=1/400

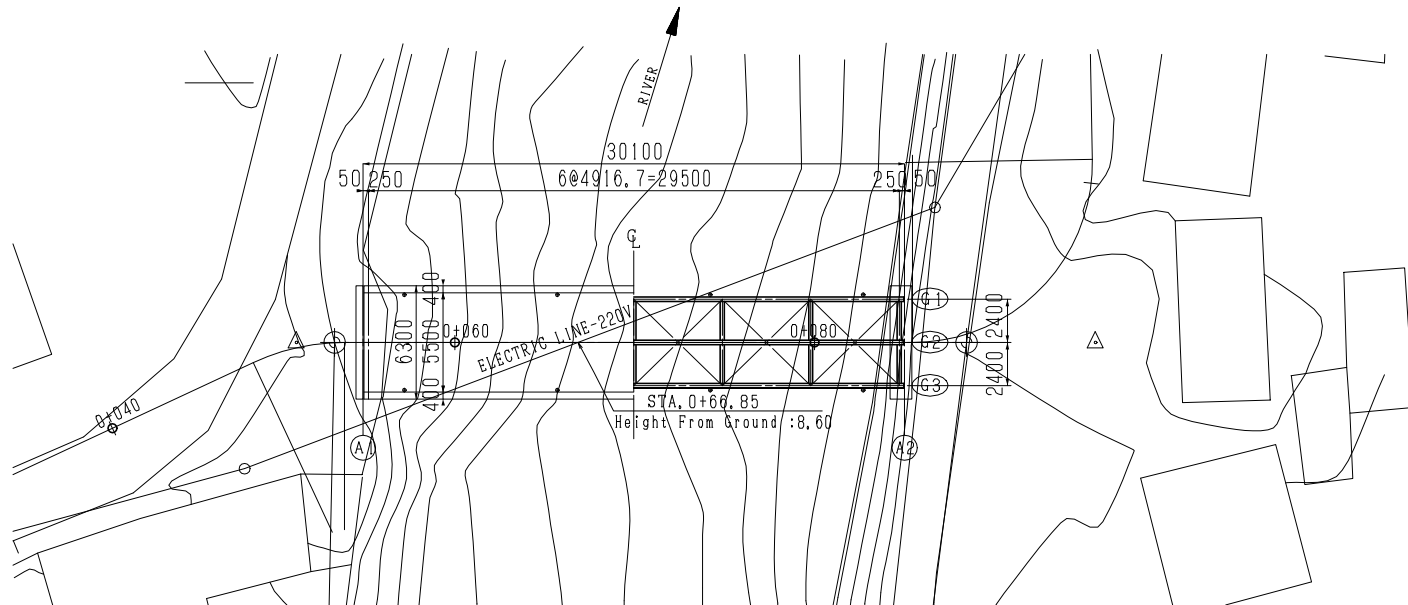


GRADE	15.710 ————— $i=0.3\%$ ————— 15.82				
PROPOSED HIGHT	15.710		15.865		15.82
GROUND HIGHT	9.91	9.54	7.68	6.77	7.92
DISTANCE	0+53.86	0+54.90	0+56.32	0+61.22	0+67.46
MARKER	A1		CL		A2

SECTION
SCALE=1/100



PLAN
SCALE=1/400



DESIGN CRITERIA

General Condition	
Design Speed	V=25km/h
Bridge Length (Span Length)	30, 1m (29, 5m)
Clear Width	5, 5m
Longitudinal Gradient	0, 3%
Cross-fall of Carriage way	1, 50%
Super Structure Type	Steel
Sub Structure Type	Abutment: Reinforced Concrete Pier: ———
Foundation Type	Reinforced Concrete Square 40x40cm Steel Pipe $\phi 406, 4\text{mm}$
Material Strength	
Super Structure Type	Girder: $\sigma_s=210\text{N/mm}^2$ Cross Beam: $\sigma_s=140\text{N/mm}^2$ Slab: $\sigma_{28}=30\text{N/mm}^2$
Surface	C, Pavement: ave, t=5cm Curb, Wall: $\sigma_{28}=30\text{N/mm}^2$
Sub Structure Type	$\sigma_{28}=20\text{N/mm}^2$
Reinforcing Steel	SD295 (py=300N/mm ²)

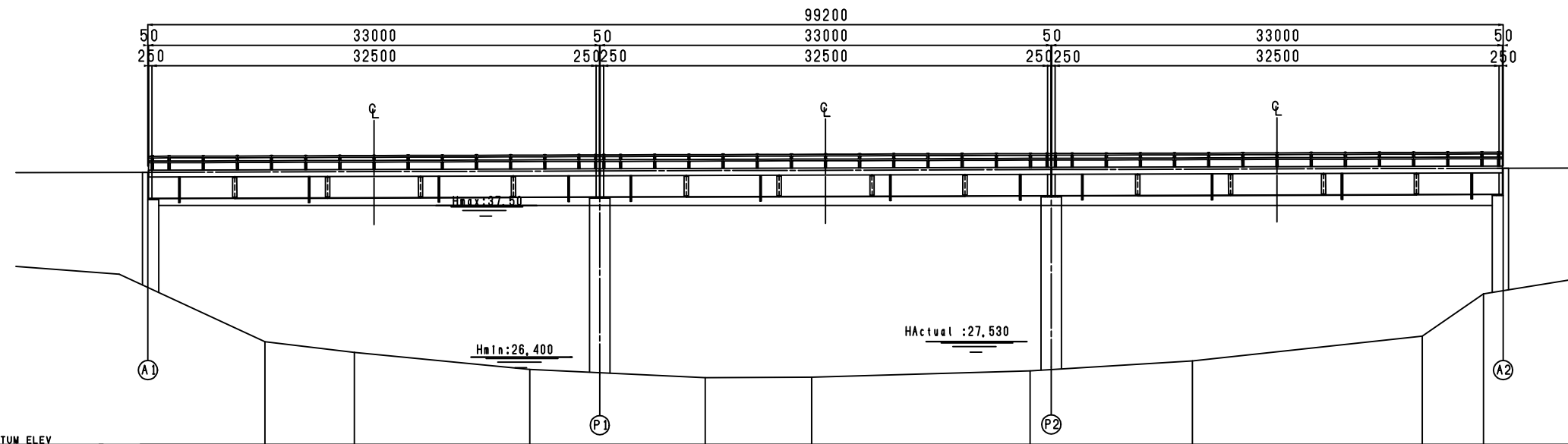
THE GOVERNMENT OF SOCIALIST REPUBLIC OF VIETNAM			
PROJECTS MANAGEMENT UNIT NO.18, MINISTRY OF TRANSPORT			
PROJECT	THE PROJECT FOR RECONSTRUCTION OF BRIDGES IN THE CENTRAL AREA OF VIETNAM		
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL		
DESIGNED BY	CHECKED BY	APPROVED BY	
NAME	T. FURUKAWA	H. ENDOU	DZUNG
SIGNATURE			
DATE			

Br. No. 4 THACH QUANG BRIDGE

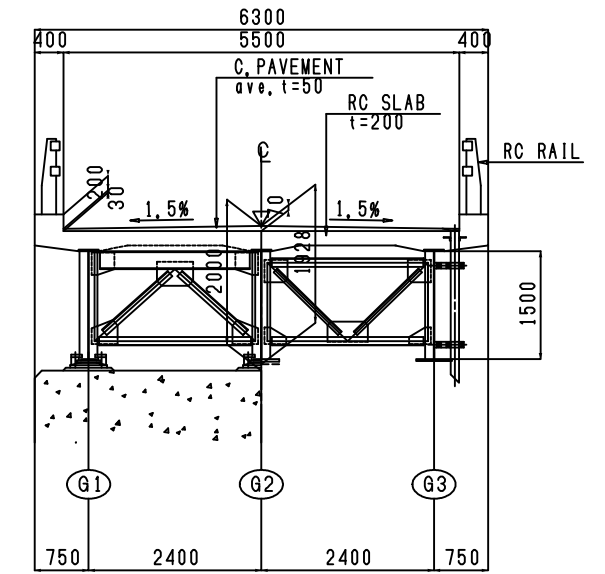
(General View of the Bridge)

SECTION	SCALE	DRAWING NO.	SHEET NO.
	1/100, 1/400	TO-	OF
DRAWING TITLE	Br. No. 4 General View of the Bridge		
REV. NO	DATE	DESCRIPTION	SIGNATURE

PROFILE
SCALE=1/400

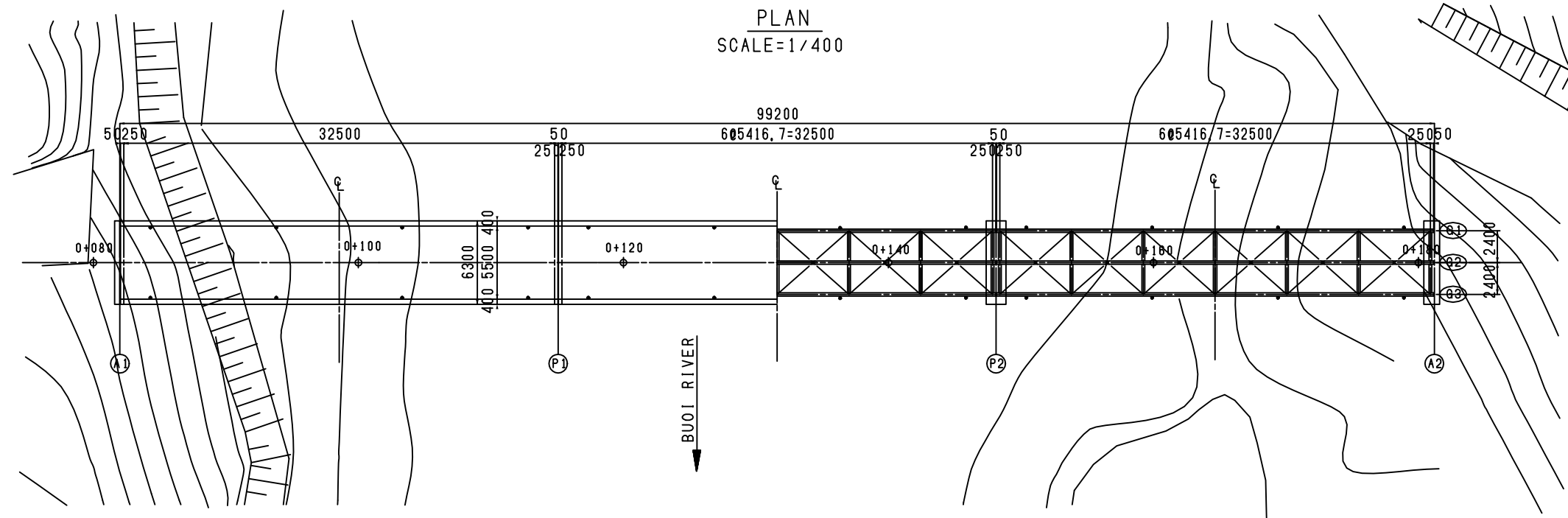


SECTION
SCALE=1/100



GRADE	39.93									
PROPOSED HIGHT	39.93									40.228
GROUND HIGHT		27.53	26.74	25.50	24.89	24.93	25.39	26.12	27.94	31.03
DISTANCE	0+82.00	0+90.57	0+97.11	0+98.55	0+109.95	0+115.075	0+122.79	0+130.56	0+131.60	0+146.56
MARKER	A1		10L		P1		20L		P2	30L

PLAN
SCALE=1/400



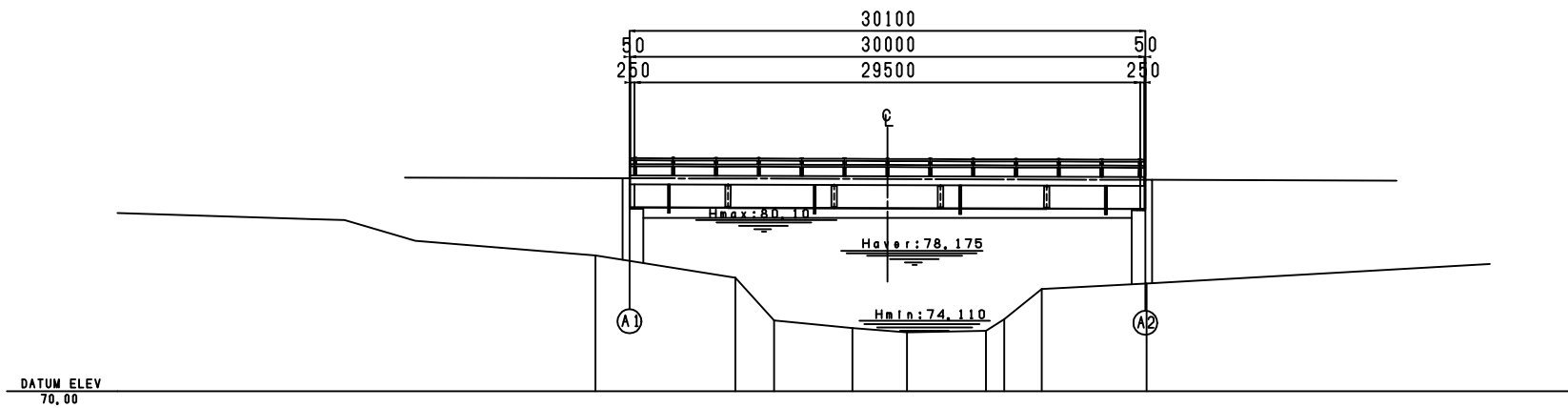
DESIGN CRITERIA	
General Condition	
Design Speed	V=25km/h
Bridge Length (Span Length)	99,2m (32,5m+32,5m+32,5m)
Clear Width	5,5m
Longitudinal Gradient	0,3%
Cross-fall of Carriage way	1,50%
Super Structure Type	Steel
Sub Structure Type	Abutment: Reinforced Concrete Pier: Reinforced Concrete
Foundation Type	Reinforced Concrete Square 40x40cm Steel Pipe φ408,4mm
Material Strength	
Super Structure Type	Girder: σa=210N/mm ² Cross Beam: σa=140N/mm ² Slab: σ28=30N/mm ²
Surface	C, Pavement: ave. t=5cm Curb, Wall: σ28=30N/mm ²
Sub Structure Type	σ28=20N/mm ²
Reinforcing Steel	SD295 (σy=300N/mm ²)

THE GOVERNMENT OF SOCIALIST REPUBLIC OF VIETNAM			
PROJECTS MANAGEMENT UNIT NO.18, MINISTRY OF TRANSPORT			
PROJECT	THE PROJECT FOR RECONSTRUCTION OF BRIDGES IN THE CENTRAL AREA OF VIETNAM		
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL		
DESIGNED BY	CHECKED BY	APPROVED BY	
NAME	T. FURUKAWA	H. ENDOU	DZUNG
SIGNATURE			
DATE			

Br. No. 7 KE CHIENG BRIDGE (General View of the Bridge)

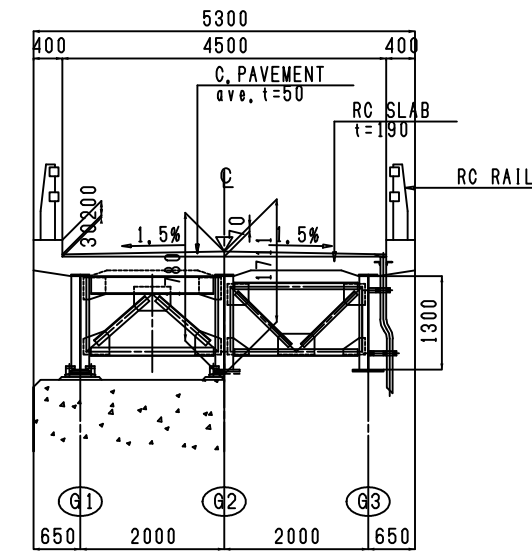
SECTION	SCALE	DRAWING NO.	SHEET NO.
	1/100, 1/400	KC-	OF
DRAWING TITLE	Br. No. 7 General View of the Bridge		
REV. NO.	DATE	DESCRIPTION	SIGNATURE

PROFILE
SCALE=1/400

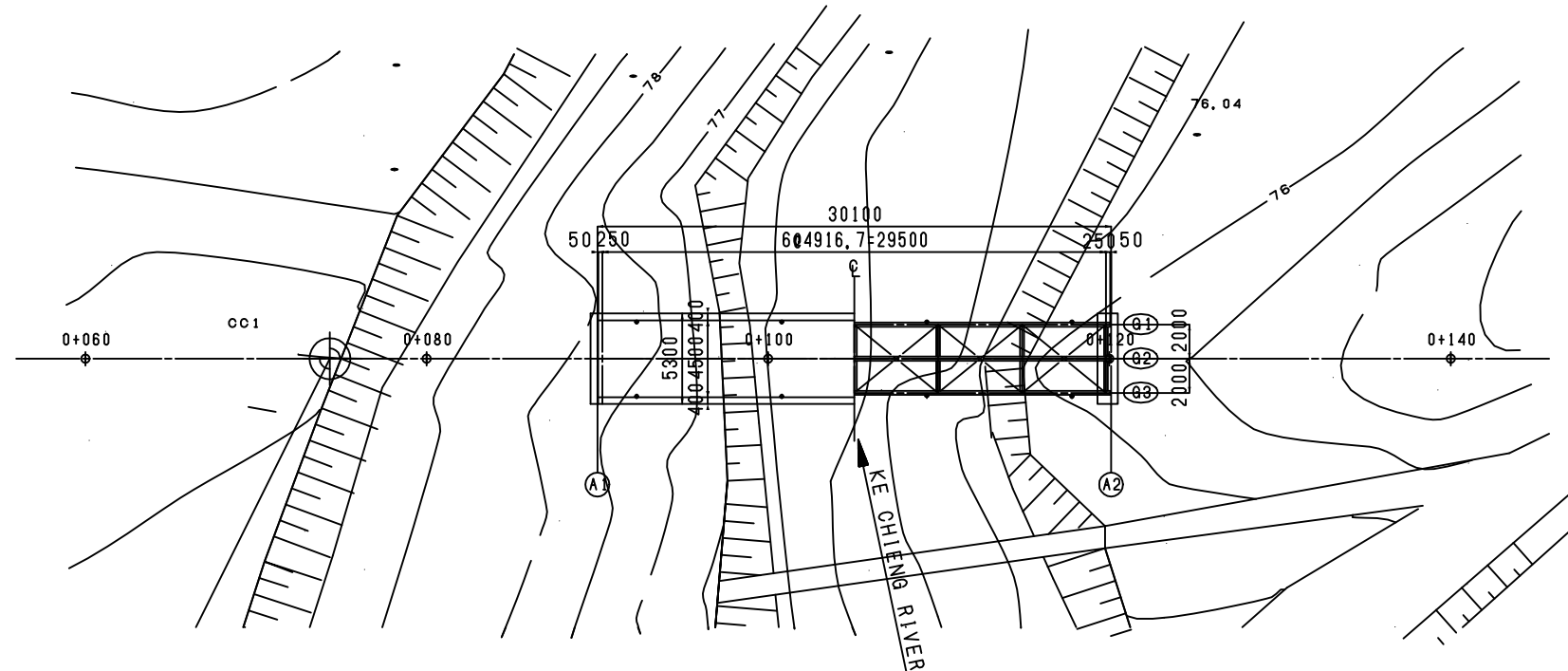


GRADE					
PROPOSED HEIGHT	82.410	82.410	82.385	82.32	82.32
GROUND HEIGHT	77.91	76.60	74.13	73.67	73.42
DISTANCE	0+87.97	0+90.00	0+96.13	0+98.99	0+102.96
MARKER	A1	CL			A2

SECTION
SCALE=1/100



PLAN
SCALE=1/400



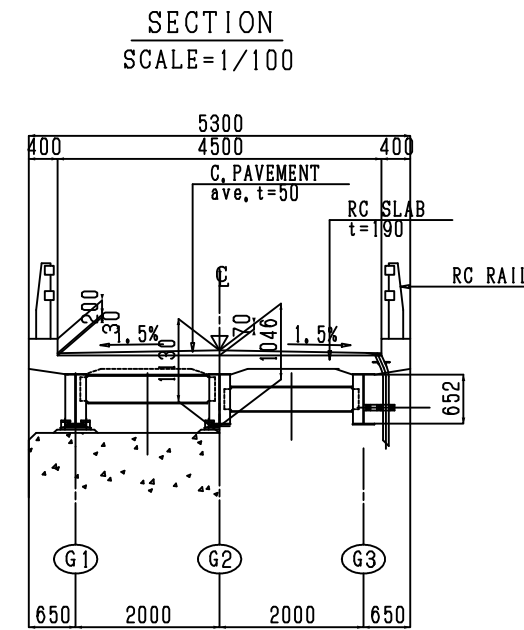
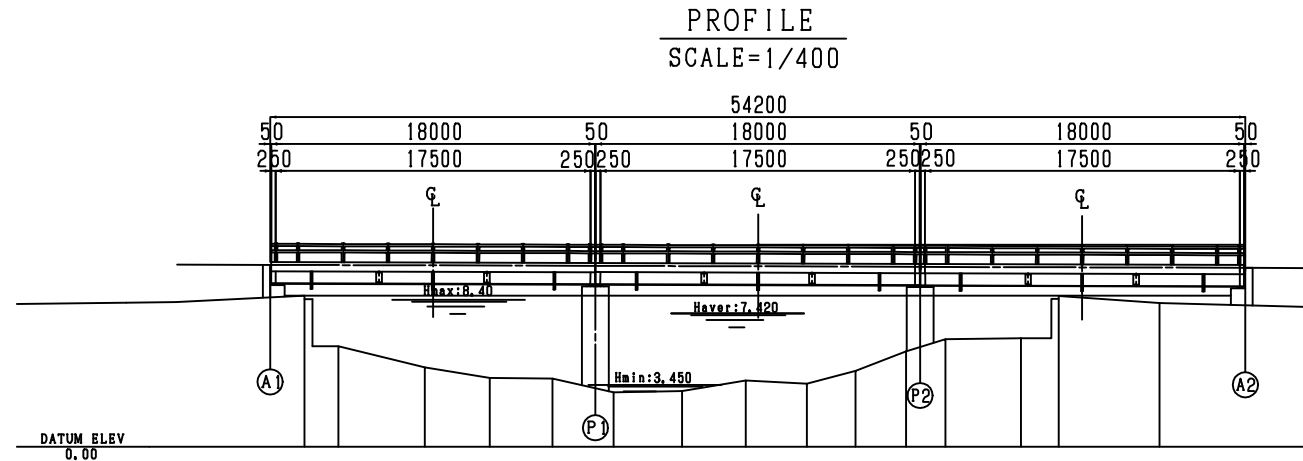
DESIGN CRITERIA

General Condition	
Design Speed	V=25km/h
Bridge Length (Span Length)	30.1m (29.5m)
Clear Width	4.5m
Longitudinal Gradient	0.3%
Cross-fall of Carriage way	1.50%
Super Structure Type	Steel
Sub Structure Type	Abutment: Reinforced Concrete Pier: Reinforced Concrete
Foundation Type	Reinforced Concrete Square 40x40cm Steel Pipe #406, 4mm
Material Strength	
Super Structure Type	Girder: $\sigma_s=210N/mm^2$ Cross Beam: $\sigma_s=140N/mm^2$ Slab: $\sigma_{28}=30N/mm^2$
Surface	C, Pavement: $\sigma_{28}=30N/mm^2$ Curb, Wall: $\sigma_{28}=20N/mm^2$
Sub Structure Type	$\sigma_{28}=20N/mm^2$
Reinforcing Steel	SD295 ($p_y=300N/mm^2$)

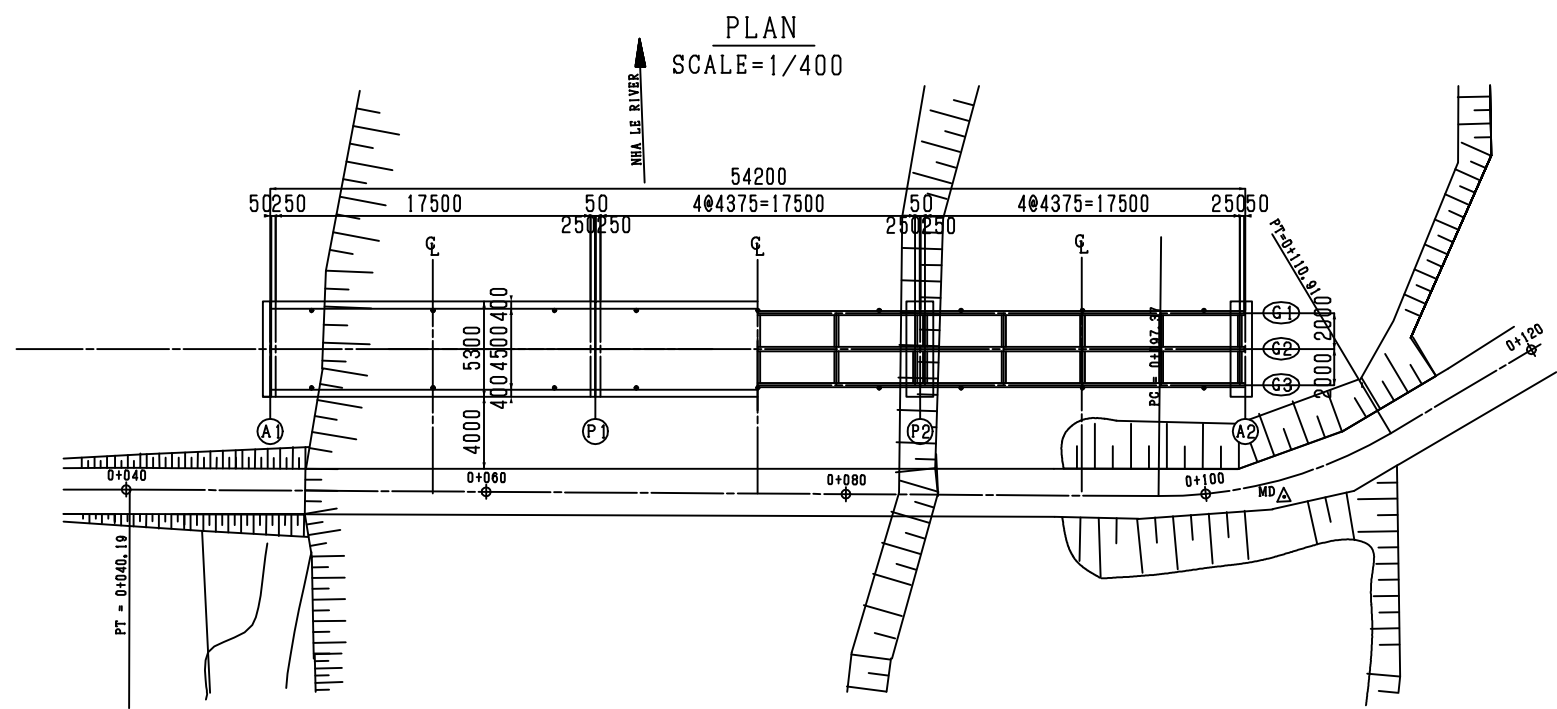
THE GOVERNMENT OF SOCIALIST REPUBLIC OF VIETNAM			
PROJECTS MANAGEMENT UNIT NO.16, MINISTRY OF TRANSPORT			
PROJECT	THE PROJECT FOR RECONSTRUCTION OF BRIDGES IN THE CENTRAL AREA OF VIETNAM		
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL		
DESIGNED BY	T. FURUKAWA	CHECKED BY	K. ENDOU
APPROVED BY	DUONG		
NAME	T. FURUKAWA	K. ENDOU	DUONG
SIGNATURE			
DATE			

Br. No. 12 CUA TRAI BRIDGE (General View of the Bridge)

SECTION	SCALE	DRAWING NO.	SHEET NO.
	1/100, 1/400	CT-	OF
DRAWING TITLE	Br. No. 12 General View of the Bridge		
REV. NO.	DATE	DESCRIPTION	SIGNATURE



GRADE	$i=0.3\%$									
PROPOSED HIGHT	10.113	10.085	10.086	10.031	10.004	9.977	9.95	9.95	9.95	9.95
GROUND HIGHT	8.41	5.59	4.42	3.83	3.80	3.03	3.11	3.69	3.52	4.23
DISTANCE	0+46.00	0+46.90	0+51.70	0+56.59	0+57.05	0+60.19	0+63.09	0+68.075	0+67.09	0+70.89
MARKER	A1	I.C.L.	P1	2.C.L.	P2	3.C.L.	A2			



DESIGN CRITERIA

General Condition	
Design Speed	V=25km/h
Bridge Length (Span Length)	54,2m (17,5m+17,5m+17,5m)
Clear Width	4,5m
Longitudinal Gradient	0,3%
Cross-fall of Carriage way	1,50%
Super Structure Type	Steel
Sub Structure Type	Abutment: Reinforced Concrete Pier: Reinforced Concrete
Foundation Type	Reinforced Concrete Square 40x40cm Steel Pipe $\phi 406,4$ mm
Material Strength	
Super Structure Type	Girder: $\sigma_a=210N/mm^2$ Cross Beam: $\sigma_a=140N/mm^2$ Slab: $\sigma_{28}=30N/mm^2$
Surface	C, Pavement: $\sigma_{28}=30N/mm^2$ Curb, Wall: $\sigma_{28}=30N/mm^2$
Sub Structure Type	$\sigma_{28}=20N/mm^2$
Reinforcing Steel	SD295 ($p_y=300N/mm^2$)

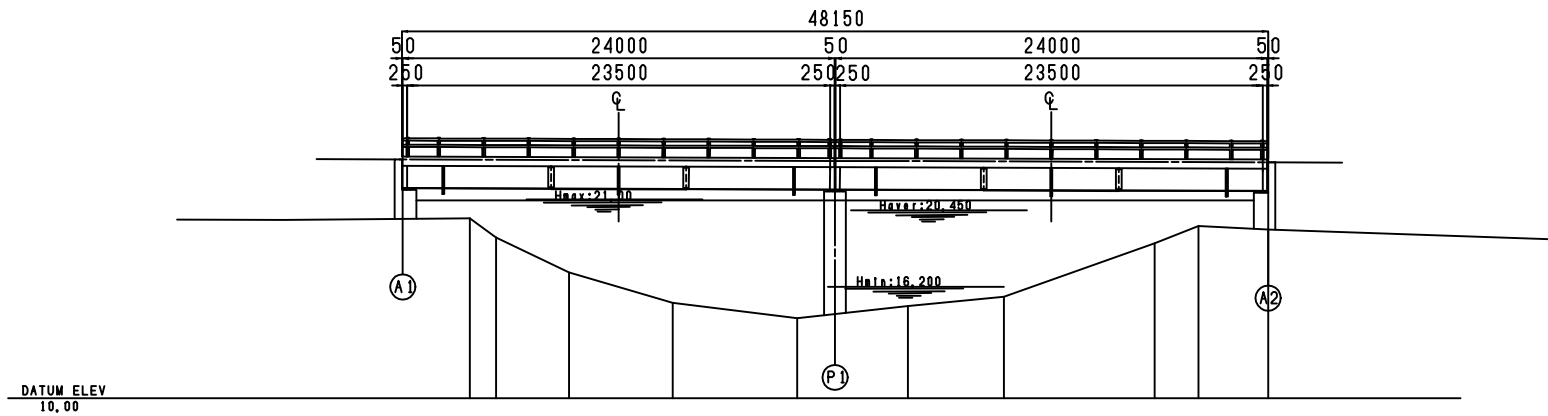
THE GOVERNMENT OF SOCIALIST REPUBLIC OF VIETNAM			
PROJECTS MANAGEMENT UNIT NO.15, MINISTRY OF TRANSPORT			
PROJECT	THE PROJECT FOR RECONSTRUCTION OF BRIDGES IN THE CENTRAL AREA OF VIETNAM		
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL		
DESIGNED BY	CHECKED BY	APPROVED BY	
NAME	T. FURUKAWA	H. ENDOU	DZUNG
SIGNATURE			
DATE			

Br. No. 15 PHU VINH BRIDGE

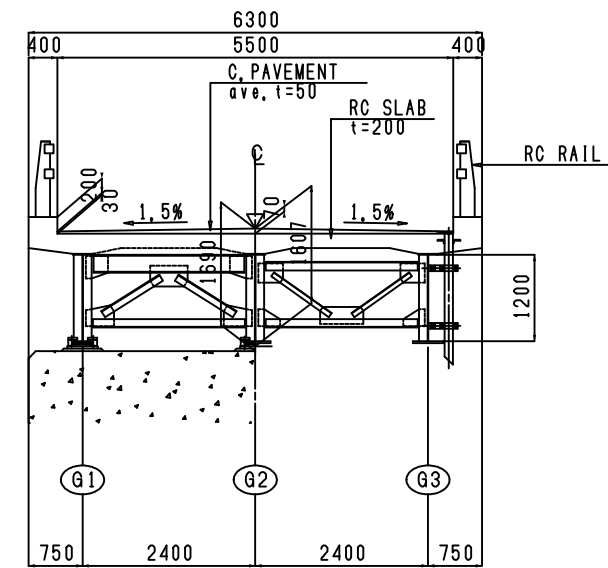
(General View of the Bridge)

SECTION	SCALE	DRAWING NO.	SHEET NO.
	1/100, 1/400	PV-	OF
DRAWING TITLE	Br. No. 15 General View of the Bridge		
REV. NO.	DATE	DESCRIPTION	SIGNATURE

PROFILE
SCALE=1/400

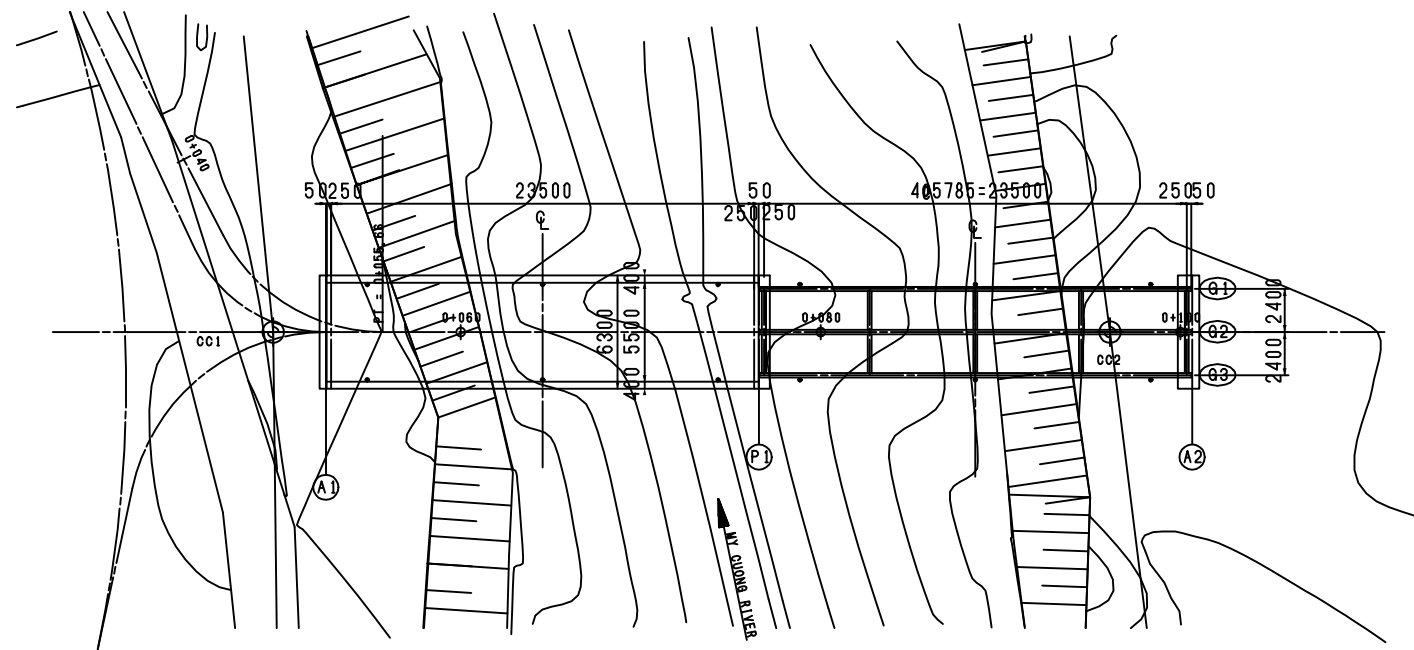


SECTION
SCALE=1/100



GRADE	23.254 ————— $i=0.3\%$ ————— 23.11														
PROPOSED HEIGHT	23.254		23.218		23.182		23.146		23.11						
GROUND HEIGHT		20.00	18.93	17.00	14.44	15.12	15.64	18.61	19.58	19.39					
DISTANCE	0+52.50	0+55.66	0+56.28	0+57.73	0+61.80	0+64.55	0+67.55	0+74.47	0+76.575	0+80.63	0+85.97	0+88.60	0+94.34	0+98.78	0+100.55
MARKER	A1				10L				P1			20L		A2	

PLAN
SCALE=1/400



DESIGN CRITERIA

General Condition	
Design Speed	V=25km/h
Bridge Length (Span Length)	48,15m (23,5m+23,5m)
Clear Width	5,5m
Longitudinal Gradient	0,3%
Cross-fall of Carriage way	1,50%
Super Structure Type	Steel
Sub Structure Type	Abutment: Reinforced Concrete Pier: Reinforced Concrete
Foundation Type	Reinforced Concrete Square 40x40cm Steel Pipe #406, 4mm
Material Strength	
Super Structure Type	Girder: $\sigma_a=210N/mm^2$ Cross Beam: $\sigma_a=140N/mm^2$ Slab: $\sigma_{28}=30N/mm^2$
Surface	C. Pavement: $\sigma_a, t=5cm$ Curb, Wall: $\sigma_{28}=30N/mm^2$
Sub Structure Type	$\sigma_{28}=20N/mm^2$
Reinforcing Steel	SD295 ($\sigma_y=300N/mm^2$)

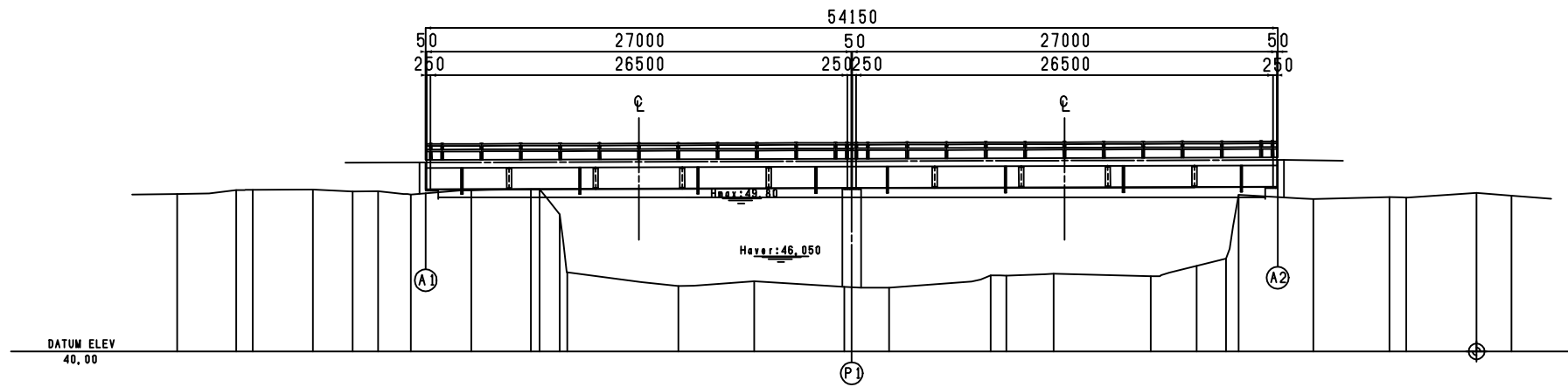
THE GOVERNMENT OF SOCIALIST REPUBLIC OF VIETNAM			
PROJECTS MANAGEMENT UNIT NO.18, MINISTRY OF TRANSPORT			
PROJECT	THE PROJECT FOR RECONSTRUCTION OF BRIDGES IN THE CENTRAL AREA OF VIETNAM		
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL		
DESIGNED BY	CHECKED BY	APPROVED BY	
NAME	T. FURUKAWA	H. ENDOU	DZUNG
SIGNATURE			
DATE			

Br. No. 20 BEN DA BRIDGE

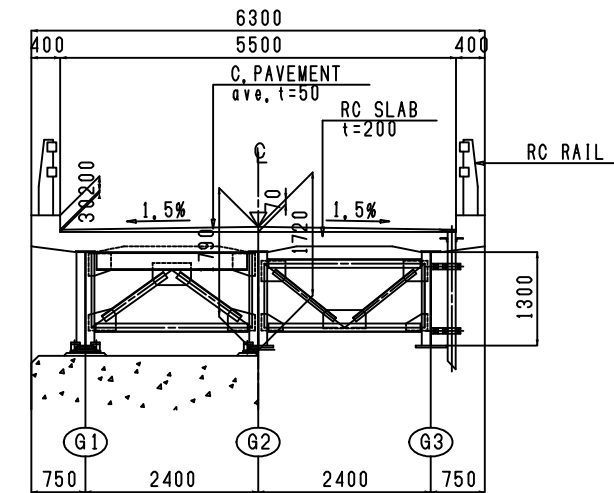
(General View of the Bridge)

SECTION	SCALE	DRAWING NO.	SHEET NO.
	1/100, 1/400	BD-	OF
DRAWING TITLE	Br. No. 20 General View of the Bridge		
REV. NO.	DATE	DESCRIPTION	SIGNATURE

PROFILE
SCALE=1/400

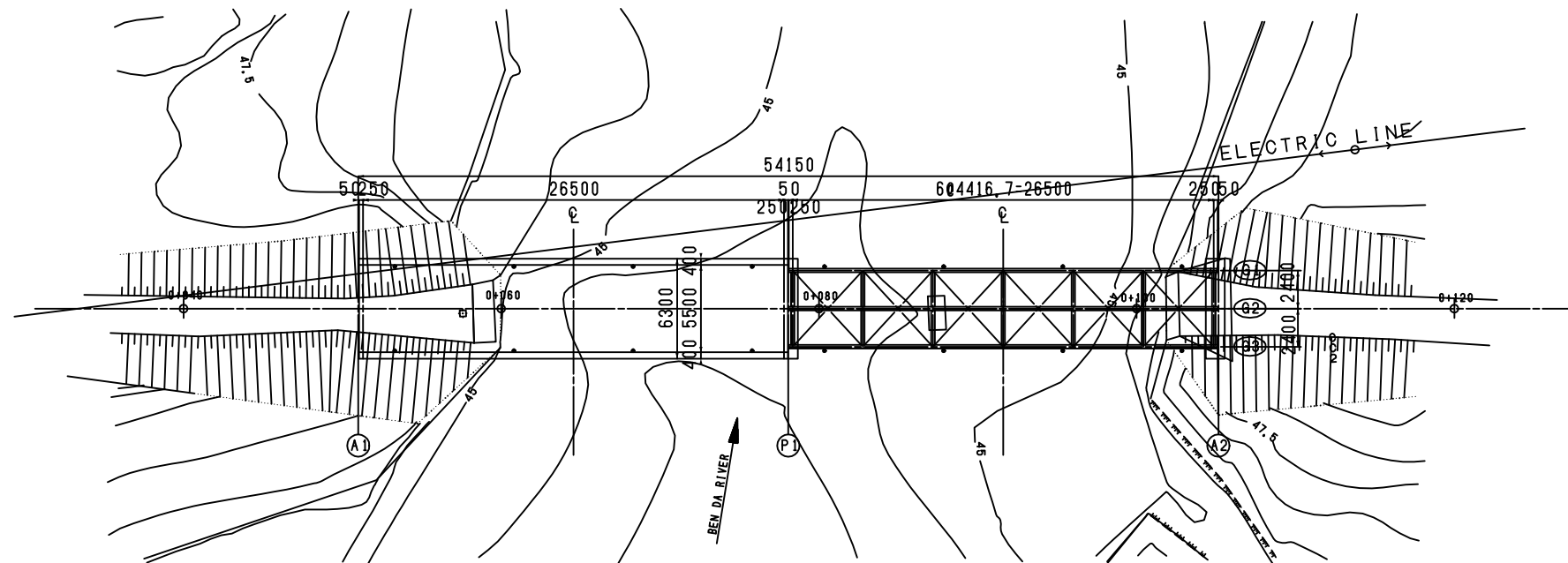


SECTION
SCALE=1/100



GRADE																					
PROPOSED HEIGHT	52.02			52.061			52.101			52.142	52.182										
GROUND HEIGHT		50.26	50.39	50.32	48.72	45.03		44.17	44.47	44.15	44.88	44.83	44.83	44.84	44.78	45.44	45.90	49.95			
DISTANCE	0+51.00	0+62.889	0+67.684	0+68.229	0+69.519	0+60.000	0+64.55	0+67.061	0+71.876	0+77.601	0+78.075	0+80.45	0+86.915	0+87.908	0+90.918	0+91.60	0+97.088	0+100.000	0+101.866	0+102.672	0+105.15
MARKER	A1						1CL			P1						2CL					A2

PLAN
SCALE=1/400



DESIGN CRITERIA

General Condition	
Design Speed	V=40km/h
Bridge Length (Span Length)	54,15m (26,5m+26,5m)
Clear Width	5,5m
Longitudinal Gradient	0,3%
Cross-fall of Carriage way	1,50%
Super Structure Type	Steel
Sub Structure Type	Abutment Reinforced Concrete Pier Reinforced Concrete
Foundation Type	Reinforced Concrete Square 40x40cm Steel Pipe φ406,4mm
Material Strength	
Super Structure Type	Girder $\sigma_a=210N/mm^2$
	Cross Beam $\sigma_a=140N/mm^2$
	Slab $\sigma_a=30N/mm^2$
Surface	C, Pavement ave. t=5cm
	Curb, Wall $\sigma_a=30N/mm^2$
Sub Structure Type	$\sigma_a=28-20N/mm^2$
Reinforcing Steel	SD295 ($\sigma_y=300N/mm^2$)

THE GOVERNMENT OF SOCIALIST REPUBLIC OF VIETNAM			
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CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL		
DESIGNED BY	CHECKED BY	APPROVED BY	
NAME	T. FURUKAWA	H. ENDOU	DZUNG
SIGNATURE			
DATE			

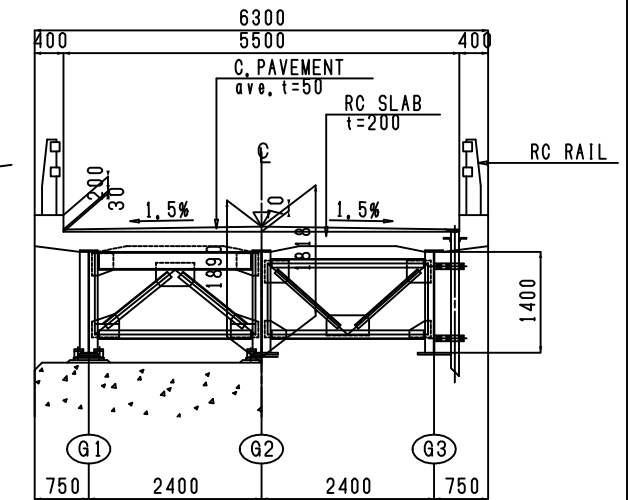
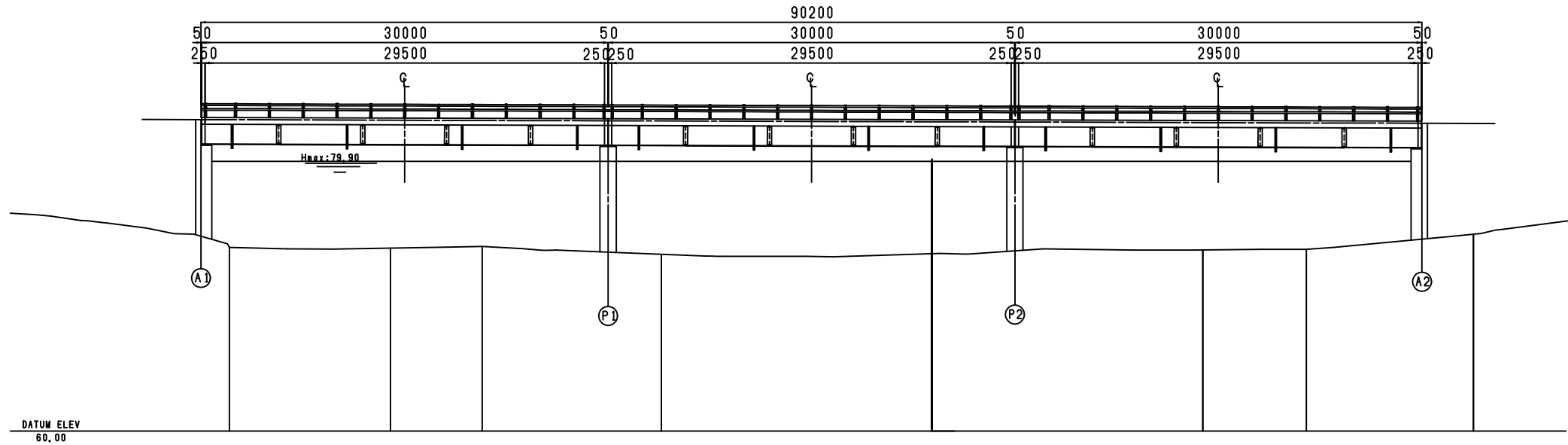
Br. No. 24 NA MAY BRIDGE

(General View of the Bridge)

SECTION	SCALE	DRAWING NO.	SHEET NO.
	1/100, 1/400	NM-	OF
DRAWING TITLE	Br. No. 24 General View of the Bridge		
REV. NO.	DATE	DESCRIPTION	SIGNATURE

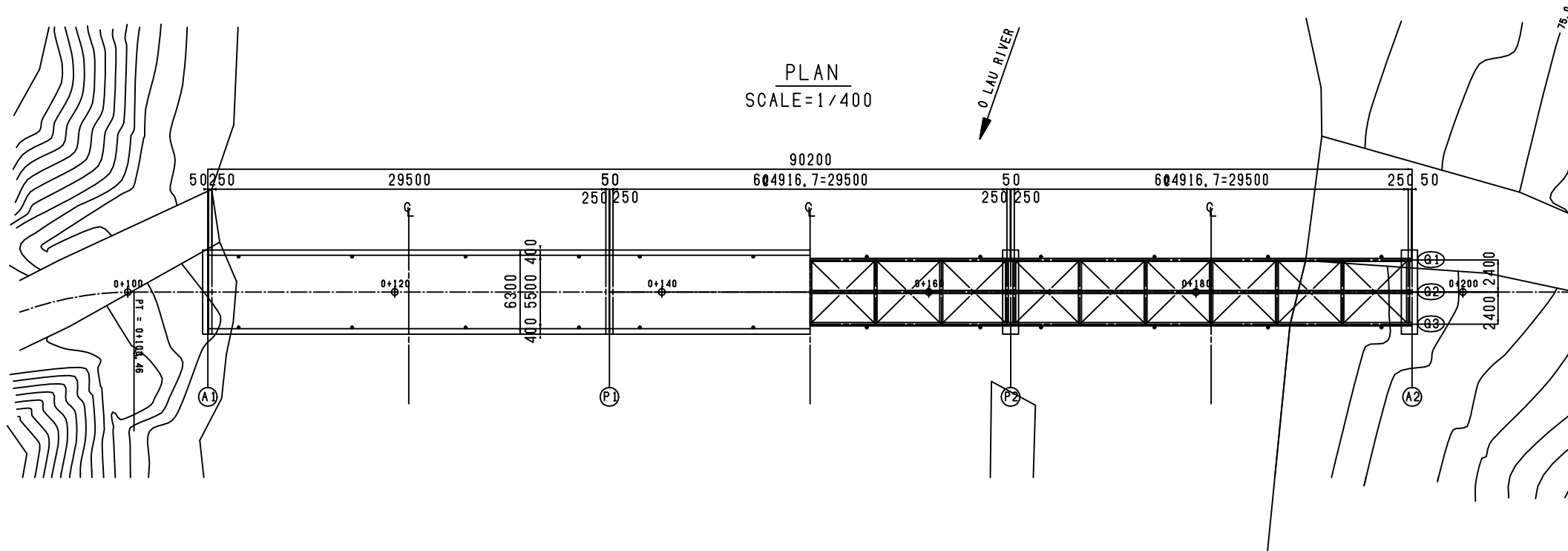
PROFILE
SCALE=1/400

SECTION
SCALE=1/100



GRADE	82.991										82.72				
PROPOSED HEIGHT	82.991		82.945		82.900		82.855		82.810		82.795	82.72			
GROUND HEIGHT		79.57	79.50	79.64		79.05		79.10		79.38	79.42	82.72			
DISTANCE	0+106.00	0+108.05	0+120.00	0+121.05	0+126.77	0+136.075	0+140.00	0+140.00	0+151.10	0+160.00	0+166.125	0+180.00	0+181.15	0+187.65	0+196.20
MARKER	A1		10L		P1				20L			P2		30L	A2

PLAN
SCALE=1/400



DESIGN CRITERIA

General Condition	
Design Speed	V=40km/h
Bridge Length (Span Length)	90,2m (29,5m+29,5m+29,5m)
Clear Width	5,5m
Longitudinal Gradient	0,3%
Cross-fall of Carriage way	1,50%
Super Structure Type	Steel
Sub Structure Type	Abutment: Reinforced Concrete Pier: Reinforced Concrete
Foundation Type	Reinforced Concrete Square 40x40cm Steel Pipe φ406,4mm
Material Strength	
Super Structure Type	Girder: σ _a =210N/mm ² Cross Beam: σ _a =140N/mm ² Slab: σ _a =30N/mm ²
Surface	C, Pavement: ave, t=5cm Curb, Wall: σ _a =30N/mm ²
Sub Structure Type	σ _a =20N/mm ²
Reinforcing Steel	SD295 (p _y =300N/mm ²)

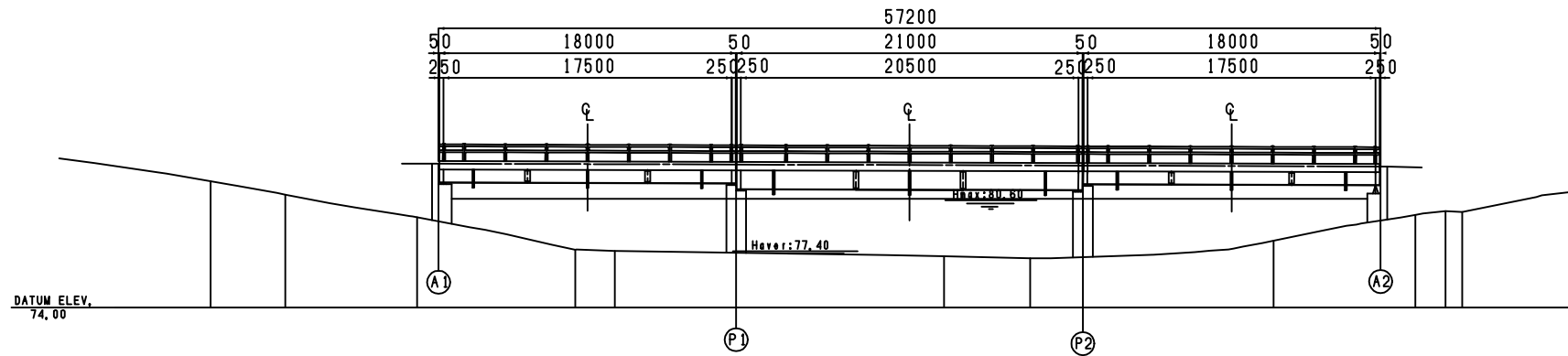
THE GOVERNMENT OF SOCIALIST REPUBLIC OF VIETNAM			
PROJECTS MANAGEMENT UNIT NO. 16, MINISTRY OF TRANSPORT			
PROJECT	THE PROJECT FOR RECONSTRUCTION OF BRIDGES IN THE CENTRAL AREA OF VIETNAM		
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL		
DESIGNED BY	CHECKED BY	APPROVED BY	
NAME	Y. FURUKAWA	H. ENDOU	DZUNG
SIGNATURE			
DATE			

Br. No. 34 SONG QUAN BRIDGE

(General View of the Bridge)

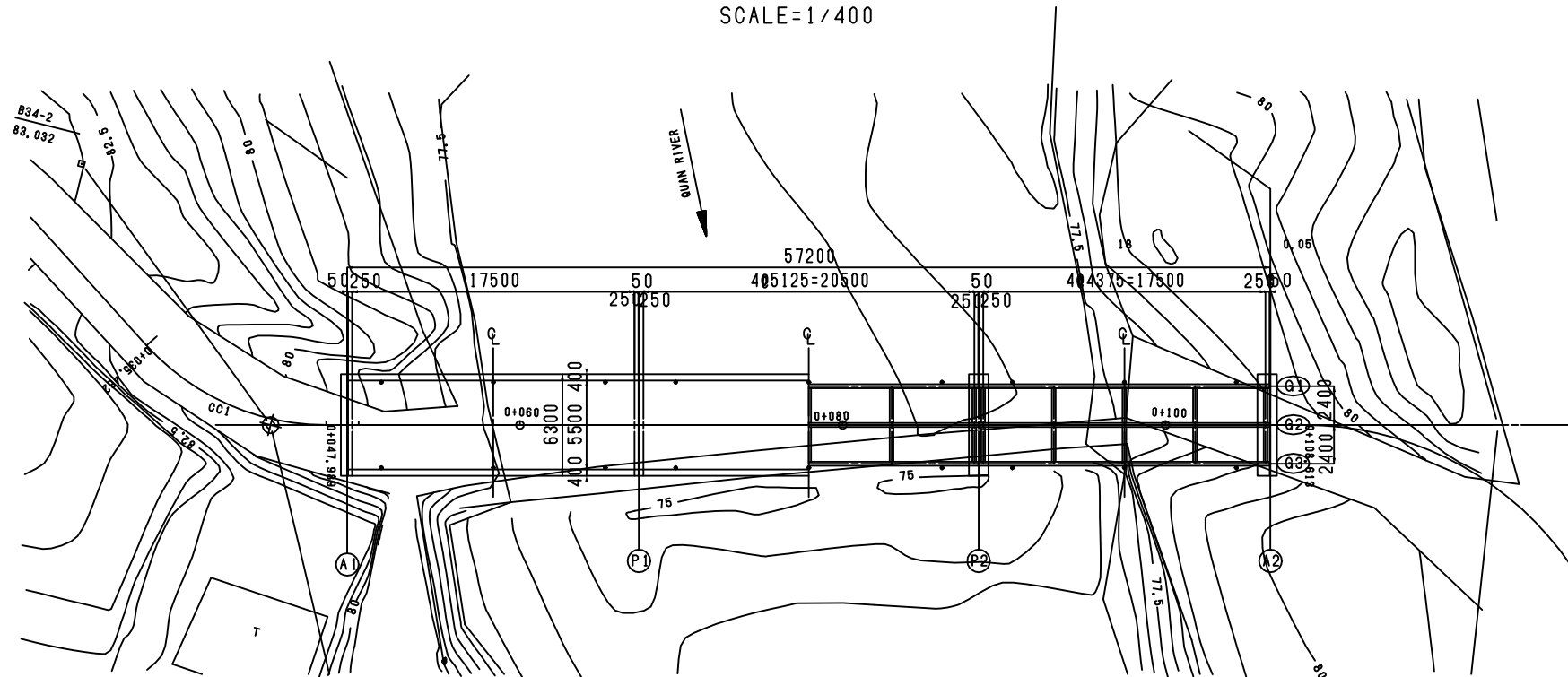
SECTION	SCALE	DRAWING NO.	SHEET NO.
	1/100, 1/400	SO-	OF
DRAWING TITLE	Br. No. 34 General View of the Bridge		
REV. NO	DATE	DESCRIPTION	SIGNATURE

PROFILE
SCALE=1/400



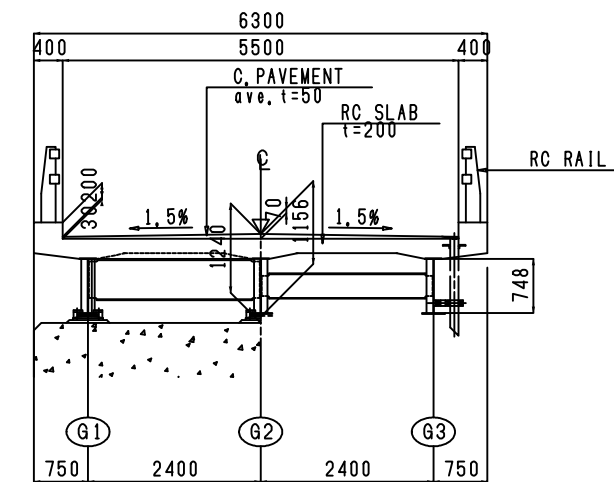
GRADE												
PROPOSED HIGHT	82.727	82.727	82.700	82.673	82.642	82.61	82.583	82.556				
GROUND HIGHT	79.48	77.51	77.42	77.10	76.98	76.05	76.05	76.05				
DISTANCE	0+47.99	0+49.30	0+57.69	0+66.35	0+67.375	0+77.90	0+80.00	0+85.22	0+88.425	0+97.45	0+100.00	0+106.50
MARKER	A1	1CL	P1	2CL	P2	3CL	A2					

PLAN
SCALE=1/400

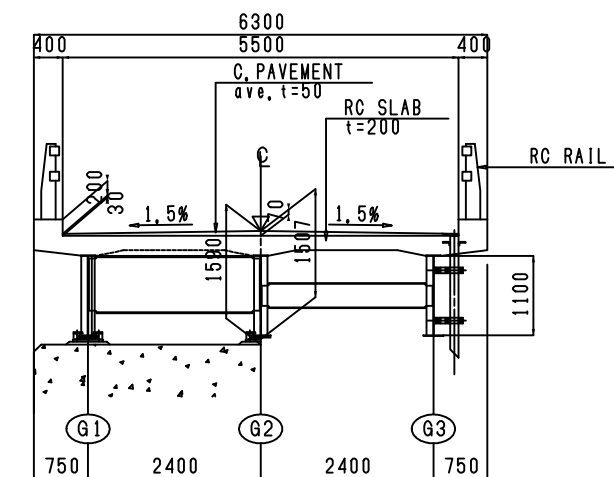


SECTION
SCALE=1/100

A1~P1, P2~A2



P1~P2



DESIGN CRITERIA

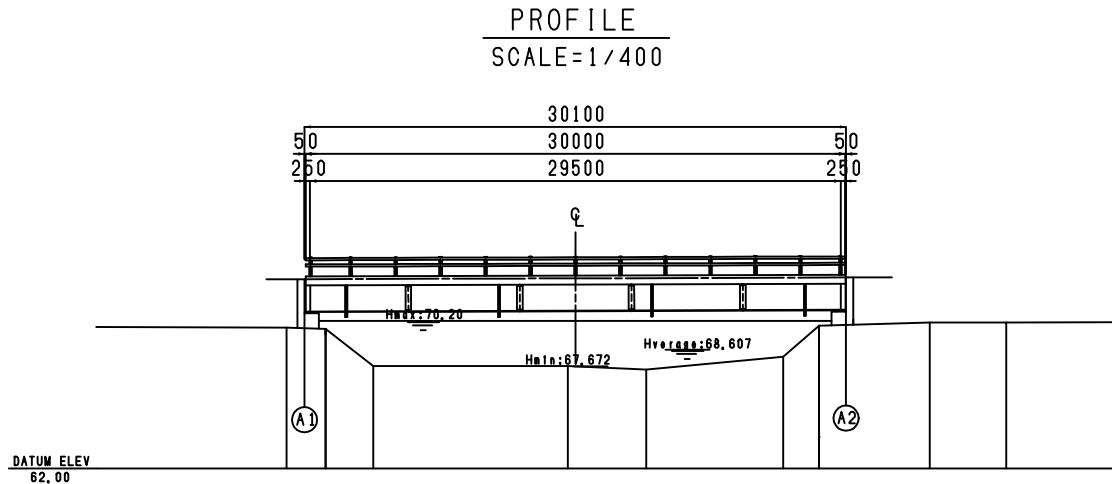
General Condition		
Design Speed	V=40km/h	
Bridge Length (Span Length)	57,2m (17,5m+20,5m+17,5m)	
Clear Width	5,5m	
Longitudinal Gradient	1=0,3%	
Cross-fall of Carriage way	1,50%	
Super Structure Type	Steel	
Sub Structure Type	Abutment	Reinforced Concrete
	Pier	Reinforced Concrete
Foundation Type	Reinforced Concrete Square 40x40cm Steel Pipe #406,4mm	
Material Strength		
Super Structure Type	Girder	σa=210N/mm ²
	Cross Beam	σa=140N/mm ²
	Slab	σ28=30N/mm ²
Surface	C, Pavement	ave, t=5cm
	Curb, Wall	σ28=30N/mm ²
Sub Structure Type	σ28=20N/mm ²	
Reinforcing Steel	SD295 (py=300N/mm ²)	

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CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL		
DESIGNED BY	CHECKED BY	APPROVED BY	
NAME	T. FURUKAWA	H. ENDOU	DZUNG
SIGNATURE			
DATE			

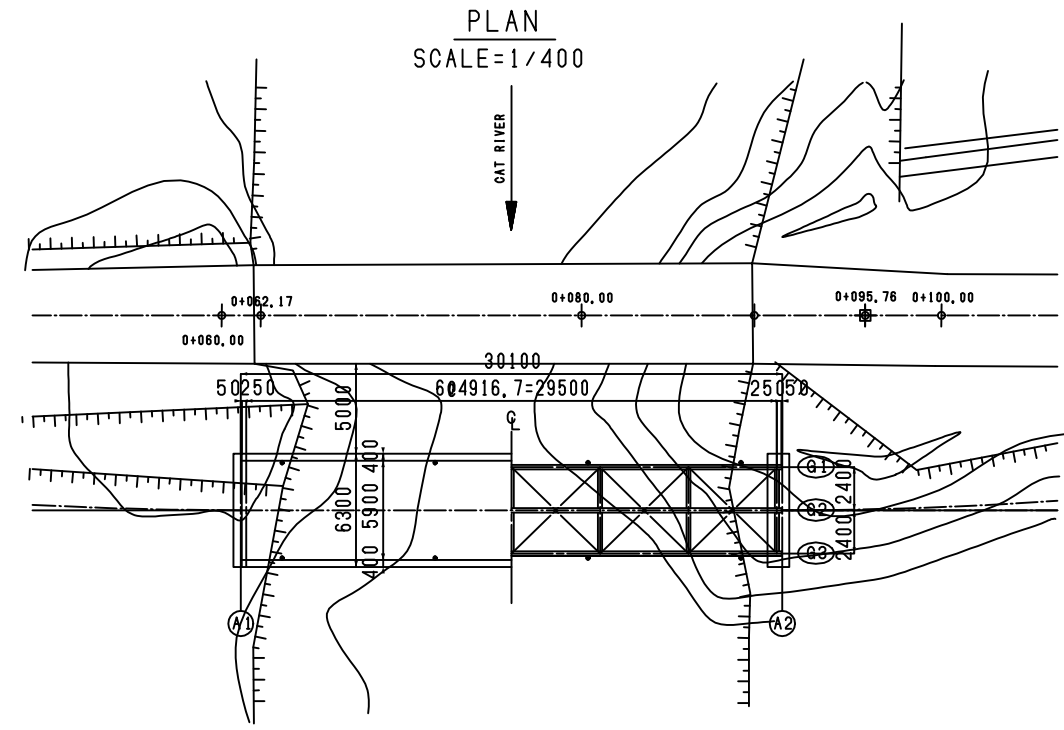
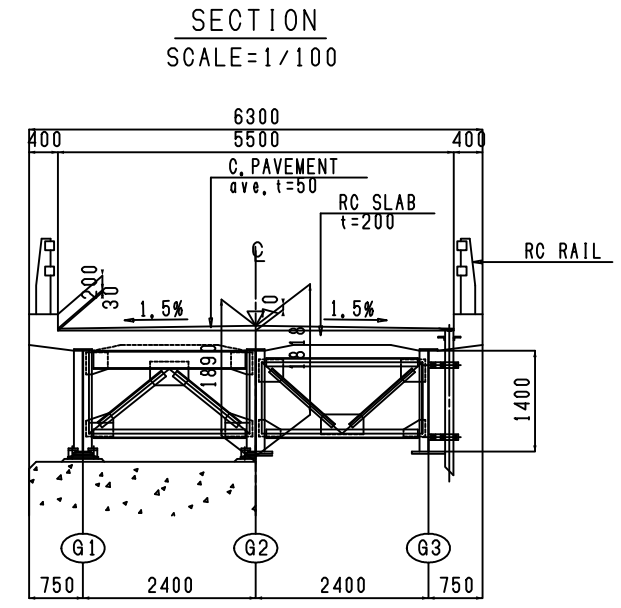
Br. No. 38 SUOI CAT BRIDGE

(General View of the Bridge)

SECTION	SCALE	DRAWING NO.	SHEET NO.
	1/100, 1/400	SC-	OF
DRAWING TITLE	Br. No. 38 General View of the Bridge		
REV. NO	DATE	DESCRIPTION	SIGNATURE



GRADE	(72.52) ———— 1=0.3% ———— (72.610)				
PROPOSED HEIGHT	72.52		72.565		72.610
GROUND HEIGHT	69.82	69.76	67.69	68.20	69.83
DISTANCE	0+60.00	0+61.00	0+62.17	0+76.69	0+80.00
MARKER	A1		CL		A2



DESIGN CRITERIA

General Condition		
Design Speed	V=25km/h	
Bridge Length (Span Length)	30, 1m (29, 5m)	
Clear Width	5, 5m	
Longitudinal Gradient	0, 3%	
Cross-fall of Carriage way	1, 50%	
Super Structure Type	Steel	
Sub Structure Type	Abutment	Reinforced Concrete
	Pier	—
Foundation Type	Reinforced Concrete Square 40x40cm Steel Pipe φ406, 4mm	
Material Strength		
Super Structure Type	Girder	σs=210N/mm ²
	Cross Beam	σs=140N/mm ²
	Slab	σs=30N/mm ²
Surface	C, Pavement	ave, t=5cm
	Curb, Wall	σs=30N/mm ²
Sub Structure Type	σs=20N/mm ²	
Reinforcing Steel	SD295 (py=300N/mm ²)	

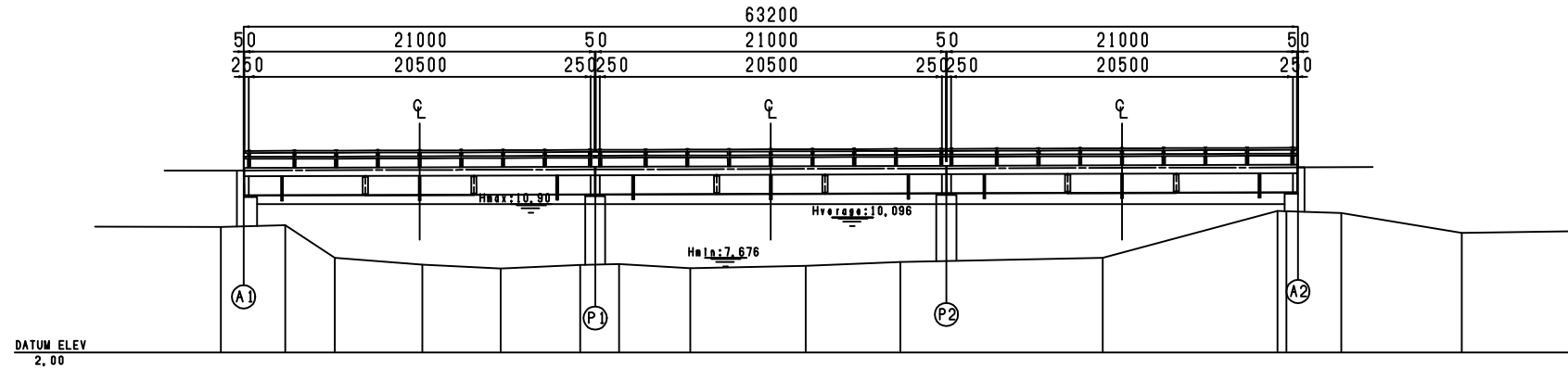
THE GOVERNMENT OF SOCIALIST REPUBLIC OF VIETNAM			
PROJECTS MANAGEMENT UNIT NO.18, MINISTRY OF TRANSPORT			
PROJECT	THE PROJECT FOR RECONSTRUCTION OF BRIDGES IN THE CENTRAL AREA OF VIETNAM		
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL		
DESIGNED BY	CHECKED BY	APPROVED BY	
NAME	T. FURUKAWA	H. ENDOU	DZUNG
SIGNATURE			
DATE			

Br. No. 42 TUAN TU BRIDGE

(General View of the Bridge)

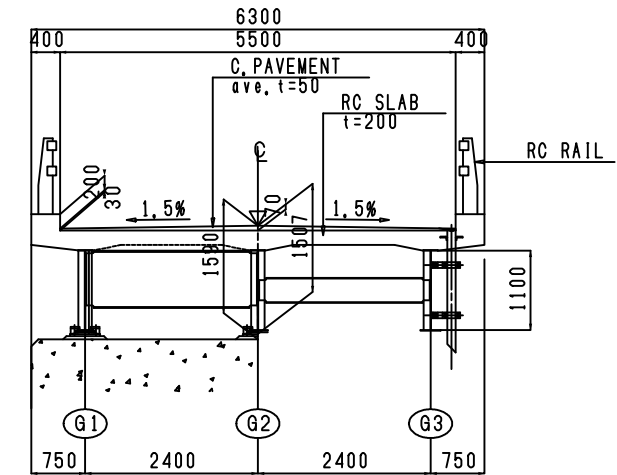
SECTION	SCALE	DRAWING NO.	SHEET NO.
	1/100, 1/400	TT-	OF
DRAWING TITLE	Br. No. 42 General View of the Bridge		
REV. NO	DATE	DESCRIPTION	SIGNATURE

PROFILE
SCALE=1/400

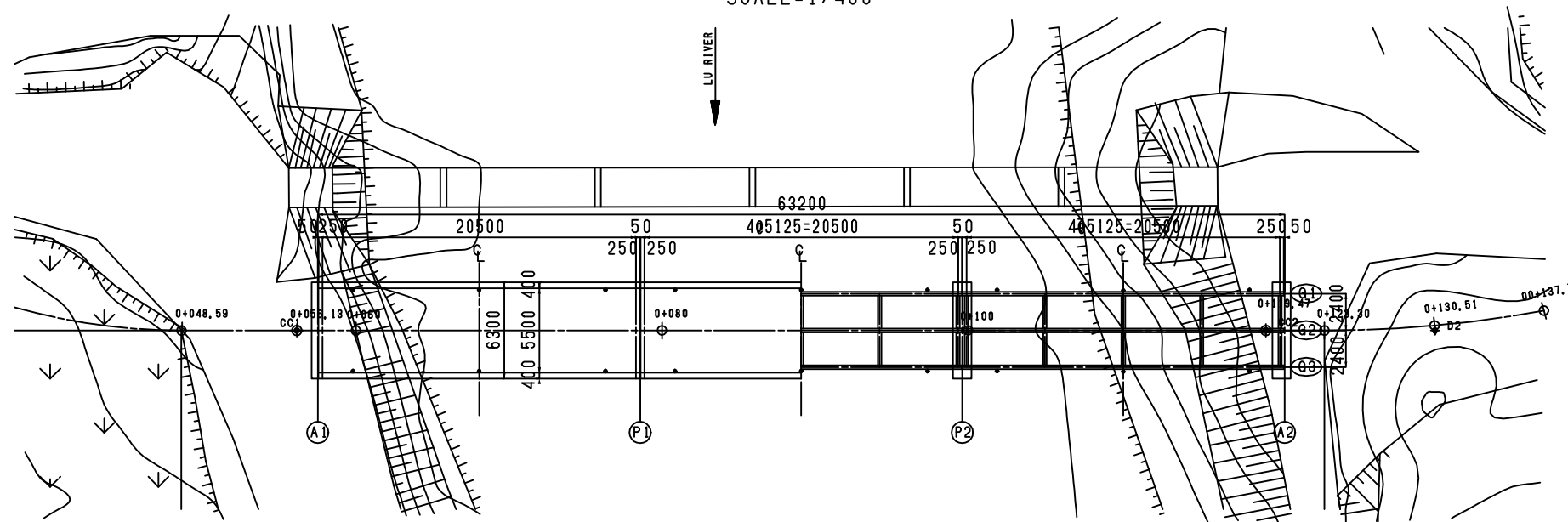


GRADE	12.91 1=0.3% 13.100																		
PROPOSED HIGHT	12.91		12.942		12.973		13.005		13.036	13.100									
GROUND HIGHT	9.52	9.63	7.67	7.26	7.03	7.24	7.30	7.05	7.42	10.48									
DISTANCE	0+56.13	0+57.50	0+60.00	0+62.96	0+68.05	0+68.21	0+72.90	0+77.66	0+78.975	0+80.00	0+84.27	0+88.10	0+91.20	0+96.86	0+99.025	0+109.00	0+110.16	0+119.47	0+120.70
MARKER	A1		CL1		P1		CL2		P2		CL3		A2						

SECTION
SCALE=1/100



PLAN
SCALE=1/400



DESIGN CRITERIA

General Condition		
Design Speed	V=25km/h	
Bridge Length (Span Length)	63,2m (20,5m+20,5m+20,5m)	
Clear Width	5,5m	
Longitudinal Gradient	0,3%	
Cross-fall of Carriage way	1,50%	
Super Structure Type	Steel	
Sub Structure Type	Abutment	Reinforced Concrete
	Pier	Reinforced Concrete
Foundation Type	Reinforced Concrete Square 40x40cm Steel Pipe #406, 4mm	
Material Strength		
Super Structure Type	Girder	σs=210N/mm ²
	Cross Beam	σs=140N/mm ²
	Slab	σs=30N/mm ²
Surface	C, Pavement	ave. t=5cm
	Curb, Wall	σs=30N/mm ²
Sub Structure Type	σs=20N/mm ²	
Reinforcing Steel	SD295 (py=300N/mm ²)	