

Anexo 1: Diseño Básico

THE PREPARATORY STUDY
ON
THE PROJECT FOR RECONSTRUCTION OF BRIDGES
ON MANAGUA-EL RAMA ROAD
IN
THE REPUBLIC OF NICARAGUA

JULY 2010

JAPAN INTERNATIONAL COOPERATION AGENCY

CTI ENGINEERING INTERNATIONAL CO.,LTD.

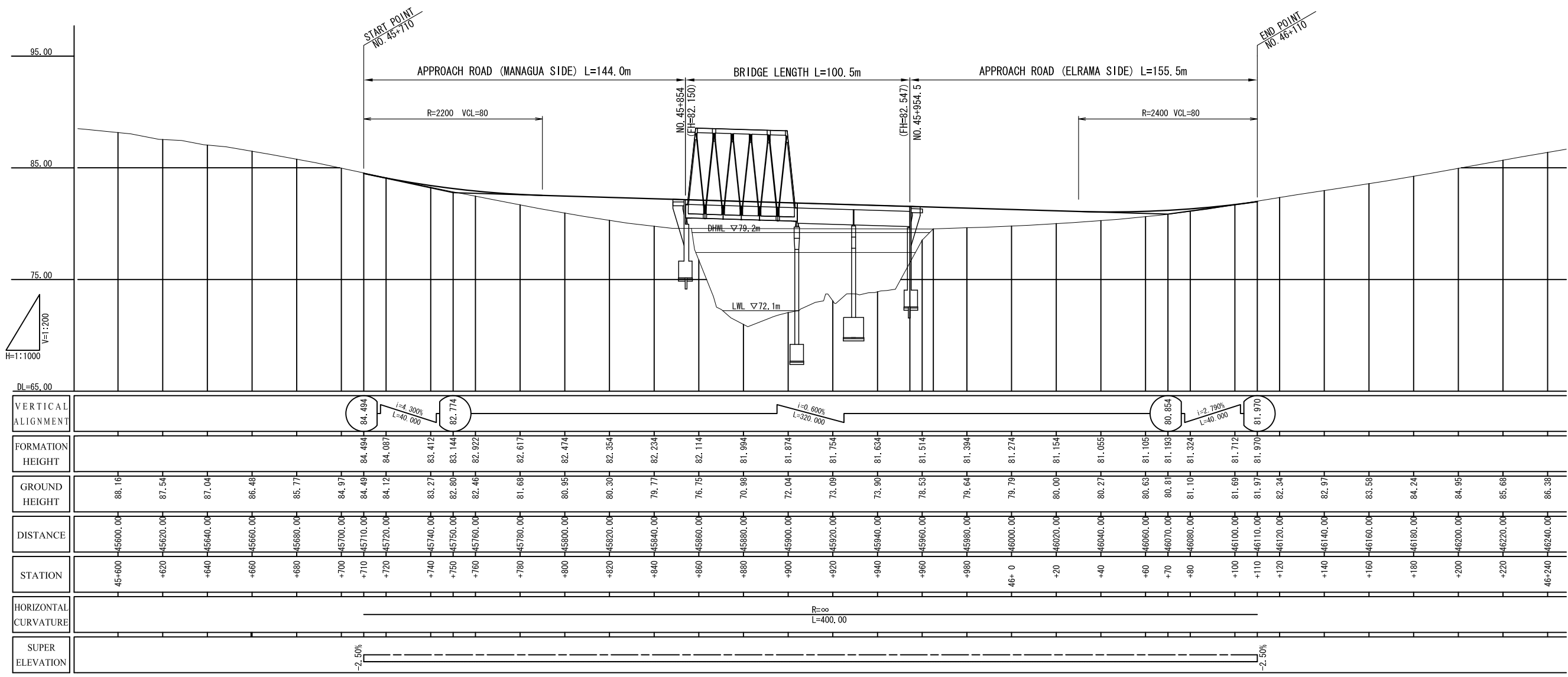
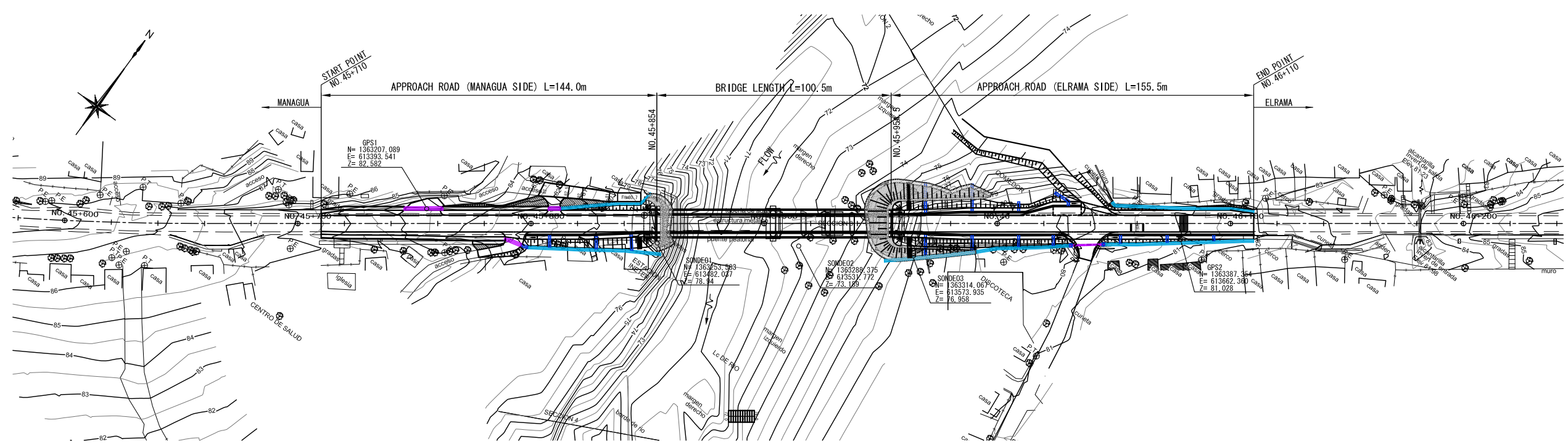
LAS BANDERAS BRIDGE

CONTENTS OF DRAWINGS (LAS BANDERAS)

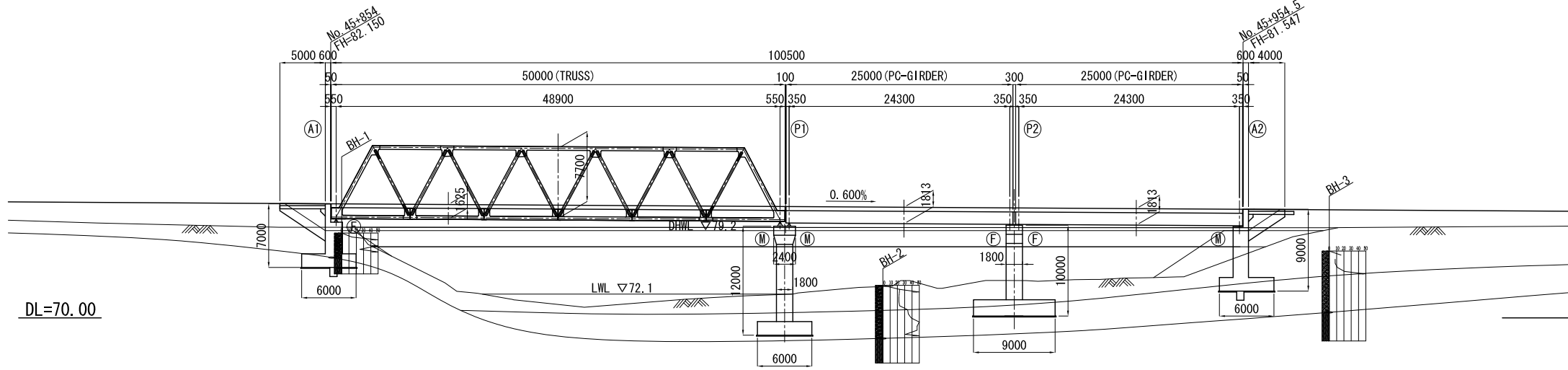
No.	DRAWING TITLE	No. of Sheets	DRAWING No.
1	LOCATION MAP (ロケーションマップ)	1	LB-01
2	GENERAL PLAN AND PROFILE OF APPROACH ROAD (取り付け道路平面・縦断図)	1	LB-02
3	GENERAL VIEW OF BRIDGE (橋梁一般図)	1	LB-03
4	STRUCTURAL DRAWING OF SUPERSTRUCTURE (橋梁上部工構造図)	1	LB-04
5	STRUCTURAL DRAWING OF A1 AND A2 ABUTMENTS (橋台構造図)	2	LB-05～06
6	STRUCTURAL DRAWING OF P1 AND P2 BRIDGE PIERS (橋脚構造図)	2	LB-07～08
7	PLAN OF APPROACH ROAD (DRAINAGE FACILITIES) (取り付け道路排水施設平面図)	1	LB-09
8	PLAN OF APPROACH ROAD (ROAD ANCILLARY WORKS) (取り付け道路附帯工施設平面図)	1	LB-10
9	TYPICAL CROSS SECTION OF APPROACH ROAD (取り付け道路標準横断図)	1	LB-11
10	CROSS SECTION OF APPROACH ROAD (取り付け道路横断図)	3	LB-12～14
11	GENERAL PLAN AND PROFILE OF DETOUR (迂回路平面・縦断図)	2	LB-15～16
12	TYPICAL CROSS SECTION OF DETOUR (迂回路標準横断図)	1	LB-17
13	CROSS SECTION OF DETOUR (迂回路横断図)	3	LB-18～20
14	STRUCTURES OF DRAINAGE FACILITIES (排水構造図(1)～(2))	2	LB-21～22
15	STRUCUTRES OF SIDE WALK & BUSBAY (歩道・バス停構造図)	1	LB-23
16	ANCILLARY WORK (付属施設構造図)	1	LB-24
17	STANDARD TREATMENT OF ACCESS ROAD (アクセス道路構造図)	1	LB-25
18	EMBANKMENT PROTECTION WORKS (護岸工構造図)	1	LB-26
19	STAIRWAY & RIVER APPROACH (階段工構造図)	1	LB-27
20	STANDARD PAVEMENT AND PEDESTRIAN MARKINGS (路面表示工構造図)	1	LB-28
21	REGULATORY/PROHIBITORY ROAD SIGNS (道路標識構造図)	1	LB-29



<p>MINISTRY OF TRANSPORT AND INFRASTRUCTURE (MTI)</p>	<p>THE PREPARATORY STUDY ON THE PROJECT FOR RECONSTRUCTION OF BRIDGES ON MANAGUA - EL RAMA ROAD IN THE REPUBLIC OF NICARAGUA</p>	<p>JAPAN INTERNATIONAL COOPERATION AGENCY CTI ENGINEERING INTERNATIONAL CO., LTD.</p>	<p>TITLE : LOCATION MAP (LAS BANDERAS)</p>	<p>SCALE(A1size) 1:1,500,000</p>	<p>Drawing No. LB-01</p>
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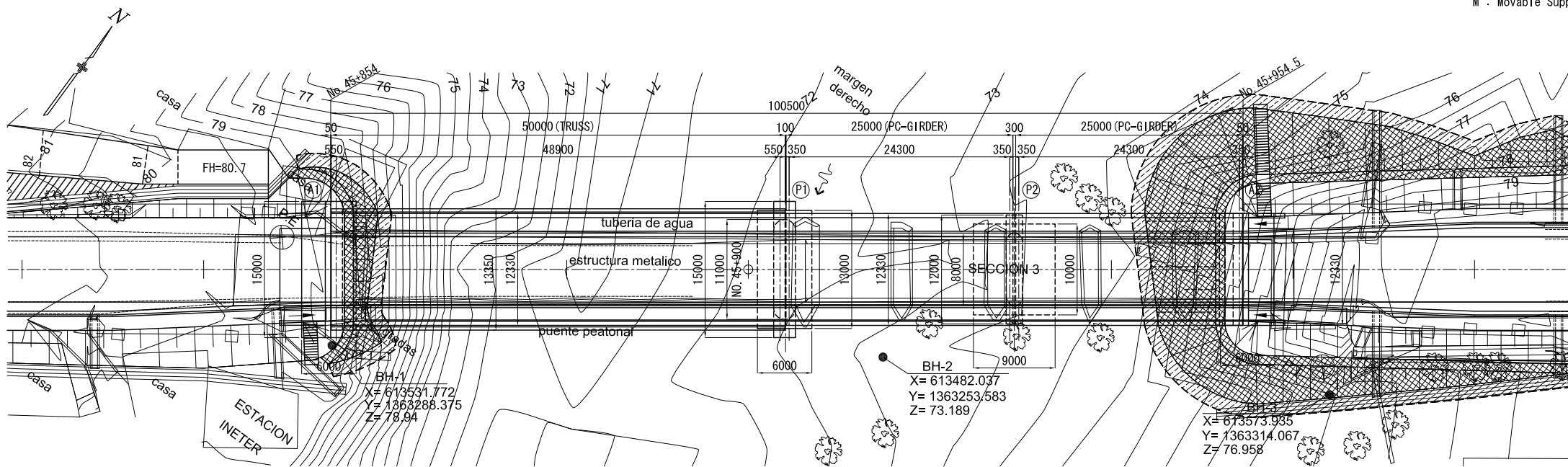


GENERAL VIEW OF LAS BANDERAS BRIDGE

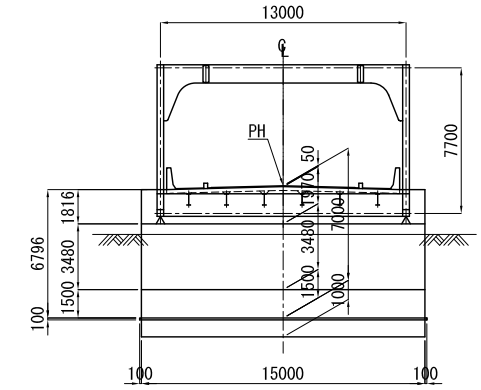


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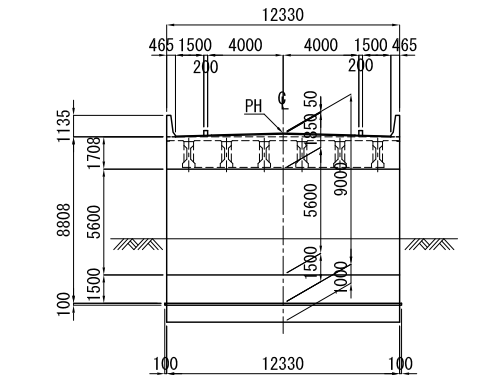
Note
F : Fixed Support
M : Movable Support



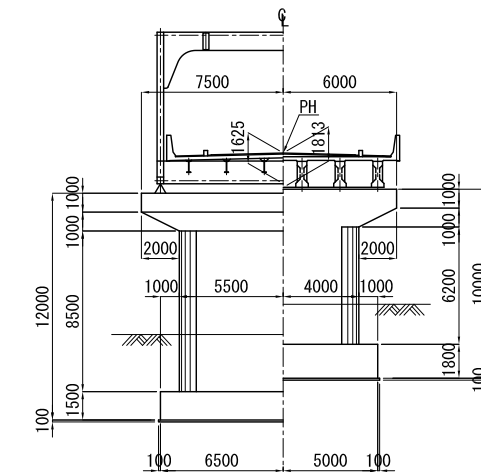
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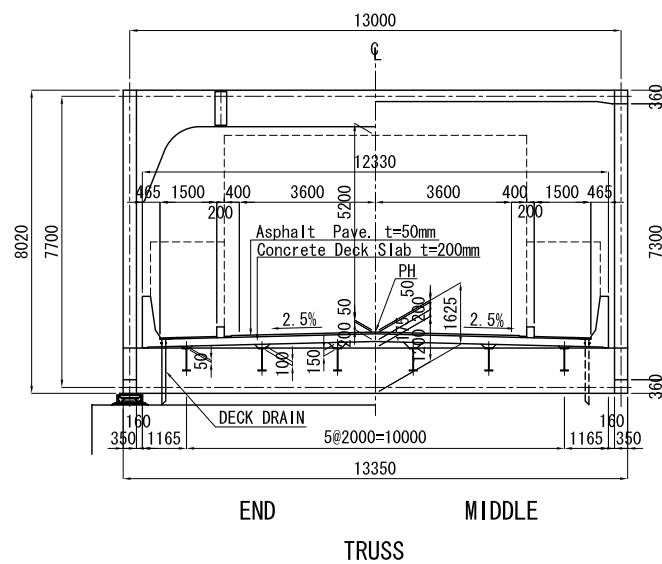
A1 ABUTMENT SCALE 1:200



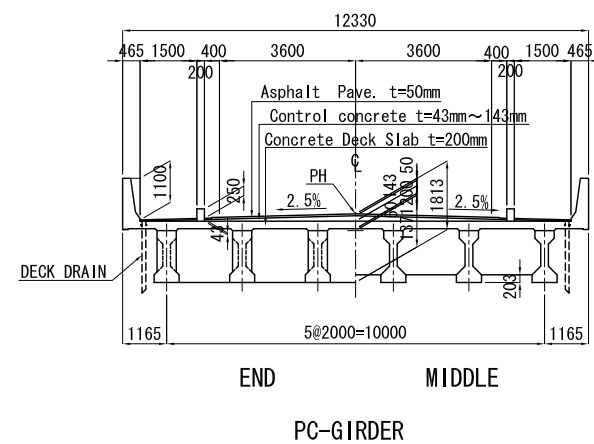
A2 ABUTMENT SCALE 1:200



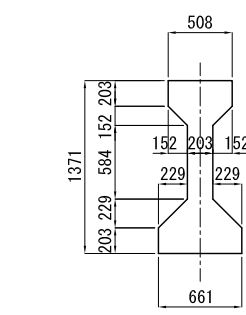
P1 P2
PIERS SCALE 1:200



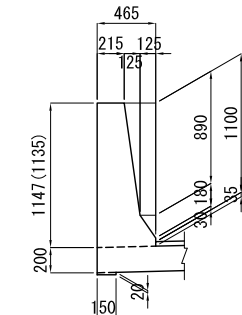
END MIDDLE
TRUSS



PC-GIRDER



PC GIRDER TYPE IV SCALE 1:30



DETAILS OF RAILING SCALE 1:30

BRIDGE CROSS SECTION SCALE 1:100

DESIGN CRITERIA

Classification of Road	Arterial Road
Design Speed	80km/h
Live load	AASHTO HS20-44 x 125% or equivalent
Bridge Length	100.50m
Span Length	48.90m+24.30m+24.30m
Total Width	12.33m (Roadway 2 x 3.60m, Sidwalk 2 x 1.50m)
Design Seismic Coefficient	kh=0.3
Superstructure Type	Steel Truss and PC I-Girder
Substructure Type	Reversed T abutment, wall type concrete pier
Foundation Type	Spread Footing
Specification Criteria	Specifications for Highway Bridges (Japan Road Asso.) Standard Specifications for Highway Bridges (AASHTO)

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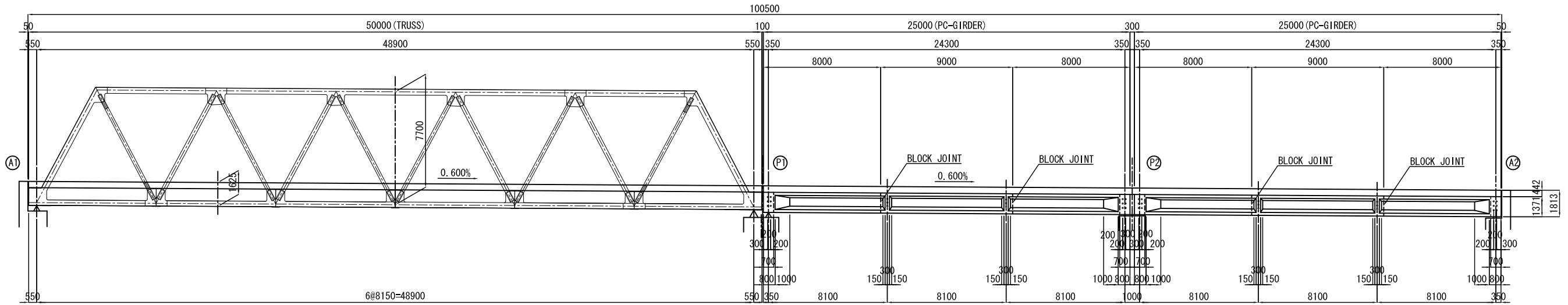
GENERAL VIEW OF BRIDGE

SCALE (A1 size) :
AS SHOWN

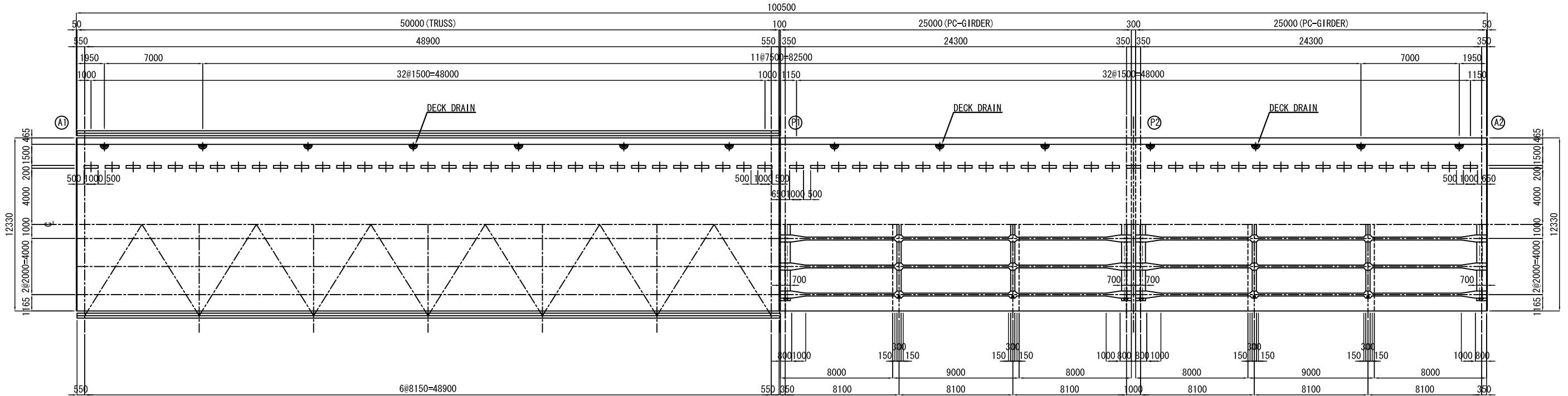
DRAWING NO. :
LB-03

STRUCTURAL DRAWING OF SUPERSTRUCTURE

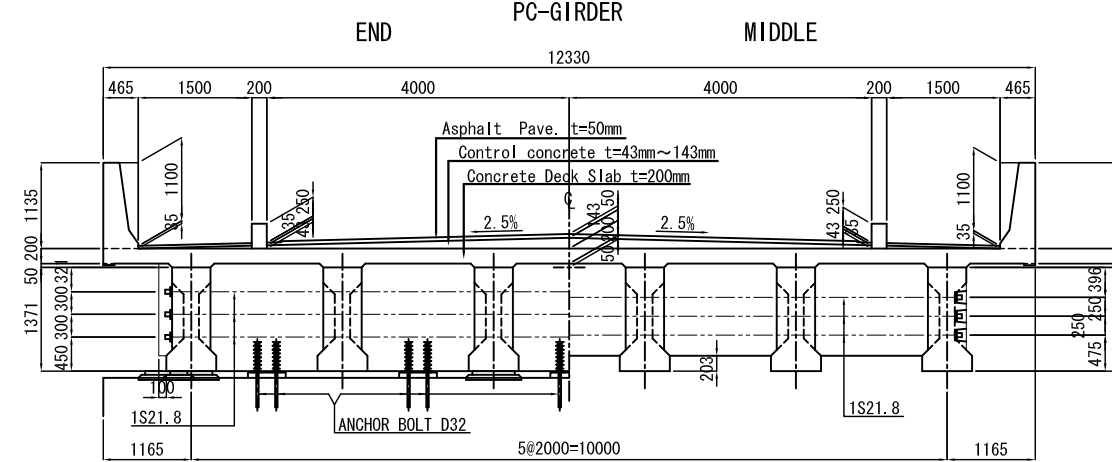
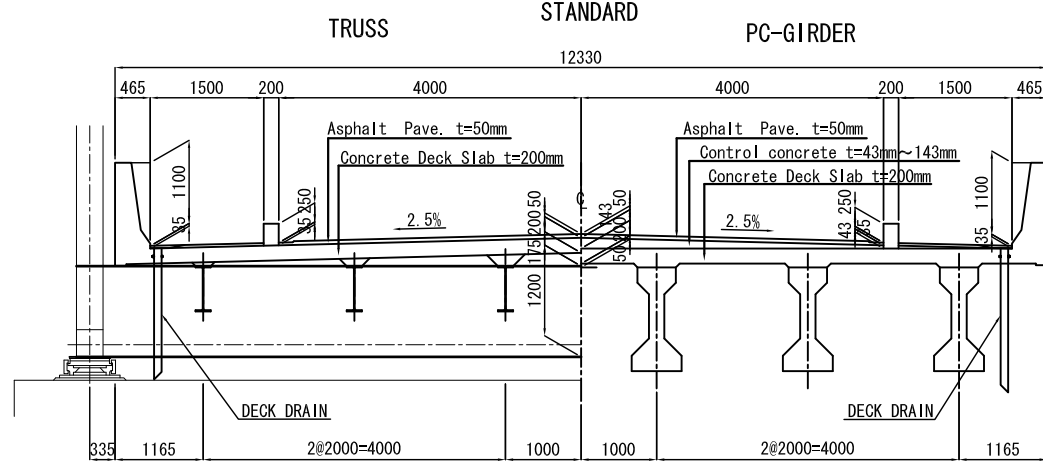
ELEVATION SCALE 1:150



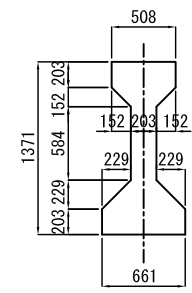
PLAN SCALE 1:150



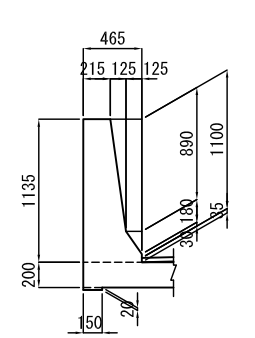
BRIDGE CROSS SECTION SCALE 1:50



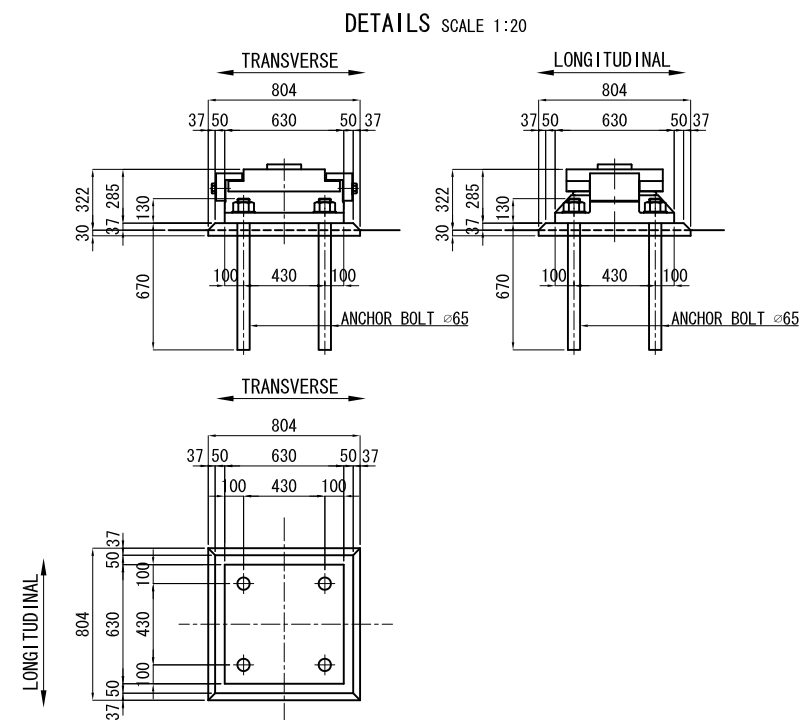
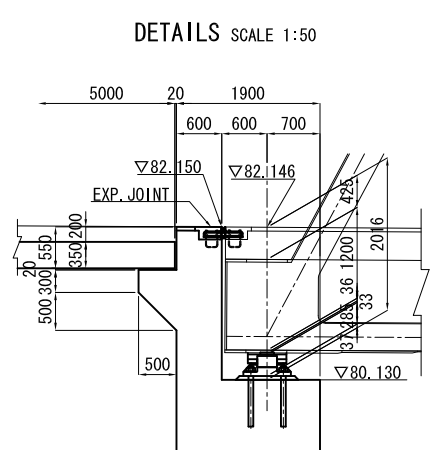
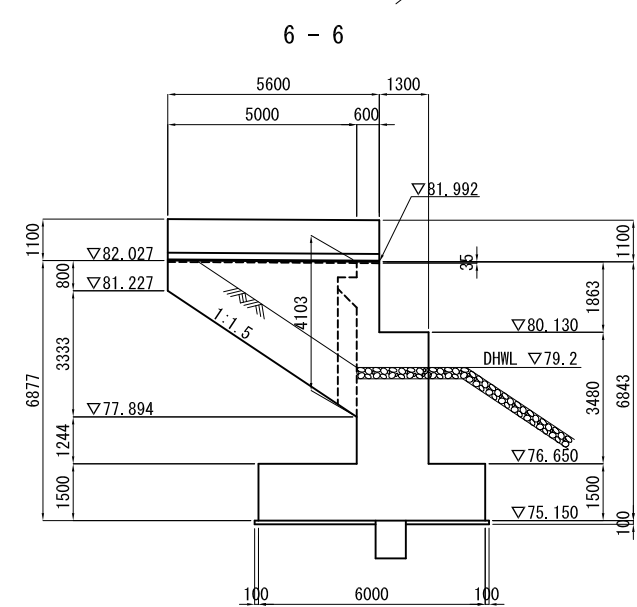
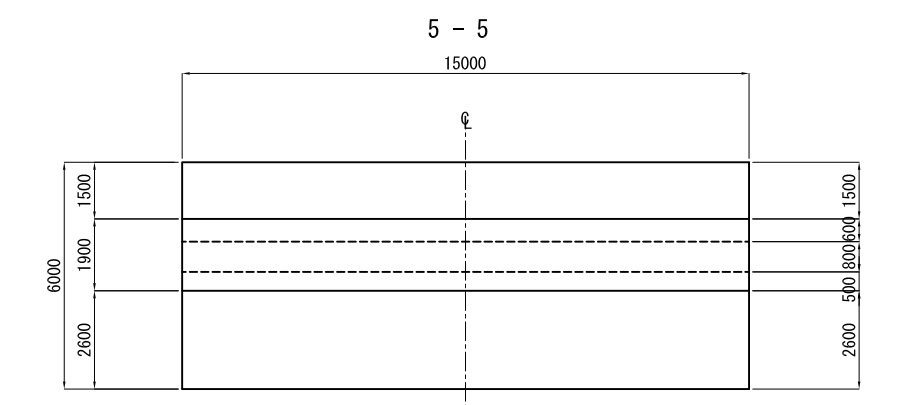
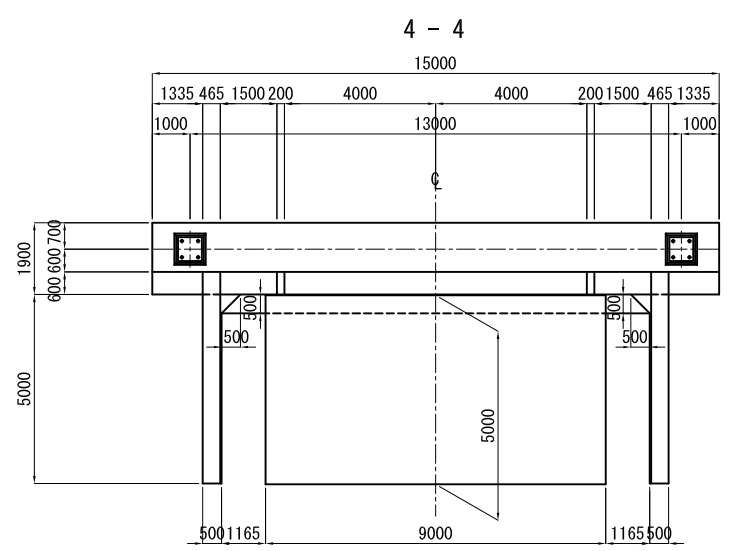
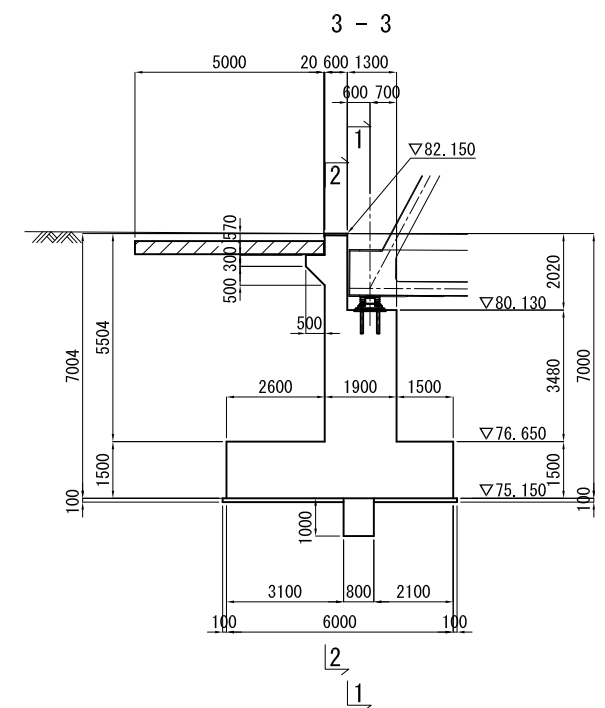
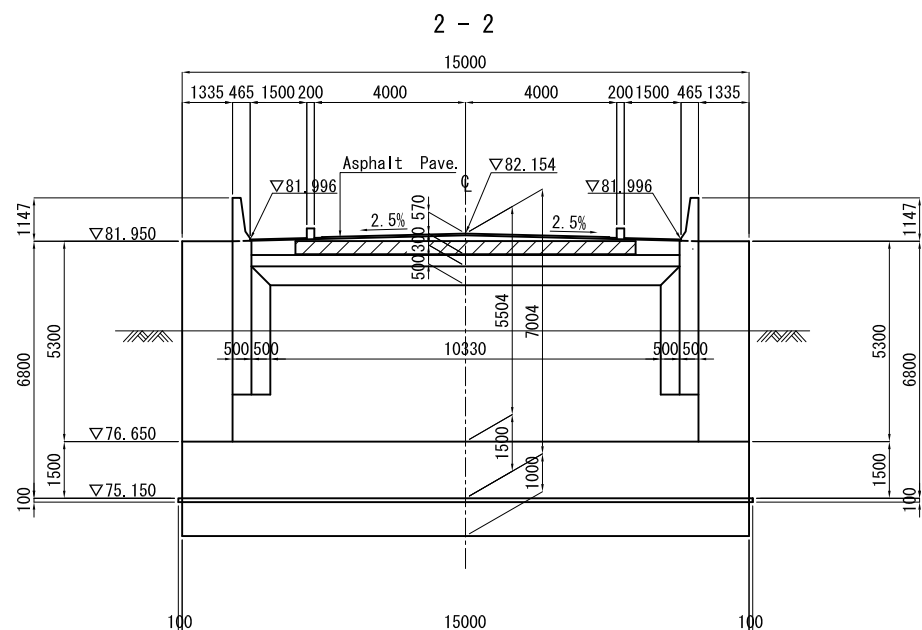
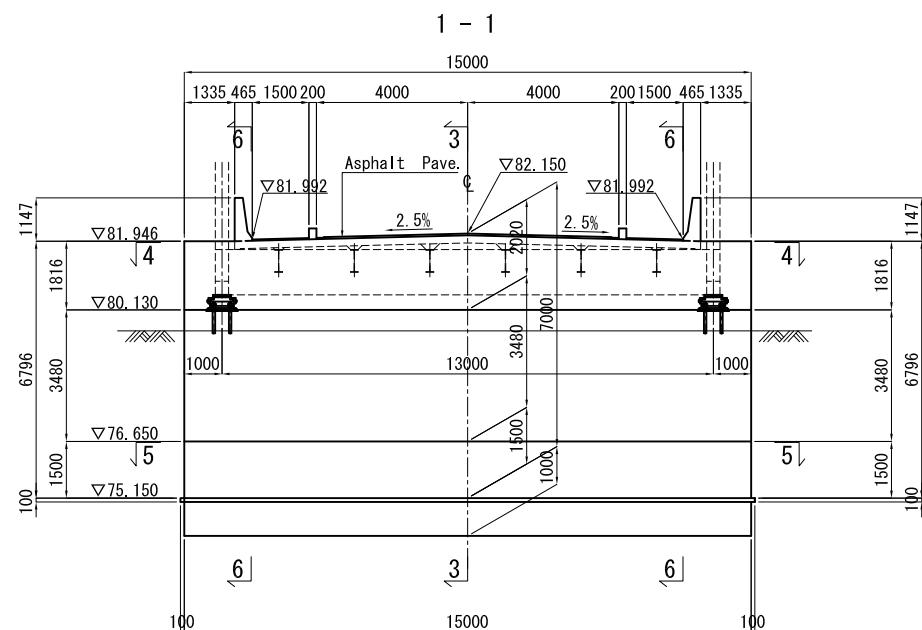
PC GIRDER TYPE IV SCALE 1:30



DETAILS OF RAILING SCALE 1:30



STRUCTURAL DRAWING OF A1 ABUTMENT SCALE 1:100



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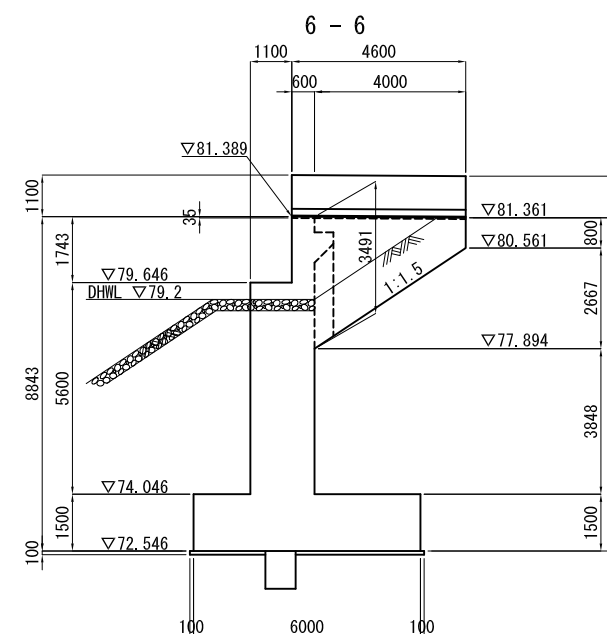
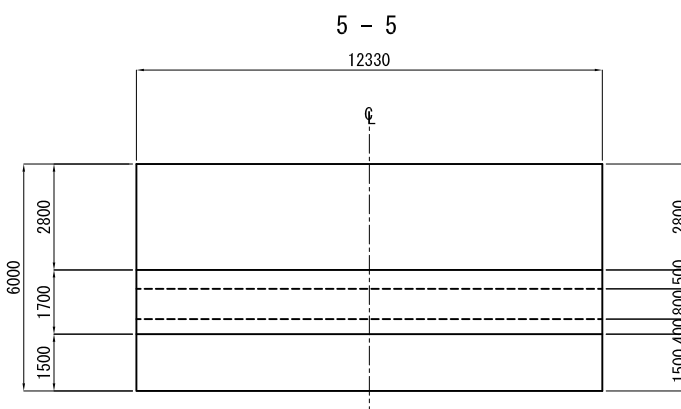
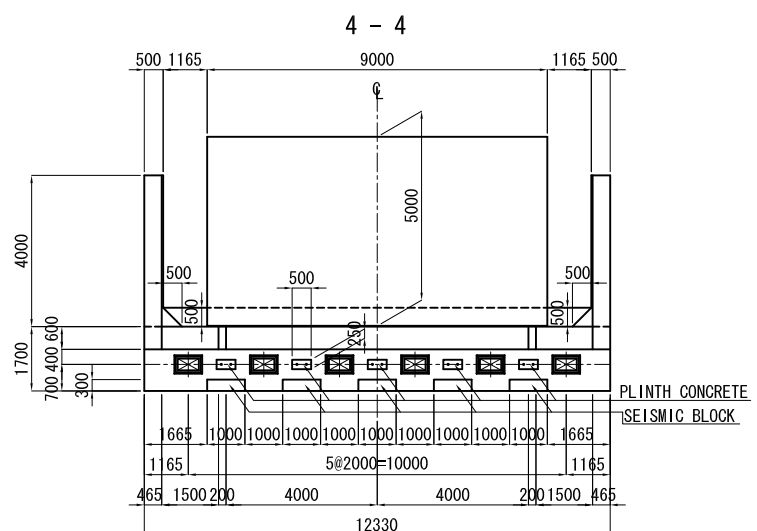
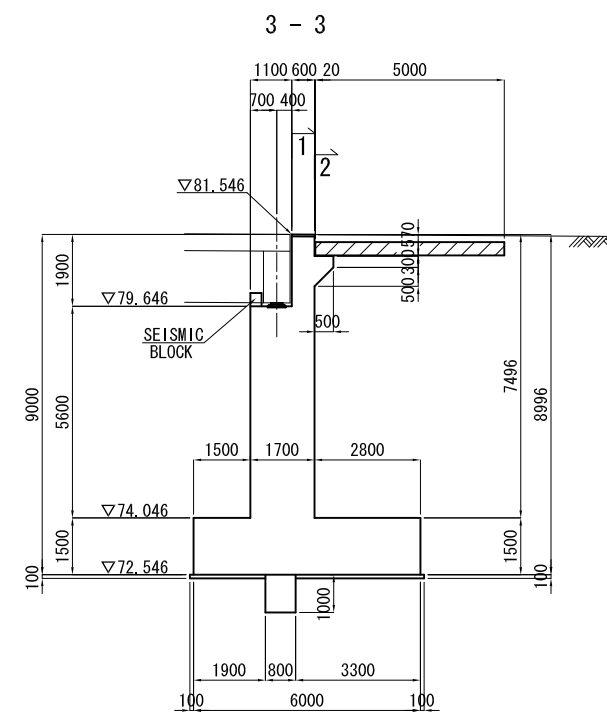
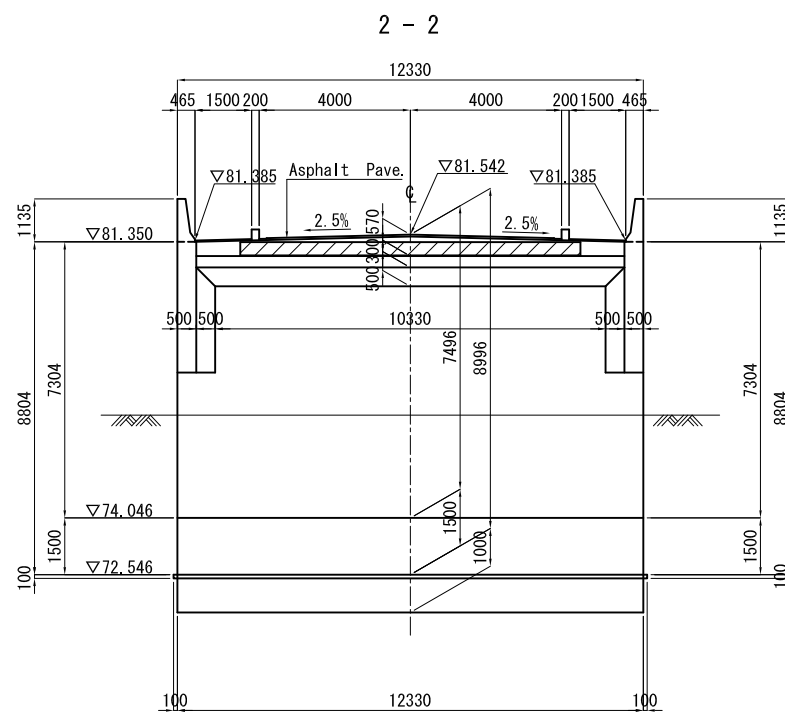
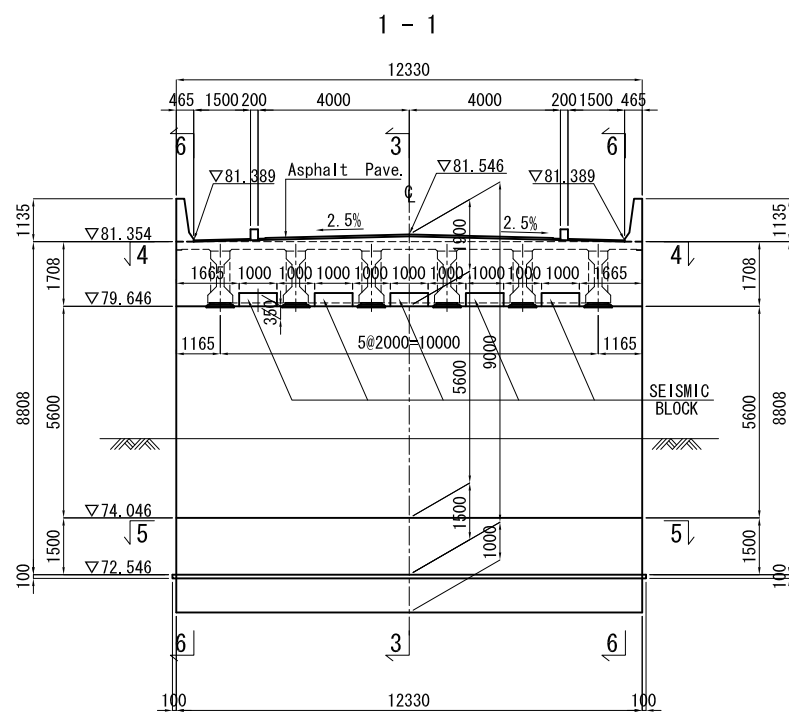
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TITLE :
STRUCTURAL DRAWING OF A1 ABUTMENT

SCALE (A1 size)
AS SHOWN

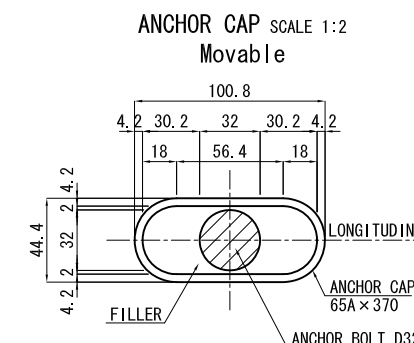
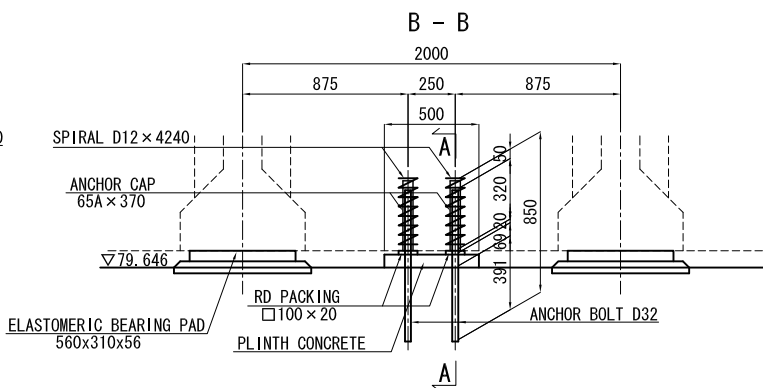
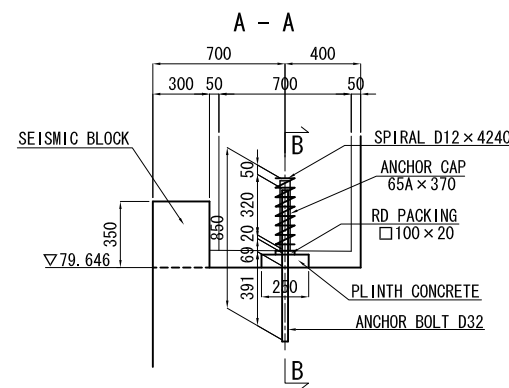
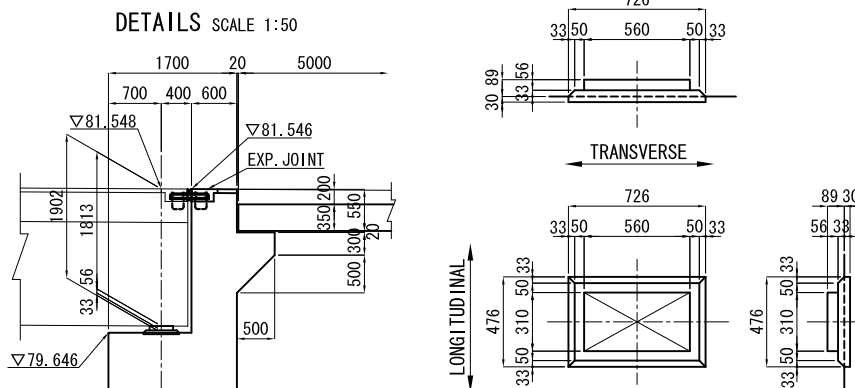
DRAWING NO. :
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STRUCTURAL DRAWING OF A2 ABUTMENT SCALE 1:100

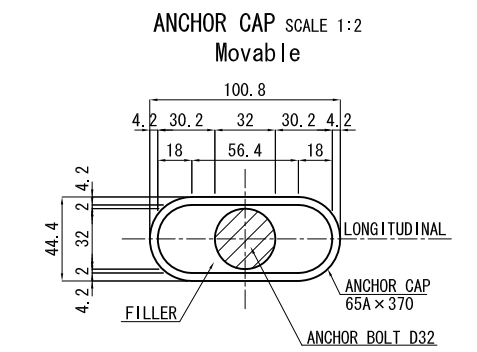
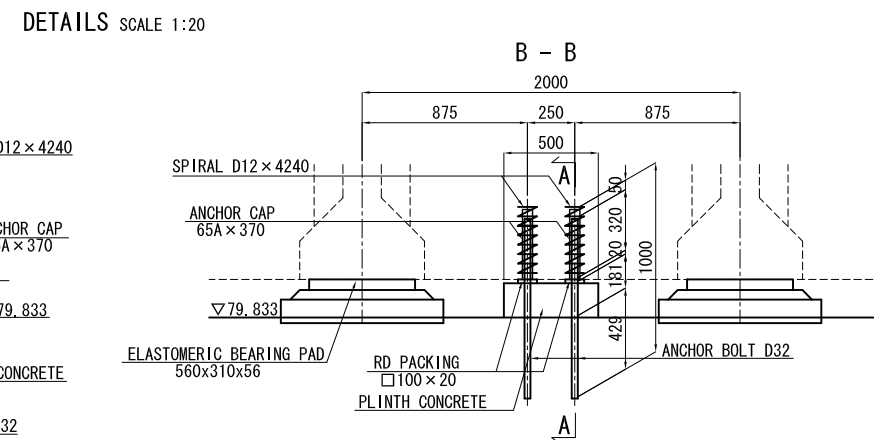
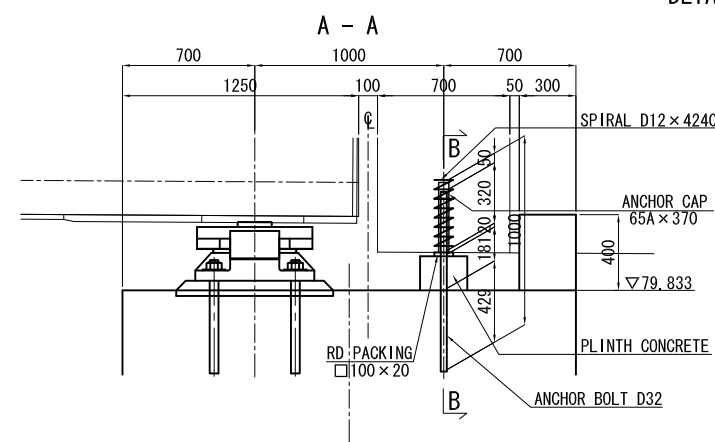
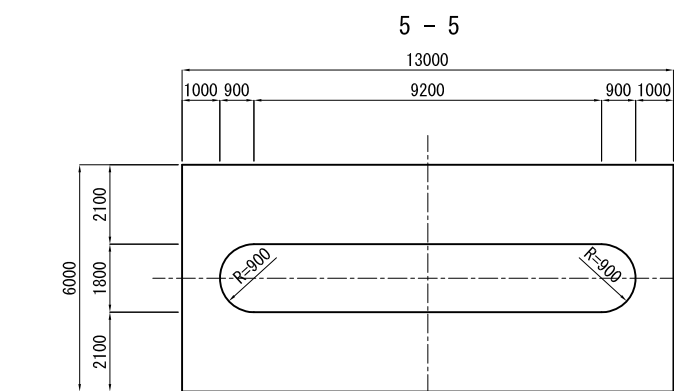
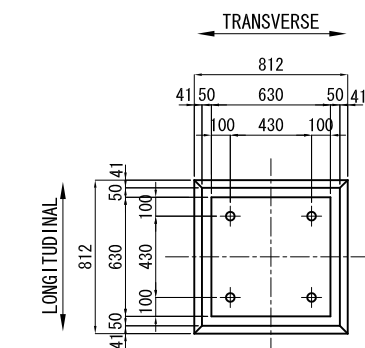
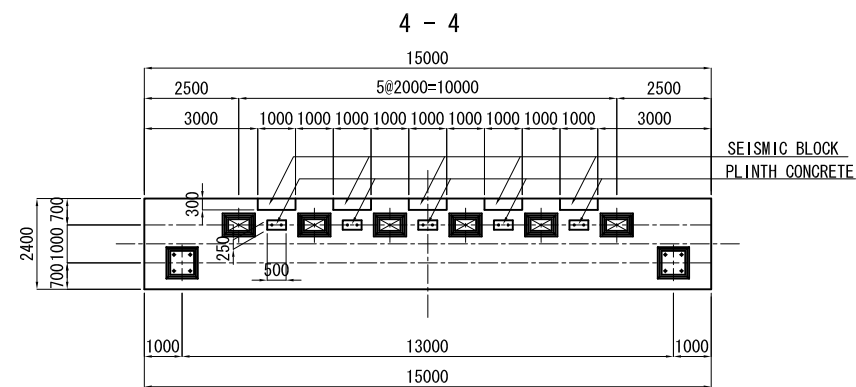
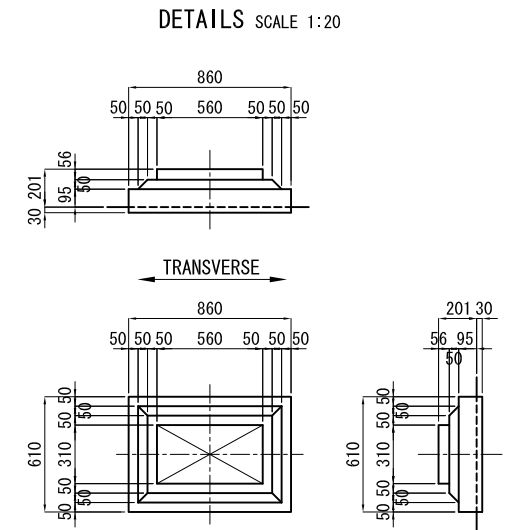
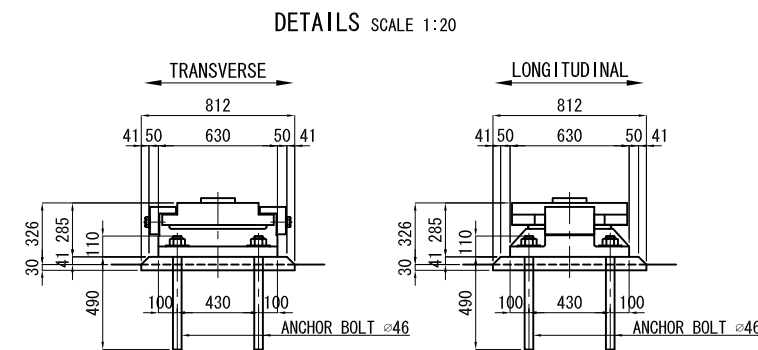
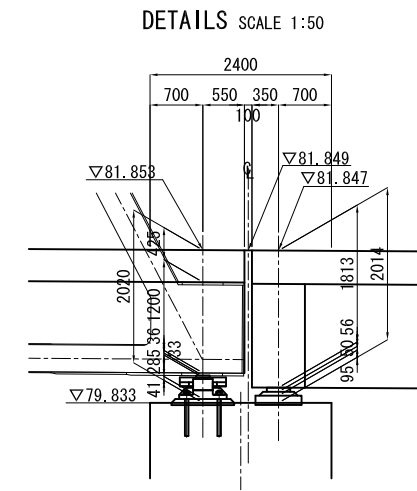
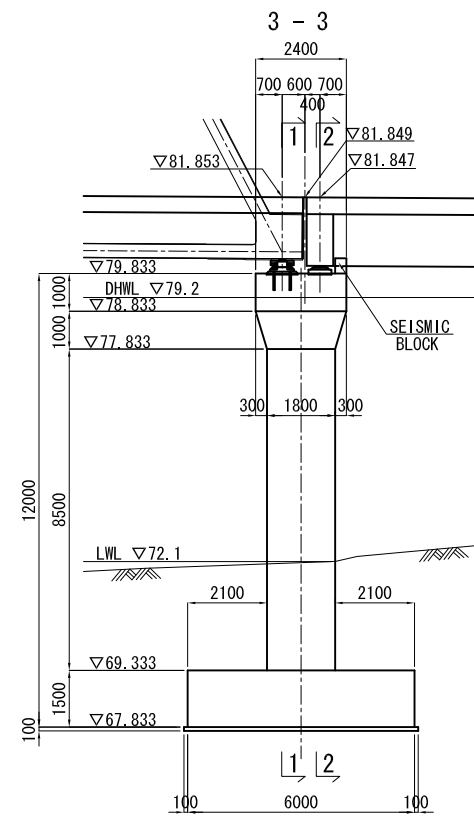
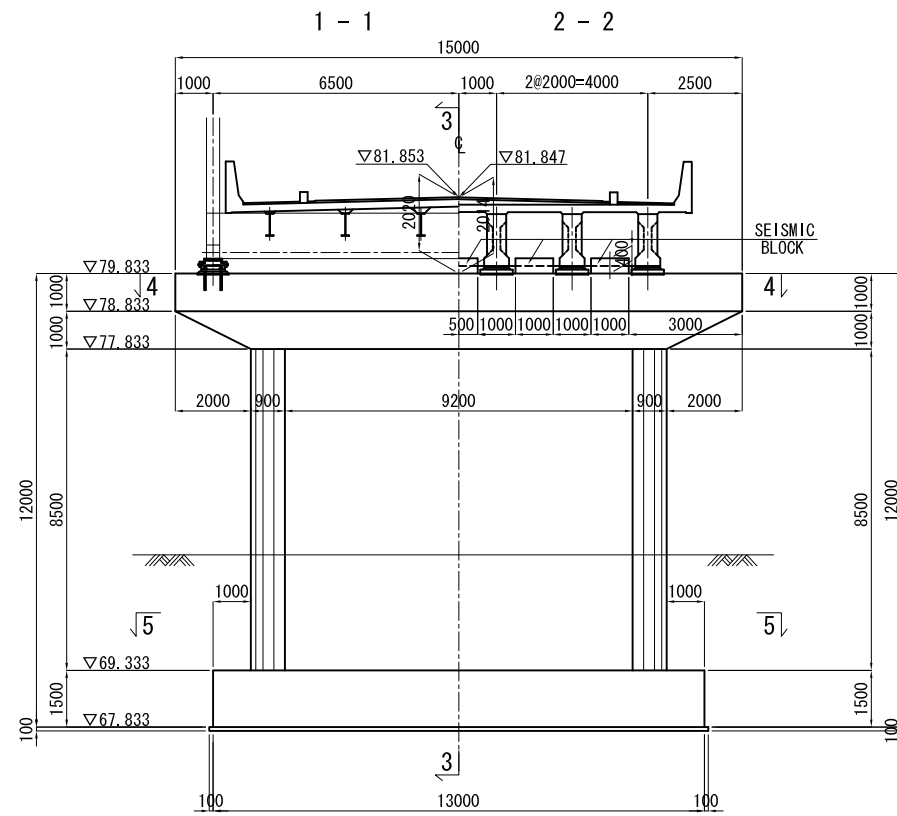


DETAILS SCALE 1:20

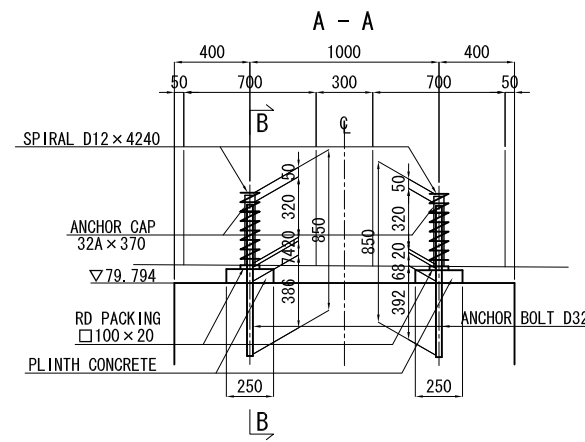
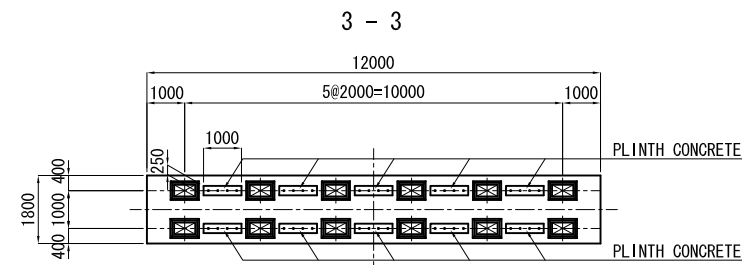
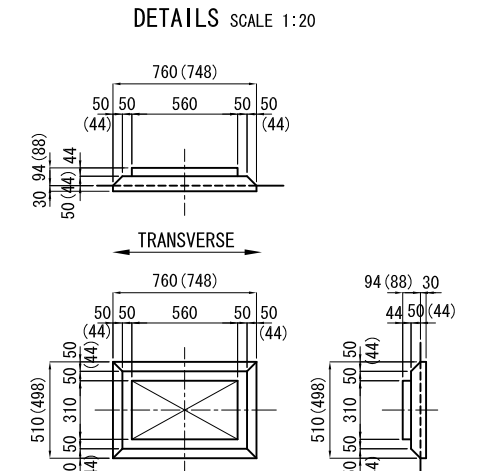
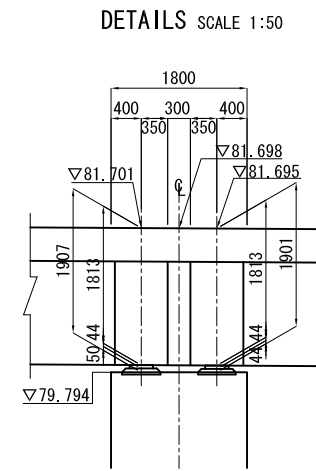
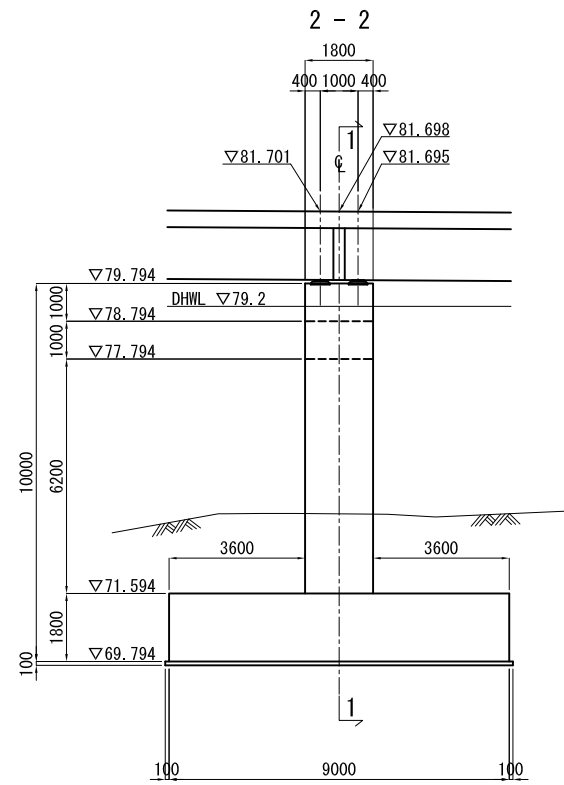
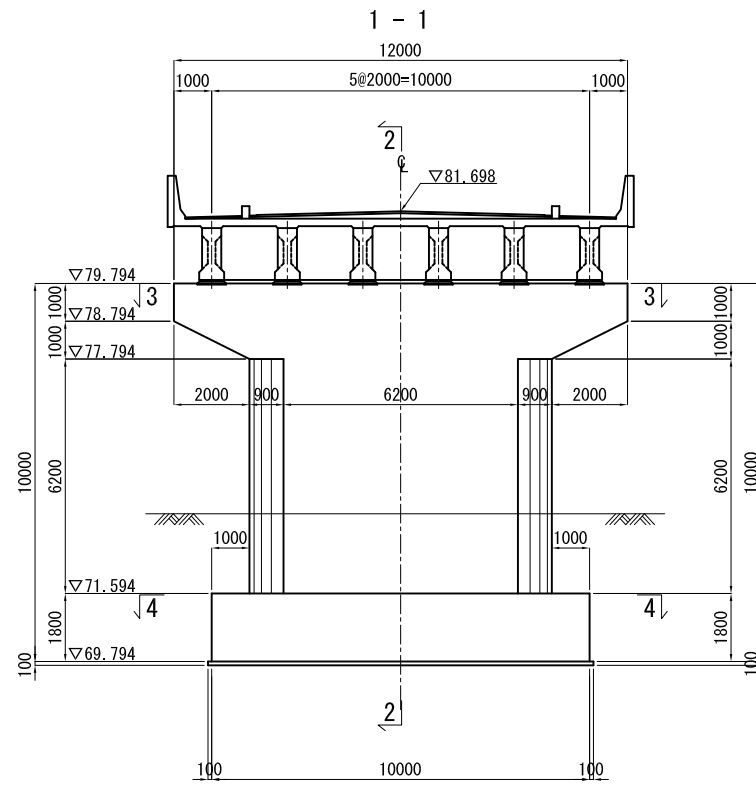
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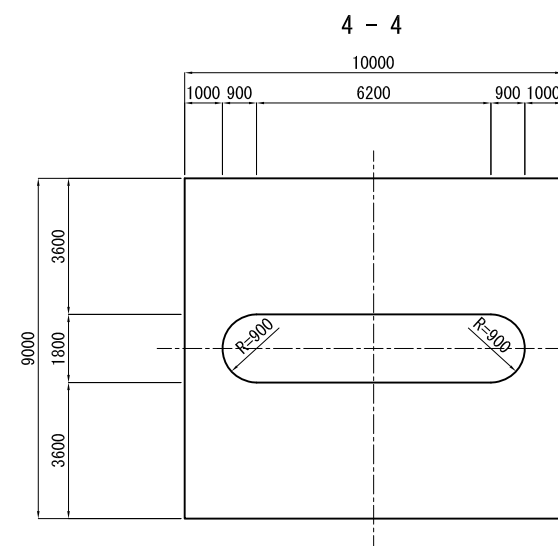
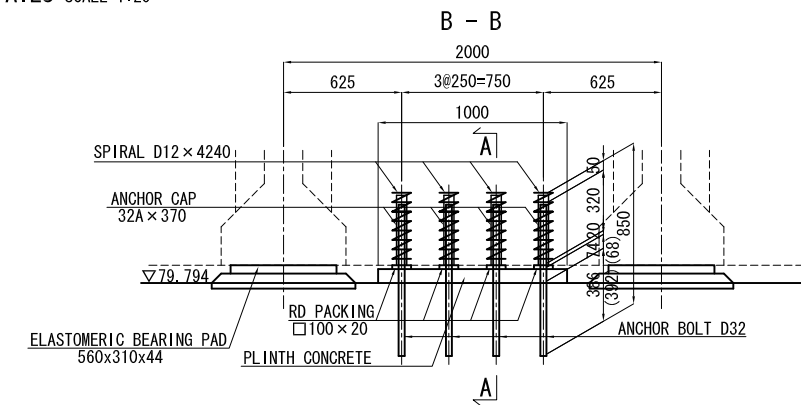
STRUCTURAL DRAWING OF P1 BRIDGE PIER SCALE 1:100



STRUCTURAL DRAWING OF P2 BRIDGE PIER SCALE 1:100



DETAILS SCALE 1:20



ANCHOR CAP SCALE 1:2
Fixed

