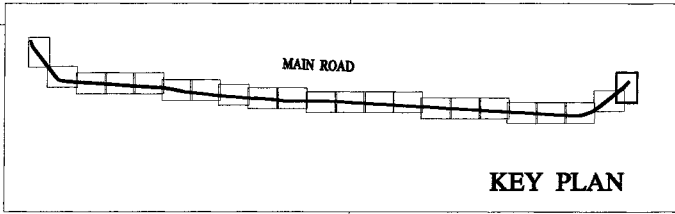
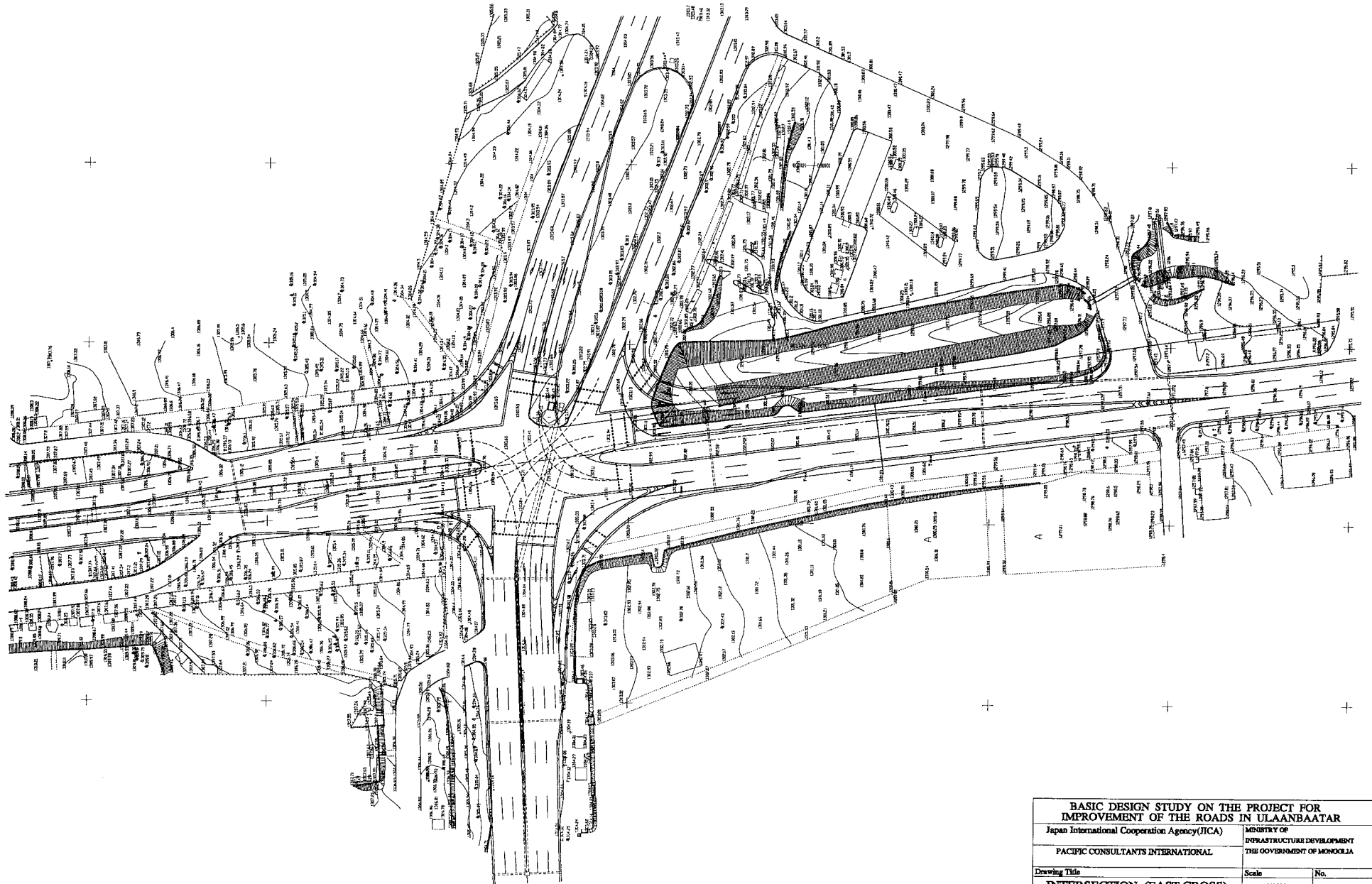


**PLAN 22**



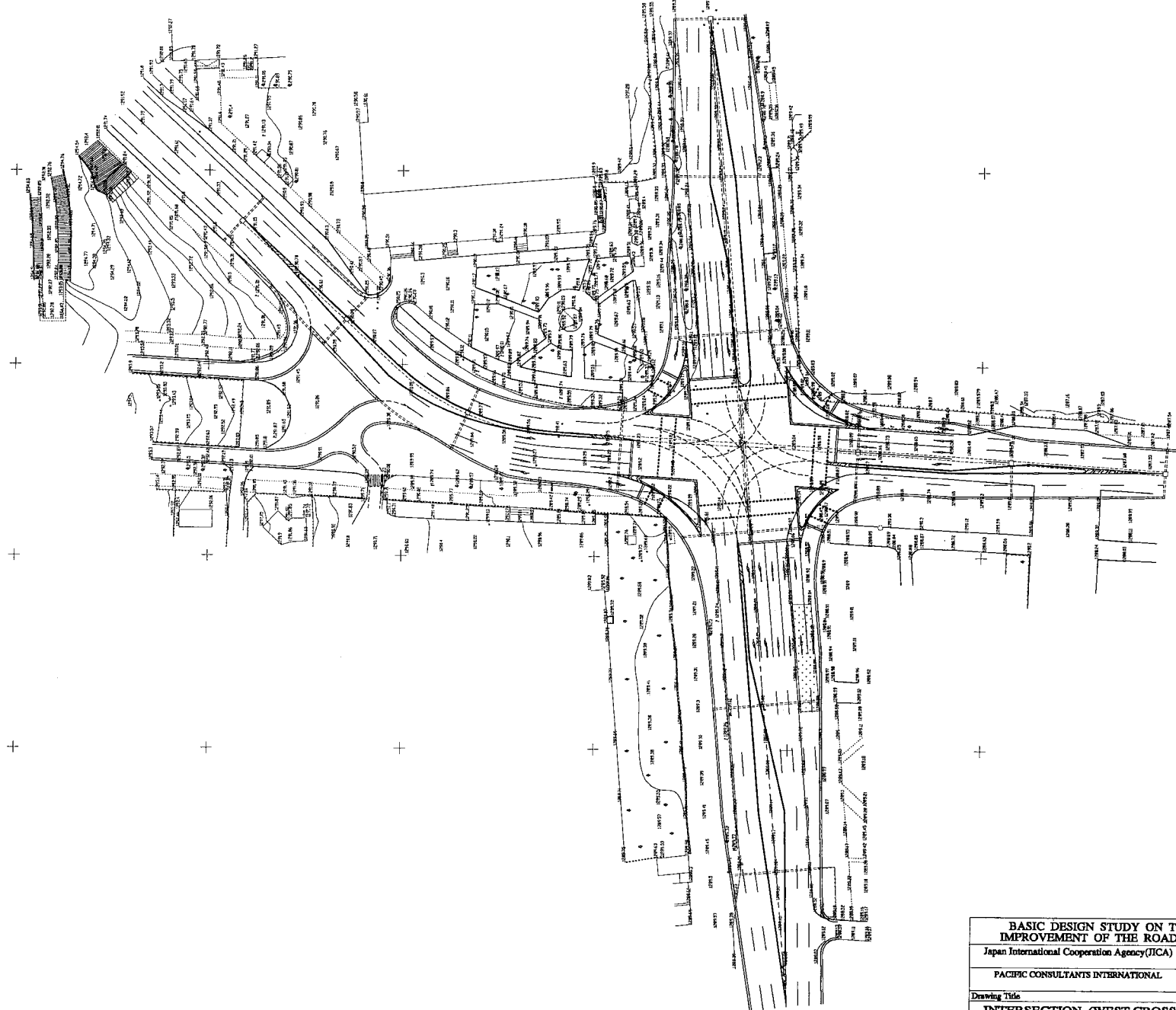
<b>BASIC DESIGN STUDY ON THE PROJECT FOR IMPROVEMENT OF THE ROADS IN ULAANBAATAR</b> Japan International Cooperation Agency (JICA)		
PACIFIC CONSULTANTS INTERNATIONAL		MINISTRY OF INFRASTRUCTURE DEVELOPMENT THE GOVERNMENT OF MONGOLIA
Drawing Title	Scale	No.
<b>PLAN 22</b>	1/1000	

# INTERSECTION (EAST CROSS)



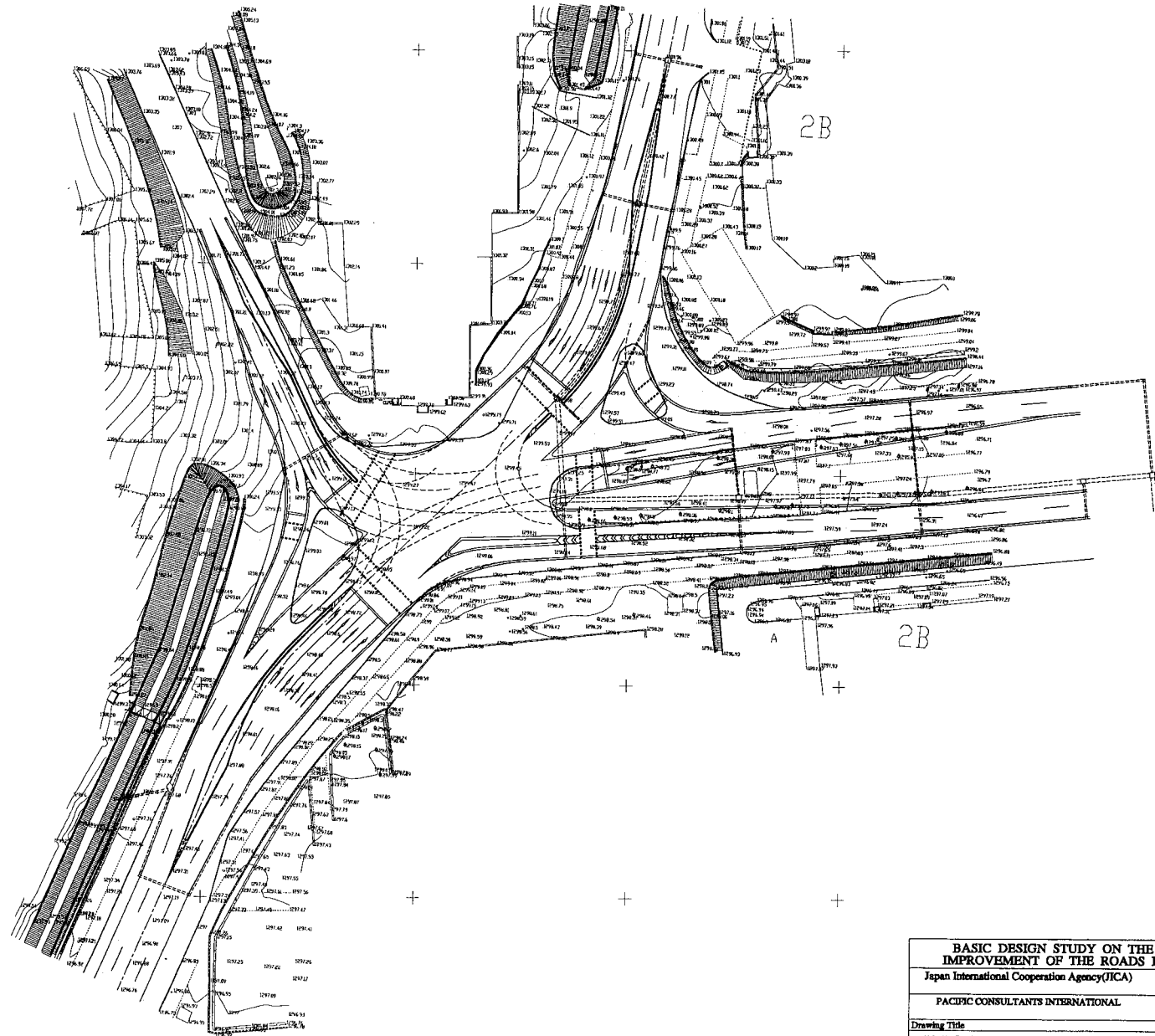
<b>BASIC DESIGN STUDY ON THE PROJECT FOR IMPROVEMENT OF THE ROADS IN ULAANBAATAR</b>		
Japan International Cooperation Agency (JICA)		MINISTRY OF INFRASTRUCTURE DEVELOPMENT THE GOVERNMENT OF MONGOLIA
PACIFIC CONSULTANTS INTERNATIONAL		
Drawing Title	Scale	No.
INTERSECTION (EAST CROSS)	1/1000	105

# INTERSECTION (WEST CROSS)



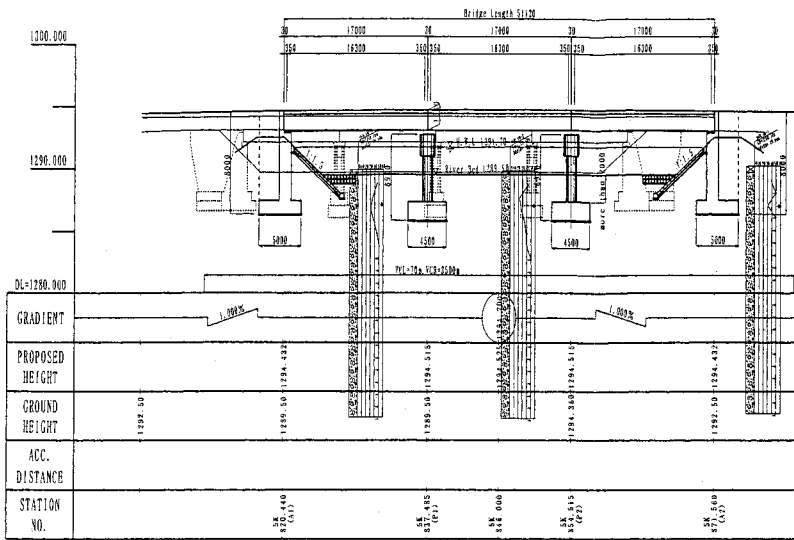
<b>BASIC DESIGN STUDY ON THE PROJECT FOR IMPROVEMENT OF THE ROADS IN ULAANBAATAR</b>		
Japan International Cooperation Agency (JICA)	MINISTRY OF INFRASTRUCTURE DEVELOPMENT THE GOVERNMENT OF MONGOLIA	
PACIFIC CONSULTANTS INTERNATIONAL		
Drawing Title	Scale	No.
INTERSECTION (WEST CROSS)	1/1000	

# INTERSECTION (IN FRONT OF GESER TEMPLE)

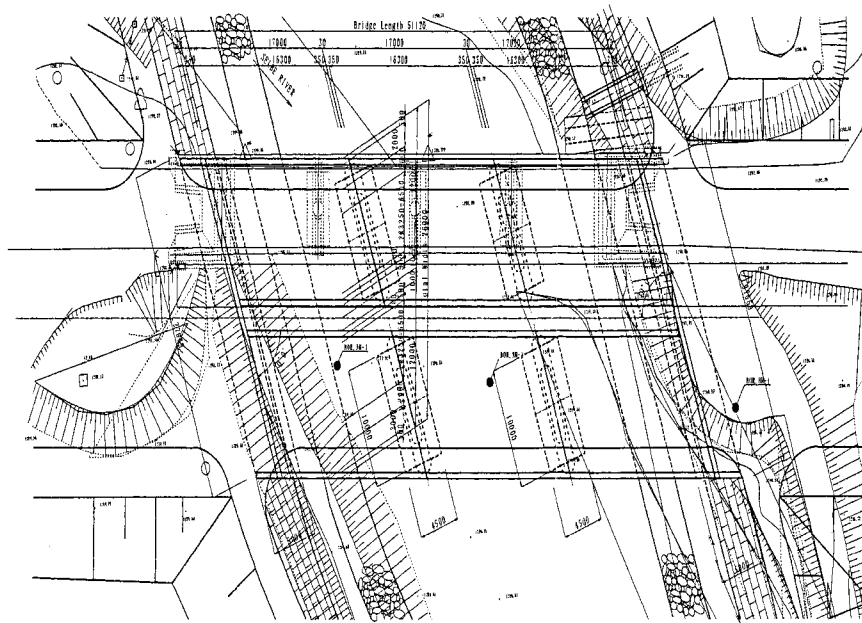


<b>BASIC DESIGN STUDY ON THE PROJECT FOR IMPROVEMENT OF THE ROADS IN ULAANBAATAR</b>		
Japan International Cooperation Agency(JICA)		MINISTRY OF INFRASTRUCTURE DEVELOPMENT
PACIFIC CONSULTANTS INTERNATIONAL		THE GOVERNMENT OF MONGOLIA
Drawing Title	Scale	No.
INTERSECTION (IN FRONT OF GESER TEMPLE)	1/1000	

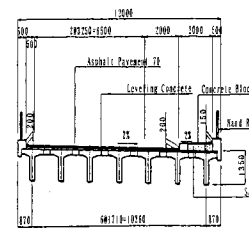
General View of Dood Selbe Bridge Scale: 1/400



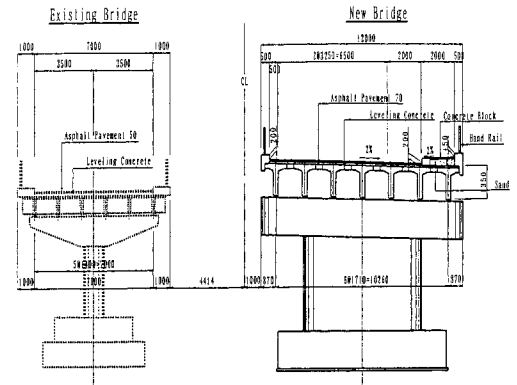
PROFILE



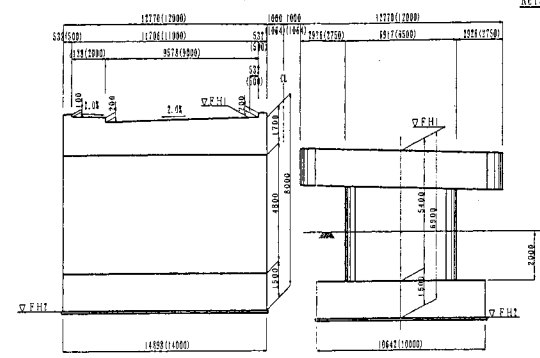
PLAN



Cross Section of RC-T Shape Girder Scale: 1/200

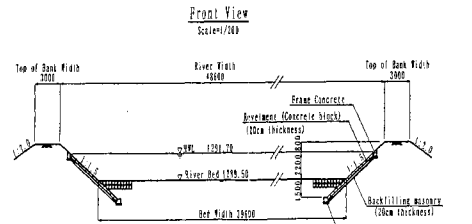


Relationship between Existing and New Bridge Scale: 1/200

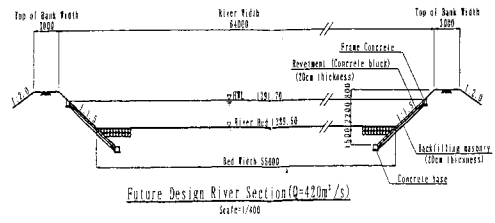


Abutment

Pier



Project Design River Section (Q=300m³/s) Scale: 1/400



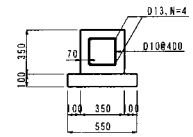
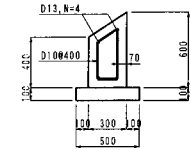
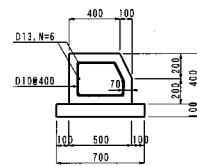
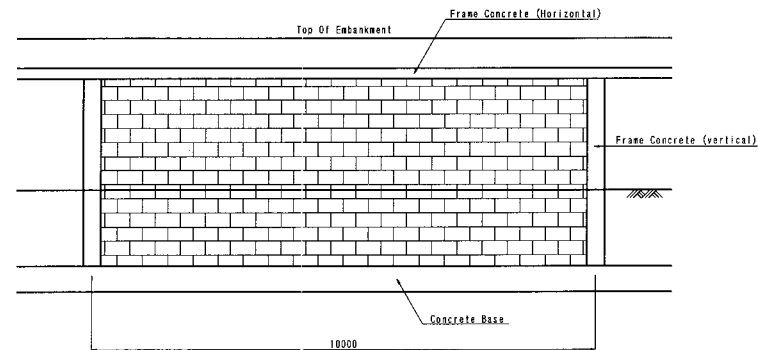
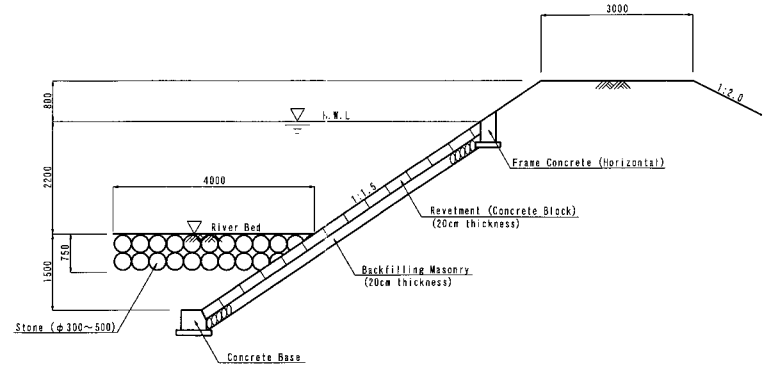
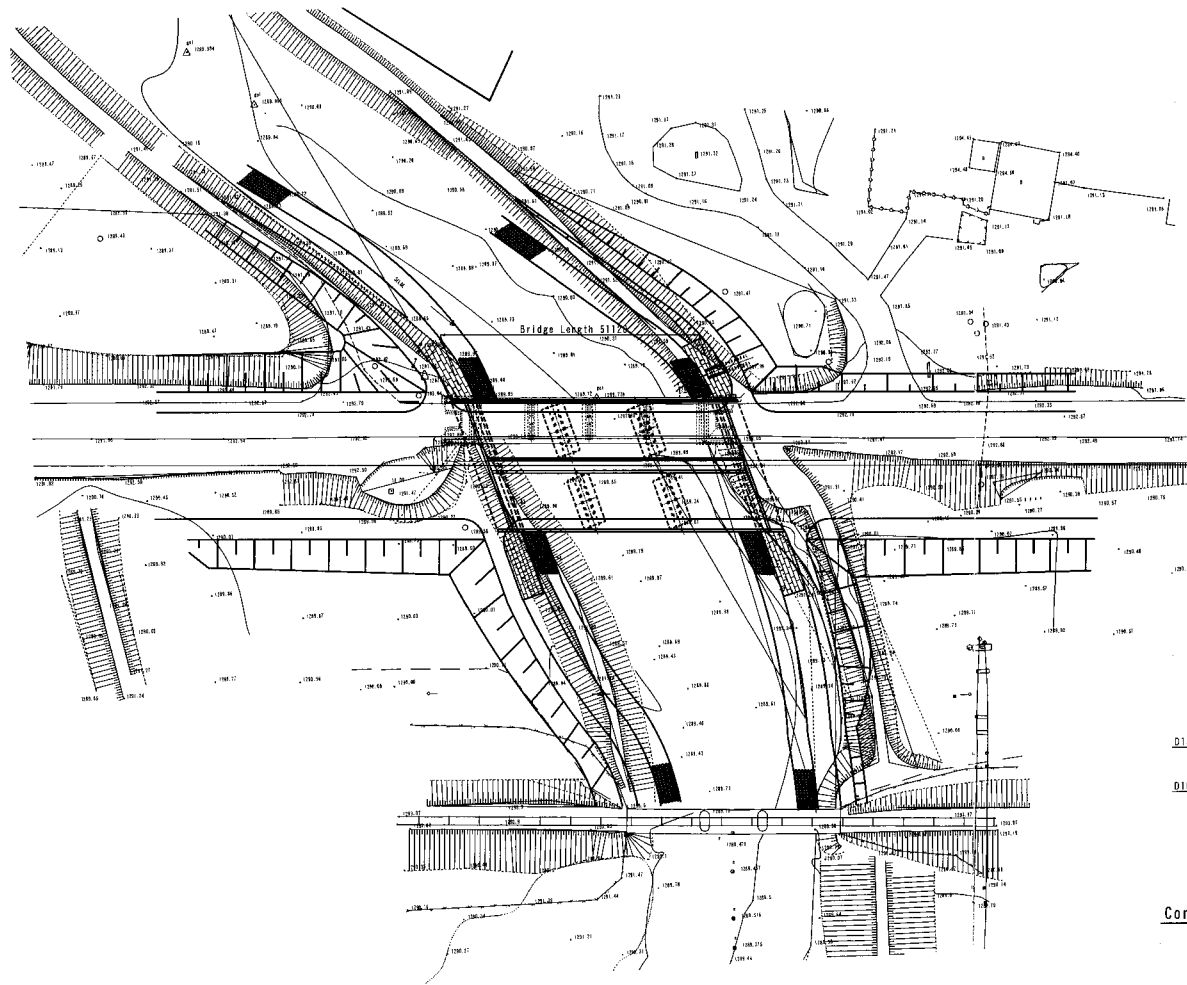
Future Design River Section (Q=420m³/s) Scale: 1/400

F.H.T.	P.F.S.
At 2% Abutment	1294.432
At 1% Pier	1292.515

DESIGN CRITERIA		
GENERAL CONDITION		
Design Speed	V=60km/h	
Bridge Length (Span Length)	51.20m (C/W 16.20m)	
Total Width	24.00m (C/W 7.00m)	
Longitudinal Gradient	1:1000	
Cross-fall of Carriageway	2%	
Superstructure Type	RC-T Shape Girder	
Substructure Type	Abutment: RC Bent-up Frame Pier: RC Wall (Carriageway-beam)	
Foundation Type	Spread	
MATERIAL STRENGTH		
Superstructure Type	Girder	$\sigma_c = 20 \text{N/mm}^2$
	Cross-beam	$\sigma_c = 20 \text{N/mm}^2$
Surface	Asphalt Pavement	Thickness=100mm
	Curb Wall	$\sigma_c = 20 \text{N/mm}^2$
Substructure Type	Reinforcing Steel	$\sigma_s = 210 \text{N/mm}^2$
	Reinforcing Steel	S205 (p-y=20kN/mm)

BASIC DESIGN STUDY ON THE PROJECT FOR IMPROVEMENT OF THE ROADS IN BHARHAT	
Japan International Cooperation Agency (JICA)	MINISTRY OF INFRASTRUCTURE DEVELOPMENT AND CONSTRUCTION OF INDIA
PACIFIC CONSULTANTS INTERNATIONAL	Scale: 1/400
Project Title	General View of Dood Selbe Bridge

General View of Revetment Scale=1/1000



BASIC DESIGN STUDY ON THE PROJECT FOR IMPROVEMENT OF THE ROADS IN ULAANBAATAR		
Japan International Cooperation Agency (JICA)	MINISTRY OF INFRASTRUCTURE DEVELOPMENT THE GOVERNMENT OF MONGOLIA	
PACIFIC CONSULTANTS INTERNATIONAL		
Drawing Title	Scale	NO.
General View of Revetment	1/1000	

## **6-8 Collected Data**

## List of Collected Data

Area	East Asia	Name of the Project	Basic Design Study on the Project for Improvement of the Roads in Ulaanbaatar	Basic Design Study		Collected By
				Period of the Survey	2000/05/15 - 2000/07/03 2000/08/28 - 2000/09/08	
Country	Mongolia					Mr. Kenji Maruoka
No.	Title	Size	Pages	original/Copy	Nos.	Published By
1	Yearbook of Statistics	A4	222	original	1	Statistics Department, Mongolia
2	Yearbook of Statistics by UB City	CD	-	original	1	UB City
3	Map (Scale 1:5,000)	A4	8	Copy	1	UB City
4	Map (Scale 1:25,000)	A4	3	Copy	1	UB City
5	Map (Scale 1:100,000)	A4	1	Copy	1	UB City
6	Highway Design Standard 1998, Republic of Mongolia	A4	92	original	1	Road Department (RD)
7	Road Designing BNbD 32-01-00	A4	92	original	1	Ministry of Infrastructure, Mongolia
8	Regulation on Operation of Facilities for Coordination of Traffic (MNS 4596:98)	A4	48	original	1	Standards, Weights and Measures Departments, Mongolia
9	Road Signs General Requirements (MNS 4597:98)	A4	45	original	1	Standards, Weights and Measures Departments, Mongolia



No.	Title	Size	Pages	original/Copy	Nos.	Published By
10	Road Marking Basic Technical Requirements (MNS 4759:99)	A4	35	original	1	Standards, Weights and Measures Departments, Mongolia
11	Reinforced Concrete Poles for Road Signs and Posts Technical Requirements (MNS 4912:2000)	A4	7	original	1	Standards, Weights and Measures Departments, Mongolia
12	Data of Underground Facilities	Digital	-	Copy	1	UB City
13	Road Bridge and Pipe Standard BNbD.2.05.03-97	A4	122	original	1	Road Department (RD)
14	Plan the Selbe Bridge on Teeverchid	A2	1	copy	1	Sergelt Co.,Ltd
15	Drawing of the Selbe Bridge on Teeverchid	A2	8	copy	1	Sergelt Co.,Ltd
16	12.15 and 18m Beam and 6.5m Sub-structure Design Sheet, 1998	A3	43	copy	1	Sergelt Co.,Ltd
17	Meteorological Data ( Temperature, etc)	A4	18	copy	1	Institute of Meteorology & Hydrology Ministry for Nature & Environment
18	Information and data collection for the design study for river engineering	A4	21	original	1	Institute of Geo-ecology
19	Rainfall Data (Buayant-Ukhaa and Takhilt Station)	A4	3	copy	1	Ministry for Nature & Environment
20	Earthquake Division of the Territory of the UB City	A4	1	copy	1	Academy of Science of USSR and Academy of Mongolia, Irkutsk - Ulaanbaatar 1980
21	Report of Geological Mapping on the Territory of UB City by A.S. Ampilov and I.P. Jelubovski 1943	A4	1	copy	1	Geotech Company
22	Meteorological and Geophysical Characteristics for Construction Design BNbD 2.01.01.-93	A4	1	copy	1	Geotech Company

No.	Title	Size	Pages	original/Copy	Nos.	Published By
23	Engineering Geological Map with Scale 1:100,000 of the Territory of the UB City by T. Beejin 1986	A4	1	copy	1	Geotech Company
24	Equipment list of the Erdene Zam Company	A4	4	Copy	1	Erdene Zam Company
25	Equipment list of the Ulaanbaatar Zam Zasvar Company	A4	2	Copy	1	Ulaanbaatar Zam Zasvar Company
26	Equipment list of the Road Repair and Maintenance Company	A4	2	Copy	1	Road Repair and Maintenance Company
27	Equipment list of the Bat Zam Company	A4	1	Copy	1	Bat Zam Company
28	Equipment list of the ASBI Company	A4	1	Copy	1	ASBI Company
29	Equipment list of the Huchit Zam Company	A4	1	Copy	1	Huchit Zam Company
30	Equipment list of the Gan Guur Company	A4	1	Copy	1	Gan Guur Company
31	Equipment list of the Techno-Arch Company	A4	1	Copy	1	Techno-Arch Company
32	Equipment list of the Equipment Leasing TTTurees Company	A4	1	Copy	1	Equipment Leasing TTTurees Company
33	Table of Exchange Rate (Tug v.s. U.S.Dollar)	A4	3	original	1	Mongol Bank
34	Breakdown of Cost Estimate of Widening Roads in Thirteenth District	A4	25	Copy	1	UB City
35	Breakdown of Cost Estimate of Widening Roads in Third District	A4	20	Copy	1	UB City