

BASIC DESIGN STUDY REPORT
ON
THE PROJECT FOR CONSTRUCTING
BRIDGES ALONG RURAL ROADS
(PHASE III)
IN
THE REPUBLIC OF THE PHILIPPINES
(DRAWINGS)

MARCH 1990

JAPAN INTERNATIONAL COOPERATION AGENCY



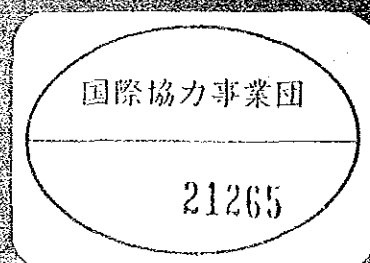
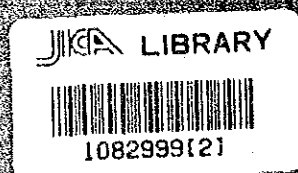
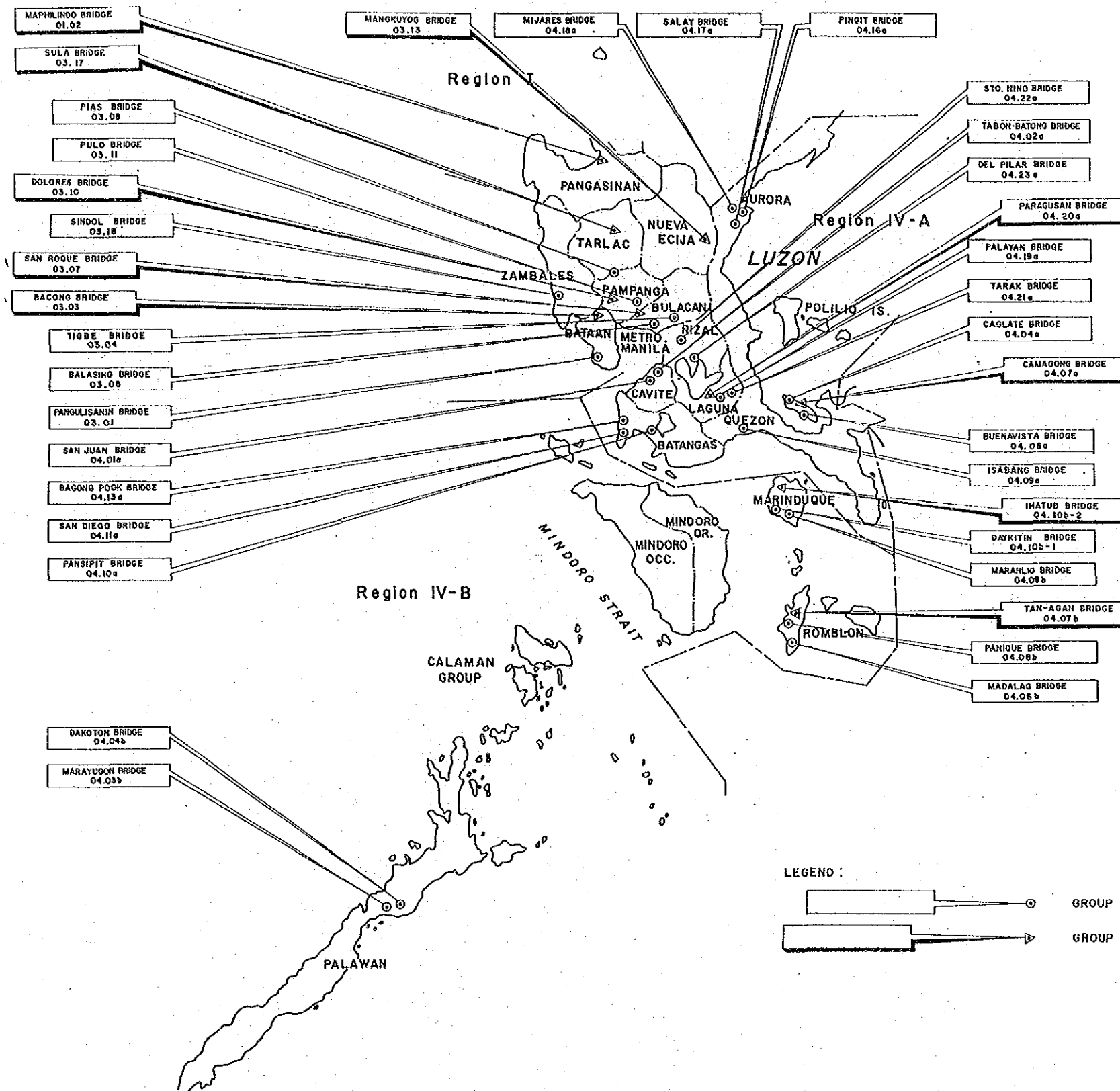


TABLE OF CONTENTS

TITLE	SHEET NO.
LOCATION MAP FOR GROUP 1 & 2 - - - - -	1/56
NAME OF BRIDGES FOR GROUP 1 - - - - -	2/56
GENERAL VIEW OF BRIDGES FOR GROUP 1 - - - - -	3/56 ~ 30/56
NAME OF BRIDGES FOR GROUP 2 - - - - -	31/56
BASIC DESIGN OF BRIDGES FOR GROUP 2 - - - - -	32/56 ~ 52/56
DETAILS OF STEEL MATERIALS FOR GROUP 1 - - - - -	53/56 ~ 56/56

THE BASIC DESIGN STUDY ON THE PROJECT FOR CONSTRUCTING BRIDGES ALONG RURAL ROADS (PHASE III)		
BRIDGE NO.	LOCATION MAP FOR GROUP 1 & 2	SHEET NO. 1/56



BRIDGE NO.	NAME OF BRIDGES FOR GROUP 1	SHEET NO.
		2 / 56

NAME OF BRIDGES FOR GROUP 1

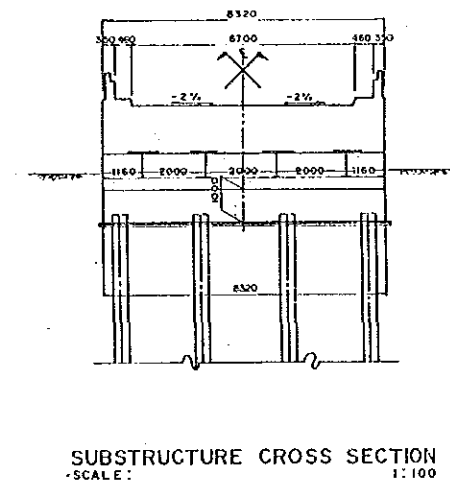
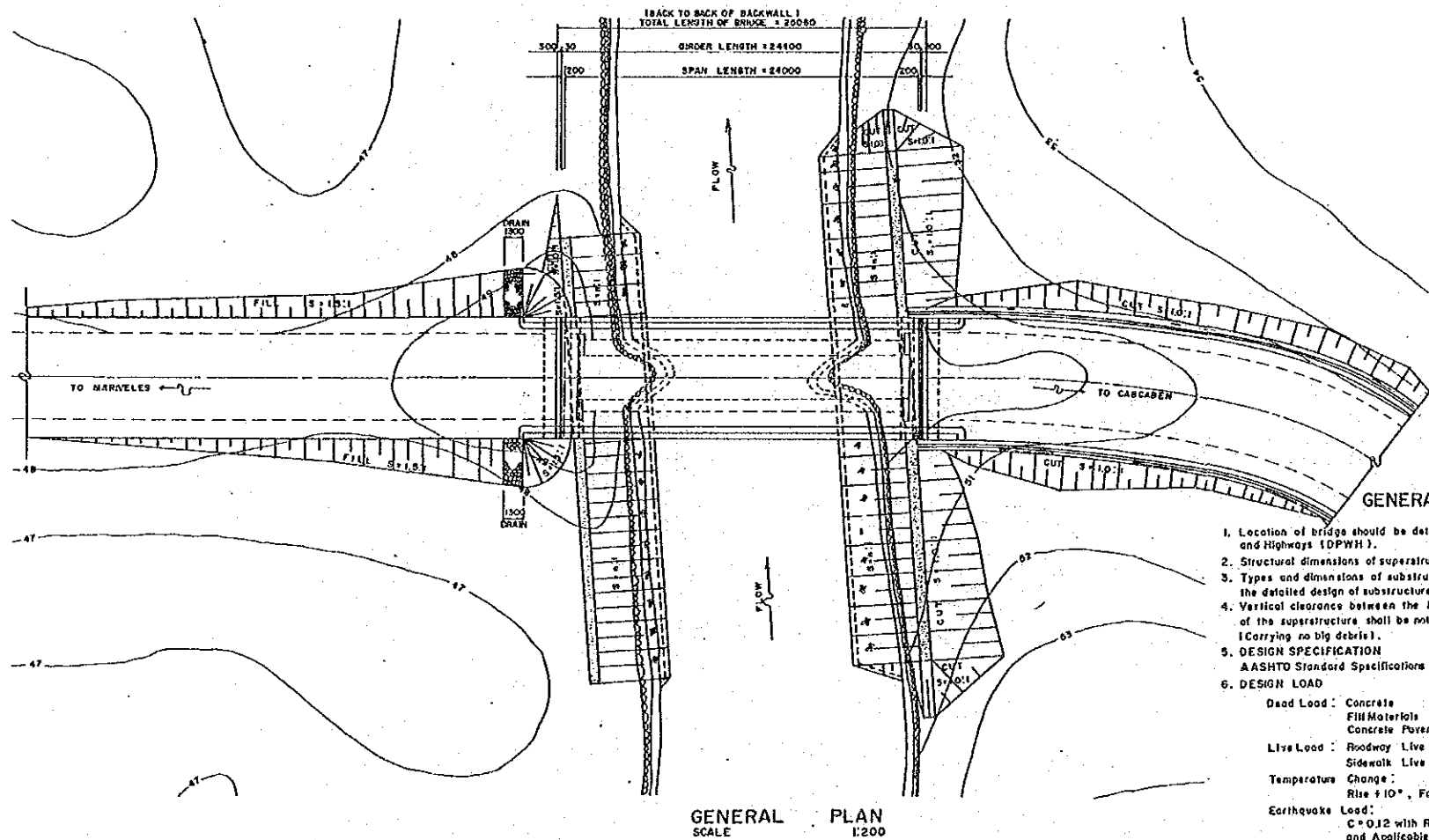
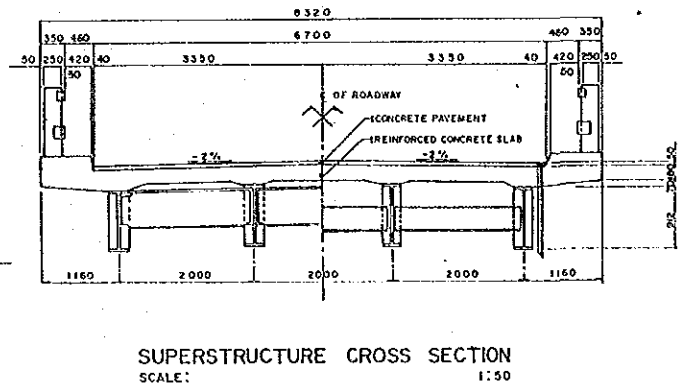
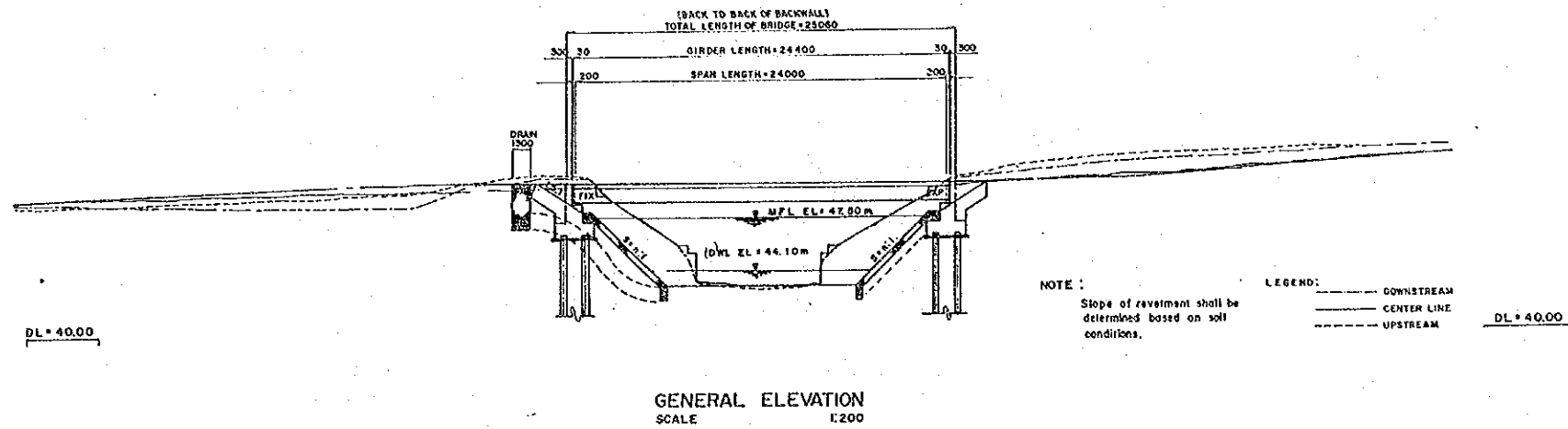
NO. BRIDGE NO.	NAME OF BRIDGE	LOCATION	NO. BRIDGE NO.	NAME OF BRIDGE	LOCATION
1 03.01	PANGULISANIN BRIDGE	Km.149+910, Cabcaban Road Cabcaban, Mariveles, Bataan	15 04.16a	PINGIT BRIDGE	Km.234+809, Baler - Baler Port Road Baler, Aurora
2 03.04	TIGBE BRIDGE	Km.77+520, Tigbe Barangay Road Norzagaray, Bulacan	16 04.17a	SALAY BRIDGE	Km.238+108, Dipaculao - Aurora Road Brgy. Salay, Dipaculao, Aurora
3 03.06	BALASING BRIDGE	Km.39+850, Balasing - Tigbe Brgy. Road Bulacan	17 04.18a	MIJARES BRIDGE	Km.247+435, Baler - Casiguran Road Brgy. Mijares, Dipaculao, Aurora
4 03.08	PIAS BRIDGE	Km.90+470, Porac - Pias - Ebo Road Porac, Pampanga	18 04.19a	PALAYAN BRIDGE	Km.89+700, Calauan - Nagcarlan Road Nagcarlan, Laguna
5 03.11	PULO BRIDGE	Km.85+925, Sta. Catalina - Pulong, Bayu Road Lubao, Pampanga	19 04.21a	TARAK BRIDGE	Km.85+144, San Pablo - Sta. Monica - Sta. Veronica Road Sta. Veronica, San Pablo City, Laguna
6 03.18	SINDOL BRIDGE	Km.172+350, Barangay - Sindol Road San Felipe, Zambales	20 04.22a	STO. NINO BRIDGE	Km.0+550, Jct. City Road - Pinagbatan Road Brgy. Sto. Nino, Cainta, Rizal
7 04.01a	SAN JUAN BRIDGE	Km.25+500, Cavite - Zapote Road San Juan, Cavite	21 04.23a	DEL PILAR BRIDGE	Km.0+100, Jct. Sumulong Highway - Del Pilar Jct. Road Del Pilar Ext., Antipolo, Rizal
8 04.02a	TABONG - BATONG BRIDGE	Km.22+500, Cavite - Zapote Road Kawit, Cavite	22 04.03b	MARUYUGON BRIDGE	Km.50+320.50, Puerto Princesa North Road, Brgy. Maruyugon, Puerto Princesa City, Palawan
9 04.04a	CAGLATE BRIDGE	Km.027+180, Quezon - Alabat Perez Road Alabat, Quezon	23 04.04b	DAKOTON BRIDGE	Km.62+761.50, Puerto Princesa North Road, Brgy. Babuyan, Puerto Princesa City, Palawan
10 04.06a	BUENAVISTA BRIDGE	Km.016+250, Quezon - Alabat Perez Road Alabat, Quezon	24 04.06b	MADALAG BRIDGE	Km.34+900, Looc - Alcantara Road Madalag, Alcantara, Romblon
11 04.09a	ISABANG BRIDGE	Km.127+399, MSR - Isabang - Rocohan - Domoit Lucena Diversion Road, Lucena City, Quezon	25 04.08b	PANIQUE BRIDGE	Km.8+000, San Andres - Odlongan Road Panique, Odlongan, Romblon
12 04.10a	PANSIPIT BRIDGE	Km.131+140, San Nicolas - Agoncillo and Vice Versa Brgy. Pansipit, Batangas	26 04.09b	MARANLIG BRIDGE	Km.56+637.80, Torrijos - Sibuyao Road Maranlig - Torrijos, Marinduque
13 04.11a	SAN DIEGO BRIDGE	Km.103+109.75, Nasugbu - Tagaytay Road Lian, Batangas	27 04.10b-1	DAYKITIN BRIDGE	Km.94+233, Buenavista - Gasan Road Daykitin, Buenavista, Marinduque
14 04.13a	BAGONG POOK BRIDGE	Km.95+090, Nasugbu - Tagaytay Road Bagong Pook, Lian, Batangas			

THE BASIC DESIGN STUDY ON THE PROJECT FOR CONSTRUCTING BRIDGES ALONG RURAL ROADS (PHASE III, GROUP 1)		
BRIDGE NO.	GENERAL VIEW OF BRIDGES FOR GROUP 1	SHEET NO.
		3/56

GENERAL VIEW OF BRIDGES FOR GROUP 1

THE BASIC DESIGN STUDY ON THE PROJECT
FOR CONSTRUCTING BRIDGES ALONG RURAL ROADS (PHASE III, GROUP 1)

BRIDGE NO.	PANGULISANIN BRIDGE	SHEET NO.
03-01	Km. 149+910	4/56

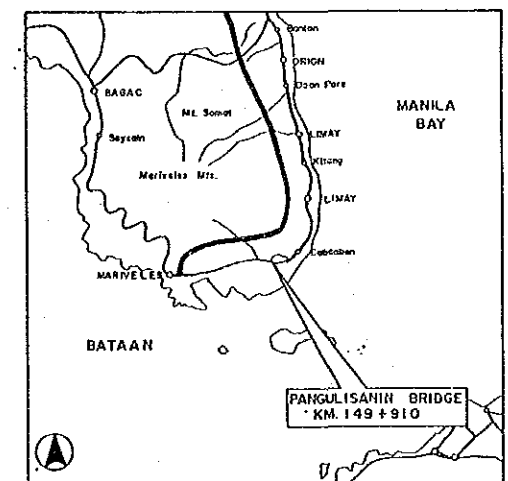


GENERAL NOTES

1. Location of bridge should be determined by the Department of Public Works and Highways (DPWH).
2. Structural dimensions of superstructures should not be amended.
3. Types and dimensions of substructures shall be justified according to the detailed design of substructures prepared by DPWH.
4. Vertical clearance between the M.F.L. and the bottom of the girders of the superstructure shall be not less than 1.0 meter (Carrying no big debris).
5. DESIGN SPECIFICATION
AASHTO Standard Specifications for Highway Bridge (13th Edition 1983)
6. DESIGN LOAD

Dead Load:	Concrete	23.54 KN/m ³
	Fill Materials	17.66 KN/m ³
	Concrete Pavement	23.54 KN/m ³
Live Load:	Roadway Live Load	HS 20-44 (MS -18)
	Sidewalk Live Load	2.873 KN/m ²
Temperature Change:		Rise + 10°, Fall - 10°
Earthquake Load:		C=0.12 with Reference to Relevant AASHTO Provisions and Applicable Code.
Other Loads:		In accordance with 1983 AASHTO Specification.
7. MATERIALS

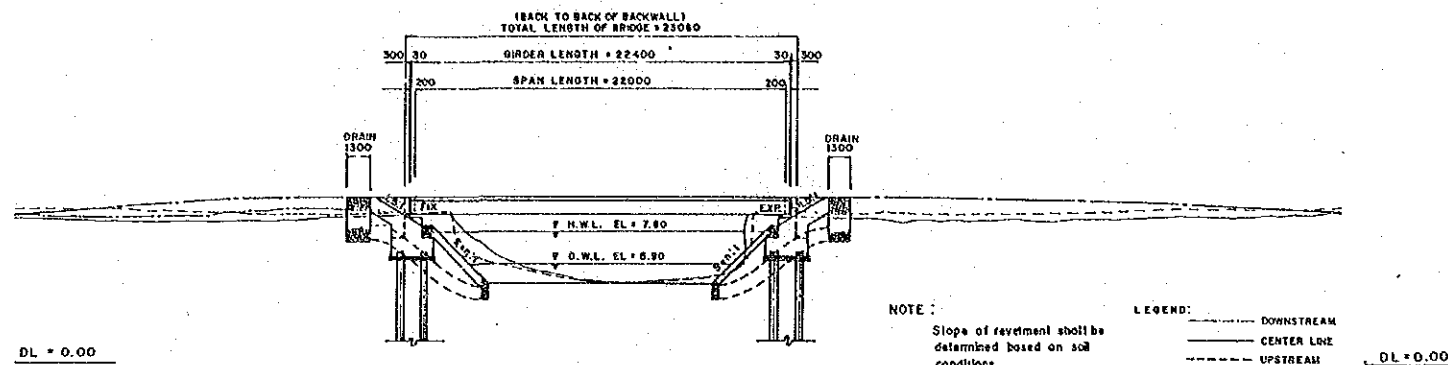
Steel for Superstructure:		Steel shall be Specified by JIS (Japanese Industrial Standard).
Concrete:	Concrete for Superstructure	f _c = 29.4 MPa
	Concrete for Substructure	f _c = 20.7 MPa
Others:		Other Materials shall conform to ASTM



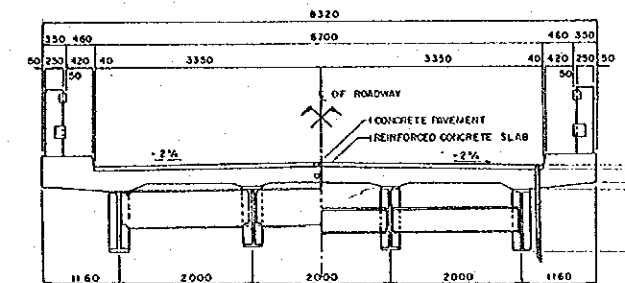
DRAWINGS
All Dimensions are express in millimeter unless otherwise shown in the plans.
All Elevations are in meters

THE BASIC DESIGN STUDY ON THE PROJECT
FOR CONSTRUCTING BRIDGES ALONG RURAL ROADS (PHASE III, GROUP 1)

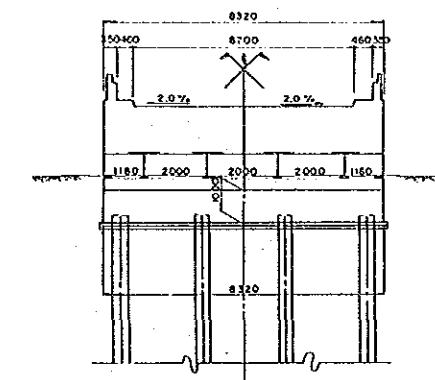
BRIDGE NO.	TIGBE BRIDGE	SHEET NO.
03.04	Km. 77+520	5/56



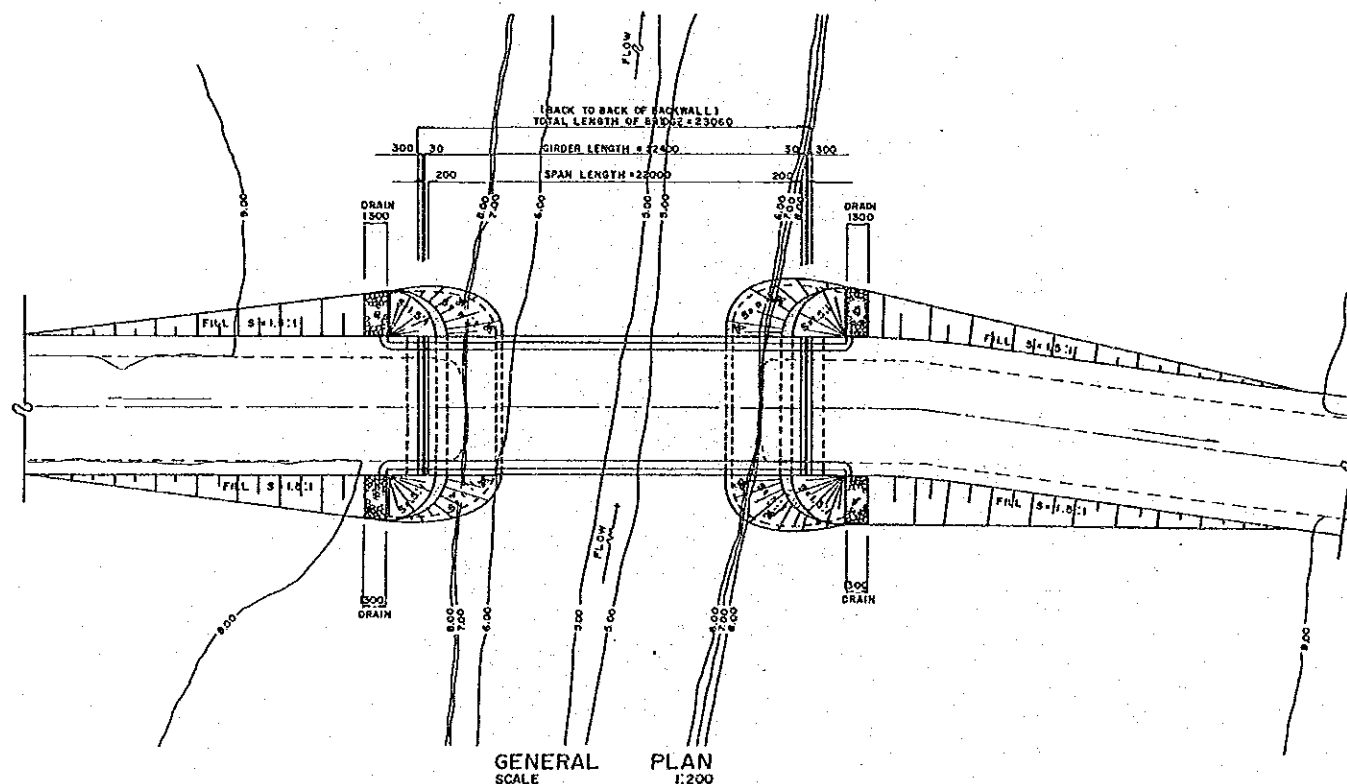
GENERAL ELEVATION
SCALE 1:200



SUPERSTRUCTURE CROSS SECTION
SCALE 1:50



SUBSTRUCTURE CROSS SECTION
SCALE 1:100



GENERAL PLAN
SCALE 1:200

GENERAL NOTES

1. Location of bridge should be determined by the Department of Public Works and Highways (DPWH).
2. Structural dimensions of superstructures should not be amended.
3. Types and dimensions of substructures shall be justified according to the detailed design of substructures prepared by DPWH.
4. Vertical clearance between the M.F.L. and the bottom of the girders of the superstructure shall be not less than 1.0 meter.
5. DESIGN SPECIFICATION
AASHTO Standard Specifications for Highway Bridges (13th Edition 1983)
6. DESIGN LOAD

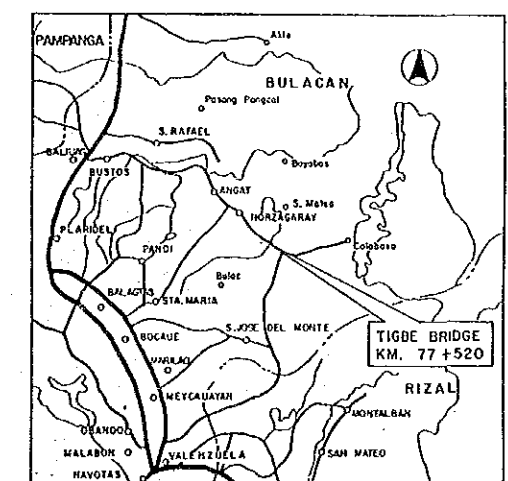
Dead Load:	Concrete	23.54 KN/m ²
	Fill Materials	17.66 KN/m ²
	Concrete Pavement	23.54 KN/m ²
Live Load:	Roadway Live Load	HS 20-44 (MS-18)
	Sidewalk Live Load	2.873 KN/m ²

Temperature Change:
Rise +10°, Fall -10°

Earthquake Load:
C=0.12 with Reference to Relevant AASHTO Provisions and Applicable Code.

Other Loads: In accordance with 1983 AASHTO Specification.
7. MATERIALS

Steel for Superstructure:	Steel shall be Specified by JIS (Japanese Industrial Standard).
Concrete:	Concrete for Superstructure $f_c = 29.4$ MPa
	Concrete for Substructure $f_c = 20.7$ MPa
Others:	Other Materials shall conform to ASTM

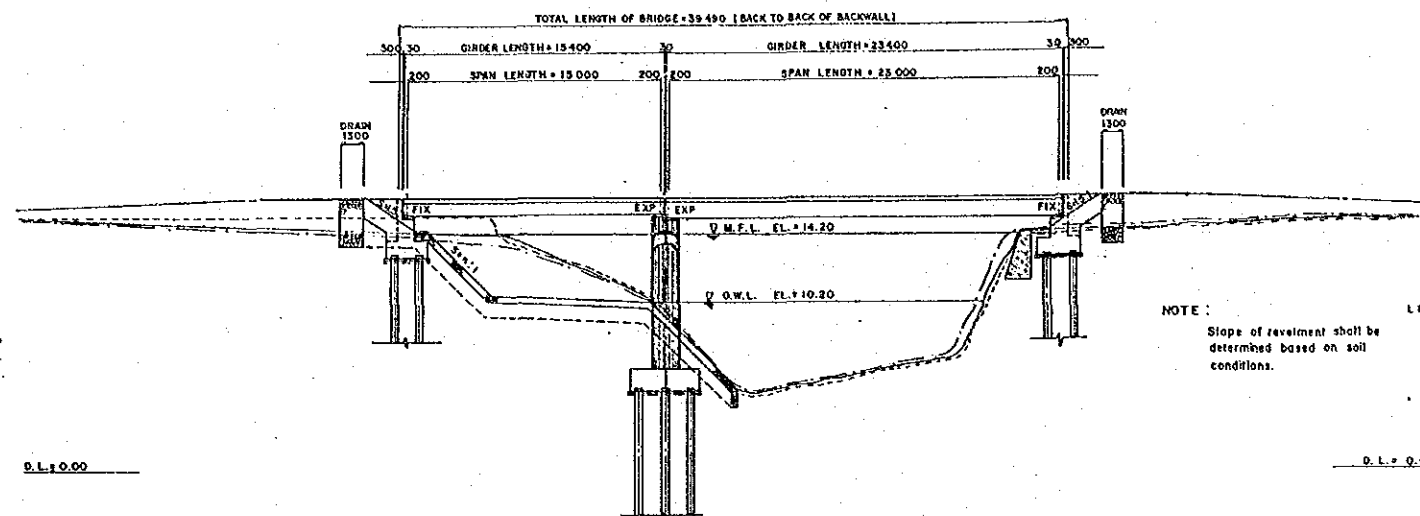


VICINITY MAP

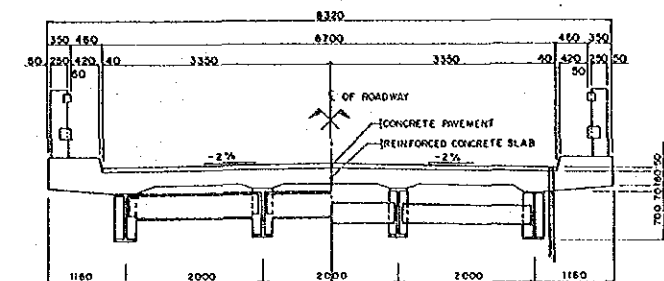
DRAWINGS
All Dimensions are expressed in millimeter unless otherwise shown in the plans.
All Elevations are in meters

THE BASIC DESIGN STUDY ON THE PROJECT
FOR CONSTRUCTING BRIDGES ALONG RURAL ROADS (PHASE II, GROUP 1)

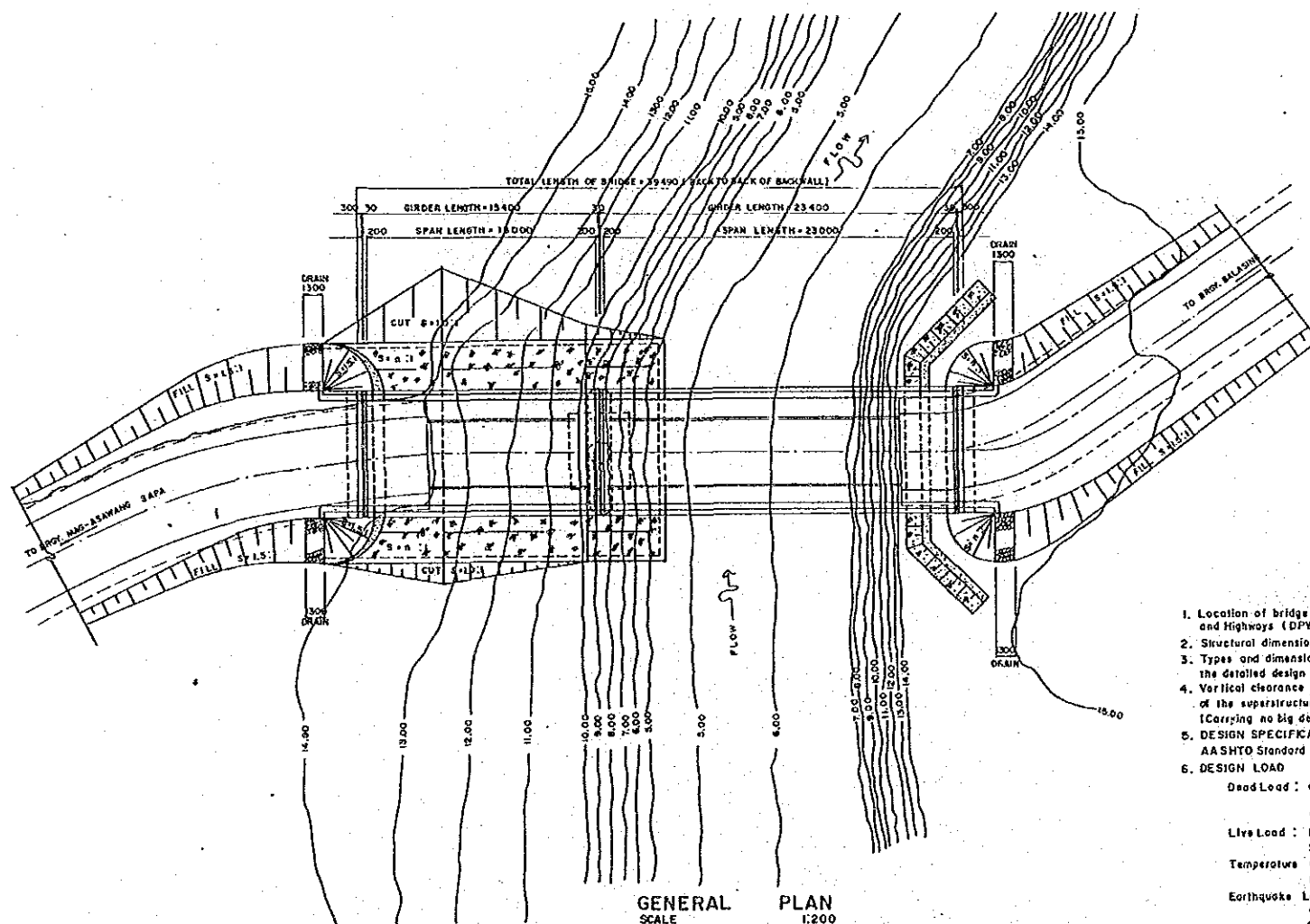
BRIDGE NO.	BALASING BRIDGE	SHEET NO.
03.06	Km. 39+850	6/56



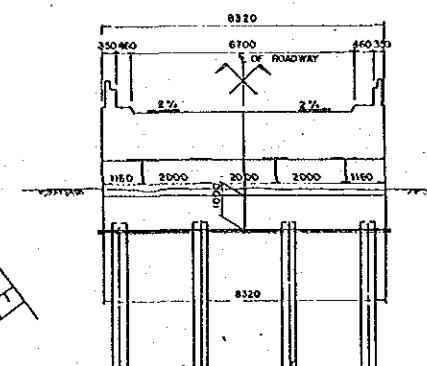
GENERAL ELEVATION
SCALE 1:200



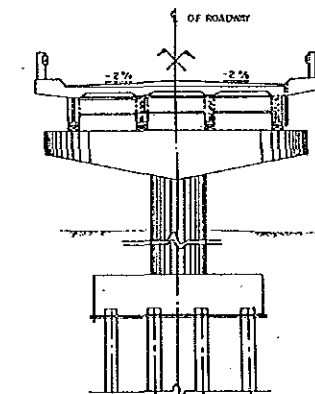
SUPERSTRUCTURE CROSS SECTION
SCALE 1:50



GENERAL PLAN
SCALE 1:200



ABUTMENT

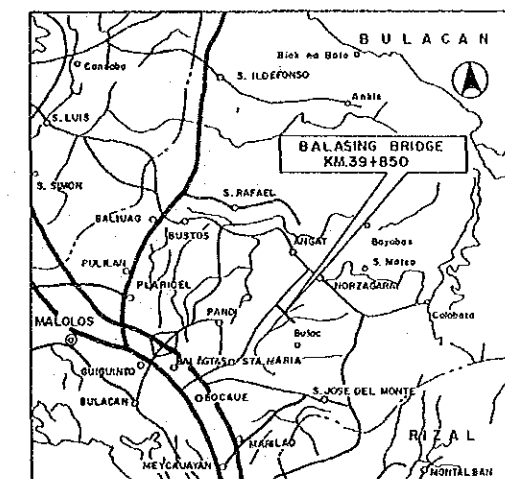


PIER

GENERAL NOTES

- Location of bridge should be determined by the Department of Public Works and Highways (DPWH).
- Structural dimensions of superstructures should not be amended.
- Types and dimensions of substructures shall be justified according to the detailed design of substructures prepared by DPWH.
- Vertical clearance between the M.F.L. and the bottom of the girders (carrying no big debris).
- DESIGN SPECIFICATION
AASHTO Standard Specifications for Highway Bridges (13th Edition 1983)
- DESIGN LOAD
Dead Load: Concrete 23.54 KN/m³
Fill Materials 17.66 KN/m³
Concrete Pavement 23.54 KN/m³
Live Load: Roadway Live Load HS 20-44 (HS-18)
Sidewalk Live Load 2.873 KN/m²
Temperature Change: Rise +10°, Fall -10°
Earthquake Load: C-0J2 with Reference to Relevant AASHTO Provisions and Applicable Code.
Other Loads: In accordance with 1983 AASHTO Specification.
- MATERIALS
Steel for Superstructure: Steel shall be Specified by JIS (Japanese Industrial Standard).
Concrete: Concrete for Superstructure f_c' = 29.4 MPa
Concrete for Substructure f_c' = 20.7 MPa
Others: Other Materials shall conform to ASTM

SUBSTRUCTURE CROSS SECTION
SCALE 1:100

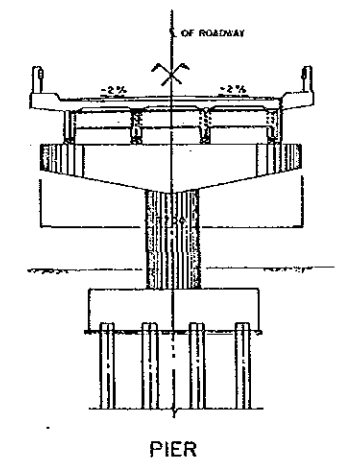
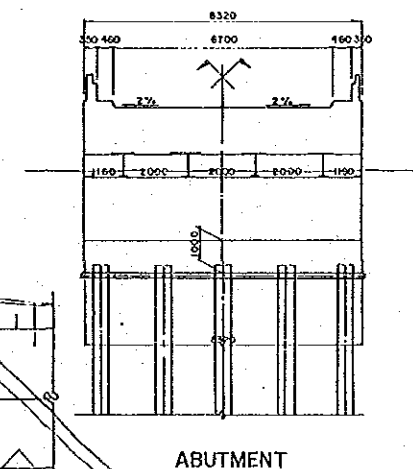
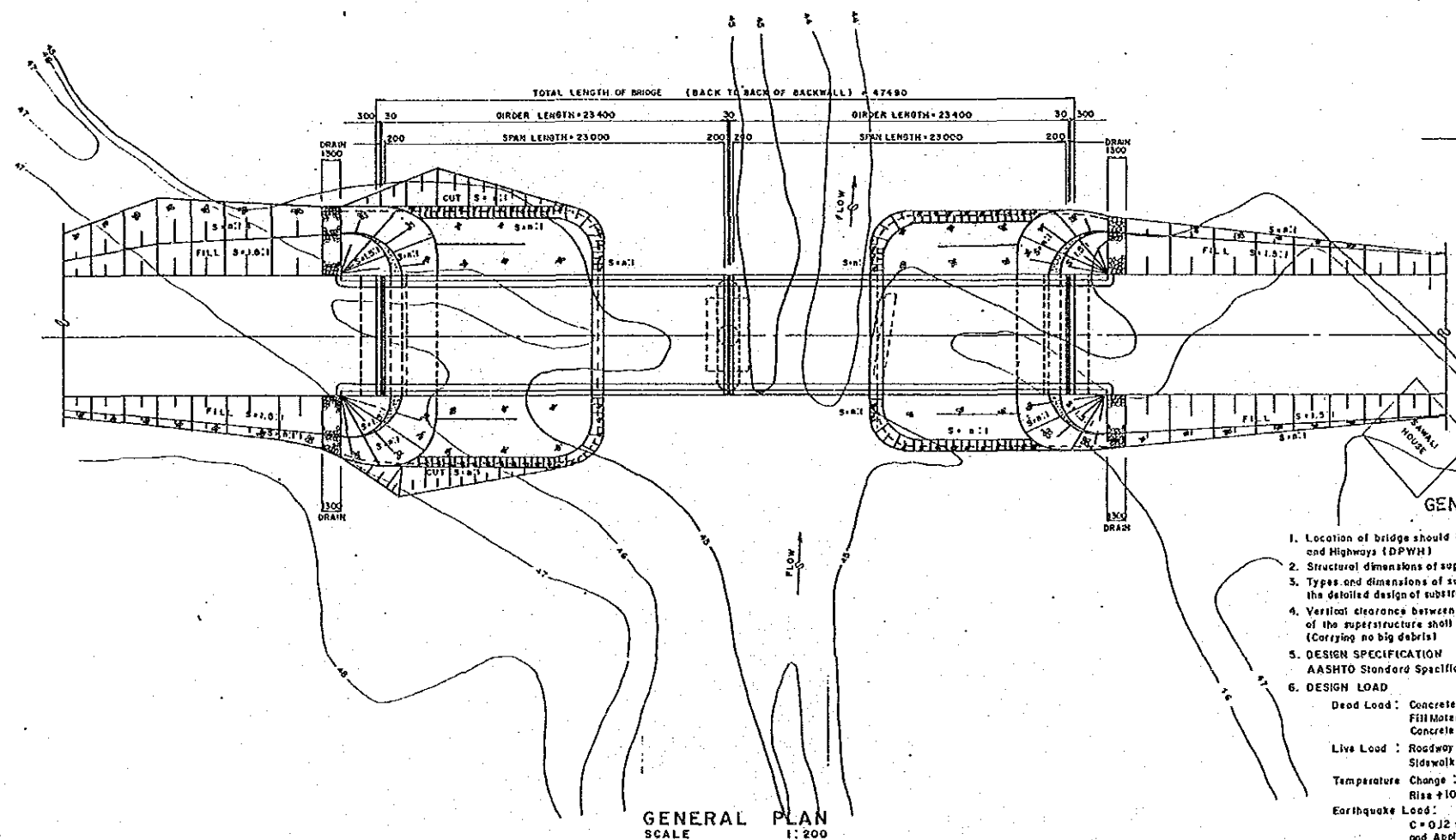
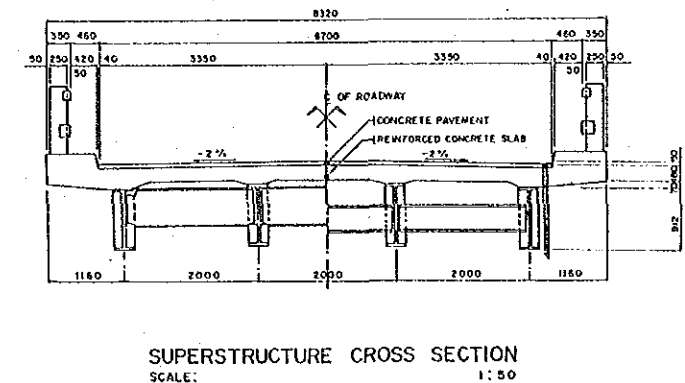
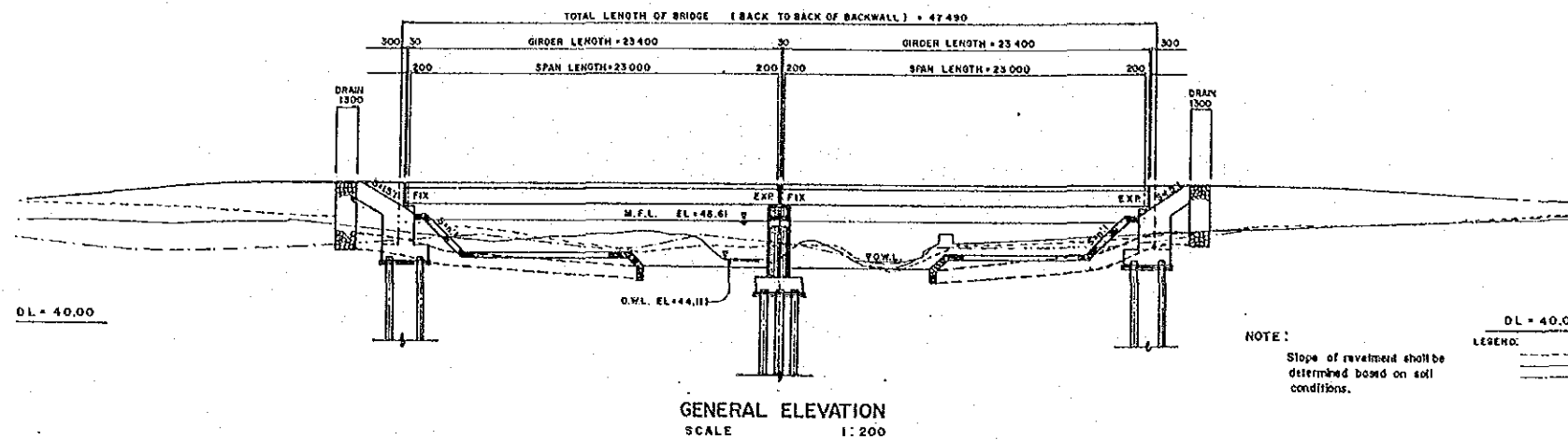


VICINITY MAP

DRAWINGS
All dimensions are express in millimeter unless otherwise shown in the plans.
All Elevations are in meters.

THE BASIC DESIGN STUDY ON THE PROJECT
FOR CONSTRUCTING BRIDGES ALONG RURAL ROADS (PHASE III, GROUP 1)

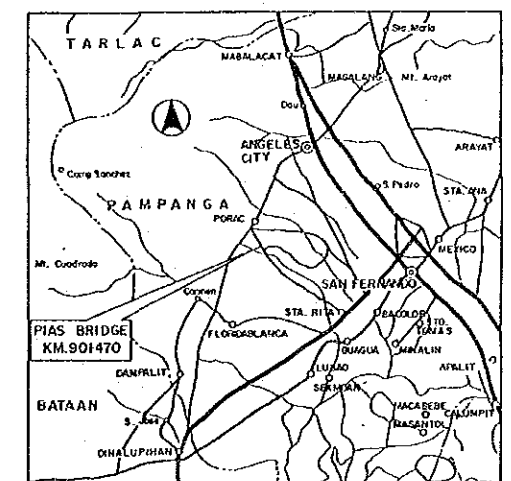
BRIDGE NO.	PIAS BRIDGE	SHEET NO.
03.08	Km. 90+470	7/56



ABUTMENT
PIER
SUBSTRUCTURE CROSS SECTION
SCALE 1:100

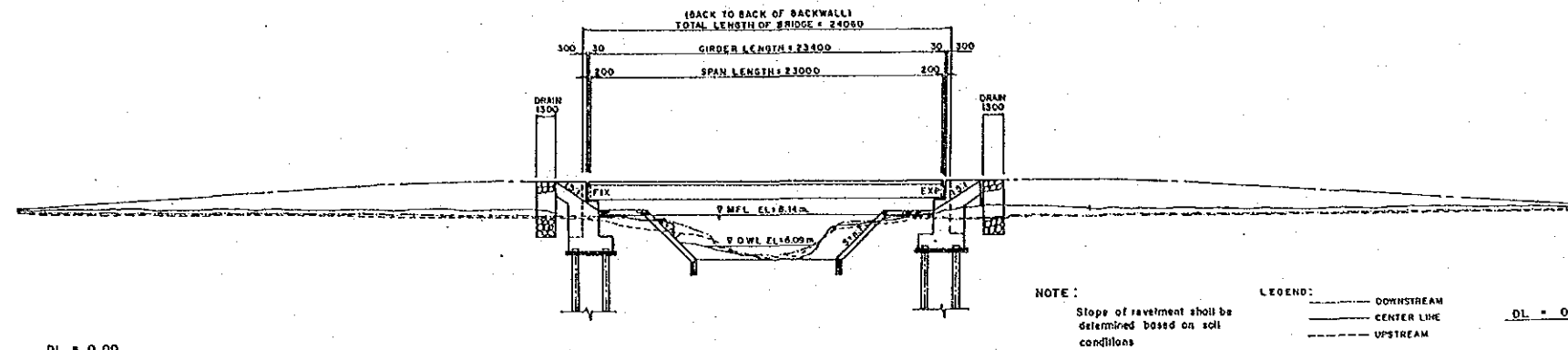
GENERAL NOTES

1. Location of bridge should be determined by the Department of Public Works and Highways (DPWH).
2. Structural dimensions of superstructures should not be amended.
3. Types and dimensions of substructures shall be justified according to the detailed design of substructures prepared by DPWH.
4. Vertical clearance between the M.F.L. and the bottom of the girders of the superstructure shall be not less than 1.0 meter. (Carrying no big debris).
5. DESIGN SPECIFICATION
AASHTO Standard Specifications for Highway Bridges (13th Edition 1983)
6. DESIGN LOAD
Dead Load: Concrete 23.54 KN/m²
Fill Materials 17.66 KN/m²
Concrete Pavement 23.54 KN/m²
Live Load: Roadway Live Load HS20-44 (MS-18)
Sidewalk Live Load 2.873 KN/m²
Temperature Change: Rise +10°, Fall -10°
Earthquake Load: C = 0.12 with Reference to Relevant AASHTO Provisions and Applicable Code.
Other Loads: In accordance with 1983 AASHTO Specification
7. MATERIALS
Steel for Superstructure: Steel shall be Specified by JIS (Japanese Industrial Standard I).
Concrete: Concrete for Superstructure f_c' = 29.4 MPa
Concrete for Substructure f_c' = 20.7 MPa
Others: Other Materials shall conform to ASTM

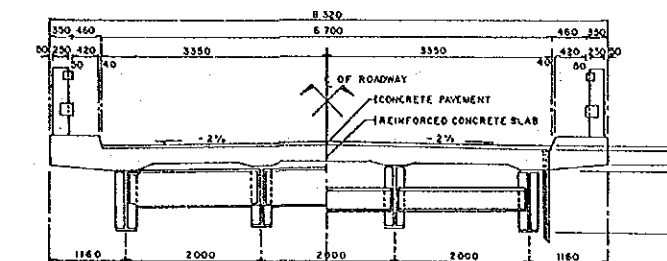


VICINITY MAP

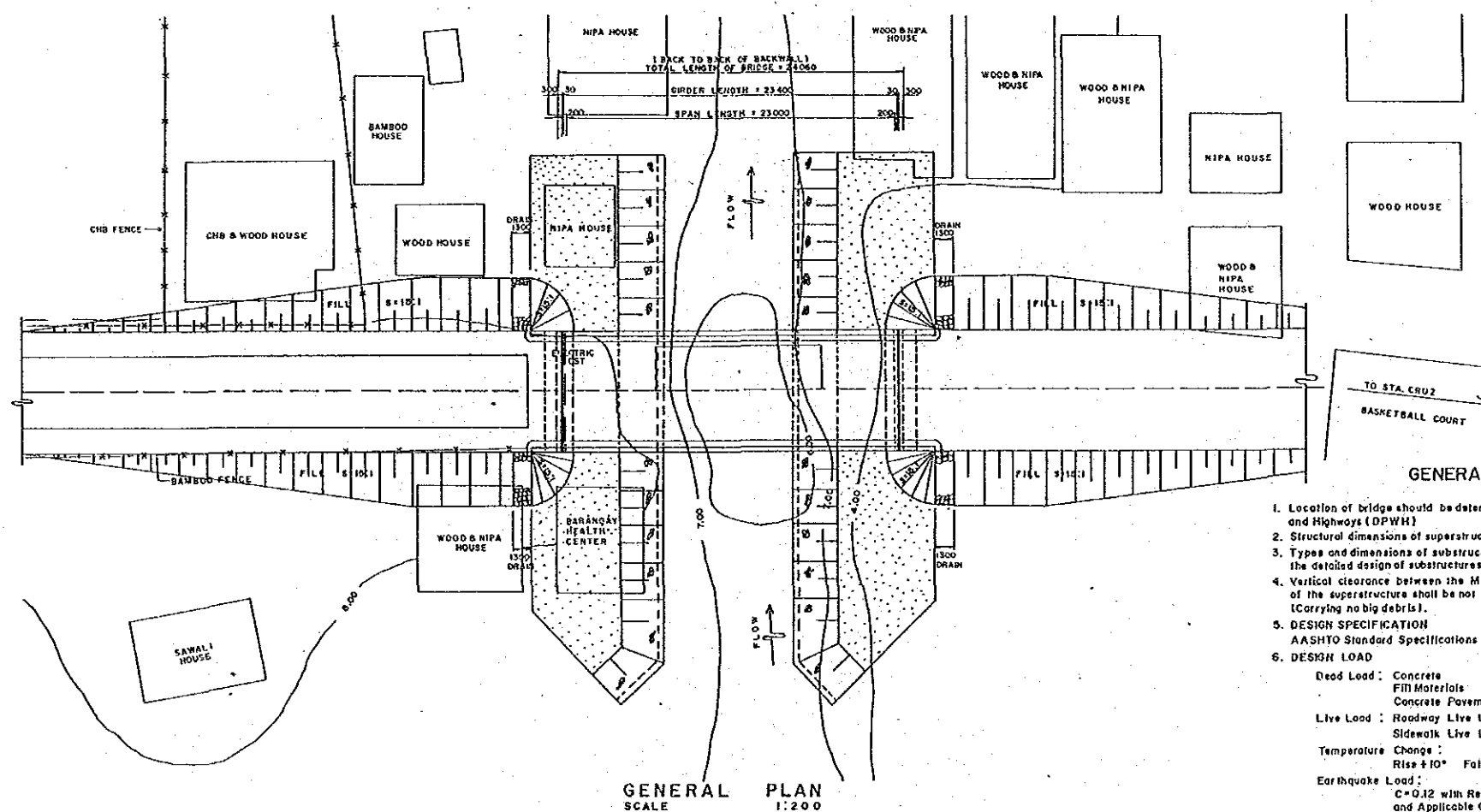
DRAWINGS
All Dimensions are expressed in millimeter unless otherwise shown in the plans
All Elevations are in meters



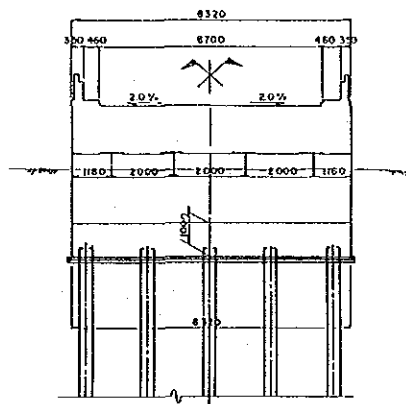
GENERAL ELEVATION
SCALE 1:200



SUPERSTRUCTURE CROSS SECTION
SCALE: 1:50



GENERAL PLAN
SCALE 1:200



SUBSTRUCTURE CROSS SECTION
SCALE 1:100

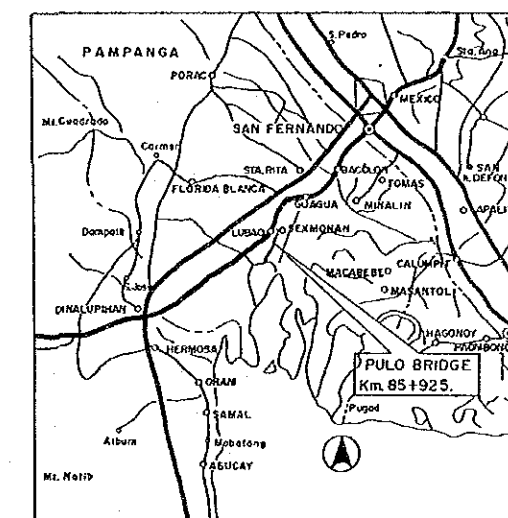
GENERAL NOTES

- Location of bridge should be determined by the Department of Public Works and Highways (DPWH).
- Structural dimensions of superstructures should not be amended.
- Types and dimensions of substructures shall be justified according to the detailed design of substructures prepared by DPWH.
- Vertical clearance between the M.F.L. and the bottom of the girders of the superstructure shall be not less than 1.0 meter (Carrying no big debris).
- DESIGN SPECIFICATION
AASHTO Standard Specifications for Highway Bridges (13th Edition 1983)
- DESIGN LOAD

Dead Load:	Concrete	23.54 KN/m ³
	Fill Materials	17.66 KN/m ³
	Concrete Pavement	23.54 KN/m ³
Live Load:	Roadway Live Load	HS20-44 (MS-18)
	Sidewalk Live Load	2.873 KN/m
Temperature Change:	Rise +10°	Fall -10°
Earthquake Load:	C=0.12 with Reference to Relevant AASHTO Provisions and Applicable Code	
Other Loads:	In accordance with 1983 AASHTO Specification.	
- MATERIALS

Steel for Superstructure:	Steel shall be Specified by JIS (Japanese Industrial Standard).
Concrete:	Concrete for Superstructure: $f_c' = 29.4$ MPa
	Concrete for Substructure: $f_c' = 20.7$ MPa
Others:	Other Materials shall conform to ASTM

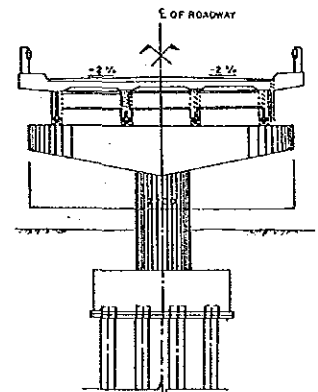
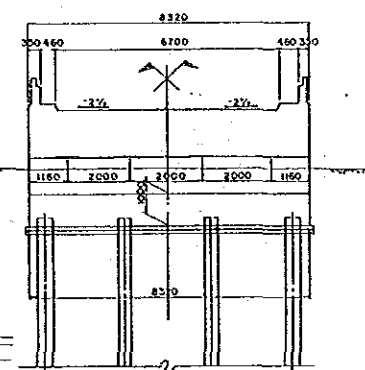
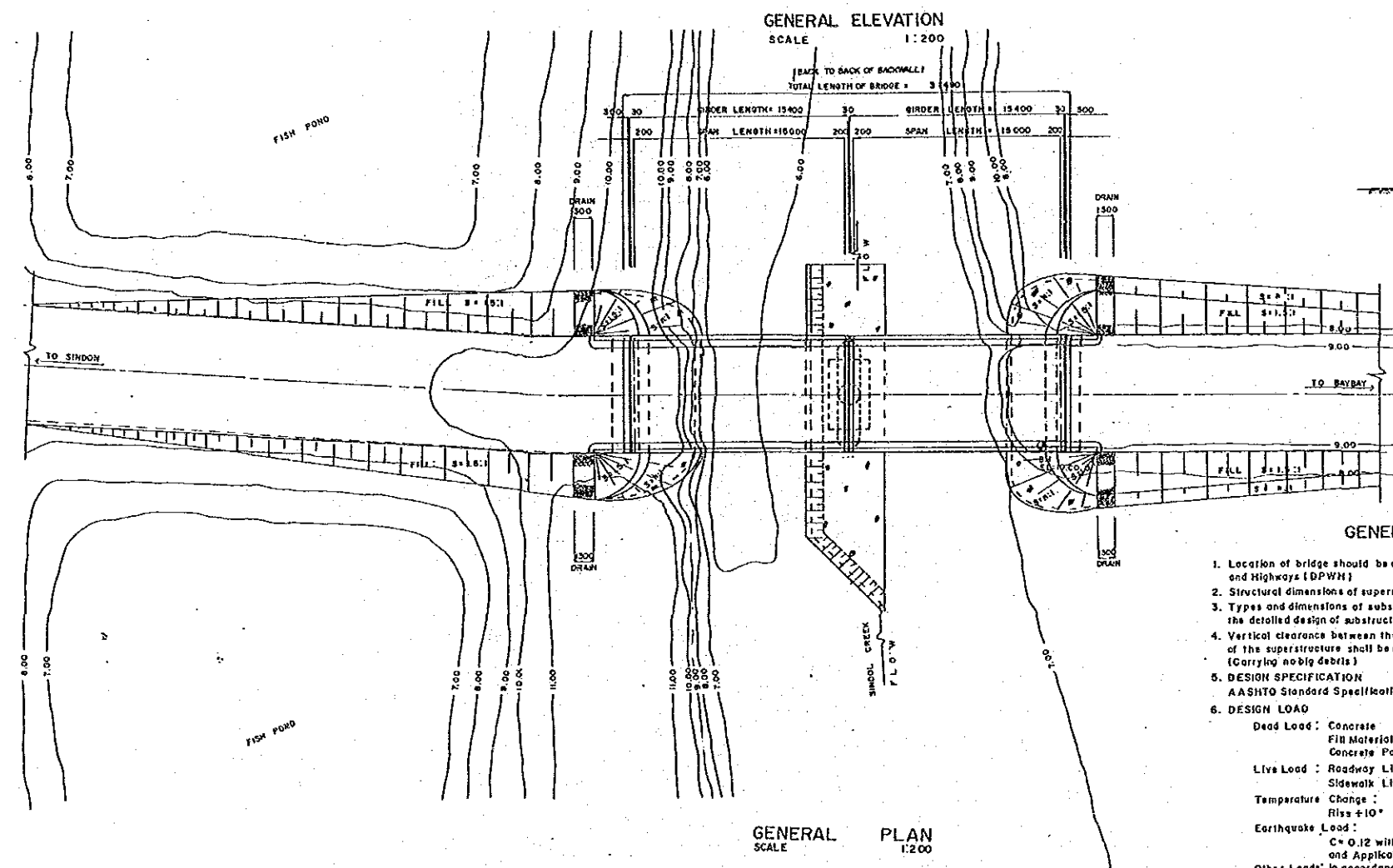
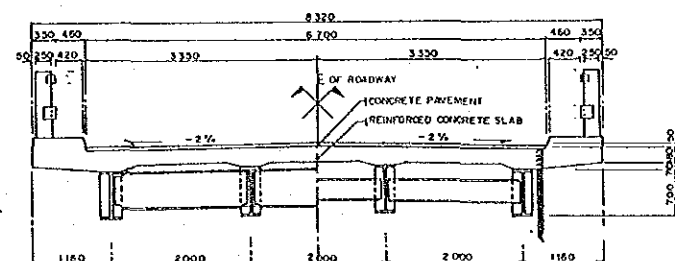
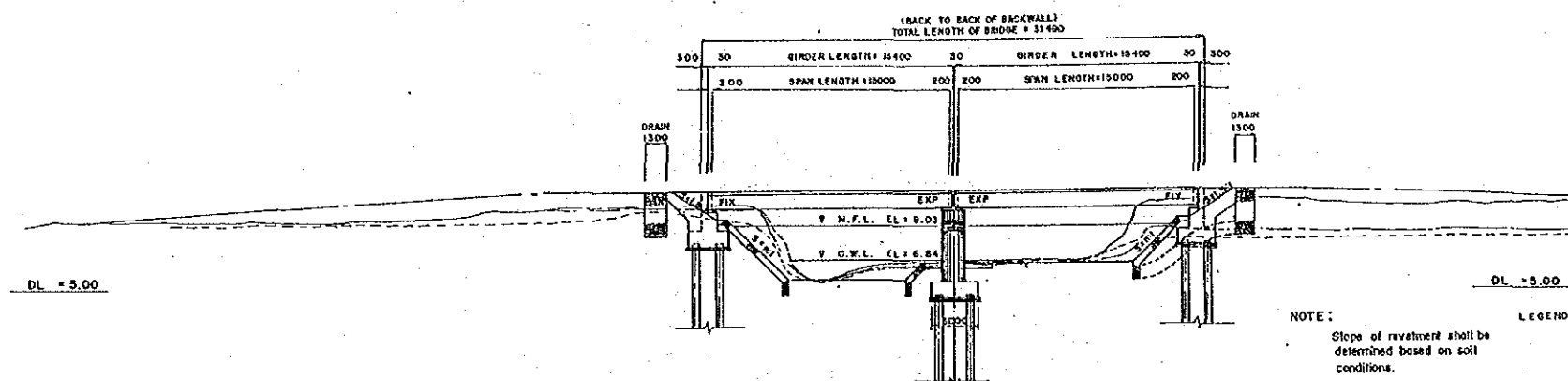
DRAWINGS
All Dimensions are express in millimeter unless otherwise shown in the plans.
All Elevations are in meters.



VICINITY MAP

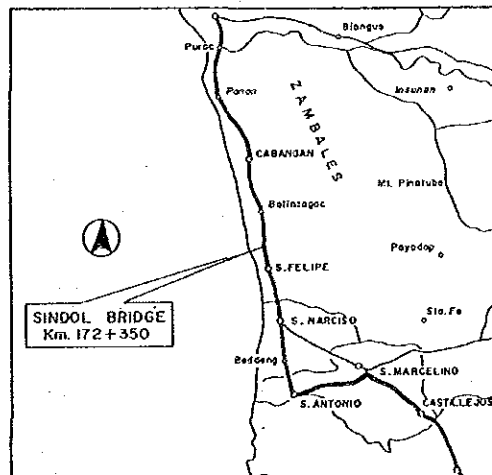
THE BASIC DESIGN STUDY ON THE PROJECT
FOR CONSTRUCTING BRIDGES ALONG RURAL ROADS (PHASE III, GROUP 1)

BRIDGE NO.	SINDOL BRIDGE Km. 172 + 350	SHEET NO.
03,1B		9 / 56



GENERAL NOTES

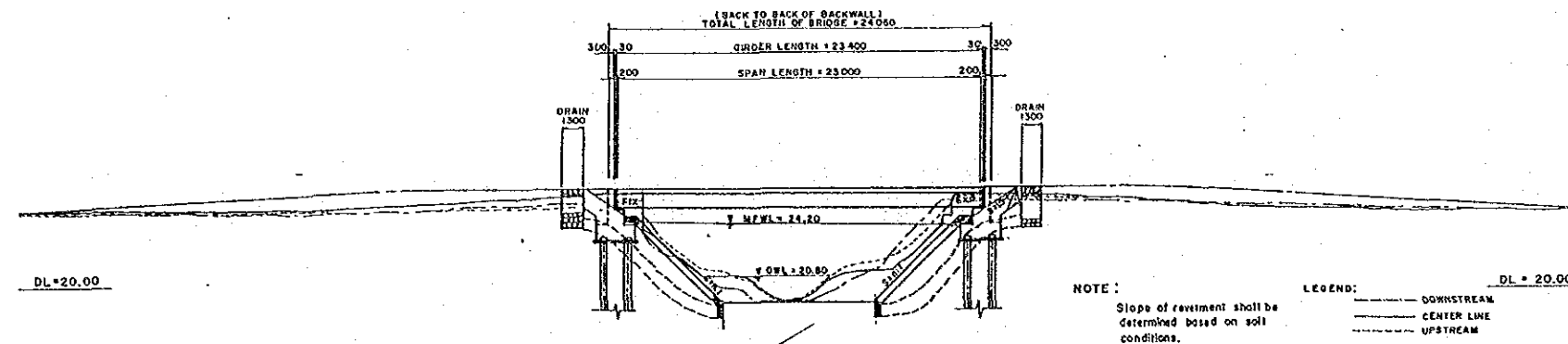
1. Location of bridge should be determined by the Department of Public Works and Highways (DPWH).
2. Structural dimensions of superstructures should not be amended.
3. Types and dimensions of substructures shall be justified according to the detailed design of substructures prepared by DPWH.
4. Vertical clearance between the M.F.L. and the bottom of the girders of the superstructure shall be not less than 1.0 meter (Carrying nobly debris).
5. DESIGN SPECIFICATION
AASHTO Standard Specifications for Highway Bridges (15th Edition 1983)
6. DESIGN LOAD
Dead Load: Concrete 23.54 KN/m³
Fill Materials 17.66 KN/m³
Concrete Pavement 23.54 KN/m³
Live Load: Roadway Live Load HS20-44 (MS-10)
Sidewalk Live Load 2.873 KN/m²
Temperature Change: Rise +10° Fall -10°
Earthquake Load: C = 0.12 with Reference to Relevant AASHTO Provisions and Applicable Code.
Other Loads: In accordance with 1983 AASHTO Specification
7. MATERIALS
Steel for Superstructure: Steel shall be Specified by JIS (Japanese Industrial Standard).
Concrete for Superstructure: f_c' = 29.4 MPa
Concrete for Substructure: f_c' = 20.7 MPa
Others: Other Materials shall conformed to ASTM



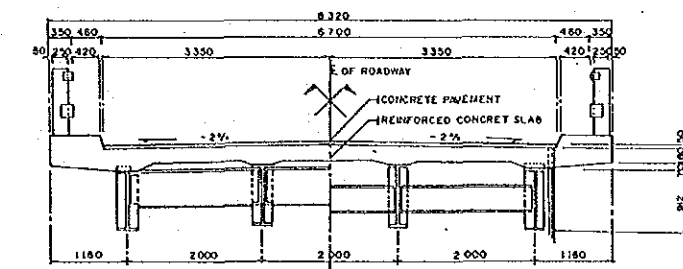
DRAWINGS
All Dimensions are express in millimeter unless otherwise shown in the plans.
All Elevations are in meters

THE BASIC DESIGN STUDY ON THE PROJECT
FOR CONSTRUCTING BRIDGES ALONG RURAL ROADS (PHASE III, GROUP 1)

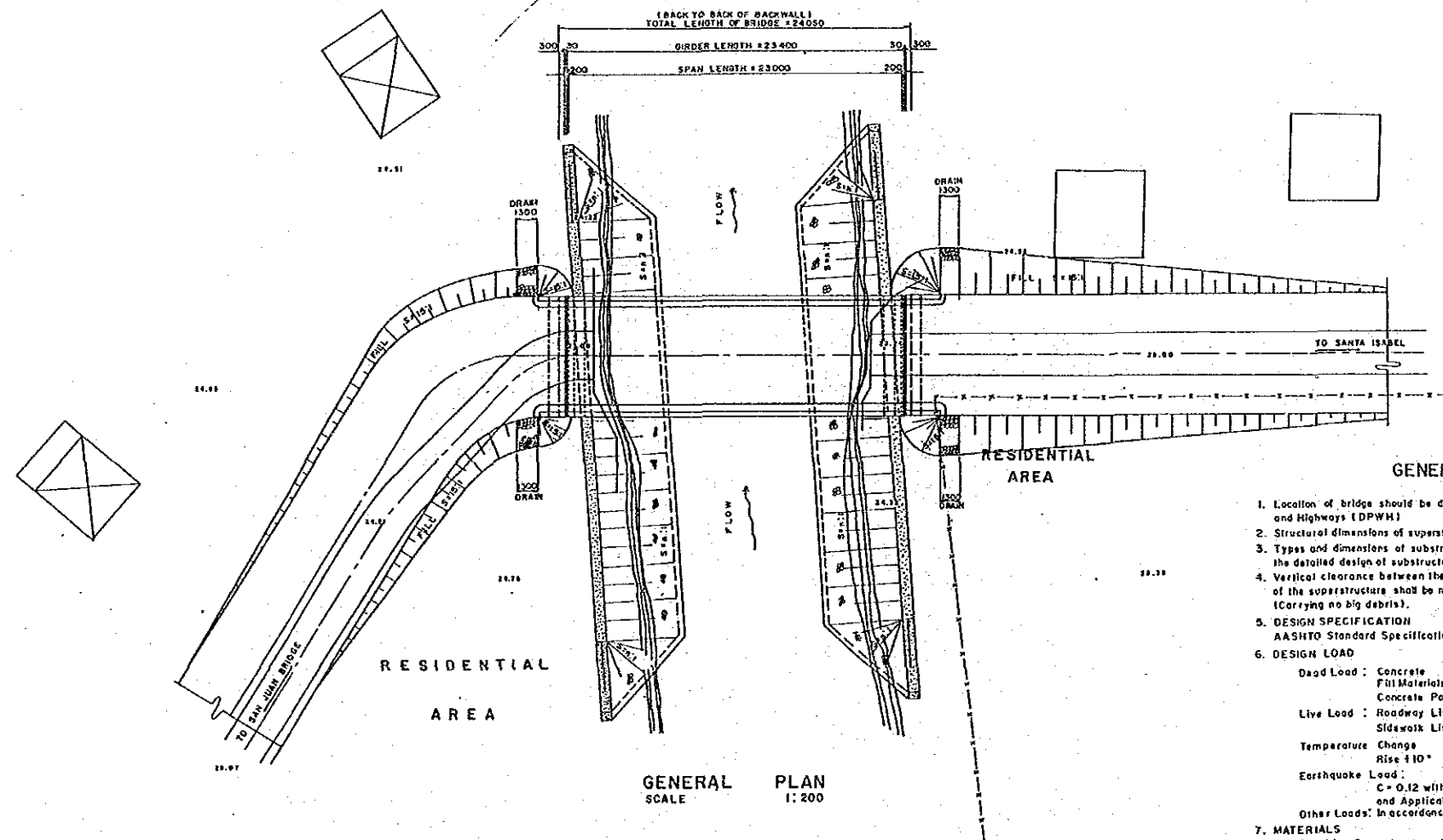
BRIDGE NO.		SHEET NO.
04.01c	SAN JUAN BRIDGE Km. 25 + 500	10/56



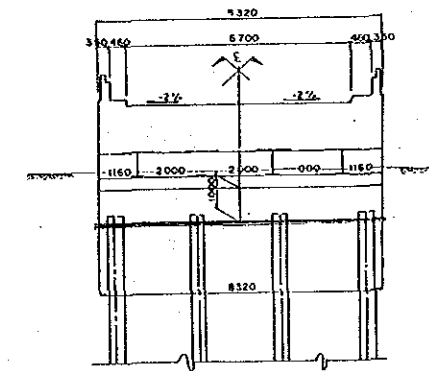
GENERAL ELEVATION
SCALE 1:200



SUPERSTRUCTURE CROSS SECTION
SCALE 1:50



GENERAL PLAN
SCALE 1:200



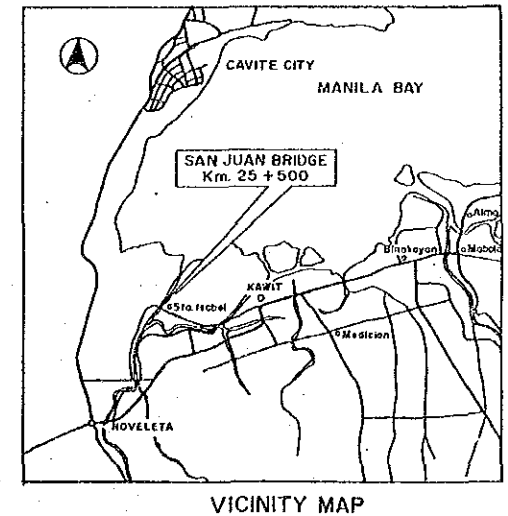
SUBSTRUCTURE CROSS SECTION
SCALE 1:100

GENERAL NOTES

- Location of bridge should be determined by the Department of Public Works and Highways (DPWH).
- Structural dimensions of superstructures should not be amended.
- Types and dimensions of substructures shall be justified according to the detailed design of substructures prepared by DPWH.
- Vertical clearance between the M.F.L. and the bottom of the girders of the superstructure shall be not less than 1.0 meter. (Carrying no big debris).
- DESIGN SPECIFICATION
AASHTO Standard Specifications for Highway Bridges (13th Edition 1983)
- DESIGN LOAD

Dead Load:	Concrete	23.54 KN/m ³
	Fill Materials	17.66 KN/m ³
	Concrete Pavement	23.54 KN/m ³
Live Load:	Roadway Live Load	HS 20-44 (MS-10)
	Sidewalk Live Load	2.873 KN/m ²
Temperature Change		Rise +10° For -10°
Earthquake Load:		C = 0.12 with Reference to Relevant AASHTO Provisions and Applicable Code.
Other Loads:		In accordance with 1983 AASHTO Specification
- MATERIALS

Steel for Superstructure:	Steel shall be Specified by JIS (Japanese Industrial Standards).
Concrete:	Concrete for Superstructure f _c ' = 29.4 MPa
	Concrete for Substructure f _c ' = 20.7 MPa
Others:	Other Materials shall conform to ASTM

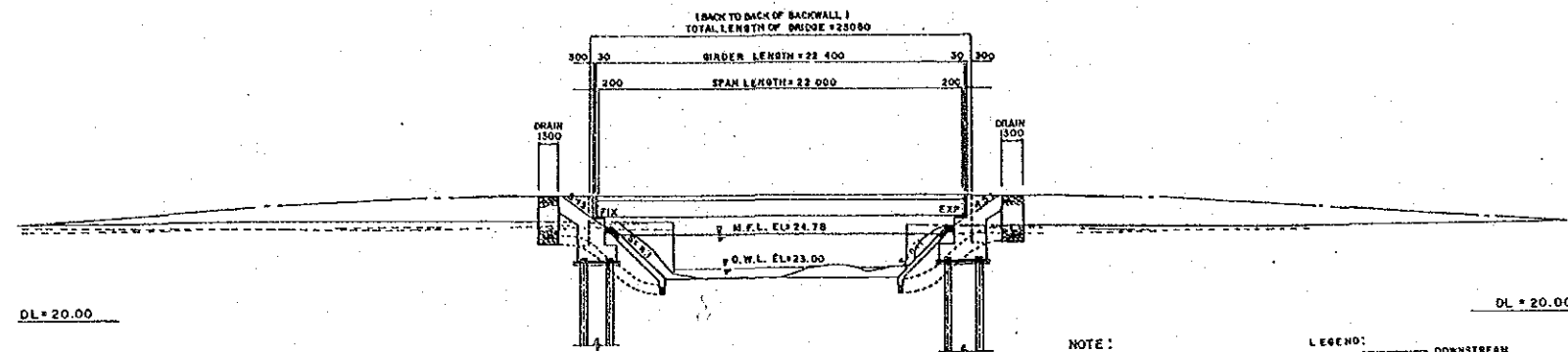


VICINITY MAP

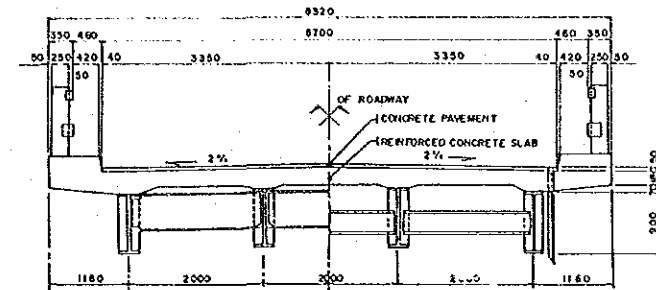
DRAWINGS
All Dimensions are express in millimeter unless otherwise shown in the plans
All Elevations are in meters

THE BASIC DESIGN STUDY ON THE PROJECT
FOR CONSTRUCTING BRIDGES ALONG RURAL ROADS (PHASE III GROUP 1)

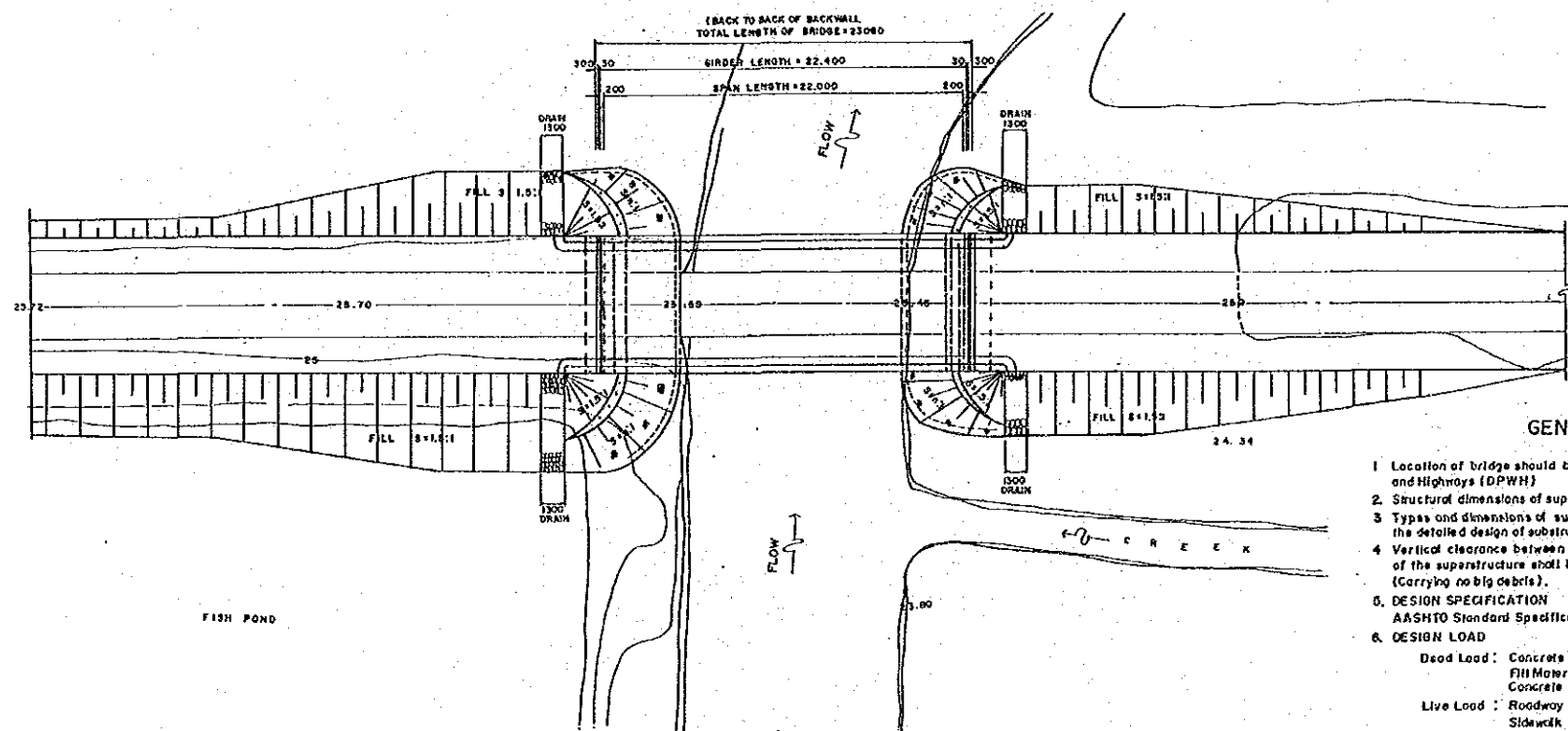
BRIDGE NO.	TABON BATONG BRIDGE	SHEET NO.
04.02a	Km. 22+500	11/56



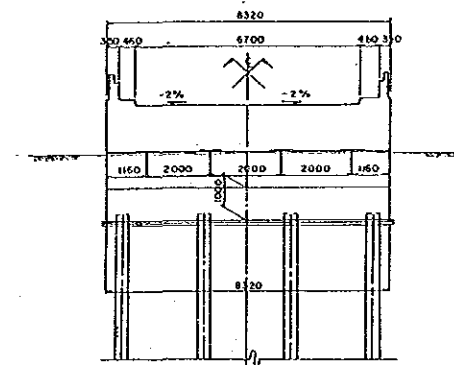
GENERAL ELEVATION
SCALE: 1:200



SUPERSTRUCTURE CROSS SECTION
SCALE: 1:50



GENERAL PLAN
SCALE: 1:200



SUBSTRUCTURE CROSS SECTION
SCALE: 1:100

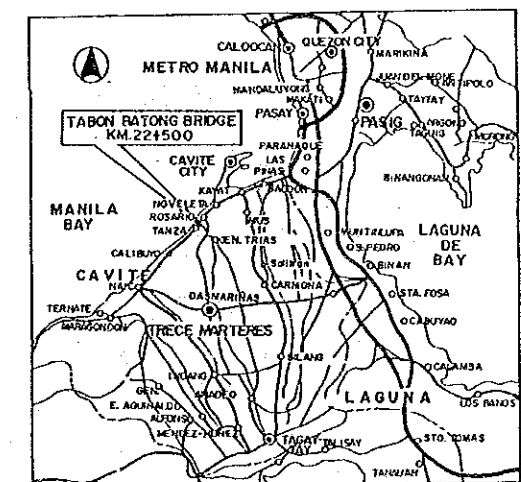
GENERAL NOTES

- Location of bridge should be determined by the Department of Public Works and Highways (DPWH).
- Structural dimensions of superstructures should not be amended.
- Types and dimensions of substructures shall be justified according to the detailed design of substructures prepared by DPWH.
- Vertical clearance between the N.F.L. and the bottom of the girders of the superstructure shall be not less than 1.0 meter (Carrying no big debris).
- DESIGN SPECIFICATION
AASHTO Standard Specifications for Highway Bridges (13th Edition 1983)
- DESIGN LOAD

Dead Load:	Concrete	23.54 KN/m ³
	Fill Materials	17.66 KN/m ³
	Concrete Pavement	23.54 KN/m ³
Live Load:	Roadway Live Load	HS20-44 (MS-1B)
	Sidewalk Live Load	2.873 KN/m ²

 Temperature Change
 Rise +10° Fall -10°
 Earthquake Load
 C = 0.12 with Reference to Relevant AASHTO Provisions and Applicable Code.
 Other Loads: In accordance with 1983 AASHTO Specification
- MATERIALS

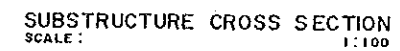
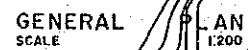
Steel for Superstructure:	Steel shall be Specified by JIS (Japanese Industrial Standard)
Concrete:	Concrete for Superstructure $f_c' = 29.4$ MPa Concrete for Substructure $f_c' = 20.7$ MPa Other Materials shall conform to ASTM



VICINITY MAP

DRAWINGS
All Dimensions are express in millimeter unless otherwise shown in the plans.
All Elevations are in meters.

BRIDGE NO.	CAGLATE BRIDGE Km. 027 + 180	SHEET NO.
04.04a		12/56



1. Location of bridge should be determined by the Department of Public Works and Highways (DPWH)
2. Structural dimensions of superstructures should not be amended.
3. Types and dimensions of substructures shall be justified according to the detailed design of substructures prepared by DPWH.
4. Vertical clearances between the M.F.L. and the bottom of the girders of the superstructure shall be not less than 1.0 meter (Carrying no big debris)
5. DESIGN SPECIFICATION

AASHTO Standard Specifications for Highway Bridges (13th Edition 1983)

6. DESIGN LOAD

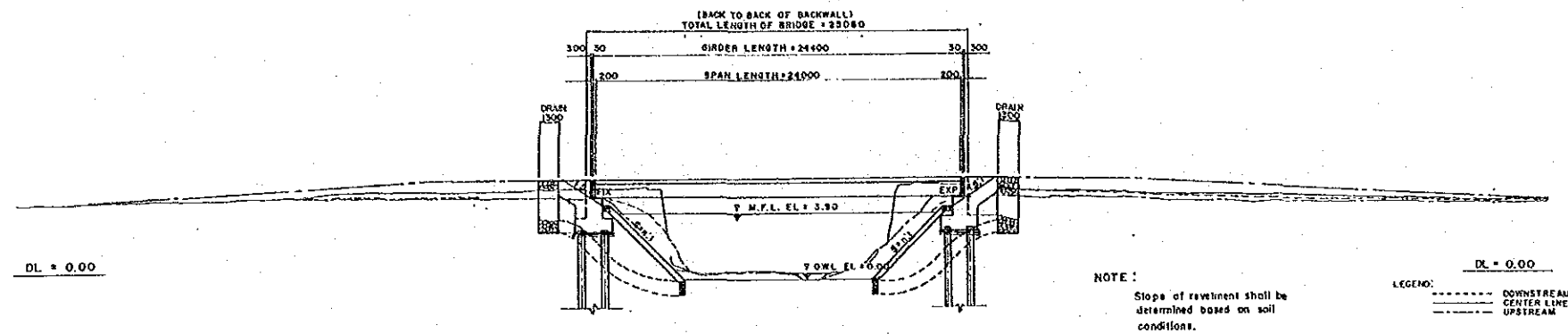
Dead Load:	Concrete	23.54 KN/m ²
	Fill Materials	17.66 KN/m ²
	Concrete Pavement	23.54 KN/m ²
Live Load:	Roadway Live Load	H320-44 (MS-1B)
	Sidewalk Live Load	2.873 KN/m ²
Temperature Change:	Rise +10°	Fall -10°
Earthquake Load:	C = 0.12 with Reference to Relevant AASHTO Provisions and Applicable Code	
Other Loads:	in accordance with 1983 AASHTO Specification.	

7. MATERIALS

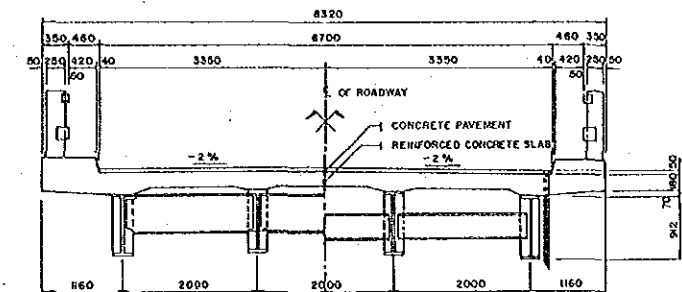
Steel for Superstructure:	Steel shall be Specified by JIS (Japanese Industrial Standard)
Concrete:	Concrete for Superstructure $f_c' = 29.4$ MPa Concrete for Substructure $f_c' = 20.7$ MPa
Others:	Other Materials shall conform to ASTM



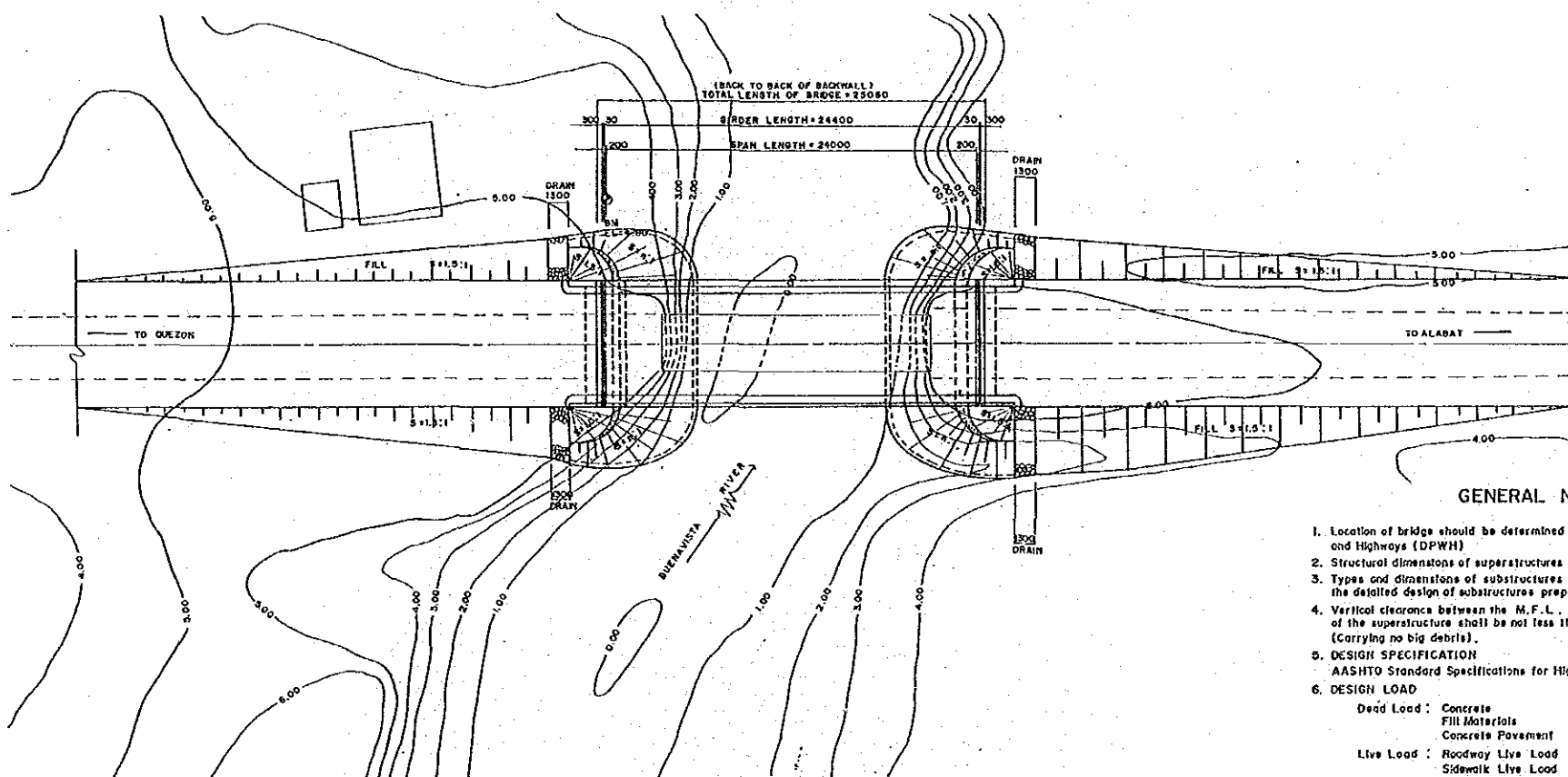
THE BASIC DESIGN STUDY ON THE PROJECT FOR CONSTRUCTING BRIDGES ALONG RURAL ROADS (PHASE III, GROUP 1)		
BRIDGE NO.	BUENAVISTA BRIDGE	SHEET NO.
04, 06a	Km. 016 + 250	13/56



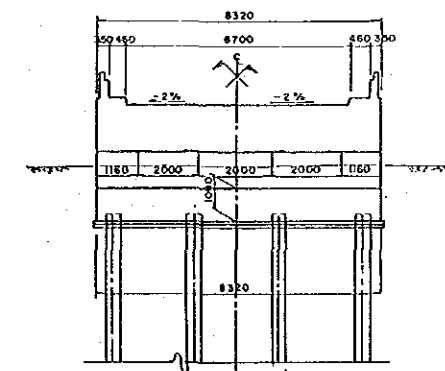
GENERAL ELEVATION
SCALE: 1:200



SUPERSTRUCTURE CROSS SECTION
SCALE: 1:50



GENERAL PLAN
SCALE: 1:200



SUBSTRUCTURE CROSS SECTION
SCALE: 1:100

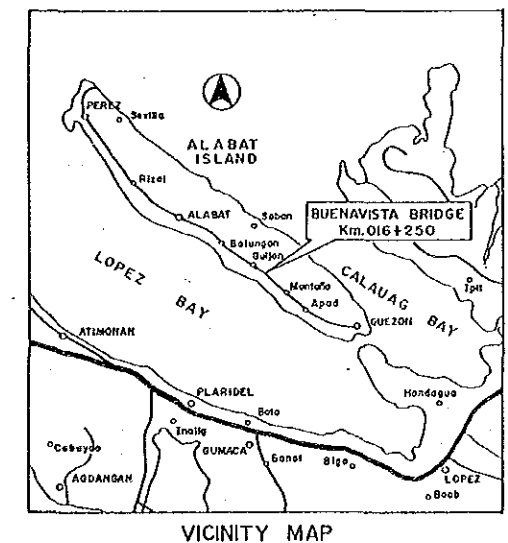
GENERAL NOTES

1. Location of bridge should be determined by the Department of Public Works and Highways (DPWH).
2. Structural dimensions of superstructures should not be amended.
3. Types and dimensions of substructures shall be justified according to the detailed design of substructures prepared by DPWH.
4. Vertical clearance between the M.F.L. and the bottom of the girders of the superstructure shall be not less than 10 meter (Carrying no big debris).
5. DESIGN SPECIFICATION
AASHTO Standard Specifications for Highway Bridges (13th Edition 1983)
6. DESIGN LOAD

Dead Load:	Concrete	23.54 KN/m ³
	Fill Materials	17.66 KN/m ³
	Concrete Pavement	23.54 KN/m ³
Live Load:	Roadway Live Load	HS 20-44 (MS-10)
	Sidewalk Live Load	2.873 KN/m ²
Temperature Change:	Rise +10°	Fall -10°
Earthquake Load:	C = 0.12 with Reference to Relevant AASHTO Provisions and Applicable Code.	
Other Loads:	In accordance with 1983 AASHTO Specification.	
7. MATERIALS

Steel for Superstructure:	Steel shall be Specified by JIS (Japanese Industrial Standard).
Concrete:	Concrete for Superstructure: $f_c' = 29.4$ MPa
	Concrete for Substructure: $f_c' = 20.7$ MPa
Others:	Other Materials shall conform to ASTM

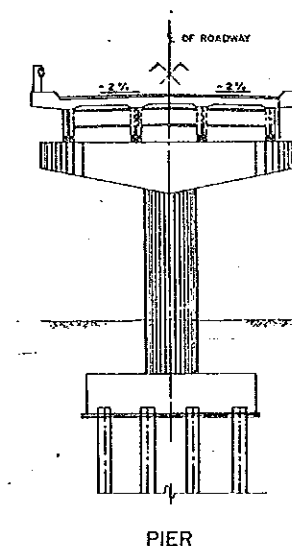
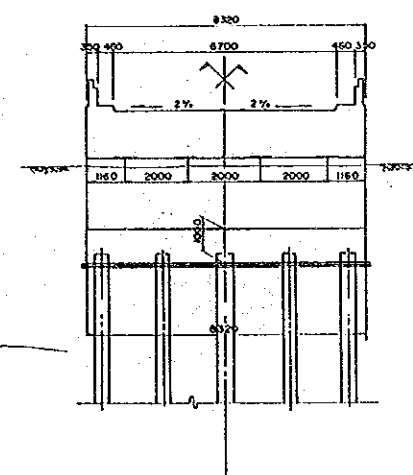
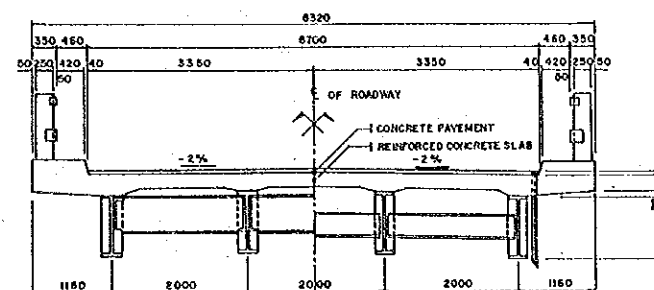
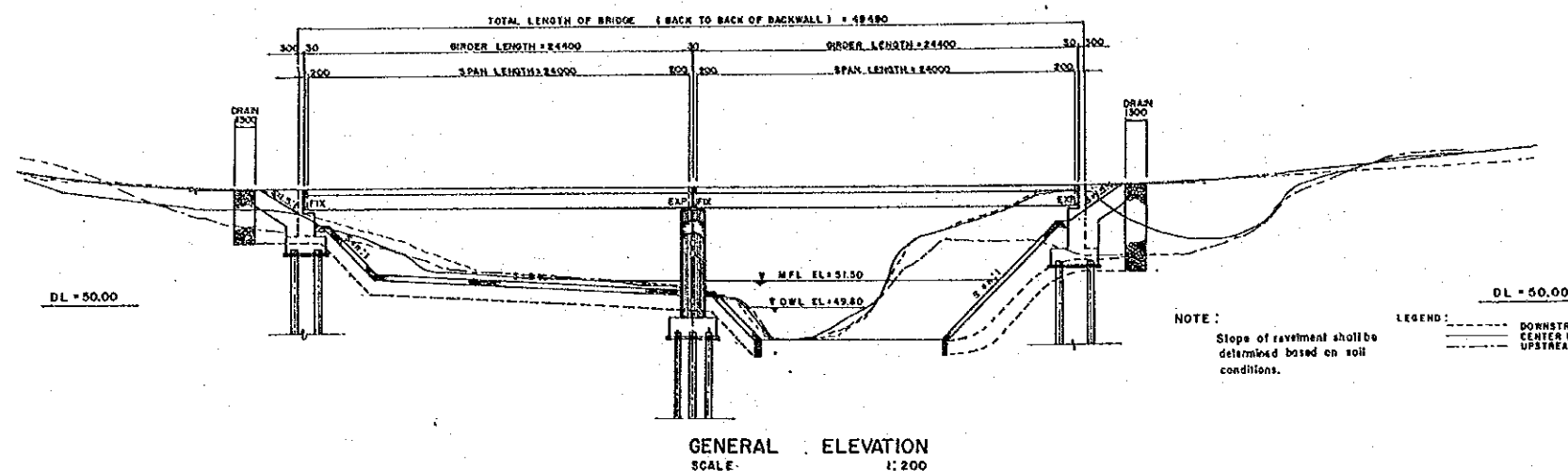
DRAWINGS
All Dimensions are express in millimeter unless otherwise shown in the plans.
All Elevations are in meters



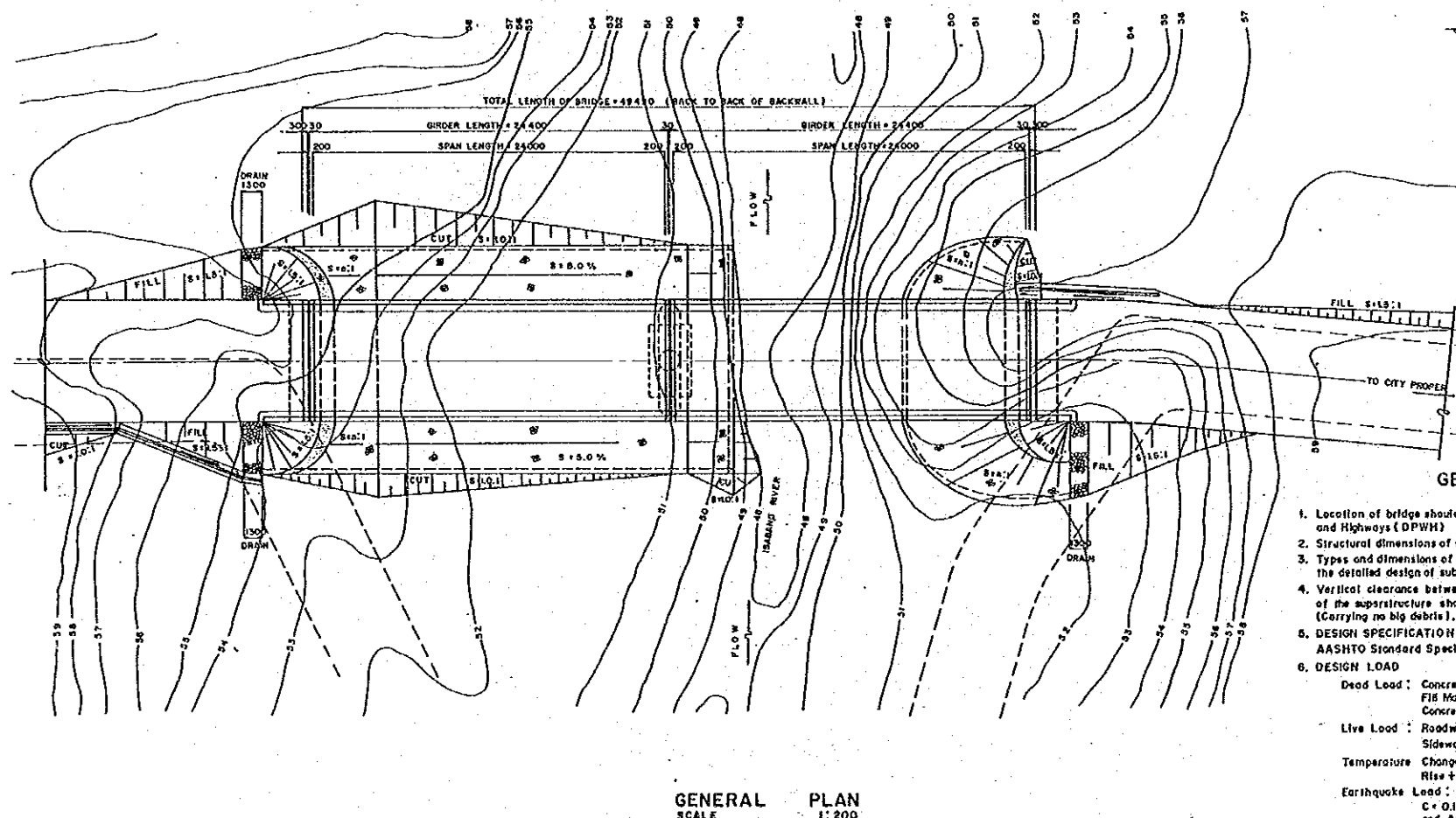
VICINITY MAP

THE BASIC DESIGN STUDY ON THE PROJECT
FOR CONSTRUCTING BRIDGES ALONG RURAL ROADS (PHASE III, GROUP I)

BRIDGE NO.	ISABANG BRIDGE	SHEET NO.
04.09a	Km. 127 + 399	14/56

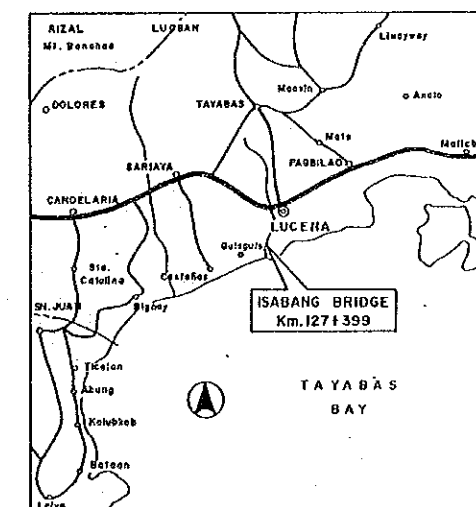


SUBSTRUCTURE CROSS SECTION
SCALE: 1:100



GENERAL NOTES

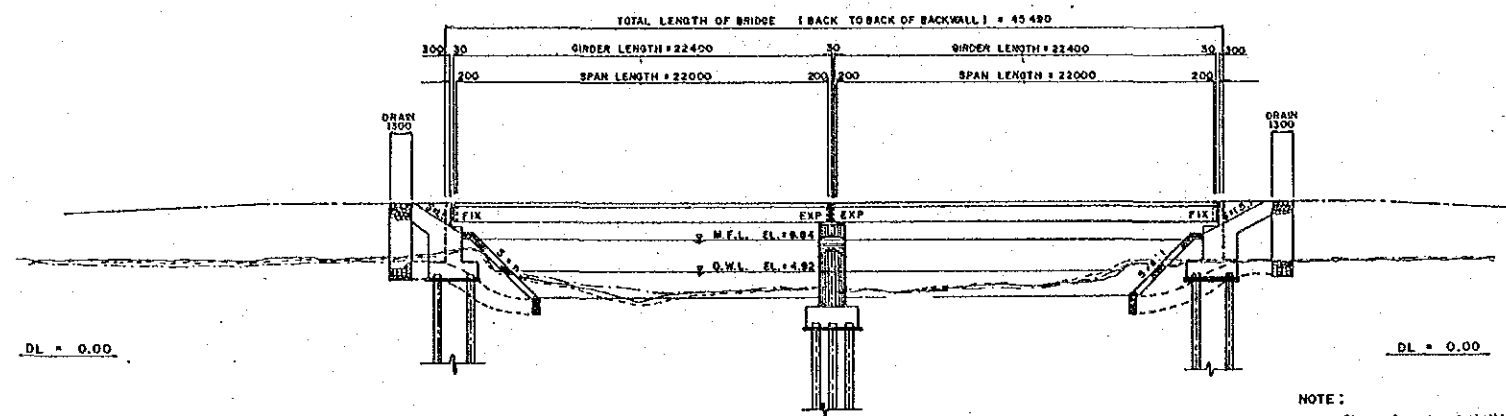
- Location of bridge should be determined by the Department of Public Works and Highways (DPWH).
- Structural dimensions of superstructures should not be amended.
- Types and dimensions of substructures shall be justified according to the detailed design of substructures prepared by DPWH.
- Vertical clearance between the M.F.L. and the bottom of the girders of the superstructure shall be not less than 1.0 meter (Carrying no big debris).
- DESIGN SPECIFICATION
AASHTO Standard Specifications for Highway Bridges (13th Edition 1983)
- DESIGN LOAD
Dead Load: Concrete 23.64 KN/m³
Fill Materials 17.66 KN/m³
Concrete Pavement 23.64 KN/m³
Live Load: Roadway Live Load HS 20-44 (MS-18)
Sidewalk Live Load 2.873 KN/m²
Temperature Change: Rise +10° Fall -10°
Earthquake Load: C = 0.12 with Reference to Relevant AASHTO Provisions and Applicable Code.
Other Loads: in accordance with 1983 AASHTO Specification.
- MATERIALS
Steel for Superstructure: Steel shall be Specified by JIS (Japanese Industrial Standard).
Concrete: Concrete for Superstructure f_c' = 29.4 MPa
Concrete for Substructure f_c' = 20.7 MPa
Others: Other Materials shall conform to ASTM



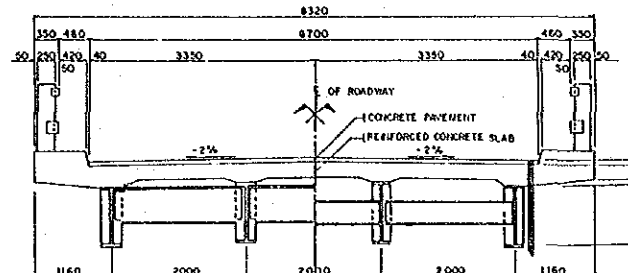
DRAWINGS
All Dimensions are expressed in millimeter unless otherwise shown in the plans.
All Elevations are in meters

THE BASIC DESIGN STUDY ON THE PROJECT
FOR CONSTRUCTING BRIDGES ALONG RURAL ROADS (PHASE III, GROUP 1)

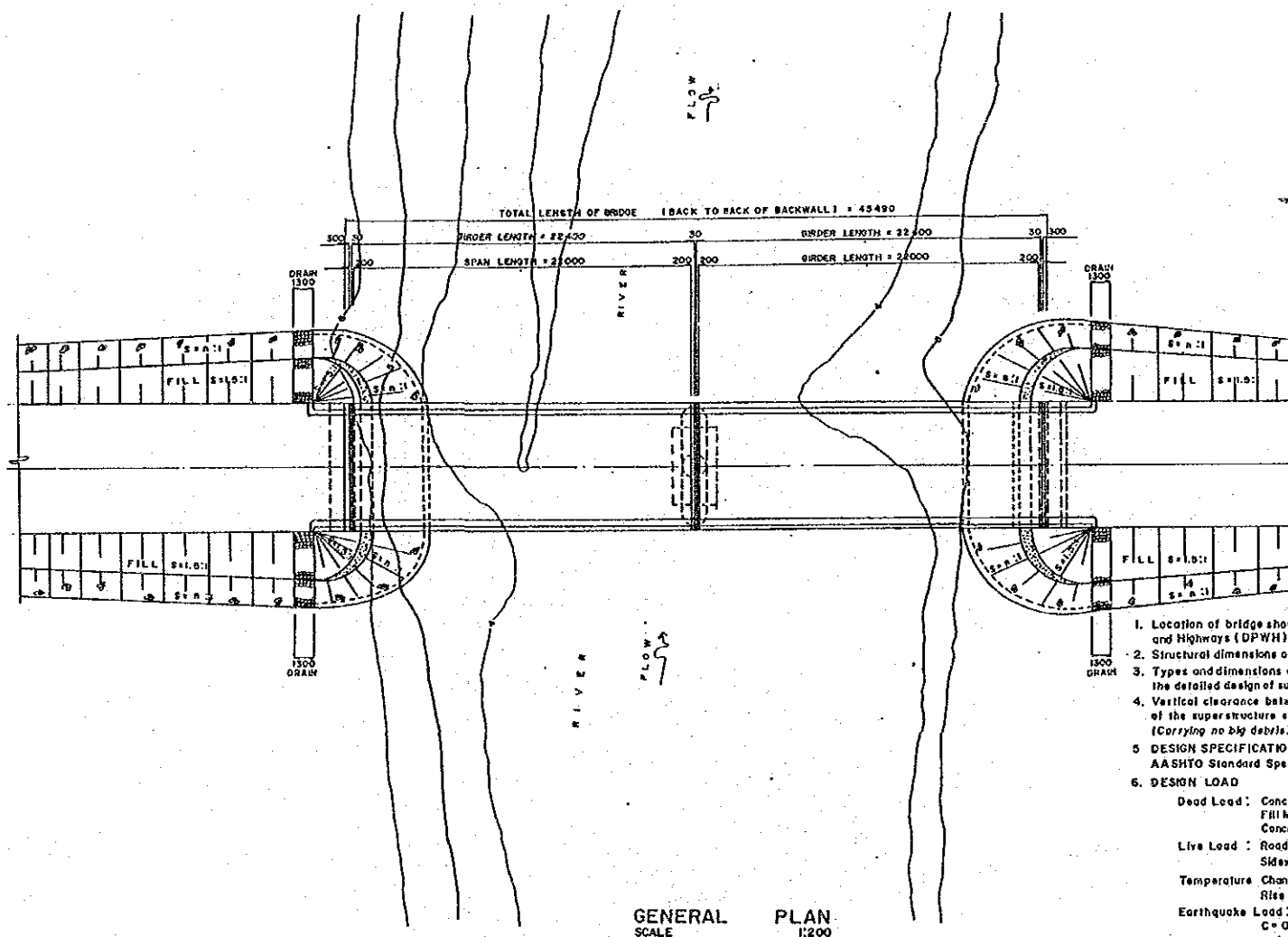
BRIDGE NO.		SHEET NO.
04.10a	PANSIPIT BRIDGE Km. 131+140	15/56



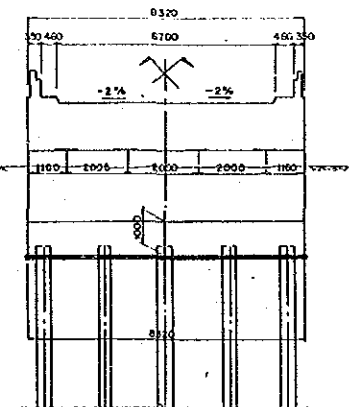
GENERAL ELEVATION
SCALE 1:200



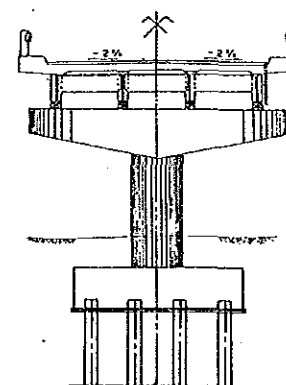
SUPERSTRUCTURE CROSS SECTION
SCALE 1:50



GENERAL PLAN
SCALE 1:200



ABUTMENT



PIER

SUBSTRUCTURE CROSS SECTION
SCALE 1:100

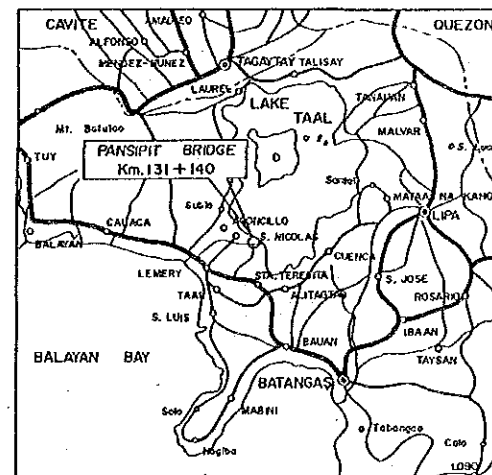
GENERAL NOTES

1. Location of bridge should be determined by the Department of Public Works and Highways (DPWH).
2. Structural dimensions of superstructures should not be amended.
3. Types and dimensions of substructures shall be justified according to the detailed design of substructures prepared by DPWH.
4. Vertical clearance between the M.F.L. and the bottom of the girders of the superstructure shall be not less than 1.0 meter (Carrying no big debris).
5. DESIGN SPECIFICATION
AASHTO Standard Specifications for Highway Bridges (13th Edition 1983)
6. DESIGN LOAD

Dead Load:	Concrete	23.54 KN/m ³
	Fill Materials	17.66 KN/m ³
	Concrete Pavement	23.54 KN/m ³
Live Load:	Roadway Live Load	HS 20-44 (MS-18)
	Skewalk Live Load	2.873 KN/m ²
Temperature Change	Rise +10°	Fall -10°
Earthquake Load:	C = 0.12 with Reference to Relevant AASHTO Provisions and Applicable Code	
Other Loads:	in accordance with 1983 AASHTO Specification	
7. MATERIALS

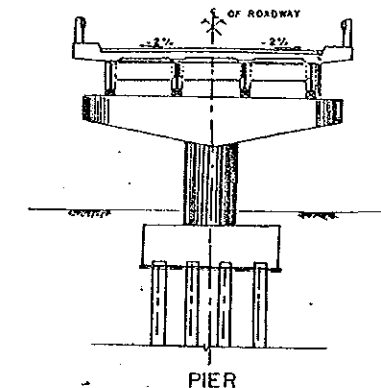
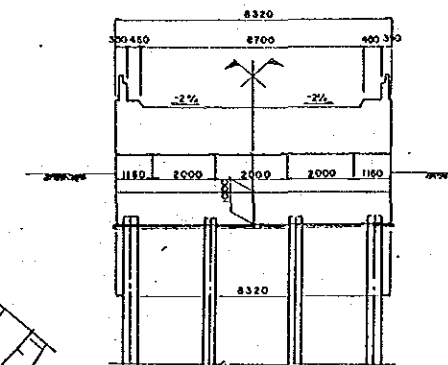
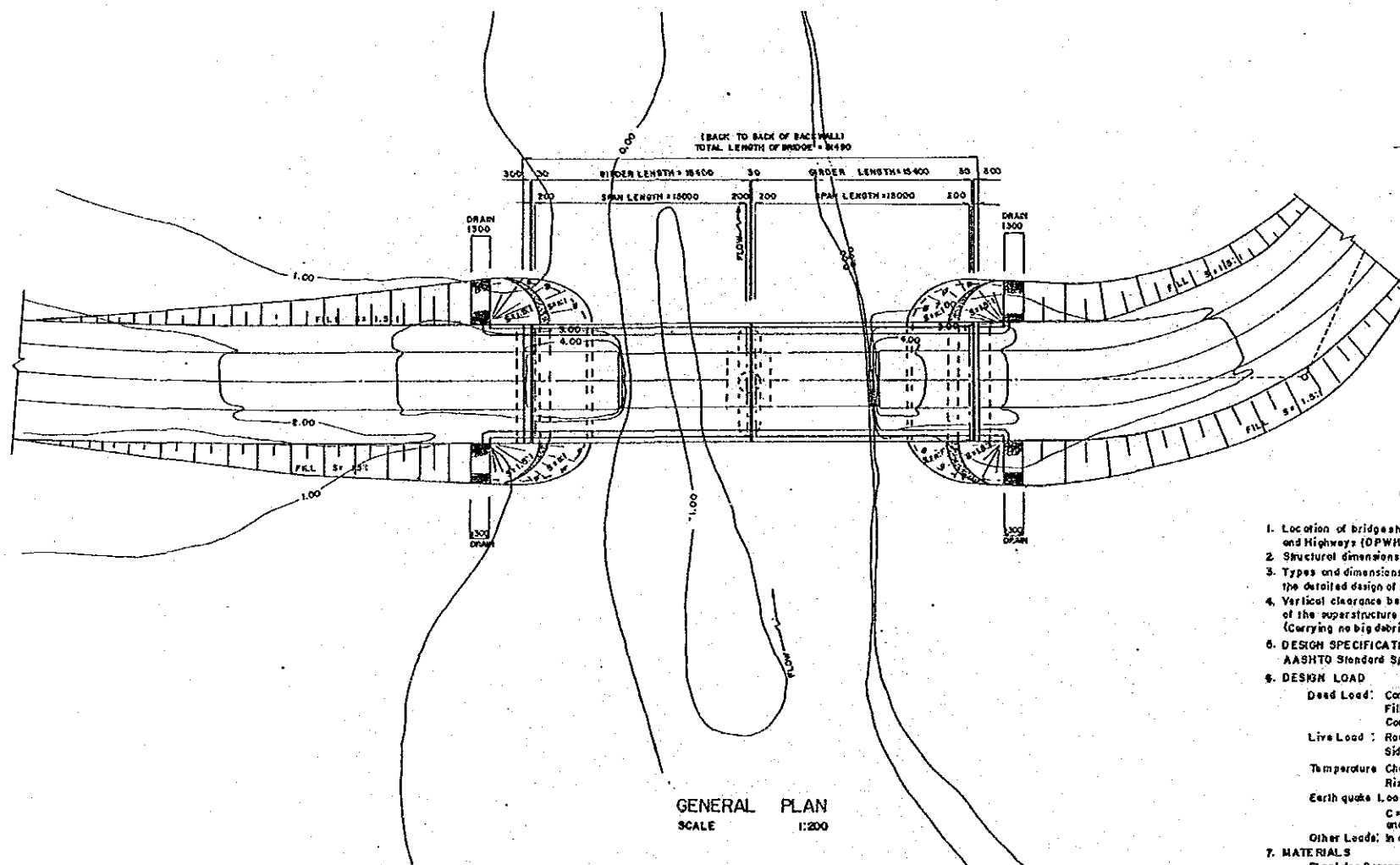
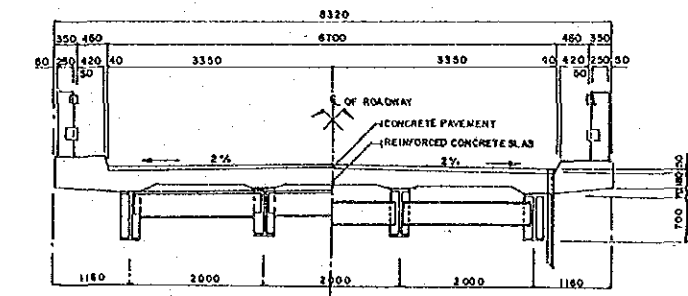
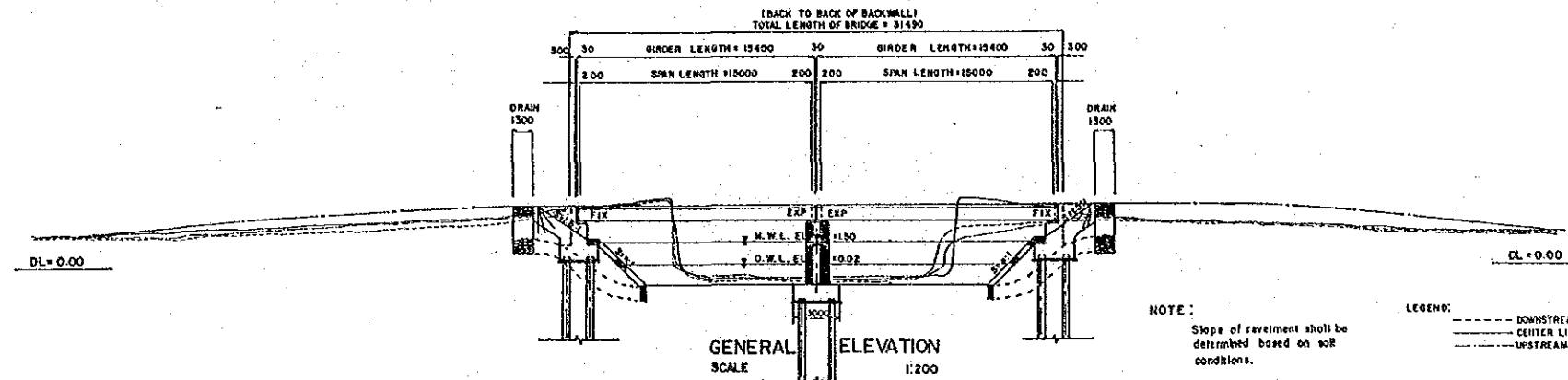
Steel for Superstructure:	Steel shall be Specified by JIS (Japanese Industrial Standard).
Concrete:	Concrete for Superstructure $f_c = 29.4$ MPa
	Concrete for Substructure $f_c = 20.7$ MPa
Others:	Other Materials shall conform to ASTM

DRAWINGS
All Dimensions are express in millimeter unless otherwise shown in the plans
All Elevations are in meters.



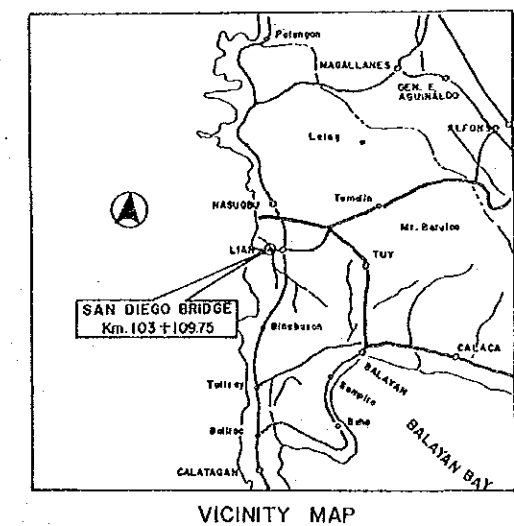
VICINITY MAP

THE BASIC DESIGN STUDY ON THE PROJECT FOR CONSTRUCTING BRIDGES ALONG RURAL ROADS (PHASE III, GROUP 1)		
BRIDGE NO.	SAN DIEGO BRIDGE	SHEET NO.
04.IIa	Km. 103 + 109.75	16/56



GENERAL NOTES

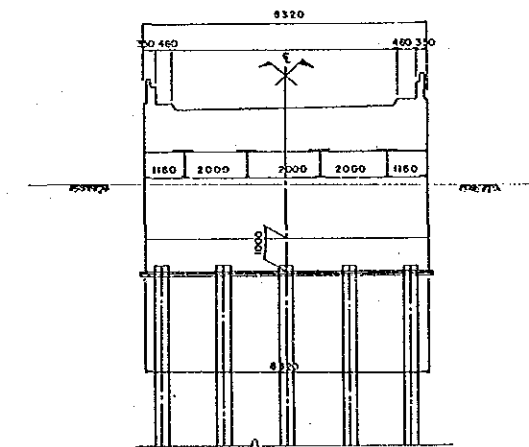
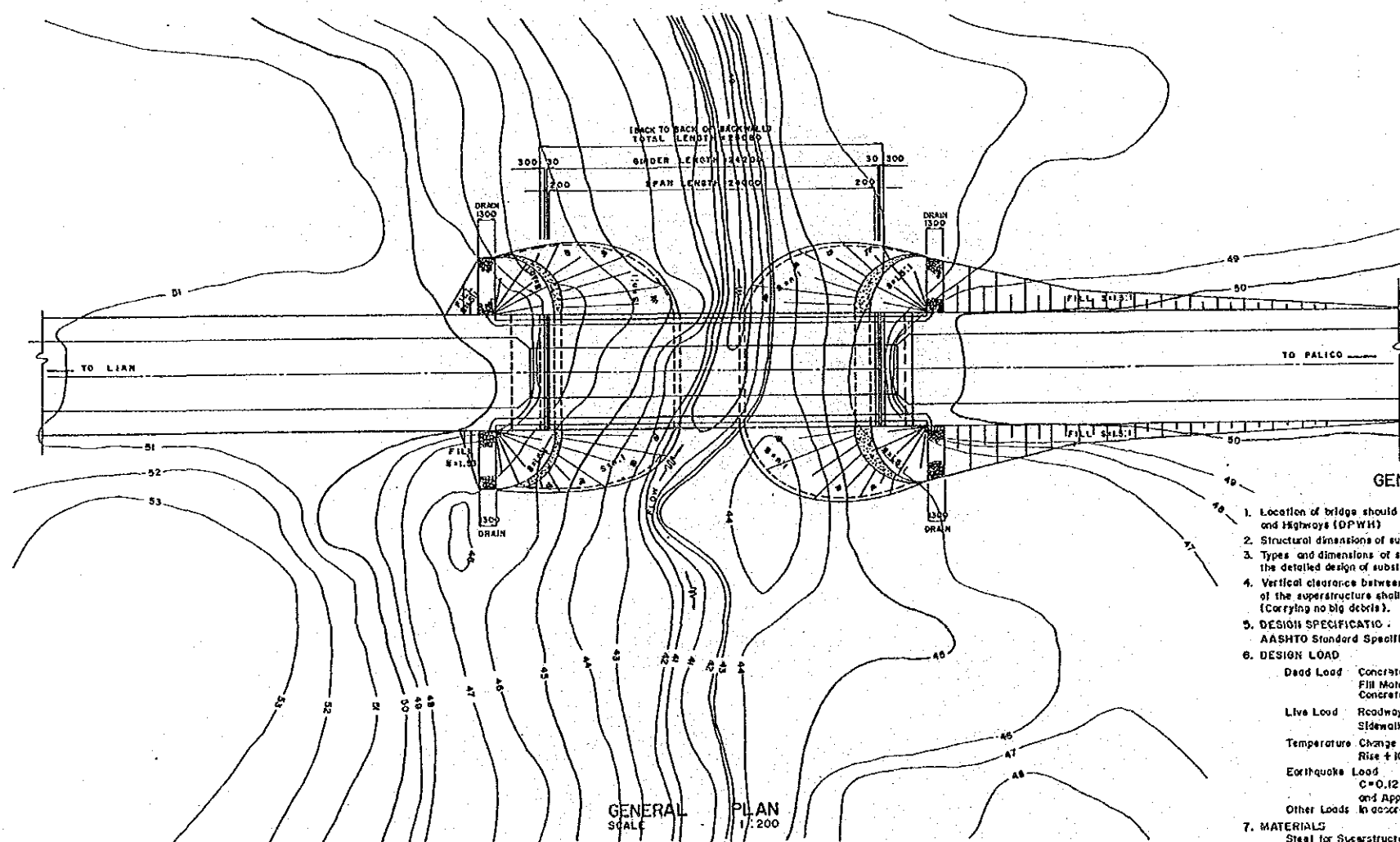
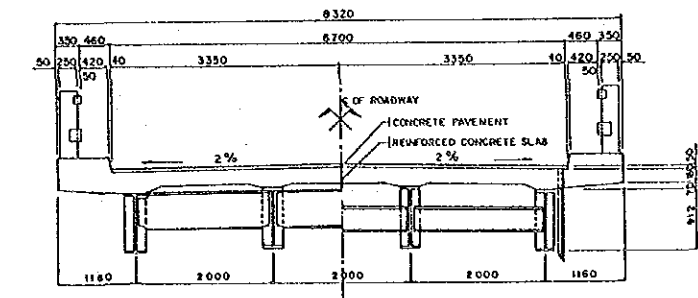
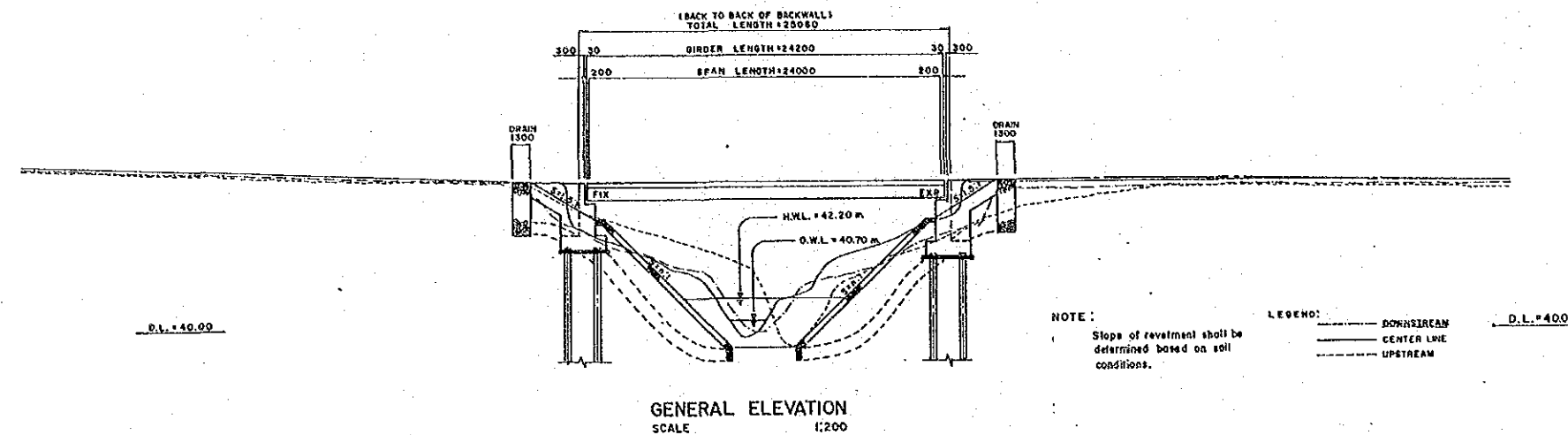
- Location of bridges should be determined by the Department of Public Works and Highways (DPWH).
- Structural dimensions of superstructures should not be amended.
- Types and dimensions of substructures shall be justified according to the detailed design of substructures prepared by DPWH.
- Vertical clearance between the M.F.L. and the bottom of the girders of the superstructure shall be not less than 1.0 meter (Carrying no big debris).
- DESIGN SPECIFICATION
AASHTO Standard Specifications for Highway Bridges (13th Edition 1963)
- DESIGN LOAD
Dead Load: Concrete 23.54 KN/m³
Fill Materials 17.68 KN/m³
Concrete Pavement 23.54 KN/m³
Live Load: Roadway Live Load HS20-44 (MS-18)
Sidewalk Live Load 2.873 KN/m²
Temperature Change: Rise +10° Fall -10°
Earthquake Load
C = 0.12 with Reference to Relevant AASHTO Provisions and Applicable Code
Other Loads: in accordance with 1983 AASHTO Specification.
- MATERIALS
Steel for Superstructure:
Steel shall be Specified by JIS (Japanese Industrial Standard).
Concrete:
Concrete for Superstructure f_c' = 29.4 MPa
Concrete for Substructure f_c' = 20.7 MPa
Others:
Other Materials shall conform to ASTM.



DRAWINGS
All Dimensions are expressed in millimeter unless otherwise shown in the plans
All Elevations are in meters.

THE BASIC DESIGN STUDY ON THE PROJECT
FOR CONSTRUCTING BRIDGES ALONG RURAL ROADS (PHASE III, GROUP 1)

BRIDGE NO.		SHEET NO.
04.13a	BAGONG POOK BRIDGE Km. 95+090	17/56

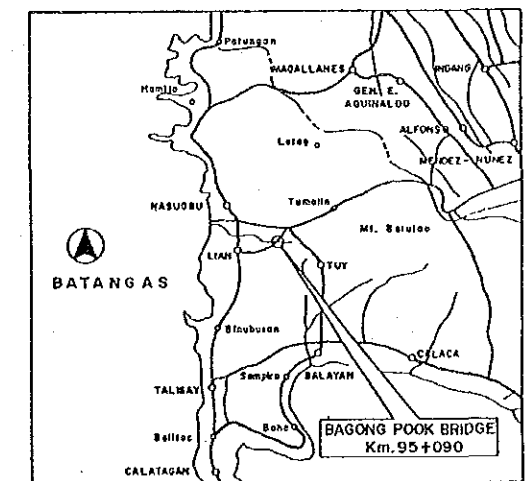


GENERAL NOTES

1. Location of bridge should be determined by the Department of Public Works and Highways (DPWH).
2. Structural dimensions of superstructures should not be amended.
3. Types and dimensions of substructures shall be justified according to the detailed design of substructures prepared by DPWH.
4. Vertical clearance between the M.F.L. and 1/4 bottom of the girders of the superstructure shall be not less than 1.0 meter (Carrying no big debris).
5. DESIGN SPECIFICATION: AASHTO Standard Specifications for Highway Bridges (13th Edition 1983).
6. DESIGN LOAD

Dead Load	Concrete	23.54 KN/m ³
	Fill Materials	17.88 KN/m ³
	Concrete Pavement	23.54 KN/m ³
Live Load	Roadway Live Load	HS20-44 (MS-18)
	Sidewalk Live Load	2.473 KN/m ²
Temperature Change	Rise +10°	Fall -10°
Earthquake Load	C=0.12 with reference to Relevant AASHTO Provisions and Applicable Code.	
Other Loads	In accordance with 1993 AASHTO Specification	
7. MATERIALS

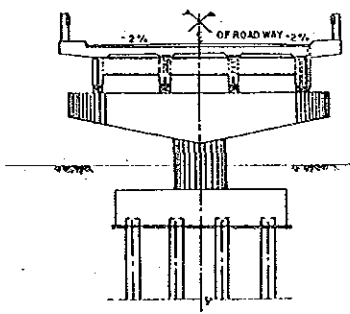
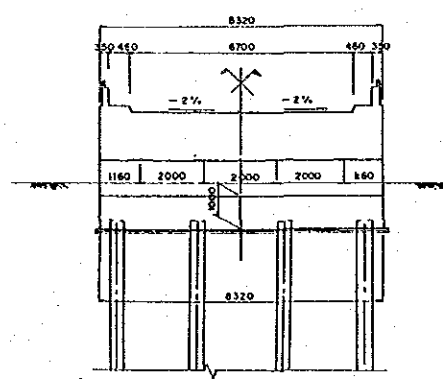
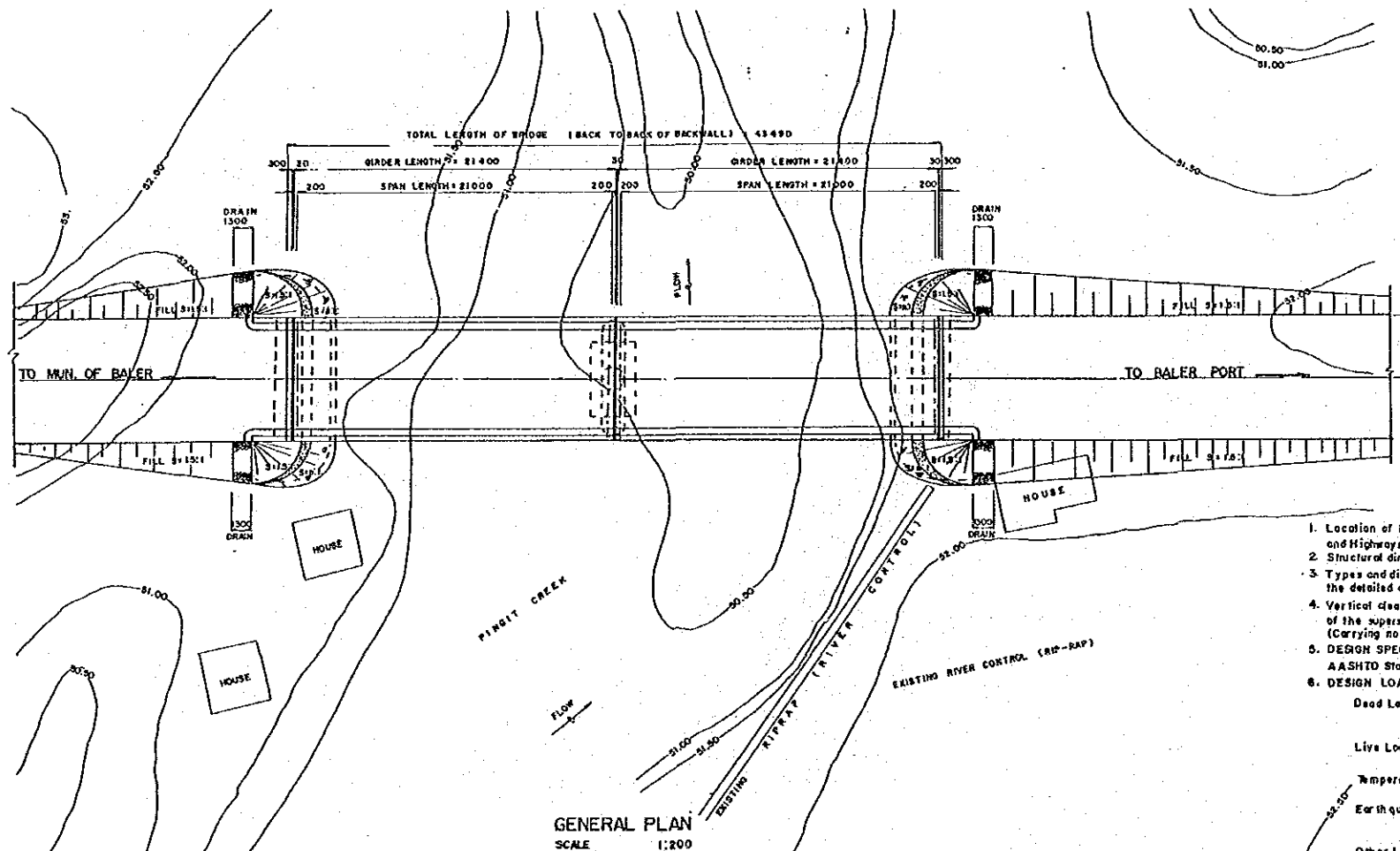
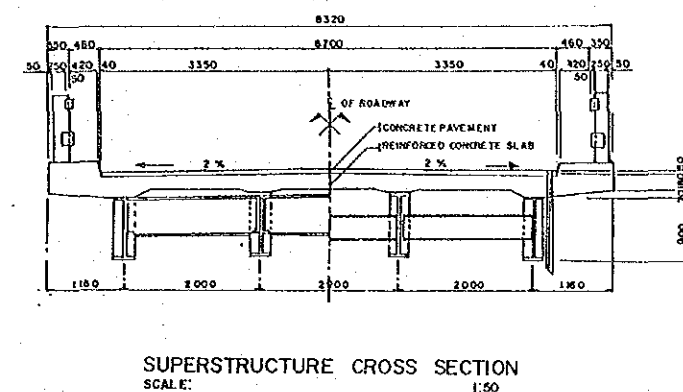
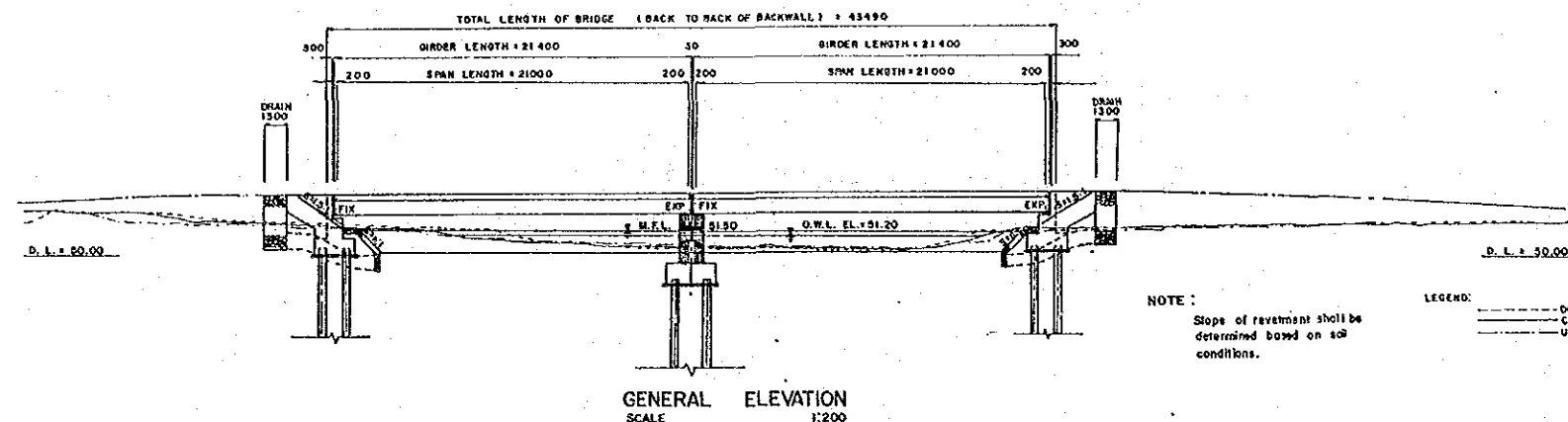
Steel for Superstructure	Steel shall be Specified by JIS (Japanese Industrial Standard).
Concrete	Concrete for Superstructure f _c ' = 29.4 MPa
	Concrete for Substructure f _c ' = 20.7 MPa
Others	Other Materials shall conform to ASTM



DRAWINGS
All Dimensions are express in millimeter unless otherwise shown in the plans
All Elevations are in meters

THE BASIC DESIGN STUDY ON THE PROJECT
FOR CONSTRUCTING BRIDGES ALONG RURAL ROADS (PHASE III, GROUP 1)

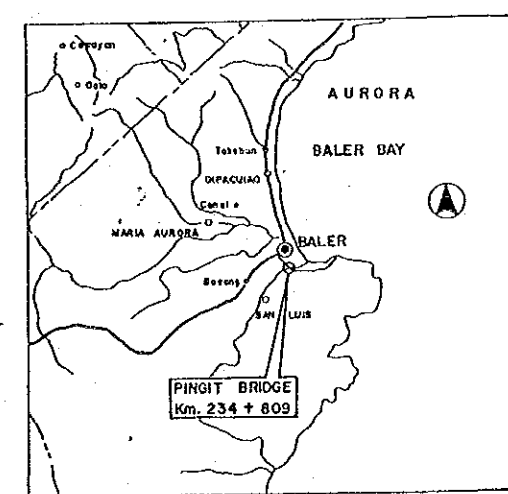
BRIDGE NO.		SHEET NO.
04.16a	PINGIT BRIDGE Km. 234 + 809	18/56



SUBSTRUCTURE CROSS SECTION
SCALE 1:100

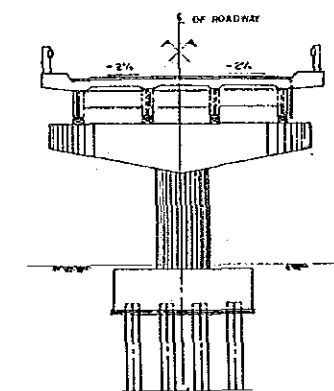
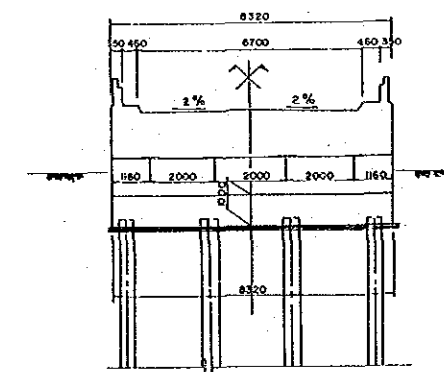
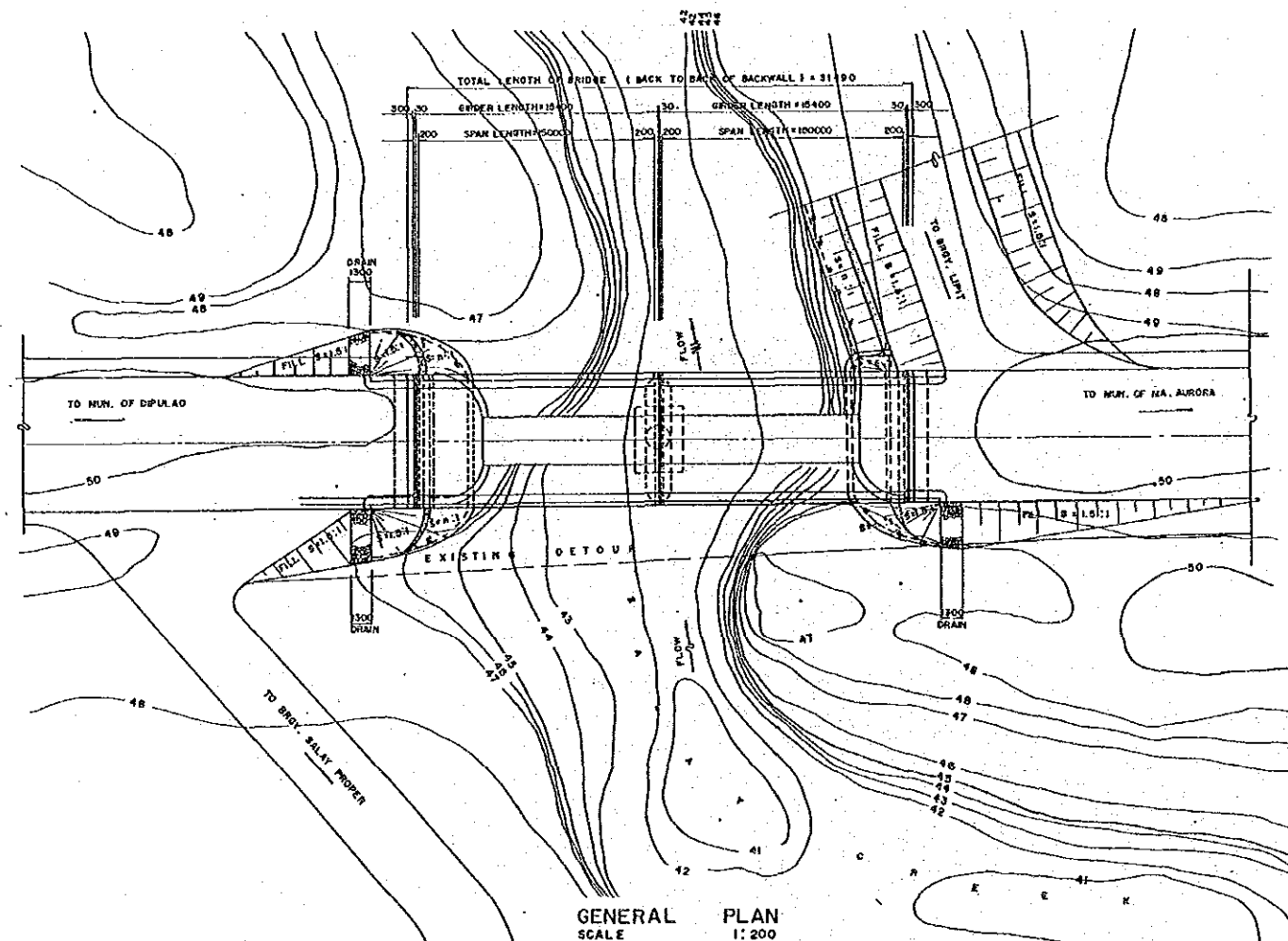
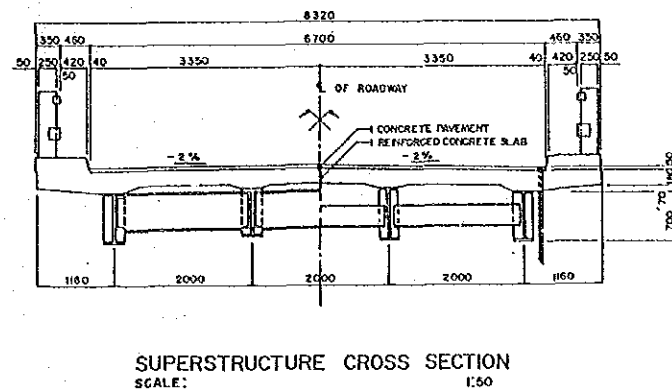
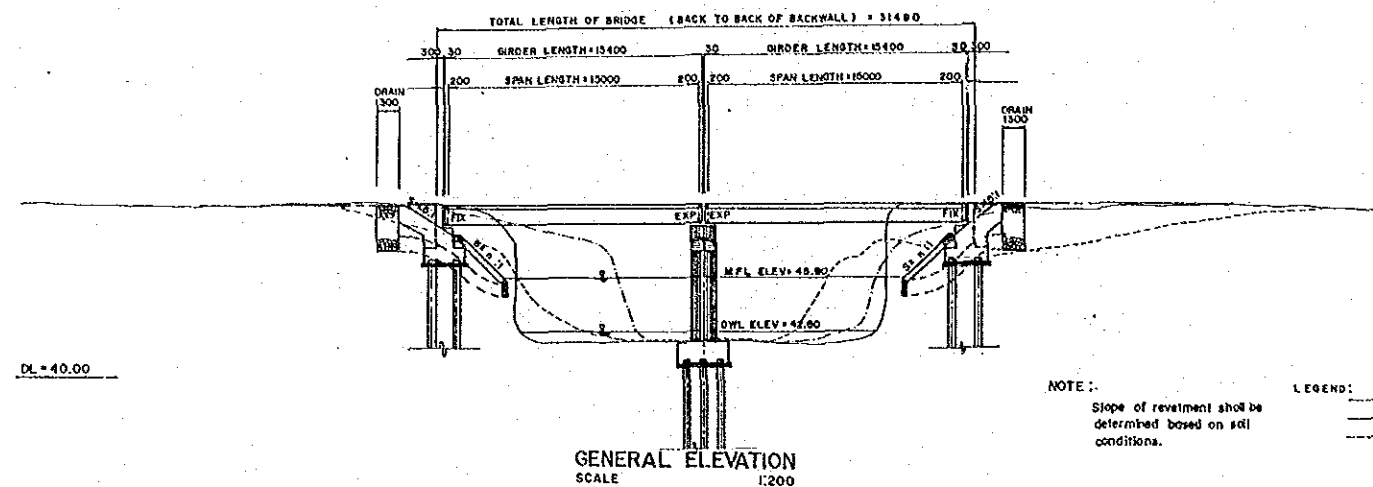
GENERAL NOTES

- Location of bridge should be determined by the Department of Public Works and Highways (DPWH).
- Structural dimensions of superstructures should not be amended.
- Types and dimensions of substructures shall be justified according to the detailed design of substructures prepared by DPWH.
- Vertical clearance between the M.F.L. and the bottom of the girders of the superstructure shall be not less than 1.0 meter (Carrying no big debris).
- DESIGN SPECIFICATION
AASHTO Standard Specifications for Highway Bridges (13th Edition 1983)
- DESIGN LOAD
Dead Load: Concrete 23.54 KN/m³
Fill Materials 17.66 KN/m³
Concrete Pavement 25.54 KN/m³
Live Load: Roadway Live Load HS 20-44 (HS-18)
Sidewalk Live Load 2.873 KN/m²
Temperature Change: Rise +10° Fall -10°
Earthquake Load: C = 0.12 with Reference to Relevant AASHTO Provisions and Applicable Code.
Other Load: In accordance with 1983 AASHTO Specification.
- MATERIALS
Steel for Superstructure: Steel shall be Specified by JIS (Japanese Industrial Standard)
Concrete: Concrete for Superstructure $f_c = 29.4$ MPa
Concrete for Substructure $f_c = 20.7$ MPa
Others: Other Materials shall conform to ASTM



DRAWINGS
All Dimensions are express in millimeter unless otherwise shown in the plans.
All Elevations are in meters

THE BASIC DESIGN STUDY ON THE PROJECT FOR CONSTRUCTING BRIDGES ALONG RURAL ROADS (PHASE II, GROUP I)		
BRIDGE NO.		SHEET NO.
04.176	SALAY BRIDGE Km. 238+108	19 / 56

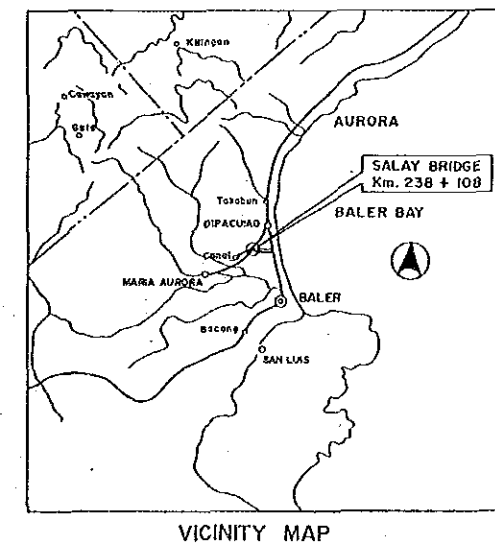


GENERAL NOTES

1. Location of bridge should be determined by the Department of Public Works and Highways (DPWH).
2. Structural dimensions of superstructures should not be amended.
3. Types and dimensions of substructures shall be justified according to the detailed design of substructures prepared by DPWH.
4. Vertical clearance between the M.F.L. and the bottom of the girders of the superstructure shall be not less than 1.0 meter (Carrying no big debris).
5. DESIGN SPECIFICATION
AASHTO Standard Specifications for Highway Bridges (13th Edition 1983)
6. DESIGN LOAD

Dead Load:	Concrete	23.54 KN/m ³
	Fill Materials	17.68 KN/m ³
	Concrete Pavement	23.54 KN/m ³
Live Load:	Roadway Live Load	HS 20-44 (MS-18)
	Sidewalk Live Load	2.873 KN/m ²
Temperature Change:	Rise +10°	Fall -10°
Earthquake Load:	C = 0.12 with References to Relevant AASHTO Provisions and Applicable Code	
Other Loads:	In accordance with 1983 AASHTO Specification.	
7. MATERIALS

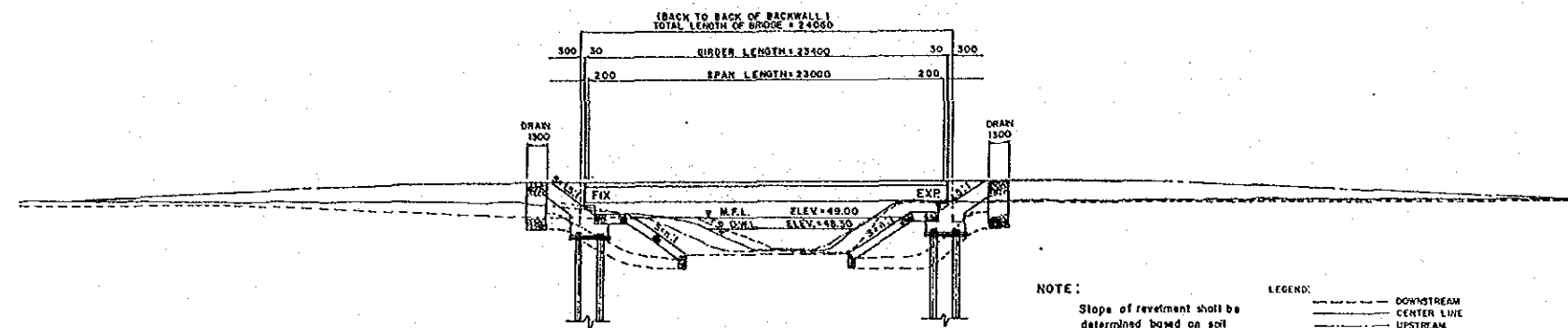
Steel for Superstructure:	Steel shall be Specified by JIS (Japanese Industrial Standard).
Concrete:	Concrete for Superstructure f _c ' = 29.4 MPa
	Concrete for Substructure f _c ' = 20.7 MPa
Others:	Other Materials shall conform to ASTM



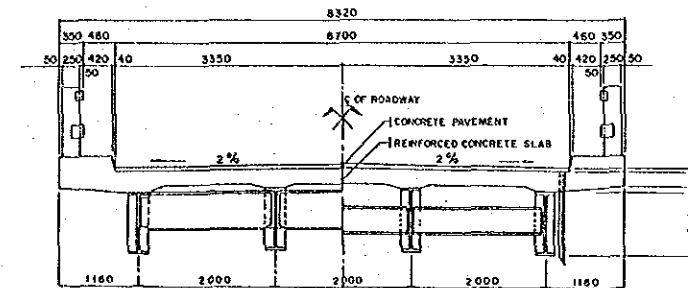
DRAWINGS
All Dimensions are express in millimeter unless otherwise shown in the plans.
All Elevations are in meters.

THE BASIC DESIGN STUDY ON THE PROJECT
FOR CONSTRUCTING BRIDGES ALONG RURAL ROADS (PHASE II, GROUP 1)

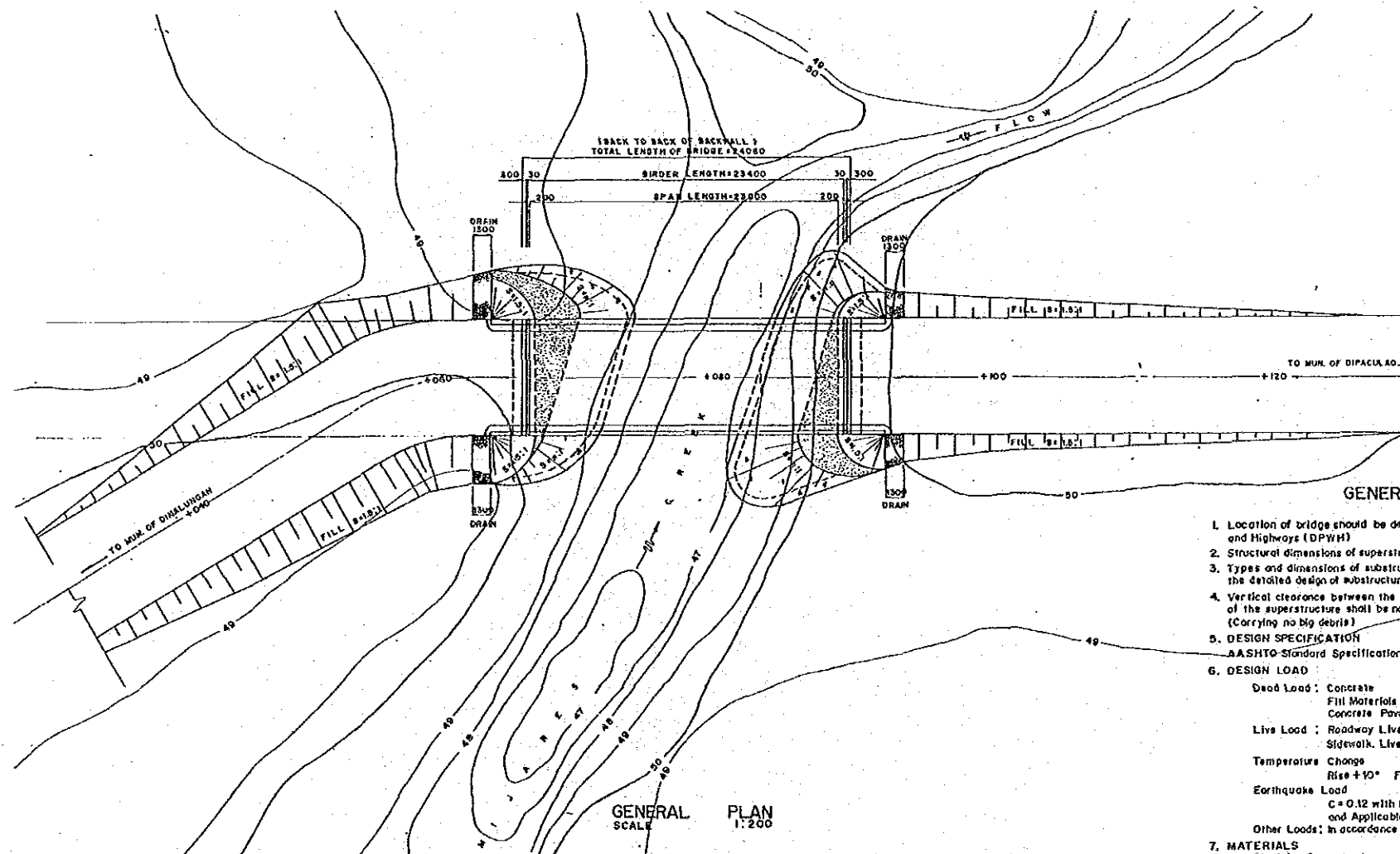
BRIDGE NO.	MIJARES BRIDGE	SHEET NO.
04, 18d	Km. 247+435	20/56



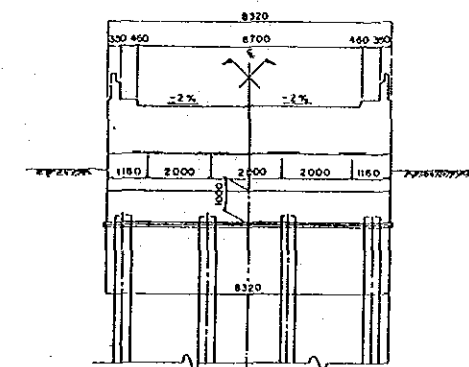
GENERAL ELEVATION
SCALE 1:200



SUPERSTRUCTURE CROSS SECTION
SCALE 1:50



GENERAL PLAN
SCALE 1:200



SUBSTRUCTURE CROSS SECTION
SCALE 1:100

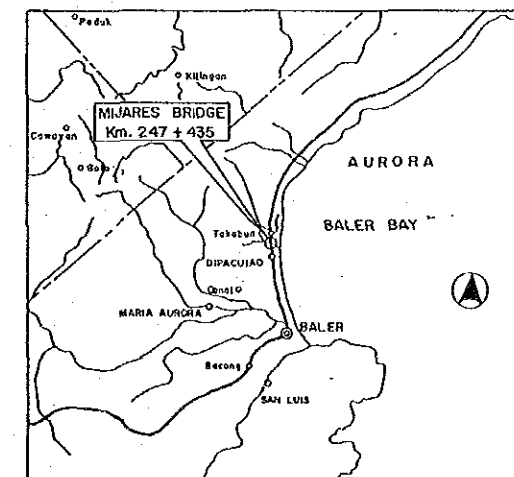
GENERAL NOTES

1. Location of bridge should be determined by the Department of Public Works and Highways (DPWH).
2. Structural dimensions of superstructures should not be amended.
3. Types and dimensions of substructures shall be justified according to the detailed design of substructures prepared by DPWH.
4. Vertical clearance between the M.F.L. and the bottom of the girders of the superstructure shall be not less than 1.0 meter (Carrying no big debris).
5. DESIGN SPECIFICATION
AASHTO Standard Specifications for Highway Bridges (13th Edition 1983)
6. DESIGN LOAD

Dead Load: Concrete	23.54 KN/m ³
Fill Materials	17.68 KN/m ³
Concrete Pavement	23.54 KN/m ³
Live Load: Roadway Live Load	HS20-44 (MS-18)
Sidewalk Live Load	2.873 KN/m ²
Temperature Change	Rise +10° Fall -30°
Earthquake Load	C=0.12 with Reference to Relevant AASHTO Provisions and Applicable Code.
Other Loads	In accordance with 1983 AASHTO Specification
7. MATERIALS

Steel for Superstructure	Steel shall be Specified by JIS (Japanese Industrial Standard).
Concrete	Concrete for Superstructure $f_c = 29.4$ MPa Concrete for Substructure $f_c = 20.7$ MPa
Others	Other Materials shall conform to ASTM

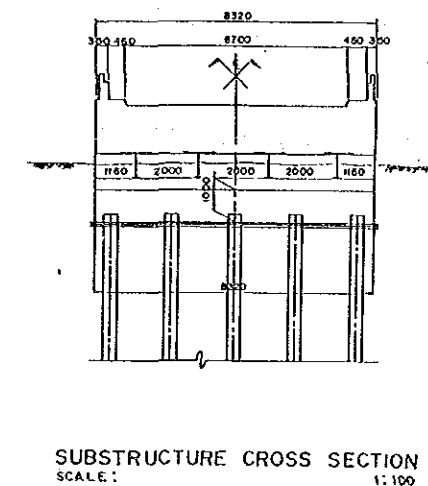
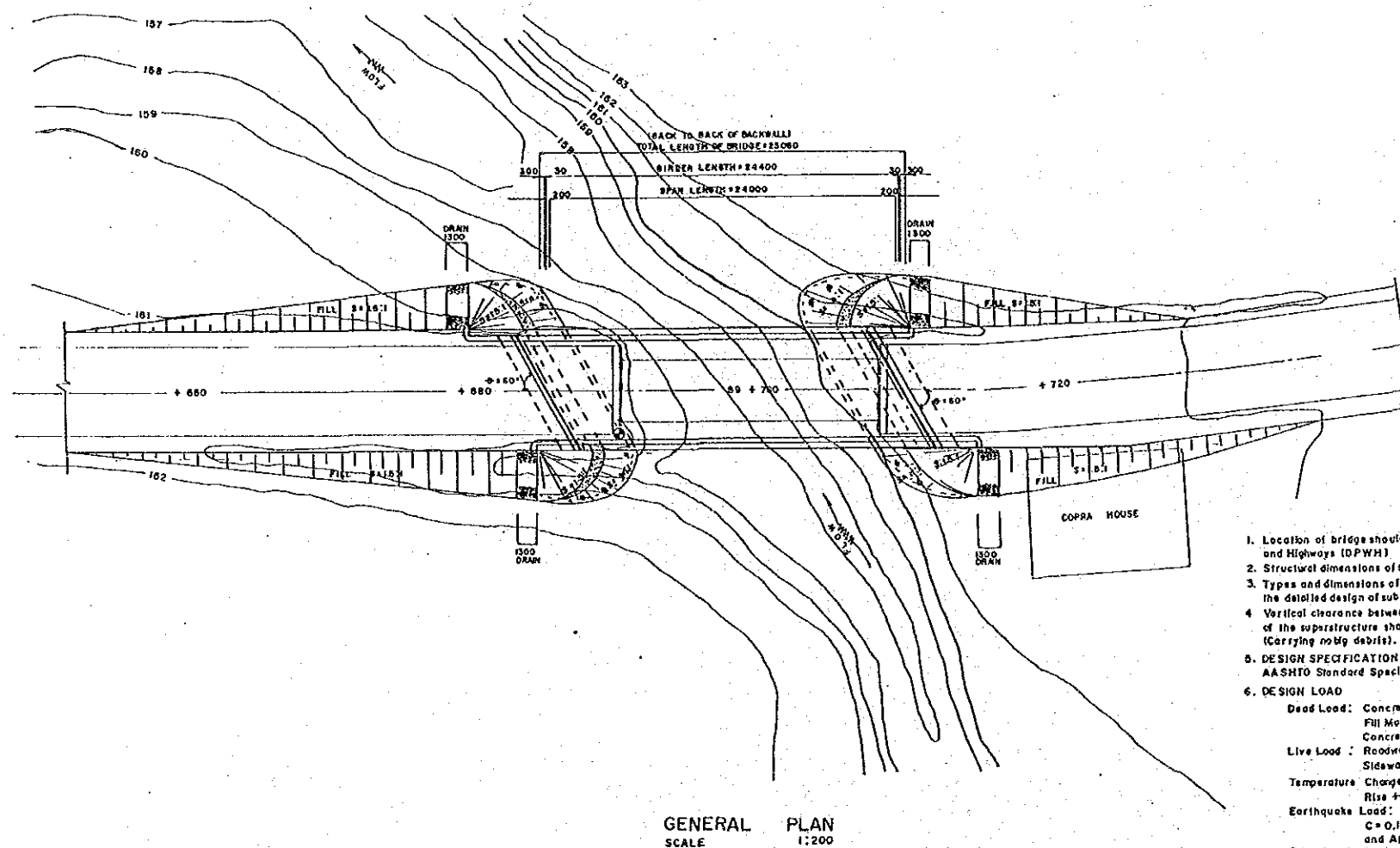
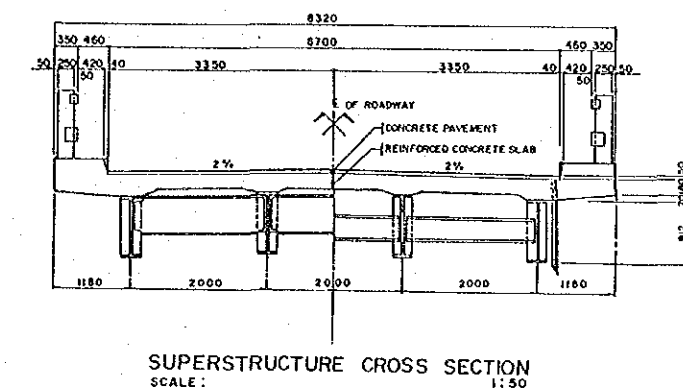
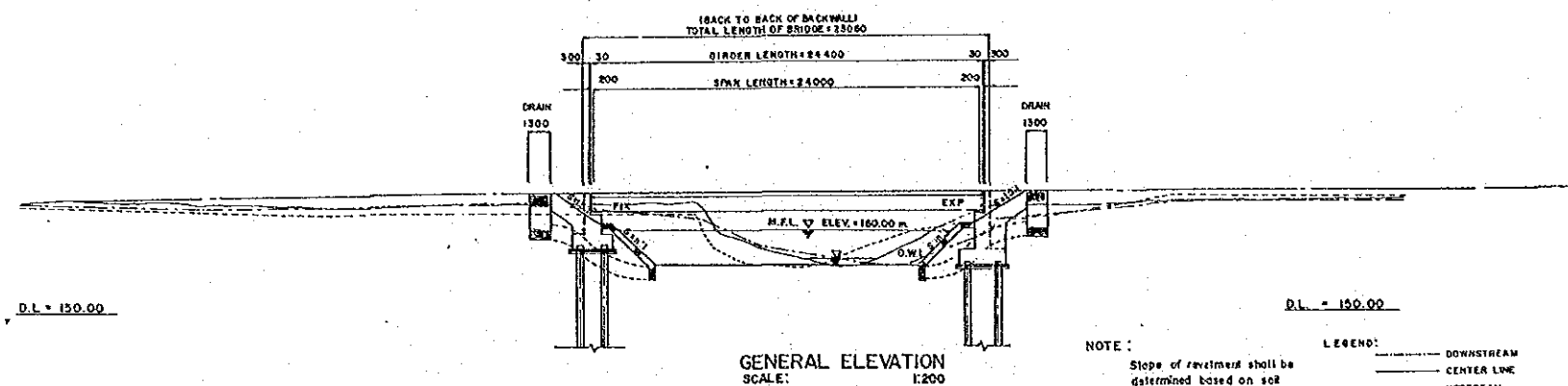
DRAWINGS
All Dimensions are express in millimeter unless otherwise shown in the plans
All Elevations are in meters



VICINITY MAP

THE BASIC DESIGN STUDY ON THE PROJECT
FOR CONSTRUCTING BRIDGES ALONG RURAL ROADS (PHASE II, GROUP 1)

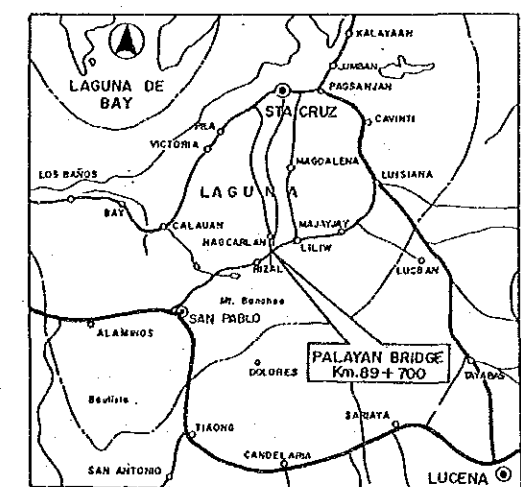
BRIDGE NO.		SHEET NO.
04.19a	PALAYAN BRIDGE Km 89 + 700	21 / 56



- Location of bridge should be determined by the Department of Public Works and Highways (DPWH).
- Structural dimensions of superstructures should not be amended.
- Types and dimensions of substructures shall be justified according to the detailed design of substructures prepared by DPWH.
- Vertical clearance between the M.F.L. and the bottom of the girders of the superstructure shall be not less than 1.0 meter. (Carrying no big debris).
- DESIGN SPECIFICATION
AASHTO Standard Specifications for Highway Bridges (13th Edition 1983)
- DESIGN LOAD

Dead Load:	Concrete	23.54 KN/m ³
	Fill Materials	17.66 KN/m ³
	Concrete Pavement	23.54 KN/m ³
Live Load:	Roadway Live Load	HS 20-44 (MS-10)
	Sidewalk Live Load	2.873 KN/m ²
Temperature Change:	Rise +10°	Fall -10°
Earthquake Load:	C = 0.12 with Reference to Relevant AASHTO Provisions and Applicable Code.	
Other Loads:	In accordance with 1983 AASHTO Specification	
- MATERIALS

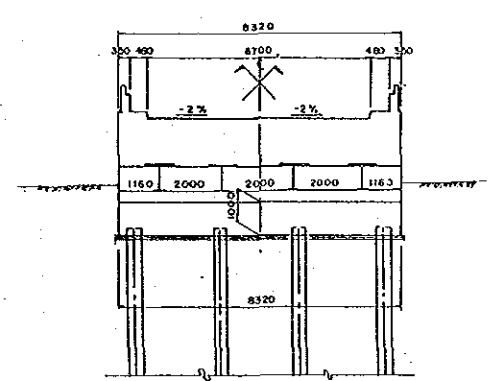
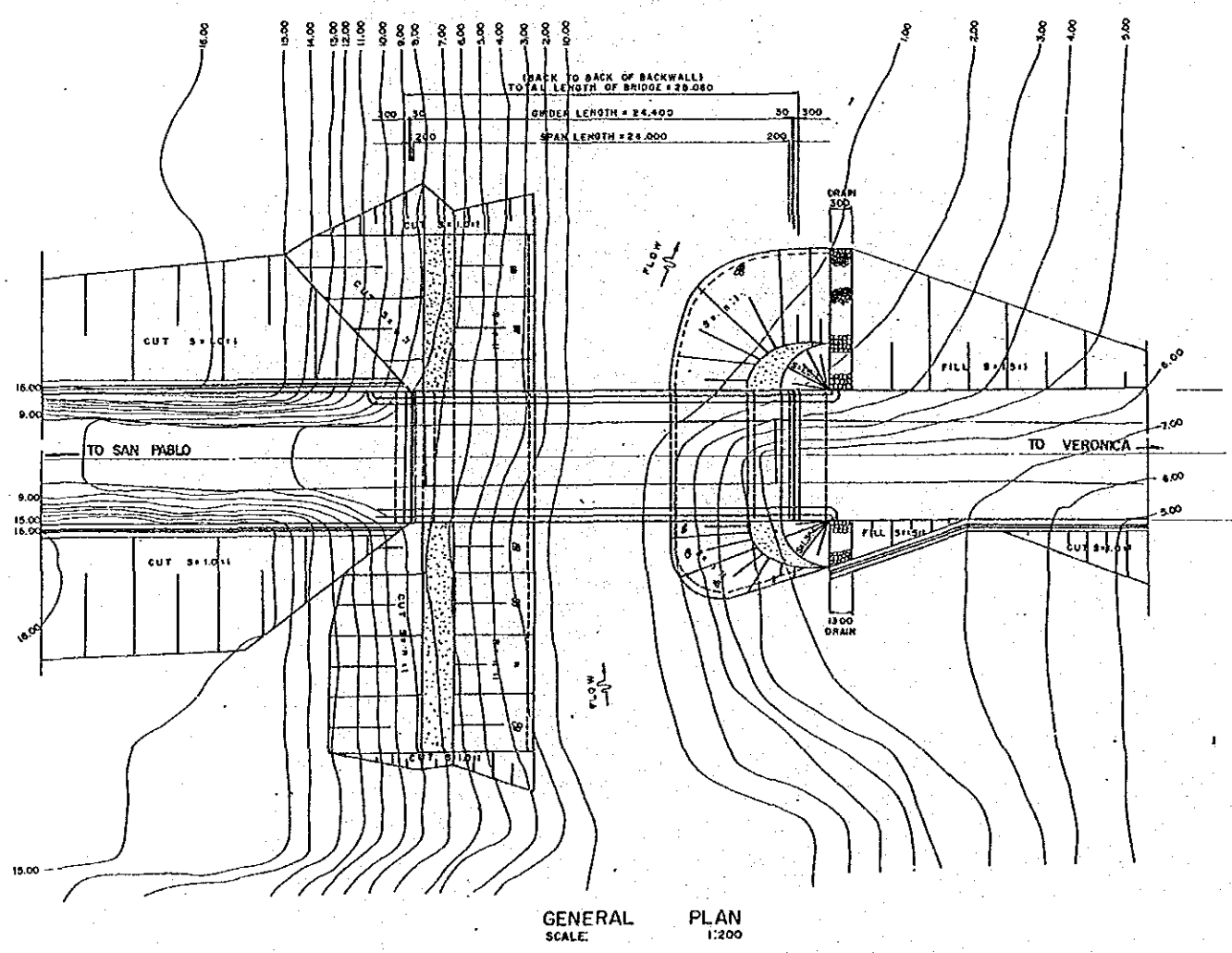
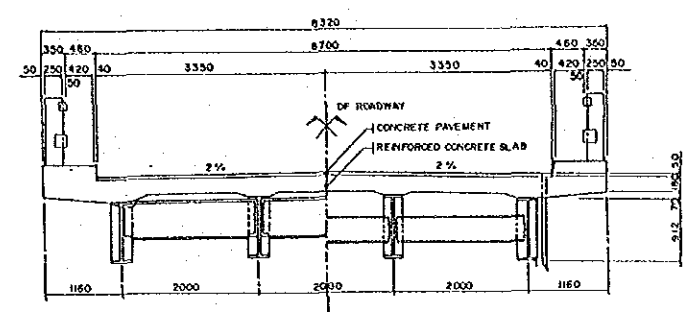
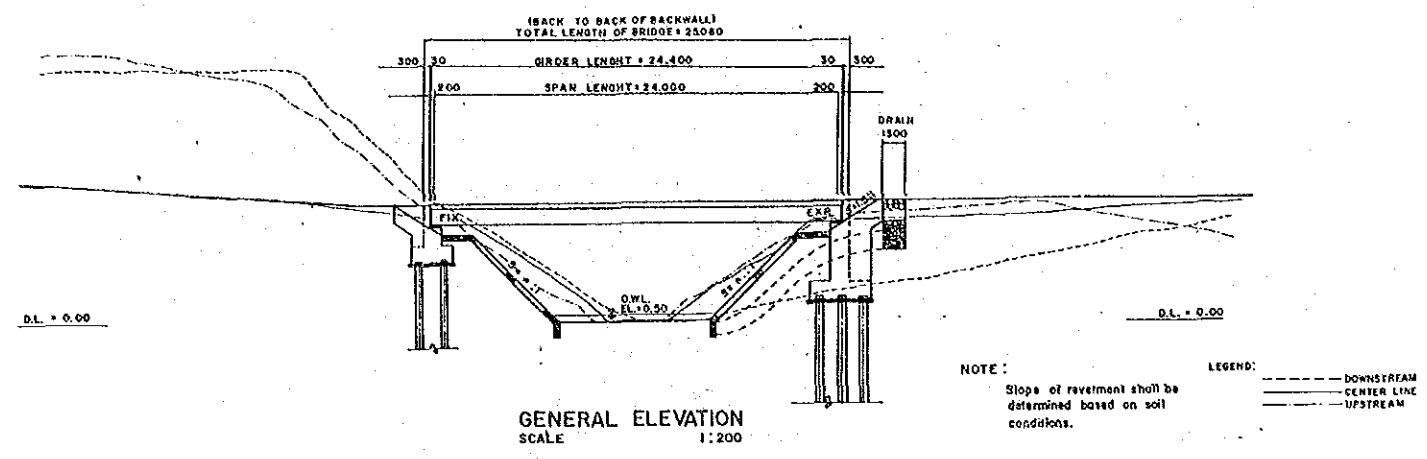
Steel for Superstructure:	Steel shall be Specified by JIS (Japanese Industrial Standard).
Concrete:	Concrete for Superstructure $f_c' = 29.4$ MPa
	Concrete for Substructure $f_c' = 20.7$ MPa
Others:	Other Materials shall conform to ASTM



DRAWINGS
All Dimensions are expressed in millimeter unless otherwise shown in the plans.
All Elevations are in meters.

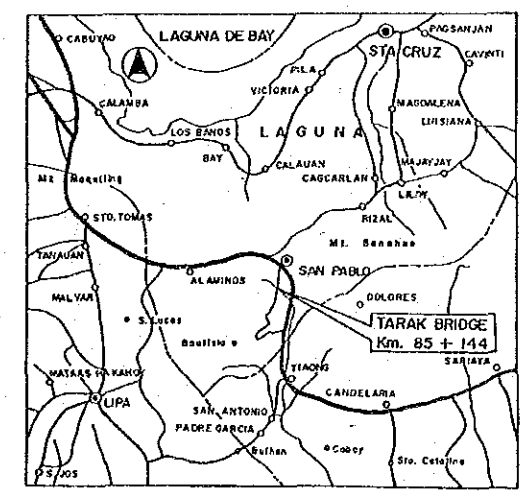
THE BASIC DESIGN STUDY ON THE PROJECT
FOR CONSTRUCTING BRIDGES ALONG RURAL ROADS (PHASE III, GROUP I)

BRIDGE NO.	TARAK BRIDGE	SHEET NO.
04.21d	Km 85 + 144	22/56

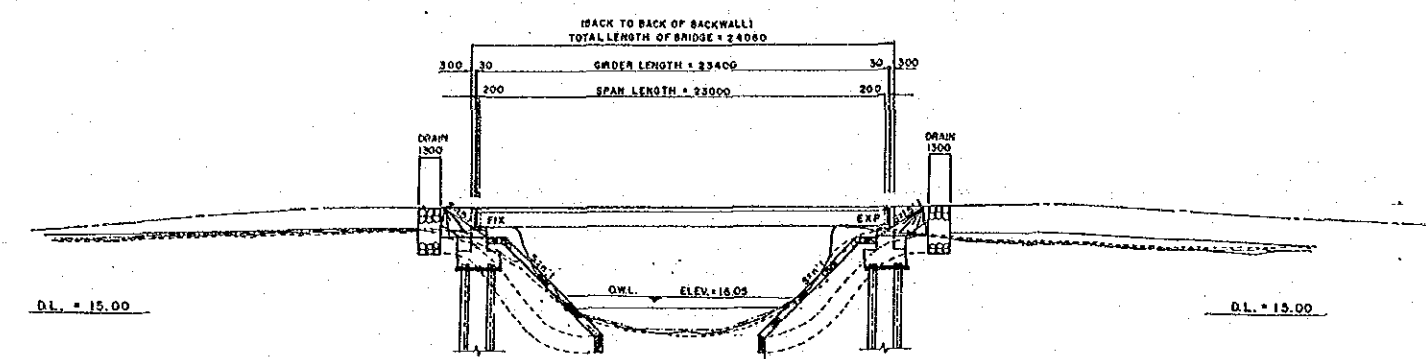


GENERAL NOTES

- Location of bridge should be determined by the Department of Public Works and Highways (DPWH).
- Structural dimensions of superstructures should not be amended.
- Types and dimensions of substructures shall be justified according to the detailed design of substructures prepared by DPWH.
- Vertical clearance between the M.F.L. and the bottom of the girders of the superstructure shall be not less than 1.0 meter (Carrying no big debris).
- DESIGN SPECIFICATION
AASHTO Standard Specifications for Highway Bridges (13th Edition 1983)
- DESIGN LOAD
Dead Load: Concrete 23.54 KN/m³
Fill Materials 17.66 KN/m³
Concrete Pavement 23.54 KN/m³
Live Load: Roadway Live Load HS 20-44 (MS-10)
Sidewalk Live Load 2.873 KN/m²
Temperature Change: Rise +10° Fall -10°
Earthquake Load: C=0.12 with Reference to Relevant AASHTO Provisions and Applicable Code.
Other Loads: In accordance with 1983 AASHTO Specification.
- MATERIALS
Steel for Superstructure: Steel shall be Specified by JIS (Japanese Industrial Standard).
Concrete: Concrete for Superstructure f_c'=29.4 MPa
Concrete for Substructure f_c'=20.7 MPa
Others: Other Materials shall conform to ASTM



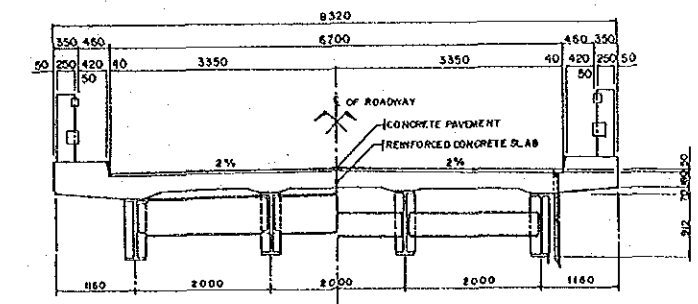
DRAWINGS
All Dimensions are expressed in millimeter unless otherwise shown in the plans.
All Elevations are in meters.



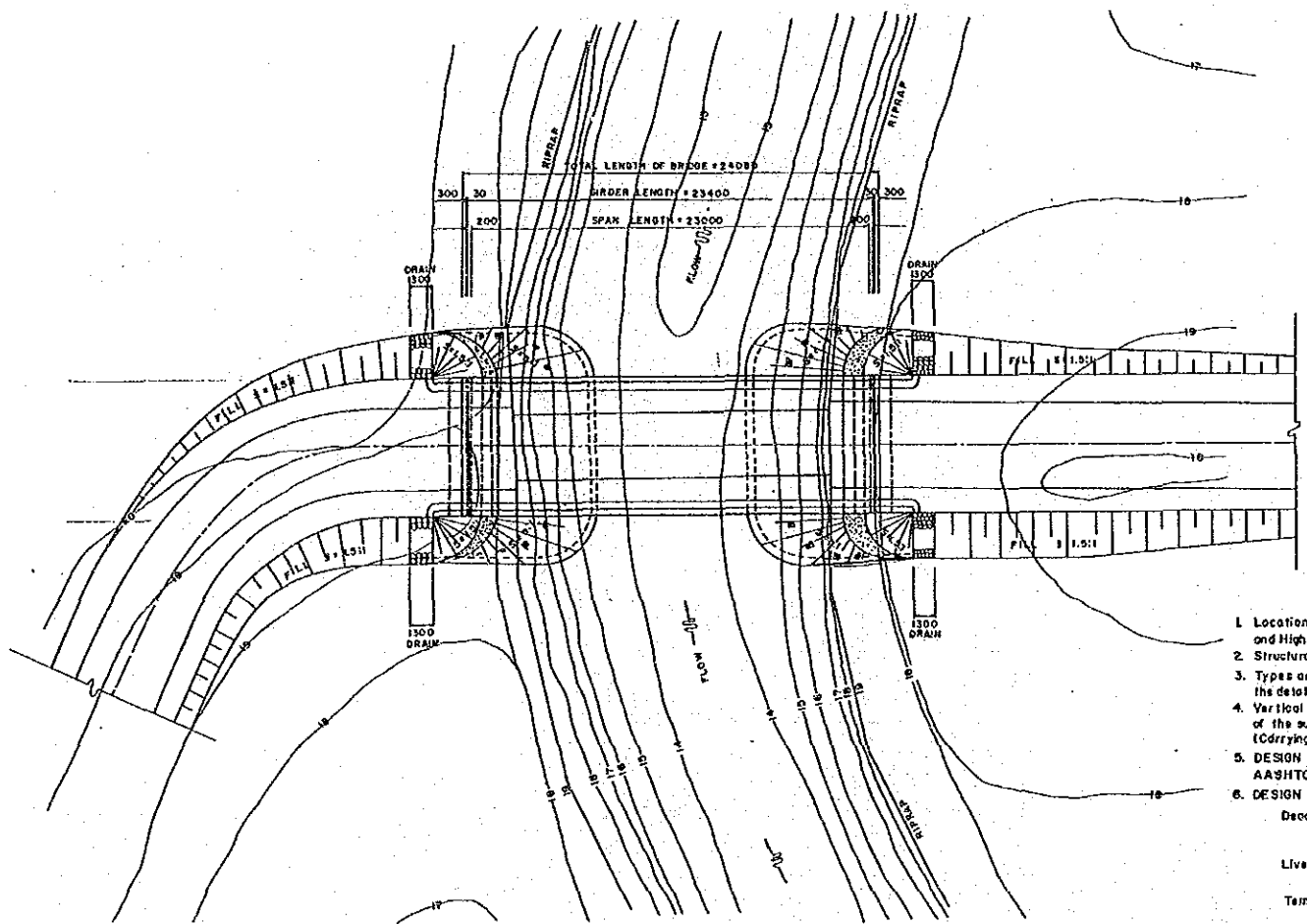
GENERAL ELEVATION
SCALE: 1:200

NOTE: Slope of pavement shall be determined based on soil conditions.

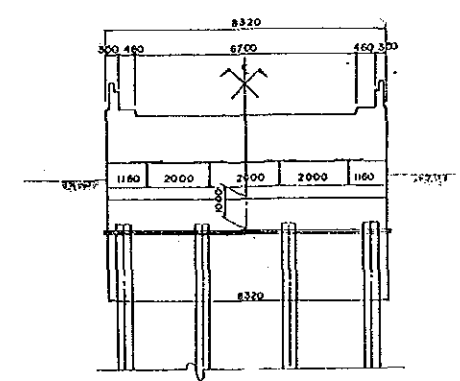
LEGEND:
 - - - - - DOWNSTREAM
 - - - - - CENTER LINE
 - - - - - UPSTREAM



SUPERSTRUCTURE CROSS SECTION
SCALE: 1:50



GENERAL PLAN
SCALE: 1:200

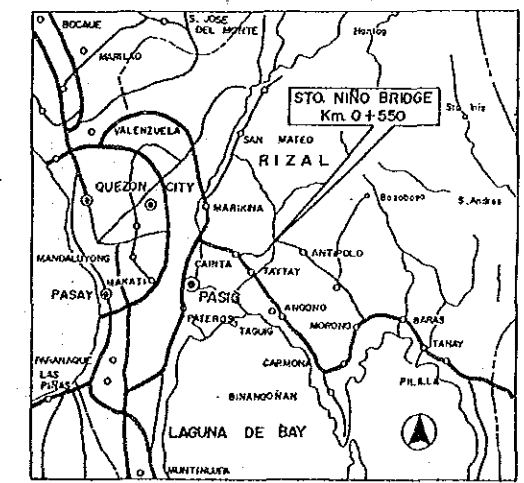


SUBSTRUCTURE CROSS SECTION
SCALE: 1:100

1. Location of bridge should be determined by the Department of Public Works and Highways (DPWH).
2. Structural dimensions of superstructures should not be amended.
3. Types and dimensions of substructures shall be justified according to the detailed design of substructures prepared by DPWH.
4. Vertical clearance between the M.F.L. and the bottom of the girders (carrying no big debris) shall be not less than 1.0 meter.
5. DESIGN SPECIFICATION
AASHTO Standard Specifications for Highway Bridges (13th Edition 1983)
6. DESIGN LOAD

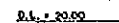
Dead Load:	Concrete	23.54 KN/m ³
	Fill Materials	17.66 KN/m ³
	Concrete Pavement	23.54 KN/m ³
Live Load:	Roadway Live Load	HS 20-44 (MS-18)
	Sidewalk Live Load	2.873 KN/m ²
Temperature Change	Rise +10°	Fall -10°
Earthquake Load:	C=0.12 with Reference to Relevant AASHTO Provisions and Applicable Code	
Other Loads:	In accordance with 1983 AASHTO Specification	
7. MATERIALS
 Steel for Superstructure:
 Steel shall be Specified by JIS (Japanese Industrial Standard)
 Concrete:
 Concrete for Superstructure $f_c = 29.4$ MPa
 Concrete for Substructure $f_c = 20.7$ MPa
 Others:
 Other Materials shall conform to ASTM

DRAWINGS
All Dimensions are express in millimeter unless otherwise shown in the plans.
All Elevations are in meters.

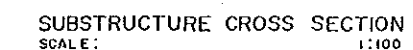
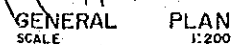


VICINITY MAP

BRIDGE NO.	DEL PILAR BRIDGE Km. 0 + 100	SHEET NO.
04.236		24/56



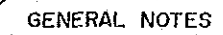
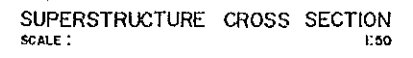
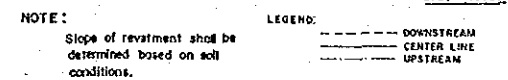
NOTE: Slope of revetment shall be determined based on soil conditions.



1. Location of bridge should be determined by the Department of Public Works and Highways (DPWH).
2. Structural dimensions of superstructures should not be amended.
3. Types and dimensions of substructures shall be justified according to the detailed design of substructures prepared by DPWH.
4. Vertical clearance between the M.F.L. and the bottom of the girders of the superstructure shall be not less than 1.0 meter (Clearing no big debris).
5. DESIGN SPECIFICATION
6. AASHTO Standard Specifications for Highway Bridges (13th Edition 1983).
6. DESIGN LOAD
- Dead Load : Concrete 23.54 KN/m³
Fill Materials 17.66 KN/m³
Concrete Pavement 23.54 KN/m³
- Live Load : Roadway Live Load HS20 - 44 (MS - 18)
Sidewalk Live Load 2.873 KN/m²
- Temperature Change :
Rise +10° Fall - 10°
- Earthquake Load :
C=0.12 with Reference to Relevant AASHTO Provisions and Applicable Code.
- Other Loads : in accordance with 1983 AASHTO Specification .
7. MATERIALS
- Steel for Superstructure :
Steel shall be Specified by JIS (Japanese Industrial Standard).
- Concrete : Concrete for Superstructure $f_c' = 29.4$ MPa
Concrete for Substructure $f_c' = 20.7$ MPa
- Others : Other Materials shall conformed to ASTM



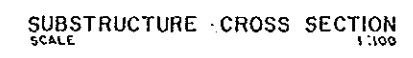
DRAWINGS
All Dimensions are express in millimeter unless otherwise shown in the plans.
All Elevations are in meters.



1. Location of bridge should be determined by the Department of Public Works and Highways (DPWH).
2. Structural dimensions of superstructures should not be amended.
3. Types and dimensions of substructures shall be justified according to the detailed design of substructures prepared by DPWH.
4. Vertical clearance between the M.F.L. and the bottom of the girders of the superstructure shall be not less than 1.0 meter (Carrying no big debris).
5. DESIGN SPECIFICATION
AASHTO Standard Specifications for Highway Bridges (13th Edition 1983).
6. DESIGN LOAD

Dead Load :	Concrete	23.54 KN/m ³
	Fill Materials	17.66 KN/m ³
	Concrete Pavement	23.54 KN/m ³
Live Load :	Roadway Live Load	HS 20 - 44 (MS-18)
	Sidewalk Live Load	2.873 KN/m ²
Temperature Change :		
	Rise + 10°	Fall - 10°
Earthquake Load :		
	C=0.12 with Reference to Relevant AASHTO Provisions and Applicable Code.	
Other Loads:	In accordance with 1983 AASHTO Specification.	
7. MATERIALS

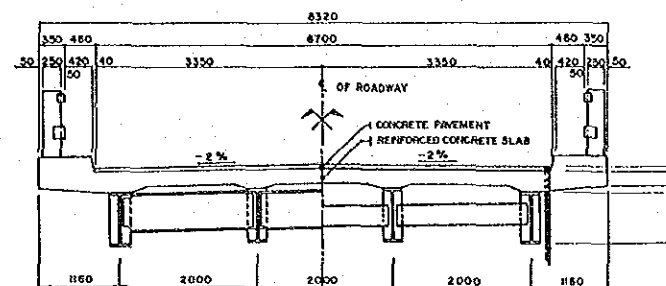
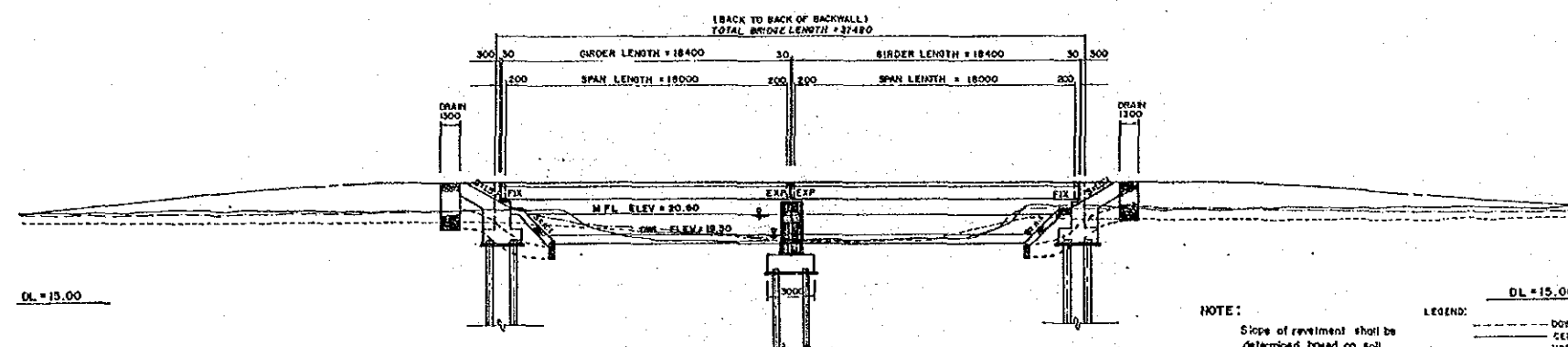
Steel for Superstructure :	
	Steel shall be Specified by JIS (Japanese Industrial Standard).
Concrete :	Concrete for Superstructure f _c '=29.4 MPa
	Concrete for Substructure f _c '=20.7 MPa
Others :	Other Materials shall conform to ASTM



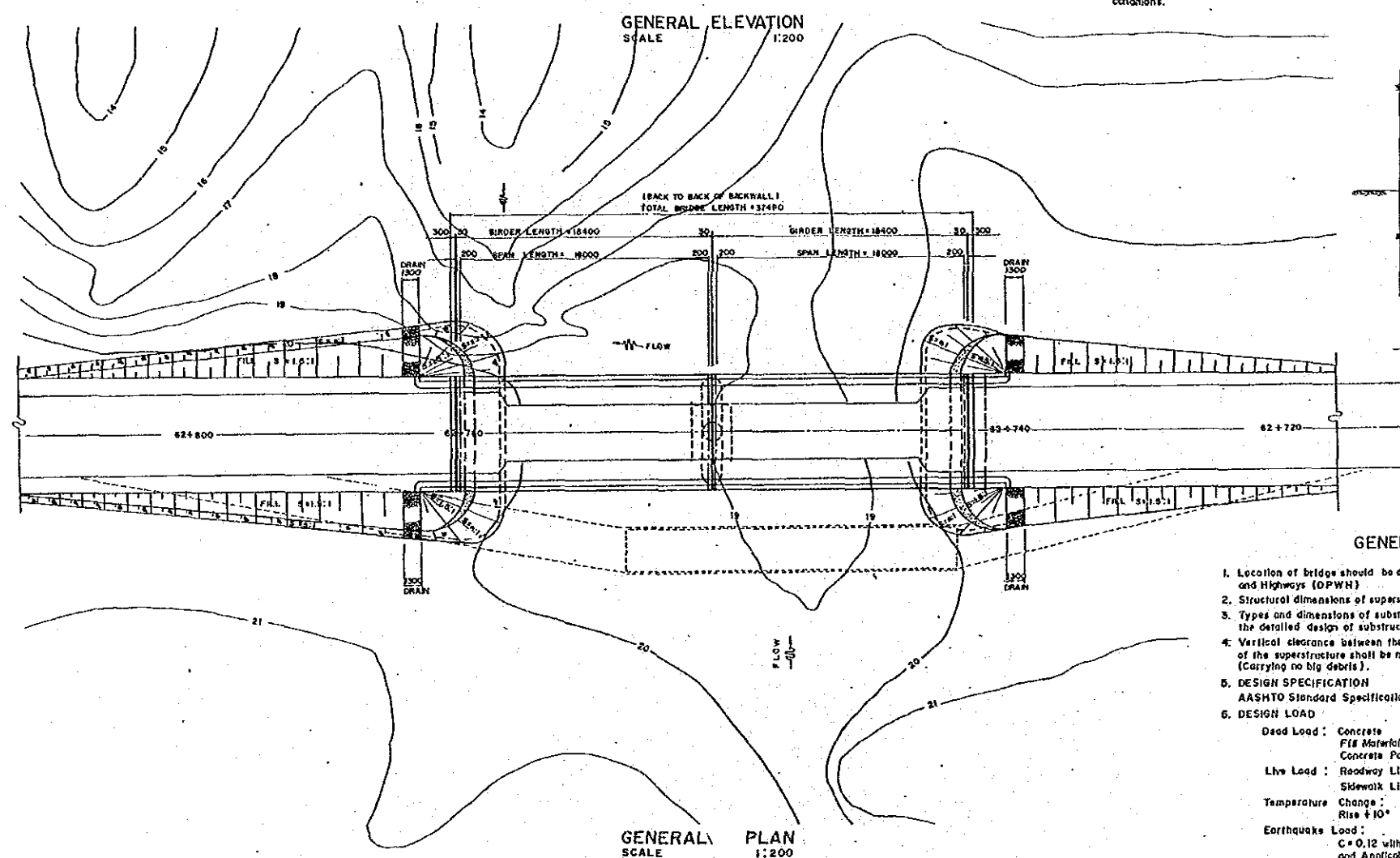
DRAWINGS
All Dimensions are express in millimeter unless otherwise shown in the plans.
All Elevations are in meters.

THE BASIC DESIGN STUDY ON THE PROJECT
FOR CONSTRUCTING BRIDGES ALONG RURAL ROADS (PHASE III, GROUP 1)

BRIDGE NO.	DAKOTON BRIDGE Km. 62 + 761.50	SHEET NO.
04.04b		26 / 56



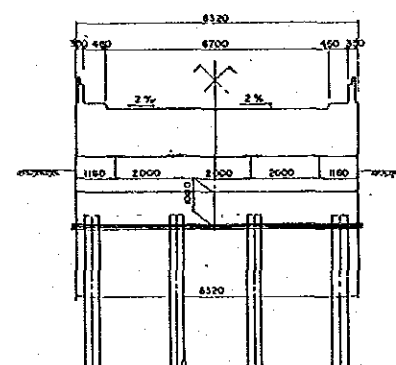
SUPERSTRUCTURE CROSS SECTION
SCALE: 1:50



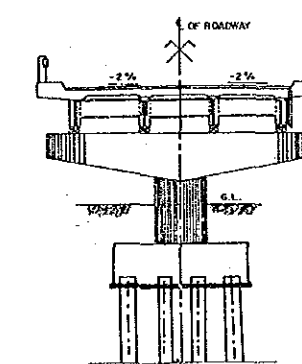
GENERAL NOTES

1. Location of bridge should be determined by the Department of Public Works and Highways (DPWH).
2. Structural dimensions of superstructures should not be amended.
3. Types and dimensions of substructures shall be justified according to the detailed design of substructures prepared by DPWH.
4. Vertical clearance between the M.F.L. and the bottom of the girders of the superstructure shall be not less than 1.0 meter (Carrying no big debris).
5. DESIGN SPECIFICATION
AASHTO Standard Specifications for Highway Bridges (13th Edition 1983)
6. DESIGN LOAD
Dead Load: Concrete 23.54 KN/m³
Fill Materials 17.66 KN/m³
Concrete Pavement 23.54 KN/m²
Live Load: Roadway Live Load HS 20-44 (MS-18)
Sidewalk Live Load 2.873 KN/m²
Temperature Change: Rise +10° Fall -10°
Earthquake Load: C = 0.12 with Reference to Relevant AASHTO Provisions and Applicable Code
Other Loads: In accordance with 1983 AASHTO Specification.
7. MATERIALS
Steel for Superstructure: Steel shall be Specified by JIS (Japanese Industrial Standard).
Concrete: Concrete for Superstructure f_c' = 29.4 MPa
Concrete for Substructure f_c' = 20.7 MPa
Others: Other Materials shall conform to ASTM

DRAWINGS
All Dimensions are express in millimeter unless otherwise shown in the plans.
All Elevations are in meters

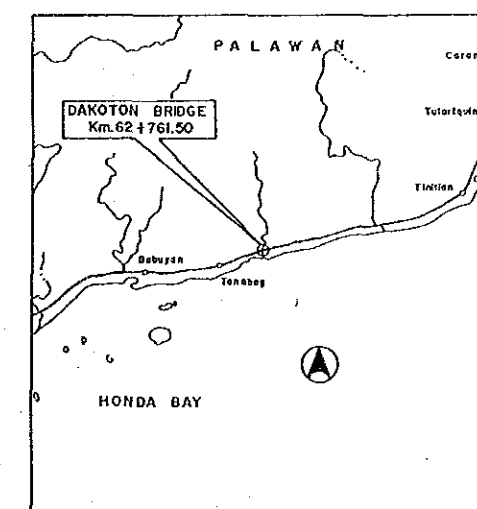


ABUTMENT



PIER

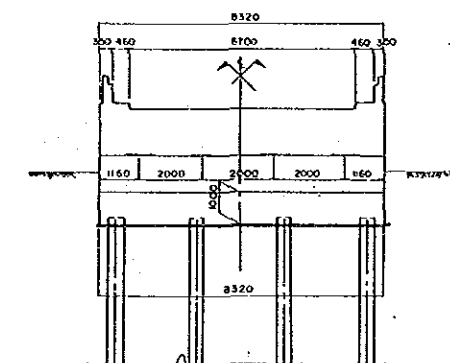
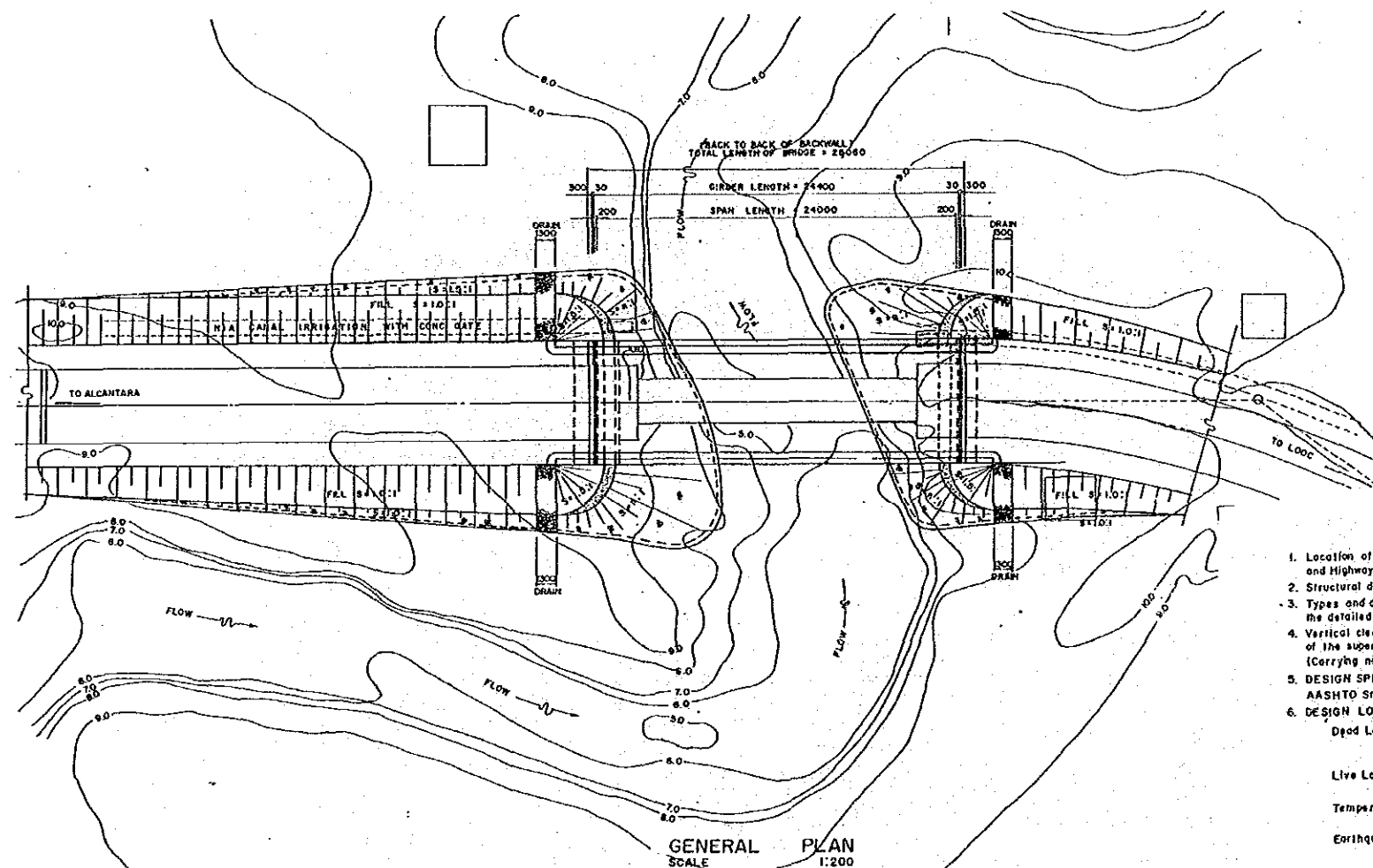
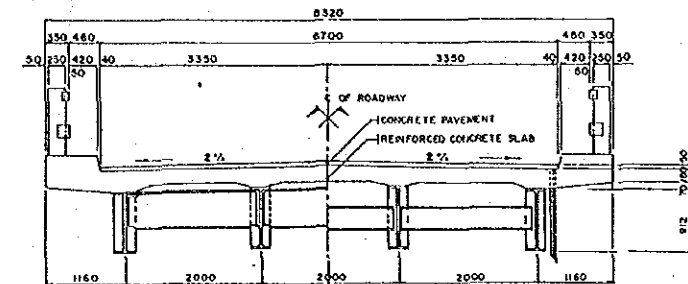
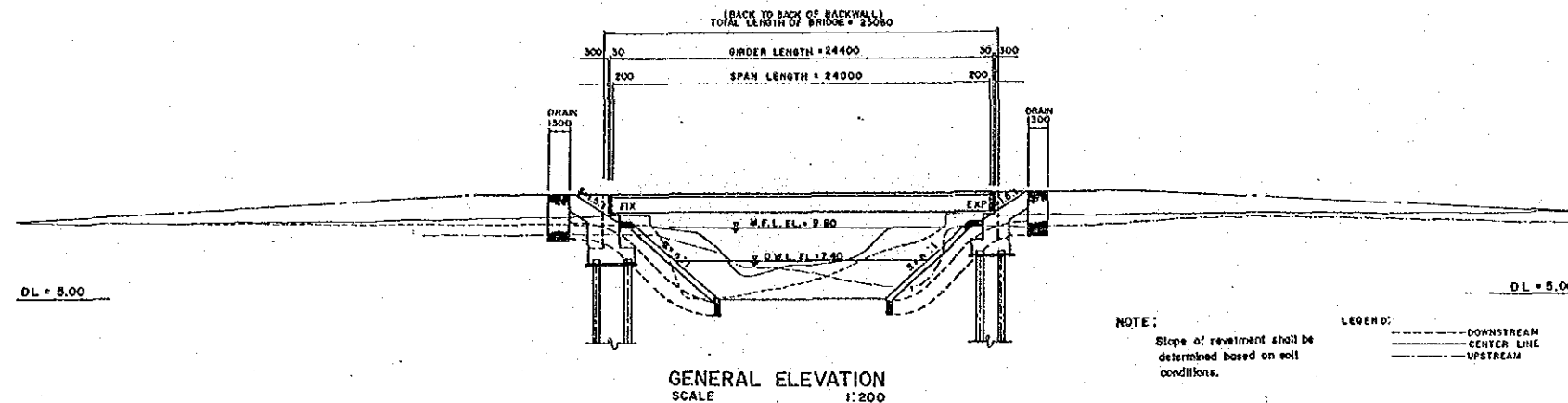
SUBSTRUCTURE CROSS SECTION
SCALE: 1:100



VICINITY MAP

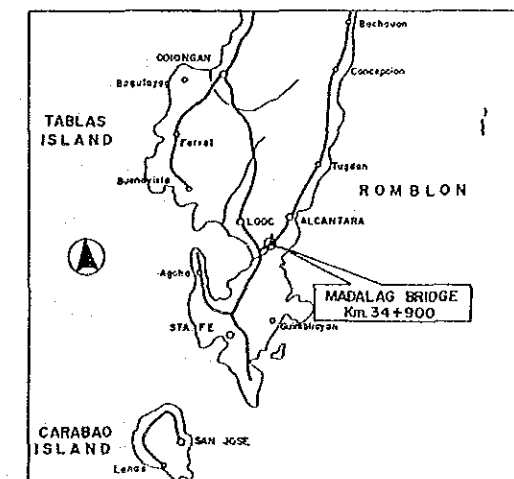
THE BASIC DESIGN STUDY ON THE PROJECT
FOR CONSTRUCTING BRIDGES ALONG RURAL ROADS (PHASE II, GROUP I)

BRIDGE NO.	MADALAG BRIDGE	SHEET NO.
04-06b	Km.34 + 900	27/56

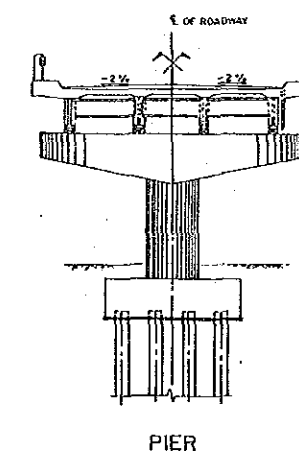
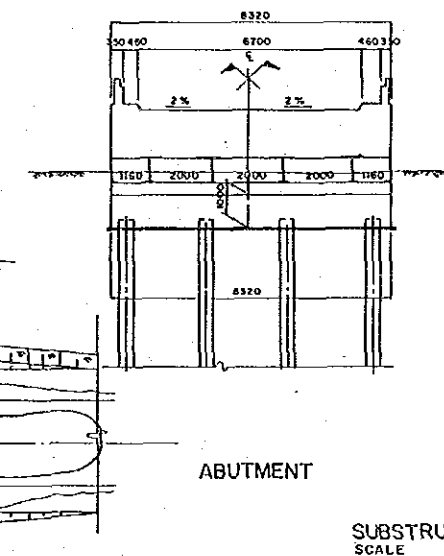
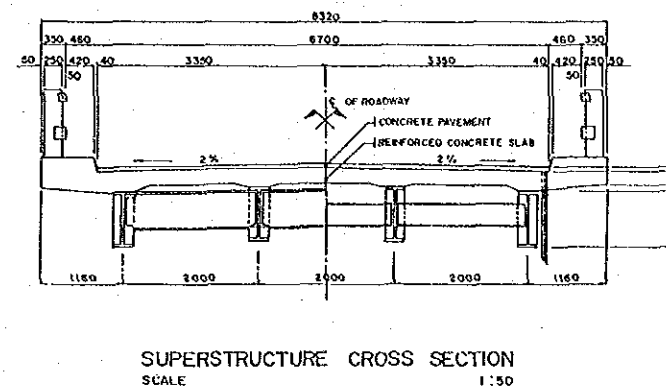


GENERAL NOTES

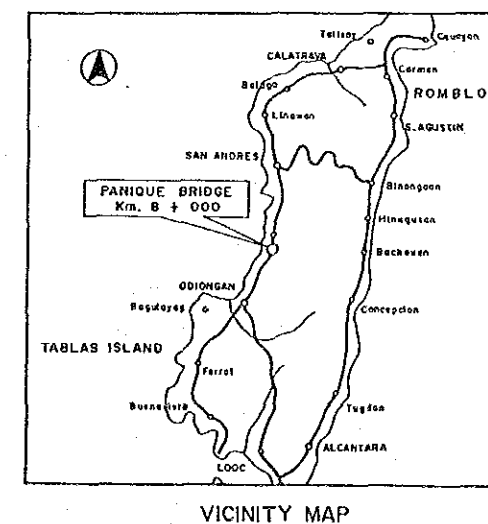
- Location of bridge should be determined by the Department of Public Works and Highways (DPWH).
- Structural dimensions of superstructures should not be amended.
- Types and dimensions of substructures shall be justified according to the detailed design of substructures prepared by DPWH.
- Vertical clearance between the M.F.L. and the bottom of the girders of the superstructure shall be not less than 1.0 meter (Carrying no big debris).
- DESIGN SPECIFICATION
AASHTO Standard Specifications for Highway Bridges (13th Edition 1983).
- DESIGN LOAD
Dead Load: Concrete 23.54 KN/m³
Fill Materials 17.66 KN/m³
Concrete Pavement 23.54 KN/m³
Live Load: Roadway Live Load HS 20-44 (MS-18)
Sidewalk Live Load 2.873 KN/m²
Temperature Change: Rise +10° Fall -10°
Earthquake Load: C = 0.12 with Reference to Relevant AASHTO Provisions and Applicable Code
Other Loads: In accordance with 1983 AASHTO Specification.
- MATERIALS
Steel for Superstructure: Steel shall be Specified by JIS (Japanese Industrial Standard).
Concrete: Concrete for Superstructure f_c' = 29.4 MPa
Concrete for Substructure f_c' = 20.7 MPa
Others: Other Materials shall conform to ASTM



DRAWINGS
All Dimensions are express in millimeter unless otherwise shown in the plans.
All Elevations are in meters

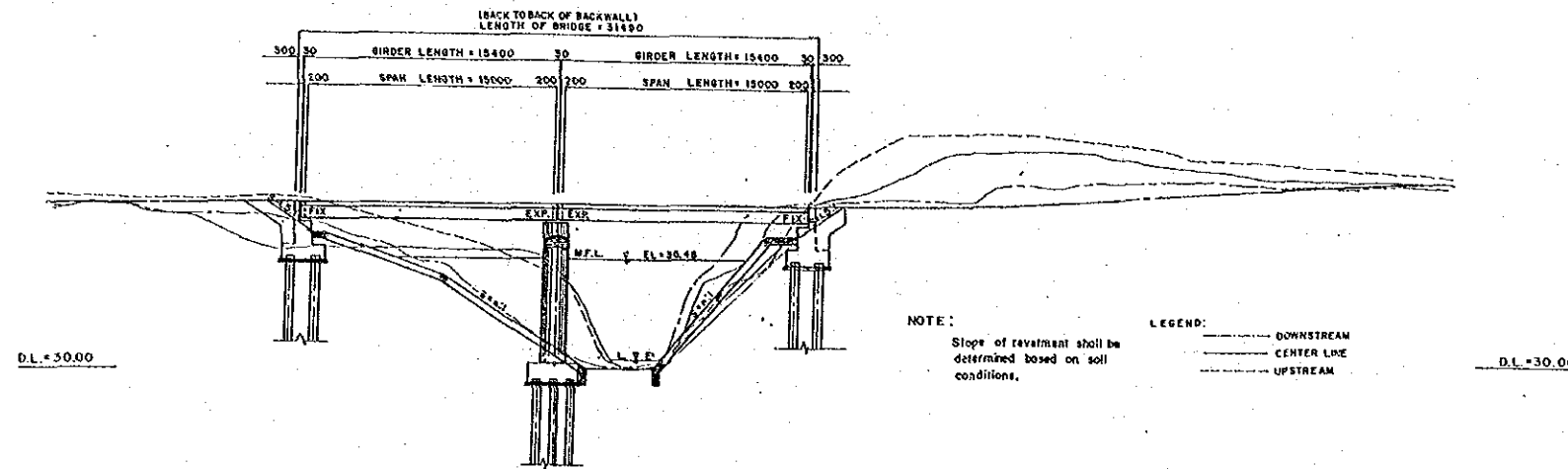


1. Location of bridge should be determined by the Department of Public Works and Highways (DPWH)
2. Structural dimensions of superstructures should not be amended.
3. Types and dimensions of substructures shall be justified according to the detailed design of substructures prepared by DPWH.
4. Vertical clearance between the M.F.L. and the bottom of the girders of the superstructure shall be not less than 1.0 meter (Corrosion no big details).
5. DESIGN SPECIFICATION
6. AASHTO Standard Specifications for Highway Bridges (13th Edition 1983)
6. DESIGN LOAD
- Dead Load Concrete 23.54 KN/m²
 Fill Materials 17.66 KN/m²
 Concrete Pavement 23.54 KN/m²
- Live Load Roadway Live Load HS20- 44 (MS-18)
 Sidewalk Live Load 2.873 KN/m²
- Temperature Change
Rise +10° Fall -10°
- Earthquake Load
C = 0.12 with Reference to Relevant AASHTO Provision and Applicable Code.
- Other Loads In accordance with 1983 AASHTO Specification
7. MATERIALS
- Steel for Superstructure
Steel shall be Specified by JIS (Japanese Industrial Standard).
- Concrete : Concrete for Superstructure f_c' = 29.4 MPa
 Concrete for Substructure f_c' = 20.7 MPa
- Others Other Materials shall conform to ASTM

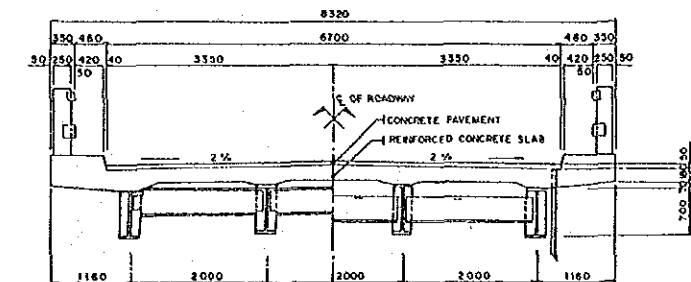


THE BASIC DESIGN STUDY ON THE PROJECT
FOR CONSTRUCTING BRIDGES ALONG RURAL ROADS (PHASE II, GROUP 1)

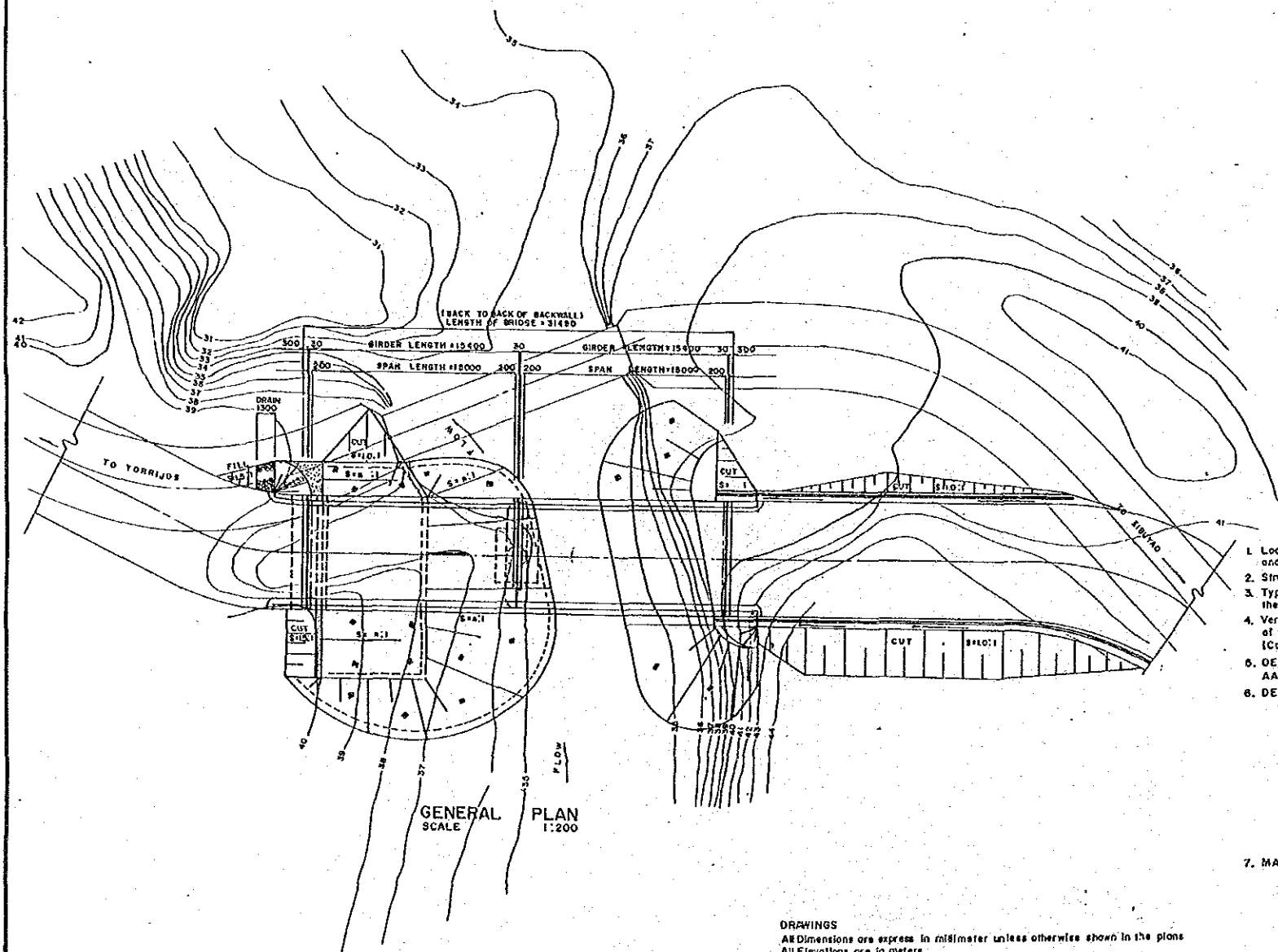
BRIDGE NO.	MARANLIG BRIDGE	SHEET NO.
04.09b	Km. 56 + 637.80	29/56



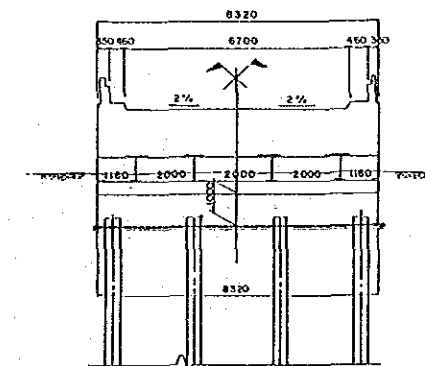
GENERAL ELEVATION
SCALE 1:200



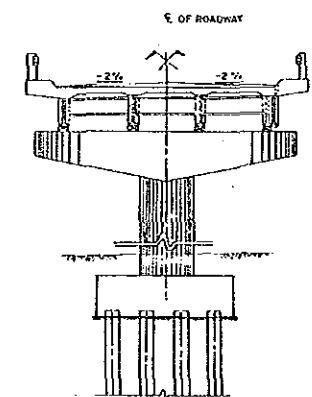
SUPERSTRUCTURE CROSS SECTION
SCALE 1:50



GENERAL PLAN
SCALE 1:200



ABUTMENT



PIER

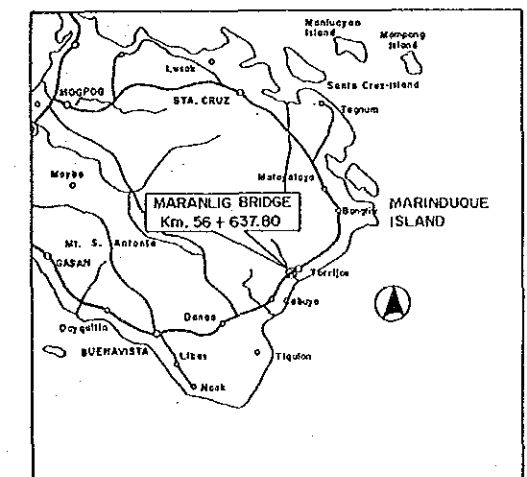
SUBSTRUCTURE CROSS SECTION
SCALE 1:100

GENERAL NOTES

1. Location of bridge should be determined by the Department of Public Works and Highways (DPWH).
2. Structural dimensions of superstructures should not be amended.
3. Types and dimensions of substructures shall be justified according to the detailed design of substructures prepared by DPWH.
4. Vertical clearance between the M.F.L. and the bottom of the girders of the superstructure shall be not less than 1.0 meter (Carrying no big debris).
5. DESIGN SPECIFICATION
AASHTO Standard Specification for Highway Bridges (13th Edition 1983)
6. DESIGN LOAD

Dead Load	Concrete	23.54 KN/m ³
	Fill Materials	17.66 KN/m ³
	Concrete Pavement	23.54 KN/m ³
Live Load	Roadway Live Load	HS20-44 (MS-18)
	Sidewalk Live Load	2.873 KN/m ²
Temperature	Change	Rise +10° Fall -10°
Earthquake Load		C=0.12 with Reference to Relevant AASHTO Provisions and Applicable Code.
Other Loads		In accordance with 1983 AASHTO Specification
7. MATERIALS

Steel for Superstructure	Steel shall be Specified by JIS (Japanese Industrial Standard).
Concrete for Superstructure	Concrete for Superstructure f _c ' = 29.4 MPa
Concrete for Substructure	Concrete for Substructure f _c ' = 20.7 MPa
Others	Other Materials shall conformed to ASTM

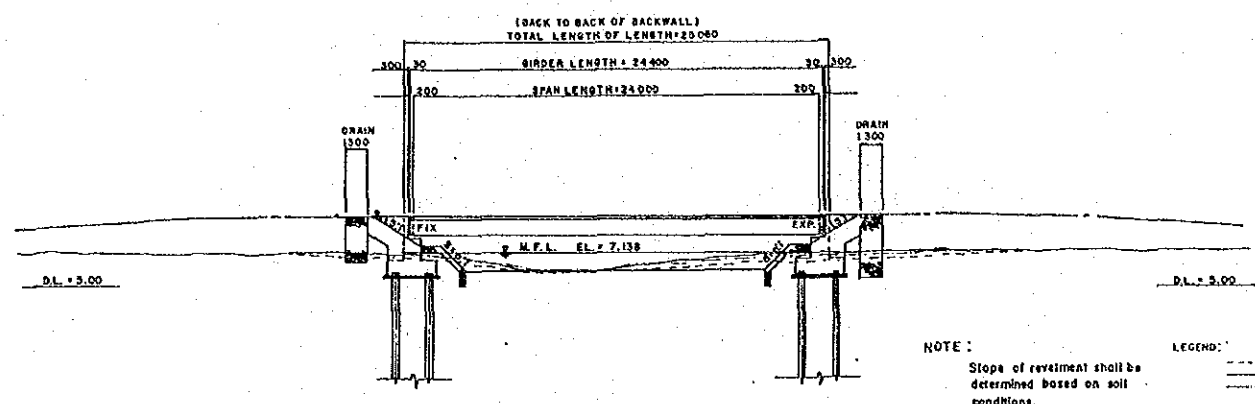


VICINITY MAP

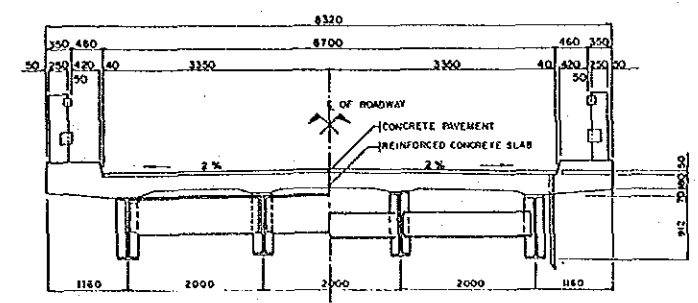
DRAWINGS
All Dimensions are express in millimeter unless otherwise shown in the plans
All Elevations are in meters

THE BASIC DESIGN STUDY ON THE PROJECT
FOR CONSTRUCTING BRIDGES ALONG RURAL ROADS (PHASE III, GROUP 1)

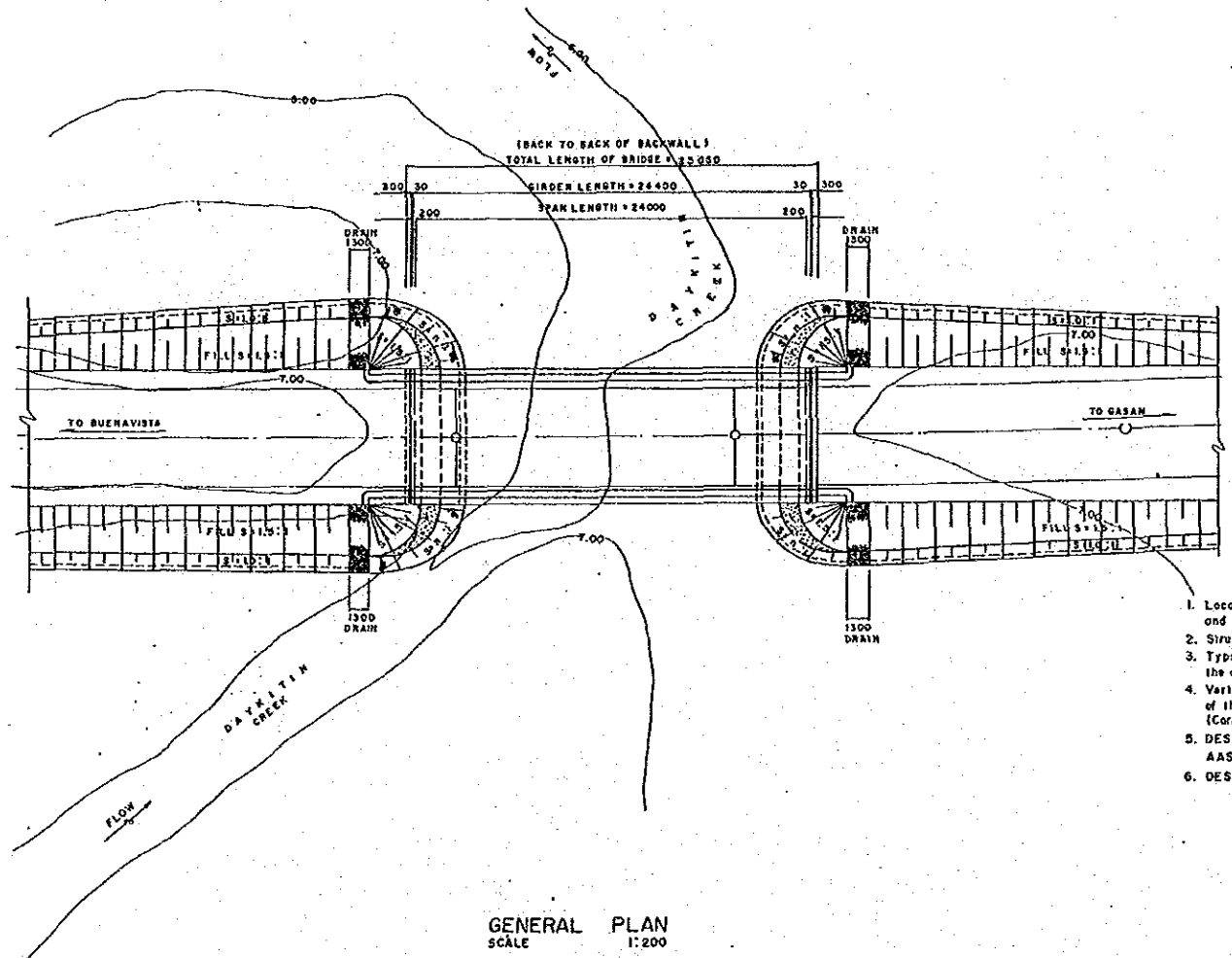
BRIDGE NO.	DAYKITIN BRIDGE	SHEET NO.
04.10b-1	Km.94 + 233	30/56



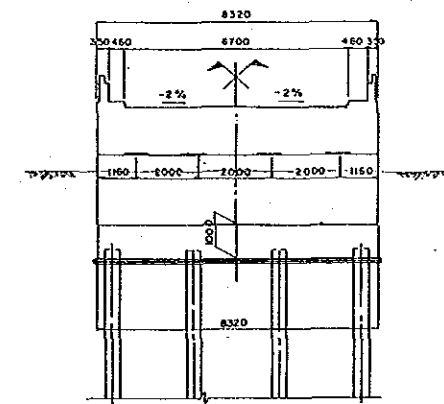
GENERAL ELEVATION
SCALE 1:200



SUPERSTRUCTURE CROSS SECTION
SCALE 1:50



GENERAL PLAN
SCALE 1:200

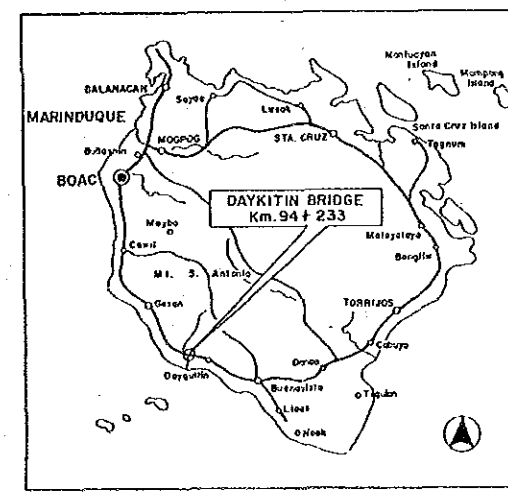


SUBSTRUCTURE CROSS SECTION
SCALE 1:100

GENERAL NOTES

- Location of bridge should be determined by the Department of Public Works and Highways (DPWH).
- Structural dimensions of superstructures should not be amended.
- Types and dimensions of substructures shall be justified according to the detailed design of substructures prepared by DPWH.
- Vertical clearance between the M.F.L. and the bottom of the girders of the superstructure shall be not less than 1.0 meter (Carrying no big debris).
- DESIGN SPECIFICATION
AASHTO Standard Specifications for Highway Bridges (13th Edition 1983).
- DESIGN LOAD
Dead Load: Concrete 23.54 KN/m³
Fill Materials 17.66 KN/m³
Concrete Pavement 23.54 KN/m³
Live Load: Roadway Live Load HS20-44 (MS-18)
Sidewalk Live Load 2.873 KN/m²
Temperature Change: Rise +10° Fall -10°
Earthquake Load: C = 0.12 with Reference to Relevant AASHTO Provisions and Applicable Code.
Other Loads: in accordance with 1983 AASHTO Specification.
- MATERIALS
Steel for Superstructure: Steel shall be Specified by JIS (Japanese Industrial Standard).
Concrete: Concrete for Superstructure $f_c' = 29.4$ MPa
Concrete for Substructure $f_c' = 20.7$ MPa
Others: Other Materials shall conform to ASTM

DRAWINGS
All Dimensions are express in millimeter unless otherwise shown in the plans.
All Elevations are in meters.



VICINITY MAP

BRIDGE NO.	NAME OF BRIDGES FOR GROUP 2	SHEET NO.
ALL BRIDGES		31 / 56

NAME OF BRIDGES FOR GROUP 2

NO. BRIDGE NO.	NAME OF BRIDGE	LOCATION	NO. BRIDGE NO.	NAME OF BRIDGE	LOCATION
1 01.02	MAPHILINDO BRIDGE	Km.220 + 900, Blec - Lomboy Road Binmaley, Pangasinan	16. 03.17	SULA BRIDGE	Km. 150 + 000, Tarlac - Sula Road Sula, Tarlac, Tarlac
2 03.03	BACONG BRIDGE	Km. 105 + 360, Luacan - Bacong Road Bacong, Bataan	17. 04.07a	CAMAGONG BRIDGE	Km. 023 + 700, Quezon-Alabat Perez Road Alabat, Quezon
3 03.07	SAN ROQUE BRIDGE	Km. 57 + 284, San Roque Barangay Road Hagonoy, Bulacan	18. 04.20a	PARAGUSAN BRIDGE	Km. 91 + 084, San Pablo - San Isidro Road San Isidro, San Pablo City, Laguna
4 03.10	DOLORES BRIDGE	Km. 076 + 870, Dolores - Del Rosario Road Dolores, Bacolor, Pampanga	19. 04.07b	TAN-AGAN BRIDGE	Km. 11 + 100, Odiongan - San Andres Road Tan-Agan, San Andres, Romblon
5 03.13	MANGKUYOG BRIDGE	Km. 169 + 000, Camachile - Bantug Road Nueva Ecija	10 04.10b-2	IHATUB BRIDGE	Km. 116 + 832.85, Boac - Gasan Road Ihatub, Boac, Marinduque