JAPAN INTERNATIONAL COOPERATION AGENCY

DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
THE REPUBLIC OF THE PHILIPPINES

BASIC DESIGN STUDY REPORT

THE PROJECT FOR CONSTRUCTION OF BRIDGES
ALONG

RURAL ROADS IN MINDANAO AREA IN

THE REPUBLIC OF THE PHILIPPINES

PANDRAWINGS)

DECEMBER 1994

KATAHIRA & ENGINEERS INTERNATIONAL ORIENTAL CONSULTANTS CO. LTD.



27764 JIGA LIBRARY 国際協力事業団

JAPAN INTERNATIONAL COOPERATION AGENCY

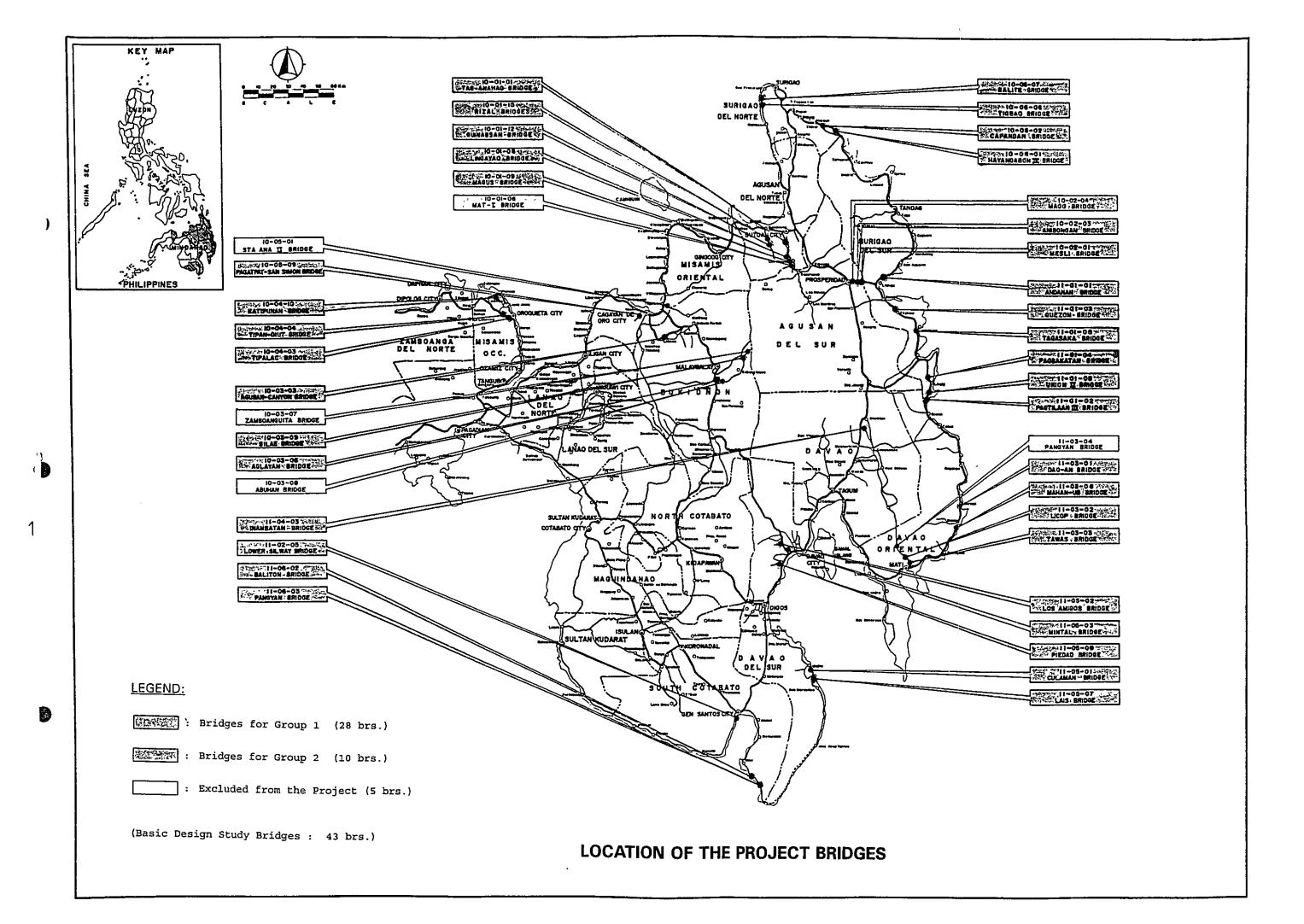
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
THE REPUBLIC OF THE PHILIPPINES

BASIC DESIGN STUDY REPORT ON THE PROJECT FOR CONSTRUCTION OF BRIDGES ALONG RURAL ROADS IN MINDANAO AREA IN THE REPUBLIC OF THE PHILIPPINES

(DRAWINGS)

DECEMBER 1994

KATAHIRA & ENGINEERS INTERNATIONAL ORIENTAL CONSULTANTS CO., LTD.





CONTENTS

<u>Drawings</u>	Sheet No.
LOCATION MAP	
LIST OF GROUP 1 BRIDGES	
LIST OF GROUP 2 BRIDGES	
GROUP 1	
GENERAL VIEW OF BRIDGES (GROUP 1)	1 - 28
BASIC DESIGN OF SUPERSTRUCTURES (GROUP 1)	29 - 78
BASIC DESIGN OF MISCELLANEOUS STRUCTURES TO BE PROCURED BY THE PROJECT (GROUP 1)	79 - 81
GROUP 2	
GENERAL VIEW OF BRIDGES (GROUP 2)	82 - 91
BASIC DESIGN OF APPROACH ROADS (GROUP 2)	92 -101
BASIC DESIGN OF SUPERSTRUCTURES (GROUP 2)	102 -153
BASIC DESIGN OF SUBSTRUCTURES (GROUP 2)	154 -186
BASIC DESIGN OF MISCELLANEOUS STRUCTURES (GROUP 2)	187 -189

LIST OF GROUP 1 BRIDGES

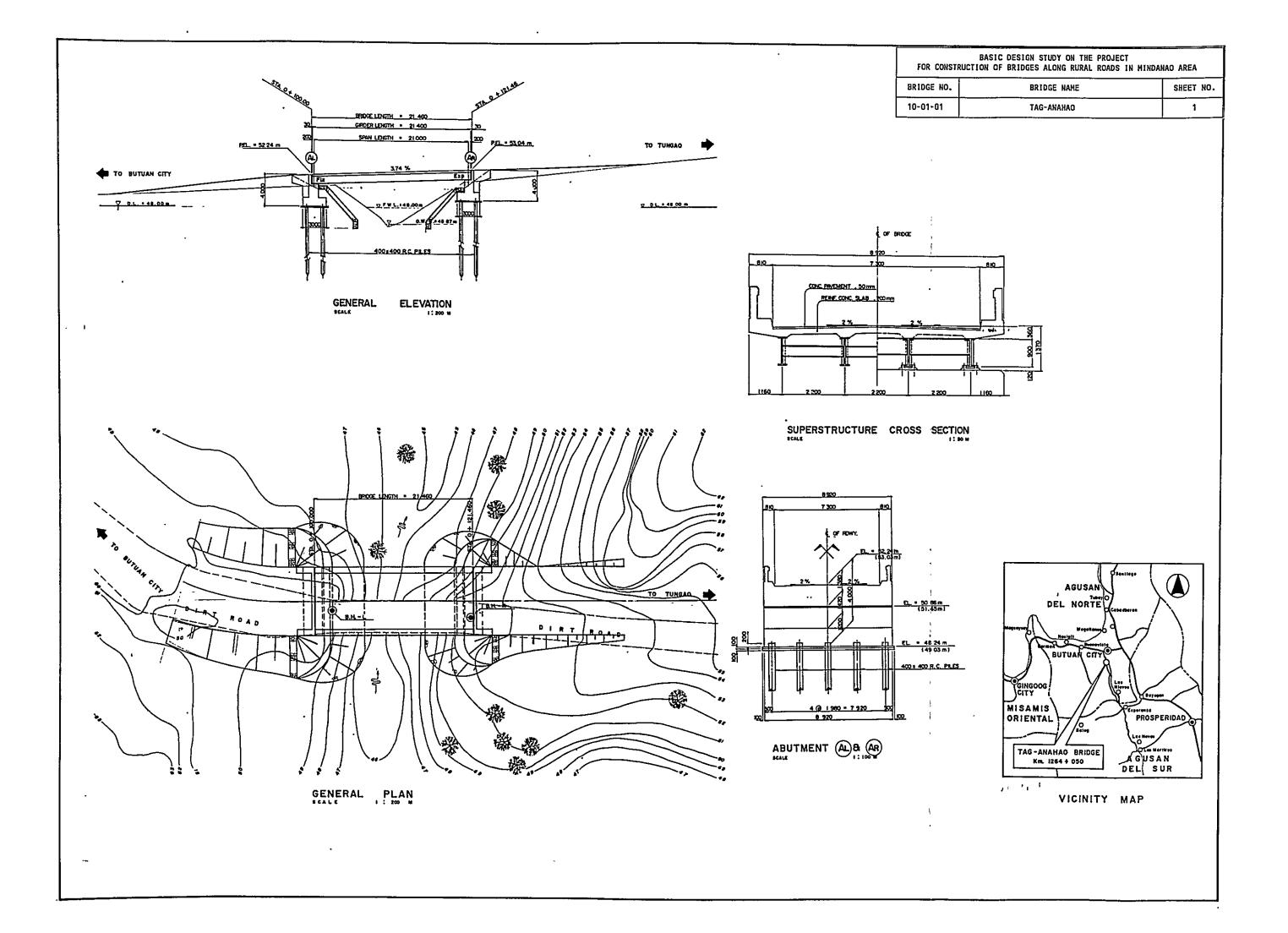
No.	Bridge No.	Name of Bridge	Location	No.	Bridge No.	Name of Bridge	Location
1	10-01-01	Tag-Anahao	Km. 1264 + 050 Butuan City-Malaybalay Road, Butuan City Agusan del Norte	15	11-01-02	Pagtilaan	Km. 1505 + 068 Davao Oriental-Surigao del Sur Coastal Road Lingig, Surigao del Sur
2	10-02-01	Mesli	Km. 1299 + 780 NRJ-Awa-Azpitia-Lianga National Secondary Road, Agusan del Sur	16	11-01-03	Quezon T	Km. 1409 + 885 Surigao del Sur-Davao Oriental Coastal Road agbina, Surigao del Sur
3	10-02-03	Anibongan	Km. 1297 +⋅655 NRJ-Awa-Azpitia-Lianga National Secondary Road, Agusan del Sur	17	11-01-04	Pagbakatan	Km. 1482 + 694 Davao Oriental-Surigao del Sur Coastal Road Lingig, Surigao del Sur
4	10-03-03	Agusan Canyon	Km. 1452 + 000 Jct. Manolo Fortich-Libona-Indahad Road Agusan Canyon, Manolo Fortich, Bukidnon	18	11-01-05	Union	Km. 1501 + 162 Davao Oriental-Su r igao del Sur Coastal Road Lingig, Surigao del Sur
5	10-03-06	Aglayan	Km. 1519 + 419.51 Jct. Sayre Highway Aglayan–Zamboanguita Rd. Barangay Aglayan, Malaybalay, Bukidnon	19	11-01-06	Tagasaka	Km. 1439 + 658 Davao Oriental-Surigao del Sur Coastal Road Hinatuan, Surigao del Sur
6	10-03-09	Silae	Km. 1559 + 465 Jct. Sayre Highway Aglayan–Zamboanguita Rd. Barangay Silae, Malaybalay, Bukidnon	20	11-03-01	Dao-An	Km. 1632 + 388 Davao Oriental-Surigao del Sur Coastal Road Caraga, Davao Oriental
7	10-04-03	Tipalac	Km. 1754 + 303.09 Oroquieta-Dipolog Mt. Road, Barangay Rizal Oroquieta City, Misamis Occidental	21	11-03-02	Licop	Km. 1726 + 439 Mati-Compostela-Montevista Road, Lupon Davao Oriental
8	10-04-04	Tipan Diut	Km. 1753 + 933 Oroquieta-Dipolog Mt. Road, Barangay Tipan Oroquieta City, Misamis Occidental	22	11-03-03	Tawas	Km. 1723 + 920 Mati-Compostela-Montevista Road, Mati Davao Oriental
9	10-04-10	Katipunan	Km. 1763 + 422 Looc-Katipunan-Cartagena-Luzaran Prov'l Road, Brgy. Katipunan, Plaridel Misamis Occidental	23	11-03-06	Mahan-Ub	Km. 1649 + 210 Davao Oriental-Surigao del Sur Coastal Road Manay, Davao Oriental
10	10-06-01	Hayangabon II	Km. 1195 + 345 Surigao-Davao Coastal Road, Surigao del Norte	24	11-05-02	Los Amigos	Km. 1689 + 282 Tugbok-Balengaeng Road, Tugbok District Davao City
11	10-06-02	Capandan	Km. 1186 + 970 Surigao-Davao Coastal Road, Surigao del Norte	25	11-05-06	Piedad	Km. 1526 + 780 Toril District-Eden Road, Toril Davao City
12	10-06-06	Tigbao	Km. 470 + 430 Surigao–Anoa–aon–Malimono Road Surigao del Norte	26	11-05-07	Lais	Km. 1645 + 160 Davao del Sur-Sarangani Coastal Road Malita, Davao del Sur
13	10-06-07	Balite	Km. 469 + 420 Surigao-Anoa-aon-Malimono Road Surigao del Norte	27	11-06-02	Baliton	Km. 1717 + 376 Sarangani-Davao del Sur Coastal Road
14	11-01-01	Andanan	Km. 1381 + 655 Davao Oriental-Surigao del Sur, Coastal Road Andanan Lianga, Surigao del Sur	28	11-06-03	Pangyan	Km. 1733 + 949 Sarangani-Davao del Sur Coastal Road Pangyan, Glan, Sarangani



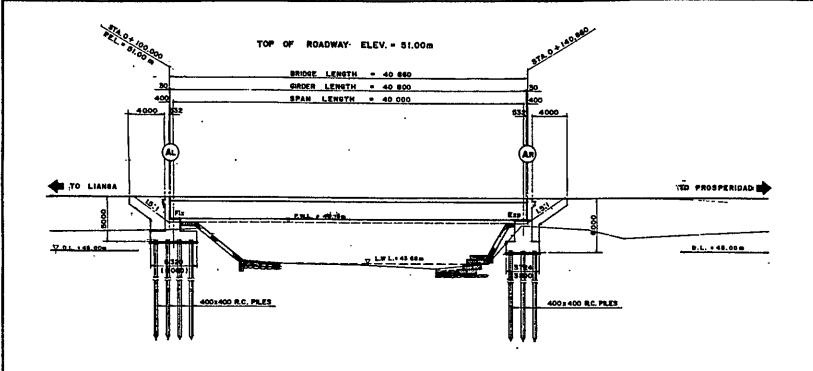
LIST OF GROUP 2 BRIDGES

No.	Bridge No.	Name of Bridge	Location		
1	10-01-08	Lingayao	Km. 1271 + 920 Agusan-Malaybalay Road, Agusan del Norte		
2	10-01-09	Magus	Km. 1273 + 484.22 ~ 1273 + 524.22 Agusan-Malaybalay Road Agusan del Norte		
3	10-01-10	Rizal	Km. 1261 + 171.89 ~ 1261 + 231.89 Buenavista-Bunaguit Road, Agusan del Norte		
4	10-01-12	Guinabsan	Km. 1263 + 560 Buenavista-Bunaguit Road Agusan del Norte		
5	10-02-04	Maog	Km. 1292+650 ~ 1292+713.60 NRJ. Awa-Azpitia-Lianga National Secondary Road, Agusan del Sur		
6	10-05-09	Pagatpat-San Simon	Km. 0 + 050 Bulua-Pagatpat-San Simon Road Cagayan de Oro City, Misamis Oriental		
7	11-02-05	Lower Silway	Km. 1656 + 032 Gen. Santos City-Makar Wharf Road Gen. Santos City, South Cotabato		
8	11-04-03	Inambatan	Km. 1400 + 570 Olaycon-Inambatan-Macopa- Compostela Road, Monkayo, Davao		
9	11-05-01	Culaman	Km. 1637 + 000 Davao del Sur-Sarangani Coastal Road Malita, Davao del Sur		
10	11-05-03	Mintal	Km. 1696 + 012 Mintal-Calinan Road, Mintal, Davao City		

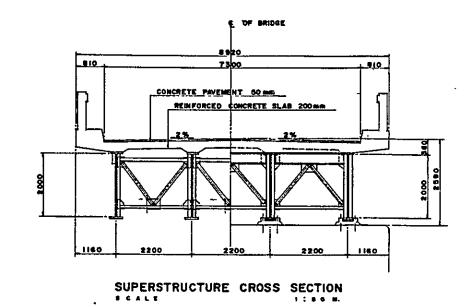
GENERAL VIEW OF BRIDGES (GROUP 1)

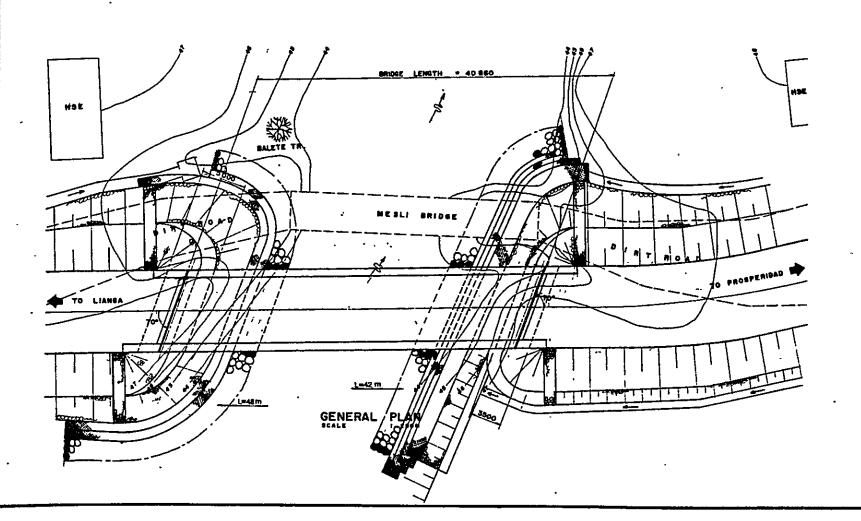


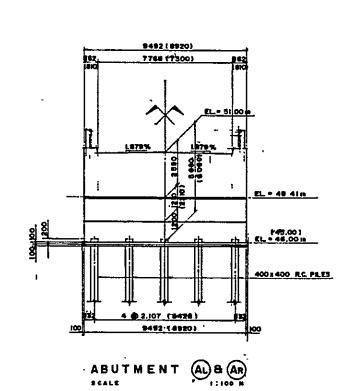
BRIDGE NO.

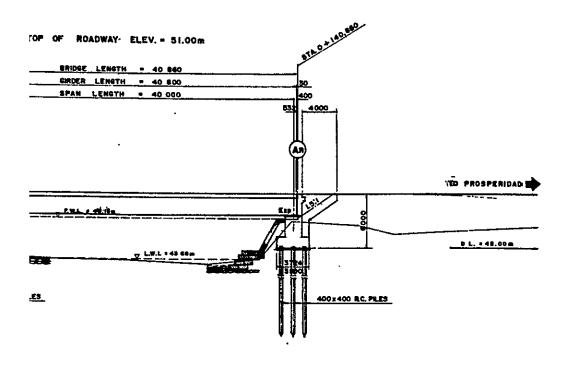


GENERAL ELEVATION

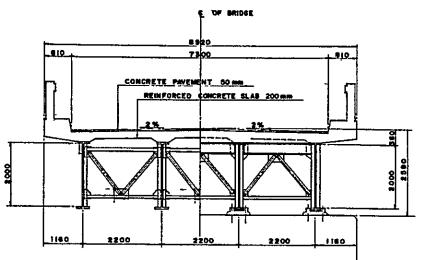


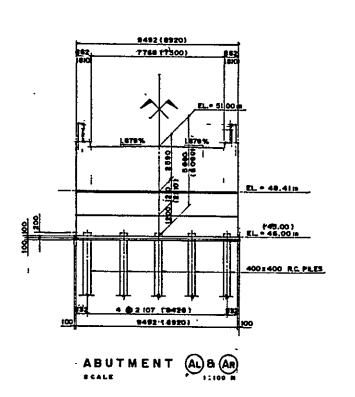






GENERAL ELEVATION







BASIC DESIGN STUDY ON THE PROJECT FOR CONSTRUCTION OF DILIDGES ALONG RURAL RUADS IN HINDANAO AREA

BRIDGE HAME

Mesli

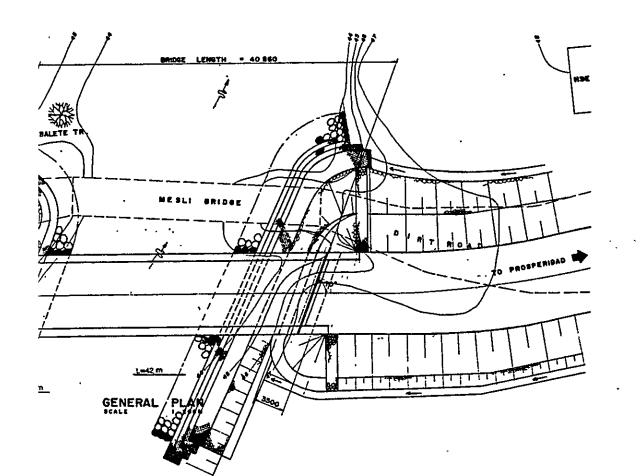
SHEET NO.

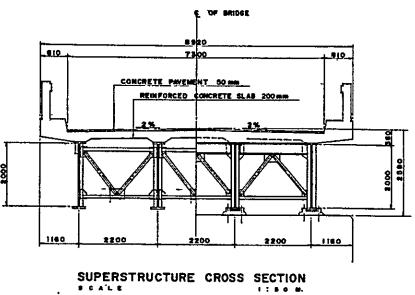
2

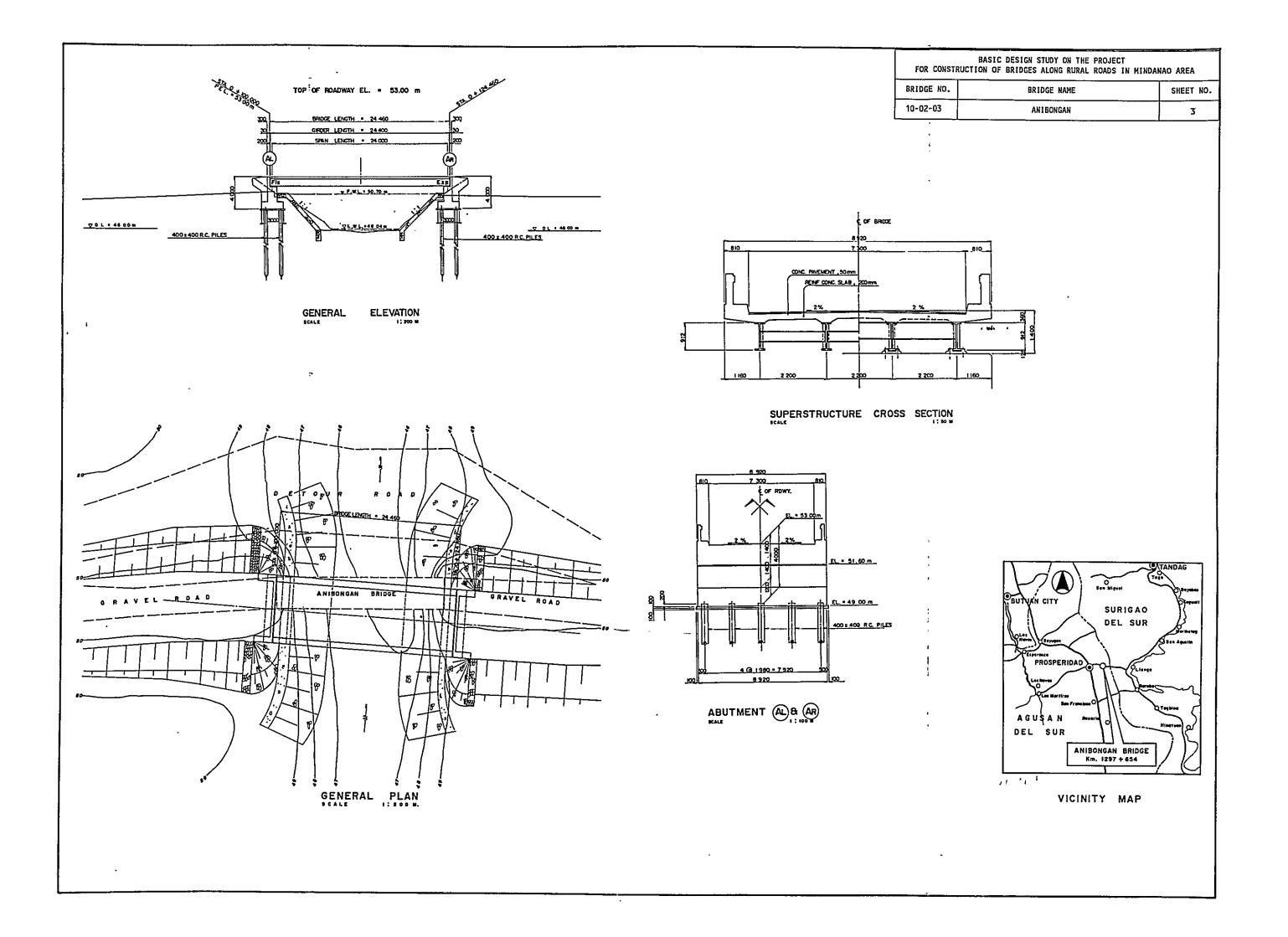
BRIDGE NO.

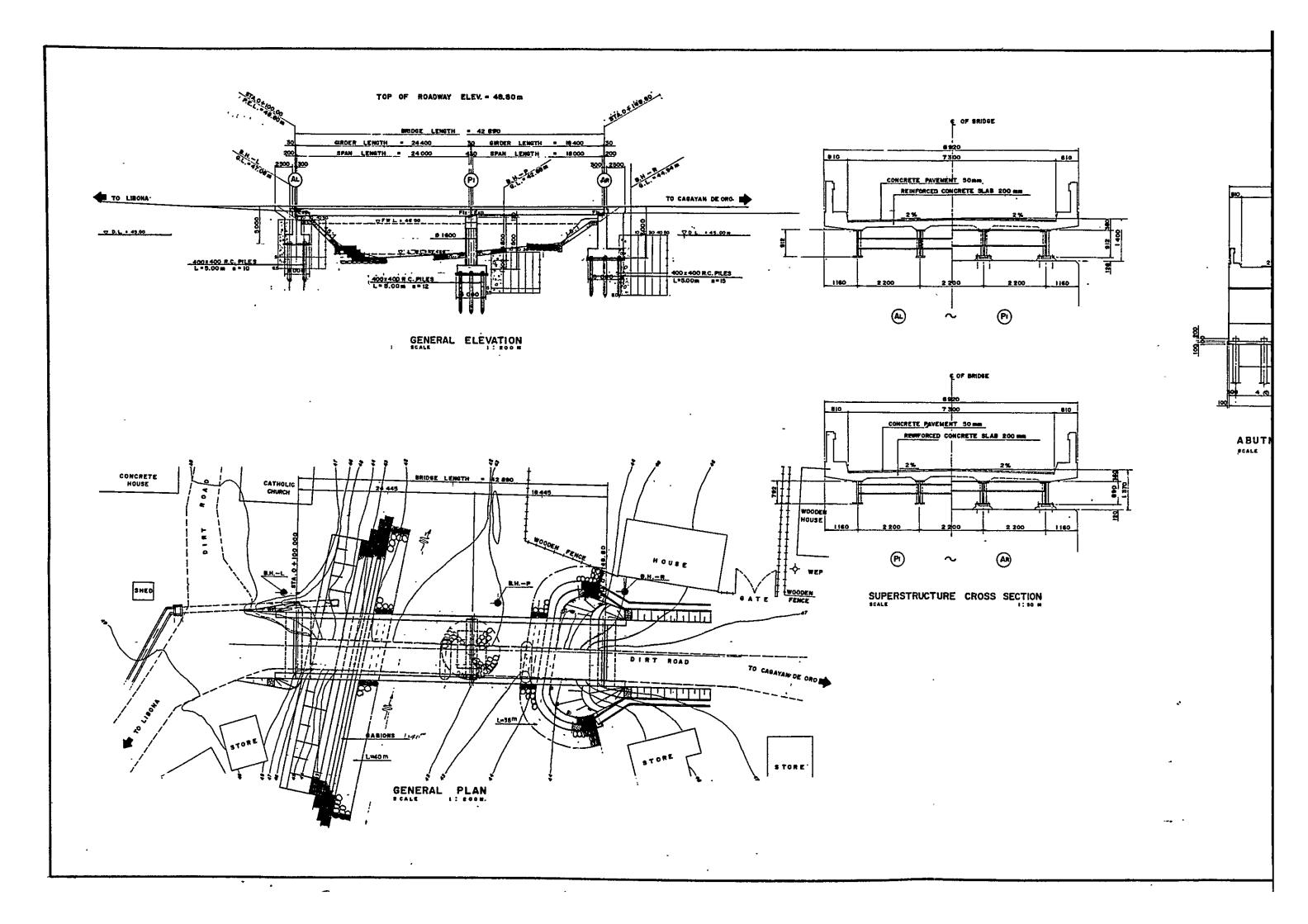
10-02-01

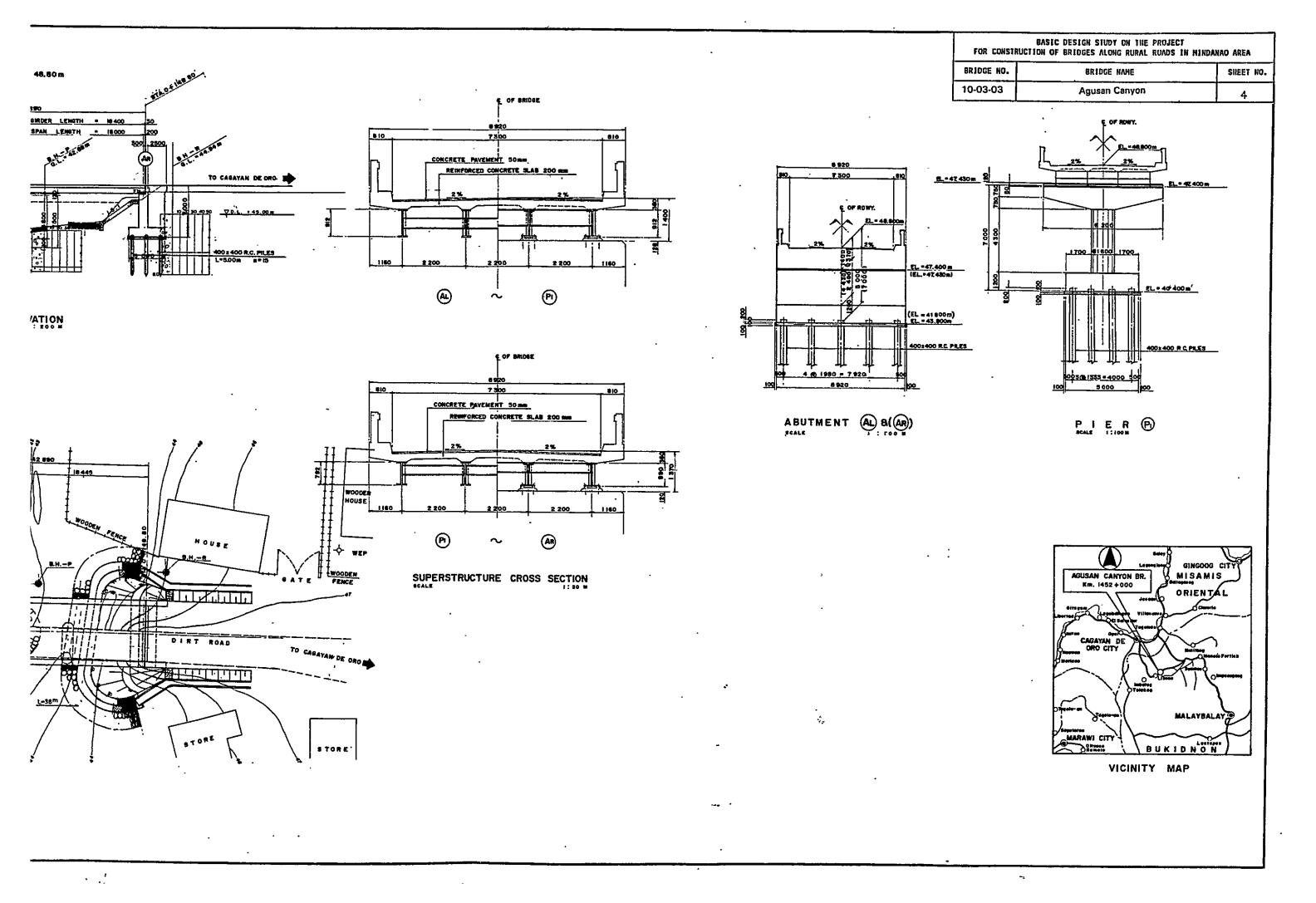
VICINITY MAP

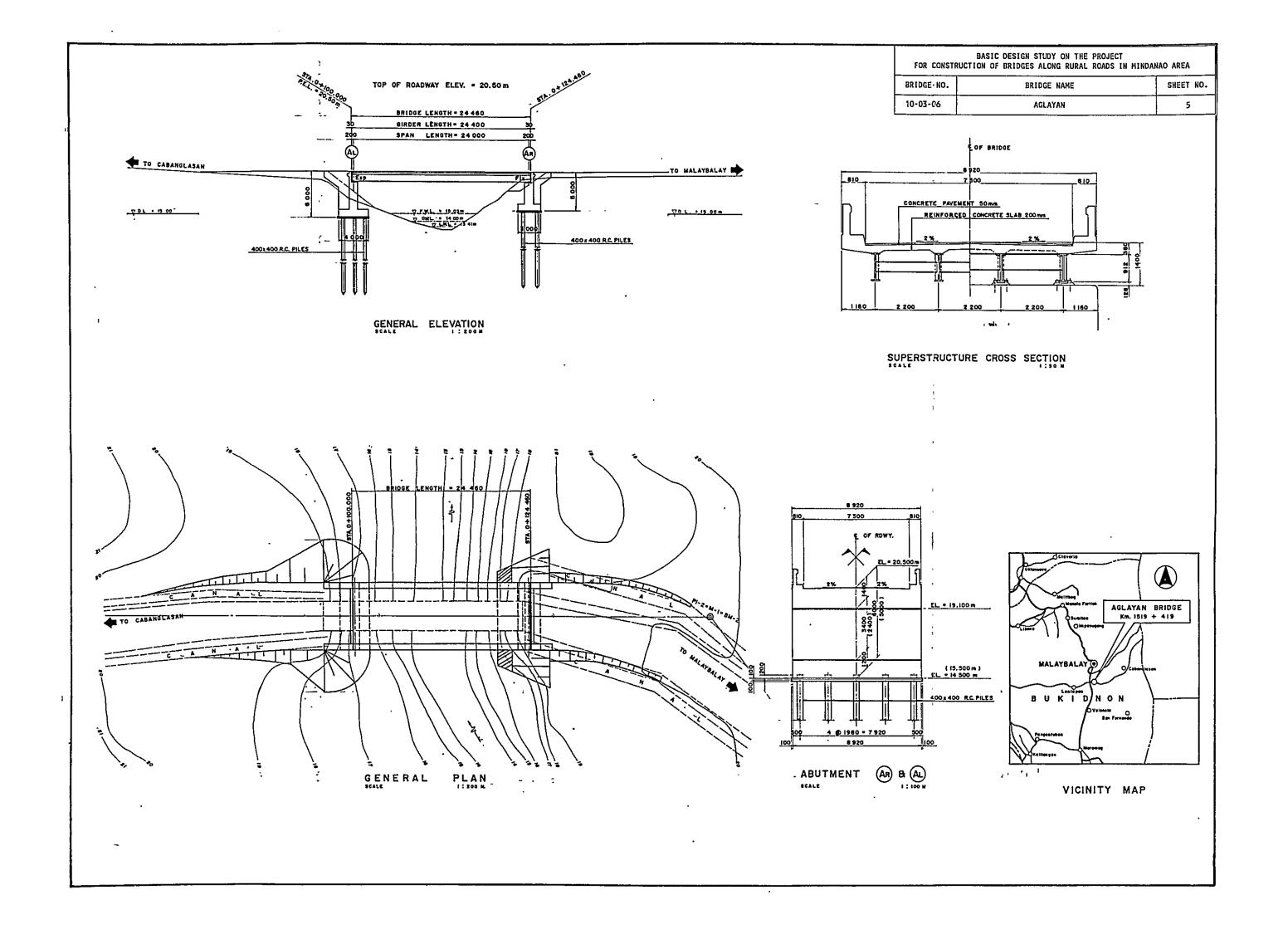


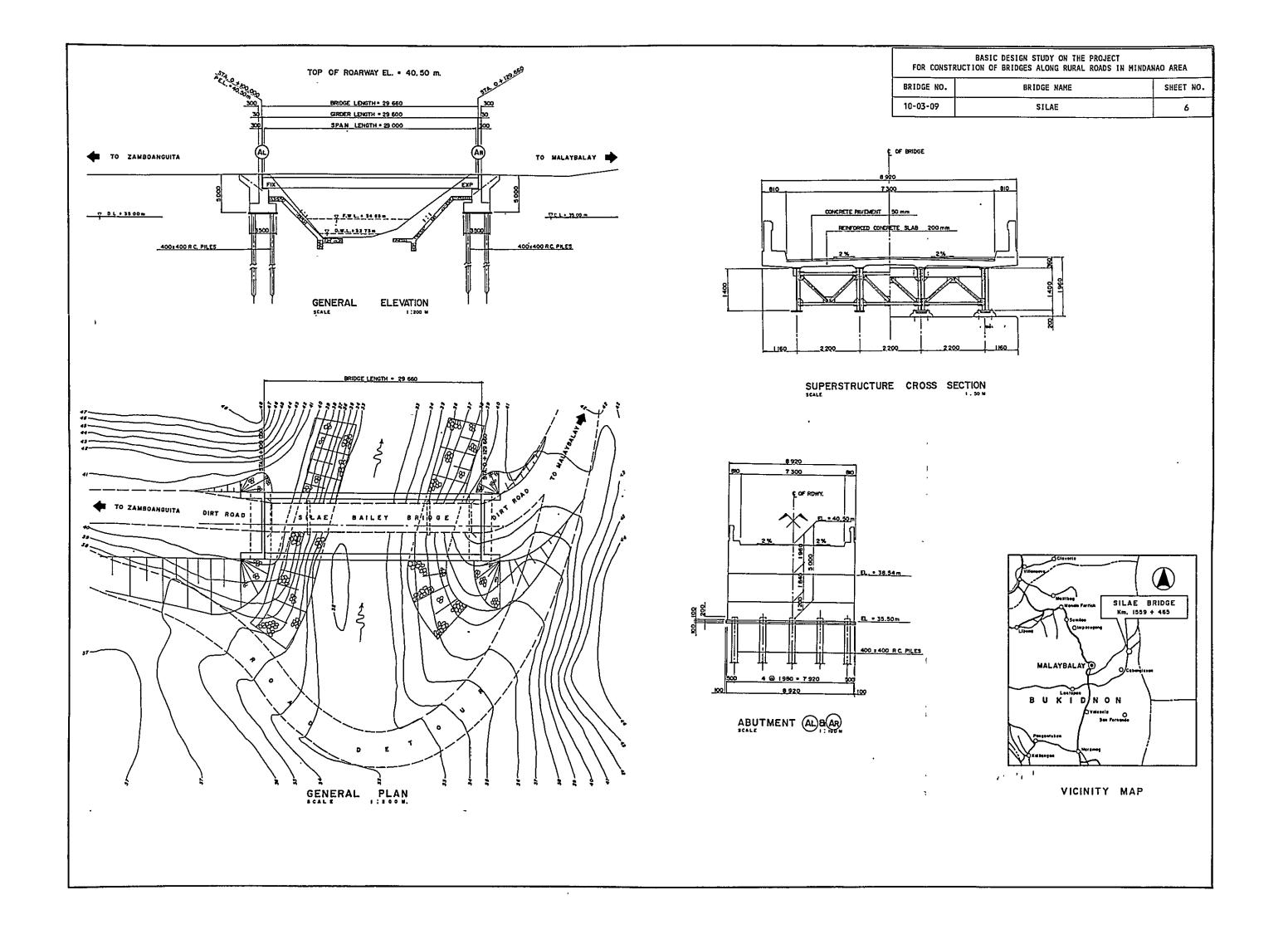


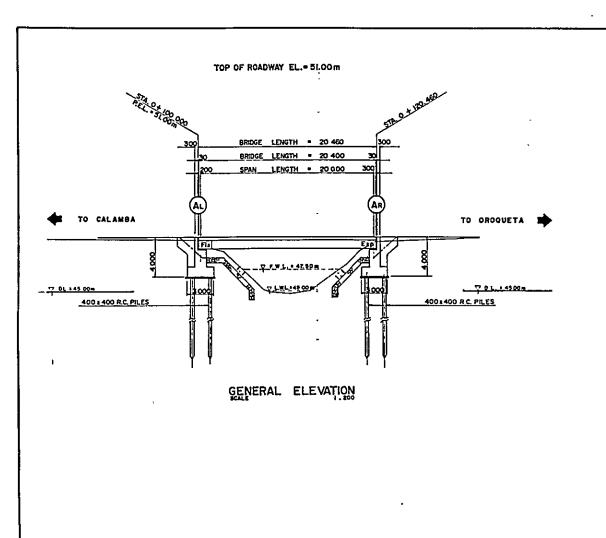






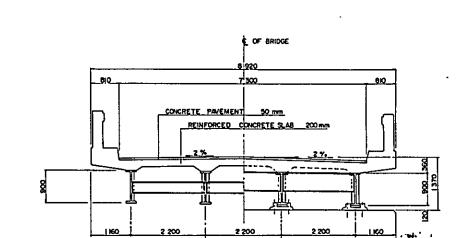






BRIDGE LENGTH - 20 460

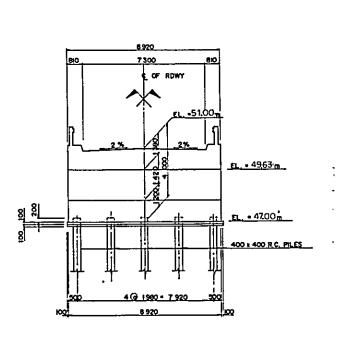
GENERAL PLAN



SUPERSTRUCTURE CROSS SECTION

BRIDGE NO.

10-04-03







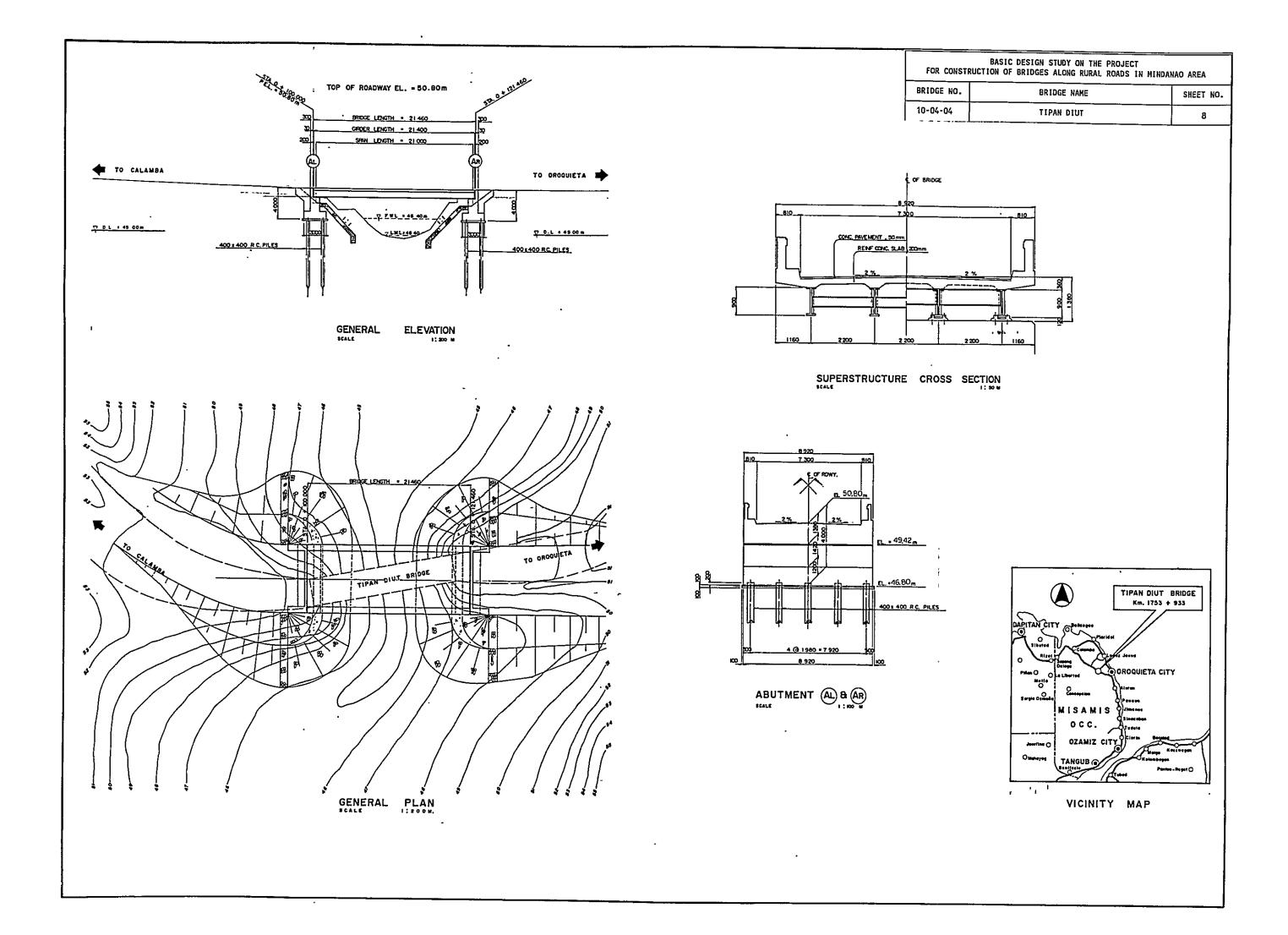
, ', ' VICINITY MAP

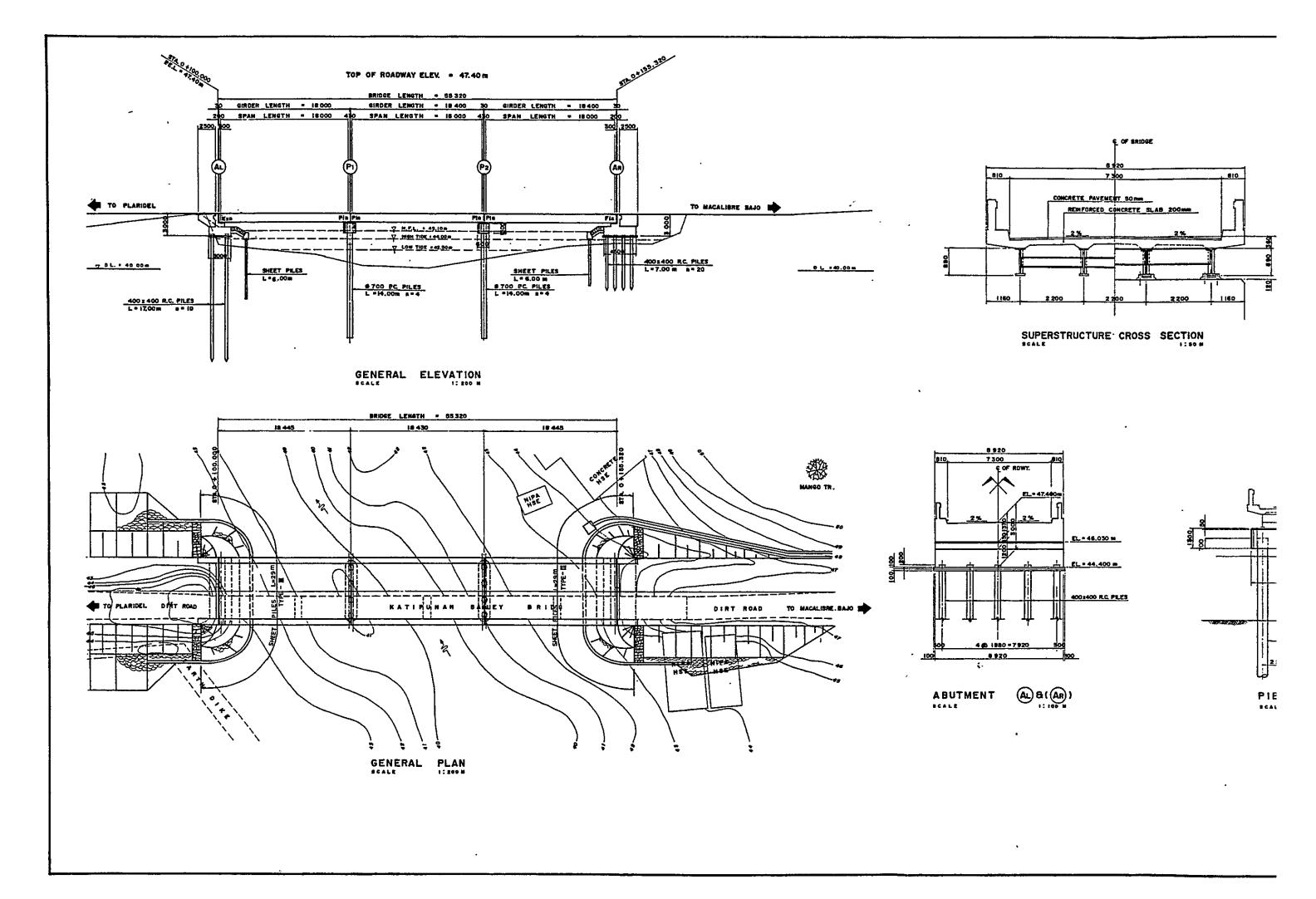
BASIC DESIGN STUDY ON THE PROJECT FOR CONSTRUCTION OF BRIDGES ALONG RURAL ROADS IN MINDANAO AREA

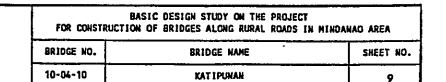
BRIDGE NAME

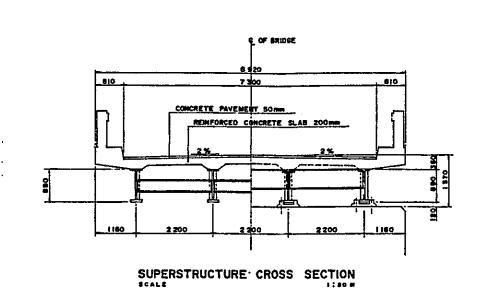
TIPALAC BRIDGE

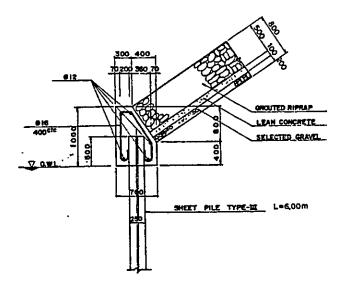
SHEET NO.



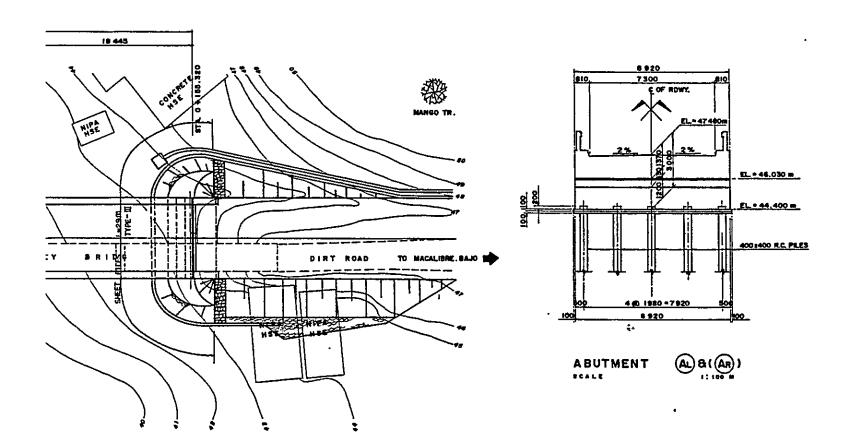






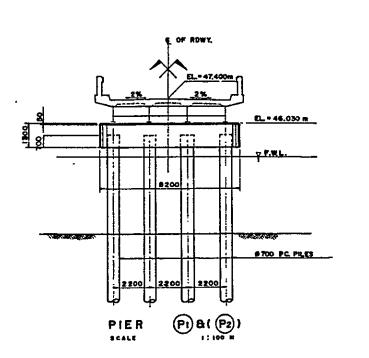


CAPING OF SHEET PILES



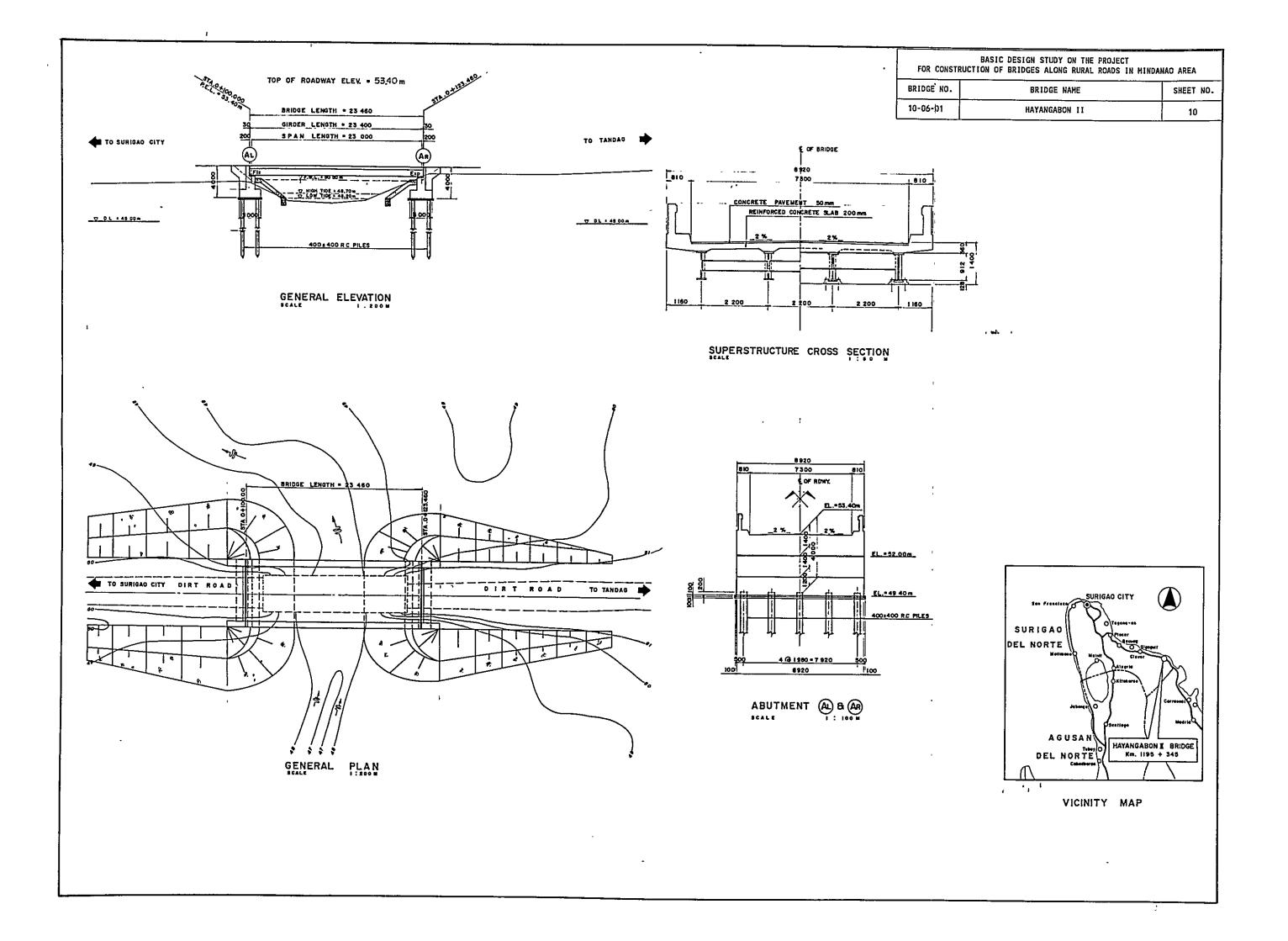
TO MACALIBRE BAJO

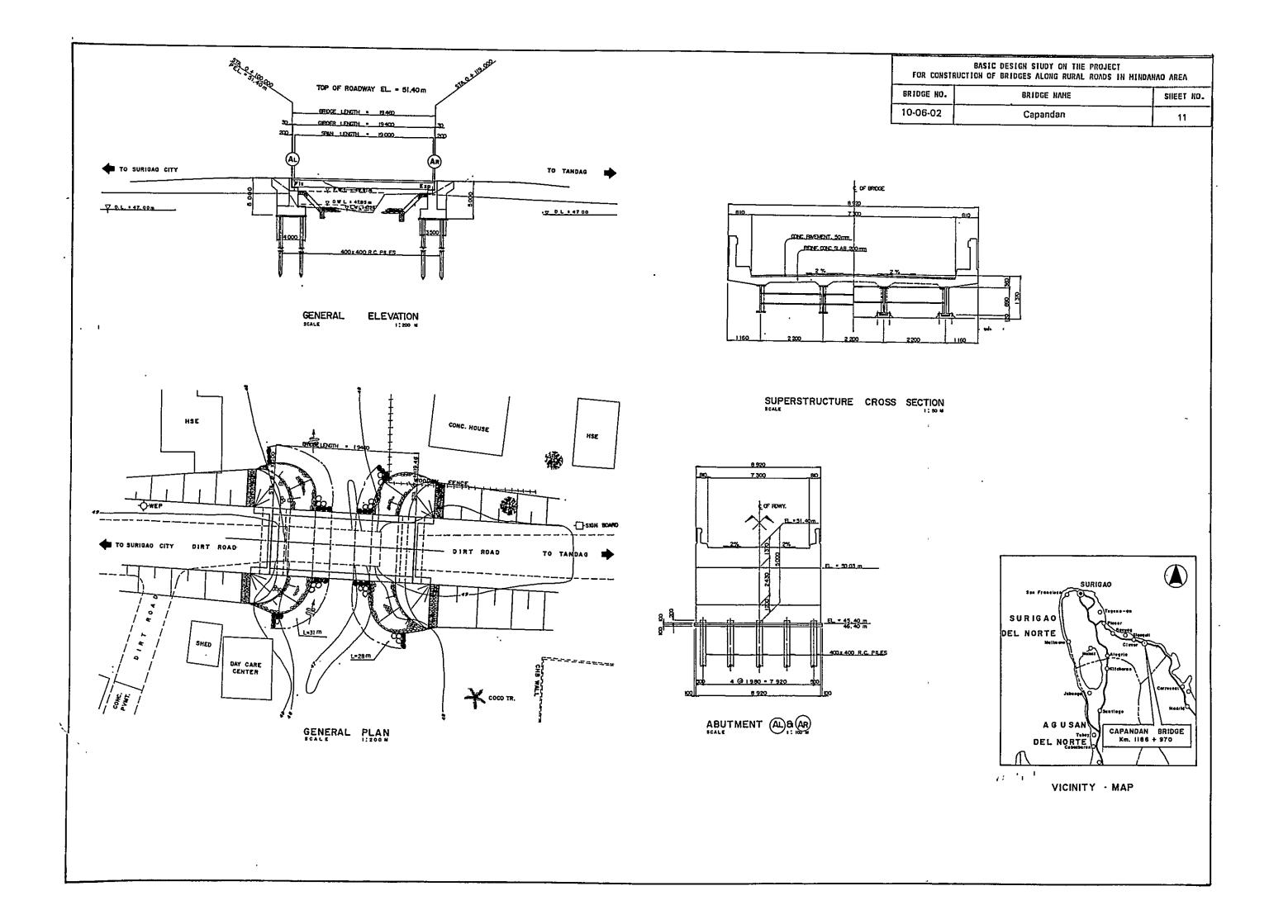
SPAN LENGTH = 18400 30

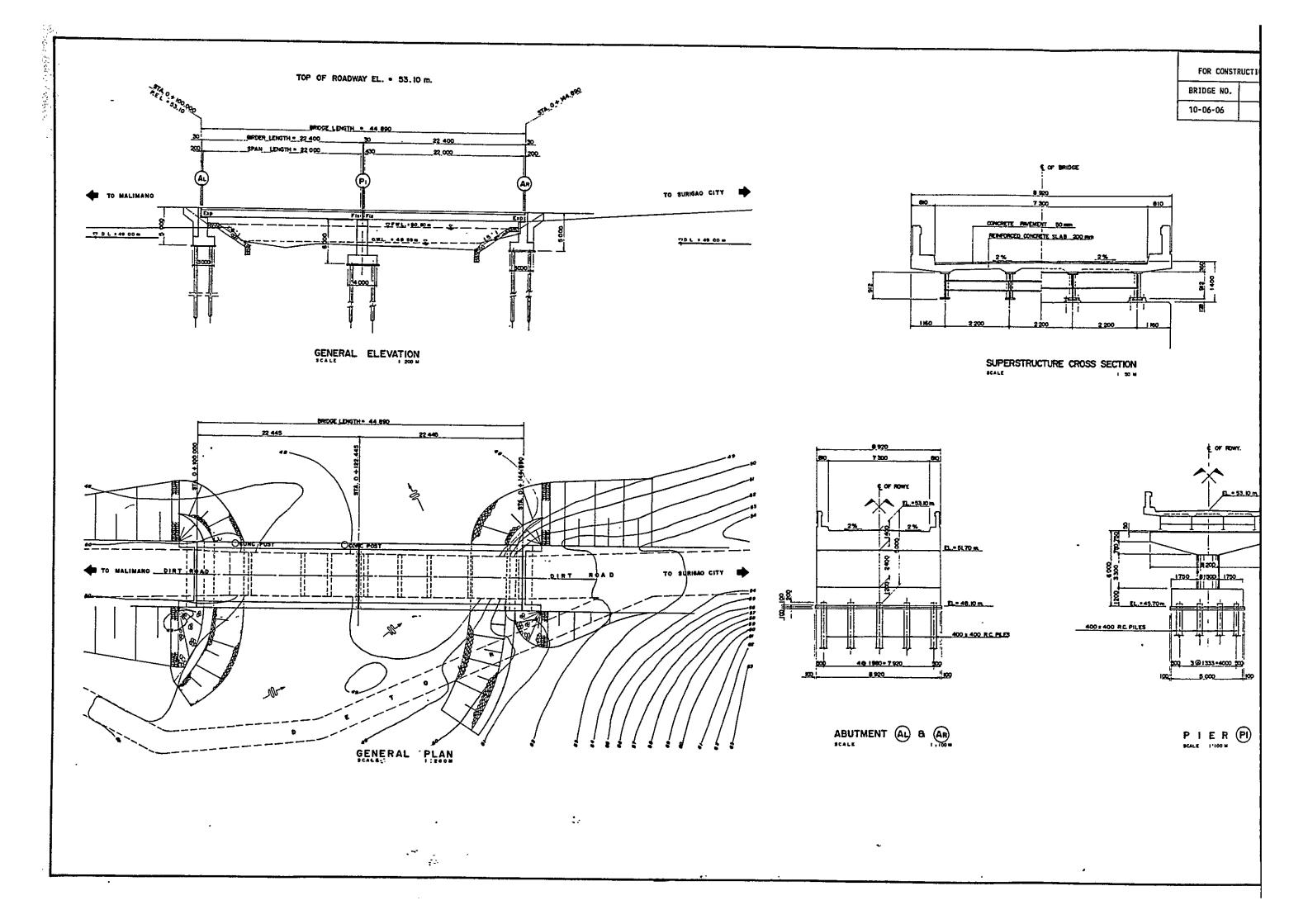


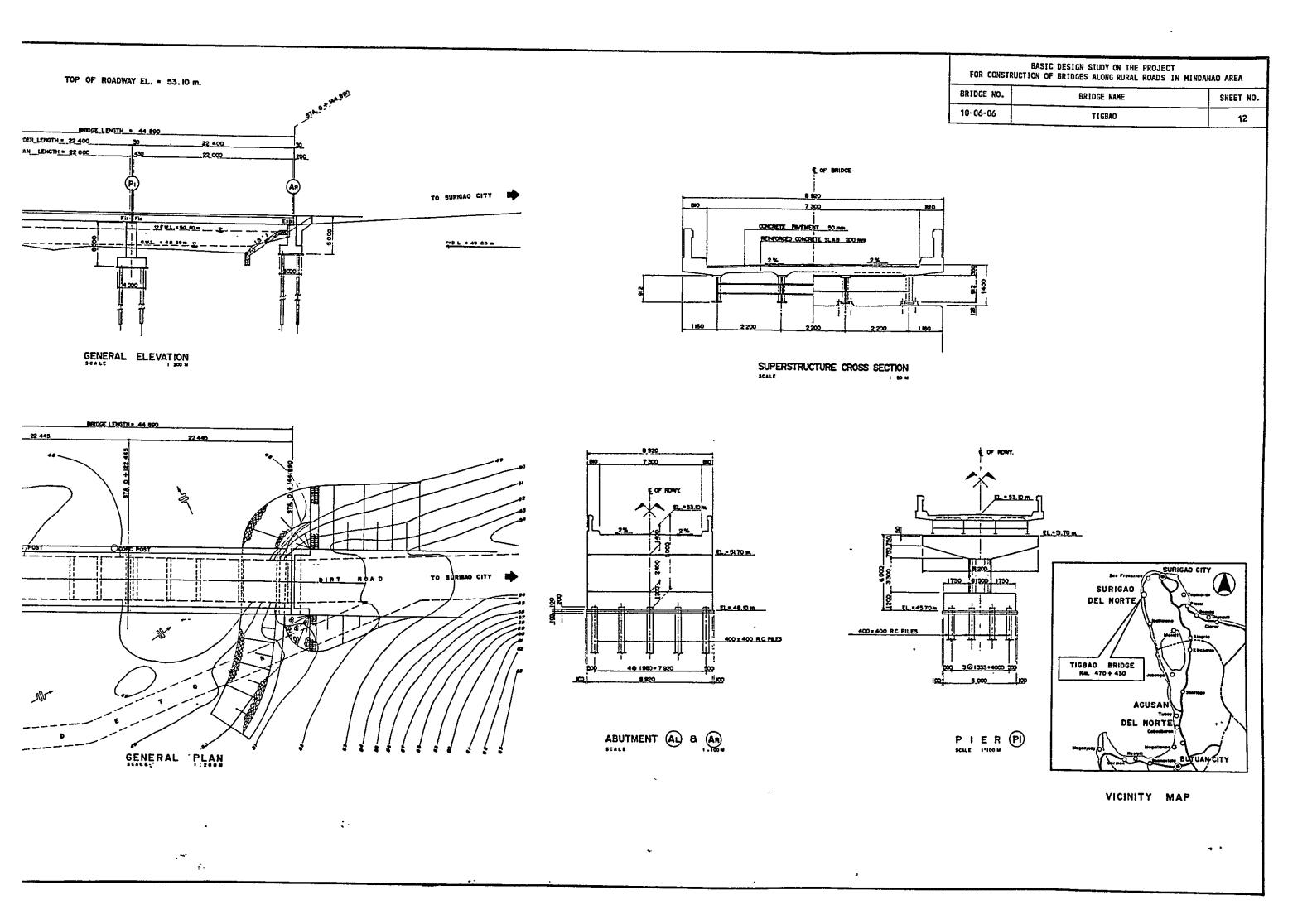


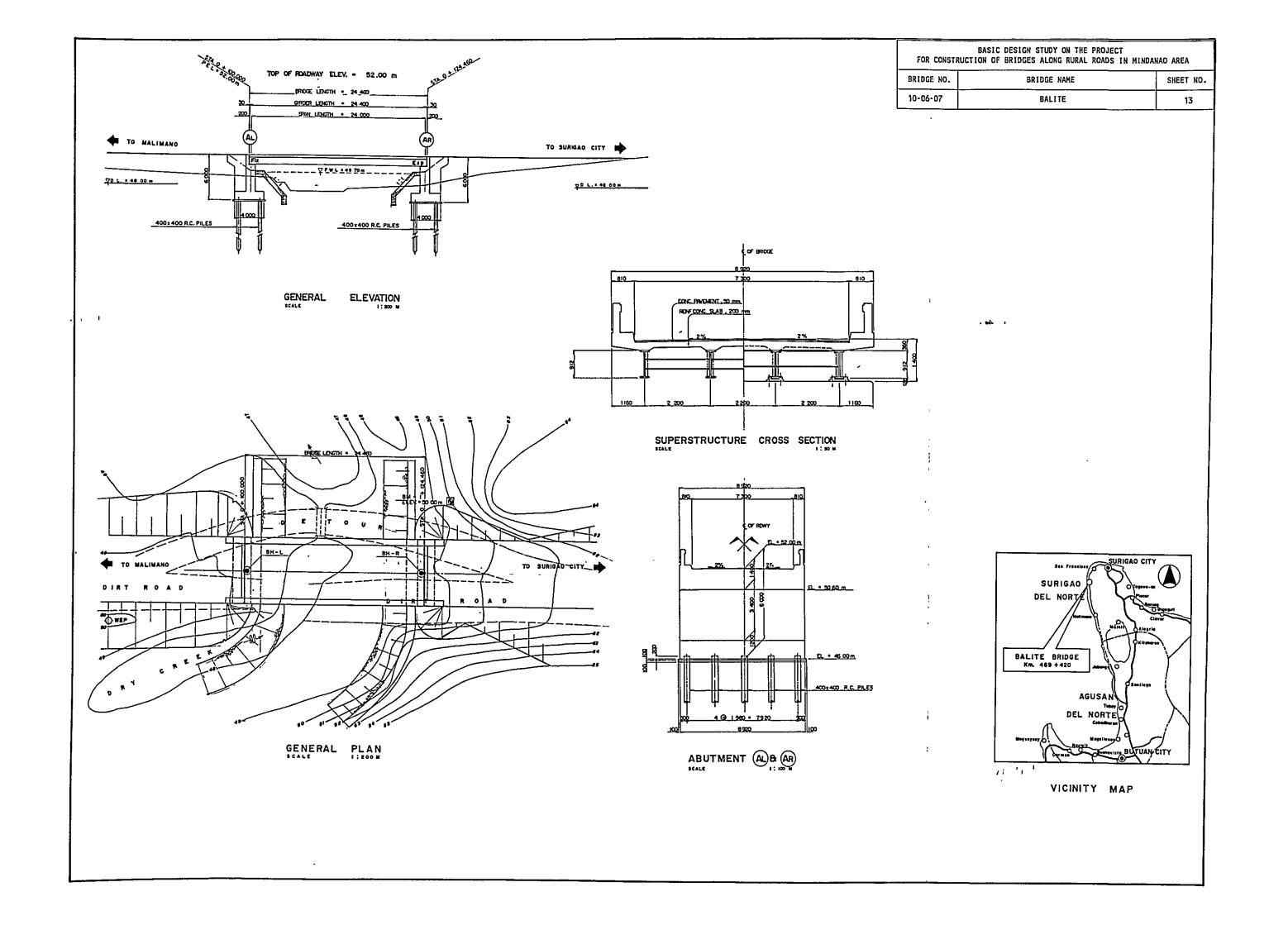
VICINITY MAP

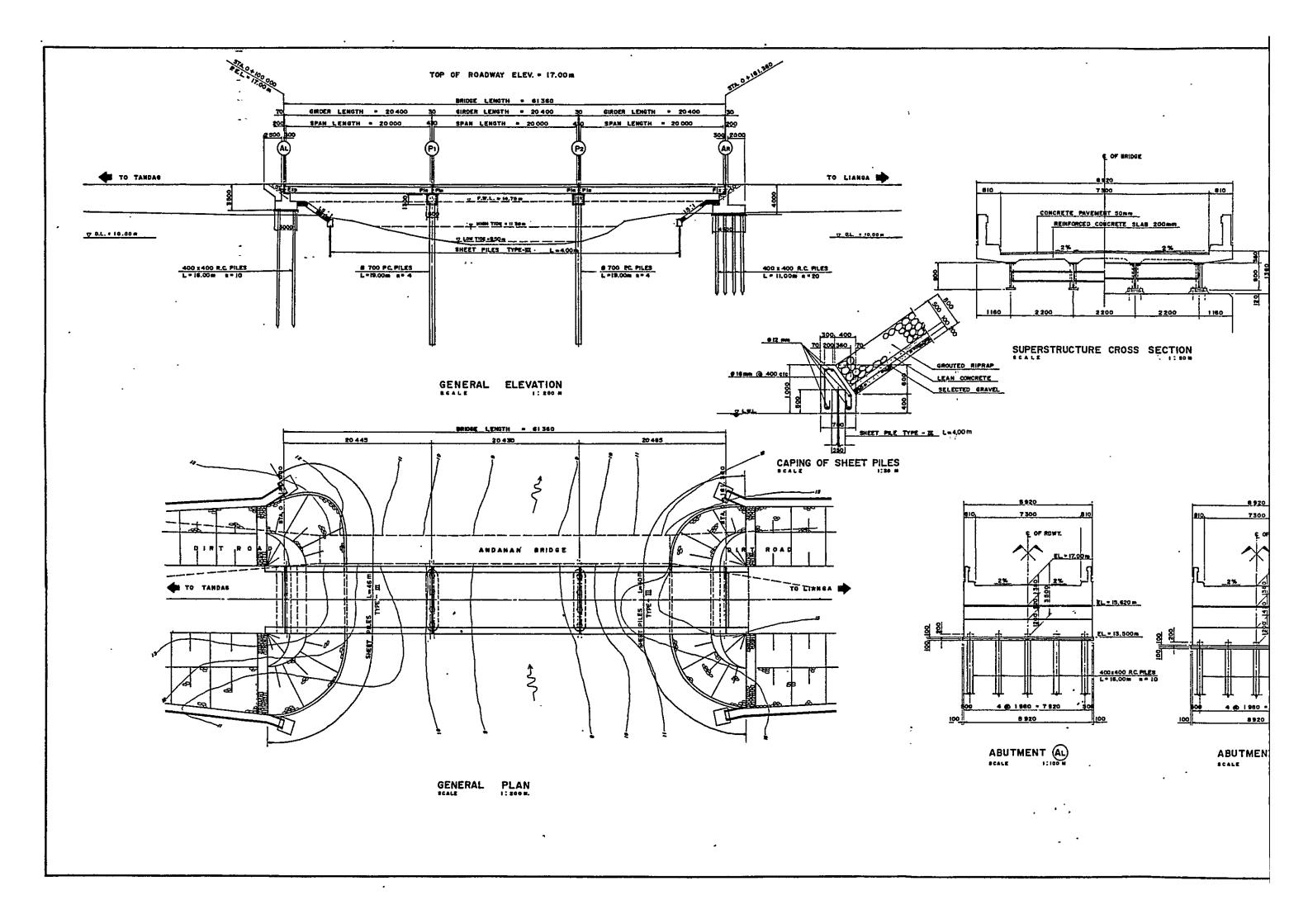


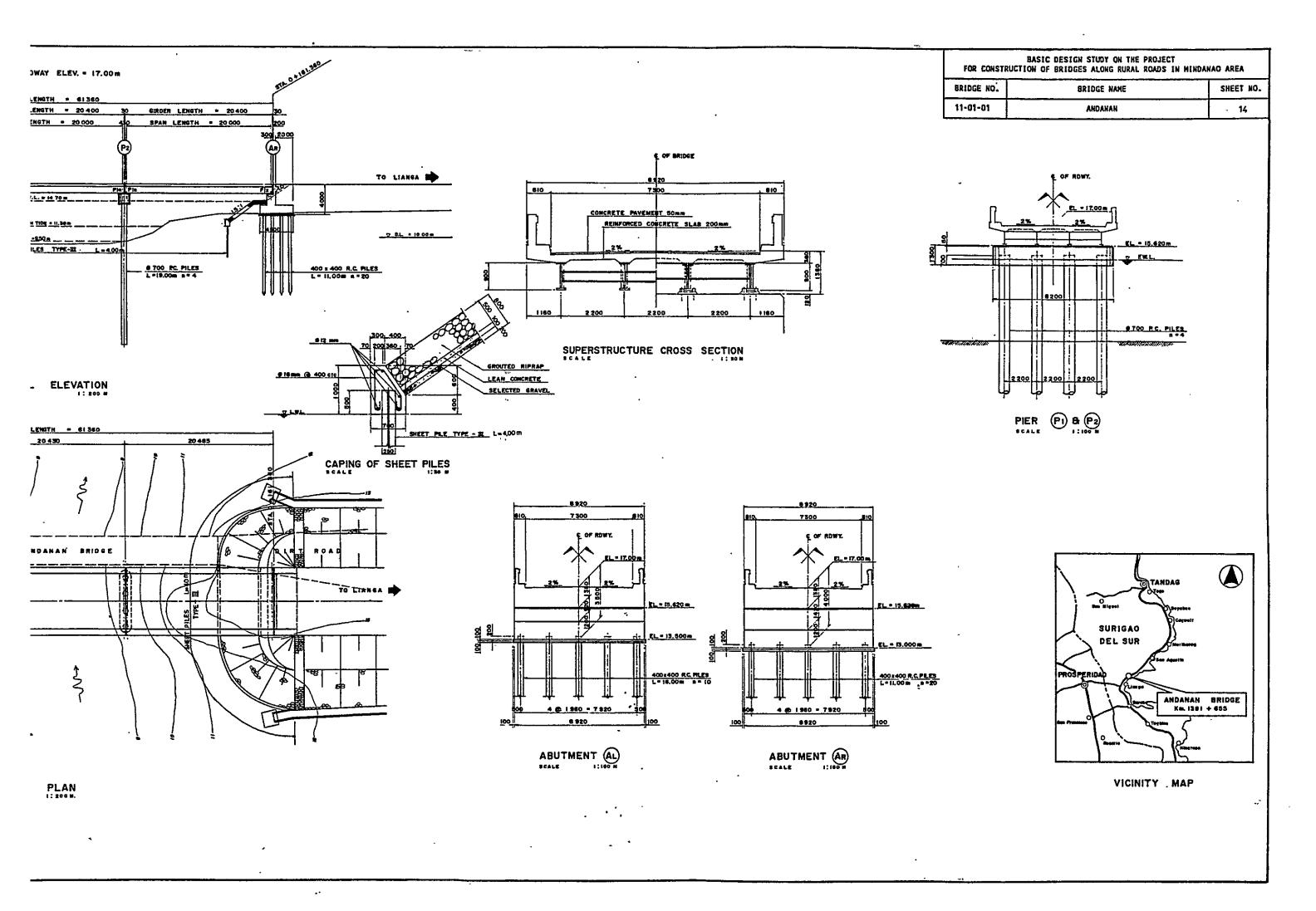


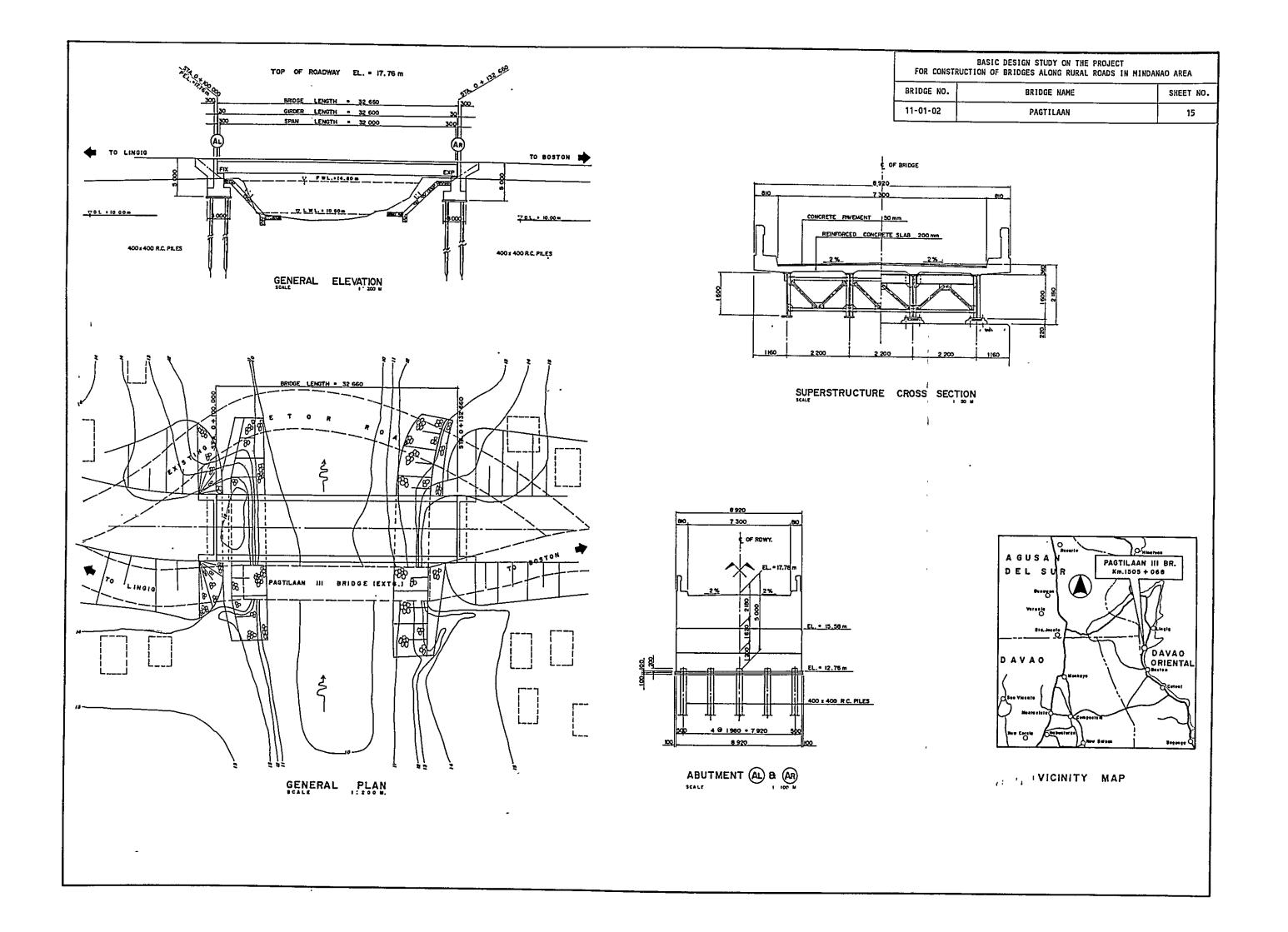


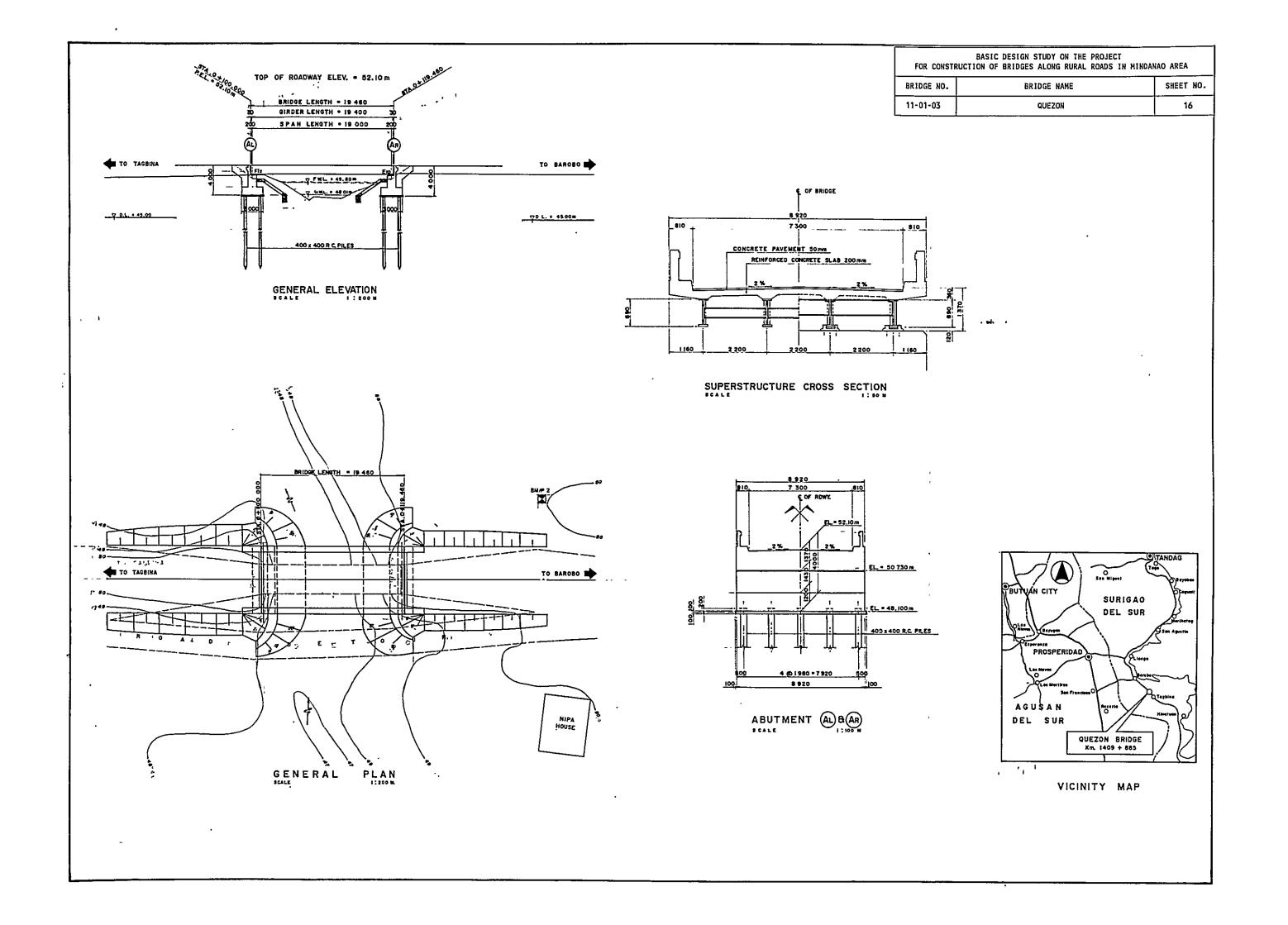


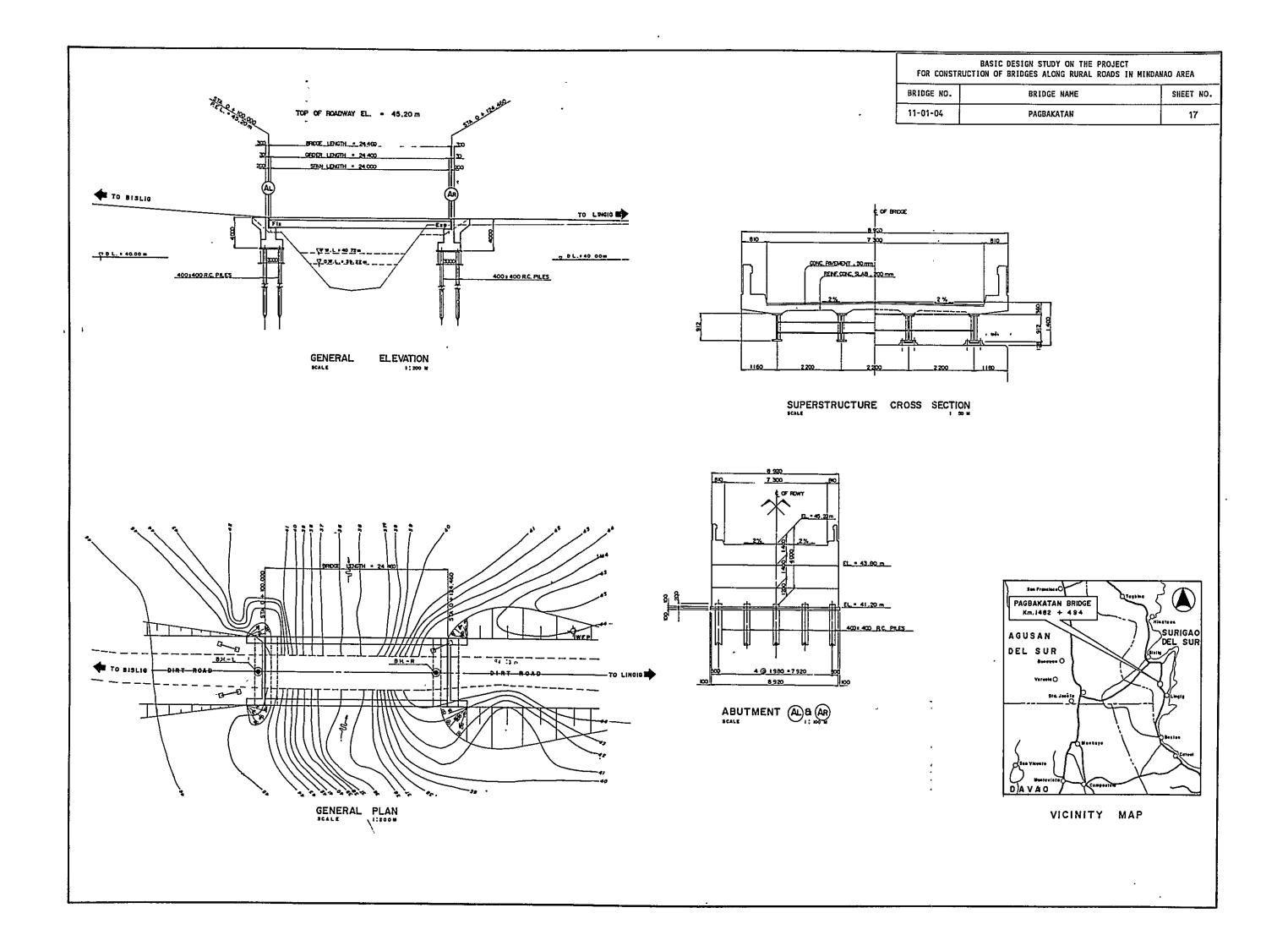


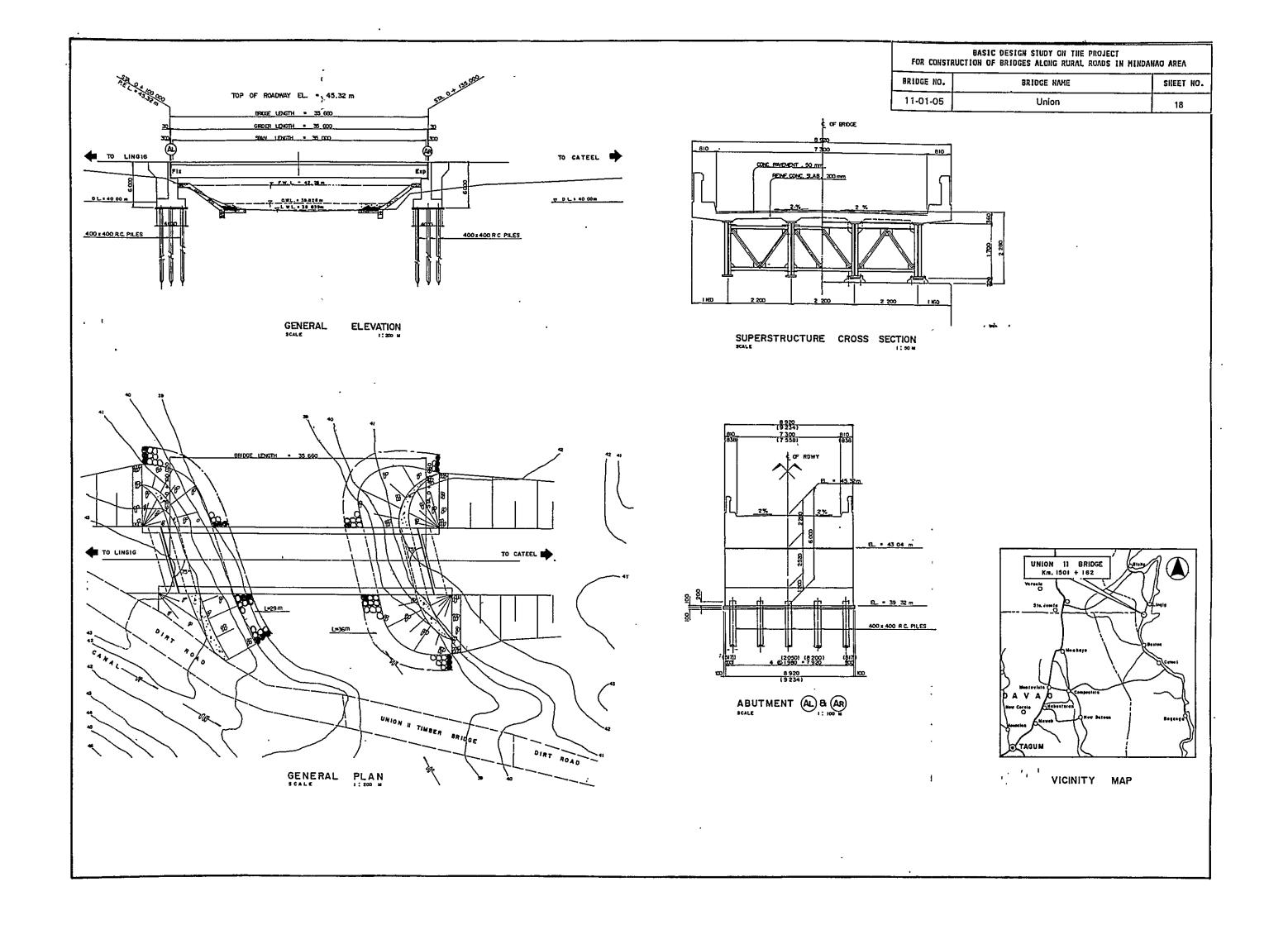


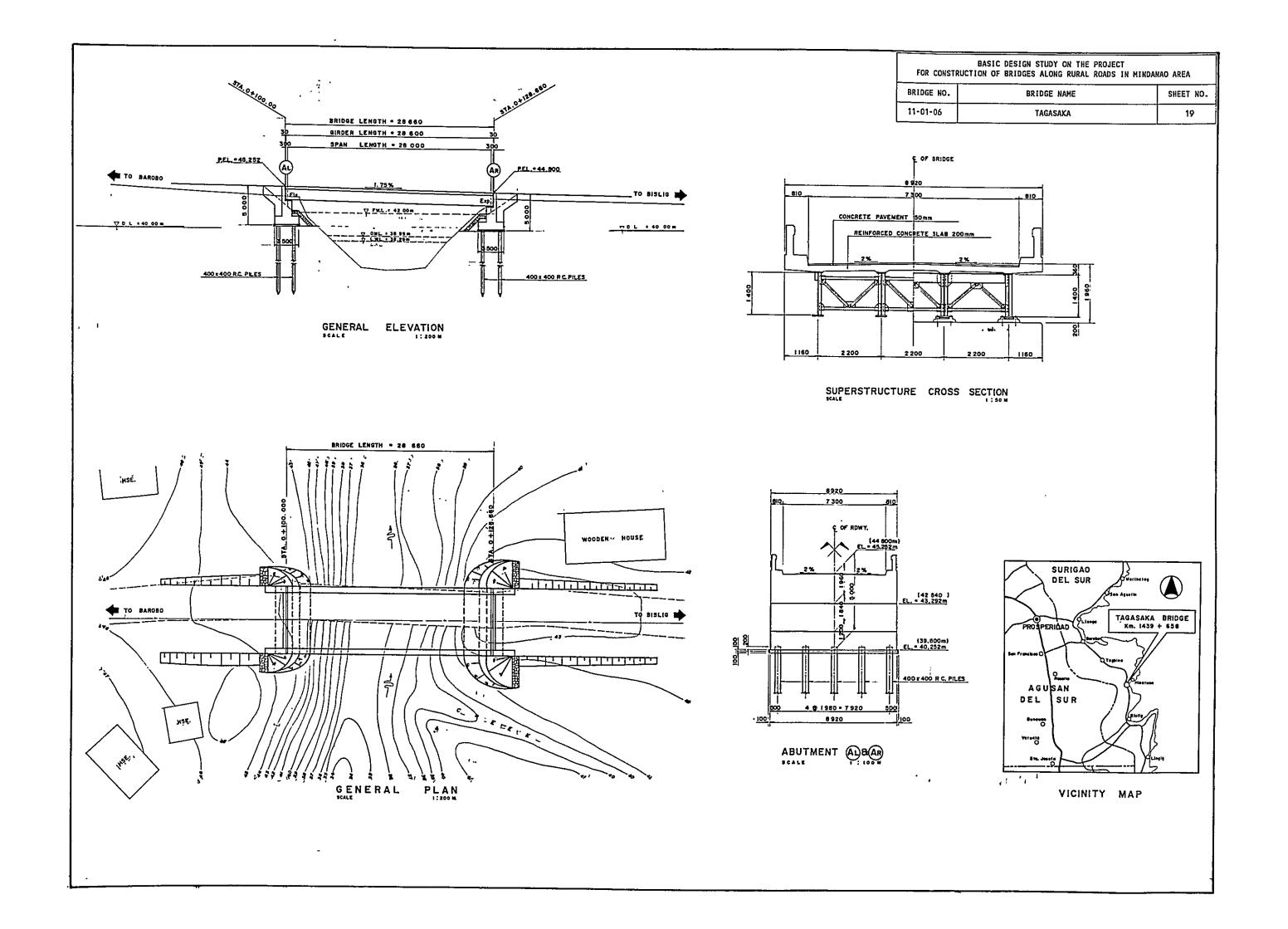


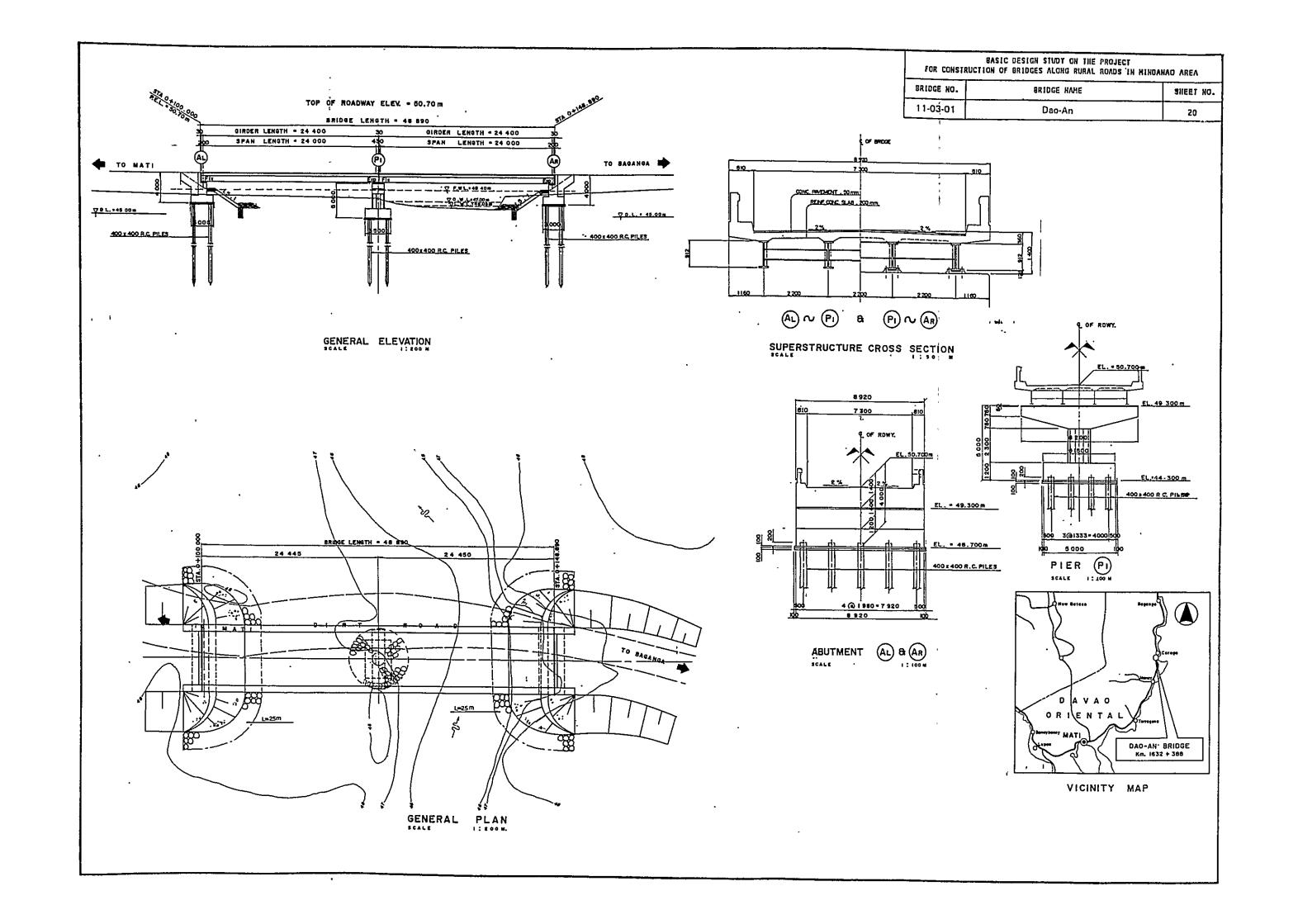


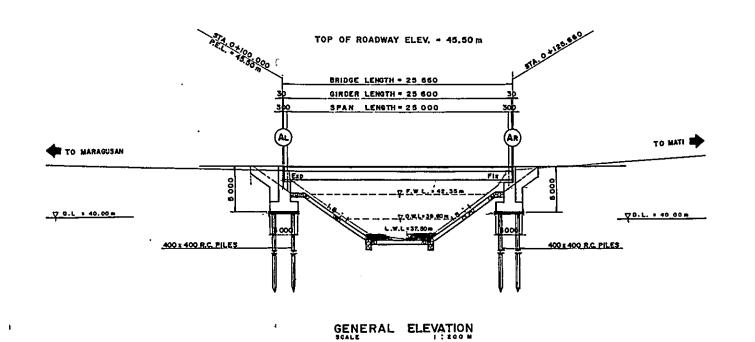


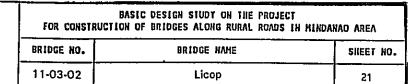


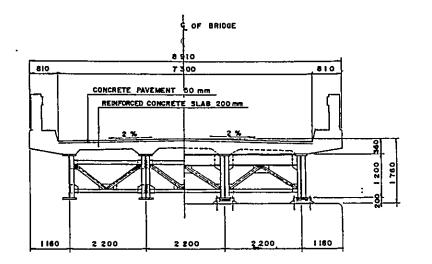




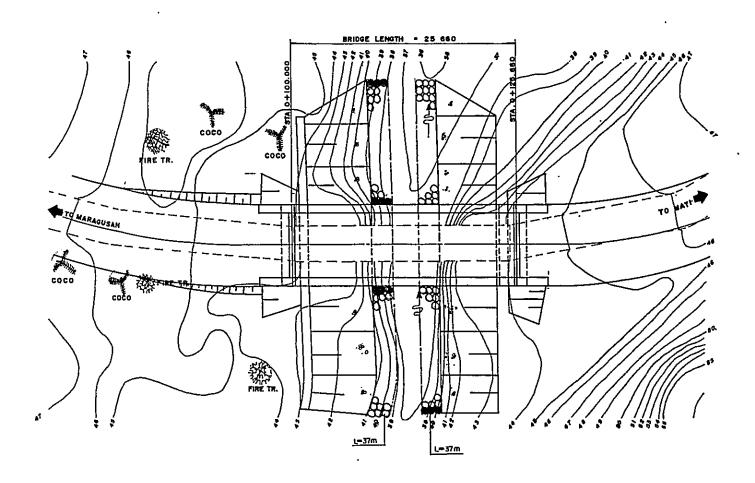


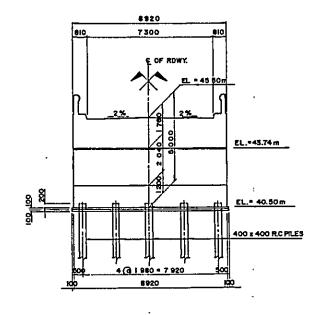




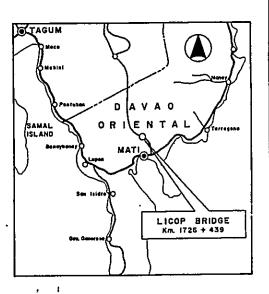


SUPERSTRUCTURE CROSS SECTION

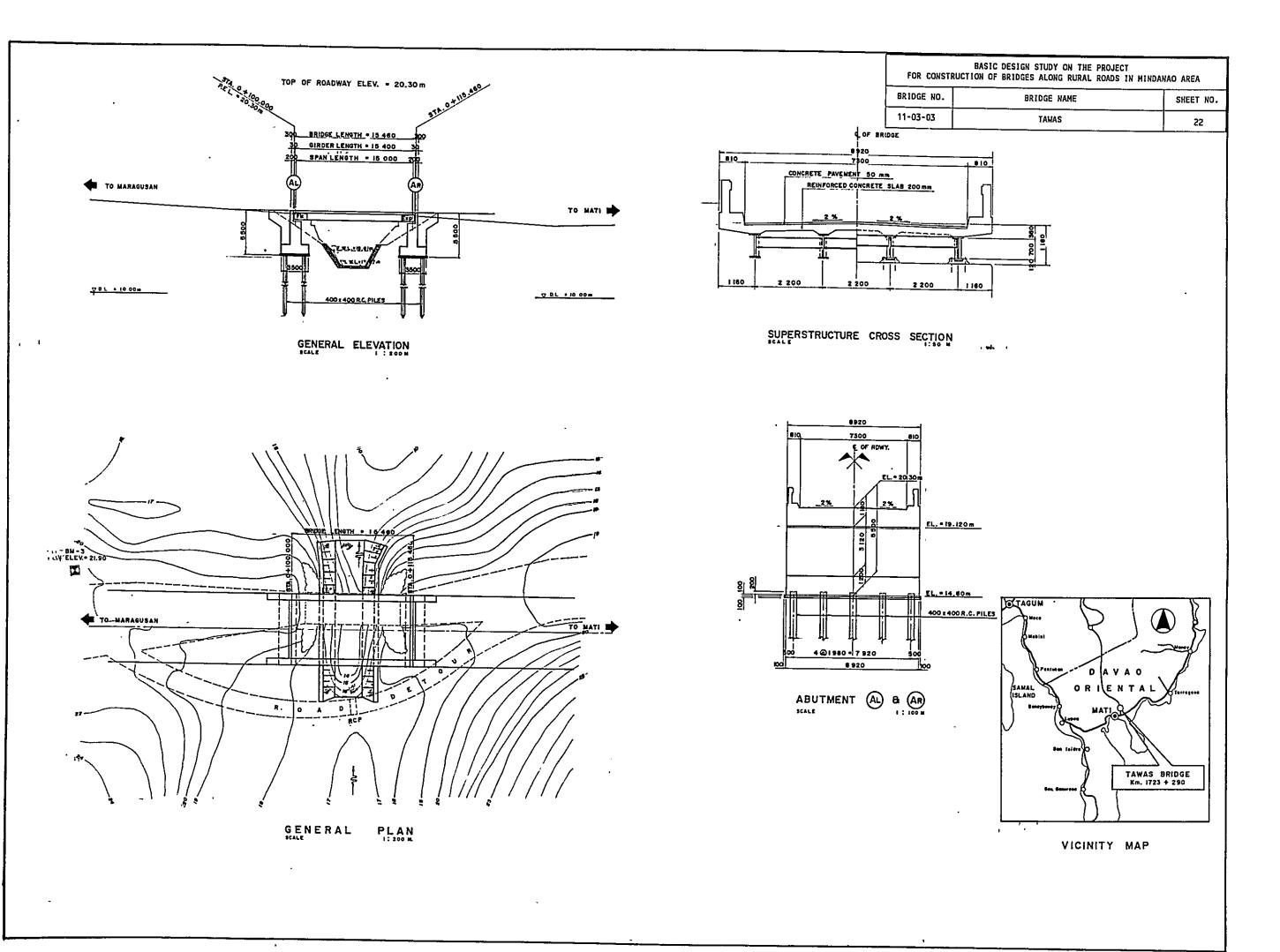


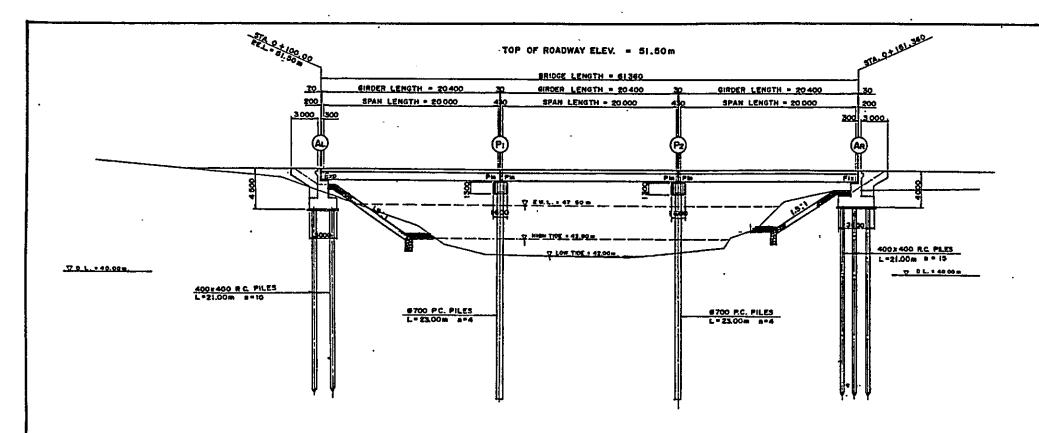


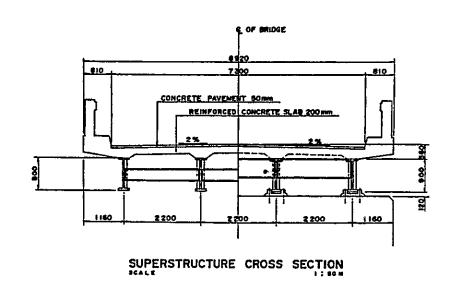
ABUTMENT AL 8 AR



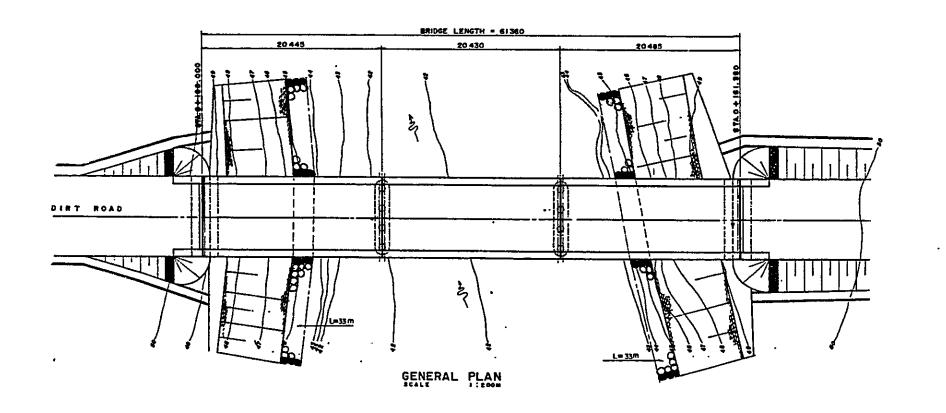
VICINITY MAP

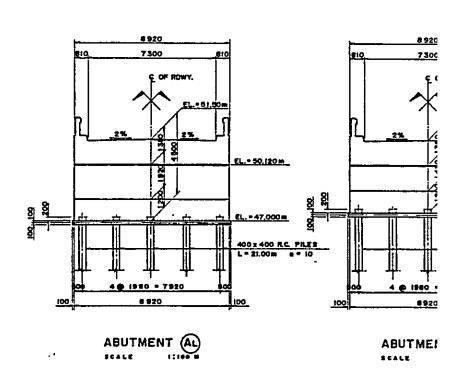


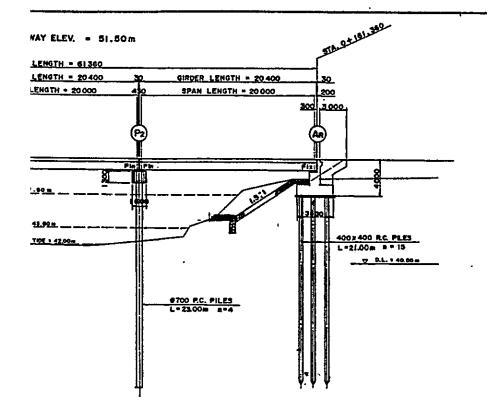




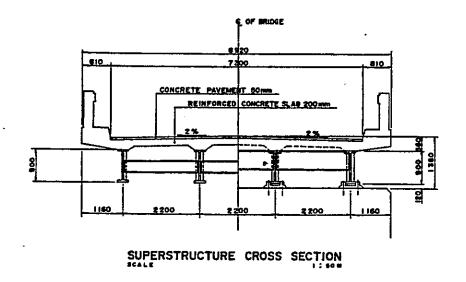
GENERAL ELEVATION







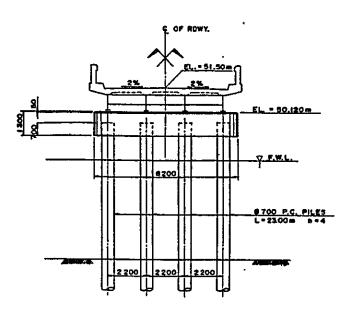
. ELEVATION



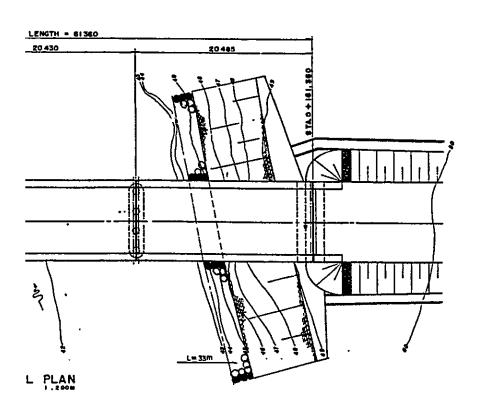
BASIC DESIGN STUDY ON THE PROJECT
FOR CONSTRUCTION OF BRIDGES ALONG RURAL ROADS IN MINDANAO AREA

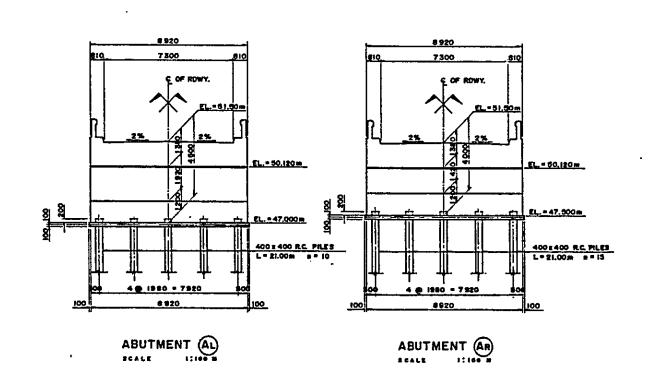
BRIDGE NO. BRIDGE NAME SHEET NO.

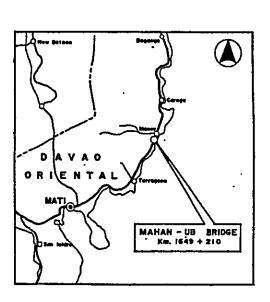
11-03-06 Mahan-Ub 23



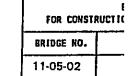
PIER PI P

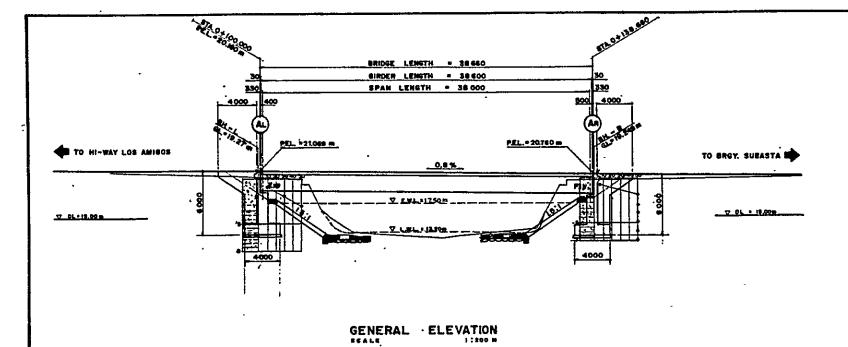


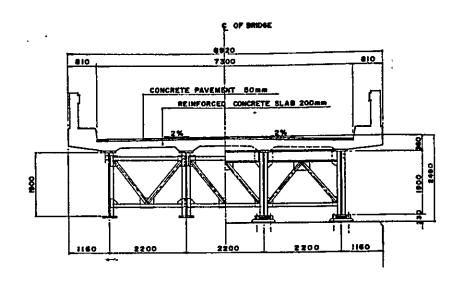




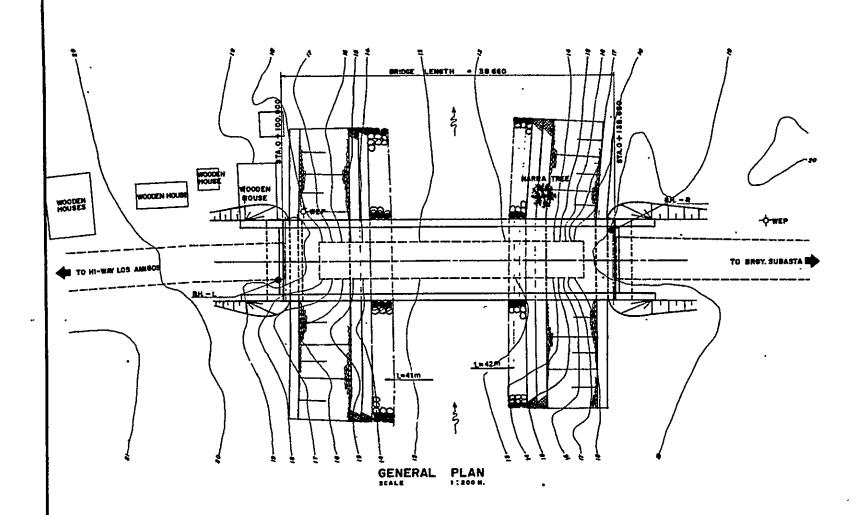
VICINITY MAP

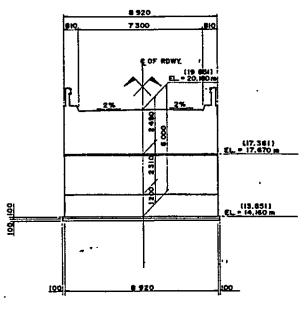




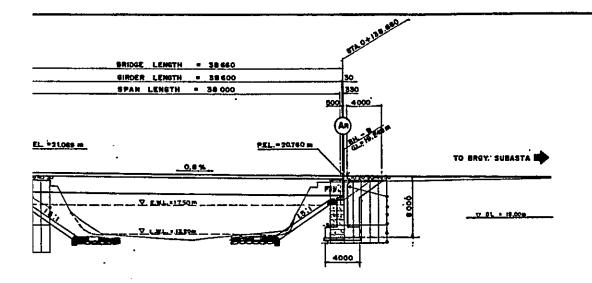


SUPERSTRUCTURE CROSS SECTION

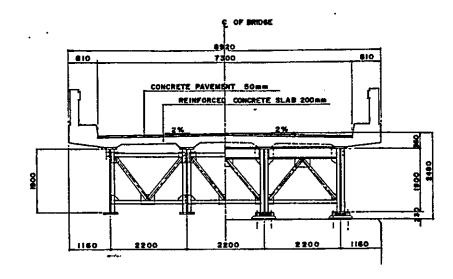




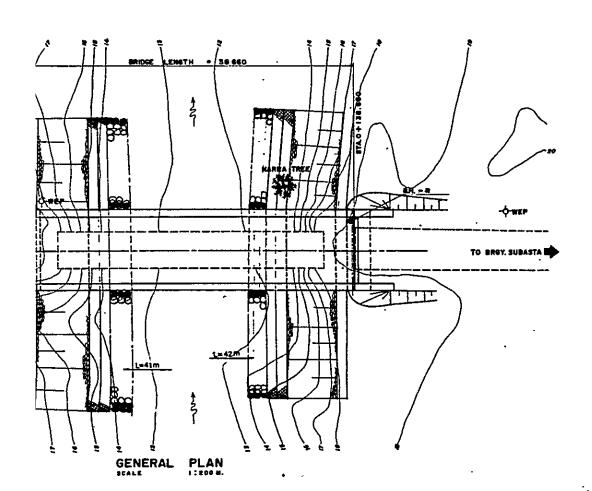
ABUTMENT AL & AR

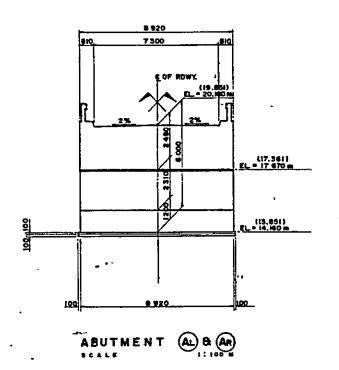


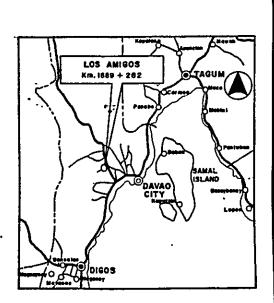
GENERAL · ELEVATION



SUPERSTRUCTURE CROSS SECTION







BASIC DESIGN STUDY ON THE PROJECT FOR CONSTRUCTION OF BRIDGES ALONG RURAL ROADS IN MINDANAO AREA

BRIDGE NAME

Los Amigos

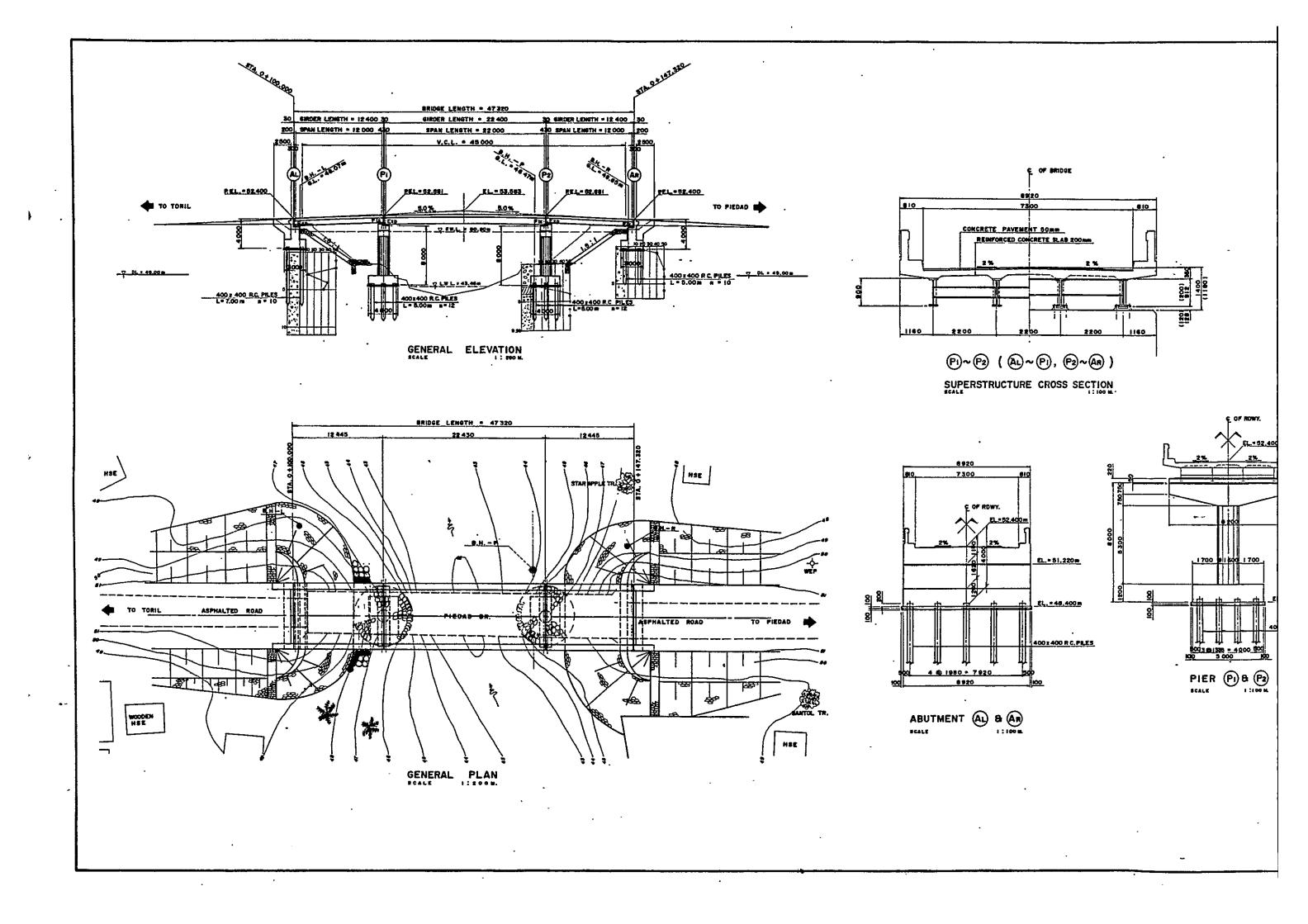
BRIDGE NO.

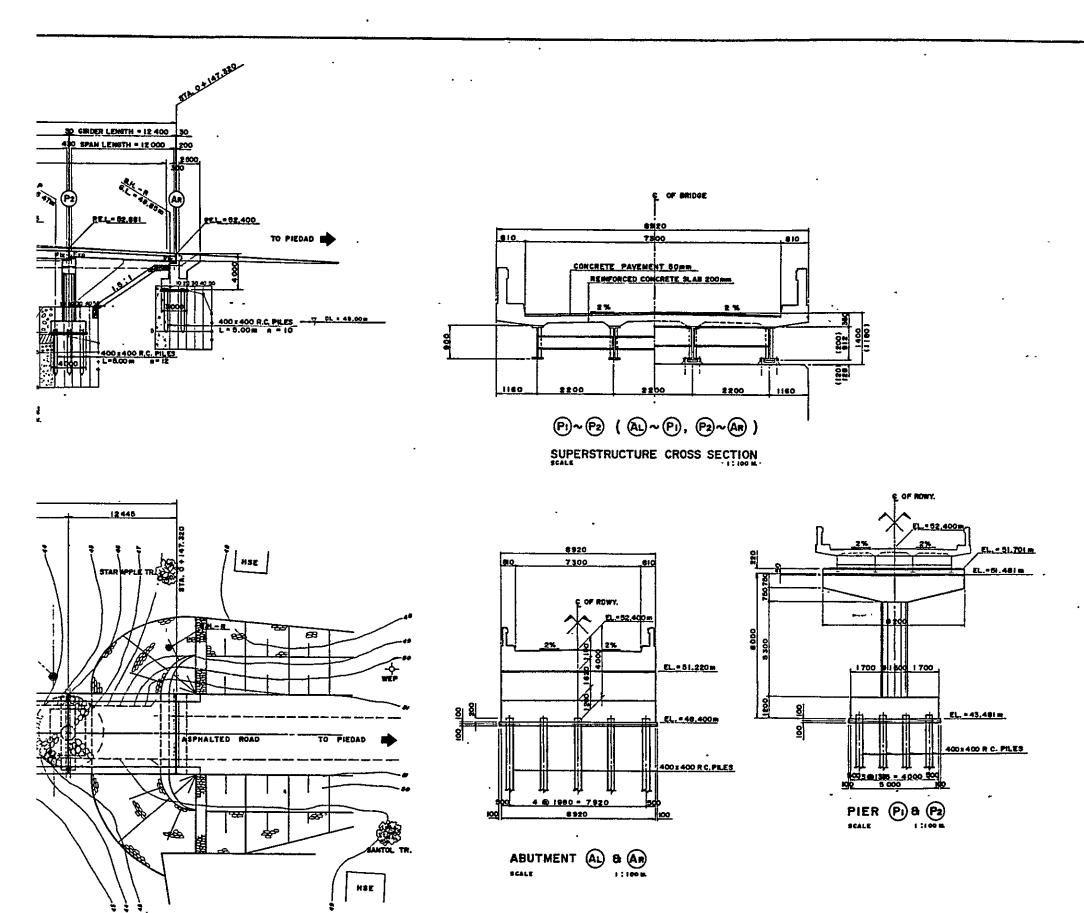
11-05-02

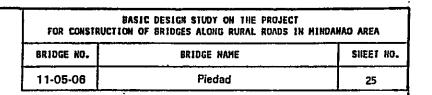
SHEET NO.

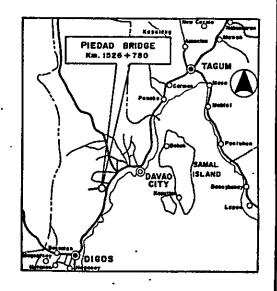
24

VICINITY MAP

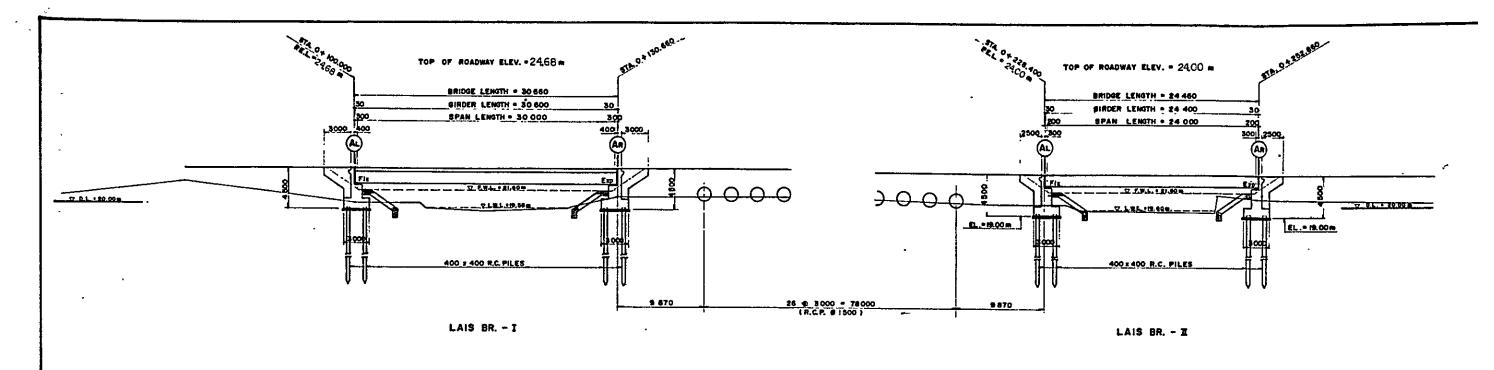




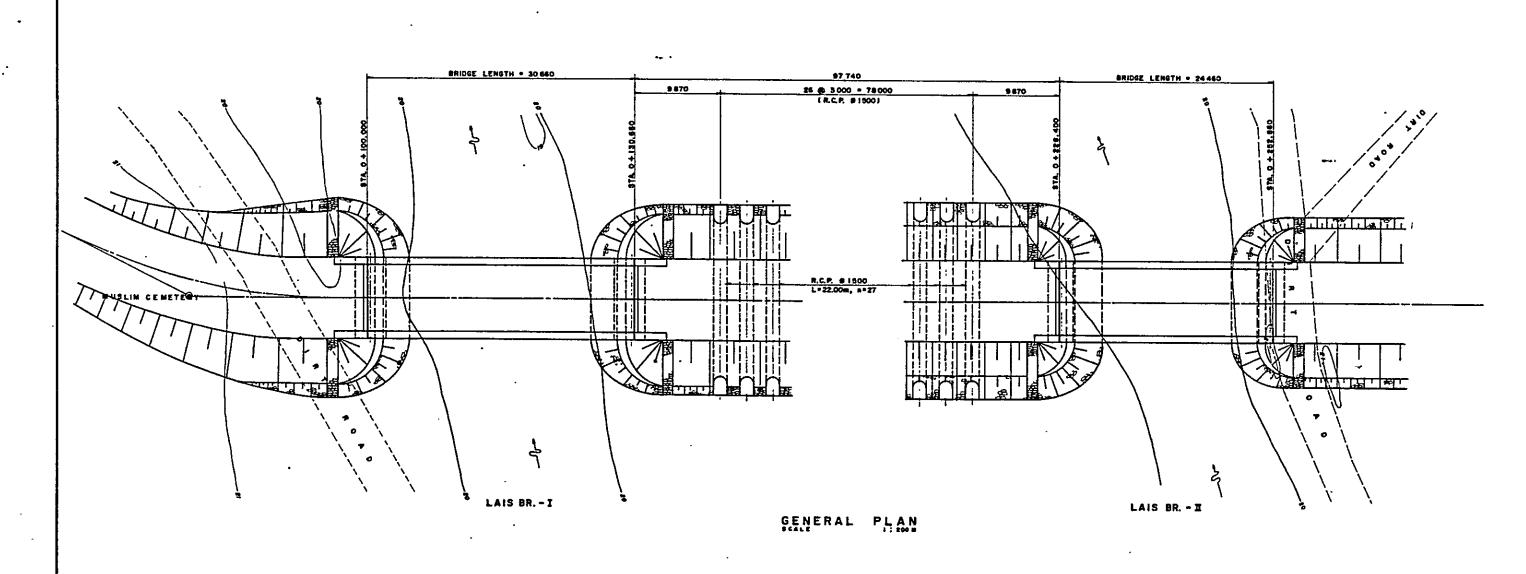


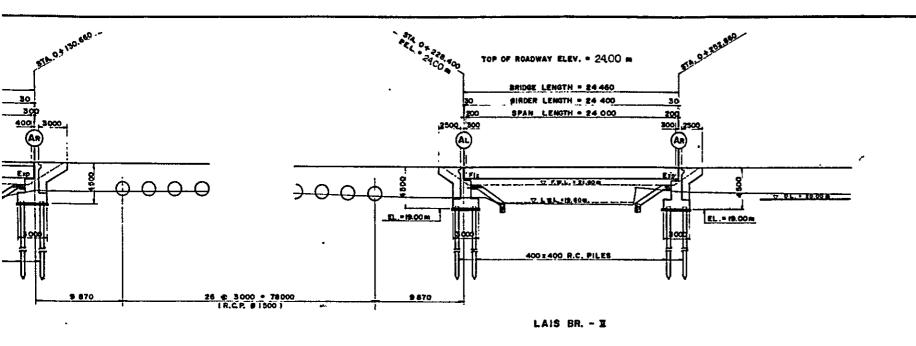


VICINITY MAP

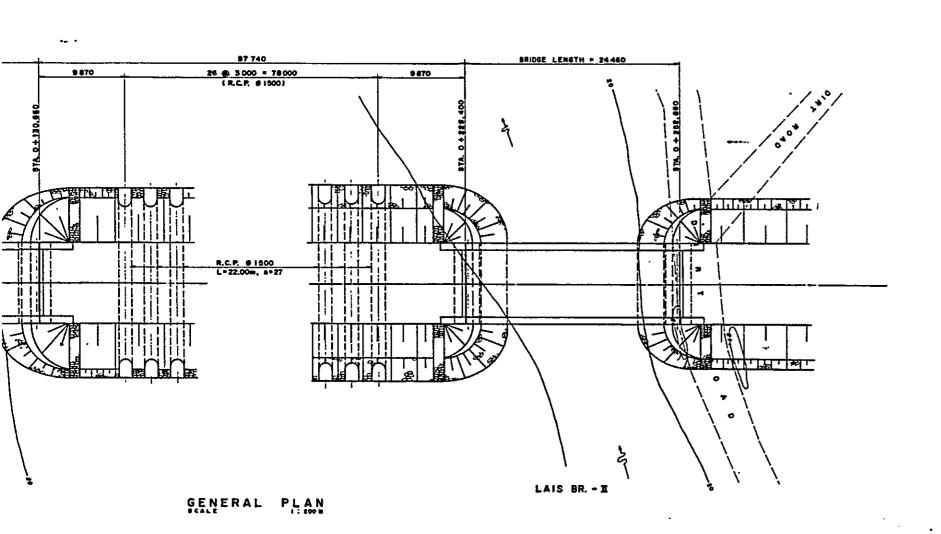


GENERAL ELEVATION





GENERAL ELEVATION



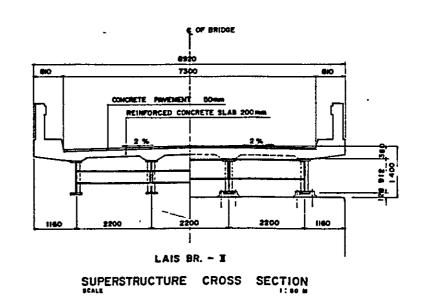
BOO TOO BIO

CONCRETE PAVEMENT BORN
REINFORCED CONCRETE SLAD 200mm

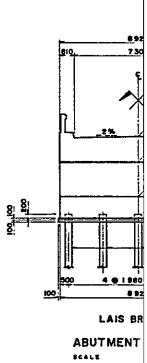
REINFORCED CONCRETE SLAD 200mm

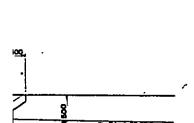
LAIS BR.- I

SUPERSTRUCTURE CROSS SECTION # 1:50 #



LAIS BE ABUTMENT SCALE

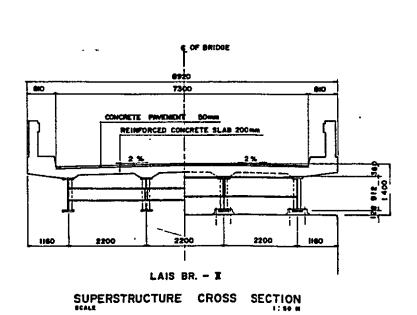


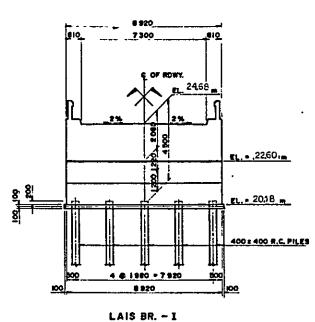


EL .= 19.00 m

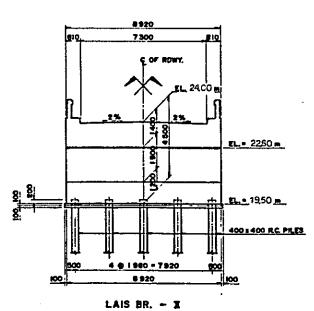
			Ç OF BRIDGE							
	8920									
	810	7300			*10	•				
		REINFORCED CONCRETE SLAB 200 mm								
		2%		2%	<u>_</u>	् ।				
_		1			<u> </u>					
0061										
				1	[]	201				
•	1160	2200	2200	2200	1160					
			LAIS BRI		-					

SUPERSTRUCTURE CROSS SECTION

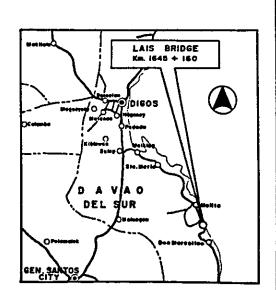




ABUTMENT AL & AR



ABUTMENT AL & AR



BASIC DESIGN STUDY ON THE PROJECT FOR CONSTRUCTION OF BRIDGES ALONG RURAL ROADS IN MINDANAO AREA

BRIDGE NAME

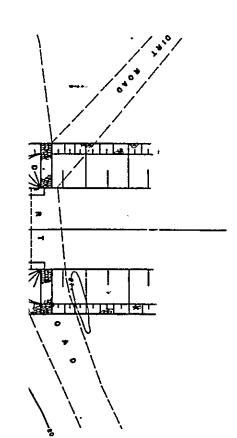
LAIS

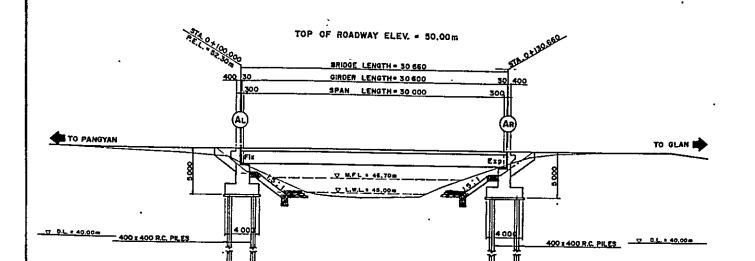
BRIDGE NO.

11-05-07

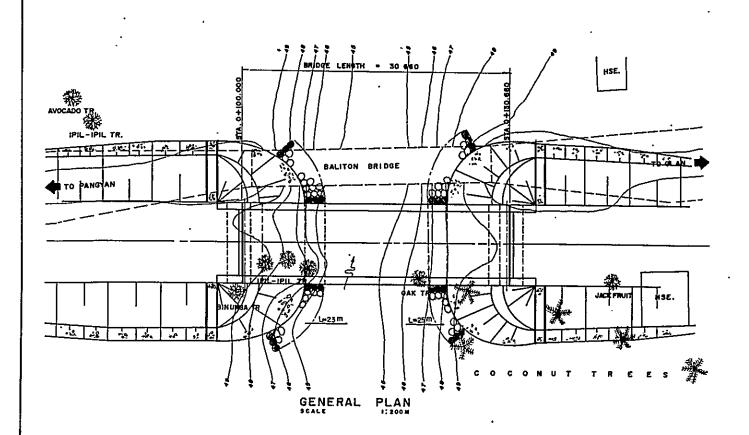
SHEET NO.

VICINITY MAP

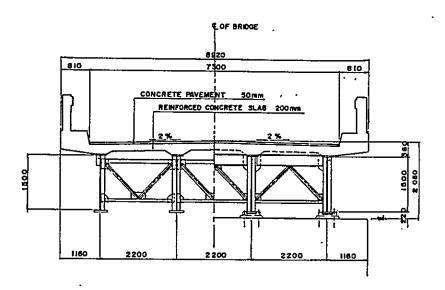




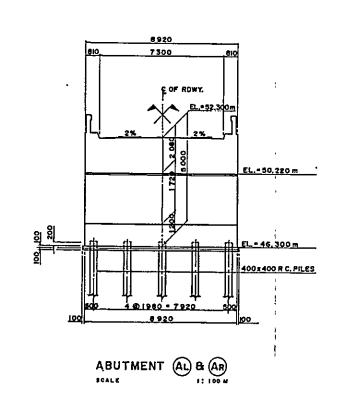
GENERAL ELEVATION

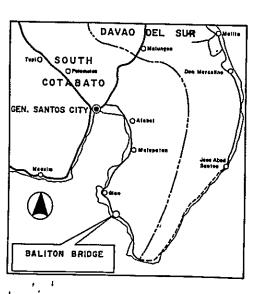


BASIC DESIGN STUDY ON THE PROJECT FOR CONSTRUCTION OF BRIDGES ALONG RURAL ROADS IN MINDANAO AREA								
BRIDGE NO.	BRIDGE NAME	SHEET NO.						
11-06-02	Baliton	27						

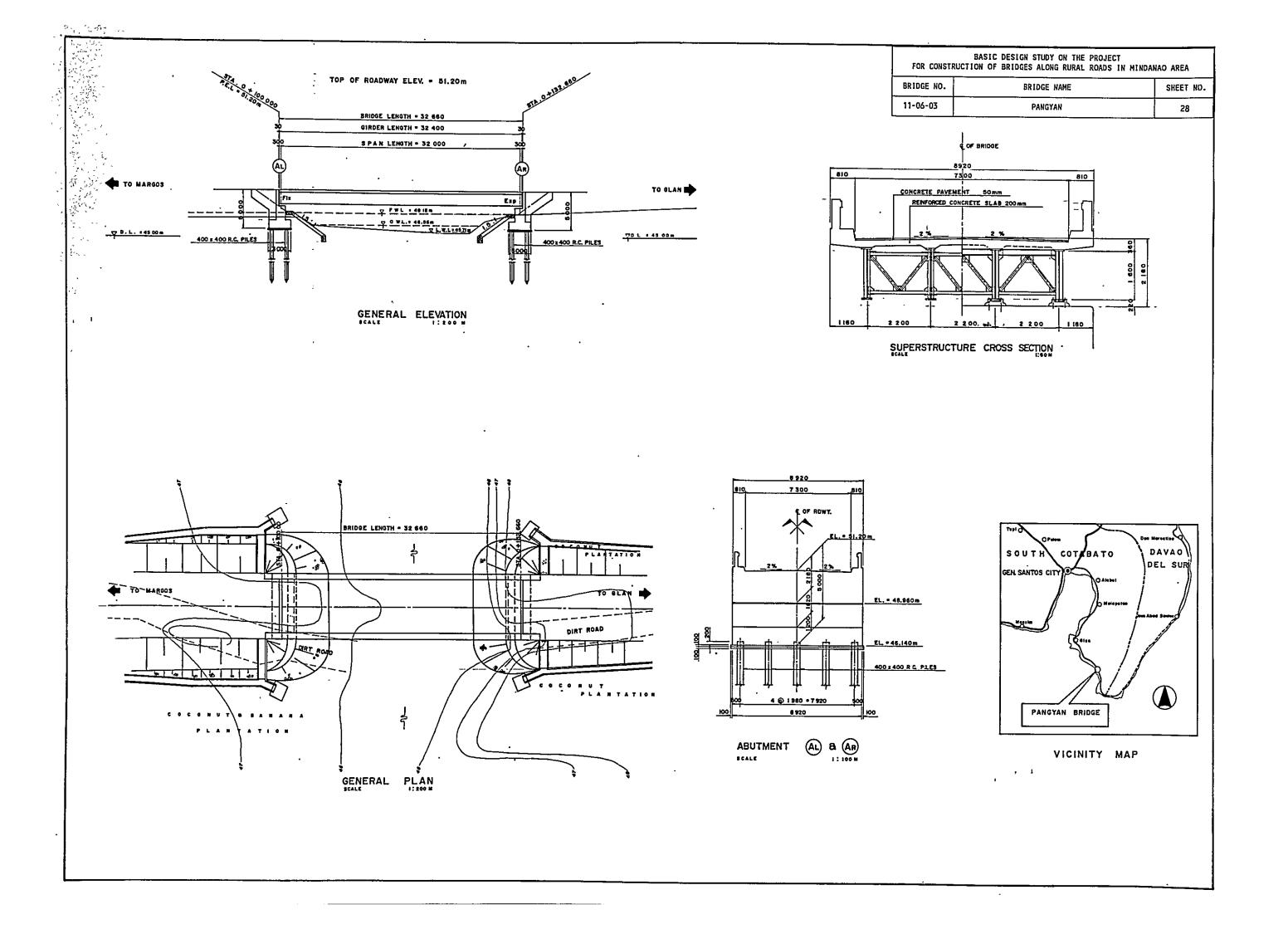


SUPERSTRUCTURE CROSS SECTION





VICINITY MAP



•		