(5/11)	
BRIDGES	
52	
OF	
INSPECTION	
VISUAL	
OF	
RESULTS	
:	

REHABILITATION METHODS	Replacement of RCDG. Widening Cop. Prorection of pier foundation. Reinforcement of Substructure	Widening Cap of Substructure.	Replacement and Reinforcement of deck slob, Protection of pier foundation.	Replacement and Reinforcemen of deck slab. Protection of pier foundation.	Replacement of deck slab, Protection of river bank/slope protection. Additional sidewalk,	Replacement and Reinforcement of deck stab. Protection of river bank at $A_{\underline{1}}$ side.
PHOTOGRAPHS	NEW					
DETERIORATION AND DAMAGES COMMENTS FOR COUNTERMEASURES	1. Cracks and previous repair works Due to the worsening condition of in the deck slab. 2. All the girders of all span show superstructure is necessary to rescracks near the support due to froe the structural integrity of shear force produced by heavy riding surface.	1. Cracking, spalling and exposure 1. The damages of the bridge are on of reinforcing bars in the slab. 2. Serious cracks in all girders. 3. Temporary Wood Support on defected beams of span 1. 2. Reconstruction of the whole bridge is recommended.	1. Extensive cracking and potholing 1. Replacement of deck slab in four were observed, especially on mended. Span no.6. Uneven and waving 2. Protection for scouring is neerasphalt pavement. 2. Heavy scouring on some piers. 3. River training must be studied.	1. Replacement or repair of the deck slab. Structural stability of the structural stability of the bridge. Structural stability of the bridge. Structural stability of the stabili	1. Erosion of river bank at A ₂ side. 2. The structural steel members 2. Steel members need repainting are partially rusty. to prevent corrosion.	1. Crack and potholes on the deck l. Replacement of deck slab is slab. 2. Corroded bottom chords lateral 2. Needs repair/replacement of bracing and gusset plates.
RATING	A	<<	વ	∢	*4	₹ .
BRIDGE NAME TYPE LENGTH	R.C.D.G. 3 15:0 = 45:0	SAN LUIS RCGG 2 12.0 = 24.0	NAGUILIAN S-I-B/TRUSS 5 15.0,8 75.0=675.0	MALALAM S-I-B/TRUSS 2 15.70,6 74.0=475.40	BALASIG TRUSS 75.00	SAN PABLO S-I-B/TRUSS 3 15.60,4 58.0=278.20
BRIDGE	8	SS	109	113	126	11 129
REGION	11	H	P-1 	lod H .	Ħ	=
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AP 6-6

NOTE: SL — Stab SU — Superstructure SUB — Substructure FDTN — Foundation

Seriously Damage; Replacement
 Partially Damage; Repair
 Minar Damage; Maintenance

RESULTS OF VISUAL INSPECTION OF 52 BRIDGES (6/11)

			1					
Š	REGION	BRIDGE	SKIDGE NAME	RATING	ERIORATION AND DAMAGES COMMENTS FOR	SURES	PHOTOGRAPHS	REHABILITATION METHODS
			LENGTH	:	SL SU SUB FOTN EMB OTHER SL SU SUB FD	FDTN EMB OTHER	1 100	
			PINGCANAHAN		• 0	•		
<u></u>	:	139	S-1-8/TBIISS	4	1. Heavy scouring on some piers. works is suggested to prevent 2. Serious cracks in the deck slab.	river training ed to prevent		Replacement of deck slab. Reinforcement of Pier.
			393.40			the deck slab cks must be		Protection of Pier Foundation. Slope protection. Foot protection.
			11		•	•		Reconstruction of two span.
. 4	=	. 45	PARED. PONY/RCDG/TRUSS	় ধ	 Fresent protection Cracks, potholes. and exposure protection is necessof reinforcing bars in the deck Replacement of temporare protection is necessof reinforcing bars in the deck Replacement of temporare protection of temporare protection of temporare protections. 	ion is inadequate, the existing necessary. temporary bailey		Replacement of deck stab. Additional Sidewalk Reinforcement of substructure
1 2		}	193,10		spans.	rmanent truss must be studied.		Slope protection.
								
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	NOTE	TE: SL	•		Domoge : Replacement			
j J		SUB - PTOT	- Superstructure	Partially D Minor Da	/ Damaga; Repair Damaga; Maintenance			
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1 1	REHABILITATION METHODS		Replacement of Precost	Stope protection,		Reinforcement of both Abutment. Link Sidb.	Slope protection.		Replacement and Rainforcement of deck Slab.	Slope protection.			Replacement and Reintorcement of deck. Slab.			Replacement and Reinforcement of	deck slab			Replacement of RC - Slob.	Widening pier Cap.	Stope profection.	
	PHOTOGRAPHS																	しい					
COMMENTS FOR COUNTERMEASURES	SL SU SUB FOTN EMB OTHER		The bridge is too old and deterior- rated. Possibility of replacement of superstructure is recommended			Repair of slope protection on both abutments.			Due to the worsening condition of the deck slab, replacement of the slab is necessary to restore the	structural integrity of the bridge and to have a smooth riding surface.			 Immediate repair of the deck slab is necessary. Cleaning and repainting of 	steel beams is recommended.	▼	 Two spans are showing evidences of deterioration in the slab. 	Uue to its worsening condition, replacement of the deck slab is necessary.	2. Needs maintenance and periodic			Urgent repair/replacement of deck slab is recommnded.		
DETERIORATION AND DAMAGES C	SL SU SUB FDTN EMBOTHERSL	Concrete oinders of first span	(from Manila) are in bad con- dition due to extensive spalling of concrete and the exposure	2. Temporary wooden support on the defective span.		1. Exposure of R.C. piles on both abutments due to scouring of Slope protection.	4		Deterioration of deck slab as shown by the cracks and white- spot on the bottom.		•	1	 For notes and exposed reinforcing bars at deck slab at 2 spans. Rusty steel girders. 		•	 Underside of deck slab shows evidence of repair works, re- 	Dars are also exposed. 2. Steel beams are rusty and begin- ning to corrode due to lack of		0		were observed under the deck slab.	ports due to bearing failure.	
DATING	:		₹			∢	·		∢ .				<u>a</u>			•	₹				⋖		
BRIDGE NAME	LENGTH	SUJE (RIZAL)	R.C. CHANNEL	2 0 6.00 = 12.0	GUINOBATAN	S-I-8	1 @ 27.70 1 @ 27.90 = 55.60	SAN FERNANDO	8-1-S	21.80		PAMUKID	S-I-8	2 @ 6.50 = 22.50 2 @ 9.50 =	SAN ISIDBO			1 @ 9.50 = 22.50		SAN GABKIEL	R.C. SLAB	3 @ 6.50 = 19.50	
	NO NO NO NO		£1			£4			75	:			76				`				78		
	NO. REGION		> .			>			> m				>	· · · · · ·		, u	>				> •		

AP 6- 8

NOTE: SL -- Slab SU -- Superstructure SUB-- Substructure FDTN- Foundation

Seriously Damage; Replacement
 Partially Damage; Repair
 Minor Damage; Maintenance

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	BRIDGES
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	OF.
	INSPECTION
	VISUAL
	QF
	RESULTS

REHABILITATION METHODS	Replacement of deck Slab. Widening Pier Cap. Slope protection.	Replacement of RCDG. Widening Cop. Link slob.	Replacement of deck slab. Widening Cap.	Replacement of deck slab. Slape protection.	Replacement and Reinforcement of deck slab.	Reinforcement and Reinforcement of deck stab. Slope protection.
DETERIORATION AND DAMAGES COMMENTS FOR COUNTERMEASURES SL SU SUB FDTN EMB OTHER SL SU SUB FDTN EMB OTHER	1. Pavement at the expansion joints are slightly separated. Large holes on the deck slab were the deck slab immediate replacement observed. 2. Minor shear cracks were observed on the end of each beam.	Underside of deck slab has spalls and exposed rebars. Nume-the immediate replacement of the rous potholes were observed on the structural integrity of the bridge.	1. Cracks, spalling of concrete concrete beams is necessary to bars on the bottom of slab. 2. Corroded steel beams. 3. Scouring on both approaches. 2. Urgent repairs on both approaches. 3. Scouring on both approaches. 3. Scouring on both approaches.	1. Cracks, spalling of concrete slab is necessary to have the and exposure of reinforcing proper structural strength and bars on the bottom of slab. 2. Corroded steel beams. 3. Scouring on both approaches. 3. Proper maintenance and repair on both approaches. 3. Shopper maintenance and repair on both approaches.	1. Potholes and exposed reinforcing 1. Existing deck slab must be repbars on top of slab at span no. safety. 2. Rusty steel beams on all spans. 2. Urgent repainting of steel I-beams.	1. Potholes, cracks and exposure of 1. Replacement of existing deck reinforcing bars on top and bot slab is necessary to restore tom of slab at span no. 2 and structural integrity of the span no. 3 (Matnog side). 2. Rusty steel beams on all spans. 2. Urgent repainting of steel 1-
RATING	⋖ .	≪	⋖	<	A	<
BRIDGE NAME TYPE LENGTH	РАНОНО R.C.D.G. 12.00	TINIGUIBAN R.C.D.G. 1 @ 6.00 = 19.90	SGT: MATIAS R.C.D.G. 1 @ 15.00 = 15.00	NAUSOD I S-I-B 1 @ 15.00 = 15.00	SOOK S-I-8 3 @ 11.10 * 33.30	Kanapawan S-I-B 3 @ 15:20 = 45.60
BRIDGE NOON	62	89	85	98	66	143
REGION	>	>	>	>	>	<u> </u>
<u>o</u>		ω	On On	10	a .	12

AP 6-3

NOTE SL Stab SU Superstructure SUB Substructure FDTN Foundation

Seriously Damoge; Replacement
 Partially Damage; Repair
 Minor Damage; Maintanance

	(9/11)
	BRIDGES
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	INSPECTION
•	VISUAL
į	Q.
	RESULTS

	REHABILITATION METHODS	Replacement and Reinforcement of deck slab.	Replacement of RCDG. Widening of Cap.	Replacement of RCDG. Widening Cap. Slope Protection. Link Slob.	Replacement of RCDG. Widening Cap.	Replacement of RCDG. Pler foundation protection. Widening Cap. Slope protection.	Repair,Overlay of deck slab.
71	PHOTOGRAPHS			ium		i Va	
RESULTS OF VISUAL INSPECTION OF 32 BKINGES (9/11	DETERIORATION AND DAMAGES COMMENTS FOR COUNTERMEASURES SL SU SUB FDTN EMB OTHER SL SUB FDTN EMB OTHER	1. Transverse cracks and penetra- 1. Replacement of existing deck tion of water in the joints of slab is needed to prevent water precast concrete elements. 2. Corvosition of upper flange of the crestore structural integrity stringers and damaged members. 2. Repainting of steel members to avoid corrossion.	1. Extensive cracks on bottom portion of the existing tion of the existing tion of the existing contracks and exposed reinforcing bars near the supports on all create beams in all spans.	1. Deterioration of concrete beams 1. Replacement of the existing conard exposure of reinforcing bars crete beams and slab and a prestation of riverbed resulting to necessar to nsure structural exposure of reinforced concrete gibles in the piers and damage to 2. Urgent repair of damaged slope slope protection at abutment 1.	1. Extensive cracking, potholing 1. Replacement of the whole superand exposure of reinforcing bars structure is recommended due to in the top and bottom of deck deterioration at concrete slab and beams on span no.? and beams particutive. Proper maintenance must be implement the supports: three supports three supports three supports: three supports th	2. 2.	1. Serious longitudinal cracks at the top and bottom of the deck slab in all spans. 2. Resurfacing of existing asphalt slab. 2. Excessive potholes are present in the asphalt pavement.
	RATING	¥	æ	æ	∢ .	⋖	∢
	BRIDGE NAME TYPE LENGTH	BASIAD TRUSS 1 @ 58.50 = 58.50	GUMACA R.C.D.G. 6 @ 7.70 = 64.20	TALABA R.C.D.G. 4 @ 5.80 = 23.20	BINAHAAN R.C.D.G. 2 @ 10.00 = 48.00 2 @ 14.00 = 48.00	PALSABANGON R.C.D.G. 3 @ 15.00 1 @ 12.00 = 57.00	LAGNAS II RC SLAB 4 @ 5.00 = 20.00
	BRIDGE NO.	154	173	181	188	190	206
	REGION	>	>	>	IV -A	IV-A	IV-A
	O O	£ 71		15	16	17	18

 Seriously Damage; Replacement
 Partially Domage; Repair
 Minor Domage; Maintenance NOTE SL — Slab
SU — Superstructure
SUB — Substructure
FOTN — Foundation

	_
,	(10/11)
	BRIDGES
	OF 52
	INSPECTION
	VISUAL
	Q.
	RESULTS

Part Part
BRIDGE NAME TYPE LENGTH STO. CRISTO 208 R.C.D.G. 3 @ 12.00 = 36.00 MAGAPONG 1 @ 25.70 = 25.70 1 @ 25.70 = 46.00 223 S-I-B SAN CRISTOBAL 227 RCDG/TRUSS 2 @ 12.00 (RCDG) 1 @ 49.60 (TRUSS) 73.60 1 @ 49.60 (TRUSS) 73.60
BRIDGE NAME TYPE LENGTH STO. CRISTO 208 R.C.D.G. 3 @ 12.00 = 36.00 MAGAPONG 1 @ 25.70 = 25.70 1 @ 25.70 = 46.00 223 S-I-B SAN CRISTOBAL 227 RCDG/TRUSS 2 @ 7.00 2 @ 7.00 1 @ 49.60 (RCDG) 1 @ 49.60 (TRUSS) 73.60

NOTE: SL— Slab
SU — Superstructure O — Particity Damage; Replacement
SU B — Substructure A — Minor Damage; Maintenance
FDTN— Foundation

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REHABILITATION METHODS	Reconstruction Slope Protection	Reinforcement of Abutment. Link Slab. Slope Protection Foot Protection	Replacement of PC-IL. Reinforcement of Abutment.	Reconstruction . Slope Protection	
E NAME RATING BETERIORATION AND DAMAGES COMMENTS FOR COUNTERMEASURES SL SU SUB FOTN EMB OTHER SL SU SUB FOTN EMB OTHER PHOTOGRAPHS	JIABONG 1. Extensive, spalling and exposure of reinforced concortion of concrete channel exposure of reinforcing bars at the slab one all spans due to deteriorated concrete slab one all spans due to deteriorated concrete channel the leg portions of the concrete channel beams.	1. Serious scouring on both abut— ments. 2. Extensive cracks on all exposed reinforced concrete piles and some are allready proxen and reinforced some are all serious erosion for both abut—ment.	1. Spalling of concrete and exposed ration of deck siab. A stable bottom of 2. Steel members are rusty and correded particularly at joints.	1. Exposure of reinforcing bars at superstructure due to deteriodeck slab. 2. Steel truss members are rusty and corroded particularly at joints to serious, corrosion and loss of of all members.	
NO. REGION BRIDGE TYPE.	1 VIII 109 RC	2 VIII 120 S-I-8	3 VIII 160 PONY	3UBAS/ 4 VIII 161 TRUSS 1 @ 7/	

AP 6-12

APPENDIX 6.2

DIAGNOSTIC RECORD

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11 12 12 13 14 14 15 15 15 15 15 15	- 1	econstruction	Reconstruction	Reconstruction		Reconstruction	Repair, replacement deck slab]		Repair, replacemen deck slab	Repair, replacemen deck slab	Repair, replacement of deck slab	Reconstruction		2		انه	Replacement of Superstructure	Repair replaceme of deck slab	Reconstruction		ą.	Reconstruction
11 14 LAGAMGAN A* 5-1-8 100.0 1350 8:50 > 2000		tion , Upstream = 260.0 m	50.0	eam 9 0 25)+ PC-T B 25)+ PC-T 2eam (3 9	of one span (RCDG 10 15	stion. Upstream PC(precast) I 1@ 10 9 @25	of deck slab at floor beam, 30 50 = 150.0	SIB 19.5m. Reconstruction SIB existing SIB	7 050 = 350.0	sement of all deck slab. Reinforcement	of deck slab,	30 60 protec	m) slab 3049.2 * 147.		75	superstructure, RCDG coping 2@ 14.0 = 28.0	cement of superstructure 3 0.12.0 = 36.0 m, Widening of pier	Replacement of superstructure PC-I-Beam, 1025.7 = 25.7 m		Reconstruction Upstream PC-L-Beam, 3 @25.0 × 75.0 m	Reinforcement of foundation	Replacement of superstructure, New construction of pier 1, PC-1-Beam 2 0 22.3. = 44.6 m, Temporary bridge	Reconstruction, Upstraam PC-T_Beam, 4 03/.0
111 14	DETOUR	none	probable	probable	probable	none	probable	probable	probable	probable	probable	none	лопе	none	probable	попе	none	probable	none		none	none	none
111	TRAFFIC	>2000				2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2002	2000
11 14 LABANGAN'I A* S-I-8 100:0 1950 1 54 TAGANGAN'I A* RCDG 40:0 1956 1 58 TAGANGAN'I A* RCDG 40:0 1956 1 58 SUED A* RCDG 45:0 1955 11 77 SALAGAN A* RCDG 45:0 1955 11 13 SATU A* TRUSS 500:4 - 11 13 SATU A* TRUSS 500:0 - 11 13 SATU A* TRUSS 575:0 1950 11 154 PARED A* TRUSS 393:4 - 12 SALAGARIEL A RC-SLAB 12:0 1956 17 LW-A 158 SLIAHARAN A* RCDG 48:0 - 17 LW-A 220 MAGAPONG A* RC-SLAB 74:8 - 17 LW-A 220 MAGAPONG A* RC-SLAB 74:8 - 17 LW-A 220 MAGAPONG A* RC-SLAB 74:8 - 11 120 HINOGGONGAN A* S-I-6 21:8 1975 121 150 UURASAN A TRUSS 73:6 - 122 LW-A 151 SUBSSAN 1 A ROWY 44:6 - 123 LW-A 151 LW-A RC-SLAB RC-SLAB	1	-		truss 6.4	6.10	side Fark 5.10	7.40	6.00	6.15	truss 6.15	6.15	6.096	6.15	7.35	7.50	6.70	6.75		8.00.	6.85	8.20	7.38	7.30
1 54 TABANGAN I	1	1950		10.0	1957					1950	1946		1976	3561	1972	,	,	1946	1	, .	1975	,	1972
11 14 LABANGAN A* S-1-8		-}	40.0	500.4		221.4			350.0	0.579	475.4	393.4											74.0
117 14 LABANGAN A* 117 14 LABANGAN A* 117 14 LABANGAN A* 11 54 TAGANUSING A* 11 54 TAGANUSING A* 11 12 BAITU A* 11 12 BAITU A* 11 13 BATU A* 11 12 BAIAHAAN 11 A* 12 12 12 12 12 12 12 1		1	RCDG	rRUSS	RCDG	PONY	TRUSS	I-B/PONY	TRUSS	TRUSS	TRUSS	TRUSS	TRÙSS	RC-SLAB	RC-SLAB	RCDG	RCDG	PONY	TRUSS	RC-SLAB	S-I-8	PONY	TRUSS
17 14 LABANGAN 1 14 LABANGAN 1 15 TAGANUSING 1 56 LUMBOY 1 1 1 1 1 1 1 1 1		 		12.0	- <u></u>	¥			* A	A*	¥.	A*	D & C	A	¥	A	च	et	4	¥.₹	A*A	•	4
	NAME R					 	*	1		IAN		NAUAN			BRIEL	AN	RISTO	NG	STOBAL	çs	ONGAN	II N	
	BRIDGE	LABANGAN	TAGAMUSI	BUED	LOMBOY	BAUANG	1	INDIAN	BATU	NAGUTL	l	PINACA	PARED	Suute	SAR GA	BINAHA	ST0. C	MAGAPO	SAN CRI	JIABON	HINGGB	JUBASA	JUBASA
	ON SE	2	55			ļ	43		73	109	113	1.39	154	119	78	 	 		├	 	 — —		!
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LEGEND:
* SUBJECT TO DETAILED SURVEY
A SUBJECT TO LOAKING TEST
** ALANA TOTT

DIAGNOSTIC RECORD OF THE 22 EXISTING BRIDGES (1/22)

REGION	111	DETERIORATION AND DAMAG	ID DAMAGES		PHOTOGRAPHS	
Br. NO.	14	ISL ISU SUB FE	FDTN EMB OTHER	TREHAB. METHODS	Bridge Length : 100 (EXSt.	
Br. NAME	LABANGAN	4		1	000	
RATING	A	ا درست محمد با	School Harry Acto	Reconstruction , up-	28.85.	
TYPE S-1	S-1-8	2. Rusty steel girde			LAND THE PROPERTY OF THE PROPE	x1 x1x
LENGTH 100	100.00	3. Uriginal pier at center of was washed-out by floods.	center of bridge / floods.	ige Slope protection.		
YEAR BUILT 1950	20	· · · · · · · · · · · · · · · · · · ·		במכר הוב הבים ומויי		
WIDTH 8.50	20	İ				
	DETERIORATION	ATION DAMAGES	RATING	Oty, OF DAMAGE	REHABILITATION METHOD REMARKS	KS.
PAVEMENT					40 mm thickness & curb 55 mm thickness & centerline of roadway 51 none = 1 5.5	
CURB & RAILING					ng height ≖	
			FIG. TEXT		Curb height = 0.20 m from pavement	1
EXPANSION JOINT					Steel Steel : 2.0.0.7	: 8.50 m.
DECK SLAB					Thickness = 190 mm.	
CONCRETE BEAM					I 1360 x. 457 x. 38 x. 22	
STEEL BEAM						
PAINTING COND.					Steel plates bearing	
SHOE	Deflection of shoe.	of shoe.	8 1	Bearing on both abutments tilted 900 (collapsed)	Reconstruction of imperse T-type (H = 2 6.60 m) on bored pile foundation (01200).	
ABUTMENT					Reconstruction of wall-type (H=3 :9.0 m; 2:11.0 m and 25:16.0 M) on bored file foundation (01200)	
주 교 교	Washout of c rarily suppo	Washout of center pier (temporarily supported by two steel	. ∀	Center span is temporarily supported with steel piers.	Grouted Riprap	
SLOPE PROTECTION						
DRAINAGE						Q
APPROACH ROAD					SUB	Superstructure Substructure Foundation
RIVER CONDITION					100	Seriously Damage Partially Damage Minor Damage
OTHERS	A service of the serv			a periodical designation of the second secon	Temporary bridge: 2 lanes	

DIAGNOSTIC RECORD OF THE 22 EXISTING BRIDGES (2/22)

NCIGHA	DETERIORATION AND	DAMAGES		STORYCOLL	The second of the second of the second
			REHAB. METHODS	(15X51) 000 - 000 000 000 000 000 000 000 000	
Br. NO. 1 54	S.C. S.U. SUB FOTN EMB	N EMB OTHER			
Br. NAME TAGAMUSING	•				
RATING	1 Cracks, spailing o	f concrete and	Reconstruction		
TYPE	exposure of reinfo	rcing bars in	PCI (15+20+15 = 50)		
LENGTH	2. First span has the most damaged.	most damaged.	Reinforcement of sub-		
YEAR Buil T	3. Scouring on all pi	ers and at the			
	Stope proceduois				
WID!H	the state of the state of	,			
DETE	DETERIORATION DAMAGES	RATING	Oty. OF DAMAGE	REHABIL	REMARKS
PAVEMENT				40 mm thickness a curo 1100 mm thickness a centerline of roadway 51ope. = 15%:	Study
SIN INC & RAILO				aht =	
5				Curb height = 0.20 m from pavement - Bridge	Bridge width = 7.94 m
EXPANSION JOINT				(Rubber)	11ks = 2 0.76 m
DECK SLAB reinfo	Excessive cracks and exposure of reinforcing bars underside of slab.	A A1 -	PI Temporary bridge.	Thickness ≠ 190 mm	
CONCRETE BEAM reinfo	Serious cracks and exposure of reinforcing bars at support of pier 1.	A (A1-	(Al-P2)interior girders of	Use 5 - 15 m span PCI (Type IV)	
STEEL BEAM					
PAINTING COND.			: : :		
SHOE				Use elastomeric bearing pads	
ABUTMENT Settle	Settlement of approach pavement.	A Both	Both abutments (Al and A2).	Inverse T - type on R. C. pile foundation	· · · · · · · · · · · · · · · · · · ·
PIER Scouring piers.	ing of riverbed around the	A PI,	P2, P3.	Reinforcing Pier P1 and P3	
SLOPE PROTECTION approach	ing of slope protection at ach no.1.	A 50 m	m at Al side.	Grouted Riprap	
DRAINAGE				Reconstruction of Inverse T - type (H = 2 0 5.8) on Note: R. C. Pile Foundation (400x400)	1.
APPROACH ROAD				Reinforcement of Pier (H = 2 $\dot{\theta}$ 10) on additional R.C. SIP Pile Foundation (2-400 \times 400 \times 30000)	SUB Substructure FDTN Foundation
RIVER CONDITION				Riverbed Protection	
OTHERS Too R	Too narrow carriageway width.	A 6.20	6.20 m with sidewalk.	Temporary bridge 2 lanes	

DIAGNOSTIC RECORD OF THE 22 EXISTING BRIDGES (3/22)

		- 1				
REGION	ĭ	DETERIORATION AND	D DAMAGES		PHOTOGRAPHS	
Br. NO.	28	SL SU SUB FO	FOTN EMB OTHER	AEHAB. ME I HOUS		
Br. NAME B	BUED	0			The state against the seal management of the	(Exst.)
RATING	ž d	1. Cracks on the bottom	tom of slab at	Reconstruction	To children and the state of th	
TYPE PONY	PONY/TRUSS RCDG/S-1-8	2. Some truss member	s are damaged	PCI 9 @ 25.0	- 21	
LENGTH 5	500.40	due to vehicular collision.	collision.	9		
YEAR BUILT!				PCT 3 0 31.0		
WIDTH 6	6.14	_		Slope Protection		
	DETERIORATION	DAMAGES	RATING	Qty. OF DAMAGE	REHABILITATION METHOD	REMARKS
PAVEMENT				,	40 mm thickness & curb 100 mm thickness & centerline of roadway Slope = 1.5%	Boring Test River Study
CURB & RAILING					ig height = 1.07-m from top of pavement = 0.20 m from top of pavement	Bridge width Sidewalks
EXPANSION JOINT						. Total length = 500.5 m
DECK SLAB					Thickness = 180 nm (PCI) Thickness = 165 (PCI)	
CONCRETE BEAM					9 & 25.0 PCI, I 32.5 PCT; 6 025.0 PCT Type IV - A , 3 0 31.0 PCT = 500.5 m	
STEEL BEAM	Damaged steel car collision.	eel truss members due to ion.	œ	Pony truss spans.		
PAINTING COND.			-			
SHOE					(Elastomeric bearing pads)	
ABUTMENT					Reconstructios of Inverse T - type (H = 2 g 10.0 m) on H-Pile Foundation (344 x 354)	
PIER					Reconstruction of wall type (H = 6 @ 8.00 m, 48 8.50m; (and 8 @ 7.50 m) on H = Pile Foundation) (344x354).	
SLOPE PROTECTION	- <u> </u>				Grouted Riprap	
DRAINAGE						Note: Stab
APPROACH ROAD					2 × 75 m	SUB Substructura FUTN Foundation EMB Embankment
RIVER CONDITION	7		- ₩	500 m with only 1-2 m clearrance.		Seriously Damage Particilly Damage Ming: Damage Ming: Damage
OTHERS	Narrow carriageway	тадемау	· · · · · · · · · · · · · · · · · · ·	6.14 m on truss spans.		

DIAGNOSTIC RECORD OF THE 22 EXISTING BRIDGES (4/22)

1	COCAMAC GIAS MOTHO COLOTTOC	000000000000000000000000000000000000000			
		NO CAMPAGES	- REHAB. METHODS	THOLOGRAPHS	
Br NO 6	65 SUSPENIEMB	DTN EMB OTHER	_	《····································	
Br. NAME LCMBOY	0,40			00 CF , LYDOLY (1900)	
RATING	The second of th		Γ	903	
TYPE RCDG	Cracks near the end of beams on the first span of bridge and sup-	d.of beams on oridge and sup	Span 2CD4 (1 @ 15.0)		
- LENGTH 45.00		orary posts.			The second secon
YEAR BUILT 1957	L. L.				
HTGIW					
	DETERIORATION DAMAGES	RATING	Qty. OF DAMAGE	REHABILITATION METHOD	REMARKS
PAVEMENT	Cracking at pavement and patching repairs.	U G		40 mm thickness a curb 100 mm thickness a centerline of roadway Slope =1.5%	7 A A C
CURB & RAILING				Curb height = 0.20 m from top of payement	• .
EXPANSION JOINT		:		Rubber	Bridge Length = 15.0 m
DECK SLAB				Thickness = 165 mm	
CONCRETE BEAM	Excessive shear cracks on girders near the support (temporary timber supports at span No.1).	r A	All girders at span no.1 (Al-Pl).	Replacement of first span,15 m RCDG	
STEEL BEAM					
PAINTING COND.					
SHOE	Rusty shoe.	U		Elastomeric bearing pads	
ABUTMENT				Widening of bearing seat (Abut $= 2$)	
ا ج ع				Widening of Bearing Seat (Pier = 2)	
SLOPE PROTECTION					
DRAINAGE					
APPROACH ROAD	Minor cracks on Approach 1 and Approach 2.	υ			SUB Substructure FOTN Foundation EMB Embankment
RIVER CONDITION					Seriously Damage Partially Damage Minor Damage
OTHERS					

DIAGNOSTIC RECORD OF THE 22 EXISTING BRIDGES (5/22)

REGION	I DETERIORATION AND	AND DAMAGES		PHOTOGRAPHS	
Br. NO	77 SL SU SUB FDT	FOTN EMB OT	OTHER REHAB. METHODS		
Br. NAME BA	0 1 9				1
RATING	A CONTRACT OFFICE OF	ho noor trills	Ţ-	GIVE CALLER HAND	(cxsc.)
TYPE PO		o vehicular	Reconstruction n Of hridge,	STREET, STREET, STREET, ALKENTAL	And a facility of the facility
LENGTH 221	221.40 2. Narrow carriagewa	y width and		The state of the s	
YEAR BUILT 1936	35 added beams with hangers were placed at the middle span of	hangers were dle span of			·
WIDTH 6.10					
	DETERIORATION DAMAGES	RATING	Oty, OF DAMAGE	REHABILITATION METHOD	REMARKS
PAVEMENT	Waving, cracking and patching repairs.			40 mm thickness @ curb 95 mm thickness a centerline of roadway Slope = 1.5%	Detailed Survey Boring Test
CURB & RAILING	L	ပ		Railing height $= 1.07 \text{ m}$ Curb height $= 0.20 \text{ m}$ from top of pavement	New Construction
EXPANSION JOINT				Rubber	ecast - I Beam
DECK SLAB					Sridewalks : 7.32 m Sidewalks : 2 @ 0.76
CONCRETE BEAM				1 @ 10 PCT 9 @ 25 PCI Type IV - A	
STEEL BEAM	Deformed steel members due to car collission	ф	Additional H-beam support for deck slab with steel hangers.		
PAINTING COND.	Truss members newly repainted.	U ·			
SHOE				Elastomeric bearing pads	
ABUTMENT				Reconstruction of Inverse T - type (H = 2.8 6.0 m)on R. C. Pille Foundation (9.1200)	
g R				Reconstruction of wall type (H \pm 9 @ 11.0 m) on R. C. Pile Foundation (§ 1200)	
SLOPE PROTECTION				Grouted Riprap	
DRAINAGE					Note: SL Stab
APPROACH ROAD				Manila side L = 110.7 m Labag side L = 114.3 m	SUB Substructure FUTH Foundation EME Embonkment
RIVER CONDITION					Seriously Damoge O Partially Damoge Minor Damage
OTHERS	Too narrow carriageway width.	Ą	6.10 m with no sidewalk.		

DIAGNOSTIC RECORD OF THE 22 EXISTING BRIDGES (6/22)

NOISO	TAGOLGETEC	PETERIOR AND MANAGE	25044			
		בים סוד אסי	SIDES	REHAB. METHODS	THOLOGRAPHS	(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)
Br NO	43SL SU S	SUB FDTN EMB	48 9 EE			The second of th
Br. NAME SIC	SICSICAN	\$1.0 \$1.5 \$1.5 \$1.5 \$1.5 \$1.5			9000 - 19	(EXS(-))
RATING	A Compose	racks at the	hottom of			
TYPE	TRUSS the slab	the slab	100	•		
LENGTH 150	7	nord and gusse	5 : : : : : : : : : : : : : : : : : : :	slab.		
YEAR BUILT				Reinforcing of deck		
1	7:40					•
	DETERIORATION DAMAGES	SES RATING	NG	Oty. OF DAMAGE	REHABILITATION METHOD	ξ.
PAVEMENT			1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -		thickness & curb thickness & carterline of roadway	Construction half lane each Bridge Width : 7.40 m
CURB 8 RAILING		: :	-:		ement	Sidewalks : 1.15 m
EXPANSION JOINT						
DECK SLAB	Numerous diagonal cracks and re- pair works at underside of slab.	nd re- slab. A		All spans.	Replacement of deck slab and additional stringer. Thickness = 165 mm, fc' = 4000 psi	
CONCRETE BEAM			· ·			
STEEL BEAM					Additional stringer (3 piece) at each span	
PAINTING COND.	Bottom chord and gusset plates are rusty.	lates	30%	of truss members.	100% of truss members	
SHOE						
ABUTMENT			·			
PIER						
SLOPE PROTECTION					- Walter St. 1997	
DRAINAGE						Note: SL Stab
APPROACH ROAD		-				" ₹ "
RIVER CONDITION						
OTHERS		·				

DIAGNOSTIC RECORD OF THE 22 EXISTING BRIDGES (7/22)

REGION	II	DETERIOR	ATION	DETERIORATION AND DAMAG	ES		PHOTOGRAPHS	
Br. NO.	7.1	SL SU	SUB	FDTN EMB	の打団	REHAB METHODS	9RIDGE LENGTH : 98.90	**98.90 (Exst.)
Br. NAME INC	INDIANA	•				Reconstruction of	8.40, 3.59AN 62.5.0 35.18, PONY	25.0
RATING	8	Transvo	200	Tracevense and longitudina		bridge, 1 @ 19.5, 3 @		
TYPE S-I.	S-I-B/PONY	cracks	in the c	cracks in the deck slab.		5.5 (SIB)	TO MANILA TO WANTED	
LENGTH 98	98:90	Z. Narrow	ดสะราชดู	eway width.				70/
YEAR BUILT						structure, protection of pier foundation, slope		
WIDTH 6.20	20				-	protection, foot protection river bed profection		
	DETERIORATION		DAMAGES	RATING		Q1y, OF DAMAGE	REHABILITATION METHOD	REMARKS
PAVEMENT							40 mm thickness @ curb 100 mm thickness @ centerline of roadway Slope * 1.5%	Boring Test River Study
CURB & RAILING	Partially	broken.		·U			Railing height = 1.07 m Curb height = 0.20 from top of pavement	
EXPANSION JOINT	Slightly separated expansion.	rated expar	nsion.	ω.	Over	Over P2 and P3, there is an enlarged gap due to cracking.	Steel	Bridge Width: 7.32 m Sidewalks : 2@0.76 m
DECK SLAB	Numerous transverse and longitudinal cracks and evidence of repair works.	sverse and and evidenc	longitu se of re	63	A11 s	spans,	Thickness = 180 mm	
CONCRETE BEAM	7							
STEEL BEAM							SIB (19.5 + 3@25.0) New construction SIB 1 @ 15.5 m Widening bridge	
PAINTING COND.								
SHOE							Steel Plates bearing	
ABUTMENT				; , , ,			(Reconstruction of Inverse-Type (H=10.8.50) on R.C Pile Foundation (400x400)	
PIER							(Reinforcement of Pier (M=42:11.40 m) on additional R.C. Pile Foundation (400x400)	
SLOPE PROTECTION					-		Grouted Riprap	
DRAINAGE	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1							1
APPROACH ROAD	A Company of the Comp	3 3					Approach Road Length = 2 x 30 m	SUB Substructure FDTN Foundation EMB Embankment
RIVER CONDITION	The state of the s							Seriousiy Damoge Puritally, Damoge Minot. Damage.
OTHERS	Too narrow carriageway width	arriageway	width	æ	6.20) m with no sidewalk.		

DIAGNOSTIC RECORD OF TEH 22 EXISTING BRIDGES (8/22)

NOICEG	DETERIORATION AND DAMAG	DAMAGES		SHOTORD	
NO TO G		Corrections of the corrections	REHAB. METHODS	011111111111111111111111111111111111111	
ar. Ivo.	SC SO SOB				· · · · · · · · · · · · · · · · · · ·
Br. NAME	BATÚ 🛆 💮	0	Replacement of deck slab	0.0	(Exst.)
RATING	A 1. Minor cracks in the	deck slab.	additional sidewalk on	Control of the Contro	
TYPE	TRUSS 2. Scouring of slope protecti	protection	deck slab, slope pro-	TO SEMPLE AND	The AMbarantan
LENGTH 3	350.00		riverbed protection and		
YEAR BUILT			groyne		
WIDTH 6	6.15				
	DETERIORATION DAMAGES F	RATING	OTY. OF DAMAGE	REHABIL	REMARKS
PAVEMENT				40 nm thickness @ curb 90 nm thickness @ centerline of roadway Slope = 1.5	- River Study
CURB & RAILING		-		Additional sidewalk : width = 1.30 m (upstream) Railing height = 1.07 m L = 15 + 350 + 16 = 381 m	
EXPANSION JOINT					
DECK SLAB	Extensive cracking and evidence of repair works (patching).	B A17	All spans.	Replacement of deck slab/additional stringer Thickness = 180 mm, fc' = 4000 psi	Bridge width = 6.70 + 0
CONCRETE BEAM					
STEEL BEAM					
PAINTING COND.				100% of Truss members	
SHOE					
ABUTMENT					
PIER					
SLOPE PROTECTION	Excessive scouring of slope pro- tection at Approach 2 and erosion of river bank	A Abu	Abutment 2 (A ₂).	(Gnouted riprap and gabion)	
DRAINAGE					Note: SL Slab st Sundestructure
APPROACH ROAD					Z
RIVER CONDITION	Flow of river is parallel to the bridge.	A		Riverbed Protection	Seriousiy Damage O Partially Damage Minor Damage
OTHERS	:				

DIAGNOSTIC RECORD OF THE 22 EXISTING BRIDGES (9/22)

ing bars at the slab Library and Concrete channel. Sourcete channel. Sourcete channel. Sourcete channel. Protection of Floor Towns of the concrete foundation of pier Towns of the concrete foundation of pier Sourcete foundation Sourcete foundation B All spans. B All spans. A P3, P4, P5 and P6	REHABILITATION METHOD ### Thickness @ curb ### Sippe = 1.5% Content of roadway Priver Study Priver Stu
B All spans. B All spans. Ing A Four spans of truss bridge. A P3, P4, P5 and P6	REHABILITATION METHOD thickness @ curb thickness w centerline of roadway = 1.5%
potholing A Four spans of truss bridge. A P3, P4, P5 and P6	thickness @ curb thickness w centerline of roadway = 1.5%
potholing 6 of truss A Four spans of truss bridge. A P3, P4, P5 and P6	
potholing 6 of truss bridge. A P3, P4, P5 and P6	
6 of truss A Four spans of truss bridge. A P3, P4, P5 and P6	Bridge width = 6.15 m Sidewalk = 2 @ 0.75 m
A 793, P44, P5 and P6	cement of deck @ truss spans. ness = 165 mm = 1.5%
A 73, 94, P5 and P6	
A 73, P4, P5 and P6	Additional Stringers
A 793, P44, P5 and P6	100% of Truss members
A 73, P4, P5 and P6	
A 793, P4, P5 and P6	
	(Construction of protection works around pier foundation)
	1.1
	SUB Substructure SUB Substructure FDTN Foundation EMB Embankment
Scouring around Pier P6 or P9.	Seriously, Pamage O Partially Damage Minar Damage

DIAGNOSTIC RECORD OF THE 22 EXISTING BRIDGES (10/22)

-				
	DETERIORATION	DAMAGES	REHAB METHODS	PHOTOGRAPHS AND
Br. NO. 113	SL SU SUB	FDTN EMB OTHER		化合物物 医骨骨骨骨骨 医骨骨骨骨骨骨骨骨骨骨骨骨骨骨骨骨骨骨骨骨骨骨骨骨骨骨骨骨
Br. NAME MALALAM	AM.			PROPERTY AND (EXSEL)
RATING		1000	. Partial Replacement	The first of the second
TYPE S-I-8	S-I-8/TRUSS 2 Cracks on cooling at Pier 1	one deck signation		TO THE SAME AND AND SAME AND
LENGTH 475.40			Foundation	
YEAR BUILT 1946	10		- Reinforcerent of deck	
WIDTH 6.15		:	.5180.	
	DETERIORATION DAMAGES	RATING	QTY, OF DAMAGE	REHABIL ITATION - METHOD
PAVEMENT	Potholes at pavement		All truss spans.	40 mm thickness@curb 86 mm thickness@centerline of roadway Slope = 1.5%
CURB B RAILING				Steel ralling 60 74.0 m Sidewalk = 200.70
EXPANSION JOINT				
DECK SLAB	Big cracks at deck slab.	ď	All truss spans.	Partial replacement of deck slab of Recommended thickness = 165 mm
CONCRETE BEAM				
STEEL BEAM				100% of truss members
PAINTING COND.				
SHOE		:		
ABUTMENT				Construction of Pier Foundation Protection around the Piers(P2, P3 and P4)
PIER	Cracks at coping of Pl.	ນ		
SLOPE PROTECTION				
DRAINAGE				
АРРКОАСН КОАБ				Substructure Substructure FDTN Foundation EMB Embankment
RIVER CONDITION	Scouring around Pier P2,P3 & P4			Seriously Damage O Partially Damage Minor Damage
OTHERS				

DIAGNOSTIC RECORD OF THE 22 EXISTING BRIDGES (11/22)

Br. NO. 13								סונת סיינת	
	139	SLS	su sue	FDTN EMB	MB OTHER	REHAB. METHODS	S.		
Br. NAME PINAC	PINACANAUAN	◁	0	0	-	0 +00H		"ork 300cc . crark c 300 . vu (Exst.)	(Exst.)
RATING	A	:				_	:	122 3 4 5000	15 6 2 20
TYPE S-1-	S-I-8/TRUSS	2. Ser	Heavy scouring on some pier Serious cracks in the deck	ig on some is in the	e piers. deck slab.			CONTRACTOR OF STREET	
LENGTH 383	383.40					Frotection of Pier foundation	r.		
YEAR BUILT						Reinforcement of Pier	pier		
WIDTH						Slope protection			
	DETERIORATION		DAMAGES	RATING	ING	GTY. OF DAMAGE	3.5	高	REMARKS
PAVEMENT				·				40 mm thickness و centerline of roadway 85 mm thickness و centerline of roadway Slope = 1.5	Boring Test
CURB & RAILING				•				Steel railing - Rive Curb height = 0.20 m from pavement	River Study
EXPANSION JOINT					·				*
DECK SLAB	Extensive cracking at deck slab.	acking a	it deck sli	ab. A				Partial Replacement of deck slab, a truss spans, Briage 60 = 180.0 m (Truss); thickness = 165 mm, fc! (4000 psi)	Bridge width = 6.06 m (Truss)
CONCRETE BEAM								p); S	Sidewalk = 2 @ 0.67 m (Truss)
STEEL BEAM			·		: '				
PAINTING COND.	.f.			 ;				100% of Truss members.	
SHOE	:			· · · · · · · · · · · · · · · · · · ·			:		
ABUTMENT									
PIER	Severe scouring	at	P3 and P4.	4	A			Reinforcement of pier. P5 ~ P7	
SLOPE PROTECTION		,		- :					
DRAINAGE								Note:	S. Side
APPROACH ROAD									_ E @
RIVER CONDITION	Scouring around pier foundation. (P2 ≥ P4)	nd pier 4)	foundatio					River bank protection Protection (P2 \sim P4)	1.1
OTHERS									

DIAGNOSTIC RECORD OF THE 22 EXISTING BRIDGES (12/22)

REGION	II DETERIORATION AND DAMAG	DAMAGES		PHOTOGRAPHS	
Br. NO.	154 SL SU SUB FDTN EMB	I EMB OTHER	REHAB, METHODS	(XSE)	
Br. NAME PARED	● ∇ C3	•	Replacement of bailey and	1 2	
RATING		nt at A. side	. –	Treated to the state of the sta	(<u>k</u>
TYPE PONY/R	PONY/RCDG/TRUSS 2. Cracks, potholes, and expo	–io	-	CANDALAN CALARY CONTRACTOR	ZIALAZI ZIALAZI
LENGTH 193	193.10 slab in all spans.		7 (1		
YEAR BUILT 19	1976		Additional Sidewalk.		ga aga dige
WIDTH 6.	6.15	:	Slope profection.		
	DETERIORATION DAMAGES	RATING	QTY. OF DAMAGE	REHABILITATION METHOD REMARKS	1RKS
PAVEMENT				40 mm thickness @ curb 85/100 mm thickness @ centerline of roadway For Truss Slope = 1.5% For Truss	
CURB & RAILING		:		from pavement	Gridge width 6.70/6.15 m
EXPANSION JOINT				Rubber - Sidewalk : 2	2 0.75.m
DECK SLAB	Cracks, potholing and exposed of rebars and patching works on all spans.	A ATT	All spans with potholes. Truss spans with exposed	Partial replacement of deck on truss spans thickness=165 mm, fc' = 4000 ps;	a dia dia dia dia dia dia dia dia dia di
CONCRETE BEAM				Reconstruction of 2 spansiPCI2 @ 25.0 = 5 m Type IV-A	
STEEL BEAM					(Andrew State Committee)
PAINTING COND				100% of Truss members	
SHOE					
ABUTMENT				Reconstruction of Inverse T - type (H = 1 @ 8.0 m) on R.C. Pile Foundation (400x400)	e-term up koom-peeper
요 요 요	:			Reconstruction of wall type (H = 10 15.0 m) on R. C. Pile foundation (400x400) Postanian propertion at D2 ps and D4	
SLOPE PROTECTION	Eroded river bank and slope pro- tection at Approach 2.	A Bot	Both abutments Al & A2.		ne e menidado e de
DRAINAGE					Stab
APPROACH ROAD				1 x 20 m	Substructure Foundation Emborkment
RIVER CONDITION	Scouring around pier foundation (P2 ~ P4)				Seriously Damage Partially Damage Minor Damage
OTHERS	Temporary bailey bridge installed at Approach 1 side.	A	18 m (A1 - P1)		

DIAGNOSTIC RECORD OF THE 22 EXISTING BRIDGES (13/22)

REGION	v DETERIORATION AND DAMAGES	DAMAGES		PHOTOGRAPHS
Br. NO	19 SL SU SUB FOTN EMB	N EMB OTHER	REHAB. METHODS	(1884) Society and the second
Br. NAME SUJE	E (RIZAL) • •		Replacement of Super-	
RATING	A 1. Concrete girders of	first span	0 12.0	
TYPE	RC-SLAS tion due to extensive spalling	n bad condi- ve spalling	Link slab	
LENGTH		exposure of	Widening of abutment	0,0
JILT	1958 2. Temporary wooden support defective span.	ipport on the	Slope protection	S C C C C C C C C C C C C C C C C C C C
WIDTH				
	DETERIORATION DAMAGES	RATING	Qty. OF DAMAGE	REHABILITATION METHOD REMARKS
PAVEMENT		· · · · · · · · · · · · · · · · · · ·		40 nm thickness @ curb. 95 nm thickness @ centerline of roacway Slope = 1:5%
CURB & RAILING	Steel railing on timber postbolted to curb in bad condition.	8 50	50% missing. 50% in bad condition	Railing height = 1.07 m Curb height = 0.20 m from pavement - Sidewaiks : 2 0 0.76
EXPANSION JOINT				Duamy joint
DECK SLAB	Cracks and evidence of repair works (patching).	₹.⊓	Whole roadway area of Span 1 and Span 2.	Thickness = 127 mm
CONCRETE BEAM	Exposed rebars, spalling of all beams. Deams. All beams on one span with temporary support.	A.	A1 - P1.	Replacement of superstructure Use one span 12 m precast PC-T beam
STEEL BEAM				
PAINTING COND.				
SHOE				Elastomeric bearing pads
ABUTMENT				Widening of bearing seat.
<u>с</u> ш				
SLOPE PROTECTION				Grouted riprap
DRAINAGE				Note:
APPROACH ROAD				_ Z m
RIVER CONDITION				Seriousiy Damage Partially Damage Minar Damage Minar Damage
OTHERS				

DIAGNOSTIC RECORD OF THE 22 EXISTING BRIDGES (14/22)

30,000	BOXXXX CING MOITAGOIDERO	CHARACT			
	A	רבואושפרפ	REHAB, METHODS	PHOTOGRAPHS	
Gr. NG. 78	SL (SU S	N EMB OTHER		4 /2	
Br. NAME SAN G	SAN GABRIEL .				
RATING A		inal cracks	result of the state of the stat		
TYPE RC-SLAB		r the deck	ای		
LENGTH 19.50	۲۵	te at the sup-			
YEAR BUILT 1972		,	Widening of pier cap.	מונונים ביינונים ביינ	
WIDTH 7.50	O.		Stope protection	property of the control of the contr	
	DETERIORATION DAMAGES	RATING	Q1Y. OF DAMAGE	REHABILITATION METHOD REMARKS	KS
PAVEMENT		: :		40 - 95 mm thickness Slope 1.5%	•
CURB & RAILING				Railing height = 1.07 m Sridewalk: 2.00.70	32 m 70 m
EXPANSION JOINT				Dummy joint	
DECK SLAB	Excessive longitudinal cracks and vibration on slab.	A Sp	Whole carriageway area of spans 1,2 & 3.	Replacement of Superstructure (RC-Slab) t = 335mm	
CONCRETE BEAM					
STEEL BEAM					
PAINTING COND.			:		
SHOE	Damage at supports due to crus- hing of concrete (slab and bridge seat)	B A1	A1 - A2.	Elastomeric bearing pads	
ABUTMENT				Widening of bride seat (A $_1$ and A $_2$)	enders van der Graders seg seg
918R			2.7	Widening of pier cop - $(P_1 \text{ and } P_2)$	
SLOPE PROTECTION				Grouted riprap	
DRAINAGE					۵
APPROACH ROAD	Potholes and cracks at Approach 1 and Approach 2.	0E 30	30% on both Al and A2.	edus us sans ens sans ens	Superstructure Substructure Foundation
RIVER CONDITION			:		Seriously Damage Partially Damage Minor Damage
OTHERS					

DIAGNOSTIC RECORD OF THE 22 EXISTING BRIDGES (15/22)

REGION	IV-A	DETERIC	DETERIORATION AND DAMAGE	ND DAMAG	SES		РНОТОВЖАРНЅ	
Br. NO.	188	SL SU	SUB	FOTN EMB	_	REHAB. METHODS		
Br. NAME BINA	BINAHAAN		4	4			MILIBE C. CONSTITUTION (EXST.)	
RATING	А	1. Exter	Extensive cracking, potholing and exposure of reinforcing bars	ing, potno reinforci	ling ng bars	,	70 91 00 01 10 00 11 00 01 00 01 00 01 00 01 00 01 00 01 00 01 00 01 00 01 00 01 00 01 00 01 00 01 00 01 00 01	9.00
TYPE R.C.	R.C.D.G.	in t	in the top and bott	bottom of	deck	·		
LENGTH 75.	75.00	2. Shear	Shear cracks on beams particu-	beams par	ticu-	RCDG)		+
YEAR BUILT		beam	larly over the supports, three beams on pier 2 and two interior	supports; cand two in	nterior	Widenirj of pier cap.	table table table table	* .0001
WIDTH 6.70	70	реэш	s on pier 3					
	DETERIORATION	H	DAMAGES	RATING		Qty. OF DAMAGE	REHABILITATION METHOD REMARKS	ARKS
PAVEMENT							110 mm thickness @ curb 90 mm thickness @ center of roadway Slope - 1.5	
CURB B RAILING							Railing height = 1.07 m Curb height = 0.20 m from top of pavement	COLUMN TO THE STATE OF THE STAT
EXPANSION JOINT							dth	9
DECK SLAB	Serious cracks and exposure of re- inforcing bars at top and bottom and big hole at span no.3.	and exp at top t span n	osure of reand bottom		Who	Whole area of span no.3.	inickness = 165 mm	
CONCRETE BEAM	Shear cracks on three (3) beams especially at support on Pier 2 and two (2) interior beam at Pier 3.	ort on Peam at P) beams esperier 2 and 1 ier 3.	Ewd 8	Thr	Three (3) beams at Pier 2 and two (2) interior beams at Pier 3.	d Replacement of superstructure (2 spans) with 5 beams	
STEEL BEAM								
PAINTING COND.			· • .					
SHOE	Shoe deteriorated	5	all spans.	ပ <u>ု</u>	AI	- A2.	Use elastomeric bearing pads	
ABUTMENT							Widening bridge seat (A ₁ and A ₂)	
PIER	Scouring of P	Pl and P2	:	J.	9.0	0.80m at Pl and o.50m at P2.	Widening of pier cop (P1, P2 and P3)	
SLOPE PROTECTION	· ·	-						
DRÁINAGE							Note:	Stab
APPROACH ROAD		de y					m Z m	Substructure Foundation Embankment
RIVER CONDITION	Scouring around	d pier	pier P2, P3					Seriously Damage Partially Damage Minor Damage
OTHERS	-							

DIAGNOSTIC RECORD OF THE 22 EXISTING BRIDGES (16/22)

30,000	*C:F< 0.0-00FP0.		
-	IV-A DE ERIONATION AND DAMAGES	REHAB, METHODS	PHOTOGRAPHS
ų			wood thorn sie (Exst.)
-	1. Serious cracks on all	Replacement of suppr-	12.0
		structure (3 @ 12.0	A THE PROPERTY OF THE PROPERTY
	2 .		
YEAR BUILT	s. Cracks and exposure of reinfor-		
WIDIN 6			The said of the sa
	DETERIORATION DAMAGES RATING	OTY OF DAMAGE	REHABILITATION METHOD
PAVEMENT			40 mm thickness @ centerline of roadway 55 mm thickness @ centerline of roadway 51pps = 1.5% - Detailed Survey
CURB & RAILING			t t
EXPANSION JOINT			
DECK SLAB			Thickness = 180 mm
CONCRETE BEAM	.Serious cracks near support and midspan.One exterior and one inte- A Alrior beam with temporary support.	- A2 (all beams)	Replacement of Superstructure utilizing wider bridge width. (3 @ 12 m RCDG, 7.32 m roadway)
STEEL BEAM			
PAINTING COND.			•
SHOE			Use elastomeric bearing pads
ABUTMENT			Widening of seat $(A_1$ and $A_2)$
PIER			Widening of coping (P_1 and P_2)
SLOPE PROTECTION			
DRAINAGE			Note:
APPROACH ROAD	Cracks and potholes at Approach 1. C 203	20% of approach pavement.	~Z@
RIVER CONDITION			Seriously Damage Pertially Damage
отнеяѕ			

DIAGNOSTIC RECORD OF THE 22 EXISTING BRIDGES (17/22)

REGION	IV-A DE	DETERIORATION AND	AND DAMAGES		PHOTOGRAPHS	
Br. NO.	220 SL	SU SUB	FDTN EMB OT	OTHER REHAB. METHODS		4
Br. NAME MAG	MAGAPONG	•			Bitter Lands 22.25.	XST-J
RATING	A I.		n deck	slab Reinforcement of sub-		
TYPE P0	PONY 2.		rusty and p	Dar- Replacement of Super-		14
LENGTH 25	25,70	tially corroded particular bottom chords, floor beams	irticularly the	structure (PCI)		
	1946 3.		is too marr			
WIDTH 6.	6.00	(6.00m).			- 1	
	DETERIORATION	N DAMAGES	RATING	Oty, OF DAMAGE	REHABILITATION METHOD	REMARKS
PAVEMENT	Abrasion, cracking and potholes pavement.	ng and potholes at	τΩ.	Whole area of bridge pavement	40 mm thickness @ curb 68 mm thickness @ centerline of roadway 5100e = 1.5%	
CURB & RAILING	Rreakage of railing.	ing.	83	30% in bad condition.	leight = 1.07 m	Bridge width = 7.32 m
EXPANSION JOINT						Sidewalk: Z & U./b m
DECK SLAB	Cracks and potho	Cracks and potholes at bottom por-	۵	A1 - A2.	Thickness ≈ 190 mm	
CONCRETE BEAM					Use 25.7 m span prestressed concrete I-beam (Type IV)	amen of the common of the comm
STEEL BEAM			:			and an angle of the second
PAINTING COND	Discoloration and rusty members.	nd rusty structural	Ą	Whole truss members (Al-A2).		a part thing model
SHOE	Rusty bearing pl	plate.	8	Width of Al and A2.	Elastromeric bearing pads	
ABUTMENT		:			Reinforcement of abutment	
PIER						
SLOPE PROTECTION			1		Grouted riprap	
DRAINAGE						Note:
APPROACH ROAD	41.1				30 m × 2	~Z @
RIVER CONDITION						Seriously Damage O Pertially Damage Minor Damage
OTHERS	Too narrow carriageway width.	iageway width.	A	6.00 m. carriageway.		

DIAGNOSTIC RECORD OF THE 22 EXISTING BRIDGES (18/22)

PEGION IN	NA NOTTERIORATION AND	AND DAMAGES		OLICA CONTROL	
	SL SU SUB	FDTN EMB OT	OTHER REHAB. METHODS	200.2	00.2
Br. NAME SAN C	ISTOBAL • △ △ ○				
	A Serious cracks at hottom of		deck slah		
TYPE RCDG/					
LENGTH 73.		ther structur	al Repainting of truss		
ILT	members, diagonal members are bent due to venicular collision.	members are ular collisio	g		
WIDTH 8.0					
	DETERIORATION DAMAGES	RATING	Oty. OF DAMAGE	REHA	REMARKS
PAVEMENT				40 mm thickness @ curb 100 mm thickness @ centerline of roadway Slope = 1.5%	Detailed Survey Loading Test
CURB B RAILING	8 RAILING Rusty and broken railing.	£0	10% missing (truss type)	railing eight ≈ 0.20 from pavement.	Exist. Br. Wdith = 8.00 m Sidewalks : 2 @ 0.76
EXPANSION JOINT			:	- Met	- Method of construction One lane will be utilized
DECK SLAB	Serious cracks and evidence of repair works were observed at the bottom of deck siab.	Ą	Whole area of truss bridge, Pl - P2.	Partial replacement of deck slab Provide additional stringers between the existing the stringer	to accomodate traffic while the other lane is under repair.
CONCRETE BEAM			:		
STEEL BEAM	Rusty lower chord, cross beams and other structural members.	₹	Whole truss bridge, Pl - P2.	Additional stringer	
PAINTING COND.	Rusty structural members.	⋖	30% of truss members.	100% of truss members	
SHOE				•	
ABUTMENT					
9 R B I G	Cracks at pier coping.	U	P1 and P2.		
SLOPE PROTECTION					
DRAINAGE				O Z	Note:
APPROACH ROAD					
RIVER CONDITION					Seriously Damage Partially Damage Minor Damage
OTHERS					

DIAGNOSTIC RECORD OF THE 22 EXISTING BRIDGES (19/22)

REGION	VIII	DETERIC	JRATI	ON AND	DETERIORATION AND DAMAGES			1	РНОТОВВАРНЅ		
Br. NO.	109	SL SU	1	SUB FOT	FDTN EMB K	15 15 15 15 15 15 15 15 15 15 15 15 15 1	REHAB, METHODS	L.			
Br. NAME JI	JIABONG	•	•	0					Brides Lapins 74.80 (EXST.	(Exst.)	
RATING	A		1 3	1		1					
TYPE RC	RC-SLAB	1. Exte	esto:	rved. Es	g and por pecially		Reconstruction (PCI 3 @ 25.0m)	(m0			 :
LENGTH 7	74.80	span asph	alt p	uneven avement.	span no.6. Uneven and waving asphalt pavement.	<u>6</u>	-				
YEAR BUILT		2. Heav	iy sco	uring on	some ple	š.		- E-		,	
WIDTH 6	6.85										
	DETERIORATION	Н	DAMAGES	ES	RATING		Oty. OF DAMAGE		REHABILITATION METHOD	REMARKS	
PAVEMENT								 	40 mm thickness @ curb 95 mm thickness @ centerline of roadway clone = 1 sy	River Study	, .
CURB & RAILING	90							40	Railing height = 1.07 m Curb height = 0.20 m from pavement	Bridge width = 7.32 Sidewalk = $2 \oplus 0.76$	8 6
EXPANSION JOINT	L _N								Rubber joint		
DECK SLAB	Extensive spalling and exposure of reinforcing bars on slab portion of concrete channel.	bars on sl channel.	ab po	sure of intiem	4	A11	All span.		Thickness ≠ 190 mm		
CONCRETE BEAM	 	osure of realing of coff beams.	einfor concre	cing te at	4	LIA	All span.		PCI 3 @ 25.0m Type IV-A		
STEEL BEAM											
PAINTING COND.	0										
SHOE			.					· · · · · · · · · · · · · · · · · · ·	Elastomeric bearing pads		
ABUTMENT	:		; .		·				Reconstruction - 2 abutments of Inverse T-type (Ajand A2)		
91 유교		÷ .			· · · · · · · · · · · · · · · · · · ·	:			Reconstruction wall type (2 piers)		1
SLOPE PROTECTION	ğ		,						Grouted riprap		
DRAINAGE										Note: SL Sieb	
APPROACH ROAD	9					<u> </u>			.2 x 75 m	~ Z @	ure n vent
RIVER CONDITION	N _C									● Seriously Damage ○ Partially Damage △ Minor Damage	Damage Damage noge
OTHERS									大型 1000 1000 1000 1000 1000 1000 1000 10		
						1		1			

DIAGNOSTIC RECORD OF THE 22 EXISTING BRIDGES (20/22)

DIAGNOSTIC RECORD OF THE 22 EXISTING BRIDGES (22/22)

Elastomeric bearing pads Reinforcement of abutment Reconstruction of rigi

DIAGNOSTIC RECORD OF THE 22 EXISTING BRIDGES (21/22)

BRIDGE LENGTH 74.00 (EXSE.)						100 St.	HOD REMARKS		- Sidewalk: 2 @ 0.76 m			7 = 74 m				= 2 @ 6.50 m)	11.50 on bored			SUB Substructure FDTN Foundation FMB Embankment	Seriously Damage
PHOTOGRAPHS					33140		REHABILITATION METHOD	50 mm thickness @ curb 68 mm thickness at centerline of roadway Slope = 1.5%	Railing height = 1.07m Curb height = 0.20m from pavement		Thickness = 180	Reconstruction of bridge 2 @ 37 Prestressed T-beam	•	•	elastomeric bearing pads	Reconstruction of inverse 1-Type (H: Du bored pile foundation (0.1200)	Reconstruction of wall type $H=1$ @ pile foundation (\$1200)	Grouted riprap		2 x 125 m	-
REHAB. METHODS			Reconstruction n of	bridge (PCT 2 @ 37.0 m)	Slope protection		OTY OF DAMAGE						20% of truss members are seriously corroded.	90% of truss members are rusty.				Both abutments (Al and A2).			
DAMAGES		rcing bars at	s are rusty	cularly at	•		RATING						A 20	A 90'				ω U			
VIII DETERIORATION AND DAMAGE 161 St. SU SUB FOTN EMB	JUBASAN I	A 1. Exposure of reinfor	TRUSS deck slab. 2 Steel truss members are rusty	74.00 and corroded particularly	1972	7.30	ETERIORATION DAMAGES			• 10			Serious corrosion on lower chord and other steel members.	Rusty truss members.				Movement and scouring of slope pro- tection.			
REGION V	Br. NAME JUSA	RATING	TYPE TR	LENGTH 74	YEAR BUILT 19	WIDTH 7.		PAVEMENT	CURB & RAILING	EXPANSION JOINT	DECK SLAB	CONCRETE BEAM	STEEL BEAM	PAINTING COND.	SHOE	ABUTMENT	9158	SLOPE PROTECTION	DRAINAGE	APPROACH ROAD	NOD-TONOO WEIVER

APPENDIX 7.1

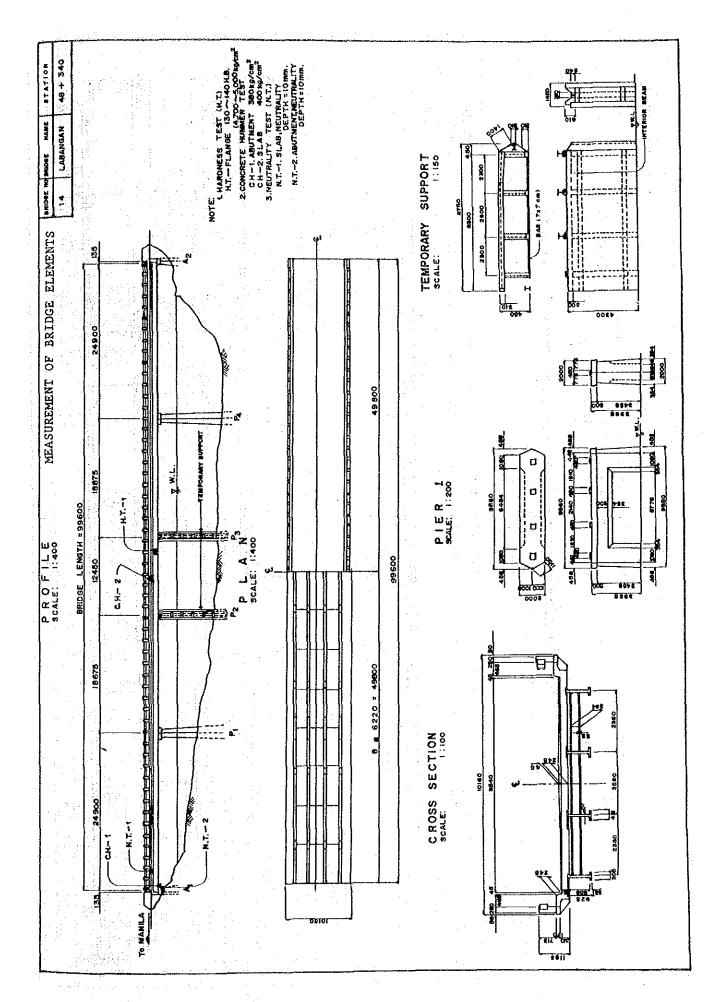
RESULTS OF DETAILED STRUCTURAL SURVEY

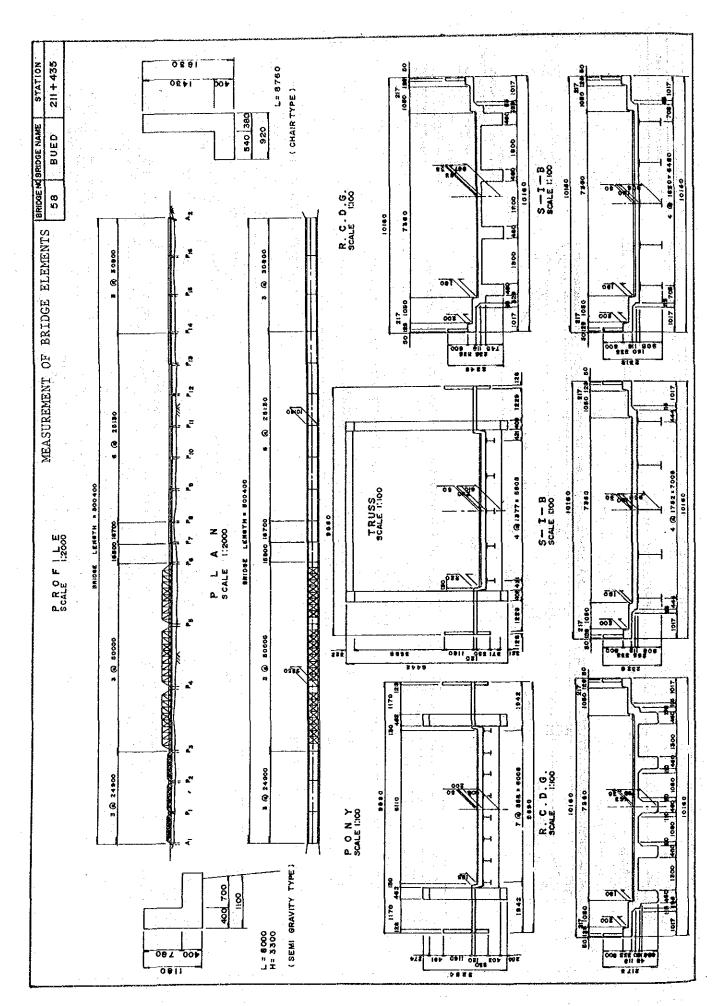
DETAILED SURVEY BRIDGES

1	REMARKS		Additional				
>	NEUTRALITY TEST	0		0			0
OF DETAILED SURVEY	CONCRETE HUMMER TEST	0		0	0	0	0
OF DETAIL	HARDNESS TEST	0		0			
ITEMS	DETERIORATION & DAMAGES	0		0	0	0	0
-	MEASUREMENT OF MEMBERS		\circ	0	0	0	
	LOCALION	MNR STA. 48 + 340 Calumpit, Bulacan	MNR STA. 211 + 453 Sison , Pangasinan	MNR STA. 258 + 750 Bauang , La Union	PPH - NORTH STA68+700 San Ildefonso, Bulacan	PPH-South STA.116 + 130 Sariaya , Quezon	PPH-South STA.48 + 666 Calamba , Laguna
T	מאוטסה ואף	S I B PONY/TRUSS		PONY TRUSS	RC - SLAB	R C D G	TRUSS/RCDG
	BRIDGE NAME BRIDGE TYPE NO. SIB		8 0 8 0	BAUANG I	ANYATAN I	STO.CRISTO	SAN CRISTOBAL TRUSS/RCDG
BRIDGE	BRIDGE BF NO.		8 8	7.2	16	6 0 80	227

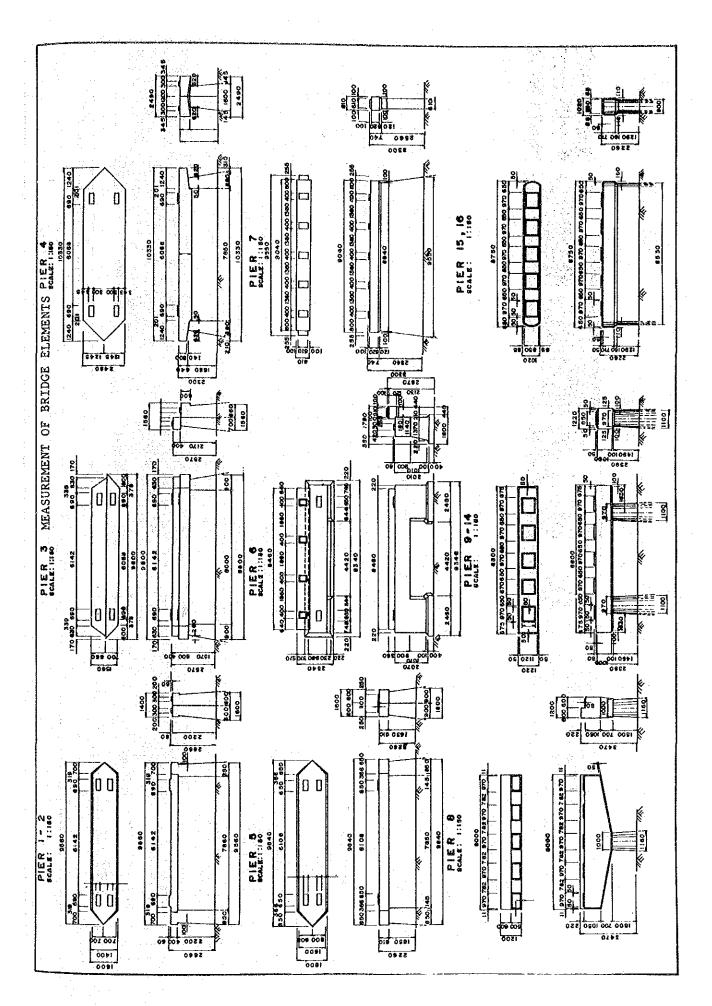
ű Upstream, Downstream - Principally clay, sand and mud - River bank pro-tection on the on side (upstream , about 250 m) RIVER BANK 48 + 340 Al,Rs,upstream A2, Right side - Settlement of the supporting soil of concrete slope protection Cracking of con-crete slope pro-teciton - Principally sup-porting soil is composed clay Minor scouring at both side of the abutment ABANGAN SCOPE PROTECTION Al, left side Al left side Al and AZ Α2 left side Al and BR Ng - Princinally clay Minor scouring FOUNDATION - Cannot be seen DETAILED SURVEY OF DETERIORATION AND DAMAGES (2/3) Al and A2 A2 - Minor cracks on both sides of each abutment WING: WALL Al and A2 Cannot be seen FOOTING and A2 41 Al and A2 STEM - No damage Reinforcing steel not visible during testing.
Reutrality Depth Obsintegration of concrete and exposure of reinforcing bars (about 1.0 m in length) Concrete Strength - 380 kg/cm² -PARAPHET BEARING BED (ABUTMENT) Al, Right side Al and A2 7 DETECT THE NEUTRALITY -AMINATION, DISTORTION CRACKING, SPALLING, IN-SITU TEST TO NON - DESTRUCTIVE TEST TO CONFIRM OF CONCRETE (CHEMICAL TEST) THE STRENGTH HARDNESS TEST) SOIL CONDITION č SEDIMENTATION PHOTOGRAPHS WIELDING. SETTLEMENT, DEFORMATION OR ROTATION REMARKS DESCRIPTION いいのこという č INSTRUMENTALITY INSPECTION VISUAL INSPECTION

	NOIT	VISUAL INSPEC			12БЕС110И	II YTIJATNЭMI	INSTRI	
DESCRIPTION	PHOTOGRAPHS	CRACKING, SPALLING LAMINATION, DISTORTION OR YIELDING	SOIL CONDITION	SETTLEMENT, DEFORMATION OR ROTATION	SCOURING OR SEDIMENTATION	NON - DESTRUCTIVE TEST TO CONFIRM THE STRENGTH (HARONESS TEST)	IN-SITU TEST TO DETECT THE NEUTRALITY OF CONCRETE (CHEMICAL TEST)	REMARKS
(PIER) CAP	Tid.	- No damage PI and P2						
WALL / COLUMN	P1	- No damage Pl and P2						
FOOTING		- Not seen						
FOUNDATION	p1	- Not seen Pland P2						
PROTECTION OF FOUNDATION		- Not seen						





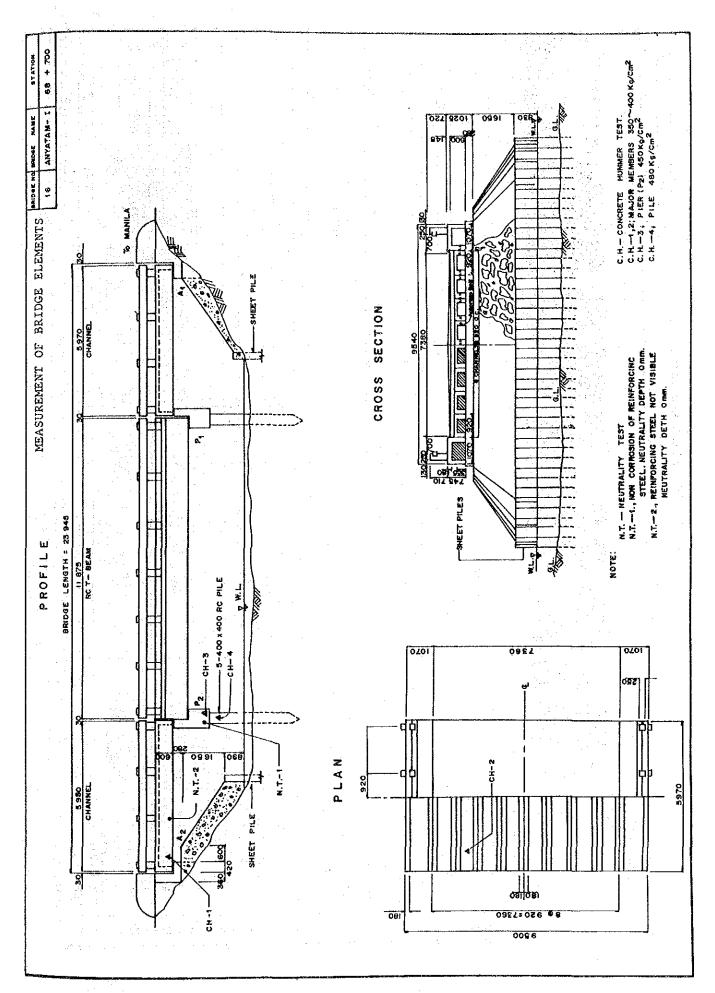
AP 7- 7



NAME	4 1 68+700	RAILING/SIDEWALK	Marina San San San San San San San San San S	10 d o o o o o o o o o o o o o o o o o o	- Hairline cracks at railing and spalling of concrete along sidewalk At P2		
BR N2 BRIDGE	16 ANYATAM	BEARING SHOE	3rd cnan				
ND DAMAGES (1/3)		SLAB BOTTOM	3rd coan		- No danage		- Zero neutrality depth. 3rd span
DETERIORATION AND DAMAGES		DECK	3rd span		- Cracks along channel and scouring of as- phalt pavement Span 2	- Three centimeter gap at expansion joint	Spar Spar to ex
DEIMILED SURVEY OF		SECONDARY MEMBERS	37d span	- All connections bolts are rusty at span 1 and 2	1		occur between channel section.
	(SUPER-STRUCTURE)	MAJOR MEMBERS	3rd span		- Spalling of concrete and exposure of rein- forcing bars. span 2		1. Water seepage occur between 2. Deck sibb and pavement are
		DESCRIPTION	PHOTOGRAPHS	CORROSION OF STRUCTURAL STEEL	CRACKING, SPALLING, LAMINATION, DISTORTION OR YIELDING	EFFECTIVENESS OR RESTRAINT OF JOINTS	SETTLEMENT, DEFORMATION OR ROTATION NON-DESTRUCTIVE TEST TO CONFIRM. THE STRENGTH (HARDNESS TEST) IN - SITU TEST TO DETECT THE NEUTRALITY OF CONCRETE (CHEMICAL TEST) REMARKS
				ІИЅРЕСТІСИ	NISUAL		INSTRUMENTALITY INSPECTION

E STA.	RIVER BANK		A2	- Clay and soil (ricefields on both sides) Upstream & downstream				
BRN2 BRIDGE NAME). P.S.G		A) - Severe cracking of concrete slope protection A1		- Settlement of concrete slope protection			
ES (2/3)	FOUNDATION		A2 Not seen	- Silty soil and clay				
IION AND DAMAGES	WING WALL		A2 - Not. seen A2					
(OF DETERIORATION	FOOTING		A2 - Cracks occur around the wing wall of abutment Al and A2					.h road
DETAILED SURVEY	STEM		A2 - No damage - A1 and A2		The same			waving at the approach road
I (ABUTMENT)	PARAPHET BEARING BED		A2 - No damage - Al and A2					- Settlement and waving at
	DESCRIPTION	PHOTOGRAPHS	CRACKING, SPALLING, LAMINATION, DISTORTION OR YIELDING	SOIL CONDITION	SETTLEMENT, DEFORMATION OR ROTATION	SCOURING OR SEDIMENTATION	NON-DESTRUCTIVE TEST TO CONFIRM THE STRENGTH (HARDNESS TEST) IN-SITU TEST TO	CHENT HE NEULALITY CONCRETE CHEMICAL TEST) REMARKS
		Take 1 Take 1 or NOIT	VISUAL INSPEC			ISPECTION	INSTRUMENTALITY IN	

AM I 68+700	PROTECTION OF FOUNDATION		PI and P2			- Silty soil and clay	around P1 and P2							
16 ANYATAM	FOUNDATION		16	. Not seen	P1 and P2	- Silty soil and clay	around P1 and P2	- Rotation of piles on piers (2 piles each)	P1 and P2			Concrete Strength - 480 kg/cm2		
	FOOTING		Id.	- Not seen	PI and P2	- Silty soil and clay	around Pl and P2							
	WALL / COLUMN		P2	- No damage	Pl and P2									
(PIER)	САР		p2	- Hairline gracks and minor concrete spalling.	P2							- Concrete Strength - 450 kg/cm² - P2	- Reinforcing steel not visible during testing Zero neutrality depth	
	DESCRIPTION	PHOTOGRAPHS		CRACKING, SPALLING LAMINATION, DISTORTION OR YIELDING		SOIL CONDITION		SETTLEMENT, DEFORMATION OR ROTATION		SCOURING OR SEDIMENTATION		NON - DESTRUCTIVE TEST TO CONFIRM THE STRENGTH (HARDNESS TEST)	IN-SITU TEST TO DETECT THE NEUTRALITY OF CONCRETE (CHEMICAL TEST)	REMARKS
		NO	PECT1	ISNI TANS	31/					ЕСТІОИ	48	NI YTIJATNEMI	เพอาหา	

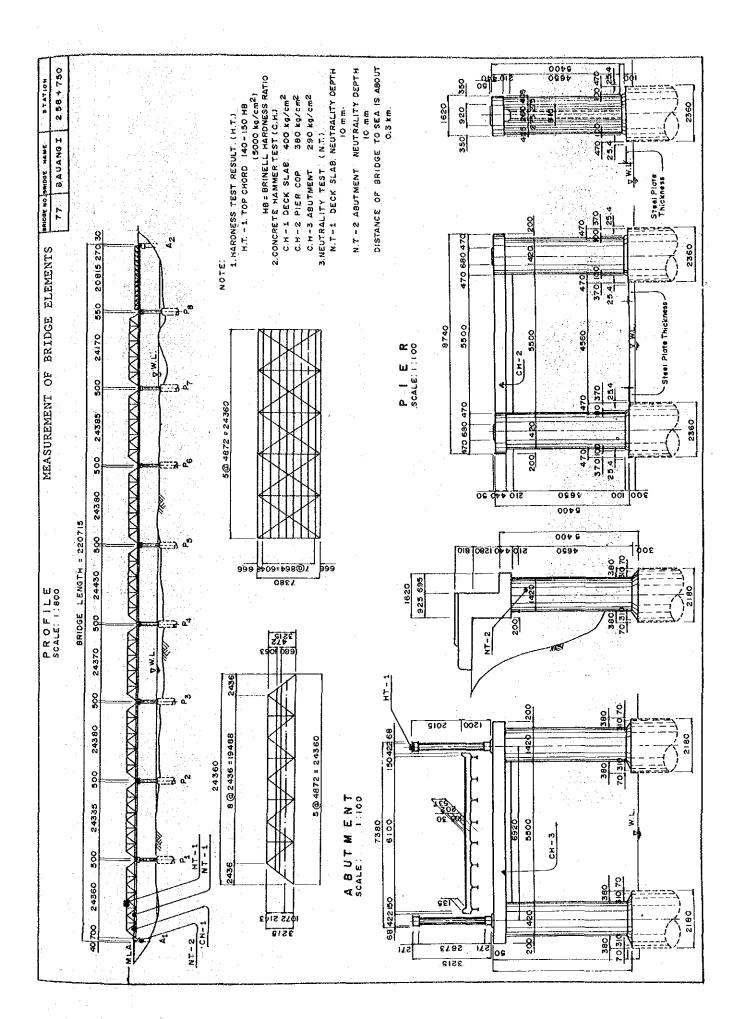


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DETAILED

NAME STA. 258+730	RAILING/SIDEWALK		4th span	- Rusty and deformed structural steel mem- bers.	4th span	- Spailing of concrete and exposure or rein- forcing bars at curbs.	All spans									35()
BR NO BRIDGE 77 BAUANG I	BEARING SHOE		A1	- Very rusty and corroded,	A1			 Inadequate restraint of bearing joint. 	A]	- Rotation of bearing shoe.	TH					Almost all structural members are very rusty, corroded and partially desintegrated. Inadequate restraint of joints causing the bridge to vibrate abnormally whenever heavily loaded trucks pass by. Corroded rainforcing bars at the bottom of deck slab was observed during the conduct of meutrality test (Chemical Test). HB : Hardness ratio of Brinell.
	SLAB. BOTTOM		1st span			- Spalling of concrete and exposure of reinforcing bars,	1st spans				1st span					ly desintegrated. mally whenever heavily loc during the conduct of neut
	DECK TOP		1st span			- Cannot be seen due to new Asphalt Con- crate Overlay	all spans					Concrete strength - 400 kg/cm ² -	lst.span	- Neutrality Depth - 10 mm -	1st span	ty corroded and partial bridge to vibrate abnord deck slab was observed
	SECONDARY MEMBERS		1st span	Corroded cross-beams and stringers and partial desintegration of sections.	all spans			- Additional cross-beams were observed showing the inadequacy of joints at cross-beams and stringers.	1st and 3rd spans	- Settlement of strin- ger and cross-beam joints.						ral members are very rus nt of joints causing the ng bars at the bottom of of Brinell.
(SUPER-STRUCTURE)	MAJOR MEMBERS		1st span, lower chord	- Lower chord totally corroded and partial desintegration of sections.	all spans			- Bolted connections were observed to be adequate but very rusty and some sections are very corroded.	all spans		**************************************	Top.Chord 140-150 HB - 5200 kg/cm2	1st span			1. Almost all structural me 2. Inadequate restraint of 3. Corroded reinforcing bar 4. HB : Hardness ratio of E
	DESCRIPTION	PHOTOGRAPHS	-	CORROSION OF STRUCTURAL STEEL		CRACKING, SPALLING, LAMINATION, DISTORTION	2	EFFECTIVENESS OR RESTRAINT OF JOINTS		SETTLEMENT, DEFORMATION OR ROTATION		~ O ~	THARDNESS TEST)	IN - SITU TEST TO DETECT THE NEUTRALITY OF CONCRETE	CHEMICAL TEST)	REMARKS
		2.5	1	SPECTION	NI	Alsur		J		CLION	1 56	SNI ALITV	ENJ	เพบสาะท		

	(ABUTMENT		DETAILED SURVEY	OF	TION AND DAMAGES	(2/3)	BRNG BRIDGE NAME	E STA.
DESCRIPTION PARAPHET BEARING STEM	STE	STEM		FOOTING	WING WALL	FOUNDATION	SLOPE	RIVER BANK
PHO TOGRAPHS								
A1,RS A1,LS	•	A1,LS		A1,RS	A1,RS	Al,RS	A1, LS	A1,RS
CRACKING, SPALLING, paraphet Tortoise cracks at paraphet Tortoise cracks at paraphet Crushed bearing - Crushed bearing - Crushed bearing - Ded D	Serious cracks at - Tortoise paraphet Crushed bearing abutment bed.	Tortoise abutment		Not seen	- No damage	- Not seen	- Cracking of con- crete slope pro- tection due to settlement.	
A1		Al					Al and A2	
SOIL CONDITION						- Silty sand, clay and gravel.		- Clay, gravel and boulders
			<u> </u>					Al side, upstream
SETTLEMENT, - Rotation of bearing DEFORMATION OR ROTATION							- Settlement of supporting soil of concrete slope protection.	
Al	A1						Al and A2	
SCOURING OR SEDIMENTATION						- Scoured river bed at abutment	- Partially scoured slope protection	- Boulder spur dike at about 100 m upstream from Al scoured river banks.
						Al and A2	Al and A2	Al side, upstream
NON-DESTRUCTIVE - Concrete strength - 290 kg/cm ² - THE STRENGTH (HARDNESS TEST)			<u></u>					
	Al		_					
IN-SITU TEST TO not visible during testing testing of CONCRETE - 10 mm - (CHEMICAL TEST) AI	<u> </u>							
Cracking of concrete can be observed Boulder spur dike was constructed on velocity.	Cracking of concrete can Boulder spur dike was con velocity.	oncrete can be observed Jike was constructed on	§ 5	on most parts of the abutment, the river bank (upstream side) due		to the scouring action of the river current and fast flood	he river current and	fast flood

PROTECTION OF FOUNDATION		Pl and P2 - No damage	all piers	cannot be observed	all piers		ourse.
FOUNDATION		- Not seen	all piers - Silty sand, clay gravel	- cannot be observed	Not seen		spans causing the flow of water to change course.
FOOTING		- Spalling of concrete	P1	- cannot be observed			the last three
WALL / COLUMN		- Hairline cracks at pier wall and column	P1	- Not observed Pl			bed especially around piers in
CAP		- Minimal distance of pier cap from bearing	all piers	- Not observed		- Concrete Strength - 380 kg/cm ²	Sedimentation of the river bec
DESCRIPTION	PHOTOGRAPHS	CRACKING, SPALLING LAMINATION, DISTORTION OR YIELDING	SOIL CONDITION	SETTLEMENT, DEFORMATION OR ROTATION	SCOURING OR SEDIMENTATION	· 	REMARKS
	CAP WALL / COLUMN FOOTING FOUNDATION	DESCRIPTION CAP WALL/COLUMN FOOTING FOUNDATION PHOTOGRAPHS PHOTOGRAPHS PA, RS P2	DESCRIPTION CAP WALL/COLUMN FOOTING FOUNDATION PHOTOGRAPHS RA, RS PA, RS P	DESCRIPTION CAP WALL/COLUMN FOOTING FOUNDATION PHOTOGRAPHS PR. Not seen PP. PI. PP. PI. PP. PI. CRACKING, SPALLING CRACKING, SPALLING PP. PI. PP. PI. PP. PI. LAMINATION, DISTORTION, DISTORTION, DISTORTION, DISTORTION all piers PP. PI. PP. PI. PP. PI. SOIL CONDITION all piers PP. PI. PP. BI. PI. <td>DESCRIPTION PHOTOGRAPHS PHOTOGRAPHS PHOTOGRAPHS PHOTOGRAPHS PA. RS PR. PP. PI /td> <td>PHOTOGRAPHS PHOTOGRAPHS PHOTOGRAPHS PHOTOGRAPHS PHOTOGRAPHS PALLING PALLING CARCKING, SPALLING CARCKING, SPALLING CARCKING, SPALLING CARCKING, SPALLING CAPTILING CARCKING, SPALLING CAPTILING CAPTI</td> <td> PESCRIPTION CAP WALL COLUNN FOOTING FOUNDATION </td>	DESCRIPTION PHOTOGRAPHS PHOTOGRAPHS PHOTOGRAPHS PHOTOGRAPHS PA. RS PR. PP. PI	PHOTOGRAPHS PHOTOGRAPHS PHOTOGRAPHS PHOTOGRAPHS PHOTOGRAPHS PALLING PALLING CARCKING, SPALLING CARCKING, SPALLING CARCKING, SPALLING CARCKING, SPALLING CAPTILING CARCKING, SPALLING CAPTILING CAPTI	PESCRIPTION CAP WALL COLUNN FOOTING FOUNDATION

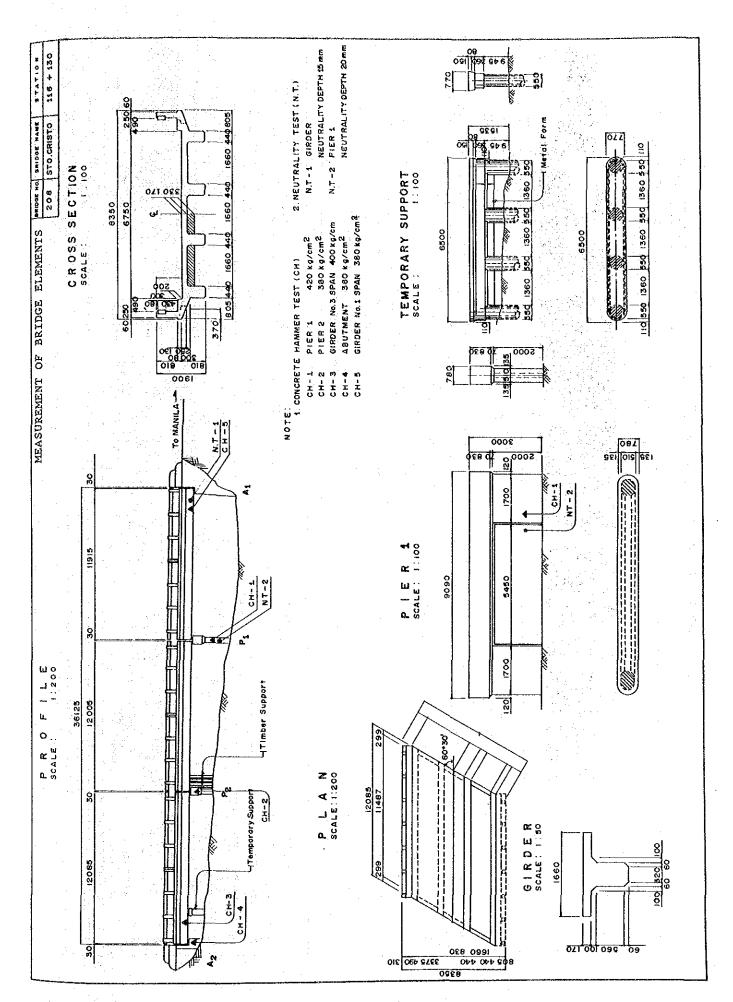


DETAILED SURVEY OF DETERIORATION AND DAMAGES (1/3) BRIDGE NAME

NAME STA. ISTO 116+130 -	RAILING/SIDEWALK		between 2nd & 3nd span	- No damage	All spans					intermediate
BR Ng BRIDGE NAME 208 STO, CRISTO	BEARING SHOE		A2, left side of G2	- No bearing shoe	A1 and A2					beams netar supports and at inter
	SLAB		2nd span	- Tortoise cracks between girders due to settlement and water	- Deflection of beams due to overstress		- Deformation at the bottom portion of deck slab.			a t
	DECK		2nd span	Cracki of con lack o face o	all spans - Five centimeter gaps at construction joints	all spans	- Settlement of deck slab between 2nd & 3rd spens			s well as exposure of reinforcing bars e beam of 1st and 2nd spans.
	SECONDARY MEMBERS		on P2, between G3 & G4	- Severe cracking and exposure of reinforcing bars at second span cross beams			- Settlement of 2nd span cross beams C2. 2nd span			nd spalling of concrete as well ans.
(SUPER-STRUCTURE)	MAJOR MEMBERS	/ # %	or F1, Zild Spail at 01	Shearing cracks at support portion of second span girders.	Spd Spd	THE PARTY OF THE P	Settlement at support portion of 2nd span girders.	- Concrete Strength - 380-450 kg/cm2 - 1st span	Reinforcing steel not visible during testing . Neutrallity Depth 15 mm 61, 1st span	 Severe cracking and spalling of points of two spans. Tension cracks on the upper por
	DESCRIPTION	0 H O H O G R A P H S	CORROSION OF STRUCTURAL STEEL	CRACKING, SPALLING, LAMINATION, DISTORTION OR YIELDINS	EFFECTIVENESS OR RESTRAINTOF JOINTS		SETTLEMENT, DEFORMATION OR ROTATION	NON - DESTRUCTIVE TEST TO CONFIRM THE STRENGTH (HARDNESS TEST)	IN -SITU TEST TO DETECT THE NEUTRALITY OF CONCRETE CHEMICAL TEST)	REN A A A K S
			иаерстіои	NISIA			ьестіои	ENT YTLIATUS	IMURTENI	

STA. 116 + 130	RIVER BANK		downstream side			- Soil, clay, gravel and boulders at the upstream and downstream side	Upstream & downstream		- No water	Upstream & downstream			
BRNS BRIDGE NAME 208 STO. CRISTO	SLOPE		Al, left side	- Spalling of con- crete slope pro- tection	Al, left side				-				on these beams.
(2/3)	FOUNDATION		A2, left side	- Not seen	AI & A?	- Cley, gravel,boul- ders and clayey sand at abutments	Al and A2		- Sedimentation at abutments	A1 and A2			to tensions cracks
TION AND DAMAGES	WING WALL		Al. left side		Al, left side								. G2 and G3 giving rise
x of deterioration	FOOTING		AZ, left side	- Minor cracks	A2, left side	- Clay, gravel boulders and clayey sand at abutments	Al and A2		- Sedimentation at abutments	A1 and A2			so acts as support for G2
DETAILED SURVEY	STEM		A2	- Spalling of con- ,crete - Mater seepage	Λ2	The state of the s	AND IN THE LANGE OF THE LANGE O			The second secon	- Concrete Strength - 380 kg/cm ² - A2		e protection at Al also acts
(ABUTMENT)	PARAPHET BEARING BED		Al, left side	- Cracks at bearing bed	A1 and A2	· · · · · · · · · · · · · · · · · · ·							1. Existing slope pratection
	DESCRIPTION	PHOTOGRAPHS		CRACKING, SPALLING, LAMINATION, DISTORTION OR YIELDING	- 1	SOIL CONDITION		SETTLEMENT, DEFORMATION OR ROTATION	SCOURING OR SEDIMENTATION		NON - DESTRUCTIVE TEST TO CONFIRM THE STRENGTH (HARDNESS TEST)	IN-SITU TEST TO DETECT THE NEUTRALITY OF CONCRETE (CHEMICAL TEST)	REMARKS
		NOL	T03	SNI JAUS	! !^				 NOITO	398	NE YTLIATUSM	·	

CRISTO 116+130	PROTECTION OF FOUNDATION	200						
208 STO.	FOUNDATION	1d.	- Mot seen all piers	- Clay, gravel and boulders around piers	41. UIECS.	- Lium ted clearance due to sedimentation		
	FOOTING		- Not seen all piers	Clay, gravel and boulders around piers				oconut. post at P2.
	WALL / COLUMN	P.I.	- Spalling and exposure of rehinforcing bars at pier column Pl				- Concrete Strength - 420 kg/cm2 - Pl Reinforcing steel not visible during tests	PI are temporarily supported by coconut post
(PIER)	CAP	P1	- Severe spalling of concrete and exposure of reinforcing bars					1. Heavily damaged beams are
	DESCRIPTION	PHOTOGRAPHS	CRACKING, SPALLING LAMINATION, DISTORTION OR YIELDING	SOL CONDITION	SETTLEMENT, DEFORMATION OR ROTATION	SCOURING OR SEDIMENTATION	NON - DESTRUCTIVE TEST TO CONFIRM THE STRENGTH (HARDNESS TEST) IN - SITU TEST TO DETECT THE NEUTRALITY	OF CONCRETE (CHEMICAL TEST) REMARKS
		NO11.	VISUAL MSPEC	·		изьестіои	I YTIJATN3MURT.ENI	

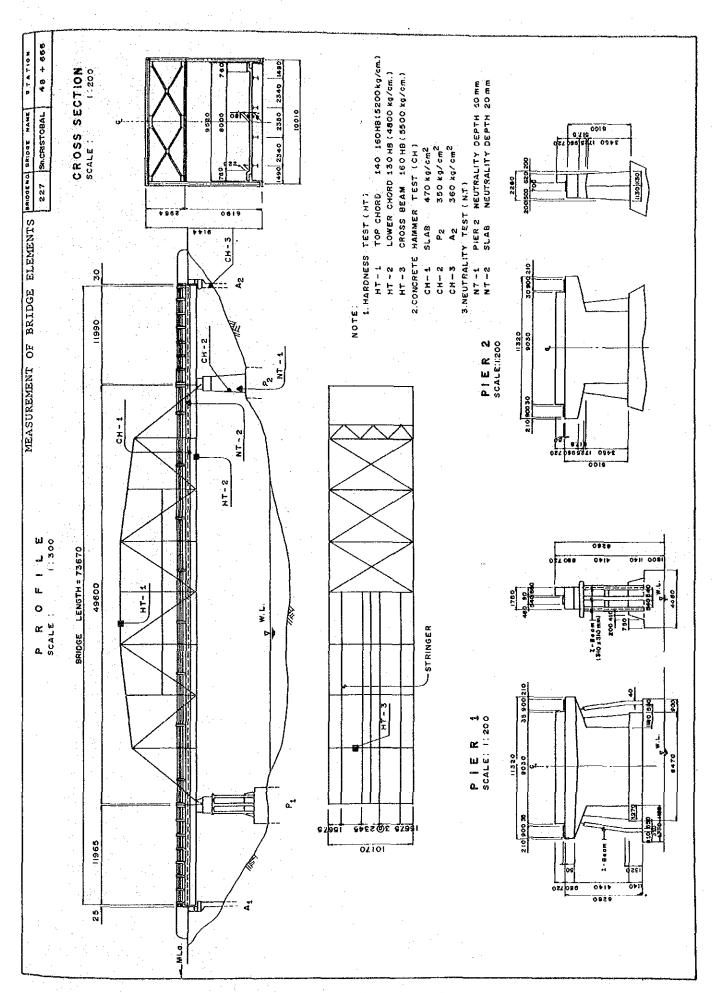


AP 7-20

NAME STA. 108AL 48+660		RAILING/SIDEWALK	10 Miles		2nd span	- Rusty steel railing Temporary railway (3-4) both sides	2nd span	,										collision
BR Ng BRIDGE NAM		BEARING SHOE		* %		Rusty bearing	Pl and P2											are bent due to vehicular collision
ID DAMAGES (1/3)	A I N	BOTTOM			2nd span			- Transverse cracks - Circular cracks that lead into the forma-tion of pothole leading the leading of the leadi	(2-3) Manila side	- Mater seepage at all spans - Exposure of reinforcing steel bars at midspan	(2-3) Manila side							
DETERIORATION AND DAMAGES	A XOEC	1			2nd span			- Transverse cracks - Severe cracks, that may lead into the formation of pothole - Visible patching (repair of pothole)	(2-3) Manila side					- Concrete Strength - 470 kg/cm ² -	รมสก	- Reinfording steel not visible during testing - Neutrality depth - 20 mm -	2nd span	inell ower chords, beams and other structural members; diagonal members
DETAILED SURVEY OF		SECONDARY MEMBERS -			Upper brace	- Secondary members are rusby	all members	- Addition of floor beams (4-5)(5-6)(6-7) (7-8)	2nd span			- Deformation of mem- bars	All members	9.5	2nd span			<u>- تو</u>
DET (SUPER-STRUCTURE)	_	MAJOR MEMBERS			Lower Chard	- Structural steel members are in an advance state of corrosion.	all members							- Hardness Test TOPCHORD 140-160H8 (2200 kg/cm2) LOWER CHORD 130 H8 (4800 kg/cm2)	2nd span			1. HB : Hardness ratio of 2. Rusty condition of
		DESCRIPTION		TOGRAPHS		CORROSION OF STRUCTURAL	•	CRACKING, SPALLING, LAMINATION, DISTORTION		EFFECTIVENESS OR RESTRAINT OF JOINTS		SETTLEMENT, DEFORMATION OR ROTATION		TEST TO CONFIRM THE STRENGTH	S C SCALL	IN - SITU TEST TO DETECT THE NEUTRALITY OF CONCRETE	(CHEMICAL TEST)	REMARKS
						рестіои	NI.	JAUSIV				NO1T;	ьEC	ITALITY INSI	N3	MURTZNI		

	(TNSWILLE)	DETAILED SURVEY	Ŏ H	DETERIORATION AND DAMAGES (2/3)		BR NS BRIDGE NAME	STA.
DESCRIPTION	PARAPHET BEARING	STEM	FOOTING	WING WALL	FOUNDATION	II. če	RIVER
PHOTOGRAPHS							
CRACKING, SPALLING, LAMINATION, DISTORTION	A2	A2	A2	A2 - No daniage	A2 - Not seen	A2 - No damage	downs tream
		A2		Al and A2	Al and A2	A2, RS	
SOIL CONDITION							
SETTLEMENT, DEFORMATION OR ROTATION						At and Az	
SCOURING OR							
SEDIMENTATION							
NON - DESTRUCTIVE TEST TO CONFIRM THE STRENGTH (HARDNESS TEST)		- Concrete Strength - 360 kg/cm ² A2					
IN-SITU TEST TO DETECT THE NEUTRALITY OF CONCRETE (CHEMICAL TEST)	TTY (TABLE)						
TEM A A A A A A A A A A A A A A A A A A A	· · · · · · · · · · · · · · · · · · ·						
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	DESCRIPTION	PHOTOGRAPHS	CRACKING, SPALLING LAMINATION, DISTORTION OR YIELDING	SOIL CONDITION	SETTLEMENT, DEFORMATION OR ROTATION	SCOURING OR SEDIMENTATION	NON-DESTRUCTIVE TEST TO CONFIRM THE STRENGTH (HARDNESS TEST)	DETECT THE NEUTRALITY OF CONCRETE (CHEMICAL TEST)	REMARKS
(PIER)	GAD	P2	NG - Disintegration of concrete TION Manile side				in A	10 LUTY	- Steel support seen at
	WALL / COLUMN						- Concrete strength - 350 kg/cm ² - P2	- Kaintorcing steet not Visible during testing - Nautrality Depth - 10 mm	at pier 2 (Calamba side).
	FOOTING								
227 SAN CRISTOBAL	FOUNDATION	P1	- Not seen						
ISTOBAL 48+560	PROTECTION OF FOUNDATION	P1							



APPENDIX 7.2

RESULTS OF GEOTECHNICAL SURVEY

RESULTS OF GEOTECHNICAL SURVEY (1/4)

PAGETMAY: National Hidiways
SECTION: Manila - Allacaban
REGION II
BRIDGE NO! II
BRIDGE NAME: Inliena Bridge
LOCATION: Jetan Huera Viscaye

	00'1	DESCRIPTION OF MATERIALS	- CL 4551-	3	- alb~	COUNT, X	MATURAL	T 10 A10	UNCONFW
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- 2	Б. Г-1	Sano: Fittle grave:	52		1		12		
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4	1/2/	redius Stiff, light brown, clay,					72	, -	1 .
1		some fine send	כנ				27	35	<u> </u>
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1	7.25 7.≥7 7.25	to fine silty sand: lizzle grave;	SM.		<u>į</u>		22 }		
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RESULTS OF GEOTECHNICAL SURVEY (2/4)

HIGHWAY HALLONG HIGHWAY:
SECTION: HANDIA MOTTH SOAS
REGION: 1
BRIDGE NO: 58
BRODE NAME: SUED Bridge
LOCATION: \$1500, Pingasinan

7.7	1.00	· DESCRIPTION OF MATERIALS	- CLASSI-	0			- co			10	HATURAL SHUTZKOM THEFFOR 13-4,41	LIOUE LIMIT ILLI	1 dn 1 e Statina i Chenical Chenical
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RESULTS OF GEOTECHNICAL SURVEY

MEHWAY: Notional Miga-ays.
SECTION: manila - Allacaon.
REGION: 11
BRIDGE NO. 139
BRIDGE NAME: Cinamanan Bridge.
LOCATION: lugurgarae, Canavas.

	1026412 11440L	- DESCRIPTION OF MATERIALS	- EL A S No - FICATION	. م	16			, co	uu E, s		.0	RATURAL WOTTURE CONTERT (R.M.C.)	L10146 L1×17	CONFRESSO STREMEN L No I
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7					. ,	-	١	ŀ	l			3	-	-
3		Hedium cense, light brown, gra- velly sand; trace of silt.	\$H.				\subseteq				L	, ,		
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5								607	 X C4	<u> </u>	L	5	-	-
6	ار د	Yey dense, dark brown, gravelly sand coarse to fine grained;	EH.				L	ي ا	<u></u>		1	15		
7	0.0	Hethe silt.	<u> </u>				1_	<u> </u>		1	<u> </u> _	9		
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ıξ		END OF BOREHOLE	1											

RESULTS OF GEOTECHNICAL SURVEY (3/4)

HIGHWAY RECORD Highway
SECTION RANILE ROFE ROAD
REGION III
BRIDGE NO. 14
SRINGE MAME: LEBANDAN Bridge
LOCATION: (Elevelt, Bulacan

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	١.	Sedius stiff, light brown,	İ	Ιİ	Ĭ	i	i –		,	† - -	╁			;
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10	<u> </u>	Soft dark gray, clavey silt.	X.	+	十	!	<u>-</u>		-	!	-	1. ~°	1 35	9.152
 	1.7.	Sort dark gray, clayey silt, with Hedium to bigh Plasticity	<u> </u>	1/	_	<u> </u>		<u>1</u>	1	<u> </u>	:	49	59	
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23 5	7/3	Stiff, tark-pray, diayey silt, with medium plasticity	re i		4		-	<u> </u>	1		H	37 1	- N 1	1.244
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RESULTS OF GEOTECHNICAL SURVEY (4/4)

Hackwar : Racional Riohady
SECTION: Senila Horth Road
SECTION
REGION
BRIDGE NO: 17
LOCATION Saveng, La Union
OF ATION

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7 777A	sampy grave:	<u> </u>					<u> </u>	<u>!</u>	1		35	45	1 6
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