6-4. Soundness of the Bridges

1. Bridge Soundness Sheet

		Table-A Br	Bridge Soundness Sheet (Sheet No.	et (Sheet No). · · ·			B	Bridge No.7	
NAME OF BRIDGE: Prek Chik	ek Chik	CLASS OF ROAD	CLASS OF ROAD CROSSING: NAME OF RIVER OR ROAD	OAD	DATE OF IN	DATE OF INSPECTION: Jan. 31.2000 INSPECTION BY Y. Takai	INSPECTION BY	Y. Takai		
Design Information	Yes	(No	Construction By USA		Date of Const	Date of Construction: 1962-68	Maintenance by	MPWT		
Type of Bridge	Superstructure	Simple RC-T Girder	jirder	Design Loading			Load limitation	(2)	Yes	
STA. 11+380	Substructure	Abutment	Steel Pipe Pile Bent Type	Design Standard	BS (AASHTO	RUSSIA	OTHERS(
		Pier		Skew of Bridge	Square	Skew	Curve (deg.R=	_		
Length of Bridge		12 m Span		1*12.0 m Condition of Crossing	Road	Width	m Clearance m	Skew deg.		
Width of Bridge	Overall	11.02 m Carriage	Carriage 9.1 m Pede. 2*0.65 m	•	River	Width of River	Depth	Free Board	Design Quantity	
Affixed Articles	Kind		Number			13.0 m	7.3 m	0.7 m	u	m3/sc
Traffic Volume		(year)	Ratio of Heavy V, icle (year)	Others						
Final Record of Repair	Pavement	Deck Slab	Main Beam Painting	Expansion Joint	Bearing	Drainage	Railing	Curb	Affixed Articles	
	Others: The	revetments have	Others: The revetments have already been repaired by the steel sheet piles.	steel sheet piles.						
Component		Conditions Of Damage	Damage	Rating Com	Component	Conditions of Damage	f Damage			Rating
Pavement (Type: AS)	Good, Wave, Ri	ut, Crack, Pothole, Oth	Good), Wave, Rut, Crack, Pothole, Others: Crack in the approach road	Abutm (Turne	Abutment (PP side)	Good Crack, Spall, Deformation, Rebar-exposed, Broken, Settlement, Scouring, Others: The pile dismeter is 41.7 cm. The lower parts of piles are correlated.	eformation, Rebar	r-exposed, Broken, Ser	ttlement, Scouring,	2
Surface Curb (Type: RC	Good, Scale, Cr	Good, Scale, Crack, Spall, Rebar-exposed, Others	ed, Others		_	Ologod, Crack, Spall Deformation, Rebar-exposed, Broken, Settlement, Scouring,	eformation, Rebai	rexposed, Broken, Sel	ttlement, Scouring,	2
•	Good, Scale, Cr	Good, Scale, Crack, Spall, Rebar-exposed, Others	ed, Others	Sub-S (Type		Good, Crack, Spall, Deformation, Rebar-exposed, Broken, Settlement, Scouring, Others	eformation, Reba	exposed, Broken, Ser	ttlement, Scouring,	
Deck slab (Type: RC)	Good, Honeycor.	mbs, Crack, Deformation	Good), Honeycombs , Crack , Deformation , Rebar-exposed , Other	Pier (Type		Good , Crack , Spall , Deformation , Rebar-exposed , Broken , Settlement , Scouring , Others	eformation, Rebai	-exposed, Broken, Ser	ttlement, Scouring,	
Main Beam	Good, Honeycor	mbs, Crack, Deformation	Good), Honeycombs , Crack , Deformation , Rebar-exposed , Other	1 Others:	The lower parto to the transve	The lower parts of steel sheet pile revetments are pushed out. It of the transverse direction in the pavement on the top of backfill	e revetments ar	re pushed out. It oche top of backfill.	Others: The lower parts of steel sheet pile revetments are pushed out. It occurred many cracks to the transverse direction in the pavement on the top of backfill.	4
Cross Beam (Type: RC)	Good, Crack, D	Good, Crack, Deformation, Rebar-exposed, Others	sed , Others	1 Comment						
Painting	Condition			OVER 1. No dar	OVERALL EVALUATION RATING No damage detected on the basis of the	OVERALL EVALUATION RATING No damage detected on the basis of the inspection results.	ults.		Final rating	
Exp.Joint (Type: AS)	Good, Abnormal	Good, Abnormal Sound, Deformation, Gap, Bro	Jap , Broken , Others	2. Damag 3. JThere i	ge has been detected is significant damag	Damage has been detected and a follow-up survey is required. There is significant damage and a defailed survey needs to be carried out to establish	equired. Is to be carried out to	cstablish	Super Structure	-
Shoe (Type	Good , Abnormal	Good, Abnormal Sound, Deformation, Gap, Br	Jap , Broken , Others Nong	wheth	er repair work is to	whether repair work is to be carried out or not. 4. There is circuitions domains and interest receiving on the heiden has to be	od ov the bridge hos	4		
	Good, Clogged I	Good, Clogged Leakage, Broken, Others		closed (or to b	closed to traffic or restriction on veh (or to be re-constructed new bridge)	closed to traffic or restriction on vehicle weight to be imposed. (or to be re-constructed new bridge)	imposed.	3	Sub Structure	ю
<plan profile=""> 1) The superstruct</plan>	ture is sound alt	though the concrete	-Profile> 1) The superstructure is sound although the concrete is a few deteriorated.					<remarks> PP: Phnom Penh</remarks>	<remarks> PP: Phnom Penh, KC: Kampong Cham</remarks>	
2) The type pf abu 3) The abutmen	utment is steel to the teams and re	 The type pf abutment is steel pipe pile bent and the corr The abutment beams and revetment steel sheet pil 	 The type of abutment is steel pipe pile bent and the corrosion is in progress on the lower part of steel pipe piles. The abutment beams and revetment steel sheet piles are jointed. It will damage the abutment in case the steel sheet piles move 	e lower part of steel image the abutme	pipe piles. nt in case the	steel sheet piles mo	ve	: corresponding itemAS : Asphalt	ing item	
due to embar 4) The embankme	due to embankment sliding. The embankment sliding can be	due to embankment sliding. 4) The embankment sliding can be seen to the longitudinal	udinal direction. It caused many cracks on the pavement.	cracks on the pave	ment.			RC : Reinforced Concrete	Soncrete	
2) The steel sheet	piles are tempo	orary structure, and	 I he steet sheet piles are temporary structure, and the investigation shall be conducted on them in detail 	cted on them in deta	Ej.					

			Table-A Br	Table-A Bridge Soundness Sheet (Sheet No.	lness She	et (Shee	t No.	_				Bridge No.10	
NAN	AE OF BRIDGE:	NAME OF BRIDGE: Prek Ta Som	CLASS OF ROAD	CLASS OF ROAD CROSSING: NAME OF RIVER OR ROAD	OF RIVER OR RO	AD	DATE	OF INSPECTION	I : Jan. 31.2000	DATE OF INSPECTION: Jan. 31,2000 INSPECTION BY	Y. Takai		1
Desi	Design Information	Yes	(No	Construction By	USA		Date of	Date of Construction:		Maintenance by	MPWT		
Туре	Type of Bridge	Superstructure	Simple RC-T Girder	Girder		Design Loading				Load limitation	Z	Yes	1
ST,	STA. 15+460	Substructure	Abutment	Steel Pipe Pile Bent Type		Design Standard	BS C	AASHTO	RUSSIA OTHERS(RS(_		ı
			Pier		-	Skew of Bridge	Square	Skew	W.	Curve (deg.R=	_		1
Lcng	Length of Bridge		12 m	12 m Span	1*12.0 m	1*12.0 m Condition of Crossing	ssing Road	W.	Width m	m Clearance m	Skew deg.		1
Widt	Width of Bridge	Overall	11.00 m	11.00 m Carriage 9.1 m Pede. 2*0.65 m	ede. 2*0.65 m		River		Width of River	Depth	Free Board	Design Quantity	1
Affix	Affixed Articles	Kind		Number					10.8 m	4.0 m		0.6 m	
Trafi	Fraffic Volume		(year)	Ratio of Heavy V ; icle (year)		Others							1
Final	Final Record of Repair	Pavement	Deck Slab	Main Beam Pa	Painting	Expansion Joint	Bearing		Drainage	Railing	Curb	Affixed Articles	
		Others : The c	Others: The cracks on the revetments due to settlement have already been repaired by mortar.	its due to settlement !	have already been	repaired by m	ortar.						l
	Component		Conditions Of Damage	f Damage		Rating	Component		Conditions of Damage	Damage			I
	Pavement (Tvpe : AS	Good, Wave, R	Good, Wave, Rut, Crack, Pothole, Others:	hers:		-	Abutment (PP side) Good (Good, Cr	ack, Spall, De	formation, Reba	r-exposed, Broken,	Crack , Spall , Deformation , Rebar-exposed , Broken , Settlement , Scouring ,	1
Surface	100	Good, Scale, C	Good, Scale, Crack, Spall, Rebar-exposed, Others	osed, Others		1 1	Abutment (KC side) Good (True Steel Pile) Others	Good Cr	ack , Spall , De	formation, Reba	r-exposed, Broken,	Offined Acree v, Spall , Deformation , Rebar-exposed , Broken , Settlement , Scouring ,	ı
	Railing (Type: RC	Good, Scale, Crack, Sp	rack, Spall, Rebar-exposed, Others	osed, Others		-qn _S	Pier (Type	Good, Cr) Others	ack, Spall, De	formation, Reba	r-exposed, Broken,	Good , Crack , Spall , Deformation , Rebar-exposed , Broken , Settlement , Scouring , Others	
	Deck slab (Type: RC	Good, Honeycombs, Cr	ombs, Crack, Deformation	ack , Deformation , Rebar-exposed , Other	ther	-	Pier (Type	Good, Cr) Others	ack, Spall, De	formation, Reba	r-exposed, Broken,	Good , Crack , Spall , Deformation , Rebar-exposed , Broken , Settlement , Scouring , Others	1
118-1	Main Beam (Type: RC	Good, Honeycombs, Cr	ombs, Crack, Deformation	ack , Deformation , Rebar-exposed , Other	ther	1 Oth	ers : The revel	ments are so	ttled on bot	ı side, and it	causes some crac	Others: The revetments are settled on both side, and it causes some crack on the revetments.	
odns	Cross Beam (Type: RC	Good, Crack , Deformat	Deformation , Rebar-exposed , Others	osed, Others		1 Comment	nent						I
	Painting	Condition				(-	OVERALL EVALUATION RATING 1) No damage detected on the basis of the inspection results.	JATION RATING	3 he inspection resu	lts.		Final rating	

Rating

Countries Cook, Civilla Learning, Dionell, Olliels	-	closed to traffic of restriction on vehicle weight to be imposed.		Sub Structure
(Type: Steel)	-	(or to be re-constructed new bridge)		
<plan profile=""></plan>			<remarks></remarks>	
1) The superstructure and substructures are sound although the concrete is a few deteriorated.	riorated.		PP: Phnom Penh,	PP: Phnom Penh, KC: Kampong Cham
2) The revetments around the abutments are settled. It causes some cracks on it. The regular inspection is required.	regular ir		corresponding item	ig item
			AS: Asphalt	
			RC: Reinforced Concrete	ncrete

Super Structure

3. There is significant damage and a detailed survey needs to be carried out to establish

whether repair work is to be carried out or not.

2. Damage has been detected and a follow-up survey is required.

7

Good , Abnormal Sound , Deformation , Gap , Broken , Other Nong Good , Abnormal Sound , Deformation , Gap , Broken , Others

(Type: AS Shoc Exp.Joint

Good, Clogged Leakage, Broken, Others

Drainage

4. There is significant damage and urgent repair is required or the bridge has to be closed to traffic or restriction on vehicle weight to be imposed.

Sub Structure

	[Table-A Brid	ridge Soundness Sheet (Sheet No	heet (Sh	eet No.	_			Bridge No.11	
NAME OF BRIDGE: Pre	Prek Ta Pich	CLASS OF ROAD	CROSSING: NAME OF RIVER OR ROAD	ROAD	DATE	DATE OF INSPECTION: Jan. 31.2000	INSPECTION BY	Y. Takai		
Design Information	Yes ((No)	Construction By USA		Date of	Date of Construction: 1968-68	Maintenance by	MPWT		
Type of Bridge	Superstructure	Simple RC-T Gir	Girder	Design Loading	ing		Load limitation (Z	Yes	
STA. 16+520	Substructure	Abutment	Steel Pipe Pile Bent Type	Design Standard	BS	(AASHTO RUSSIA OTI	OTHERS((
		Pier		Skew of Bridge	lge Square	Skew	Curve (deg.R=			
Length of Bridge		12 m	12 m Span 1*12.0	1*12.0 m Condition of Crossing	Crossing Road	Width	m Clearance m	Skew deg.		
Width of Bridge	Overall	11.00 m Carriage	Carriage 9.0 m Pede. 2*0.70 m] =	River	Width of River	Depth	Free Board	Design Quantity	
Affixed Articles	Kind		Number	<u> </u>		11.0 m	n 4.7 m		0.5 m	m3/sec
Traffic Volume		(year)	Ratio of Heavy V; icle (year)	Others						
Final Record of Repair	Pavement	Deck Slab	Main Beam Painting	Expansion Joint	oint Bearing	3 Drainage	Railing	Curb	Affixed Articles	
	Others: The cra	cks on the revetmen	Others: The cracks on the revetments due to settlement have already been repaired by mortar.	been repaired b	y mortar.					
Component		Conditions Of Damage	f Damage	Rating	Component	Conditions of Damage	of Damage			Rating
Pavement (Type: AS)	Good, Wave, Ru	Good, Wave, Rut, Crack, Pothole, Others	hers:	1	Abutment (PP side) (Type : Steel Pile)		Deformation, Rebar	r-exposed, Broken,	Gand-Crack , Spall , Deformation , Rebar-exposed , Broken , Settlement , Scouring , Others :	-
•	Good, Scale, Cra	, Scale, Crack, Spall, Rebar-exposed	sed , Others	1	*		Deformation, Rebai	r-exposed, Broken,	Cood Crick, Spall, Deformation, Rebar-exposed, Broken, Settlement, Scouring, Others:	1
Railing (Type: RC)	Good, Scale, Cra	Good, Scale, Crack, Spall, Rebar-exposed	sed , Others	1	Sub- Pier (Type		Deformation, Rebar	r-exposed, Broken,	Good , Crack , Spall , Deformation , Rebar-exposed , Broken , Settlement , Scouring , Others	
Deck slab (Type: RC)	Good, Honeycom	Good, Honeycombs, Crack, Deformation	on, Rebar-exposed, Other	1	Pier (Type	Good, Crack, Spall, I	Deformation, Rebar	r-exposed, Broken,	Good , Crack , Spall , Deformation , Rebar-exposed , Broken , Settlement , Scouring , Others	
Main Beam	Good, Honeycom	Good, Honeycombs , Crack , Deformation ,	on , Rebar-exposed , Other	1	Others : The rever	Others: The revetments are settled on PP side. It caused some cracks on the revetments (They have already been repaired.)	side. It caused red.)	some cracks or	the revetments	2
Cross Beam (Type: RC)	Good, Crack, De	Good, Crack, Deformation, Rebar-exposec	osed, Others	1	Comment					
Painting	Condition				OVERALL EVALI	OVERALL EVALUATION RATING 1) No damage detected on the basis of the inspection results.	sults.		Final rating	
Exp.Joint (Type: AS)	Good, Abnormal	Good) Abnormal Sound , Deformation , Gap	Gap , Broken , Others	1	Damage has been d There is significant	Damage has been detected and a follow-up survey is required. There is significant damage and a detailed survey needs to be carried out to establish	required. eds to be carried out to	o establish	Super Structure	_
Shoc CCSS (Type	Good , Abnormal	Sound, Deformation,	Good , Abnormal Sound , Deformation , Gap , Broken , Otherk None		whether repair worl	whether repair work is to be carried out or not. 4. There is significant damage and urgent repair is required or the bridge has to be	ired or the bridge has	to be		
Drainage (Type : Steel)	Good, Clogged L	Good, Clogged Leakage, Broken, Others	90	1	closed to traffic or restriction on vehi	closed to traffic or restriction on vehicle weight to be imposed (or to be re-constructed new bridge)	imposed.		Sub Structure	
<plan profile=""> The superstruct The revetments </plan>	ture and substru s around the abu	eplan / Profile> 1) The superstructure and substructures is sound althou 2) The revetments around the abutments are settled. TP	 Plan / Profile> 1) The superstructure and substructures is sound although the concrete is a few deteriorated. 2) The revetments around the abutments are settled. The cracks caused by the settlement have already repaired. The regular inspection is required. 	eteriorated. tlement have	already repaired. T	he regular inspection is re	quired.	<remarks> PP: Phnom Penh, KC: K : corresponding item AS: Asphalt RC: Reinforced Concrete</remarks>	<pre><remarks> PP: Phnom Penh, KC: Kampong Cham C : corresponding item AS: Asphalt RC: Reinforced Concrete</remarks></pre>	

Table-A Bridge Soundness Sheet (Sheet No.)	Bridge No.1)

	1	Table-A Bri	idge Soundness Sheet (Sheet No.	et (She	et No.			Ā	Bridge No.12	
NAME OF BRIDGE: Pre	Prek Tabenn	CLASS OF ROAD	CROSSING: NAME OF RIVER OR ROAD	OAD	DATE OF II	DATE OF INSPECTION: Jan. 29.2000 INSPECTION BY	INSPECTION BY	Y. Takai		
Design Information	Yes ((No	Construction By USA		Date of Con	Date of Construction : 1962-68	Maintenance by	MPWT		
Type of Bridge	Superstructure	Simple RC-T Gi	rder	Design Loading	25		Load limitation	(Z)	Yes	
STA. 17+470	Substructure	Abutment	Steel Pipe Pile Bent Type	Design Standard	BS	AASHTO RUSSIA OTH	OTHERS(_		
		Pier	Steel Pipe Pile Bent Type	Skew of Bridge	e (Square)	Skew	Curve (deg.R=			
Length of Bridge		24 m Span		2*12.0 m Condition of Crossing	rossing Road	Width	m Clearance m	Skew deg.		
Width of Bridge	Overall	11.04 m	11.04 m Carriage 9.1 m Pedc. 2*0.67 m		River	Width of River	Depth	Free Board	Design Quantity	
Affixed Articles	Kind		Number			23.0 m	5.2 m	0.2 m	u	m3/sec
Traffic Volume		(year)	Ratio of Heavy V , icle (year)	Others						
Final Record of Repair	Pavement	Deck Slab	Main Beam Painting	Expansion Joint	Dearing	Drainage	Railing	Curb	Affixed Articles	
	Others:									
Component		Conditions Of Damage	Damage	Rating	Component	Conditions of Damage	ıf Damage			Rating
	Good, Wave, Rut	t, Crack, Pothole, Oth	Good). Wave , Rut , Crack , Pothole , Others : Crack in the approach road	1	Abutment (PP side) Good? (Type: Steel Pile) Others	(ميميم) Crack , Spall , Deformation , Rebar-exposed , Broken , Settlement , Scouring , Others :	Deformation, Rebar-	-exposed, Broken, Set	ttlement, Scouring,	-
Surface (Type:RC)	Good, Scale, Cra	Good, Scale, Crack, Spall, Rebar-exposed	sed, Others	1		Gnod A Crack, Spall, Deformation, Rebar-exposed, Broken, Settlement, Scouring, Others:	Deformation, Rebar-	-exposed, Broken, Set	ttlement, Scouring,	1
Railing (Type:RC)	Good, Scale, Cra	Good, Scale , Crack , Spall , Rebar-exposed	sed , Others	-qn _S		Per Good , Crack , Spall , Deformation , Rebar-exposed , Broken , Sattlement , Scouring (Туре : Steel Pile) Others : The pile diameter is 40.7 cm. The corrosion is in progress.	Deformation, Rebar- ter is 40.7 cm. The	exposed, Broken, Sel corrosion is in progres	ttlement, Scouring,	2
Deck slab (Type: RC)	Good, Honeycomt	Good , Honeycombs (Cracy), Deformation	n , Rebar-exposed , Other	3	Pier (Type)	Good, Crack, Spall, Deformation, Rebar-exposed, Broken, Settlement, Scouring, Others	Deformation, Rebar	-exposed, Broken, Set	ttlement, Scouring,	
Main Beam	Good , Honeycomt	Good , Honeycombs (Crack , Deformation	n, Rebar-exposed, Other	2 01	Others:					-
Cross Beam (Type: RC)	Good, Crack, Def	Good, Crack, Deformation, Rebar-exposed, Others	sed , Others	1 Col	Comment					
Painting	Condition				OVERALL EVALUATION RATING 1. No damage detected on the basis of the	OVERALL EVALUATION RATING No damage detected on the basis of the inspection results.	sults.		Final ratino	
Exp.Joint (Type: AS)	Good, Abnormal	Good, Abnormal Sound, Deformation, Gap (Broken, Others	Sap (Broken, Others	<u>د</u>	2. Damage has been detect. 3. There is significant dama	2) Damage has been detected and a follow-up survey is required. 3. There is significant damage and a detailed survey needs to be earried out to establish	required.	establish	Super Structure	2
Shoe (Type	Good , Abnormal ?	Sound, Deformation, C	Good , Abnormal Sound , Deformation , Gap , Broken , Other Nong		whether repair work is to be carried out or not. 4. There is significant damage and urgent repair is	whether repair work is to be carried out or not. 4. There is significant damage and urgent repair is required or the bridge has to be	ired or the bridge has t	io be		
-	Good, Clogged Le	Good, Clogged Leakage, Broken, Others		1	closed to traffic or restriction on vehi (or to be re-constructed new bridge)	closed to traffic or restriction on vehicle weight to be imposed. (or to be re-constructed new bridge)	imposed.		Sub Structure	2
 cPlan / Profile> 1) The expansion joints should be repaired. 2) There are some cracks on the deck slab at 3) The tracking observation and repair 	joints should be e cracks on the d observation an	eplan / Profile> 1) The expansion joints should be repaired. 2) There are some cracks on the deck slab and girder ends. 3) The tracking observation and repair investigation of the tracking observation.	Plan / Profile> The expansion joints should be repaired. There are some cracks on the deck slab and girder ends. The tracking observation and repair investigation are required. 					cRemarks> PP: Phnom Penh, KC: K : corresponding item AS: Asphalt RC: Reinforced Concrete	cRemarks> PP: Phnom Penh, KC: Kampong Cham : corresponding item AS: Asphalt RC: Reinforced Concrete	
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	P. Commerce			ridge Soundness Sheet (Sheet No.	et (Sheet No.					Bridge No.13	
NAME	NAME OF BRIDGE: Prek Thmei	rek Thmei	S OF ROAD	CROSSING: NAME OF RIVER OR ROAD	OAD	DATE OF INSPE	DATE OF INSPECTION: Jan. 29.2000 INSPECTION BY Y. Takai	INSPECTION BY	Y. Takai		
Design	Design Information	Yes	(No	Construction By USA		Date of Construction: 1962-68	ion: 1962-68	Maintenance by	MPWT		
Type of	Type of Bridge	Superstructure	Simple RC-T G	Girder	Design Loading			Load limitation	(N)	Yes	
STA.	STA. 18+560	Substructure	Abutment	Steel Pipe Pile Bent Type	Design Standard	BS (AASHTO	RUSSIA OTHERS	ers((
			Pier	Steel Pipe Pile Bent Type	Skew of Bridge	Square	Skew	Curve (deg.R=	_		
cngth .	ength of Bridge		24 m	Span 2*12.0 m	2*12.0 m Condition of Crossing	Road	Width	m Clearance m	Skew deg.		
Vidth c	Width of Bridge	Overall	11.00 m	Carriage 9.1 m Pede. 2*0.65 m		River	Width of River	Depth	Free Board	Design Quantity	
Affixed	Affixed Articles	Kind		Number			22.5 m	6.0 m	1.2 m		m3/sec
raffic	Traffic Volume			Ratio of Heavy V ; icle (year)	Others						
inal Ro	Final Record of Repair	Pavement	Deck Slab	Main Beam Painting	Expansion Joint	Bearing	Drainage	Railing	Curb	Affixed Articles	
		Others: The	revetments have	Others: The revetments have already been repaired.							
Ø	Component		Conditions Of Damage	Damage	Rating Component	ent	Conditions of Damage	Damage			Rating
Pa C	Pavement (Type: AS)	Good, Wave, Ru	ut, Crack, Pothole, Otho	Good), Wave , Rut , Crack , Pothole , Others : Crack in the approach road	Abutment (PP side)	[[Good, Crack, Spall, Do	eformation, Reba	رمصار الموري (Spall , Deformation , Rebar-exposed , Broken , Settlement , Scouring , Otherse .	tlement, Scouring,	-
Surface	Curb (Type: RC)	Good, Scale, Cr	Good, Scale, Crack, Spall, Rebar-exposed, Others	ed , Others			Good, Crack, Spall, Do	eformation, Reba	Cond Crack, Spall, Deformation, Rebar-exposed, Broken, Settlement, Scouring, Others.	tlement, Scouring,	_
	Railing (Type: RC)	Good, Scale, Cr	Good, Scale, Crack, Spall, Rebar-exposed, Others	sed, Others	Sub-dus	o di di co	od, Crack, Spall, Do	eformation, Reba	Once 1 ne Conde 1 ne Control Discourant de la	tlement, Scouring,	_
ĮĂ Đ	Deck slab (Type: RC)	Good , Нопеусоп	nbs (Crac), Deformation	Good , Honeycombs (Craes), Deformation , Rehar-exposed , Other	Pier Pier (Type	9 0	Good, Crack, Spall, Do	eformation, Reba	Good, Crack, Spall, Deformation, Rebar-exposed, Broken, Settlement, Scouring, Others	tlement, Scouring,	
ıβ-1 Σ ₽	Main Beam (Type: RC)	Good , Honeycon	nbs Crack, Deformation	Good , Honeycombs (Crac) , Deformation , Rehar-exposed , Other	2 Others: Th	e revetments	are settled on KC	side. It cause	Others: The revetments are settled on KC side. It caused some cracks on the revetments	ne revetments	3
	Cross Beam (Type: RC)	Good, Crack, De	Good), Crack, Deformation, Rebar-exposed, Others	sed , Others	1 Comment						
Pa	Painting	Condition			OVERALI 1. No damage	OVERALL EVALUATION RATING No damage detected on the basis of the	OVERALL EVALUATION RATING 1. No damage detected on the basis of the inspection results.	ults.		Final ratino	
_ <u> </u>	Exp.Joint (Type: AS)	Good, Abnormal	Good, Abnormal Sound, Deformation, C	Gap), Broken, Others	1 (2.) Damage h:	as been detected an gnificant damage ar	2) Damage has been detected and a follow-up survey is required. 3. There is significant damage and a detailed survey needs to be carried out to establish	equired. Is to be carried out t	to establish	Super Structure	_
Sessory Sessory	Shoe	Good, Abnormal	Good, Abnormal Sound, Deformation, C	Gap, Broken, Others None	whether re	whether repair work is to be carried out or not.	arried out or not.				
	(Type : Steel)	Good, Clogged I	Good, Clogged Leakage, Broken, Others		4. There is signal closed to to (or to be re	There is significant damage and urge closed to traffic or restriction on veh (or to be re-constructed new bridge)	4. There is significant damage and urgent repair is required or the bridge has to be closed to traffic or restriction on vehicle weight to be imposed. (or to be re-constructed new bridge)	ed or the bridge has imposed.	to be	Sub Structure	
∆ ±, 9, €, 4,	cPlan / Profile> 1) The superstruc 2) The corrosion 3) The revetment 4) The regular	cplan / Profile> 1) The superstructures and substructures 2) The corrosion on the steel pipe piles is 3) The reverments are settled, and it caus 4) The regular inspection is required.	cplan / Profile> 1) The superstructures and substructures are sound altt 2) The corrosion on the steel pipe piles is in progress. 3) The revetments are settled, and it causes some cracl 4) The regular inspection is required.	cplan / Profile> 1) The superstructures and substructures are sound although the concrete is a few deteriorated. 2) The corrosion on the steel pipe piles is in progress. 3) The revetments are settled, and it causes some cracks on it. The repair is required. 4) The regular inspection is required.	teriorated.				<pre><remarks> PP: Phnom Penh, KC: K</remarks></pre>	cRemarks> PP: Phnom Penh, KC: Kampong Cham C: corresponding item AS: Asphalt RC: Reinforced Concrete	

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			Table-A Br	le-A Bridge Soundness Sheet (Sheet No.	dness She	et (She	et No.	(B	Bridge No.17
NAME O	NAME OF BRIDGE: Pre	Prek Hok Leng	CLASS OF ROAD CROSSING: NAME OF RIVER OR ROAD	CROSSING: NAM	TE OF RIVER OR RC	OAD	D'	ATE OF INSPEC	DATE OF INSPECTION: Jan. 29.2000 INSPECTION BY	INSPECTION BY	Y. Takai	
Design Information	formation	Yes	(No	Construction By	USA		Dį	ate of Construction	Date of Construction: 1962-68	Maintenance by	MPWT	
Type of Bridge	ridge	Superstructure	Simple RC-T Girder	Jirder		Design Loading	90			Load limitation	(N)	Yes
STA. 31+790	11+790	Substructure	Abutment	Steel Pipe Pile Bent Type		Design Standard		BS (AASHTO	RUSSIA	OTHERS()	
			Pier	Steel Pipe Pile Bent Type		Skew of Bridge		Square	Skew	Curve (deg.R=	_	
Length of Bridge	Bridge		36.0 m Span	Span	3*12.0 m	3*12.0 m Condition of Crossing		Road	Width	m Clearance m	Skew deg.	
Width of Bridge	Bridge	Overall	11.05 m	11.05 m Carriage 9.07 mPede. 2*0.69 m	Pede. 2*0.69 m		River	(ec.)	Width of River	Depth	Free Board	Design Quantity
Affixed Articles	rticles	Kind		Number					35.0 m	6.5 m	0.9 m	-
Traffic Volume	olume		(year)	Ratio of Heavy V , icle (year)		Others						
Final Recc	Final Record of Repair	Pavement	Deck Slab	Main Beam	Painting	Expansion Joint		Bearing	Drainage	Railing	Curb	Affixed Articles
		Others:										
Сош	Component		Conditions Of Damage	Датаве		Rating	Component		Conditions of Damage	f Damage		
Pave (Tyr	Pavement (Type: AS)	Good, Wave, Rut, Crack	ut, Crack, Pothole, Oth	, Pothole , Others : Crack in the approach road	proach road	2	Abutment (PP side)		DCrack, Spall, D	eformation, Reba	Good Crack, Spall, Deformation, Rebar-exposed, Broken, Settlement, Scouring Others.	tlement, Scouring,
1.		Good, Scale, Cr	Good, Scale, Crack, Spall, Rebar-exposed, Others	ed, Others			Abutment (KC side)	7	d Crack Snall D	eformation Reha	Good Clack Shall Deformation Rehar-exmosed Broken Settlement Scourfing	tlement Scouring
Surf.	(Type: RC)					1 Str.		_	ars:	ciolination, neoa	Traposca, Dionell, Se	irement, scouling,
Railing (Type:	Railing (Type: RC)	Good, Scale, Cr	Good, Scale, Crack, Spall, Rebar-exposed, Others	sed, Others		1	Pier (Twe: Steel	Goo Pile) Othe	Good, Crack, Spall, Deformation, Rebar-exposed, Broke Others: The lower parts of steel piles are widely corroded.	eformation, Reba	Good, Crack, Spall, Deformation, Rebar-exposed, Broken, Settlement, Scouring Others: The lower narts of steel piles are widely corroded.	tlement, Scouring,
Decl (Typ	Deck slab (Type: RC)	Good), Honeycor	Good), Honeycombs , Crack , Deformation , Rebar-exposed , Other	n, Rebar-exposed,	Other	1	Pier (Type)	Good,	d, Crack, Spall, D	eformation, Reba	Good , Crack , Spall , Deformation , Rebar-exposed , Broken , Settlement , Scouring Others	tlement, Scouring,
u2-13	Main Beam (Type: RC)	Good Honeycor	Good Honeycombs , Crack , Deformation , Rebar-exposed , Other	n, Rebar-exposed,	Other	1 0	thers : The r Son	evetments a	he revetments are settled on KC side, and it caused mar Some cracks on the revetments on KC side can be seen	Side, and it c	Others: The revetments are settled on KC side, and it caused many cracks. Some cracks on the revetments on KC side can be seen.	
	Cross Beam (Type: RC)	Good, Crack, Deformati	eformation, Rebar-exposed, Others	sed, Others		ე 1	Comment					
Painting	ting	Condition					OVERALL EV	OVERALL EVALUATION RATING No damage detected on the basis of th	OVERALL EVALUATION RATING No damage detected on the basis of the inspection results.	sults.		Einal ratino
	Exp.Joint (Type: AS)	Good, Abnormal Sound,		Deformation, Gap Broke, Others	(,	3	2. Damage has b 3. There is signifi	een detected and	2) Damage has been detected and a follow-up survey is required. 3. There is significant damage and a detailed survey needs to be carried out to establish	required.	o establish	Suner Structure
Sesson	0	Good, Abnormal Sound		Deformation, Gap, Broken, Other, None	Nong		whether repair	whether repair work is to be carried out or not	rried out or not.			
	(1ype	Closed C					4. There is signiff	icant damage and	There is significant damage and urgent repair is required or the bridge has to be	red or the bridge has	to be	,
(Tyr	(Type:Steel)	Good, Clogged Leakage,	Leakage, Broken, Others			1	closed to traffi (or to be re-co	closed to traffic or restriction on veh (or to be re-constructed new bridge)	closed to traffic or restriction on vehicle weight to be imposed. (or to be re-constructed new bridge)	imposed.		Sub Structure
4Pla 1) T 2) T 3) T	<pre>cPlan / Profile> 1) The superstruct 2) The abutments 3) The lower parts</pre>	chan / Profile> 1) The superstructure is a few deteriorated. 2) The abutments themselves are sound. The 3) The lower parts of steel pipe piles on the	 Profile> 1) The superstructure is a few deteriorated. 2) The abutments themselves are sound. The revetments are settled due to scouring and many cracks can be seen on it. The early repairment is required. 3) The lower parts of steel pipe piles on the piers are corroded. 	ents are settled o	due to scouring	and many cr	acks can be so	een on it. The	e early repairmen	is required.	cRemarks> PP: Phnom Penh, KC: K C: corresponding item AS: Asphalt RC: Reinforced Concrete	cRemarks> PP: Phnom Penh, KC: Kampong Charr C : corresponding item AS: Asphalt RC: Reinforced Concrete

	-	Table-A Brid	idge Soun	lge Soundness Sheet (Sheet No.	et (Sho	et No.	<u> </u>				Bri	Bridge No.18	
NAME OF BRIDGE: Pre	Prek Ta Oun	CLASS OF ROAD	CLASS OF ROAD CROSSING: NAME OF RIVER OR ROAD	E OF RIVER OR RO	AD	D/	VTE OF INSPI	DATE OF INSPECTION: Jan. 29.2000 INSPECTION BY	INSPECTION BY	Y. Takai			
Design Information	Yes	(No	Construction By	USA		Da	te of Construc	Date of Construction: 1962-68	Maintenance by	MPWT			
Type of Bridge	Superstructure	Simple RC-T Girder	Girder		Design Loading	gu			Load limitation	(2)		Yes	
STA. 31+940	Substructure	Abutment	Steel Pipe Pile Bent Type		Design Standard	ard BS	(AASHT)	RUSSIA	OTHERS(^			
		Pier	Steel Pipe Pile Bent Type		Skew of Bridge)	Square	Skew	Curve (deg.R=	_			
Length of Bridge		36.0 m Span	Span	3*12.0 m Condition of Crossing	Condition of		Road	Width	m Clearance m	Skew	deg.		
Width of Bridge	Overall	11.00 m	11.00 m Carriage 9.10 m Pede. 2*0.65 m	Pede. 2*0.65 m			River	Width of River	Depth	Free Board		Design Quantity	
Affixed Articles	Kind		Number					35.0 m	n 5.0 m	_	0.2 m		m3/sec
Traffic Volume		(year)	Ratio of Heavy V ; icle (year)		Others								
Final Record of Repair	Pavement	Deck Slab	Main Beam	Painting	Expansion Joint		Bearing	Drainage	Railing	Curb		Affixed Articles	
	Others: The cr	Others: The cracks on the revetments have already been repaired by mortar.	ts have already bec	n repaired by mor	tar.								
Component		Conditions Of Damage	. Dатадс		Rating	Component		Conditions of Damage	of Damage				Rating
Pavement (Type: AS)	Good, Wave, R	Good), Wave , Rut , Crack , Pothole , Others : Crack in the approach road	ers : Crack in the app	roach road	1	Abutment (PP side) (Type : Steel Pile)		المصطرك (Crack , Spall , Deformation , Rebar-exposed , Broken , Settlement , Scouring Others :	Deformation, Reba	ır-exposed, Br	oken , Settle	ment, Scouring,	1
Curb Surface (Type: RC)	Good, Scale, Cr	Good, Scale, Crack, Spall, Rebar-exposed	sed, Others		1		side) Go	Good Zrack, Spall, Deformation, Rebar-exposed, Broken, Settlement, Scouring, Others.	Deformation, Reba	ır-exposed, Br	oken , Settle	ment, Scouring,	1
Railing (Type: RC)	Good, Scale, Cr	Good, Scale, Crack, Spall, Rebar-exposed	sed, Others		1	Sub Pier (Type : Steel	Pile Ou	Pier (Good) Crack, Spall, Deformation, Rebar-exposed, Broken, Settlement, Scouring, Cryse; Steel Pile) Others: The corrosion on the steel piles are in progress. The pile diameter is 27.7 cm.	Deformation, Reba	rr-exposed, Br	oken, Settle The pile dia	ment, Scouring,	2
Deck slab (Type: RC)	Good), Honeycon	Good), Honeycombs , Crack , Deformation ,	nn, Rebar-exposed, Other	Other	1	Pier (Type	9 0	Good , Crack , Spall , Deformation , Rebar-exposed , Broken , Settlement , Scouring , Others	Deformation, Reba	ır-exposed , Br	oken , Settle	ment, Scouring,	
Main Beam	Good Honeycon	Good Honeycombs , Crack , Deformation	on , Rebar-exposed , Other	Other	-	Others:							1
Super Cross Beam (Type: RC)	Good, Crack, D	Good), Crack , Deformation , Rebar-exposed	sed, Others		1	Comment							
Painting	Condition		(OVERALL EVALUATION RATING 1) No damage detected on the basis of th	'ALUATION	OVERALL EVALUATION RATING 1) No damage detected on the basis of the inspection results.	sults.			Final rating	
	Good, Abnorma	Good, Abnormal Sound, Deformation, Gap	Gap (Broke), Others	. (2	 Damage has be There is signifi 	en detected ar cant damage a	 Damage has been detected and a follow-up survey is required. There is significant damage and a detailed survey needs to be carried out to establish 	s required. eds to be carried out	to establish	1 - **	Super Structure	1
Shoe (Type	Good, Abnorma	Good, Abnormal Sound, Deformation, Gap, Broken, Other Nong	Gap , Broken , Other	Nong		whether repair 4. There is signiff	work is to be cant damage a	whether repair work is to be carried out or not. There is significant damage and urgent repair is required or the bridge has to be	ired or the bridge ha	s to be			
	Good, Clogged I	Good, Clogged Leakage, Broken, Others	8		1	closed to traffic or restriction on veh (or to be re-constructed new bridge)	c or restriction	closed to traffic or restriction on vehicle weight to be imposed. (or to be re-constructed new bridge)	e imposed.			Sub Structure	-
<plan profile=""> 1) The superstruct 2) The revetments</plan>	ures and substr	eplan / Profile> The superstructures and substructures are sound. The revetments are settled. The regular inspection is required. 	n is required.							<pre><remarks> PP: Phnom Penh, KC: K</remarks></pre>	narks> Phnom Penh , KC : k : corresponding item Asphalt Reinforced Concrete	<remarks> PP: Phnom Penh, KC: Kampong Cham : corresponding item AS: Asphalt RC: Reinforced Concrete</remarks>	

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	-	Table-A Br	Bridge Soundness Sheet (Sheet No.	eet (She	et No.			Br	Bridge No.22	
NAME OF BRIDGE: Prek Kra Poes	Prek Kra Poes	CLASS OF ROAD	CROSSING: NAME OF RIVER OR ROAD	OAD	DATE OF II	DATE OF INSPECTION: Jan. 28.2000 INSPECTION BY	0 INSPECTION BY	Y. Takai		
Design Information	Yes	(No	Construction By USA		Date of Cons	Date of Construction: 1962-68	Maintenance by	MPWT		
Type of Bridge	Superstructure	Simple RC-T G	Girder	Design Loading	60		Load limitation	Z	Yes	
STA. 36+880	Substructure	Abutment	Steel Pipe Pile Bent Type	Design Standard	BS	(AASHTO RUSSIA OT	OTHERS(_		
		Pier	Steel Pipe Pile Bent Type	Skew of Bridge	Square	Skew	Curve (deg.R=	_		
Length of Bridge		120.0 m Span		10*12.0 m Condition of Crossing	rossing Road	Width	m Clearance m	m Skew deg.		
Width of Bridge	Overall	11.00 m	n Carriage 9.10 m Pede. 2*0.65 m	1 -	River	Width of River	Depth	Free Board	Design Quantity	
Affixed Articles	Kind		Number			120.0 m	n 7.5 m	0.3 m		m3/sec
Traffic Volume		(year)	Ratio of Heavy V , icle (year)	Others						
Final Record of Repair	Pavement	Deck Slab	Main Beam Painting	Expansion Joint	D Bearing	Drainage	Railing	Curb	Affixed Articles	
	Others: Three	(3) span superstructure	Others : Three (3) span superstructures have been replaced. The 7th Pier from PP (P7) has been replaced.	from PP (P7)	has been replaced.					
Component		Conditions Of Damage	Damage	Rating	Component	Conditions	Conditions of Damage			Rating
Pavement	Good, Wave, RI	ut, Crack, Pothole, Othe	Good), Wave, Rut, Crack, Pothole, Others: Crack in the approach road	1	Abutment (PP side)	Good, Crack, Spall,	Deformation, Reba	Good Crack , Spall , Deformation , Rebar-exposed , Broken , Settlement , Scouring ,	lement, Scouring,	1
_					(Type: Steel Pile)	Others:				
Surface (Type: RC	Good, Scale, Cr	Good, Scale, Crack, Spall, Rebar-exposed, Others	sed , Others		Abutment (KC side) (Type : Steel Pile)	$\overline{}$	Deformation, Reba	Good Xrack, Spall, Deformation, Rebar-exposed, Broken, Settlement, Scouring, Others:	lement, Scouring,	1
Railing (Type: RC	Good, Scale, Cr	Good), Scale, Crack, Spall, Rebar-exposed, Others	sed, Others	-qnS			Deformation, Reba	Good, Crack, Spall, Deformation, Rebar-exposed, Broken, Settlement, Scou sing, Others: The steel tiles are widely correded	lement, Scouking,	3
Deck slab	Good, Honeycon	nbs, Crack, Deformation	Good), Honeycombs , Crack , Deformation , Rebar-exposed , Other	-			Deformation, Reba	Good, Crack, Spall, Deformation, Rebar-exposed, Broken, Settlement, Scouring,	lement, Scouring,	
(1) ype: NC					(Type	Others				
Main Beam	Good Honeycor.	nbs, Crack, Deformation	Good Honeycombs , Crack , Deformation , Rebar-exposed , Other	1 0	thers: The revetme The cracks	he revetments on both sides are settled. I The cracks have been repaired by mortar.	re settled. It cau by mortar.	Others: The revetments on both sides are settled. It causes vertical cracks on them. The cracks have been repaired by mortar.	n them.	4
	Good, Crack, D	Good, Crack, Deformation, Rebar-exposed, Others	sed , Others	1 Ω	Comment					
Painting	Condition				OVERALL EVALUATION RATING	ON RATING				
					1. No damage detected on the basis of the inspection results.	the basis of the inspection	esults.		Final rating	
Exp.Joint (Type: AS	Good, Abnorma	Good, Abnormal Sound, Deformation, Gap (Broke) , Others	Gap (Broke), Others	2	 Damage has been detected and a follow-up survey is required. There is significant damage and a detailed survey needs to be carried out to establish 	ed and a follow-up survey ige and a detailed survey no	s required. seds to be carried out	to establish	Super Structure	_
Shoe	Good, Abnormal	Good, Abnormal Sound, Deformation, G	, Gap , Broken , Others Nong		whether repair work is to be carried out or not.	be carried out or not.			-	
					4. There is significant damage and urgent repair is required or the bridge has to be	age and urgent repair is req	uired or the bridge ha	s to be		
Drainage (Type : Steel	Good, Clogged I	Good, Clogged Leakage, Broken, Others		1	closed to traffic or restriction on vehi	closed to traffic or restriction on vehicle weight to be imposed. (or to be re-constructed new bridge)	e imposed.		Sub Structure	3
<plan profile=""></plan>								<remarks></remarks>		
1) The superst	1) The superstructures are sound.	# #						PP: Phnom Penh,	PP: Phnom Penh, KC: Kampong Cham	
3) The revetme	 I me steet pipe pites are neavily corroded. The revetments are settled, and it causes: 	y corroded. d it causes some bie	 I me steet pipe pites are neavily corroged. The revetments are settled, and it causes some his cracks on them due to nile heat evule abutment in high embankment. 	it style abutn	ent in high embanker	funt		: corresponding item	ng item	
4) The invest	4) The investigation of repair is required	is required.		and other	Tour III III BII CIII CAIINI			RC : Reinforced Concrete	oncrete	

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								m3/sec				Rating	1	1	3		1				·	-	E E
Bridge No.23			Yes				Design Quantity	E		Affixed Articles			ettlement, Scouring,	ettlement, Scouring,	ettlement, Scouring,	ettlement, Scouring,	s on them.		Final rating	Siner Structure		Sub Structure	<remarks> PP: Phnom Penh, KC: Kampong Cham : corresponding item AS: Asphalt RC: Reinforced Concrete</remarks>
H	Y. Takai	MPWT	(N)	(Skew dcg.	Free Board	n 1.5 m		Curb			Crack, Spall, Deformation, Rebar-exposed, Broken, Settlement, Scouring, Others:	كوميل كرعود , Spall , Deformation , Rebar-exposed , Broken , Settlement , Scouring , Others :	Good Crack, Spall, Deformation, Rebar-exposed, Broken, Settlement, Scouring, Others: The steel piles are widely corroded.	Good , Crack , Spall , Deformation , Rebar-exposed , Broken , Settlement , Scouring , Others	Others: The revetments on both sides are settled. It causes vertical cracks on them. The cracks have been repaired by mortar.			to establish		as to be	<remarks> PP: Phnom Penh, KC: K</remarks>
	INSPECTION BY	Maintenance by	Load limitation	ERS(Curve (deg.R=	m Clearance m	Depth	12.5 m		Railing		. Damage	eformation, Reb	eformation, Reb	eformation, Reb	eformation , Reb	settled. It can		ults.	required. ds to be carried out		red or the bridge ha imposed.	
	DATE OF INSPECTION: Jan. 28.2000 INSPECTION BY	on: 1962-68		RUSSIA OTHERS(Skew	Width	Width of River	59.0 m		Drainage		Conditions of Damage	طب Crack , Spall , D ers :	d Crack, Spall, D	Good Crack, Spall, Deformation, Rebar-c Others: The steel piles are widely corroded.	d, Crack, Spall, D	ne revetments on both sides are settled. I The cracks have been repaired by mortar.		OVERALL EVALUATION RATING 1) No damage detected on the basis of the inspection results.	Damage has been detected and a follow-up survey is required. There is significant damage and a detailed survey needs to be carried out to establish	rried out or not.	4. There is significant damage and urgent repair is required or the bridge has to be closed to traffic or restriction on vehicle weight to be imposed. (or to be re-constructed new bridge)	
(DATE OF INSPEC	Date of Construction: 1962-68		BS (AASHTO	Square	Road	River			Bearing		ıı	· ·	1		_	e revetments o		OVERALL EVALUATION RATING No damage detected on the basis of the	s been detected and	whether repair work is to be carried out or not.	There is significant damage and urge closed to traffic or restriction on vehi (or to be re-constructed new bridge)	
heet No.			ading	andard	3ridge (3*20.0 m Condition of Crossing	O			n Joint		Component	Abutment (PP side) (Type : Reversed T		Picr (Type : Wall Type)	Pier (Type	Others : The	Comment	OVERALI 1.)No damage	2. Damage ha	whether rep	4. There is sig	
eet (S)	ROAD		Design Loading	Design Standard	Skew of Bridge	Condition	l e		Others	Expansion Joint		Rating	-	1	1	1	-	1		1		-	
Bridge Soundness Sheet (Sheet No.	CROSSING: NAME OF RIVER OR ROAD	Construction By USA	. Girder	Abutment: Reversed T Type (steel pipe pile)	(steel pipe pile)		n Carriage 9.05 m Pede. 2*0.90 m	Number	Ratio of Heavy V ; icle (year)	Main Beam Painting	nave been repaired.	итаде	Good), Wave, Rut, Crack, Pothole, Others: Crack in the approach road	, Others	, Others	Rebar-exposed , Other	Rebar-exposed , Other	1, Others		p (Broke), Others	p , Broken , Other None		
Table-A Bri		O O	Simple RC-T Gi	Abutment: Reversed	Pier : Wall Type (st	60.0 m Span	11.45 m		(year) R.	Deck Slab M	Others: The revetments on both sides have been repaired	Conditions Of Damage	, Crack, Pothole, Others	Good, Scale, Crack, Spall, Rebar-exposed, Others	Good, Scale, Crack, Spall, Rebar-exposed, Others	Good), Honeycombs , Crack , Deformation , Rebar-exposed , Other	Good Honeycombs , Crack , Deformation , Rebar-exposed , Other	Good, Crack, Deformation, Rebar-exposed, Others		Good, Abnormal Sound, Deformation, Gap (Broke), Others	Good , Abnormal Sound , Deformation , Gap , Broken , Other Nong	Good, Clogged Leakage, Broken, Others	eplan / Profile> 1) The superstructure and substructures are sound. 2) The revetments have been repaired and reinforced.
	ek Ampong Prass	Yes (Superstructure	Substructure			Overall	Kind		Pavement	Others: The revi		Good, Wave, Rut	Good, Scale, Cra	Good, Scale, Cra	Good, Honeycoml	Good Honeycoml	Good), Crack, Det	Condition	Good, Abnormal:	Good, Abnormal	Good, Clogged Le	eplan / Profile> 1) The superstructure and substructures are sound. 2) The revetments have been repaired and reinforc
	NAME OF BRIDGE: Prek Ampong Prasa CLASS OF ROAD	Design Information	Type of Bridge	STA. 37+600		Length of Bridge	Width of Bridge	Affixed Articles	Traffic Volume	Final Record of Repair		Component	Pavement (Type: AS)	Surface Curb (Type: RC)	Railing (Type: RC)	Deck slab (Type: RC)	Main Beam		Painting	Exp.Joint (Type: AS)	Shoe		<plan profile=""> 1) The superstruc 2) The revetment</plan>

		Table-A Bri	idge Sour	dge Soundness Sheet (Sheet No.	et (Sh	eet No.					Bridge No.24	
NAME OF BRIDGE: Prek Ampong Prah 1	k Ampong Prah 1	CLASS OF ROAD	CROSSING: NAM	CROSSING: NAME OF RIVER OR ROAD	OAD	D,	ATE OF INSPE	DATE OF INSPECTION: Jan. 27.2000 INSPECTION BY	INSPECTION BY	Y. Takai		
Design Information	Yes ((Š)	Construction By	USA		Då	ate of Construct	Date of Construction: 1962-68	Maintenance by	MPWT		
Type of Bridge	Superstructure	Simple RC-T Gi	Girder		Design Loading	ding			Load limitation	(Z)	Yes	
STA. 39+890	Substructure	Abutment	Steel Pipe Pile Bent Type	e Bent Type	Design Standard		BS (AASHTO	RUSSIA	OTHERS(_		
		Picr	Steel Pipe Pile Bent Type	e Bent Type	Skew of Bridge		Square	Skew	Curve (deg.R=			
Length of Bridge		84.0 m Span	Span	7*12.0 m Condition of Crossing	Condition o		Road	Width	m Clearance m	Skew deg.	ah ah	
Width of Bridge	Overall	11.00 m	11.00 m Carriage 9.00 m Pede. 2*0.67 m	Pede. 2*0.67 m		Π <u>s</u>	River	Width of River	Depth	Free Board	Design Quantity	
Affixed Articles	Kind		Number					82.6 m	11.0 m		0.5 m	m3/sec
Traffic Volume		(year)	Ratio of Heavy V; icle (year)	icle (year)	Others							
Final Record of Repair	Pavement	Deck Slab	Main Beam	Painting	Expansion Joint		Bearing	Orainage	Railing	Curb	Affixed Articles	
	Others : The firs	Others: The first span girder, abutments and revetments on KC side have been replaced.	ents and revetmen	ts on KC side have	e been repla	reed.						
Component		Conditions Of Damage	Damage		Rating	Component		Conditions of Damage	of Damage			Rating
Pavement	Good, Wave, Rut	Good, Wave, Rut, Crack, Pothole, Others: Crack in the approach road	ers: Crack in the ap,	proach road	-	Abutment (PP side)	side) Go	عركور Crack , Spall , I	Deformation, Rebar	-exposed, Brok	المومل Crack , Spall , Deformation , Rebar-exposed , Broken , Settlement , Scouring ,	-
	((Type: Steel Pile)	I File) Ott	Others :				
Surface (Type: RC)	Good, scale, Cra	ick, Spall, Rebar-expo	sed , Others		1	Abutment (KC side)		Good, Crack, Spall, D Others:	Deformation, Rebar	r-exposed, Brok	Good Crack, Spall, Deformation, Rebar-exposed, Broken, Settlement, Scouring, Others:	-
Railing (Type: RC)	Good, Scale, Cra	Good, Scale, Crack, Spall, Rebar-exposed	sed, Others		-	Pier (Type: Beam.)		Good (Crack Spall , D. Others ;	Deformation, Rebar	-exposed, Brok	Good (Crack Spall , Deformation , Rebar-exposed , Broken , Settlement , Scouring , Others :	3
Deck slab (Type: RC)	Good, Honeycom	Good, Honeycombs, Crack, Deformation	n , Rebar-exposed , Other	Other	1	Pier Cheel Dile		od, Crack, Spall, I	Good , Crack , Spall , Deformation , Rebar-exposed , Broken , Settlement , Sc Othere , The Journal and of spal aim siles are boundly and the 23.7 cm	-exposed , Brok	Good, Crack, Spall, Deformation, Rebar-exposed, Broken, Settlement, Scouring,	4
	Good Honeycom	Good Honeycombs , Crack , Deformation	n, Rebar-exposed, Other	Other	-	Others: The r	revetment o	n PP side is settled	At the revellment on RC side is settled and the oars best revellment on RC side is settled and the oars have revellment on RC side is settled and the oars has been reveiled to	orizontal crac	ks on it.	3
Sup Cross Beam (Type: RC)	Good, Crack, Dei	Good, Crack, Deformation, Rebar-exposed	sed, Others		-	Comment				amda maa	3	
Painting	Condition						OVERALL EVALUATION RATING	ATING				
Exp.Joint	Good, Abnormal	Good, Abnormal Sound, Deformation, Gap (Broken, Others	Sap (Broke), Other	s		No damage del Damage has be	etected on the ba	 No damage detected on the basis of the inspection results. Damage has been detected and a follow-in survey is required. 	ssults.		Final rating	
)		2	3. There is signifi	ficant damage an	id a detailed survey ne	3. There is significant damage and a detailed survey needs to be carried out to establish	establish	Super Structure	-
Shoe	Good , Abnormal !	Good , Abnormal Sound , Deformation , Gap , Broken , Other Nong	Gap, Broken, Other	Non		whether repair	r work is to be c	whether repair work is to be carried out or not.	whether repair work is to be carried out or not.	-		
•	Good, Clogged Le	Good, Clogged Leakage, Broken, Others				closed to traffi	ic or restriction	There is significant damage and digent repail is required of the closed to traffic or restriction on vehicle weight to be imposed.	inco of the offoge has timposed.	90 00	Sub Structure	4
(Type: Steel))				-	(or to be re-co	(or to be re-constructed new bridge)	ridge)				+
<plan profile=""></plan>										<remarks></remarks>		
1) The superstructures are sound.	stures are sound.		;	;						PP : Phnom	PP: Phnom Penh, KC: Kampong Cham	Е
2) The lower part 3) Some intermed	ts ot steel pipe pi tiate beams of pi	 Ine lower parts of steel pipe piles are heavily corroded (1 to 3mm). Some piles have been damaged by woods or stones. Some intermediate beams of piles are deteriorated and are going to fall down. Others are damaged and rimoffed and it of 	roded (1 to 3mr d and are going	n). Some piles h to fall down. Oth	ave been o	lamaged by woo	ods or stones offed and it	oded (1 to 3mm). Some piles have been damaged by woods or stones. and are going to fall down. Others are damaged and runoffed and it causes buckling and structural		C : corres	: corresponding item	
unstability or	n the steel pipe	unstability on the steel pipe piles. Some piles	s are not set in	are not set in the center of piers.	oiers.	200	f ·			RC: Reinfor	RC: Reinforced Concrete	
4) The pipe bent	type abutment in	4) The pipe bent type abutment in high embankment causes settlement and land sliding to the longitudinal direction. (The pavement has been repaired)	t causes settlem	ent and land slid	ing to the	longitudinal dir	rection. (The	pavement has be				
3) Overall substr	uctures and tounk	 Overail substructures and foundations are damaged and deteriorated. This bridge is unstable, and should be reinforced or replaced soon. 	ed and deteriora	ted. This bridge	is unstabl	e, and should be	e reinforced	or replaced soon.				

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(Sheet
Sheet
undness
Bridge S o
Table-A

	<u>.</u> -,	Table-A Bri	idge Soundness Sheet (Sheet No.	et (Sheet No.	(Br	Bridge No.25	
NAME OF BRIDGE: Prek Ampong Prah 2	k Ampong Prah 2	CLASS OF ROAD	CROSSING: NAME OF RIVER OR ROAD	AD	DATE OF INSPEC	DATE OF INSPECTION: Jan. 26.2000 INSPECTION BY	INSPECTION BY	Y. Takai		
Design Information	Yes ((No	Construction By USA		Date of Construction: 1962-68	տ։ 1962-68	Maintenance by	MPWT		
Type of Bridge	Superstructure	Simple RC-T Girder		Design Loading			Load limitation	(Z)	Yes	
STA. 40+520	Substructure	Abutment	Steel Pipe Pile Bent Type	Design Standard	BS (AASHTO	RUSSIA OTHERS(ERS(•		
		Pier	3	Skew of Bridge	Square	Skew	Curve (deg.R=			
Length of Bridge		12.0 m	Span 1*12.0 m	1*12.0 m Condition of Crossing	Road	Width	m Clearance m	m Skew deg.		
Width of Bridge	Overall	11.00 m	Carriage 9.00 m Pede. 2*0.65 m		River	Width of River	Depth	Free Board	Design Quantity	
Affixed Articles	Kind		Number			10.5 m	5.3 m	0.0 m		m3/sec
Traffic Volume		(year)	Ratio of Heavy V, icle (year)	Others						
Final Record of Repair	Pavement	Deck Slab	Main Beam Painting	Expansion Joint	Bearing	Drainage	Railing	Curb	Affixed Articles	
	Others: The em	bankment and pavem	Others: The embankment and pavement on the approach road have been repaired. The gabions have been placed in the area of 30m from the bridge to the upstream on the riverbed.	repaired. The gabions ha	we been placed in	the area of 30m froi	m the bridge to the	upstream on the riverbe	.pc	
Component		Conditions Of I	Damage	Rating Component	ent	Conditions of Damage	. Damage			Rating
Pavement (Type: AS)	Good (Waye, Ru	ıt, Crack, Pothole, Othe	Good (Ways), Rut, Crack, Pothole, Others: Crack in the approach road	Abutment (PP side)		DCrack, Spall, Do	eformation, Rebar	Good, Crack, Spall, Deformation, Rebar-exposed, Broken, Settlement, Scouring,	lement, Scouring,	1
Surface Curb (Type: RC)	Good, Scale, Cra	Good, Scale, Crack, Spall, Rebar-exposed, Others	ed, Others		Abutment (KC side) Good C	Crack, Spall, Do	eformation, Rebar	Control Scattlement , Scouring , Others:	clement, Scouring,	_
Railing (Type: RC)	Good, Scale, Cra	Good, Scale, Crack, Spall, Rebar-exposed, Others	ed , Others	Sub-	Good, C	d, Crack, Spall, De	eformation, Rebar	Good , Crack , Spall , Deformation , Rebar-exposed , Broken , Settlement , Scouring Others .	lement, Scouring,	
Deck slab (Type: RC)	Good, Honeycom	Good), Honeycombs , Crack , Deformation , Rebar-exposed , Other : The 4.0 m² in the center of span has been repaired	, Rebar-exposed, an has been repaired.	Pier Pier (Type:	Good, C	d, Crack, Spall, De	eformation, Rebar	Good , Crack , Spall , Deformation , Rebar-exposed , Broken , Settlement , Scouring Others :	lement, Scouring,	
Main Beam	Good Нопеусош	Good Honeycombs , Crack , Deformation , Rebar-exposed , Other	1, Rebar-exposed, Other	1 Others : Th	re revetments a	ers: The revetments around the abutments These cracks have been repaired by mortar	nents are settle	Others: The revetments around the abutments are settled, it causes some cracks on them. These cracks have been repaired by mortar.	acks on them.	3
	Good, Crack, De	Good, Crack, Deformation, Rebar-exposed, Others	ed, Others	1 Comment						
Painting	Condition			OVERALI 1. No damage	OVERALL EVALUATION RATING No damage detected on the basis of the	OVERALL EVALUATION RATING 1. No damage detected on the basis of the inspection results	<u> </u>		Final ratino	
Exp.Joint (Type: AS)	Good, Abnormal	Good , Abnormal Sound, Deformation , Gap (Broke) , Others	iap (Broke), Others	3 2. Damage ha	as been detected and gnificant damage and	Damage has been detected and a follow-up survey is required. There is significant damage and a detailed survey needs to be earried out to establish	equired. st to be carried out to	o establish	Super Structure	2
Shoe	Good, Abnormal	Sound, Deformation, G	Good , Abnormal Sound , Deformation , Gap , Broken , Other Nong	whether re-	whether repair work is to be carried out or not.	rried out or not.	:			1
	Good, Clogged L	Good, Clogged Leakage, Broken, Others		t. Interests significant to the control of the cont	inere is significant damage and urge closed to traffic or restriction on veh (or to be re-constructed new bridge)	4. Inere is significant camage and urgent repair is required or the bridge has to be closed to traffic or restriction on vehicle weight to be imposed. (or to be re-constructed new bridge)	red or the bridge has imposed.	to be	Sub Structure	2
 cPlan / Profile> 1) The superstructure and substructures are sou 2) The expansion joints are damaged, and it ca 3) The revetments around the abutments are so 4) The gabions are placed on the riverbed. 	ture and substrutions are dama saround the abu	cplan / Profile> 1) The superstructure and substructures are sound alti 2) The expansion joints are damaged, and it caused a 3) The revetments around the abutments are scoured 4) The gabions are placed on the riverbed.	cplan / Profile> 1) The superstructure and substructures are sound although they are a few deteriorated. 2) The expansion joints are damaged, and it caused abnormal sound by the vehicles. 3) The revetments around the abutments are scoured and settled. It causes some cracks but they have been repaired by mortar. 4) The gabions are placed on the riverbed.	id. ks but they have been	repaired by mort	tar.		-Remarks> PP: Phnom Penh, KC: K	cRemarks> PP: Phnom Penh, KC: Kampong Cham : corresponding item AS: Asphalt RC: Reinforced Concrete	

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		Table-A Bri	idge Soundness Sheet (Sheet No.	et (Sheet No.				E	Bridge No.26	
NAME OF BRID	NAME OF BRIDGE: Prek Ampong Prah 3	CLASS OF ROAD	CROSSING: NAME OF RIVER OR ROAD	JAD	DATE OF INSPECT	DATE OF INSPECTION: Jan. 26.2000 INSPECTION BY	INSPECTION BY	Y. Takai		
Design Information	on Yes	(No	Construction By USA		Date of Construction: 1962-68		Maintenance by	MPWT		
Type of Bridge	Superstructure	Simple RC-T Girder		Design Loading			Load limitation	(2)	Yes	
STA. 41+210	0 Substructure	Abutment	Steel Pipe Pile Bent Type	Design Standard	BS (AASHTO	RUSSIA OTHERS(RS(^		
		Pier	Steel Pipe Pile Bent Type	Skew of Bridge	Square	Skew	Curve (deg.R=	_		
Length of Bridge		36.0 m Span		3*12.0 m Condition of Crossing	Road	Width m	m Clearance m	Skew deg.		
Width of Bridge	Overall	11.00 m	Carriage 9.00 m Pede. 2*0.65 m	_	River	Width of River	Depth	Free Board	Design Quantity	
Affixed Articles	Kind		Number			56.0 m	11.4 m	0.0 m	ш	m3/sec
Traffic Volume		(year)	Ratio of Heavy V , icle (year)	Others						
Final Record of Repair	tepair Pavement	Deck Slab	Main Beam Painting	Expansion Joint	Bearing	Drainage	Railing	Curb	Affixed Articles	
	Others : The r	evetments around the a	Others: The revetments around the abutments have been reinforced by the steel sheet piles in 1994. The supocrstructures and substructures were damaged and runoffed in 1996.	e steel sheet piles in 199.	4. The supoerstruct	tures and substructu	res were damaged	and runoffed in 1996		
Component		Conditions Of Damage	Damage	Rating Component	ent	Conditions of Damage	Damage			Rating
Pavement (Type	Good, Wave, I	Rut, Crack, Pothole, Othe	Good , Wave , Rut , Crack , Pothole , Others : Crack in the approach road	Abutment (PP side)		i, Crack, Spall, De	formation, Rebar	-exposed, Broken, S	Good , Crack , Spall , Deformation , Rebar-exposed , Broken , Settlement , Scouring , Others :	
Surface Curb (Type	Good, Scale, C	Good, Scale, Crack, Spall, Rebar-exposed	ed , Others			I, Crack, Spall, De	formation, Rebar	-exposed, Broken, S	Good , Crack , Spall , Deformation , Rebar-exposed , Broken , Settlement , Scouring , Others .	T
Railing (Type	Good, Scale, C	Good, Scale, Crack, Spall, Rebar-exposed, Others	ied , Others	Sub-S	Good, C	1, Crack, Spall, De	formation, Rebar	-exposed, Broken, S	Good, Crack, Spall, Deformation, Rebar-exposed, Broken, Settlement, Scouring,	
Deck slab	Good, Honeyco	Good, Honeycombs, Crack, Deformation	n, Rebar-exposed,	Pier	Good	I, Crack, Spall, De	formation . Rebar	-exposed . Broken . S	Good, Crack, Spall, Deformation, Rebar-exposed, Broken, Settlement, Scouring	
(Type	Other: The 4.	Other: The 4.0 m ² in the center of span has been repaired.	an has been repaired.	(Type:	Others	rs:	,	o (manara) manara)	circular, couring,	
		Good, Honeycombs, Crack, Deformation,	n, Rebar-exposed, Other	Others:						
ber-:										
		Good, Crack, Detormation, Rebar-exposed, Others)	sed , Others	Comment						
Painting	Condition			OVERALI 1. No damage	OVERALL EVALUATION RATING No damage detected on the basis of the	OVERALL EVALUATION RATING 1. No damage detected on the basis of the inspection results.	SI ₁		Final ratino	
Exp.Joint (Type	Good , Abnorm)	Good , Abnormal Sound , Deformation , Gap , Broken , Others)	Jap , Broken , Others	2. Damage hi	as been detected and a	Damage has been detected and a follow-up survey is required. There is significant damage and a detailed survey needs to be earned out to establish	equired.	establish	Siner Structure	
Crossson Chosess	Good, Abnorm	al Sound, Deformation, C	Good , Abnormal Sound , Deformation , Gap , Broken , Others None	whether re	whether repair work is to be carried out or not. There is sionificant damage and urgent repair is	whether repair work is to be carried out or not. There is sionificant damage and urgent repair is conjuged or the bridge has to be	od or the bridge has	od et		
	Good , Clogged	Good, Clogged Leakage, Broken, Others		closed to tr	closed to traffic or restriction on veh (or to be re-constructed new bridge)	closed to traffic or restriction on vehicle weight to be imposed. (or to be re-constructed new bridge)	mposed.	3	Sub Structure	
<plan profile=""></plan>	ile> /erbed was scoured and	d the embankments o	eplan / Profile> 1) The riverbed was scoured and the embankments on the backside of abutments were runoffed due to the flood damage in 1991.	re runoffed due to the	flood damage in	1991.		<remarks> PP: Phnom Penh</remarks>	<pre><remarks> PP: Phnom Penh, KC: Kampong Cham</remarks></pre>	
2) The rev 3) The riv	vetments were reinford verbed was heavily sco	ced by the steel sheet ured and the embank	 The revetments were reinforced by the steel sheet piles as emergency repair in 1994. The riverbed was heavily scoured and the embankments on the backside of abutments were runoffed again due to the big flood in 1996. 	94. Ients were runoffed ag:	ain due to the big	g flood in 1996.		: corresponding itemAS : Asphalt	ding item	
4) The p have t	The piers are settled down 30cm together with have been removed and some structures remain in	1 30cm together wi	4) The piers are settled down 30cm together with the superstructure. It causes impossibility of vehicle pass. The superstructures have been removed and some structures remain in the site.	es impossibility of v	ehicle pass. The	e superstructure	S	RC: Reinforced Concrete	Concrete	

2. Ration of Overall Evaluation for each Bridge

Table-A' Rating Method of Overall Evaluation for the Bridge (Sheet No.)

T appro-	-	Maring Method of Overall Evaluation for the Diluge (Sheet No.	uc) agnud aun i	3	_	
			Rating Point	Bridge	Bridge Weight	Point
		Evaluation Item	(E.P.)	(E.P.)	(E.P.) Factor(W/F)	(E.P.)*(W/F)
Durability	Degree of su	Durability Degree of superstructure damage and defect	good to bad		0.4	
			1234			
	Degree of su	Degree of substructure damage and defect	good to bad		9.0	
			1234			
Load	Low traffic v	Low traffic volume (heavy vehicle with axle	1		0.2	
Capacity	load less than 8 ton	1 8 ton)				
	High traffic v	High traffic volume (heavy vehicle with axle	3		0.2	
	load greater than 8 ton	than 8 ton)				
Function	Constructed	Constructed Constructed after 1980	1		0.1	
	record	(use less than 20 years)				
		Constructed before 1980	3		0.1	
		(use more than 20 years)				
	Effective	Sufficient width for traffic capacity	1		0.2	
	width and	and flood flow				
	Flood flow	Insufficient width for traffic capacity	3		0.2	
		and flood flow				
Overall evaluation for	ation for	D: Sound	1.5~2.5		Min. 1.5	٩
bridge		C: Fairly sound	2.5~3.5			S
(Range of point)	int)	B: Unsound / Lack of safety	3.5~4.25			В
		A: Danger	4.25~5.5		Max. 5.5	A

B:Lack of Sound

A:Danger

4.25]

C:Normal

3.5

D:Sound

2.5

Eva. Rank

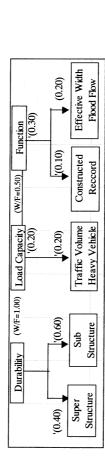


Figure Weight Factors (W/F) for Evaluation Items

Table 2.3.37 Rating Method of Bridge Conditions

Table 2.3.3 / Rating Method of Bridge Conditions		
Bridge Conditions	Rating	Evaluation
Survey results showed no damages and defects. And, bridge has functional stability.	_	Q
Damage has been detected and a follow-up survey is required. And, bridge has functional stability at present.	7	၁
There are significant damages / defectes. Therefore, a detailed survey is needed and the 3 B necessity of repair work including function of bridge should be considered.	8	В
There are significant damages / defectes, and no function. Therefore, urgent repair is required. 4 A The bridgehas to beclosed for traffic or restriction on vehicle weight to be imposed.	4	A
(or re-construction of bridge)		

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Overall Evaluation Graph of Soundness for Requested Bridges

Durability Super Str. Damage Sub Str. Damage Loading Heavy Traffic Function Constructed Year						Bridg	Bridge No.					
	7	10	11	12	13	17	18	22	23	24	25	56
	0.4	0.4	0.4	0.8	0.4	0.4	0.4	0.4	0.4	0.4	8.0	
	1.8	9.0	9.0	1.2	9.0	1.2	9.0	1.8	9.0	2.4	1.2	
	9.0	9.0	9.0	9.0	9.0	9.0	9'0	9.0	9.0	9.0	9.0	
-	0.3	0.3	0.3	0.3	0.3	0.3	6.0	0.3	0.3	0.3	0.3	
Width, Flood	9.0	9.0	0.6	9.0	9.0	0.6	9'0	9.0	9.0	9.0	9.0	
D:1.5-2.5		2.5	2.5		2.5		2.5					
Rate C:2.5-3.5				3.5		3.1			2.5			
Result B:3.5-4.25	3.7							3.7			3.5	
A:4.25-5.5										4.3		5.5
Overall Evaluation	В	D	D	၁	D	Э	a	В	D	Α	В	⋖

11)	Bridge Weight	(E.P.) Factor(W/F)	1 0.4		1 0.6		0.2	!	3 0.2		0.1	:	3 0.1		0.2		3 0.2		D Min. 1.5			Mon 6 6
lge (Bridge No.	Rating Point Br		good to bad	1 2 3 4	good to bad	1 2 3 4	1		3		1		3		1		3		1.5~2.5	2.5~3.5	3.5~4.25	2000
Table-A Rating of Overall Evaluation for the Bridge (Bridge No. 11)	R	Evaluation Item	Degree of superstructure damage and defect gc		Degree of substructure damage and defect go		ow traffic volume (heavy vehicle with axle	n 7 ton)	High traffic volume (heavy vehicle with axle	than 7 ton)	Constructed Constructed after 1980	(use less than 20 years)	Constructed before 1980	(use more than 20 years)	Sufficient width for traffic	capacity	Insufficient width for traffic	capacity	D: Sound	C: Fairly sound	B: Unsound / Lack of safety	A. D.
Table-A Rating of			Durability Degree of su		Degree of su		Load Low traffic v	Capacity load less than 7 ton	High traffic	load greater than 7 ton)	Function Constructed	record			Effective	width of	bridge		Overall evaluation for	bridge	(Range of point)	
			D.4		∞.		<u> </u>	0	9.0		ii.	_	0.3		 I		9.0		0	ءَ		- r
	Point	(E.P.)*(W/F)	0		I				0				0				0		D	C	B:3.7	Ý
	Weight	(E.P.) Factor(W/F)	0.4		9.0		0.2		0.2		0.1		0.1		0.2		0.2		Min. 1.5			May 55
No. 7)	Bridge Weight	(E.P.)	1		3				3				3				3				В	_
ridge (Bridge	Rating Point	(E.P.)	good to bad	1234	good to bad	1234	1		3		1		3		1		3		1.5~2.5	2.5~3.5	3.5~4.25	4 25-55
Table-A Rating of Overall Evaluation for the Bridge (Bridge No. 7)		Evaluation Item	Durability Degree of superstructure damage and defect		Degree of substructure damage and defect		ow traffic volume (heavy vehicle with axle	load less than 7 ton)	High traffic volume (heavy vehicle with axle	load greater than 7 ton)	Constructed Constructed after 1980		Constructed before 1980	(use more than 20 years)	ive Sufficient width for traffic		Insufficient width for traffic			C: Fairly sound	B: Unsound / Lack of safety	A: Danger
Table-A Rati			Durability Degree		Degree		Load Low tr	Capacity load le	High t	load g	Function Constr	record			Effective	width of	bridge		Overall evaluation for	bridge	(Range of point)	

Point (E.P.)*(W/F) 0.4

	-	9	+-		⊢		┿		╄		╄		╀		┺		┡		Ρ	ν	В	₹
_	Bridge Weight	(E.P.) Factor(W/F)	0.4		9.0		0.2	!	0.2		0.1		0.1		0.2		0.2		Min. 1.5			Max. 5.5
No. 12	Bridge	(E.P.)	2		2				3				3				3			ပ		
Bridge (Bridge	Rating Point	(E.P.)	good to bad	1234	good to bad	1 2 3 4		1	3		1		3		1		3		1.5~2.5	2.5~3.5	3.5~4.25	4.25~5.5
Table-A Rating of Overall Evaluation for the Bridge (Bridge No. 12)		Evaluation Item	Degree of superstructure damage and defect		Degree of substructure damage and defect		Low traffic volume (heavy vehicle with axle	n 7 ton)	High traffic volume (heavy vehicle with axle	than 7 ton)	Constructed Constructed after 1980	(use less than 20 years)	Constructed before 1980	(use more than 20 years)	Sufficient width for traffic	capacity	Insufficient width for traffic	capacity	D: Sound	C: Fairly sound	B: Unsound / Lack of safety	A: Danger
-A Rating of			y Degree of su		Degree of su		Low traffic	_	High traffic	load greater than 7 ton		record			Effective	width of	bridge		Overall evaluation for		f point)	
Table			Durability				Load	Capacity			Function								Overall e	bridge	(Range of point)	
	_		₩		2		_		100		_		3		_		2		_	_		_
	Point	(E.P.)*(W/F)	0.4		9.0				9.0				0.3				9.0		D:2.5	ر د	В	Ą
																			Г			3
	Weight	Factor(W/F	0.4		9.0		0.2		0.2		0.1		0.1		0.2		0.2		Min. 1.5			Max. 5
No. 10)	Bridge Weight	(E.P.) Factor(W/F)	1 0.4		1 0.6		0.2		3 0.2		0.1		3 0.1		0.2		3 0.2		D Min. 1.5			Max. 5.5
Bridge (Bridge No. 10)	int		1 1	1 2 3 4	good to bad 1 0.6	1 2 3 4	1 0.2				1 0.1				1 0.2				D	2.5~3.5	3.5~4.25	4.25~5.5 Max. 5
A Rating of Overall Evaluation for the Bridge (Bridge No. 10)	Rating Point		1	1 2 3 4	1	1	Low traffic volume (heavy vehicle with axle 1 0.2	load less than 7 ton)	avy vehicle with axle 3 3	load greater than 7 ton)	Constructed Constructed after 1980 1 0.1	record (use less than 20 years)	3 3		Sufficient width for traffic	<u>-</u>	ent width for traffic 3 3	capacity	1.5~2.5 D	C: Fairly sound	d / Lack of safety	

Overall evaluation for bridge (Range of point)

Load Capacity

-	(W/F) (E.)	0.4	9.0	0.2		0.2		0.1		0.1	_	0.2		0.2		.S D:	<u>b</u>	m	5.5
Bridge Weight	(E.P.) Factor(W/F)	-1	-			3				3		_		3		D Min. 1.5			Max. 5.5
Rating Point Bridge	(E.P.) (good to bad 1 2 3 4	good to bad	1		3		_		3				3		1.5~2.5	2.5~3.5	3.5~4.25	4.25~5.5
	Evaluation Item	Durability Degree of superstructure damage and defect	Degree of substructure damage and defect	Low traffic volume (heavy vehicle with axle	1 / IOH)	High traffic volume (heavy vehicle with axle	ilali / toli)	Constructed Constructed after 1980	(use less than 20 years)	Constructed before 1980	(use more than 20 years)	Sufficient width for traffic	capacity	Insufficient width for traffic	capacity	D: Sound	C: Fairly sound	B: Unsound / Lack of safety	A: Danger
		Degree of su	Degree of su	Low traffic v	load less tilati / ton	High traffic volume (he	וסמט פורמוניו ו	Constructed	record			Effective	width of	bridge		uation for		oint)	
		Durability		Load	Capacity			Function								Overall evaluation for	bridge	(Range of point)	
Point	(E.P.)*(W/F)	0.4	0.6			9.0				0.3				9.0		D:2.5	ن ن	В	Ą
Weight	(E.P.) Factor(W/F)	9.4	9.0	0.2		0.2		0.1		0.1		0.2		0.2		Min. 1.5			Max. 5.5
Bridge Weight	(E.P.)	-	1			3				3				3		D			
Rating Point	(E.P.)	good to bad 1 2 3 4	good to bad 1 2 3 4	1		3	-	-		3		1		3		1.5~2.5	2.5~3.5	3.5~4.25	4.25~5.5
	Evaluation Item	Degree of superstructure damage and defect	Degree of substructure damage and defect	Low traffic volume (heavy vehicle with axle load less than 7 ton)		High traffic volume (heavy vehicle with axle load greater than 7 ton)	Constructed Constructed offer 1000	mercal Constitucion alici 1900	record (use less than 20 years)	Constructed before 1980		Effective Sufficient width for traffic	<u>.</u>	bridge Insufficient width for traffic			C: Fairly sound	B: Unsound / Lack of safety	A: Danger
Rating Point Bridge		Durability De	De	Load Loa		H los	Function		<u>2</u>			Ef	wi	bri		Overall evaluation for	bridge	(Range of point)	

l Evaluation for the Bridge (Bridge No. 17)	Bridge (Bridge	No. 17			Table-A	Rating of	Table-A Rating of Overall Evaluation for the Bridge (Bridge No. 22)	Bridge (Bridge	No. 22		
	Rating Point	Bridge	Bridge Weight	Point		0		Rating Point	Bridge	Bridge Weight	Poi
on Item	(E.P.)	(E.P.)	(E.P.) Factor(W/F)	(E.P.)*(W/F)			Evaluation Item	(E.P.)	(E.P.)	W/F)	(E.P.)*(
re damage and defect	good to bad	1	0.4	0.4	Durability	Degree of sup	Degree of superstructure damage and defect	good to bad	-	0.4	
	1234							1234			
damage and defect	good to bad	2	9.0	1.2		Degree of sub	Degree of substructure damage and defect	good to bad	3	9.0	
	1234							1234			
eavy vehicle with axle	1		0.2		Load	Low traffic vo	Low traffic volume (heavy vehicle with axle	1		0.2	
					Capacity	load less than 7 ton	7 ton)				
leavy vehicle with axle	3	3	0.2	9.0		High traffic ve	High traffic volume (heavy vehicle with axle	3	3	0.2	
						load greater than 7 ton	nan 7 ton)				
sted after 1980	1		0.1		Function	Constructed	Constructed Constructed after 1980	1		0.1	
than 20 years)						record	(use less than 20 years)			!	
sted before 1980	3	3	0.1	0.3			Constructed before 1980	3	3	0.1	
re than 20 years)							(use more than 20 years)				
t width for traffic	1		0.2			Effective	Sufficient width for traffic	1		0.2	
						width of	capacity				
ent width for traffic	3	3	0.2	9.0		bridge	Insufficient width for traffic	3	3	0.2	
							capacity				
	1.5~2.5		Min. 1.5	D	Overall evaluation for	ation for	D: Sound	1.5~2.5		Min. 1.5	
, sound	2.5~3.5	ပ		C:3.1	bridge		C: Fairly sound	2.5~3.5			ا ا
und / Lack of safety	3.5~4.25			В	(Range of point)	nt)	B: Unsound / Lack of safety	3.5~4.25	В		B:3.7
er	4.25~5.5		Max. 5.5	Ą			A: Danger	4.25~5.5		Max. 5.5	<

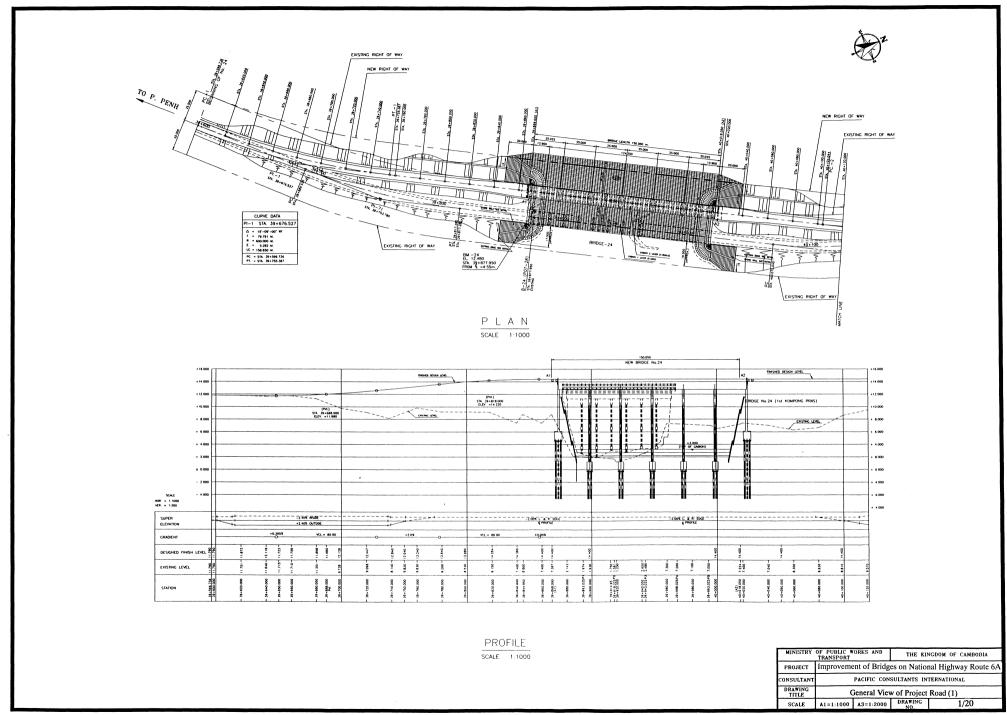
Function

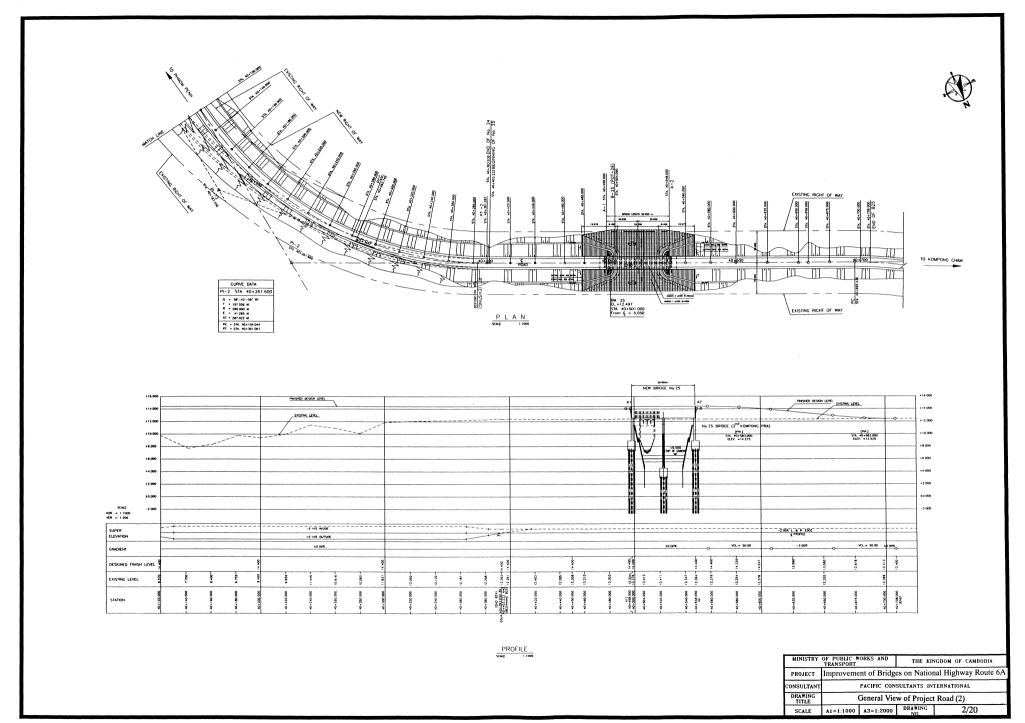
Overall evaluation for bridge (Range of point)

n for the Bridge (Bridge No. 25)	Rating Point Bridge Weight	(E.P.) (E.P.) Factor(W/F) (defect good to bad 2 0.4		+		ith axle 3 3 0.2		1 0.1		0 3 3 0.1		fic 1 0.2		affic 3 3 0.2		1.5~2.5 Min. 1.5	2.5~3.5	ifety 3.5~4.25 B	475-55 May 55
Table-A Rating of Overall Evaluation for the Bridge (Bridge No. 25)		Evaluation Item	lity Degree of superstructure damage and defect	Degree of substructure damage and defect	Low traffic volume (heavy vehicle with axle	_	High traffic volume (heavy vehicle with axle	load greater than 7 ton)	on Constructed Constructed after 1980	record (use less than 20 years)	Constructed before 1980	(use more than 20 years)	Effective Sufficient width for traffic	width of capacity	bridge Insufficient width for traffic	capacity	Overall evaluation for D: Sound	C: Fairly sound	(Range of point) B: Unsound / Lack of safety	A. Danger
Tab			Durability		Load	Capacity			Function	.—							Overal	bridge	(Range	
	Point	(E.P.)*(W/F)	0.4	9.0			9.0				0.3				9.0		D: 2.5	S	В	Ą
)	Bridge Weight	(E.P.) Factor(W/F)	0.4	9.0	0.2		0.2		0.1		0.1		0.2		0.2		Min. 1.5			Max. 5.5
e No. 23	Bridge	(E.P.)	-	-			3				3				3		Δ		Г	Γ
Bridge (Bridge No. 23)	Rating Point	(E.P.)	good to bad	good to bad			3		-		3		I		3		1.5~2.5	2.5~3.5	3.5~4.25	4.25~5.5
Table-A Rating of Overall Evaluation for the Brid		Evaluation Item	Ourability Degree of superstructure damage and defect	Degree of substructure damage and defect	ow traffic volume (heavy vehicle with axle	load less than 7 ton)	High traffic volume (heavy vehicle with axle	oad greater than 7 ton)	Constructed Constructed after 1980	(use less than 20 years)	Constructed before 1980	(use more than 20 years)	e Sufficient width for traffic	f capacity	Insufficient width for traffic			C: Fairly sound	B: Unsound / Lack of safety	A: Danger
Table-A Rating			Ourability Degree	Degree	Load Low traf	Capacity load less	High tra	load gre	Function Constru	record			Effective	width of	bridge		Overall evaluation for	bridge	(Range of point)	

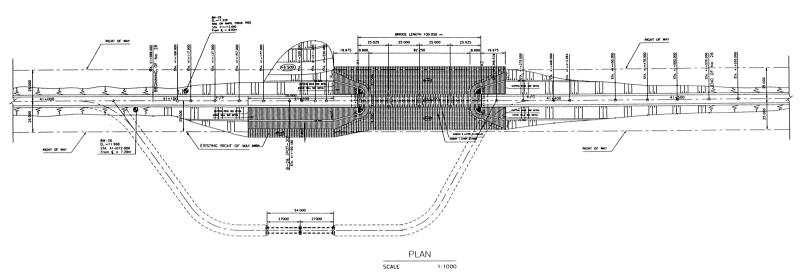
Table-A	Rating of	Table-A Rating of Overall Evaluation for the Bridge (Bridge No. 24)	Bridge (Bridge	No. 24	(Table-A	Rating of	Table-A Rating of Overall Evaluation for the Bridge (Bridge No. 26)	3ridge (Bridge	No. 26		
			Rating Point	Bridge	Bridge Weight	Point				Rating Point	Bridge	Bridge Weight	Point
		Evaluation Item	(E.P.)	(E.P.)	(E.P.) Factor(W/F)	(E.P.)*(W/F)			Evaluation Item	(E.P.)	(E.P.)	(E.P.) Factor(W/F)	(E.P.)*(W/I
Durability	Degree of sul	Durability Degree of superstructure damage and defect	good to bad	1	0.4	0.4	Durability	Degree of sup	Degree of superstructure damage and defect	good to bad		0.4	
			1234							1234			
	Degree of sul	Degree of substructure damage and defect	good to bad	4	9.0	2.4		Degree of sub	Degree of substructure damage and defect	good to bad		9.0	
			1234							1234			
Load	Low traffic v	ow traffic volume (heavy vehicle with axle	1		0.2		Load	Low traffic ve	low traffic volume (heavy vehicle with axle	1		0.2	
Capacity	load less than 7 ton)	1 7 ton)					Capacity	load less than 7 ton	7 ton)				
	High traffic v	High traffic volume (heavy vehicle with axle	3	3	0.2	9.0		High traffic v	High traffic volume (heavy vehicle with axle	3		0.2	
	load greater than 7 ton)	han 7 ton)						load greater than 7 ton	han 7 ton)				
Function	Constructed	Constructed Constructed after 1980	1		0.1		Function	Constructed	Constructed Constructed after 1980			0.1	
	record	(use less than 20 years)						record	(use less than 20 years)				
		Constructed before 1980	3	3	0.1	0.3			Constructed before 1980	3		0.1	
		(use more than 20 years)							(use more than 20 years)			!	
	Effective	Sufficient width for traffic	1		0.2			Effective	Sufficient width for traffic	l		0.2	
	width of	capacity						width of	capacity				
	bridge	Insufficient width for traffic	3	3	0.2	9.0		bridge	Insufficient width for traffic	3		0.2	
		capacity						1	capacity				
Overall evaluation for	nation for	D: Sound	1.5~2.5		Min. 1.5	Д	Overall evaluation for	ation for	D: Sound	1.5~2.5		Min. 1.5	<u>e</u>
bridge		C: Fairly sound	2.5~3.5			3	bridge		C: Fairly sound	2.5~3.5			S
(Range of point)	dint)	B: Unsound / Lack of safety	3.5~4.25			В	(Range of point)	int)	B: Unsound / Lack of safety	3.5~4.25			<u>_</u>
		A: Danger	4.25~5.5	∢	Max. 5.5	A: 4.3			A: Danger	4.25~5.5	٧	A Max. 5.5	A:5.5

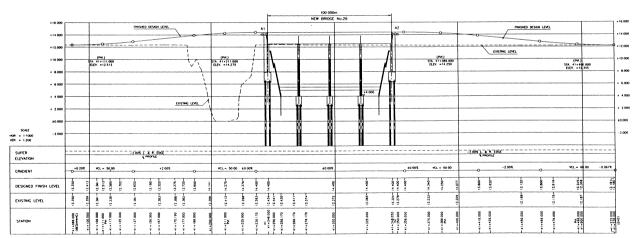
6-5. Drawings of Basic Design





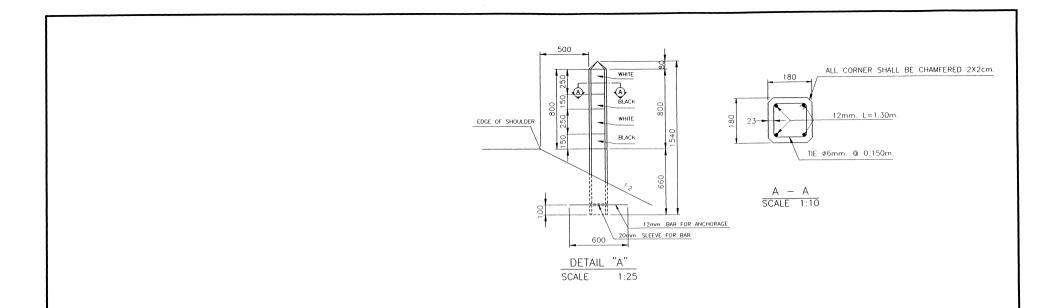


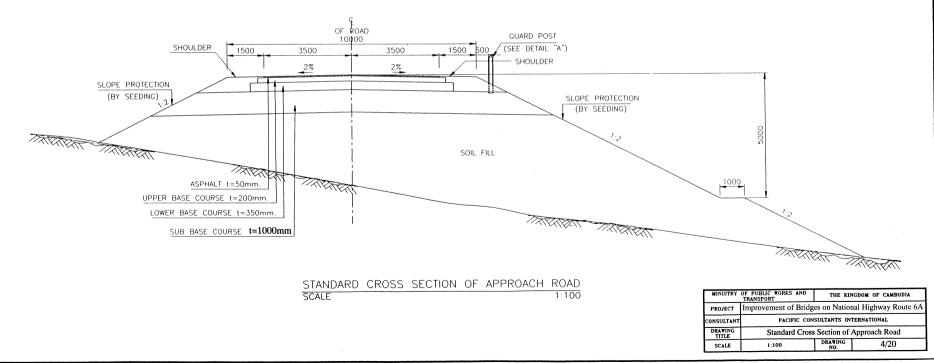


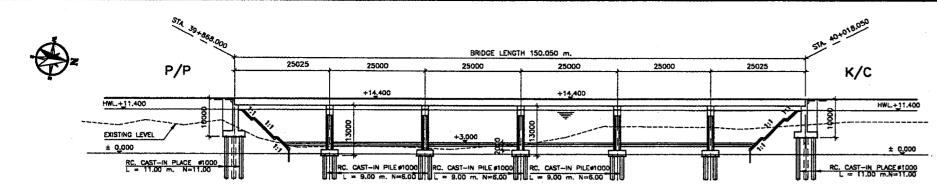


PROFILE 1:1000

MINISTRY	OF PUBLIC WORKS AND TRANSPORT	THE KI	NGDOM OF CAMBODIA
PROJECT	Improvement of Bridg	es on Natio	nal Highway Route 6A
CONSULTANT	PACIFIC CON	SULTANTS IN	TERNATIONAL
DRAWING TITLE	General Vi	ew of Proje	et Road (3)
SCALE	1:1000	DRAWING NO.	3/20



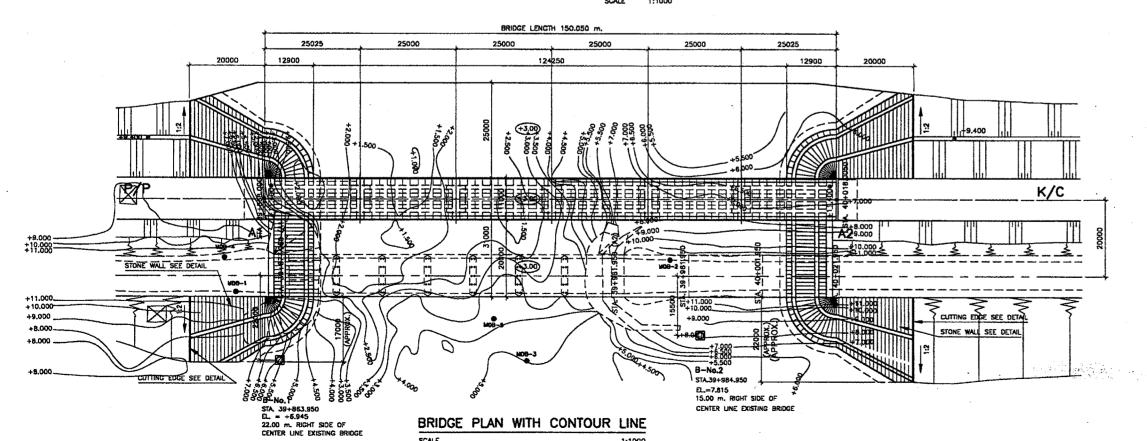


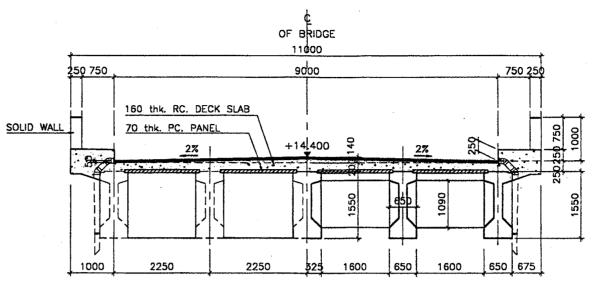


LONGITUDINAL SECTION

SUPER ELEVATION			-2.0		& R. ED ROFILE	ĞĒ						***			-2.00%	L, & F		,						
GRADIENT -	VCL.= 80.	00		±0,00	%																			
DESIGNED FINISH LEVEL	14.264	14.350	14.392	4.4.	14.400		,	14.400						14.400				4 400		14.400		14.400		-
EXISTING LEVEL	9.150	7.400	8.800	7.400	8.800	4.100	2.143	1.974	1.930 —	1.750	1.200	2.010-	2.486	4.400	7.300-	7.200-	7.100-	7.050-	6.500 —	7.224	7.040		6.300	6.630
STATION	- 39+818.000 Pvl. - 39+825.000	- 39+837.950	- 39+844,950	+854 +858	- 39+864.950 - 39+868.000 (A1)	- 39+874.950	- 39+884.950	- 39+893.025 P1 - 39+894.950 39+900.000	- 39+904.950	- 39+914.95 -39+918.025 P2	- 39+924.950	- 39+934,950	-39+943.025 P3 -39+944.950	- 39+950.000 - 39+954.950	- 39+964.950 - 39+968.025P4	- 39+974.950	- 39+984.950	- 39+993.025 P5 - 39+994.950	5	- 40+018.050 (A2) - 40+021.950	- 40+041.950	- 40+050.000	- 40+061,950	40+081.950

PROFILE



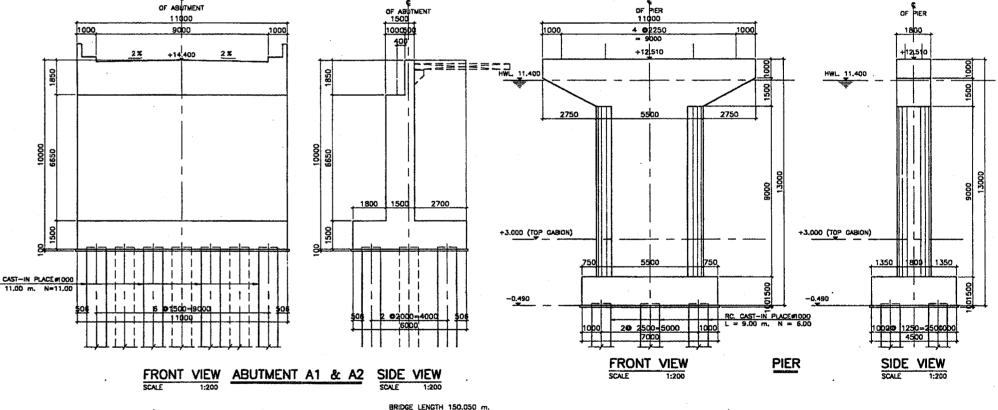


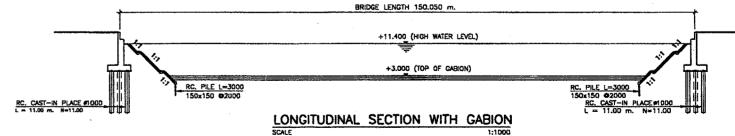
CROSS SECTION OF PC-I GIRDER

SCALE

GENERAL CONDITION V=60 km/h Design Speed 150.05 m. (6 @25 m.) Bridge length (Span Length) Total Width 11.00 m. Longitudinal Gradient Level Cross-fall of Carriage way 2% Superstructure Type PC-I Shape Girder RC. Reversed T-Shape Substructure Type RC. Wall (Cantilever-beam) Foundation Type MATERIAL STRENGTH Girder 6 ck=350 kgf/cm2Cross Beam 6 ck=240 kgf/cm2 Supper structure Type б ck=500 kgf/cm2 PC panel б ck=240 kgf/cm2 Surface Asphalt Pavement Thicness=50 mm. Curb, Hand wall б ck=210 kgf/cm2 Substructure б ck=210 kgf/cm2 RC. Pile (Cast-in-place) 6 ck=300 kgf/cm2 T-12.7 mm. (6 py-160 kgf/mm2) Main Beam Prestressing Steel Cross Beam T-19.3 mm. (6 py-160 kgf/mm2) Reinforcing Steel SD295.SD345 (py-30 kgf/mm2)

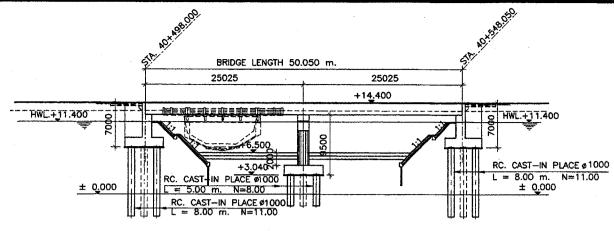
DESIGN CRETERIA





	F PUBLIC WORKS AND TRANSPORT	THE KI	NGDOM OF CAMBODIA
PROJECT	Improvement of Bridg	es on Nationa	Highway Route 6A
CONSULTANT	PACIFIC CON	SULTANTS IN	TERNATIONAL
DRAWING TITLE	GENERAL VI	EW OF BRI	DGE No. 24
SCALE	AS SHOWN	DRAWING NO.	5/20
Jones	120 0110 111	NO.	0,30

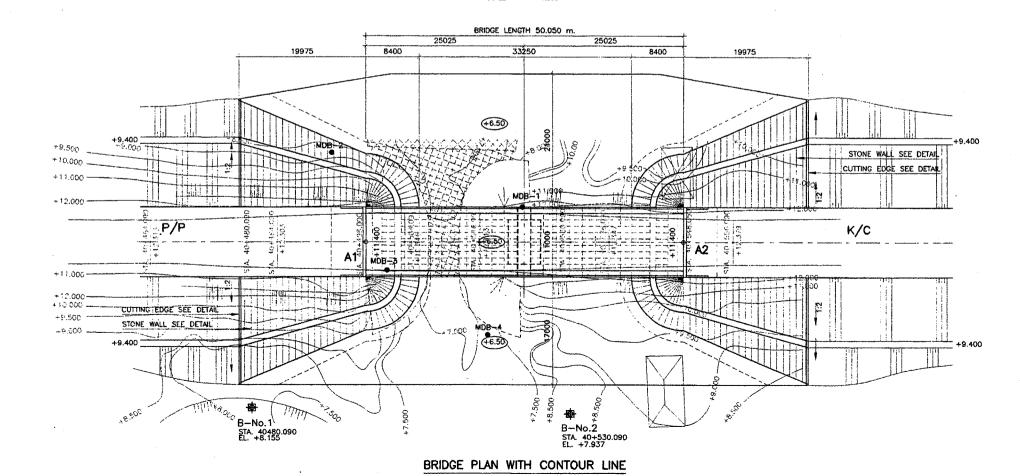


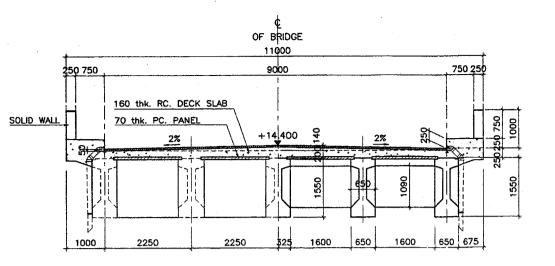


LONGITUDINAL SECTION

SUPER ELEVATION												* * * * * * * * * * * * * * * * * * * *				
GRADIENT									±0.00%					VCL.=	= 50.00	
DESIGNED FINISH LEVEL	14.400					14.400					14.400-	14.400-		14.342	14.275	14.047
EXISTING LEVEL	12.308	12.308-	12.313	12.298	12.305-	192.324	12.412	12.411	12.367_	12.347	12.364	12.378	12.363-			12.378
STATION	40+450.000	- 40+454.090	- 40+464.090	J 40+474.090 - 40+475.000	40+485.090	40+495.090 40+498.000(A 40+500.000	40+504.090	- 40+516.090	- 40+525.000 1 40+526.090	40+536.090	f 40+548.050 A2 140+550.000	_ 40+556.090 40+558.000	- 40+566.090	- 40+575.000 1 40+576.090	- 40+583.000 PVI.	-40+596.090 40+600.000

PROFILE 1:600





CROSS SECTION OF PC-I GIRDER SCALE 1:100

GENERAL CONDITION Design Speed V=60 km/h Bridge length (Span Length) 150.05 m. (6 @25 m.) 11.00 m. Total Width Longitudinal Gradient Level Cross-fall of Carriage way PC-I Shape Girder Superstructure Type RC. Reversed T-Shape Substructure Type RC. Wall (Cantilever-beam) Foundation Type MATERIAL STRENGTH б ck=350 kgf/cm2 Girder 6 ck=240 kgf/cm2 Supper structure Type Cross Beam б ck=500 kgf/cm2 PC panel б ck=240 kgf/cm2

Thicness=50 mm.

б ck=210 kgf/cm2

б ck=210 kgf/cm2

б ck=300 kgf/cm2

T-12.7 mm. (6 py-160 kgf/mm2)

T-19.3 mm. (6 py-160 kgf/mm2)

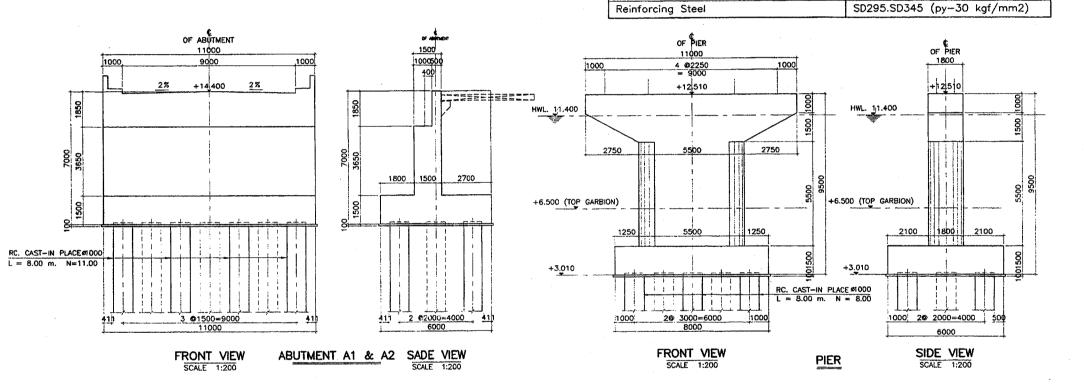
Asphalt Pavement

Curb, Hand wall

Main Beam

Cross Beam

DESIGN CRETERIA

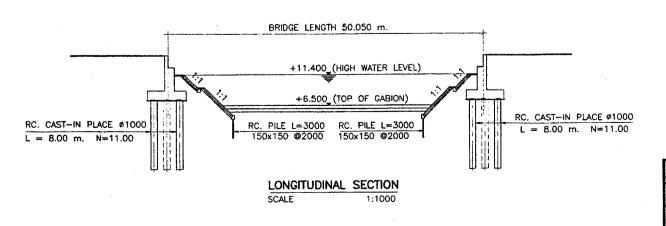


Surface

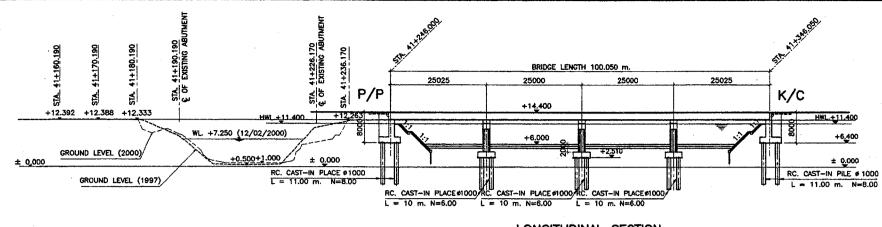
Substructure

Prestressing Steel

RC. Pile (Cast-in-place)

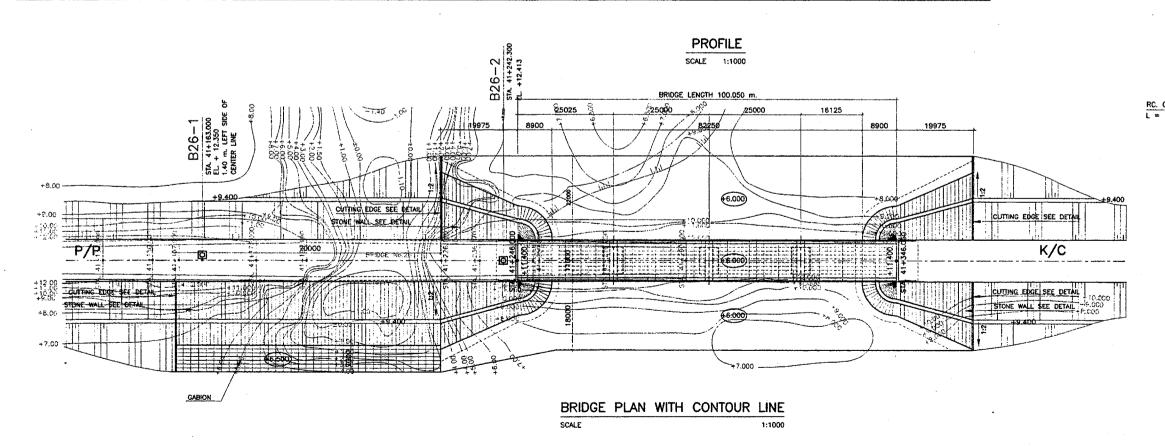


	OF PUBLIC WORKS AND TRANSPORT	THE KI	NGDOM OF CAMBODIA
PROJECT	Improvement of Bridg	ges on National	Highway Route 6A
CONSULTANT	PACIFIC CON	SULTANTS IN	TERNATIONAL
DRAWING TITLE	GENERAL VI	EW OF BRI	DGE No. 25
SCALE	AS SHOWN	DRAWING NO.	6/20



LONGITUDINAL SECTION

SUPER ELEVATION	−2.00% L. & R. EDGE © PROFILE		
GRADIENT	+2.00%	VCL.= 50.00 ±0.00%	±0.00%
DESIGNED FINISH LEVEL	13.180\ 13.375\ 13.680\ 13.720\ 13.900\	14.275-	14.400—
EXISTING LEVEL	12.383 – 12.392 – 12.388 – 12.333 –	12.263 12.434 12.430 12.418 12.411	12.276—
STATION	L41+150.000 L41+150.190 -41+150.190 -41+160.190 L41+170.000 L41+170.190 -41+175.000 -41+180.190 -41+186.000	-41+211.000 -41+225.000 (41+236.000 (41+236.170 -41+246.170 -41+256.170 -41+256.170 -41+256.170 -41+275.000 -41+275.000	-41+325.000 -41+346.050 -41+356.000

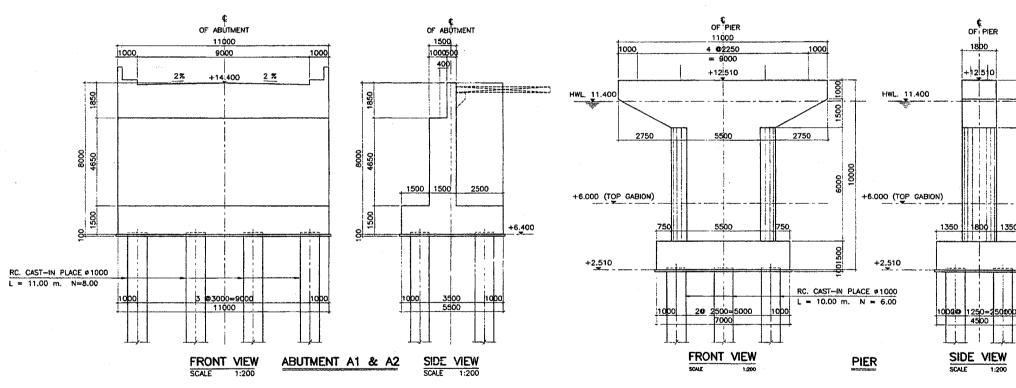


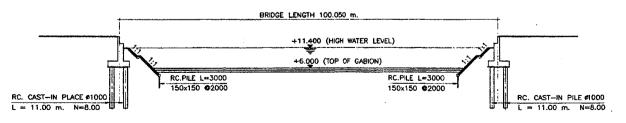
© OF BRIDGE 160 thk. RC. DECK SLAB 70 thk. PC. PANEL SOLID WALL 1000 2250

CROSS SECTION OF PC-I GIRDER SCALE

gth)		V=60 km/h
gth)		
		150.05 m. (6 @25 m.)
		11.00 m.
		Level
ay		2%
		PC-I Shope Girder
butment		RC. Reversed T-Shape
Pier		RC. Wall (Cantilever-beam)
MATE	RIAL ST	RENGTH
Girder		б ck=350 kgf/cm2
Cross Bed	m	б ck=240 kgf/cm2
PC panel		6 ck=500 kgf/cm2
Slab		б ck=240 kgf/cm2
Asphalt P	avement	Thicness=50 mm.
Curb, Har	nd wall	б ck=210 kgf/cm2
		6 ck=210 kgf/cm2
)		6 ck=300 kgf/cm2
Main Bear	m	T-12.7 mm. (6 py-160 kgf/mm2)
Cross Bed	m	T-19.3 mm. (6 py-160 kgf/mm2)
		SD295.SD345 (py-30 kgf/mm2)
	MATEI Girder Cross Bec PC panel Slab Asphalt P Curb, Har	MATERIAL ST Girder Cross Beam PC panel Slab Asphalt Pavement Curb, Hand wall

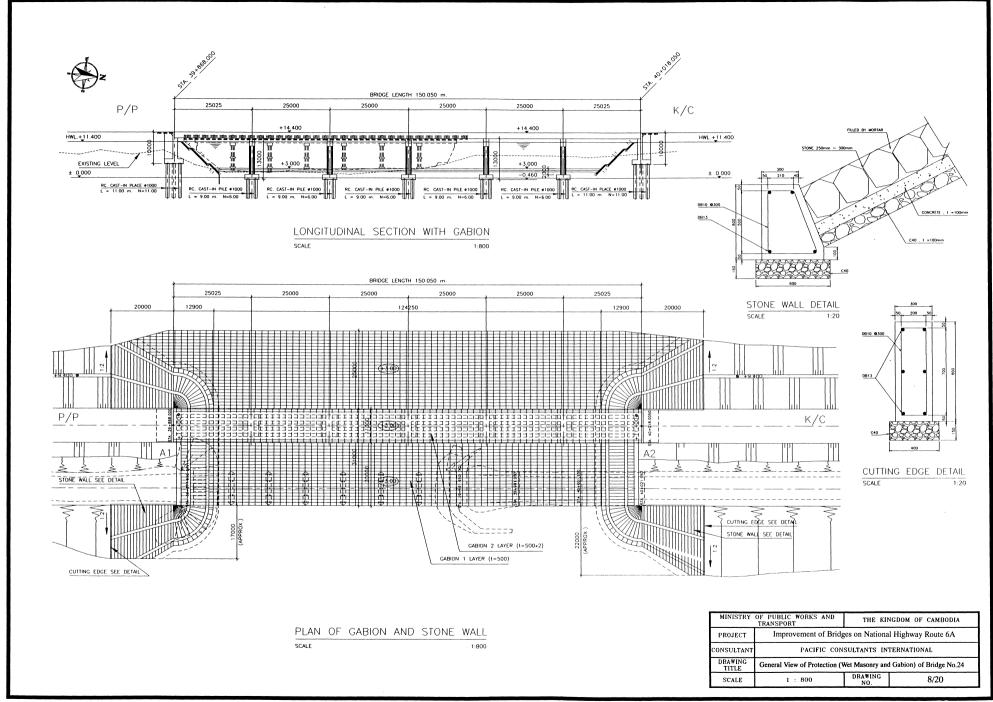
DESIGN CRETERIA

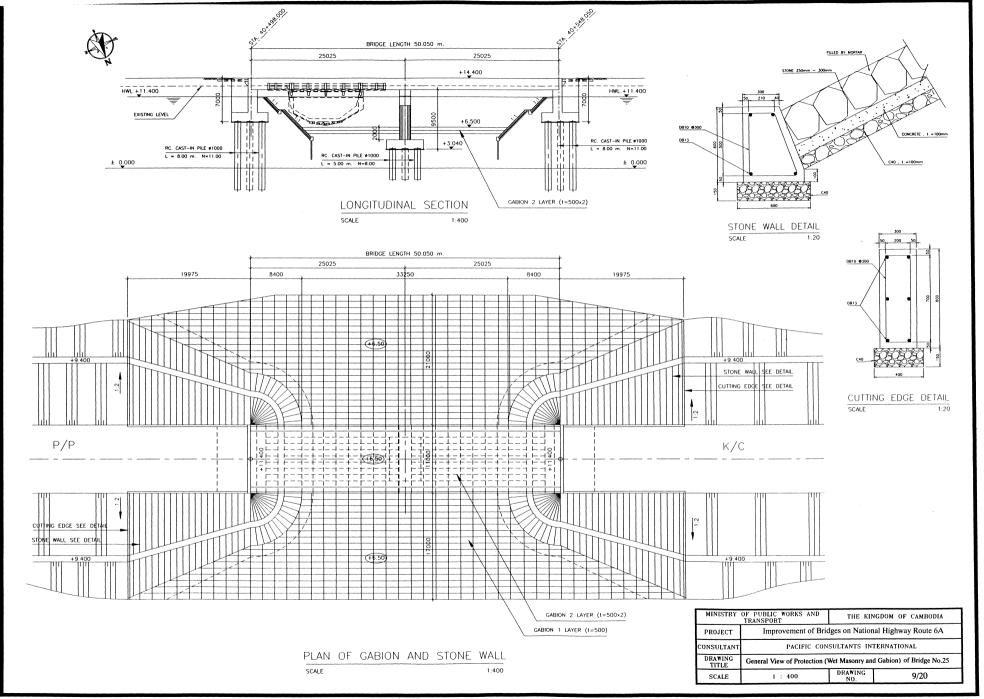


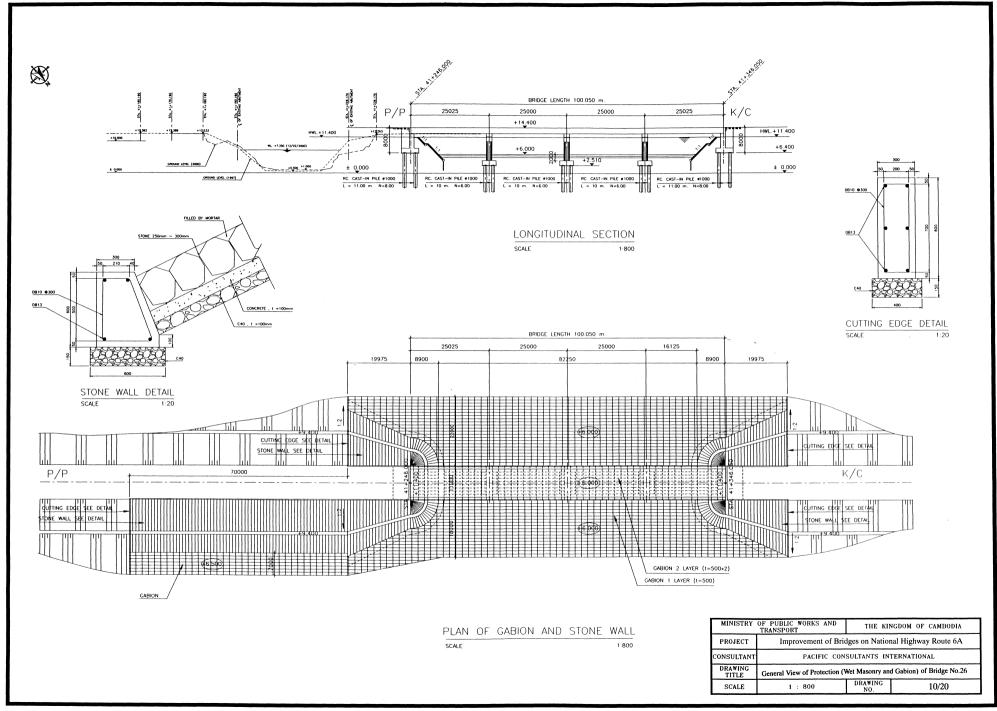


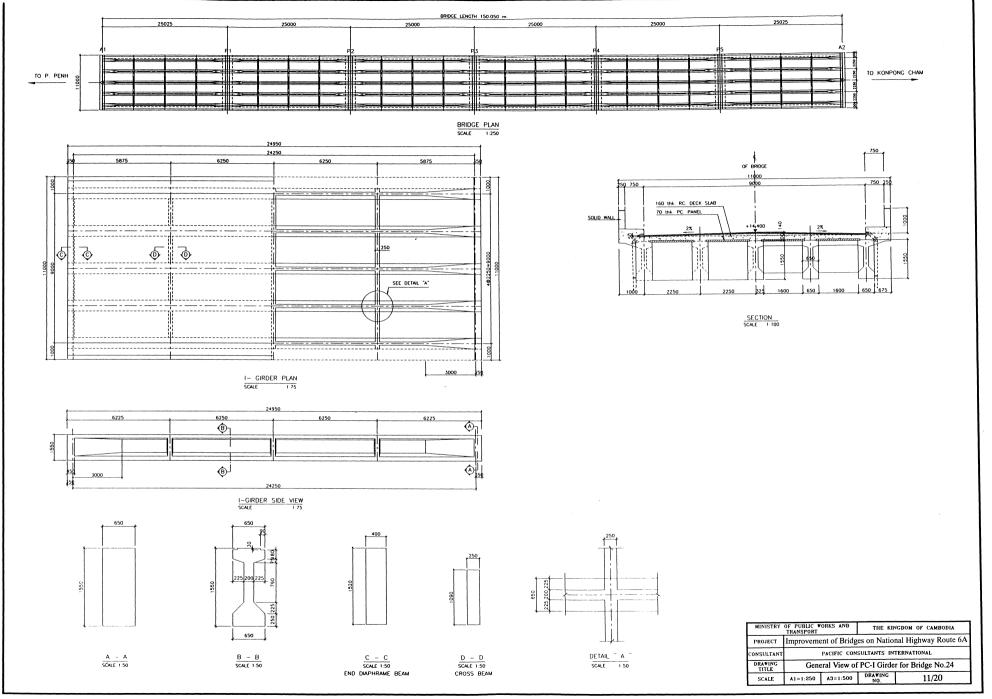
ONGITUDINAL	SECTION
CALE	1:1000

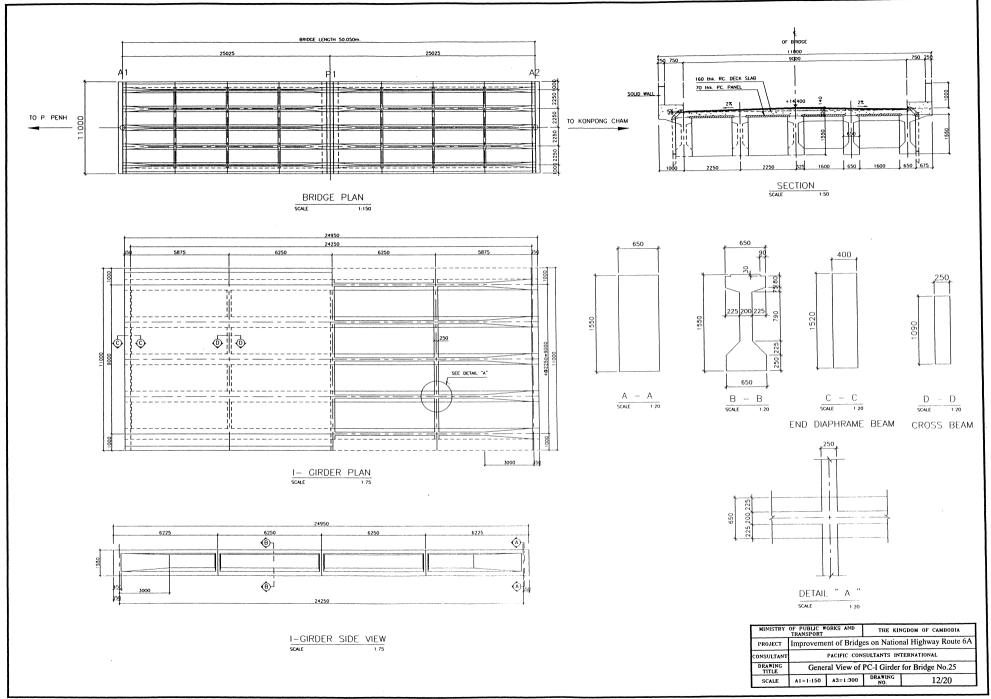
	PUBLIC WORKS AND RANSPORT	THE KING	GDOM OF CAMBODIA							
PROJECT	Improvement of Bridges on National Highway Route 6A									
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL										
DRAWING TITLE										
SCALE	AS SHOWN	DRAWING NO.	7/20							

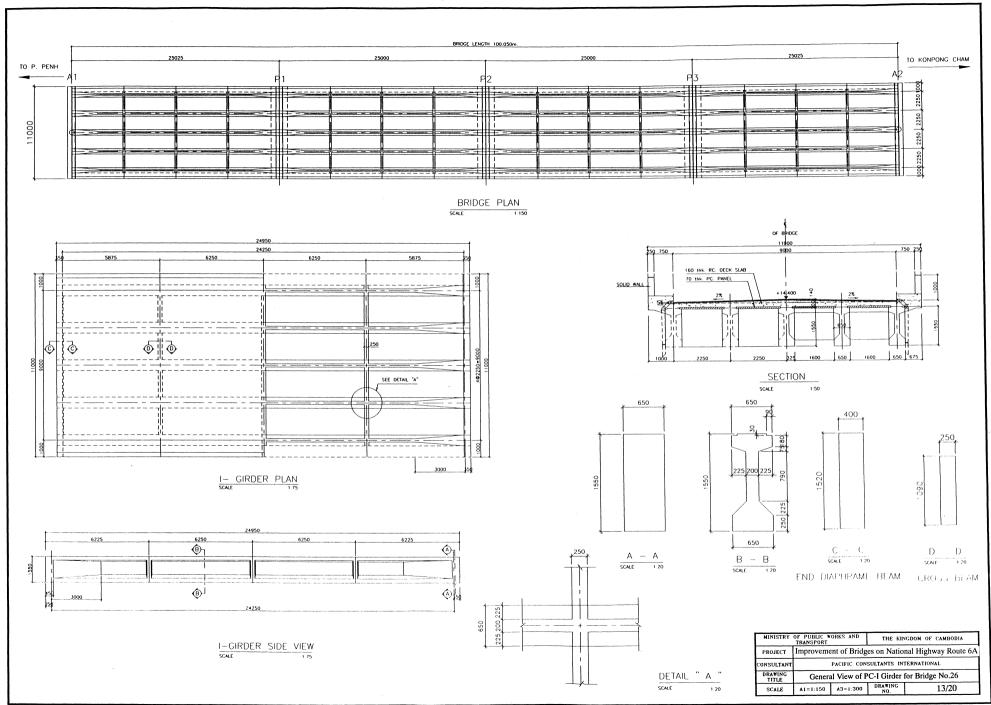


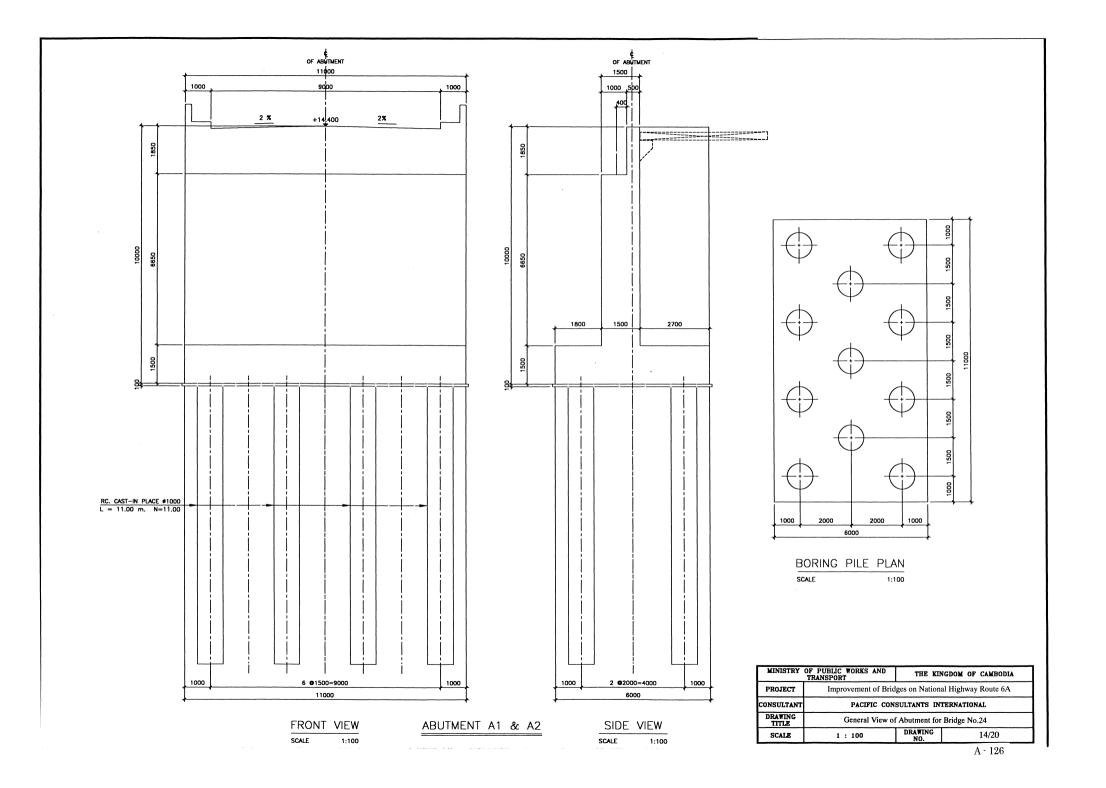


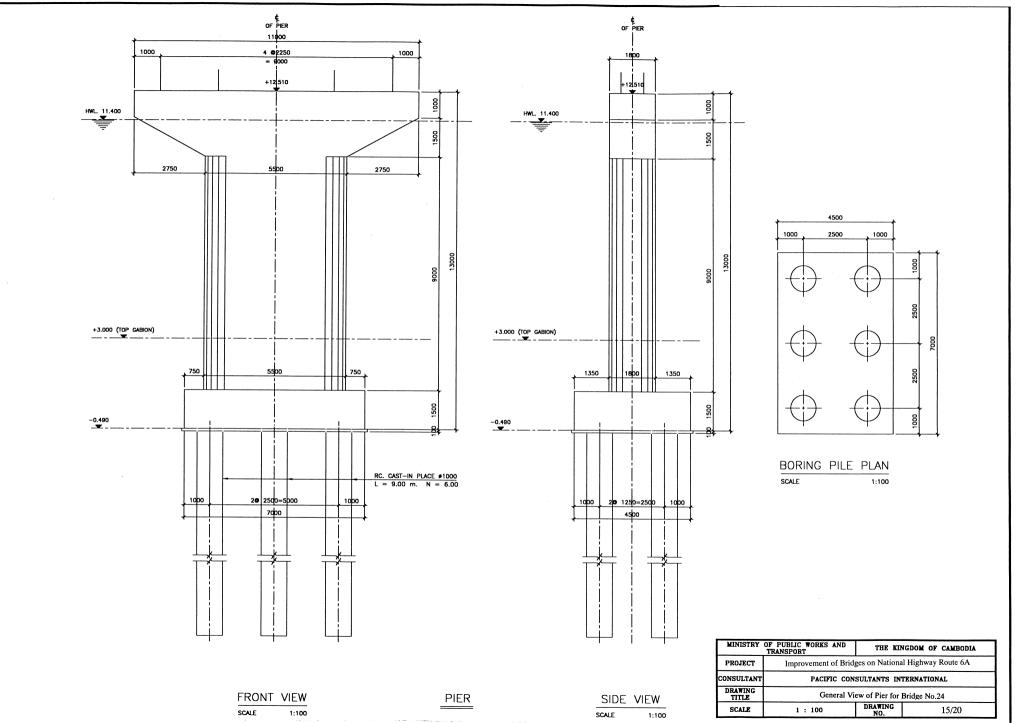


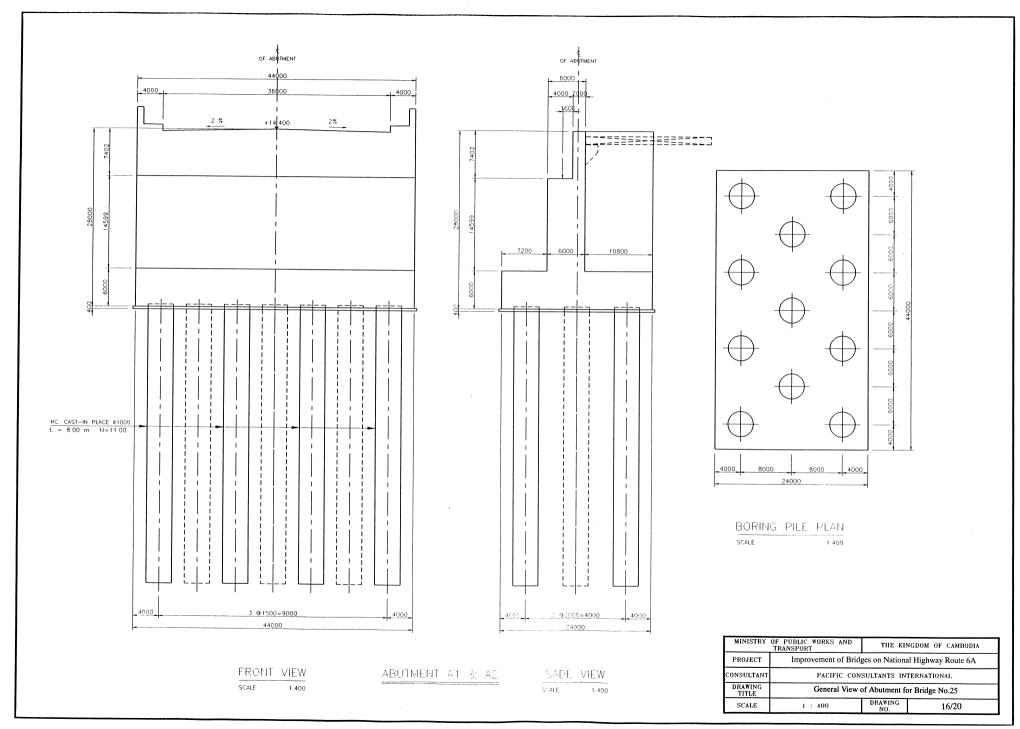


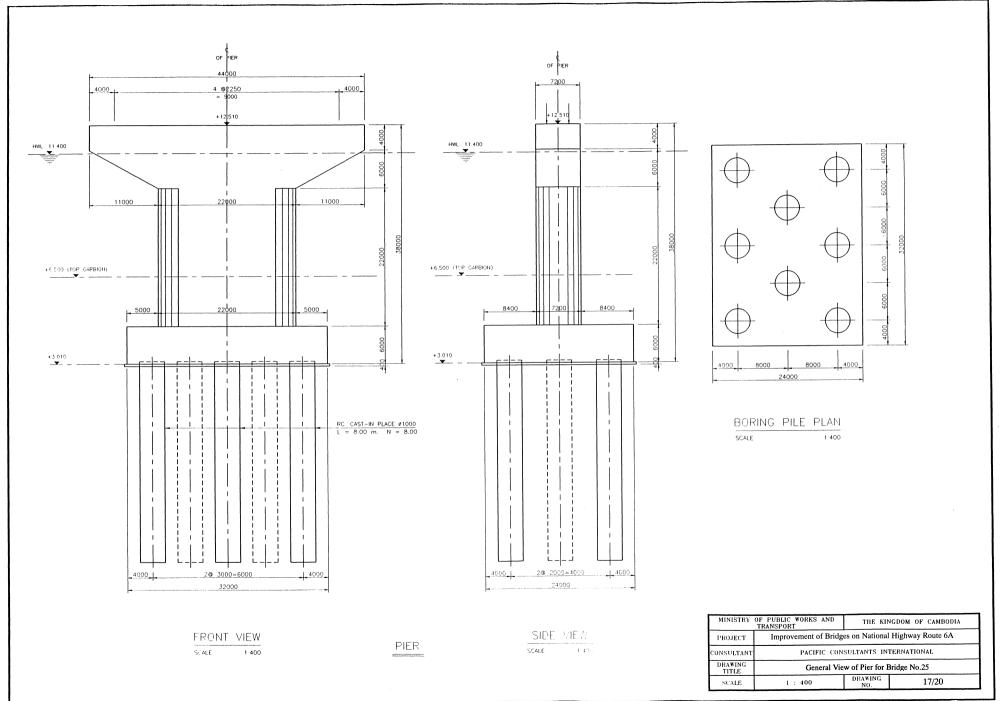


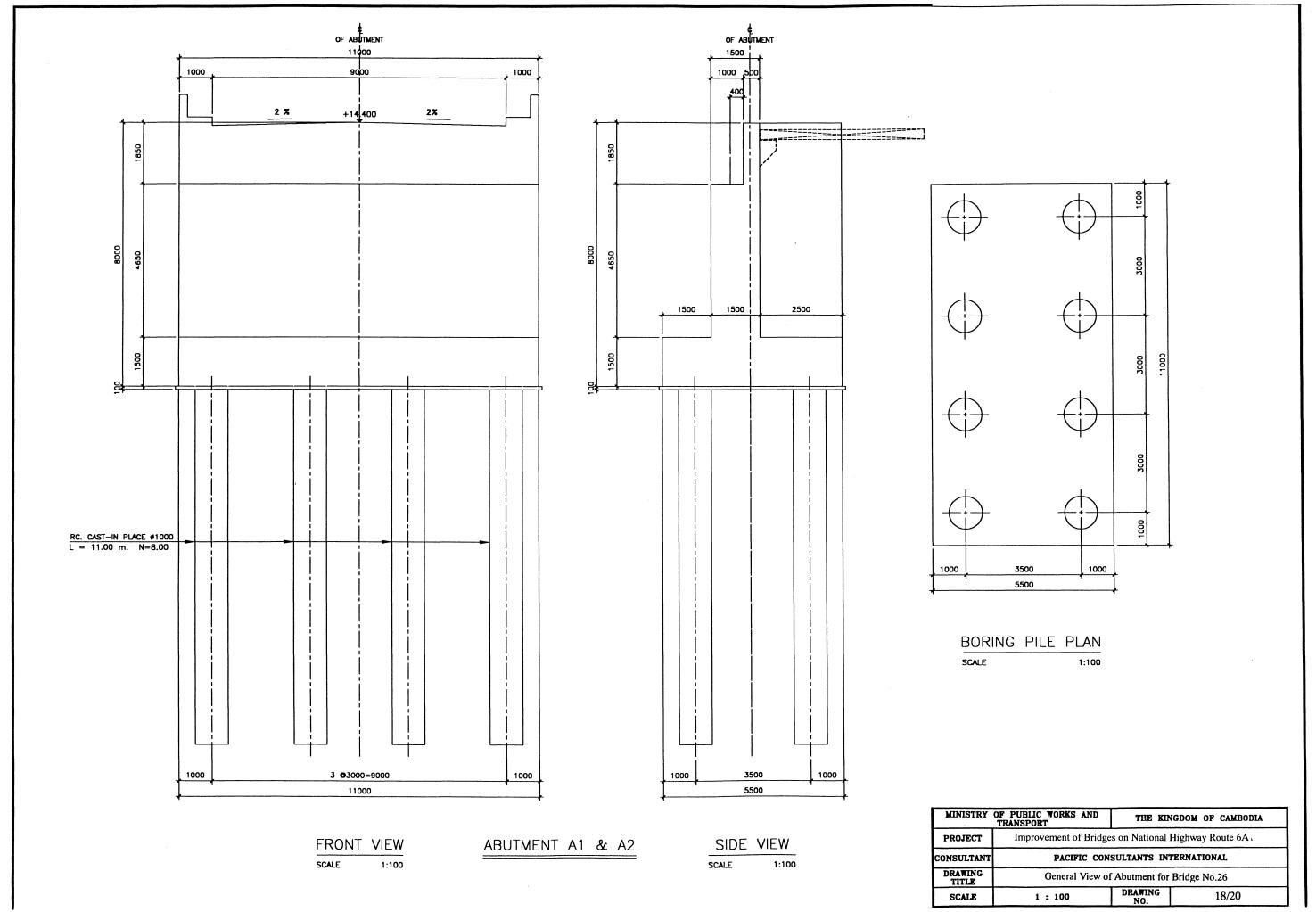


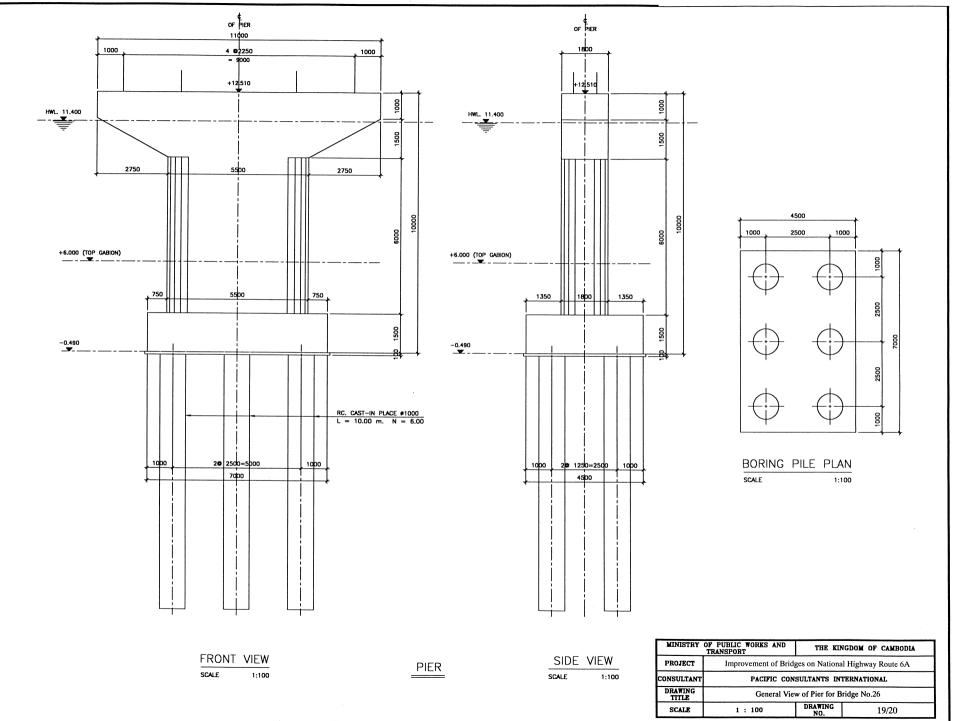


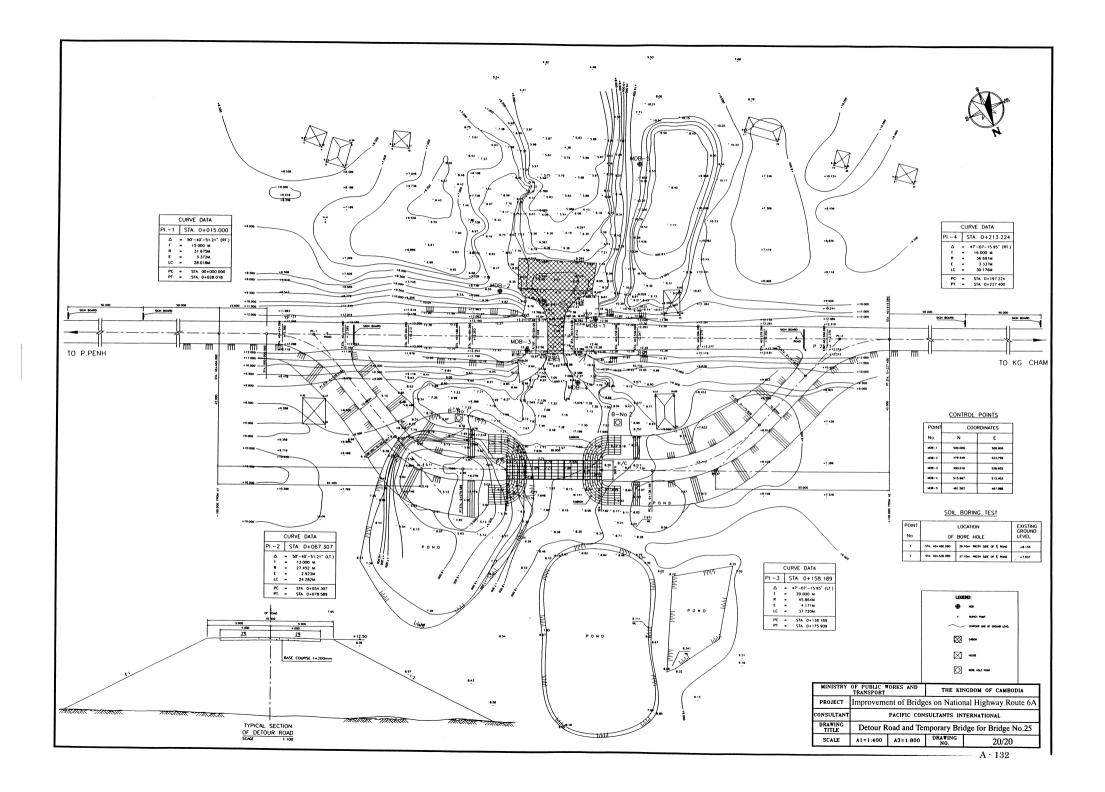












6-6. Data Collection

List of Data Collection

ı								_
Sou	Area South-east Asia				Basic Design Study		Collected By	
Ę	The Vinadom of	Name of the	Basic Design Study on the	- 17 J - F - 1	2000/01/16 - 2000/02/24			
=	Cambodia	Project E	Bridges on National Road 6A	Survey	2000/05/14 - 2000/05/24	Chiet	Mr. Yoshiaki Kaneko	
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Document Name	Cambodia Road Net Work Phnom Penh Oct.1998	Basic Design Report for Route No.6 &7	Detailed Design Drawings for Route No.6 & 7	Detailed Design Report for Mekong Bridge on Route No.7 (Design Condition)	Priority of National Road Restoration (Road Map of Grant Aid)	Basi Design Study for Route 6A Draft Final Report	Proposal for Mekong River	Construction Method for Route 6 and 7	Monthly Bullentin of Statistics		Price List from 01-01-1998 Building and Public Works Laboratory	Bridge No.26 of National Road Route 6A
No.	10	11	12	13	14	15	16	17	18	19	20	21

Published By	Ministry of Economy and Finance	National Assembly	MPWT	MPWT	MPWT	MPWT	Ministry of Environment	Ministry of Environment	Ministry of Planning	SMEC, ADB	SMEC, ADB
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-	Costoms Tariff 2000	Labor Code 1999	Aerial Photo 1992	Topographic Map 1965, 1/50,000	Geology Map Phnom penh 1/500,000	Cambodia Reconnaissance survey Digital Data			First Socioeconomic Development Plan 1996- 2000	Initial Environmental Examination and Social Impact Report	Economic Evaluation and Review of TRS
No.	22	23	24	25	26	27	28	29	30	31	32

Published By	The Royal Government of Cambodia	Ministry of Public Works and Transport, Public Works Reserch Center	Ministry of Water Resources and Meteorology	Ministry of Water Resources and Meteorology	Ministry of Water Resources and Meteorology	Ministry of Water Resources and Meteorology	Ministry of Water Resources and Meteorology	Ministry of Water Resources and Meteorology	Ministry of Public Works and Transport, Department of Waterways	Ministry of Public Works and Transport, Department of Waterways	Ministry of Public Works and Transport, Department of Waterways	Ministry of Water Resources and Meteorology
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Size	A4		A4	A4	A4	A 4	A 4	A4	A2 Long	A3 Long	A4 Long	A4
. Document Name	National Programme to Rehabilitate and Develop Feb.1994	Topo map s = 1:100,000	Daily and Monthly water level at Chruoy Changva, Kampong Cham, Prek Kdam, Bassac		Daily water level at Chruoy Changva, Kampong Cham, Prek Kdam, Bassac	Daily discharge at Chruoy Changva, Kampong Cham, Prek Kdam	Basic River at Phnom Penh (Station Description)	Water Level and H-Q curve at Speam Tras Year 1999 National Road No.6, 6A & No.24Br.	Hydraulic Atras Mekong River in Cambodia Volume 1, Mekong River from Cambodia / Viet Nam Border to Phnom Penh	Hydraulic Atras Mekong River in Cambodia Volume 2, Mekong River from Phnom Penh to Cambodia / Laos Border	Hydraulic Atras Mekong River in Cambodia Volume 3, Tonle Sap River from Phnom Penh to Tonle Sap Lake	Meteorological Data of Temperature, Relative Humidity, Wind Direction & Velocity, Rainfall at Phnom Penh, Kampong Cham, Pusat
No.	33	8	35	36	37	38	39	40	41	45	43	4