Bridge No.

Ą

88

16 Photo No. (~~ Code of authorit DRR Route name RAMA III Bridge Bridge name No. Authority from Khet Thon Buri 0 from km+ Place Survey date 2009/10/23 Distanc Khet Bang Kho Leam km+ 0 to to Bridge type(1) main road side road . ramp Camber deform ves · no ltem Type State Bridge type(2) bridge viaduct plank pass Difference in glade yes no Main girde PC-Box Generally healthy 3-span continuous PC box girder Bridge type(3) ontinuous of barrie Cross bea yes • no -Dronert i Total length 476.00 (m) Continuous of curve Stringer ves • no 125 + 226 + 125 (m) Noise Span ves · no Cross fram result dop Nos. of span Space change no 3 span ves · Lateral brac oint Ľ. 23.00 (m) / difference grade yes Width (m) Slab no damage Survey Completion 2000 draining damage ves no Abutment -Blocked drainage yes • no ę Pier Rectangular Out line Straight ) · Curve (R Crack of pavement no Horizontal • incli( = Bearing m) yes · 5 ) parabol ( 凸 凹 Gradient Damage of lighting yes . ) no Barrier One way ( informat Nearby tunnel Damage of sign no m ) Railing yes ( Nearby crossing Damage of handrail ves · no ves no ( m ) Curb Possibility of scou asphalt • concrete Generally healthy Traffic Much Medium • Little yes • no Pavement Road Commercial traffi Walkway yes • no drained undrained Much Mediur • Little Joint Vehicle yes · no Drainage ves · no lon 2.Suburbs 3.Mountain 1.Urban 4.Seaside way 5. Industrial 6.Harbor 7.Residential 8.Bussiness Envi 9.Salty 10.Cold and snow 11.Heavy snow 12.0thers · Hole for fixing of formwork of pier was not filled by mortar nspect ion i d New bridge 1.Shinkansen 2.Railway 3.Highway 4.Road þ 5.River 6.Lake 7.Ravine 8.Valley mpressions Unde r 9.Waterway 10.Parking 11.Bike parkin 12.Park 13.Vacant 14.Harbor Chao Phrava Name 1.Inspection car2.Falsework 3.On ground 4.Ladder 5.Lift car Superstructure 6.0n boat 7.Special camera 8.Others( about 34m Height of girde nethod I.Inspection car2.Falsework 3.On ground 4.Ladder 5.Lift car Deterioration of bridge Substructure 0.0n boat 7.Special camera 8.Others( deficient · fair · good nosis • All bridge section is on the water Noticeable point istory of repair agn · If inspection car is not available, false work Survey from boat Repaint; Reason - yy - mm will be required D Mr,Chujo, Mr.Kudo Surveyor ;

Append

Prese	nt state ( 1	/2)			
Authority	DRR	Address	Bangkok	Data	31-0ct-09
Bridge	Rama 3				

	Picture No.	1
	Span	1
and the second s	Member	Side view
The state of the second		
and the second s		
and the second se		
A DECEMBER OF THE OWNER		
	Picture No.	2
	Span	1
	Member	View under girder
		troit under grider
	Dicture No.	0
	Span	1
	Member	View of nier
	Member	
BOOK STORE I TO	1	

Prese	nt state ( 2	2/2)			
Authority	DRR	Address	Bangkok	Data	31-0ct-09
Bridge	Rama 3				

	Picture No.	4
The state of the s	Span	1
	Member	Pier
	Unfilled ho	le
	Distant No.	
	Spop	5
	Span Member	Girder
	Member	onder
	Unfilled ho	le
	Picture No.	6
	Span	1
	Member	

Br	idg	je No.	Ins	pec	ction	n shee	t of	vi	sual	survey		_	Photo No.	( ~	Appena
	Bri	idge name	Krung Thep Bridge	Rou	ute name	-		Auth	ority	DRR		Code of authority No.		-	
	PI	lace from Kh to Kh	net Thon Buri net Bang Kho Leam	Dista	from to	km+ km+	0					Survey date	20	009/10/23	
A - 101		Bridge type(1 Bridge type(2 Bridge type(3 Total length Span Nos. of span Width Completion Horizontal Gradient	) <u>main road</u> · side road · ramp ) <u>bridge</u> · viaduct · plank pass ) <u>5-span steel truss</u> 316.00 (m) 64 + 64 + 60 + 64 + 64 (m) 5 span 12.00 (m) / (m) 1959 <u>Straight</u> · incli( = 1.7 %) (R m) One way ( · ) parabol ( 凸 · 3.45% )	Survey result	Cambé Differer Continuou Continuou M diffe drai Blocke Crack o Damage	er deform nce in glade us of barrie bus of curve loise ace change erence grade ning damage d drainage of pavement of lighting	yes         no           yes         no	utline of damage	ltem Main girder Cross beam Stringer Cross frame Lateral brace Slab Abutment Pier Bearing Barrier	Type Truss I section steel I section steel T section steel - - Oval Pin bearing Trapezoidal	Deterio - - - Fructur - Crack un Deterio General	ration of proofing e of botom side of nder bearing (appr ration of proofing ly healthy	State 1, Reduce of th walkway, Crad oach bridge)	nickness at center ck of walkway,free	r sp
	בהעורמה Koad Intormation היאריים ביים ביים ביים ביים ביים ביים ביים	Nearby tunne Nearby crossin Traffic ommercial traff 1.Urban 5.Industrial 9.Salty	I       yes       no       (       m )         ng       yes       no       (       m )         Much       Medium       Little         fic       Much       Medium       Little         2.Suburbs       3.Mountain       4.Seaside         6.Harbor       7.Residential       8.Bussiness         10.Cold and snow       11.Heavy snow       12.Others	on way	Damage Damage Possibil Walkway Vehicle	e of sign of handrail ity of scour yes • no yes • no	- yes • no yes • no	0	Railing Curb Pavement Joint Drainage	Steel - asphalt • concrete drained • undraine yes • no g is renewd. But	General General Partly Blocked	ly healthy ly healthy leakage n of steel thickne	ss was seen at	connection part	
	d Under Drig	1.Shinkansen 5.River 9.Waterway 13.Vacant Superstructur	2.Railway       3.Highway       4.Road         6.Lake       7.Ravine       8.Valley         10.Parking       11.Bike parkin       12.Park         14.Harbor       Name (       Chao Phraya ))         e       1.Inspection car       2.Falsework 3.0n ground 4.Ladder 5.Lift car         6.0n boat       7.Special camera 8.0thers(       )	Inspect ic	Height of	girde ;	about 7.5m	Impressions	and con • Rust wa • Crack(	crete slab. as seen over paint 0.8mm on top) and	, it migh flacture	nt insufficinet of of concrete was s	scraping befo een on slab of	pre paint. walkway	
	ACCESS METNO	Substructure Reason	1.Inspection car       2.Falsework 3.0n ground 4.Ladder 5.Lift car         6.0n boat       7.Special camera 8.0thers()         • All bridge section is on the water         • If inspection car is not available, false work         will be required	Diagnosis	Deter <sub>deficie</sub> Notic • Corros • Breaki	ioration of b nt fair eable point sion of vert ng of slab	oridge <sup>good</sup> ical membe		listory o Surve	f repair ; ·· Counter eyor ; Mr,Chujo	mesure w Mr.Kudo	as planed by ODA a	at 1982 Repaint ;	- уу -	mm

Prese	nt state ( 1	/ 16 )			
Authority	DRR	Address	Bangkok	Data	23-0ct-09
Bridge	Krung Thep Bridg	je			



Present state ( 2 / 16 )					
Authority	DRR	Address	Bangkok	Data	23-0ct-09
Bridge	Krung Thep Bridg	je			

	Picture No.	4
	Span	1
	Member	Side view of side spar
A CONTRACTOR OF		
		1
	Picture No.	5
	Span	1
	Member	Side view of center sp
and the second		
The second s		
a transformer and the second		
and the second se		
11日 11日の「「11日」では、11日に、11日に、11日に、11日に、11日に、11日に、11日に、11日		
	Picture No.	6
	Span	1
	Member	View of walkway
PALL TO A		

Prese	nt state ( 3	/ 16 )			
Authority	DRR	Address	Bangkok	Data	23-0ct-09
Bridge	Krung Thep Bridg	je			

	Picture No.	7
	Span	1
ALC: ALC: ALC: ALC: ALC: ALC: ALC: ALC:	Member	Approach bridge
	Limit vehic	cle height 2.3m
and the second se		
TIMMAN		
	Picture No.	8
	Span	1 Francisco inico
	Member	Expansion joint
a state and the state of the st		
The second se		
The second se		
and the second sec		
	Picture No	9
	Span	1
	Member	Expansion joint
	Deteriorati	on of drainage function
and the second se		
A BUT I THE THE T		
· · · ·		
Burger and a second and		

Present state ( 4 / 16 )						
Authority	DRR	Address	Bangkok	Data	23-0ct-09	
Bridge	Krung Thep Bridge					

Picture No.	10
Span	1
Member	Expansion joint
Height adju	stment around joint
Picture No.	11
Span	1
Member	Bearing
Locker bear	ing, Approach bridge
Picture No.	12
Span	1
Member	Expansion joint
Fracture of locker bear	concrete edge of ing
Falling of	water proofing materia

Prese	nt state ( 5	5 / 16 <b>)</b>			
Authority	DRR	Address	Bangkok	Data	23-0ct-09
Bridge	Krung Thep Brido	ge			

	Picture No.	13
	Span	1
	Member	Water supply
	Water suppl	y was removed
	Picture No.	14
	Span	1
	Member	Center span
	Rotation ce	enter of drawbridge
	Picture No.	15
	Span	1 Contor area
	Member	Center span
	Hinge part	
	Continuous	vibration
	It is impor	tant to check fatigue
	crack arour	d rotation center.
A CONTRACT OF A		
the per per man the second		
	1	

Prese	nt state ( 6	/ 16)			
Authority	DRR	Address	Bangkok	Data	23-0ct-09
Bridge	Krung Thep Bridg	je			

Picture No.	16
Span	1
Member	Stay cable
Hinge of dr	awbridge
Mechanical	parts is replaced ever
2 years.	
Picture No.	17
Span	1
Member	Vertical member
Mount up or	ound vortical mombar
to prevent	remaining water
	10
Snan	1
Member	Vertical member
Deteriorati	on of calking in gap

Prese	nt state ( 7	/ 16)			
Authority	DRR	Address	Bangkok	Data	23-0ct-09
Bridge	Krung Thep Brido	je			

Picture No.	19
Span	1
Member	Vertical member
Deteriorati	on of calking.
Picture No.	20
Span	1
Member	Chord member
Mark of rep repair by b	paired (bottom of pictu polt.
Picture No.	21
Span Member	slab
Fracture of adjustment	mortar for height

Prese	nt state ( 8	/ 16)			
Authority	DRR	Address	Bangkok	Data	23-0ct-09
Bridge	Krung Thep Bridg	je			

	Picture No.	22
	Span	1
and the second	Member	Center span
and the second	Fracture of	mortar for height
	adjustment	mortar for horght
The second secon		
and the second sec		
an apply to the second in the second		
Condit 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
Fill and the second		
	Picture No.	23
	Span	1
	Member	Center span
	Manufacture	ed by plasticity deform
	Picture No.	24
	Span Member	1 Center span
	weinder	venter span
	Continuous	vibration
	Painting is	s not
	塗装が完全で	ではない
all the the the		

Prese	nt state ( 9	/ 16)			
Authority	DRR	Address	Bangkok	Data	23-0ct-09
Bridge	Krung Thep Bridg	je			

	Picture No.	25
	Span	1
	Member	Center span
	Over coatin	g is not painted
	lower side	of flange.
		22
	PICTURE NO.	26
the second s	Span Mombor	Center span
	Member	benter span
	Middle spli	ce plate is divided in
	2 plate.	
19-91-92 Inc. 100-01		
	Picture No.	27
	Span	1
	Member	Center span
	Reduction o	of plate thickness of
the second se	steel plate	
and the second		
and the second		
and the second		
the second s		
and the second		
Second and the second s		

Preser	nt state (10	) / 16 <b>)</b>			
Authority	DRR	Address	Bangkok	Data	23-0ct-09
Bridge	Krung Thep Bridg	je			
Authority Bridge	DRR Krung Thep Bridg	Address je	Bangkok	Data	23-0

	Picture No.	28
	Span	1
	Member	Center span
		Г I
	Reduction of	of plate thickness of
	steel plate	).
1 Tenter in the second s	There is no	remaining water
The Carlot of the second		
A second s		
	Picture No.	29
*******	Span	1
	Member	Center span
A CONTRACTOR OF A CONTRACTOR O		
*******	Dirt line i	s seen at bottom of we
	Possibility	of remaining water an
	soil	
A DECIMAL OF THE REAL PROPERTY		
	Picture No.	30
	Span	1
	Member	Center span
	Difference	at center joint
A REAL AND A		
the second second second second		
A A A A A A A A A A A A A A A A A A A		
AND THE REAL PROPERTY AND		

Prese	nt state (1 <sup>-</sup>	1 / 16 )			
Authority	DRR	Address	Bangkok	Data	23-0ct-09
Bridge	Krung Thep Brid	je			

	Picture No.	31
	Span	1
	Member	Center span
e.	Manhala	
A	Mannole	
S. S.	lost of bol	t
	No key	
A S A S A S A S A S A S A S A S A S A S		
	Picture No.	32
	Span	1
	Member	Center span
	_	
	Door to acc	ess to center joint
a last and a set of the		
A Providence of the second sec		
the second se		
	Picture No.	33
<ul> <li>A state of the sta</li></ul>	Span	1
	Member	Center span
	Rust from p	painting part
	Possibility	of insuficient
The second se	of scraping	before painting
The Bearing		
No. of the second se		
and a state of the		

Prese	nt state (12	2 / 16 )			
Authority	DRR	Address	Bangkok	Data	23-0ct-09
Bridge	Krung Thep Bridg	ge			

	Picture No.	34
	Span	1
	Member	Center span
		· · ·
	Around cent	er joint
24	Change from	revet to bolt
	Mark of rem	arkable corrosion
	Rust from p	painting part
	•	
The second se	Possibility	of insuficient
	of scraping	before painting
and the second sec		· · · · ·
	Picture No.	35
	Span	1
	Member	Center span
	Deflection	between vertical
	member?	
A start of the sta		
grand and have a second		
Payment for the second second second		
and the second s		
	Picture No.	36
the state of the second s	Span	1
	Member	Center span
	Inclination	of locker bearing
	Bangkok sic	le
and the second s		
A REAL PROPERTY AND A REAL		

Preser	nt state (13	3/16)			
Authority	DRR	Address	Bangkok	Data	23-0ct-09
Bridge	Krung Thep Bridg	je			

	Picture No.	37
	Span	1
	Member	Vertical member
BALLIGO	Reinforceme	ent by additional plate
	Picture No.	38
	Span	1
	Member	Approach bridge
	Exfoliation	1
No service and the service of the se		
and the state with the set		
Real Provide State		
	Picture No.	39
	Span	1
	Member	Approach bridge
	Remaining w	vater at shoe
and the second s		
and the second s		
and the second se		
and the second state of th		

Preser	nt state (	14 / 16 )			
Authority	DRR	Address	Bangkok	Data	23-0ct-09
Bridge	Krung Thep B	ridge		-	
		Photo and the second	P	icture No.	40
		C. Spiller Let		Span	1
1.10	PARTY PARTY			Member	Approach bridge
19	100				
F. L	Talk 1	and the second	C	rack under	bearing
P	the second second				
and the	Phan I among		Dan Starting	eterioratio	on of load capacity
- Intr	ALL AND AL				

	Picture No.	41
	Span	1
	Member	Drainage
He have a stranger of the stranger of the		
and the second second		
	Picture No.	42
	Span	1



Member

Prese	nt state (1	5 / 16 )			
Authority	DRR	Address	Bangkok	Data	23-0ct-09
Bridge	Krung Thep Bridg	ge			

Picture No.	43
Span	1
Member	Slab
Fracture of	slab on bracket board, 31-oct
Picture No	44
Span	4
Member	Slab
Crack	
Free lime	
*Survey on	board, 31-oct
Picture No.	45
Span	3
Member	Slab
Center spar	1
*Survey on	board, 31-oct

Prese	nt state (16	6 / 16 )			
Authority	DRR	Address	Bangkok	Data	23-0ct-09
Bridge	Krung Thep Bridg	je			

Picture No.	46
Span	1
Member	Bearing
Deteriorati	on of corrosion proofi
*Survey on	board, 31-oct
Picture No.	47
Span	1
Member	
Dioturo No	40
Snan	40
Member	I

Bridg	ge No.	Ins	pec	tion	shee	t of	vi	sual	survey			Photo No. ( ~	)
Bri	idge name	RAMA IX Bridge	Rou	te name	-		Auth	ority	EXAT		Code of authority No.	y - -	
PI	lace fromK	het Rat Burana het Yan Nawa	Dista	nce from to	km+ km+	0 0		Mr.F	Pittaya, Mr.Yadpong		Survey date	26-0ct-2009	
information Bridge properties	Bridge type( Bridge type( Bridge type( Total length Span Nos. of span Width Completion Horizontal Gradient Nearby tunne Nearby crossi	1) main road · side road · ramp         2) bridge · viaduct · plank pass         33) 7-span steel box girder cable stayed bridge         n       781.20 (m)         8 + 57.6 + 61.2 + 450 + 61.2 + 57.6 + 46.8 (m)         n       7 span         33.00 (m) / (m)         1987         Straight · incli( = 2.5 %) · curve(R m)         One way ( · ) parabol ( 凸 · 凹 )         I yes · no ( m)         n	Survey result	Cambe Differen ontinuou Continuo M Spa diffe drair Blocked Crack o Damage o Damage o	r deform ce in glade s of barrie us of curve oise ce change rence grade ing damage d drainage f pavement of lighting e of sign of handrail	yes         ·         no           yes         ·         no	Outline of damage	Item Main girder Cross beam Stringer Cross frame Lateral brack Slab Abutment Pier Bearing Barrier Railing Curb	Type Steel box girderr truss - - - Rectangular Link bearing Steel Steel -	Under ro Mark of - - - General - General General General	einforcement of U MT Iy healthy Iy healthy Iy healthy	State J-rib	
Access method Under bridg Environ Road	1.Urban 5.Industria 9.Salty 1.Shinkansen 5.River 9.Waterway 13.Vacant Superstructure Reason	Much · Medium · Little         fic       Much · Medium · Little         2.Suburbs       3.Mountain       4.Seaside         6.Harbor       7.Residential       8.Bussiness         10.Cold and snow       11.Heavy snow       12.Others         2.Railway       3.Highway       4.Road         6.Lake       7.Ravine       8.Valley         10.Parking       11.Bike parkin       12.Park         14.Harbor       Name (       Chao Phraya       )         re       6.On boat       7.Special camera       8.Others(       Inspection vehicle )         1.Inspection car       2.Falsework       3.On ground 4.Ladder       5.Lift car         6.On boat       7.Special camera       8.Others(       Inspection vehicle )         •       1.Inspection car       2.Falsework       3.On ground 4.Ladder       5.Lift car         6.On boat       7.Special camera       8.Others(       Inspection vehicle )       •         •       False work might be prepared for pylon       •       •       Inspection vehicle is set on center and side spa	Diagnosis Inspection way	Vehicle Vehicle Height of g Deteri deficien Notic • Under	yes • no yes • no yes • no girde oration of b t • fair • eable point repairing w	about 45m	Impressions	<ul> <li>Pavement</li> <li>Joint</li> <li>Drainage</li> <li>10year</li> <li>Evalua</li> <li>Cable</li> <li>Reinfo</li> <li>Replac</li> <li>Paveme</li> <li>History</li> </ul>	drained Indrained drained Indrained yes no inspection was con- tion program by Chu- and pylon was repa- rcement of U-rib by e of expansion join nt was replaced to of repair	Just re Just re npleted of ulalongko inted and CERT it 'jonmix'	placed on 2003 orn Univ. Jan2005 d girder is repain tested by insti	to Mar.2009. nting using inspection veh tute of DOH at 2005 Repaint ;	icle yy - mm

Prese	nt state ( 1	/9)			
Authority	EXAT	Address	Bangkok	Data	26-0ct-09
Bridge	RAMA IX Bridge				

Picture No.	1
Span	1
 Member	Side view
*Survey on	board, 31-oct
Picture No	2
Span	1
Member	View on road
	2
Picture No.	3
Span	1 View of correction
*Survey on	board, 31-oct

Prese	nt state ( 2	:/9 <b>)</b>			
Authority	EXAT	Address	Bangkok	Data	26-0ct-09
Bridge	RAMA IX Bridge				

	Picture No.	4
	Span	1
	Member	View under bridge
A DESCRIPTION OF THE OWNER OWNER OF THE OWNER OWNER OF THE OWNER OWNE	Under repai	nting using inspection
	venicie	
	*Survey on	board, 31-oct
	Picture No.	5
	Span	1
	Member	Inspection way
	Picture No.	6
	Span	1
	Member	View of pier
Contraction of the second s	1 inspectio	on vehicle apply for
	all side sp	Dan.
	Numbers of	vehicles are 3
		יכווונוכס מול ט.
and the second s		
and the second		

Prese	nt state ( 3	/9 <b>)</b>			
Authority	EXAT	Address	Bangkok	Data	26-0ct-09
Bridge	RAMA IX Bridge				

	Picture No.	7
	Span	1
	Member	Inspection vehicle
	Preparing w	ork for painting?
INT.		
	Picture No.	8
	Span	1
	Member	Pylon
	Bottom flar	nge is repainted.
	Shirinkage	crack is seen in pier.
THE PARTY		
	Picture No.	9
· · · · · · · · · · · · · · · · · · ·	Span	1
The surgest and the surgestion and the surgestion and the surgestion and	Member	Bottom flange
3 332233C 101111	Deteriorati	on of corrosion proofi
やうかく こうてい くうかん		
我们的 手引 二百一 4 3 2 3		
金田 新闻主题 白田 山美子 開業		
法国现货工作的职责 目的 太阳系。		
· · · · · · · · · · · · · · · · · · ·		
SALL SKALL THE REAL REAL REAL		
THE STATE IS THE TOP TO		
1 Langer and 13 - 32 1 or		
3 3 m R 8 21 2 m 1 10 1 m		
A DECEMBER OF THE PARTY OF THE		

Presen	t state (	4/9)			
Authority	EXAT	Address	Bangkok	Data	26-0ct-09
Bridge	RAMA IX Brid	ge			
			P	icture No.	10
				Span	1 Evenesion isint
				Member	Expansion joint
			R	eplaced on	0ct-2009
				nly surfac	e plate was replaced
1///	HTT			icture No.	11
200			(e)	Span	1
-0		-		Member	Cable
			R	ocked coil	cable.
				utside was	repainted.
		in the			
			P	icture No.	12
1 1		1 C		Span	1
0	-	1	4	Member	Cable damper
	R. B. A. M. B.				
	4 100	A			

4

4

Presen	t state (	5/9)			
Authority	EXAT	Address	Bangkok	Data	26-0ct-09
Bridge	RAMA IX Bridge				
<b>.</b>					
			P	Picture No.	7
	110	The a		Span	1
			HE CONTRACT	Member	Drainage
				Guide of rain	n water
				Picture No. Span Member	8 1 Manhole
				Picture No. Span Member	9 1 Walkway in girder

Prese	nt state ( 6	;/9 <b>)</b>			
Authority	EXAT	Address	Bangkok	Data	26-0ct-09
Bridge	RAMA IX Bridge				

	Picture No.	10
	Span	1
A second s	Member	Diaphragm
	Mark of MT	inspedction
	Picture No	11
	Span	1
	Member	Bottom flange
	Reinforceme	ent by CFRT
and the second		
	Picture No.	12
	Span Member	slab
and the second		5100
	Mark of def	ormation of member
	Axial stres	s is small at span cer
	Normaly, fa	ar from yield stress.
	It's not cl	ear the deformation
		cement at this survey.
and the second s		
00 00		
00 00		

Prese	nt state ( 7	′/9 <b>)</b>			
Authority	EXAT	Address	Bangkok	Data	26-0ct-09
Bridge	RAMA IX Bridge				

	Picture No.	13
	Span	1
	Member	Senser
	Temperature	sensor
X X		
201		
125 1 2 3 3 3 3 1		
	Picture No.	14
	Span	1
	Member	Sensor
	Strain gaug	е
		45
	Picture No.	15
	Span	1 Senser
	Member	Sensor
	Acceleromet	or
	Accereromet	
1 4 Grand 14		

Prese	nt state ( 8	/9 <b>)</b>			
Authority	EXAT	Address	Bangkok	Data	26-0ct-09
Bridge	RAMA IX Bridge				

	Picture No.	16
	Span	1
	Member	Girder damper
	4-damper in	n girder
		47
	Spop	1
	Member	I Pavement
		i avonorit
	All layer o	of pavement was replace
	at 2005	
And the second se		
	Picture No.	18
	Span	1
	Member	slab

Prese	nt state ( 9	/9)			
Authority	EXAT	Address	Bangkok	Data	26-0ct-09
Bridge	RAMA IX Bridge				

Picture No.	13
Span	1
Member	Meeting
Member	meeting
Picture No.	14
Span	1
Member	
Picture No.	15
Span	1
Member	

Bridge No. 19 Inspection sheet of visual survey Photo No. ( ~ )															
	Bri	idge name	Industrial Ring Road North Bridge	Ro	ute name	-		Auth	ority	DRR		Code of authority No.		-	
	ΡI	ace from Ke	et Yan Nawa nphoe Phra Pradaeng	Dist	ance from to	km+ km+	0					Survey date	22	-0ct-2009	
A_ 010	Information Bridge properties	Bridge type(1 Bridge type(2 Bridge type(3 Total length Span Nos. of span Width Completion Horizontal Gradient Nearby tunne Nearby tunne	) main road · side road · ramp ) bridge · viaduct · plank pass 5-span composite I girder cable stayed bridge 5-span	Survey result	Cambe Differen ontinuou Continuou Continuou N y diffe drain Blocked Crack o Damage o	r deform ce in glade s of barrie us of curve oise ce change rence grade ning damage d drainage f pavement of lighting e of sign	yes         no           yes         no	Outline of damage	Item Main girder Cross beam Stringer Cross frame Lateral brace Slab Abutment Pier Bearing Barrier Railing Curb	Type Composite I girde I section steel - - - Rectangular Fix at pylon Trapezoidal, stee Stainless -	- - - Crack a - Crack a - Crack a - General General	round fixing struc round cross beam <b>Iy healthy</b> Iy healthy	State	me	
	Under bridgenvironne Road	ommercial traf	indiant       indiant       indiant         fic       Much       Medium       Little         2.Suburbs       3.Mountain       4.Seaside         6.Harbor       7.Residential       8.Bussiness         10.Cold and snow       11.Heavy snow       12.Others         2.Railway       3.Highway       4.Road         6.Lake       7.Ravine       8.Valley         10.Parking       11.Bike parkin       12.Park         14.Harbor       Name (Chao Phraya))       1.Inspection car	Inspect ion way	Vehicle	ves · no		pressions	Joint     Drainage     Occurr     Crack     especi     Improv	drained undrained yes no ence of sound of in is seen in pylon a ally in the case o ement around fixin	npact and round cro f increas	nce of sound of in d jumping by heavy pss beam end. It i sing the defect af ure is recommended	vehicle at a s required de ter completion	t expansion joint tailed investigat 1.	t tion.
A second s	Access method	Superstructur Substructure Reason	e 6.0n boat 7.Special camera 8.0thers( Inspection vehicle ) 1.Inspection car2.Falsework 3.0n ground 4.Ladder 5.Lift car 6.0n boat 7.Special camera 8.0thers( Inspection vehicle ) • False work should be prepared for side span and	Diagnosis	Height of y Deteri deficien Notic • Crack • Crack	girde oration of b t · fair · eable point around pylo around fixi	about 55r pridge good n ng structi		listory o Surve	f repair ; eyor ; Mr,Chujo,	Mr.Kudo		Repaint	; - уу -	- mm

Prese	nt state ( 1	/ 14 )				
Authority	DRR	Address	Bangkok	Data	22-0ct-09	
Bridge	Industrial Ring Road Bridge (North)					

	Picture No.	1
	Span	1
	Member	Side view
- Table		
V V V		
The second s		
	* Survey on	board 21 oot
	Survey on	DOATU, 31-0CT
	Picture No.	2
	Span	2
	Member	View on road
A /		
	Picture No.	3
	Span	ی ۱
	Member	View of connection dir
	Member	view of connection gri
	*Survey on	board, 31-oct
AND DESCRIPTION OF THE OWNER OWNER OF THE OWNER OWNE		
	1	

Prese	nt state ( 2	/ 14 )				
Authority	DRR	Address	Bangkok	Data	22-0ct-09	
Bridge	Industrial Ring Road Bridge (North)					

Picture No.	4
Span	1
Member	View under bridge
*Survey on	board, 31-oct
Picture No.	5
Span	1
Member	Pylon
Diature M:	<u>_</u>
FICTURE NO.	0
Span	
wember	inspection way

Prese	nt state ( 3	/ 14 )					
Authority	DRR	Address	Bangkok	Data	22-0ct-09		
Bridge	Bridge Industrial Ring Road Bridge (North)						

	Picture No.	7
	Span	1
	Member	Cable fixing part
Les Contractions		
and a c c c c c c c c c c c c c c c c c c		
	Picture No.	8
	Span	1
	Member	Vertical alignment
	Saged verti	cal alignment
	Picture No.	Q
	Span	1
	Member	Vertical alignment
	Saged verti	cal alignment

Preser	nt state (4	/ 14 )			
Authority	DRR	Address	Bangkok	Data	22-0ct-09
Bridge Industrial Ring Road Bridge (North)					

	Picture No.	10
Value of the second sec	Span	1
	Member	Expansion joint
	South side. of grade	Adjustment of differe
	Picture No.	11
	Span	1
	Member	Expansion joint
	North side.	
	Occurrence	of sound of impact
	Jumping by	heavy vehicle
	Snan	12
	Member	Expansion joint
	Looseness o	of bolt
0000		
)		

Presei	nt state ( 5	/ 14 )			
Authority	DRR	Address	Bangkok	Data	22-0ct-09
Bridge Industrial Ring Road Bridge (North)					

	Picture No.	7
E CARACTER CONTRACTOR	Span	1
	Member	Expansion joint
	0	
		between main bridge an
	Tamp. NO SL	acting
sight work		
riproversion		
	Picture No.	8
	Span	1
	Member	Stay cable
All a Dich of the American		
	Picture No.	9
	Span	1
	Member	Stay cable
	Peeling of	projection material
	for cable v	vibration control

Preser	nt state ( 6	5 / 14 <b>)</b>			
Authority	DRR	Address	Bangkok	Data	22-0ct-09
Bridge Industrial Ring Road Bridge (North)					

	Picture No.	10
	Span	1
	Member	Stay cable
	ooze out of	grease
	Picture No.	11
	Span	Inspection vehicle
The A A HA		
and the state of t		
	Picture No.	12
	Span	1
the second se	Member	slab
	<u> </u>	
the second s	Crack from	cable fixing structure
i and and in	lt is strik	ing cables near pylon

Preser	nt state (7	/ 14 )			
Authority	DRR	Address	Bangkok	Data	22-0ct-09
Bridge Industrial Ring Road Bridge (North)					

	Picture No.	13
	Span	1
a set and a set and a set of the	Member	slab
( www. )		
	Crack from	cable fixing structure
	0 1mm ~ 0 2m	nm
《三部》 化力器	0.111111~0.21	111
	Picture No.	1/
and the second s	Snan	14
	Member	slab
and the second se	Crack from	cable fixing structure
and a first the second second second second		
and the second		
	Picture No.	15
	Span	1
	Member	slab
	Demoistre	10 to 1
	Remaining w	ater
and the second		
	1	

Prese	nt state ( 8	8 / 14 )			
Authority	DRR	Address	Bangkok	Data	22-0ct-09
Bridge Industrial Ring Road Bridge (North)					

	Picture No.	16
	Span	1
the second se	Member	slab
		soil at fixing struct
	Picture No.	17
	Snan	1
	Member	slab
	Accumulator	soil at fixing struct
	Picture No.	18
	Span	1
	Member	slab
	Remaining w	ater and
and the second sec	deteriorati	on of corrosion proofi
	1	

Prese	nt state ( 9	/ 14 )			
Authority	DRR	Address	Bangkok	Data	22-0ct-09
Bridge Industrial Ring Road Bridge (North)					

	Picture No.	13
	Span	1
	Member	slab
	Crack from	cable fixing structure
the second se	PC girder p	bart
a start and a start a start and a start a star		
	Picture No.	14
	Span	14
	Member	slab
	One els fram	and the finite structure
	Crack from	cable fixing structure
	0.1mm~0.15	ōmm
	PC girder p	part
	Picture No.	15
	Span Member	1 
		5160
	crack	
	PC girder p	part

Prese	nt state (10	) / 14 <b>)</b>							
Authority	DRR	Address	Bangkok	Data	22-0ct-09				
Bridge	dge Industrial Ring Road Bridge (North)								

Picture No. Span Member Peeling of	16 1 slab concrete
Picture No. Span Member Fixing stru Mold?	17 1 slab
Picture No. Span Member Remaining w	18 1 slab /ater

Presei	nt state (1 <sup>4</sup>	1 / 14 )							
Authority	DRR	Address	Bangkok	Data	22-0ct-09				
Bridge	Je Industrial Ring Road Bridge (North)								

	Picture No.	19
and the state of the second state of the secon	Span	1
and the second	Member	Pylon
1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	crack arour	nd cross beam end
Star		
the second		
and the second s		
and the second state of the		
and the second second		
	Diature N:	00
	Span	<u></u> 20 1
	Member	Pylon
		l y lon
and the second second second	crack arour	nd cross beam end
1 manual 1		
The state of the second s		
	Picture No.	21
	Span	1
	Member	Lighting
	Continuous	vibration of pole
	Doocihilit	u of fotique oracle
	POSSIDILITY	of fatigue crack

Prese	nt state (12	2 / 14 )							
Authority	DRR	Address	Bangkok Data 22-Oct						
Bridge	Industrial Ring Road Bridge (North)								

	Picture No.	22
the second secon	Span	1
	Member	Electric wire
The second s		
T		
and the second		
	Picture No.	23
	Span	1
	Member	Lighting pole
	Gap between	n base plate and founda
1003		
RI CONCE		
A Million K.		
and i fill the same the same		
	Picture No.	24
	Span	1
IPOD	Member	Lighting pole
	Gap between	n base plate and founda
A STATE PROPERTY AND A STATE OF A		
the new internet the second in the second		
The second se		

Prese	nt state (13	3 / 14 )							
Authority	DRR	Address	Bangkok	Data	22-0ct-09				
Bridge	Industrial Ring Road Bridge (North)								

	Picture No.	25
and an and the second of the s	Span	1
	Member	Newel
	Membe r	Newe I
	Picture No.	26
The second se	Span	1
	Member	Electric wire
		ver and looseness of bo
	Picture No.	27
	Span	

Prese	nt state (14	4 / 14 )							
Authority	DRR	Address	Bangkok	Data	22-0ct-09				
Bridge	Bridge Industrial Ring Road Bridge (North)								

	Picture No.	28
A A A A A A A A A A A A A A A A A A A	Span	1
	Member	
and the second of the second		
	North bridg	e- South pylon – cente
	crack	
and the second		
The Street of th	*SURVAN OD	board 31-oct
	ourvey on	
	Picture No.	29
	Span	1
	Member	
	North bridg	e – North pylon – cent
	crack	
	CTACK	
	*0	
	*Survey on	board, 31-oct
	Picture No.	30
	Span	1
	Member	
	North bridg	e – North pylon – cent
	orock	
	стаск	
and the second sec		
	*Survey on	board, 31-oct

Br	idge No.		20		Insp	e	ction	shee	t of	vi	sual	survey	/		Photo No.	( ~	)
	Bridge name		Industria	al Ring Road Sc	outh Bridge	Roi	ute name	-		Auth	ority	DRR		Code of authority No.	(	-	
	Place fro	om Bang o	gkok			Dista	ance from to	km+ km+	0					Survey date		22-0ct-2009	
	Bridge ty Bridge ty Bridge ty Total les Span Nos. of Width Complet Horizon Gradies	pe(1) pe(2) pe(3) ngth span ion tal nt	main road bridge 5-span com 68 35.9 - Straight • incli One way ( yes • no	<ul> <li>side road</li> <li>viaduct</li> <li>posite I girder cab</li> <li>3.6 + 83.5 + 398 + 8</li> <li>55.2 (m) /</li> <li>2006</li> <li>( = 2.5 %) • (m)</li> <li>( parabolic</li> </ul>	<ul> <li>ramp</li> <li>plank pass</li> <li>plank pass</li> <li>plank pass</li> <li>for a stayed bridge</li> <li>702.30 (m)</li> <li>33.5 + 68.6 (m)</li> <li>5 span</li> <li>(m)</li> </ul>	Survey result	Cambe Differen ontinuou Continuo V V diffe drair Blocked Crack o Damage o	r deform ce in glade s of barrie us of curve oise ce change rence grade ning damage d drainage f pavement of lighting	yes         no           yes         no	Outline of damage	Item Main girde Cross bear Stringer Cross fram Lateral brai Slab Abutment Pier Bearing Barrier Railing	Type Composite I g I section s - - Rectangula Fix at pyl Trapezoidal, Stainless	girder - teel - - - - - Crack a - Crack a - ar Crack a lon - steel General s General	around fixing structure around cross beam <b>Iy healthy</b> Iy healthy	State	lime	
ini Pood	Traffi Commercial 1 5 1.Urban 5 1.Industri	ic traffic	Much · 2.Suburbs 6.Harbor	Medium · Little Medium · Little 3.Mountain 7.Residential	, 4.Seaside 8.Bussiness	way	Possibili Walkway Vehicle	ty of scoul yes • no yes • no	yes · no		Pavement Joint Drainage	asphalt.con drained .undr yes.no	ncrete - rained -				
	9.Salty 1.Shinkans 5.River 9.Waterway 13.Vacant Superstrue	sen /	10.Cold and s 2.Railway 6.Lake 10.Parking 14.Harbor	snow 11.Heavy snow 3.Highway 7.Ravine 11.Bike parkin Name ( ( 2.Falsework 3.0n ground	12.0thers 4.Road 8.Valley 12.Park Chao Phraya ) 4.Ladder 5.Lift car	Inspect ion				Impressions	Crack     Improv     espec	is seen in pyl vement around f ially in the ca	lon around cro fixing structu ase of increa	oss beam end. It i ure is recommended sing the defect af	is required o	detailed invest	igation.
	Substruc Reaso	ture n	1.Inspection car 6.On boat 7.Spe • False work	2.Falsework 3.0n ground ecial camera 8.0thers( should be prepared	4.Ladder 5.Lift car Inspection vehicle ) for side span and p	Di agnos i s	Deteri deficien Notice • Crack	oration of b t · <u>fair</u> · eable point around pylo around fixi	about 55M ridge good n ng structu		listory Surv	of repair; reyor; Mr,C	Chujo, Mr.Kudc	)	Repain	t;	

Prese	nt state (1	/5)						
Authority	nority DRR		Bangkok	22-0ct-09				
Bridge	Industrial Ring Road Bridge (South)							

	Picture No.	1
	Span	1
	Member	Side view
No. and Sector		
The second se		
	*0	board 21 oot
	Survey on	DOATO, 31-OCT
+		
	Pictura No.	n
	Span	<u>۲</u>
the second se	Member	View on road
and the second	member	
a second land a second s		
	Dioturo No	0
	Span	ی ۱
	Member	View under girder
	Member	
PROPERTY AND A LONG		
7 The second sec		
and the second s	1	

Prese	nt state ( 2	/5)			
Authority	DRR	Address	Bangkok	Data	22-0ct-09
Bridge Industrial Ring Road Bridge (South)					

	Picture No.	4
	Span	1
	Member	Inspection way
and the second s		
	Picture No.	5
	Span	1
	Member	Inspection vehicle
- + / P Mar		
1994 IL IV		
	Picture No.	6
	Span	1
	Member	Inspection vehicle
all to a		

Presei	nt state ( 3	/ 5 <b>)</b>			
Authority	DRR	Address	Bangkok	Data	22-0ct-09
Bridge Industrial Ring Road Bridge (South)					

	Picture No.	7
and the second s	Span	1
The second s	Member	slab bottom surface
	Free lime f	rom filled hole
	Picture No.	8
	Span	1
	Member	slab
	Crack from	cable fixing structure
	Picture No.	9
the second se	Span Member	1 hottom slah
	Crack from	cable fixing structure
	0 15mm 0	3mm
	0.1500 - 0.	JIIIII
ビックス工法		
ロレドビジクス工法		
the second state of the se		

Presei	nt state (4	/5)			
Authority	DRR	Address	Bangkok	Data	22-0ct-09
Bridge Industrial Ring Road Bridge (South)					

	Picture No.	10
the second state of the second state of the	Span	1
the state of the second state of the	Member	bottom slab
and the second sec		
a second s	Back surfac	e of crack around fixi
the second s	Crack canno	ot find from inspection
A REAL PROPERTY AND A REAL	vehicle (ab	out 2m from eye height
A State by State of the state of the		
A REAL PROPERTY AND A REAL		
A COMPANY STATE OF THE AVER AN AVER AND A		
A REAL PROPERTY AND A REAL PROPERTY.		
the second second		
	Picture No.	11
	Span	1
the second	Member	Connection girder
a find some by	Incide of a	opposition girdor
And the second		onnection grider
South of the state	Harm of bir	ď
1 15 Mar Rest of the lot		
A CONTRACT OF A		
A A A A A A A A A A A A A A A A A A A		
and the first of the second		
	Picture No.	12
	Span	1 Dulon
	nemper	Pyton
	Vertical cr	ack at cross beam end
	Inclined cr	ack of pylon shaft
	Opening cor	struction joint

Prese	nt state ( 5	/5)			
Authority	DRR	Address	Bangkok	Data	22-0ct-09
Bridge Industrial Ring Road Bridge (South)					

	Picture No.	7
	Span	1
	Member	Pylon
	Vertical cr	ack of pylon shaft
	Possibility	of shirincade crack
	during cons	struction is high
	dur mg bone	in the might
	Picture No.	8
	Span	1
	Member	Pylon
		, , , , , , , , , , , , , , , , , , ,
	Crack	
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
	*Survey on	board, 31-oct
		2
	Spop	9
THE LOCAL DEVICE THE PROPERTY OF THE PROPERTY	Member	PC girder
	Moniber	ro grider
the state when the state when the state of t		
the second s		
the set of - of a state of a state of the		
THE REPORT OF THE PARTY OF THE		
	*Survey on	board, 31-oct
NOR ALL AND A REAL PROPERTY AND A REAL PROPERT		