1.5.7 Phra Pokklao

Span No. – 1

Inspecton result

		Span No.	-1

		Damages of steel members				Damages of concrete members						Others							Remarks
		Corrosion	Cracking	Missing bolts	Fracture	Cracking, Water leakage, Free lime	No.	Rebar exposure	Pop-outs	Deck cracking	Damages at anchorage of PC tender	Level difference of road surface	Functional damage of bearings	Damages in substructures	Damages in pavements	Damages in expansion joints	Damages in cable	
Girder	01					a		a			a								
	02					a		a			a								
Deck	01							a	a	a									
	02							a	a	a									
	03							a	a	a									
	04							a	a	a									
	05							a	a	a									
	06							a	a	a									
Pier	01					a		a											
	02					a		a											
Road surface												a							
Pavement															a				
Barriers Railings	01															a			
	02															a			
	03															a			
Expansion joints	01																a		
Others																			

Span No.-1

Countermeasure classification of members					Bridge name		007Phra Pokklao	Span No.		-1
Member	No.	Damage	Damage classification		Countermeasure classification	No.	Damage	Damage classification		Countermeasure classification
			Classification	Judge				Classification	Judge	
Girder	01	Cracking, Water leakage, Free lime	a	-	5	02	Cracking, Water leakage, Free lime	a	-	5
		Rebar exposure	a	-	5		Rebar exposure	a	-	5
		Damages at anchorage of PC tendon	a	-	5		Damages at anchorage of PC tendon	a	-	5
Deck	01	Rebar exposure	a		5	04	Rebar exposure	a		5
		Pop-outs	a		5		Pop-outs	a		5
		Deck cracking	a	N	5		Deck cracking	a	N	5
	03	Rebar exposure	a		5	06	Rebar exposure	a		5
		Pop-outs	a		5		Pop-outs	a		5
		Deck cracking	a	N	5		Deck cracking	a	N	5
Pier	01	Cracking, Water leakage, Free lime	a	-	5	02	Cracking, Water leakage, Free lime	a	-	5
		Rebar exposure	a	-	5		Rebar exposure	a	-	5
		Damages in substructures	a	-	5		Damages in substructures	a	-	5
Bearings	101	Functional damage of bearings	a		5	104	Functional damage of bearings	a		5
	102	Functional damage of bearings	a		5	105				
	103	Functional damage of bearings	a		5	106				
Road surface	01	Level difference of road surface	a		5	01	Damages in pavemnents	a		5
Barriers Railing	01	Damages in barriers	a		5	03	Damages in barriers	a		5
	02	Damages in barriers	a		5	04	Damages in barriers	a		5
Expansion joints	01	Damages in expansion joints	a		5	-	-	-	-	-

Estimation of repair quantity

Bridge name	007Phra Pokklao			Span No.	-1
	Subject		Quantity	Remarks	
1	Span length		30.90 m	Length of 1 span	
2	Road width for pavement		21.50 m	Width for pavement area (Vehicle lane)	
3	Total road width		26.40 m	Deck width	
4	Area of bridge surface		815.8 m^2	Span length x Total width	
5	Area of pavement		664.4 m^2	Span length x Width for pavement	
6	Barriers & railings	01	concrete	Type of barriers & railings	
		02	concrete	Same as above	
		03	concrete	Same as above	
		04	concrete	Same as above	
7	Expansion joints	01	steel	Type of expansion joint	
		-	-	Same as above	
8	Crack length		Quantity	Remarks	
	Total crack length L		32.6 m	A of bridge surf. x 0.040	
	Girder		16.3 m	L × 1/2 (per girder)	
9	Area of rebarb exposure		Quantity	Remarks	
	Total area A		6.5 m^2	A of bridge surf. x 0.008	
	Girder		3.3 m^2	L × 1/2 (per girder)	
10	Repaired area of deck		Quantity	Remarks	
	01,06 A		139.1 m^2	Deck width = 4.50 m	
	Area of rebarb exposure		1.4 m^2	A × 0.010	
	Area of deck cracking		7.0 m^2	A × 0.050	
	03,04 A		85.0 m^2	Deck width = 2.75 m	
	Area of rebarb exposure		0.8 m^2	A × 0.010	
	Area of deck cracking		4.2 m^2	A × 0.050	
11	Repair quanity of substructure		Quantity	Remarks	
	Cracking, Water leakage, Free lime		5.54 m	per substructure	
	Rebar exposure		2.24 m^2	per substructure	
12	Concrete barrier		Quantity	Remarks	
	Rebar exposure		3.26 m^2	A of bridge surf. x 0.004	

Approximate repair price for countermeasure

Bridge name	007Phra Pokklao				Span No.		-1									
Member	No.	Damage	Damage classification	Countermeasure classification	Repair method	Repair quantity	Unit	Approximate unit price (B)	Approximate repair price (B)	Approximate repair price for countermeasure classification 1 & 2 (B)	countermeasure classification 3		countermeasure classification 4		Planned repair & reconstruction	
											Repair price (B)	Remaining years up to counter measure cl. 2	Repair price (B)	Remaining years up to counter measure cl. 2	Repair price (B)	Life cycle
Girder	01	Cracking/Water leakage/Free lime	a	5	Resin injection	16.3	m	5,000	81,500	-	-	7	-	15	-	30
		Rebar exposure	a	5	Patching	3.3	m^2	17,500	57,800	-	-	7	-	15	57,800	30
		Damages at anchorage of PC tendon	a	5	Reinforcement with external PC tendon	-	Pos.	1,000,000	-	-	-	-	-	-	-	-
	02	Cracking/Water leakage/Free lime	a	5	Resin injection	16.3	m	5,000	81,500	-	-	7	-	15	-	30
		Rebar exposure	a	5	Patching	3.3	m^2	17,500	57,800	-	-	7	-	15	57,800	30
		Damages at anchorage of PC tendon	a	5	Reinforcement with external PC tendon	-	Pos.	1,000,000	-	-	-	-	-	-	-	-
Deck	01	Rebar exposure	a	5	Patching	1.4	m^2	17,500	24,500	-	-	7	-	15	-	30
		Pop-outs	a	5	Patching & CFR	-	Pos.	10,000	-	-	-	-	-	-	-	-
		Deck cracking	a	5	CFR	7.0	m^2	22,500	157,500	-	-	12	-	25	157,500	50
	03	Rebar exposure	a	5	Patching	0.8	m^2	17,500	14,000	-	-	7	-	15	-	30
		Pop-outs	a	5	Patching & CFR	-	Pos.	10,000	-	-	-	-	-	-	-	-
		Deck cracking	a	5	CFR	4.2	m^2	22,500	94,500	-	-	12	-	25	94,500	50
	04	Rebar exposure	a	5	Patching	0.8	m^2	17,500	14,000	-	-	7	-	15	-	30
		Pop-outs	a	5	Patching & CFR	-	Pos.	10,000	-	-	-	-	-	-	-	-
		Deck cracking	a	5	CFR	4.2	m^2	22,500	94,500	-	-	12	-	25	94,500	50
	06	Rebar exposure	a	5	Patching	1.4	m^2	17,500	24,500	-	-	7	-	15	-	30
		Pop-outs	a	5	Patching & CFR	-	Pos.	10,000	-	-	-	-	-	-	-	-
		Deck cracking	a	5	CFR	7.0	m^2	22,500	157,500	-	-	12	-	25	157,500	50
Pier	01	Cracking/Water leakage/Free lime	a	5	Resin injection	5.54	m	5,000	27,700	-	-	7	-	15	-	30
		Rebar exposure	a	5	Patching	2.24	m^2	17,500	39,200	-	-	7	-	15	39,200	30
		Damages in substructures	a	5	Foot protection	-	Pier	1,750,000	-	-	-	-	-	-	-	-
	02	Cracking/Water leakage/Free lime	a	5	Resin injection	5.54	m	5,000	27,700	-	-	7	-	15	-	30
		Rebar exposure	a	5	Patching	2.24	m^2	17,500	39,200	-	-	7	-	15	39,200	30
		Damages in substructures	a	5	Foot protection	-	Pier	1,750,000	-	-	-	-	-	-	-	-
Bearings	101	Functional damage of bearings	a	5	Metal spraying	1.0	Pier	120,000	120,000	-	-	7	-	15	120,000	30
	102	Functional damage of bearings	a	5	Metal spraying	1.0	〃	120,000	120,000	-	-	7	-	15	120,000	30
	103	Functional damage of bearings	a	5	Metal spraying	1.0	〃	120,000	120,000	-	-	7	-	15	120,000	30
	104	Functional damage of bearings	a	5	Metal spraying	1.0	〃	120,000	120,000	-	-	7	-	15	120,000	30
Road surface	01	Level difference of road surface	a	5	Pavement replacement	-	m^2	5,000	-	-	-	5	-	10	-	20
		Damages in pavements	a	5	same as above	664.4	〃	5,000	3,321,800	-	-	5	-	10	3,321,800	20
Barriers Railings	01	Damages in barriers	a	5	Patching	3.26	m^2	17,500	57,100	-	-	7	-	15	57,100	30
	02	Damages in barriers	a	5	Patching	3.26	m^2	17,500	57,100	-	-	7	-	15	57,100	30
	03	Damages in barriers	a	5	Patching	3.26	m^2	17,500	57,100	-	-	7	-	15	57,100	30
	04	Damages in barriers	a	5	Patching	3.26	m^2	17,500	57,100	-	-	7	-	15	57,100	30
Expansion joints	01	Damages in expansion joints	a	5	change of steel exp.	26.4	m	133,400	3,521,800	-	-	7	-	15	3,521,800	30

Span No.1

Inspecton result

		Span No.	1

		Damages of steel members				Damages of concrete members						Others							
		Corrosion	Cracking	Missing bolts	Fracture	Cracking, Water leakage, Free lime	No.	Rebar exposure	Pop-outs	Deck cracking	Damages at anchorage of PC tender	Level difference of road surface	Functional damage of bearings	Damages in substructures	Damages in pavements	Damages in expansion joints	Damages in cable	Remarks
Girder	01					c	4	a			a							
	02					c	4	a			a							
Deck	01							a	a	c								
	02							a	a	a								
	03							a	a	a								
	04							a	a	a								
	05							a	a	a								
	06							a	a	c								
Pier	01					a		a										
	02					a		a										
Road surface												c						
Pavement															c			
Barriers Railings	01															c		
	02															a		
	03															a		
	04															c		

Span No.1

Countermeasure classification of members

Bridge name	007Phra Pokklao	Span No.	1

Member	No.	Damage	Damage classification		Countermeasure classification	No.	Damage	Damage classification		Countermeasure classification
			Classification	Judge				Classification	Judge	
Girder	01	Cracking, Water leakage, Free lime	c	3	3	02	Cracking, Water leakage, Free lime	c	3	3
		Rebar exposure	a	-	5		Rebar exposure	a	-	5
		Damages at anchorage of PC tendon	a	-	5		Damages at anchorage of PC tendon	a	-	5
Deck	01	Rebar exposure	a		5	04	Rebar exposure	a		5
		Pop-outs	a		5		Pop-outs	a		5
		Deck cracking	c	-	3		Deck cracking	a	N	5
	03	Rebar exposure	a		5	06	Rebar exposure	a		5
		Pop-outs	a		5		Pop-outs	a		5
		Deck cracking	a	N	5		Deck cracking	c	-	3
Pier	01	Cracking, Water leakage, Free lime	a	-	5	02	Cracking, Water leakage, Free lime	a	-	5
		Rebar exposure	a	-	5		Rebar exposure	a	-	5
		Damages in substructures	a	-	5		Damages in substructures	a	-	5
Road surface	01	Level difference of road surface	c		4	01	Damages in pavemnents	e		2
Barriers Railing	01	Damages in barriers	c		2	03	Damages in barriers	a		5
	02	Damages in barriers	a		5	04	Damages in barriers	c		2

Estimation of repair quantity

Bridge name	007Phra Pokklao			Span No.	1
	Subject		Quantity	Remarks	
1	Span length		56.00 m	Length of 1 span	
2	Road width for pavement		21.50 m	Width for pavement area (Vehicle lane)	
3	Total road width		26.40 m	Deck width	
4	Area of bridge surface		1,478.4 m^2	Span length x Total width	
5	Area of pavement		1,204.0 m^2	Span length x Width for pavement	
6	Barriers & railings	01	concrete	Type of barriers & railings	
		02	concrete	Same as above	
		03	concrete	Same as above	
		04	concrete	Same as above	
7	Expansion joints	01	steel	Type of expansion joint	
		-	-	Same as above	
8	Crack length		Quantity	Remarks	
	Total crack length L		59.1 m	A of bridge surf. x 0.040	
	Girder		29.6 m	L × 1/2 (per girder)	
9	Area of rebarb exposure		Quantity	Remarks	
	Total area A		11.8 m^2	A of bridge surf. x 0.008	
	Girder		5.9 m^2	L × 1/2 (per girder)	
10	Repaired area of deck		Quantity	Remarks	
	01,06 A		252.0 m^2	Deck width = 4.50 m	
	Area of rebarb exposure		2.5 m^2	A × 0.010	
	Area of deck cracking		12.6 m^2	A × 0.050	
	03,04 A		154.0 m^2	Deck width = 2.75 m	
	Area of rebarb exposure		1.5 m^2	A × 0.010	
	Area of deck cracking		7.7 m^2	A × 0.050	
11	Repair quanity of substructure		Quantity	Remarks	
	Cracking, Water leakage, Free lime		5.54 m	per substructure	
	Rebar exposure		2.24 m^2	per substructure	
12	Concrete barrier		Quantity	Remarks	
	Rebar exposure		5.91 m^2	A of bridge surf. x 0.004	

Approximate repair price for countermeasure

Bridge name	007Phra Pokklao					Span No.		1								
Member	No.	Damage	Damage classification	Countermeasure classification	Repair method	Repair quantity	Unit	Approximate unit price (B)	Approximate repair price (B)	Approximate repair price for countermeasure classification 1 & 2 (B)	countermeasure classification 3		countermeasure classification 4		Planned repair & reconstruction	
											Repair price (B)	Remaining years up to counter measure cl. 2	Repair price (B)	Remaining years up to counter measure cl. 2	Repair price (B)	Life cycle
Girder	01	Cracking/Water leakage/Free lime	c	3	Resin injection	29.6	m	5,000	148,000	-	148,000	7	-	15	-	30
		Rebar exposure	a	5	Patching	5.9	m^2	17,500	103,300	-	-	7	-	15	103,300	30
		Damages at anchorage of PC tendon	a	5	Reinforcement with external PC tendon	-	Pos.	1,000,000	-	-	-	-	-	-	-	-
	02	Cracking/Water leakage/Free lime	c	3	Resin injection	29.6	m	5,000	148,000	-	148,000	7	-	15	-	30
		Rebar exposure	a	5	Patching	5.9	m^2	17,500	103,300	-	-	7	-	15	103,300	30
		Damages at anchorage of PC tendon	a	5	Reinforcement with external PC tendon	-	Pos.	1,000,000	-	-	-	-	-	-	-	-
Deck	01	Rebar exposure	a	5	Patching	2.5	m^2	17,500	43,800	-	-	7	-	15	-	30
		Pop-outs	a	5	Patching & CFR	-	Pos.	10,000	-	-	-	-	-	-	-	-
		Deck cracking	c	3	CFR	12.6	m^2	22,500	283,500	-	283,500	12	-	25	283,500	50
	03	Rebar exposure	a	5	Patching	1.5	m^2	17,500	26,300	-	-	7	-	15	-	30
		Pop-outs	a	5	Patching & CFR	-	Pos.	10,000	-	-	-	-	-	-	-	-
		Deck cracking	a	5	CFR	7.7	m^2	22,500	173,300	-	-	12	-	25	173,300	50
	04	Rebar exposure	a	5	Patching	1.5	m^2	17,500	26,300	-	-	7	-	15	-	30
		Pop-outs	a	5	Patching & CFR	-	Pos.	10,000	-	-	-	-	-	-	-	-
		Deck cracking	a	5	CFR	7.7	m^2	22,500	173,300	-	-	12	-	25	173,300	50
	06	Rebar exposure	a	5	Patching	2.5	m^2	17,500	43,800	-	-	7	-	15	-	30
		Pop-outs	a	5	Patching & CFR	-	Pos.	10,000	-	-	-	-	-	-	-	-
		Deck cracking	c	3	CFR	12.6	m^2	22,500	283,500	-	283,500	12	-	25	283,500	50
Pier	01	Cracking/Water leakage/Free lime	a	5	Resin injection	5.54	m	5,000	27,700	-	-	7	-	15	-	30
		Rebar exposure	a	5	Patching	2.24	m^2	17,500	39,200	-	-	7	-	15	39,200	30
		Damages in substructures	a	5	Foot protection	-	Pier	1,750,000	-	-	-	-	-	-	-	-
	02	Cracking/Water leakage/Free lime	a	5	Resin injection	5.54	m	5,000	27,700	-	-	7	-	15	-	30
		Rebar exposure	a	5	Patching	2.24	m^2	17,500	39,200	-	-	7	-	15	39,200	30
		Damages in substructures	a	5	Foot protection	-	Pier	1,750,000	-	-	-	-	-	-	-	-
Road surface	01	Level difference of road surface	c	4	Pavement replacement	-	m^2	5,000	-	-	-	5	-	10	-	20
		Damages in pavements	e	2	same as above	1,204.0	〃	5,000	6,020,000	6,020,000	-	5	-	10	6,020,000	20
Barriers Railings	01	Damages in barriers	c	2	Patching	5.91	m^2	17,500	103,500	103,500	-	7	-	15	103,500	30
	02	Damages in barriers	a	5	Patching	5.91	m^2	17,500	103,500	-	-	7	-	15	103,500	30
	03	Damages in barriers	a	5	Patching	5.91	m^2	17,500	103,500	-	-	7	-	15	103,500	30
	04	Damages in barriers	c	2	Patching	5.91	m^2	17,500	103,500	103,500	-	7	-	15	103,500	30

Span No.2

Inspecton result

		Span No.	2

		Damages of steel members				Damages of concrete members						Others						
		Corrosion	Cracking	Missing bolts	Fracture	Cracking, Water leakage, Free lime	No.	Rebar exposure	Pop-outs	Deck cracking	Damages at anchorage of PC tender	Level difference of road surface	Functional damage of bearings	Damages in substructures	Damages in pavemnents	Damages in expansion joints	Damages in cable	Remarks
Girder	01					a		a			a							
	02					a		a			a							
Deck	01							a	a	a								
	02							a	a	a								
	03							a	a	a								
	04							a	a	a								
	05							a	a	a								
	06							a	a	a								
Pier	01					c		a										
	02					a		a										
Road surface												a						
Pavement															a			
Barriers Railings	01															c		
	02															a		
	03															c		
	04															c		

Span No.2

Countermeasure classification of members					Bridge name		007Phra Pokklao	Span No.		2
Member	No.	Damage	Damage classification		Countermeasure classification	No.	Damage	Damage classification		Countermeasure classification
			Classification	Judge				Classification	Judge	
Girder	01	Cracking, Water leakage, Free lime	a	-	5	02	Cracking, Water leakage, Free lime	a	3	5
		Rebar exposure	a	-	5		Rebar exposure	a	-	5
		Damages at anchorage of PC tendon	a	-	5		Damages at anchorage of PC tendon	a	-	5
Deck	01	Rebar exposure	a		5	04	Rebar exposure	a		5
		Pop-outs	a		5		Pop-outs	a		5
		Deck cracking	a	N	5		Deck cracking	a	N	5
	03	Rebar exposure	a		5	06	Rebar exposure	a		5
		Pop-outs	a		5		Pop-outs	a		5
		Deck cracking	a	N	5		Deck cracking	a	N	5
Pier	01	Cracking, Water leakage, Free lime	c	-	3	02	Cracking, Water leakage, Free lime	a	-	5
		Rebar exposure	a	-	5		Rebar exposure	a	-	5
		Damages in substructures	a	-	5		Damages in substructures	a	-	5
Road surface	01	Level difference of road surface	a		5	01	Damages in pavemnents	a		5
Barriers Railing	01	Damages in barriers	c		2	03	Damages in barriers	c		2
	02	Damages in barriers	a		5	04	Damages in barriers	c		2

Estimation of repair quantity

Bridge name	007Phra Pokklao		Span No.	2
	Subject	Quantity	Remarks	
1	Span length	100.00 m	Length of 1 span	
2	Road width for pavement	21.50 m	Width for pavement area (Vehicle lane)	
3	Total road width	26.40 m	Deck width	
4	Area of bridge surface	2,640.0 m^2	Span length x Total width	
5	Area of pavement	2,150.0 m^2	Span length x Width for pavement	
6	Barriers & railings 01	concrete	Type of barriers & railings	
	Barriers & railings 02	concrete	Same as above	
	Barriers & railings 03	concrete	Same as above	
	Barriers & railings 04	concrete	Same as above	
7	Expansion joints 01	steel	Type of expansion joint	
	Expansion joints -	-	Same as above	
8	Crack length	Quantity	Remarks	
	Total crack length L	105.6 m	A of bridge surf. x 0.040	
	Girder	52.8 m	L × 1/2 (per girder)	
9	Area of rebarb exposure	Quantity	Remarks	
	Total area A	21.1 m^2	A of bridge surf. x 0.008	
	Girder	10.6 m^2	L × 1/2 (per girder)	
10	Repaired area of deck	Quantity	Remarks	
	01,06 A	450.0 m^2	Deck width = 4.50 m	
	Area of rebarb exposure	4.5 m^2	A × 0.010	
	Area of deck cracking	22.5 m^2	A × 0.050	
	03,04 A	275.0 m^2	Deck width = 2.75 m	
	Area of rebarb exposure	2.8 m^2	A × 0.010	
	Area of deck cracking	13.8 m^2	A × 0.050	
11	Repair quanity of substructure	Quantity	Remarks	
	Cracking, Water leakage, Free lime	5.54 m	per substructure	
	Rebar exposure	2.24 m^2	per substructure	
12	Concrete barrier	Quantity	Remarks	
	Rebar exposure	10.56 m^2	A of bridge surf. x 0.004	

Approximate repair price for countermeasure

Bridge nam		007Phra Pokklao				Span No.		2										
Member	No.	Damage	Damage classification	Countermeasure classification	Repair method	Repair quantity	Unit	Approximate unit price (B)	Approximate repair price (B)	Approximate repair price for countermeasure classification 1 & 2 (B)	countermeasure classification 3		countermeasure classification 4		Planned repair & reconstruction	
											Repair price (B)	Remaining years up to counter measure cl. 2	Repair price (B)	Remaining years up to counter measure cl. 2	Repair price (B)	Life cycle
Girder	01	Cracking/Water leakage/Free lime	a	5	Resin injection	52.8	m	5,000	264,000	-	-	7	-	15	-	30
		Rebar exposure	a	5	Patching	10.6	m^2	17,500	185,500	-	-	7	-	15	185,500	30
		Damages at anchorage of PC tendon	a	5	Reinforcement with external PC tendon	-	Pos.	1,000,000	-	-	-	-	-	-	-	-
	02	Cracking/Water leakage/Free lime	a	5	Resin injection	52.8	m	5,000	264,000	-	-	7	-	15	-	30
		Rebar exposure	a	5	Patching	10.6	m^2	17,500	185,500	-	-	7	-	15	185,500	30
		Damages at anchorage of PC tendon	a	5	Reinforcement with external PC tendon	-	Pos.	1,000,000	-	-	-	-	-	-	-	-
Deck	01	Rebar exposure	a	5	Patching	4.5	m^2	17,500	78,800	-	-	7	-	15	-	30
		Pop-outs	a	5	Patching & CFR	-	Pos.	10,000	-	-	-	-	-	-	-	-
		Deck cracking	a	5	CFR	22.5	m^2	22,500	506,300	-	-	12	-	25	506,300	50
	03	Rebar exposure	a	5	Patching	2.8	m^2	17,500	49,000	-	-	7	-	15	-	30
		Pop-outs	a	5	Patching & CFR	-	Pos.	10,000	-	-	-	-	-	-	-	-
		Deck cracking	a	5	CFR	13.8	m^2	22,500	310,500	-	-	12	-	25	310,500	50
	04	Rebar exposure	a	5	Patching	2.8	m^2	17,500	49,000	-	-	7	-	15	-	30
		Pop-outs	a	5	Patching & CFR	-	Pos.	10,000	-	-	-	-	-	-	-	-
		Deck cracking	a	5	CFR	13.8	m^2	22,500	310,500	-	-	12	-	25	310,500	50
	06	Rebar exposure	a	5	Patching	4.5	m^2	17,500	78,800	-	-	7	-	15	-	30
		Pop-outs	a	5	Patching & CFR	-	Pos.	10,000	-	-	-	-	-	-	-	-
		Deck cracking	a	5	CFR	22.5	m^2	22,500	506,300	-	-	12	-	25	506,300	50
Pier	01	Cracking/Water leakage/Free lime	c	3	Resin injection	5.54	m	5,000	27,700	-	27,700	7	-	15	-	30
		Rebar exposure	a	5	Patching	2.24	m^2	17,500	39,200	-	-	7	-	15	39,200	30
		Damages in substructures	a	5	Foot protection	-	Pier	1,750,000	-	-	-	-	-	-	-	-
	02	Cracking/Water leakage/Free lime	a	5	Resin injection	5.54	m	5,000	27,700	-	-	7	-	15	-	30
		Rebar exposure	a	5	Patching	2.24	m^2	17,500	39,200	-	-	7	-	15	39,200	30
		Damages in substructures	a	5	Foot protection	-	Pier	1,750,000	-	-	-	-	-	-	-	-
Road surface	01	Level difference of road surface	a	5	Pavement replacement	-	m^2	5,000	-	-	-	5	-	10	-	20
		Damages in pavemnents	a	5	same as above	2,150.0	〃	5,000	10,750,000	-	-	5	-	10	10,750,000	20
Barriers Railings	01	Damages in barriers	c	2	Patching	10.56	m^2	17,500	184,800	184,800	-	7	-	15	184,800	30
	02	Damages in barriers	a	5	Patching	10.56	m^2	17,500	184,800	-	-	7	-	15	184,800	30
	03	Damages in barriers	c	2	Patching	10.56	m^2	17,500	184,800	184,800	-	7	-	15	184,800	30
	04	Damages in barriers	c	2	Patching	10.56	m^2	17,500	184,800	184,800	-	7	-	15	184,800	30

Span No.3

Inspecton result

		Span No.	3

		Damages of steel members				Damages of concrete members						Others						
		Corrosion	Cracking	Missing bolts	Fracture	Cracking, Water leakage, Free lime	No.	Rebar exposure	Pop-outs	Deck cracking	Damages at anchorage of PC tender	Level difference of road surface	Functional damage of bearings	Damages in substructures	Damages in pavements	Damages in expansion joints	Damages in cable	Remarks
Girder	01					a		a			a							
	02					a		a			a							
Deck	01							a	a	c								
	02							a	a	a								
	03							a	a	a								
	04							a	a	a								
	05							a	a	a								
	06							a	a	c								
Pier	01					a		a										
	02					a		a										
Road surface												a						
Pavement															a			
Barriers Railings	01															c		
	02															a		
	03															a		
	04															c		

Span No.3

Countermeasure classification of members

Bridge name	007Phra Pokklao	Span No.	3

Member	No.	Damage	Damage classification		Countermeasure classification	No.	Damage	Damage classification		Countermeasure classification
			Classification	Judge				Classification	Judge	
Girder	01	Cracking, Water leakage, Free lime	a	-	5	02	Cracking, Water leakage, Free lime	a	-	5
		Rebar exposure	a	-	5		Rebar exposure	a	-	5
		Damages at anchorage of PC tendon	a	-	5		Damages at anchorage of PC tendon	a	-	5
Deck	01	Rebar exposure	a		5	04	Rebar exposure	a		5
		Pop-outs	a		5		Pop-outs	a		5
		Deck cracking	c	-	3		Deck cracking	a	N	5
	03	Rebar exposure	a		5	06	Rebar exposure	a		5
		Pop-outs	a		5		Pop-outs	a		5
		Deck cracking	a	N	5		Deck cracking	c	-	3
Pier	01	Cracking, Water leakage, Free lime	a	-	5	02	Cracking, Water leakage, Free lime	a	-	5
		Rebar exposure	a	-	5		Rebar exposure	a	-	5
		Damages in substructures	a	-	5		Damages in substructures	a	-	5
Road surface	01	Level difference of road surface	a		5	01	Damages in pavemnents	a		5
Barriers Railing	01	Damages in barriers	c		2	03	Damages in barriers	a		5
	02	Damages in barriers	a		5	04	Damages in barriers	c		2

Estimation of repair quantity

Bridge name	007Phra Pokklao			Span No.	3
	Subject		Quantity	Remarks	
1	Span length		56.00 m	Length of 1 span	
2	Road width for pavement		21.50 m	Width for pavement area (Vehicle lane)	
3	Total road width		26.40 m	Deck width	
4	Area of bridge surface		1,478.4 m^2	Span length x Total width	
5	Area of pavement		1,204.0 m^2	Span length x Width for pavement	
6	Barriers & railings	01	concrete	Type of barriers & railings	
		02	concrete	Same as above	
		03	concrete	Same as above	
		04	concrete	Same as above	
7	Expansion joints	01	steel	Type of expansion joint	
		-	-	Same as above	
8	Crack length		Quantity	Remarks	
	Total crack length L		59.1 m	A of bridge surf. x 0.040	
	Girder		29.6 m	L × 1/2 (per girder)	
9	Area of rebarb exposure		Quantity	Remarks	
	Total area A		11.8 m^2	A of bridge surf. x 0.008	
	Girder		5.9 m^2	L × 1/2 (per girder)	
10	Repaired area of deck		Quantity	Remarks	
	01,06 A		252.0 m^2	Deck width = 4.50 m	
	Area of rebarb exposure		2.5 m^2	A × 0.010	
	Area of deck cracking		12.6 m^2	A × 0.050	
	03,04 A		154.0 m^2	Deck width = 2.75 m	
	Area of rebarb exposure		1.5 m^2	A × 0.010	
	Area of deck cracking		7.7 m^2	A × 0.050	
11	Repair quanity of substructure		Quantity	Remarks	
	Cracking, Water leakage, Free lime		5.54 m	per substructure	
	Rebar exposure		2.24 m^2	per substructure	
12	Concrete barrier		Quantity	Remarks	
	Rebar exposure		5.91 m^2	A of bridge surf. x 0.004	

Approximate repair price for countermeasure

Bridge name	007Phra Pokklao				Span No.		3								
Member	No.	Damage	Damage classification	Countermeasure classification	Repair method	Repair quantity	Unit	Approximate unit price (B)	Approximate repair price (B)	Approximate repair price for countermeasure classification 1 & 2 (B)	countermeasure classification 3		countermeasure classification 4		Planned repair & reconstruction	
											Repair price (B)	Remaining years up to counter measure cl. 2	Repair price (B)	Remaining years up to counter measure cl. 2	Repair price (B)	Life cycle
Girder	01	Cracking/Water leakage/Free lime	a	5	Resin injection	29.6	m	5,000	148,000	-	-	7	-	15	-	30
		Rebar exposure	a	5	Patching	5.9	m^2	17,500	103,300	-	-	7	-	15	103,300	30
		Damages at anchorage of PC tendon	a	5	Reinforcement with external PC tendon	-	Pos.	1,000,000	-	-	-	-	-	-	-	-
	02	Cracking/Water leakage/Free lime	a	5	Resin injection	29.6	m	5,000	148,000	-	-	7	-	15	-	30
		Rebar exposure	a	5	Patching	5.9	m^2	17,500	103,300	-	-	7	-	15	103,300	30
		Damages at anchorage of PC tendon	a	5	Reinforcement with external PC tendon	-	Pos.	1,000,000	-	-	-	-	-	-	-	-
Deck	01	Rebar exposure	a	5	Patching	2.5	m^2	17,500	43,800	-	-	7	-	15	-	30
		Pop-outs	a	5	Patching & CFR	-	Pos.	10,000	-	-	-	-	-	-	-	-
		Deck cracking	c	3	CFR	12.6	m^2	22,500	283,500	-	283,500	12	-	25	283,500	50
	03	Rebar exposure	a	5	Patching	1.5	m^2	17,500	26,300	-	-	7	-	15	-	30
		Pop-outs	a	5	Patching & CFR	-	Pos.	10,000	-	-	-	-	-	-	-	-
		Deck cracking	a	5	CFR	7.7	m^2	22,500	173,300	-	-	12	-	25	173,300	50
	04	Rebar exposure	a	5	Patching	1.5	m^2	17,500	26,300	-	-	7	-	15	-	30
		Pop-outs	a	5	Patching & CFR	-	Pos.	10,000	-	-	-	-	-	-	-	-
		Deck cracking	a	5	CFR	7.7	m^2	22,500	173,300	-	-	12	-	25	173,300	50
	06	Rebar exposure	a	5	Patching	2.5	m^2	17,500	43,800	-	-	7	-	15	-	30
		Pop-outs	a	5	Patching & CFR	-	Pos.	10,000	-	-	-	-	-	-	-	-
		Deck cracking	c	3	CFR	12.6	m^2	22,500	283,500	-	283,500	12	-	25	283,500	50
Pier	01	Cracking/Water leakage/Free lime	a	5	Resin injection	5.54	m	5,000	27,700	-	-	7	-	15	-	30
		Rebar exposure	a	5	Patching	2.24	m^2	17,500	39,200	-	-	7	-	15	39,200	30
		Damages in substructures	a	5	Foot protection	-	Pier	1,750,000	-	-	-	-	-	-	-	-
	02	Cracking/Water leakage/Free lime	a	5	Resin injection	5.54	m	5,000	27,700	-	-	7	-	15	-	30
		Rebar exposure	a	5	Patching	2.24	m^2	17,500	39,200	-	-	7	-	15	39,200	30
		Damages in substructures	a	5	Foot protection	-	Pier	1,750,000	-	-	-	-	-	-	-	-
Road surface	01	Level difference of road surface	a	5	Pavement replacement	-	m^2	5,000	-	-	-	5	-	10	-	20
		Damages in pavemnents	a	5	same as above	1,204.0	//	5,000	6,020,000	-	-	5	-	10	6,020,000	20
Barriers Railings	01	Damages in barriers	c	2	Patching	5.91	m^2	17,500	103,500	103,500	-	7	-	15	103,500	30
	02	Damages in barriers	a	5	Patching	5.91	m^2	17,500	103,500	-	-	7	-	15	103,500	30
	03	Damages in barriers	a	5	Patching	5.91	m^2	17,500	103,500	-	-	7	-	15	103,500	30
	04	Damages in barriers	c	2	Patching	5.91	m^2	17,500	103,500	103,500	-	7	-	15	103,500	30

Span No.4

Inspecton result

Span No.	4

		Damages of steel members				Damages of concrete members						Others						
		Corrosion	Cracking	Missing bolts	Fracture	Cracking, Water leakage, Free lime	No.	Rebar exposure	Pop-outs	Deck cracking	Damages at anchorage of PC tender	Level difference of road surface	Functional damage of bearings	Damages in substructures	Damages in pavemments	Damages in expansion joints	Damages in cable	Remarks
Girder	01					a		a			a							
	02					a		a			a							
Deck	01							a	a	a								
	02							a	a	a								
	03							a	a	a								
	04							a	a	a								
	05							a	a	a								
	06							a	a	a								
Pier	01					a		a										
	02					a		a										
Road surface												a						
Pavement															a			
Barriers Railings	01															a		
	02															a		
	03															a		
Expansion joints	01																a	
Others																		

Span No.4

Countermeasure classification of members					Bridge name		007Phra Pokklao	Span No.		4
Member	No.	Damage	Damage classification		Countermeasure classification	No.	Damage	Damage classification		Countermeasure classification
			Classification	Judge				Classification	Judge	
Girder	01	Cracking, Water leakage, Free lime	a	-	5	02	Cracking, Water leakage, Free lime	a	-	5
		Rebar exposure	a	-	5		Rebar exposure	a	-	5
		Damages at anchorage of PC tendon	a	-	5		Damages at anchorage of PC tendon	a	-	5
Deck	01	Rebar exposure	a		5	04	Rebar exposure	a		5
		Pop-outs	a		5		Pop-outs	a		5
		Deck cracking	a	N	5		Deck cracking	a	N	5
	03	Rebar exposure	a		5	06	Rebar exposure	a		5
		Pop-outs	a		5		Pop-outs	a		5
		Deck cracking	a	N	5		Deck cracking	a	N	5
Pier	01	Cracking, Water leakage, Free lime	a	-	5	02	Cracking, Water leakage, Free lime	a	-	5
		Rebar exposure	a	-	5		Rebar exposure	a	-	5
		Damages in substructures	a	-	5		Damages in substructures	a	-	5
Bearings	101	Functional damage of bearings	a		5	104	Functional damage of bearings	a		5
	102	Functional damage of bearings	a		5	105				
	103	Functional damage of bearings	a		5	106				
Road surface	01	Level difference of road surface	a		5	01	Damages in pavemnents	a		5
Barriers Railing	01	Damages in barriers	a		5	03	Damages in barriers	a		5
	02	Damages in barriers	a		5	04	Damages in barriers	a		5
Expansion joints	01	Damages in expansion joints	a		5	-	-	-	-	-

Estimation of repair quantity

Bridge name	007Phra Pokklao		Span No.	4
	Subject		Quantity	Remarks
1	Span length		30.90 m	Length of 1 span
2	Road width for pavement		21.50 m	Width for pavement area (Vehicle lane)
3	Total road width		26.40 m	Deck width
4	Area of bridge surface		815.8 m^2	Span length x Total width
5	Area of pavement		664.4 m^2	Span length x Width for pavement
6	Barriers & railings	01	concrete	Type of barriers & railings
		02	concrete	Same as above
		03	concrete	Same as above
		04	concrete	Same as above
7	Expansion joints	01	steel	Type of expansion joint
		-	-	Same as above
8	Crack length		Quantity	Remarks
	Total crack length L		32.6 m	A of bridge surf. x 0.040
	Girder		16.3 m	L × 1/2 (per girder)
9	Area of rebarb exposure		Quantity	Remarks
	Total area A		6.5 m^2	A of bridge surf. x 0.008
	Girder		3.3 m^2	L × 1/2 (per girder)
10	Repaired area of deck		Quantity	Remarks
	01,06 A		139.1 m^2	Deck width = 4.50 m
	Area of rebarb exposure		1.4 m^2	A × 0.010
	Area of deck cracking		7.0 m^2	A × 0.050
	03,04 A		85.0 m^2	Deck width = 2.75 m
	Area of rebarb exposure		0.8 m^2	A × 0.010
	Area of deck cracking		4.2 m^2	A × 0.050
11	Repair quanity of substructure		Quantity	Remarks
	Cracking, Water leakage, Free lime		5.54 m	per substructure
	Rebar exposure		2.24 m^2	per substructure
12	Concrete barrier		Quantity	Remarks
	Rebar exposure		3.26 m^2	A of bridge surf. x 0.004

Approximate repair price for countermeasure

Bridge name	007Phra Pokklao				Span No.		4									
Member	No.	Damage	Damage classification	Countermeasure classification	Repair method	Repair quantity	Unit	Approximate unit price (B)	Approximate repair price (B)	Approximate repair price for countermeasure classification 1 & 2 (B)	countermeasure classification 3		countermeasure classification 4		Planned repair & reconstruction	
											Repair price (B)	Remaining years up to counter measure cl. 2	Repair price (B)	Remaining years up to counter measure cl. 2	Repair price (B)	Life cycle
Girder	01	Cracking/Water leakage/Free lime	a	5	Resin injection	16.3	m	5,000	81,500	-	-	7	-	15	-	30
		Rebar exposure	a	5	Patching	3.3	m^2	17,500	57,800	-	-	7	-	15	57,800	30
		Damages at anchorage of PC tendon	a	5	Reinforcement with external PC tendon	-	Pos.	1,000,000	-	-	-	-	-	-	-	-
	02	Cracking/Water leakage/Free lime	a	5	Resin injection	16.3	m	5,000	81,500	-	-	7	-	15	-	30
		Rebar exposure	a	5	Patching	3.3	m^2	17,500	57,800	-	-	7	-	15	57,800	30
		Damages at anchorage of PC tendon	a	5	Reinforcement with external PC tendon	-	Pos.	1,000,000	-	-	-	-	-	-	-	-
Deck	01	Rebar exposure	a	5	Patching	1.4	m^2	17,500	24,500	-	-	7	-	15	-	30
		Pop-outs	a	5	Patching & CFR	-	Pos.	10,000	-	-	-	-	-	-	-	-
		Deck cracking	a	5	CFR	7.0	m^2	22,500	157,500	-	-	12	-	25	157,500	50
	03	Rebar exposure	a	5	Patching	0.8	m^2	17,500	14,000	-	-	7	-	15	-	30
		Pop-outs	a	5	Patching & CFR	-	Pos.	10,000	-	-	-	-	-	-	-	-
		Deck cracking	a	5	CFR	4.2	m^2	22,500	94,500	-	-	12	-	25	94,500	50
	04	Rebar exposure	a	5	Patching	0.8	m^2	17,500	14,000	-	-	7	-	15	-	30
		Pop-outs	a	5	Patching & CFR	-	Pos.	10,000	-	-	-	-	-	-	-	-
		Deck cracking	a	5	CFR	4.2	m^2	22,500	94,500	-	-	12	-	25	94,500	50
	06	Rebar exposure	a	5	Patching	1.4	m^2	17,500	24,500	-	-	7	-	15	-	30
		Pop-outs	a	5	Patching & CFR	-	Pos.	10,000	-	-	-	-	-	-	-	-
		Deck cracking	a	5	CFR	7.0	m^2	22,500	157,500	-	-	12	-	25	157,500	50
Pier	01	Cracking/Water leakage/Free lime	a	5	Resin injection	5.54	m	5,000	27,700	-	-	7	-	15	-	30
		Rebar exposure	a	5	Patching	2.24	m^2	17,500	39,200	-	-	7	-	15	39,200	30
		Damages in substructures	a	5	Foot protection	-	Pier	1,750,000	-	-	-	-	-	-	-	-
	02	Cracking/Water leakage/Free lime	a	5	Resin injection	5.54	m	5,000	27,700	-	-	7	-	15	-	30
		Rebar exposure	a	5	Patching	2.24	m^2	17,500	39,200	-	-	7	-	15	39,200	30
		Damages in substructures	a	5	Foot protection	-	Pier	1,750,000	-	-	-	-	-	-	-	-
Bearings	101	Functional damage of bearings	a	5	Metal spraying	1.0	Pier	120,000	120,000	-	-	7	-	15	120,000	30
	102	Functional damage of bearings	a	5	Metal spraying	1.0	//	120,000	120,000	-	-	7	-	15	120,000	30
	103	Functional damage of bearings	a	5	Metal spraying	1.0	//	120,000	120,000	-	-	7	-	15	120,000	30
	104	Functional damage of bearings	a	5	Metal spraying	1.0	//	120,000	120,000	-	-	7	-	15	120,000	30
Road surface	01	Level difference of road surface	a	5	Pavement replacement	-	m^2	5,000	-	-	-	5	-	10	-	20
		Damages in pavemments	a	5	same as above	664.4	//	5,000	3,321,800	-	-	5	-	10	3,321,800	20
Barriers Railings	01	Damages in barriers	a	5	Patching	3.26	m^2	17,500	57,100	-	-	7	-	15	57,100	30
	02	Damages in barriers	a	5	Patching	3.26	m^2	17,500	57,100	-	-	7	-	15	57,100	30
	03	Damages in barriers	a	5	Patching	3.26	m^2	17,500	57,100	-	-	7	-	15	57,100	30
	04	Damages in barriers	a	5	Patching	3.26	m^2	17,500	57,100	-	-	7	-	15	57,100	30
Expansion joints	01	Damages in expansion joints	a	5	change of steel exp.	26.4	m	133,400	3,521,800	-	-	7	-	15	3,521,800	30

Approximate total repair cost

Year	Annual repair cost (B)							Cummalative cost (B)
	Span No.1	Span No.2	Span No.3	Span No.4	Span No.5	Periodic inspection + reserve for unexpected matters	Bridge total	
2011	-	6,227,000	554,400	207,000	-	233,400	7,221,800	7,221,800
2012	-	-	-	-	-	-	-	7,221,800
2013	-	-	-	-	-	-	-	7,221,800
2014	-	-	-	-	-	-	-	7,221,800
2015	-	-	-	-	-	-	-	7,221,800
2016	-	-	-	-	-	233,400	233,400	7,455,200
2017	-	-	-	-	-	-	-	7,455,200
2018	-	296,000	27,700	-	-	-	323,700	7,778,900
2019	-	-	-	-	-	-	-	7,778,900
2020	-	-	-	-	-	-	-	7,778,900
2021	-	-	-	-	-	233,400	233,400	8,012,300
2022	-	-	-	-	-	-	-	8,012,300
2023	-	567,000	-	567,000	-	-	1,134,000	9,146,300
2024	-	-	-	-	-	-	-	9,146,300
2025	-	-	-	-	-	-	-	9,146,300
2026	-	-	-	-	-	233,400	233,400	9,379,700
2027	-	-	-	-	-	-	-	9,379,700
2028	-	-	-	-	-	-	-	9,379,700
2029	-	-	-	-	-	-	-	9,379,700
2030	-	-	-	-	-	-	-	9,379,700
2031	3,321,800	-	10,750,000	6,020,000	3,321,800	233,400	23,647,000	33,026,700
2032	-	6,020,000	-	-	-	-	6,020,000	39,046,700
2033	-	-	-	-	-	-	-	39,046,700
2034	-	-	-	-	-	-	-	39,046,700
2035	-	-	-	-	-	-	-	39,046,700
2036	-	-	-	-	-	233,400	233,400	39,280,100
2037	-	-	-	-	-	-	-	39,280,100
2038	-	-	-	-	-	-	-	39,280,100
2039	-	-	-	-	-	-	-	39,280,100
2040	-	-	-	-	-	-	-	39,280,100
2041	4,424,200	492,000	634,200	492,000	4,424,200	233,400	10,700,000	49,980,100
2042	-	207,000	554,400	207,000	-	-	968,400	50,948,500
2043	-	-	-	-	-	-	-	50,948,500
2044	-	-	-	-	-	-	-	50,948,500
2045	-	-	-	-	-	-	-	50,948,500
2046	-	-	-	-	-	233,400	233,400	51,181,900
2047	-	-	-	-	-	-	-	51,181,900
2048	-	-	-	-	-	-	-	51,181,900
2049	-	-	-	-	-	-	-	51,181,900
2050	-	-	-	-	-	-	-	51,181,900
2051	-	-	-	-	-	233,400	233,400	51,415,300
2052	3,321,800	-	10,750,000	6,020,000	3,321,800	-	23,413,600	74,828,900
2053	-	6,020,000	-	-	-	-	6,020,000	80,848,900
2054	-	-	-	-	-	-	-	80,848,900
2055	-	-	-	-	-	-	-	80,848,900
2056	-	-	-	-	-	233,400	233,400	81,082,300
2057	-	-	-	-	-	-	-	81,082,300
2058	-	-	-	-	-	-	-	81,082,300
2059	-	-	-	-	-	-	-	81,082,300
2060	-	-	-	-	-	-	-	81,082,300
2061	504,000	346,600	1,633,600	346,600	504,000	233,400	3,568,200	84,650,500
2062	-	-	-	-	-	-	-	84,650,500
2063	-	-	-	-	-	-	-	84,650,500
2064	-	-	-	-	-	-	-	84,650,500
2065	-	-	-	-	-	-	-	84,650,500
2066	-	-	-	-	-	233,400	233,400	84,883,900
2067	-	-	-	-	-	-	-	84,883,900
2068	-	-	-	-	-	-	-	84,883,900
2069	-	-	-	-	-	-	-	84,883,900
2070	-	-	-	-	-	-	-	84,883,900
2071	-	-	-	-	-	233,400	233,400	85,117,300
2072	4,424,200	492,000	634,200	492,000	4,424,200	-	10,466,600	95,583,900
2073	3,321,800	207,000	11,304,400	6,227,000	3,321,800	-	24,382,000	119,965,900
2074	-	6,587,000	-	567,000	-	-	7,154,000	127,119,900
2075	-	-	-	-	-	-	-	127,119,900
2076	-	-	-	-	-	233,400	233,400	127,353,300
2077	-	-	-	-	-	-	-	127,353,300
2078	-	-	-	-	-	-	-	127,353,300
2079	-	-	-	-	-	-	-	127,353,300
2080	-	-	-	-	-	-	-	127,353,300
2081	-	-	-	-	-	233,400	233,400	127,586,700
2082	-	-	-	-	-	-	-	127,586,700
2083	-	-	-	-	-	-	-	127,586,700
2084	-	-	-	-	-	-	-	127,586,700
2085	-	-	-	-	-	-	-	127,586,700
2086	-	-	-	-	-	233,400	233,400	127,820,100
2087	-	-	-	-	-	-	-	127,820,100
2088	-	-	-	-	-	-	-	127,820,100
2089	-	-	-	-	-	-	-	127,820,100
2090	-	-	-	-	-	-	-	127,820,100
2091	-	-	-	-	-	233,400	233,400	128,053,500
2092	-	-	-	-	-	-	-	128,053,500
2093	-	-	-	-	-	-	-	128,053,500
2094	3,321,800	-	10,750,000	6,020,000	3,321,800	-	23,413,600	151,467,100
2095	-	6,020,000	-	-	-	-	6,020,000	157,487,100
2096	-	-	-	-	-	233,400	233,400	157,720,500
2097	-	-	-	-	-	-	-	157,720,500
2098	-	-	-	-	-	-	-	157,720,500
2099	-	-	-	-	-	-	-	157,720,500
2100	-	-	-	-	-	-	-	157,720,500
2101	-	-	-	-	-	233,400	233,400	157,953,900
2102	-	-	-	-	-	-	-	157,953,900
2103	4,424,200	492,000	634,200	492,000	4,424,200	-	10,466,600	168,420,500
2104	-	207,000	554,400	207,000	-	-	968,400	169,388,900
2105	-	-	-	-	-	-	-	169,388,900
2106	-	-	-	-	-	233,400	233,400	169,622,300
2107	-	-	-	-	-	-	-	169,622,300
2108	-	-	-	-	-	-	-	169,622,300
2109	-	-	-	-	-	-	-	169,622,300
2110	-	-	-	-	-	-	-	169,622,300

Eestimation of LCC