ANNEXES FOR FEASIBILITY STUDY

ANNEX F-1 SUMMARY OF PRESENT CONDITION OF SURVEY ROUTE

ANNEX F-1 SUMMARY OF PRESENT CONDITION OF SURVEY ROUTE

(1) **Route 14A**

																			(1	1/3))																			
	<u>KM POST</u>	0.0	- 0.5	- 1.0	- 1.5	- 2.0	2.5	- 3.0	3 .5	- 4.0	4.5	5.0	-5.5	- 6.0	- 6.5	- 7.0	0, 0 •	0.0 E		- 9.0 0.5	6.6 -	10.0 10.F		11.5	- 12.0	10 5		- 13.0	-13.5	- 14.0	- 14.5	15.0	- 15.5	- 16.0	- 16.5	- 17.0	- 17.5		19.0	
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	Photo			Y	L	Surve		4C1									+	1											
		Jct.	. (140	C1) (5	5.5kr	n)							Cro	ss Se	ction	(56.	1km)												

FINAL REPORT – ANNEXES





(2) **Route 16A**





																	(2	2/4))																		
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FINAL REPORT – ANNEXES



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(3) List of Crossing Structures on Route 14A

No.	Km Post	Туре	Size	N	lo.	Km Post	Туре	Size
1	0+802	RV		7	71	25+777	PC	0.6x11.0
2	1+552	RV		7	2	26+337	PC	1.2x13.0
3	2+157	RV		7	73	26+824	PC	1.2x12.0
4	2+427	RV		7	74	27+327	PC	0.45x13.0
5	3+227	RV		7	75	27+547	PC	0.6x8.5
6	3+667	RV		7	76	27+822	PC	0.45x11.0
7	4+257	RV		7	7	27+922	PC	0.45x?
8	4+652	RV		7	78	28+125	PC	0.45x13.0
9	5+057	RV		7	79	28+227	PC	0.6x13.0
10	5+387	RV		8	30	28+967	PC	0.4x11.0
11	5+632	RV		8	31	29+447	RV	
12	6+167	RV		8	32	29+527	ICP	?
13	6+332	RV		8	33	30+004	ICP	1.0
14	6+448	RV		8	34	30+185	ICP	1.0
15	6+637	RV		8	35	30+344	ICP	1.0
16	7+237	RV		8	36	30+449	ICD	1.0
17	7+432	RV		8	37	31+227	RV	
18	7+632	RV		8	38	32+217	RV	
19	7+649	RV		8	39	32+627	RV	
20	7+887	RV		, ç	90	33+127	RV	
21	8+022	RV		<u> </u>	91	33+537	RV	
22	8+107	RV		ç	92	33+767	RV	
23	8+197	RV		ç	93	34+347	RV	
24	8+427	RV		9	94	35+237	PC	0.6x11.0
25	8+512	RV		<u> </u>	95	35+342	PC	2@0.6x11.0
26	8+637	RV		9	96	35+867	BC	2.0x2.5x9.0
27	8+849	RV		9	97	36+213	PC	2@0.6x11.0
28	9+022	RV		<u> </u>	98	36+625	BC	2.0x2.5x8.0
29	9+087	RV		<u> </u>	99	36+867	PC	2@0.6x11.0
30	9+142	RV		1	00	37+167	PC	1.0x12.0
31	9+167	RV		1	01	37+515	BC	2.0x2.5x8.0
32	9+237	RV		1	02	37+823	BC	2.0x2.5x7.0
33	9+377	RV		1	03	38+427	PC	1.0x10.0
34	9+407	RV		1	04	38+434	PC	0.8x10.0
35	9+472	RV		1	05	38+441	PC	1.0x11.0
36	9+567	RV		1	06	38+734	PC	1.0x10.0
37	9+757	RV		1	07	38+880	PC	2@0.8x10.0
38	10+032	RV		1	08	39+295	PC	1.0x11.0
39	10+297	RV		1	09	39+653	PC	0.8x11.0
40	10+452	RV		1	10	39+707	PC	0.8x11.0
41	10+555	RV			11	39+854	PC	2@1.0x10.0
42	10+857	RV			12	39+899	PC	2@0.8x?
43	10+997	RV		1	13	39+941	PC	2@1.0x11.0
44	11+3//	RV		1	14	40+362	PC	2@0.6x11.0
45	11+562	RV			15	40+617	RV	000577
46	11+707	RV DV		1	16	41+647	BC	2.0x2.5x7.7
4/	12+057	RV DV			17	41+657	PC PC	1.5X12.0
48	12+567	RV DV		1	18	41+727		1.0X11.0
49	12+022	RV DV			19	41+937	PC	2@1.0X11.0
50	12+827	RV DV			20	43+187		2@1.5X10.5
51	13+037	RV DV			21	44+137	PC PC	1.0x7.0
52	13+037	RV DV			22	44+157	PC	1.0X7.0
53	13+848	RV DV			23	44+009	PC PC	1.2X9.0
54	14+347	RV DV			24	45+307		1.2X11.0
50	10+397				20	40+497		0.6×9.0
57	15+397		222		20	40+907		2@0.9v7.0
50	15+995		· X !		21	47+937	PC	2@0.0X7.0
50	10+022				20	49+239	PC PC	1.0x0.0
59	17+407		242		20 20	407/00 50,726		1.0/11.0
61	18+207	RV	: 7 (31	51+6/5		0.000 5
62	181085	RV			32	57+640		0.979.0
63	101900	RV			<u>3</u> 2	52+001		0.0710.0
64	2017032	PC	2@0.6v5.0		3/	53+911		0.079.0
65	207037	RV	200.000.0		35	5/11/2		0.079.0
66	217447		0 0 0 7		36	55+022	PC	0.000.0
67	217012 20±217		0.9X0.7		37	50+922		1 /v0 6
68	227341	RV	0.070.4		38	50+670		1.473.0
69	277347	PC	2@0.6v2		00	007010	10	1.0711.0
70	25+245	PC.	0.6x11.0	ł				
	20.210		5.5,1110	1				

NOTE	(Unit: m)
PC: Pipe Culvert (diameter x length)	BC: Box Culvert (height x width x length)
ICD: Irrigation Canal (ditch type: height x width)	RV: River / Stream
ICP: Irrigation Canal (pipe type: diameter)	

List of Crossing Structures on Route 16A (i) For Shortcut Route (ii) Exist (4)

1) FUL SIIC			
No.	Km Post	Type	Size
1	0+065	PC.	1 0x9 4
2	1+0/3	PC	0.8v2
2	1+043		1.0x2
3	1+995		0.6x2
4	2+302		0.0x?
5	2+868		0.8X?
6	3+259	PC	1.0x?
7	3+655	PC	0.6x14
8	4+001	PC	2@0.8x?
9	5+040	PC	0.8x?
10	5+448	PC	0.8x?
11	5+828	PC	0.8x?
12	6+745	PC	0.8x?
13	7+800	PC.	0.8x?
1/	10+06/	PC	3@0.6v2
14	10+004		0.6v2
10	13+034	PC	0.0X?
16	17+665	RV	
1/	17+926	PC	0.8X?
18	18+705	PC	0.6x12.0
19	19+780	PC	0.6x11.5
20	21+314	PC	0.8x?
21	22+260	PC	0.6x11.5
22	23+630	PC	0.6x11.2
23	29+460	PC	0.6x?
24	31+784	PC	2@0.6x14.0
25	35+525	RV	200.0.0.1.10
26	36+620	RV RV	
20	20+020	DV	
21	30+120		
28	38+715	RV	
29	42+505	PC	0.8x8.8
30	42+675	PC	1.0x?
31	43+362	PC	1.0x10.0
32	44+080	PC	1.0x10.0
33	44+591	PC	1.0x?
34	45+990	RV	
35	46+183	PC	1.0x?
36	46+925	PC	1.0x9.0
37	47+203	PC.	0.2x8.0
38	17+88/		1 0v2
0	51+600		1.07:
10	51+000		
40	51+825		
41	52+160		45.00
42	53+022	PC	1.5x9.0
43	53+365	PC	1.0x?
44	53+713	PC	1.0x?
45	54+300	PC	0.8x11.0
46	54+380	PC	1.0x?
47	54+470	PC	1.0x?
48	54+560	PČ	0.6x10.0
49	54+960	PC	1 0x?
50	55+220		0.6v8.0
50	55:446		0.0X0.0
51	55+410		0.0X0.0
52	55+692		1.0X5.0
53	55+750	PC	0.4x4.0
54	55+860	PC	0.4x6.0
55	55+967	PC	0.4x6.0
56	55+997	PC	0.4x6.0
57	56+225	PC	1.5x6.0
58	61+480	PC	2.0x6.0
59	61+924	PC	0.4x6.0
60	63+715	PC	0.4x6.0
61	63+010		0.4v8.0
UI	034910		0.470.0

(ii) Existing	g Road Section	excluded	from	Shortcut	Route

No.	Km Post	Type	Size
1	1+718	PC	1.5x13.0
2	5+4750	PC	0.2x?
3	6+399	PC	0.6x8.0
4	6+795	PC	0.6x8.0
5	7+980	PC	1.0x10.0
6	8+540	PC	0.4x8.0
7	8+775	PC	1.0x10.0
8	9+280	PC	2.25x9.0
9	10+420	RV	
10	10+790	PC	0.6x8.0
11	12+190	PC	2.25x9.0
12	12+597	PC	0.4x9.0
13	13+275	PC	2@2.25x12.1

NOTE	
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<u>NOTE</u>	(Unit: m)
PC: Pipe Culvert (diameter x length)	BC: Box Culvert (height x width x length)
BC: Box Culvert (height x width x length)	RV: River / Stream

No.	Name	Location (km post)
1	Ban HouayPhek	0.0 - 0.25
2	Ban Takou	5.3 - 5.55
3	Ban Houpakho	13.75 - 14.45
4	Ban Khonken	17.45 - 17.85
5	Ban Khanneng	20.35 - 20.75
6	Ban Vataxay	21.55 - 22.55
7	Ban Phatthanakham	24.45 - 24.9
8	Ban Vatthong	27.35 - 27.75
9	Ban Watlakhone	28.25 - 28.65
10	Ban Phonepheng	28.65 - 29.05
11	Ban Phonngam	34.6 - 35.8
12	Ban Maidonthangkhouay	36.15 - 36.45
13	Ban Nong-Nokkhian	37.95 - 38.25
14	Ban Thangbeng	39.05 - 39.45
15	Ban Nongthon	40.05 - 40.25
16	Ban Dontalat	42.55 - 43.55
17	Ban Chikthango	46.5 - 47.3
18	Ban Nong Bouakhao	$47.55 - \overline{48.0}$
19	Ban Bak	52.1 - 52.4
20	Ban Samkha	54.45 - 54.95
21	Ban Samyak	55.45 - 55.75
22	Ban Soukhouma	59.55 - 59.75

(5) List of Villages on Route 14A

(6) List of Villages on Route 16A

(1) For Shortcut Route	(i) For	Shortcut	Route
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No.	Name	km
1	Ban Nonchan	8.1 - 9.0
2	Ban Lak 11	9.9 - 10.6
3	Ban Lak 12	11.7 - 12.8
4	Ban Lak 15	15.3 - 16.0
5	Ban Chansavang	16.5 - 17.8
6	Ban Nongkhaung-Gnai	21.45 - 22.4
7	Ban Nongkin	24.9 - 25.4
8	Ban Lak 27	27.6 - 28.1
9	Ban Houaykong	32.0 - 32.4
10	Ban Nong I-Oy	33.0 - 34.0
11	Ban Namtouat	40.1 - 40.35
12	Ban Lak 52	64.4 - 64.5

(ii) Existing Road Section excluded from Shortcut Route

No.	Name	km
1	Ban Oupaxa	1.8 - 2.0
2	Ban Ta-Ot	5.2 - 5.5
3	Ban Tagnuksua	7.2 - 7.7
4	Resettlement Village	10.7 - 11.7

No.	Point Type	Location (km post)
1	Cemetery	0.15 - 0.25km
2	Cemetery	0.3 - 0.4km
3	Access Rd. to Village	4.8km
4	Jct. with Existing Rd.	5.3km
5	Access Rd. to Village	6.75km
6	Access Rd. to Temple	12.95km
7	School	B. Houpakho (13.9 – 14.0km)
8	School	B. Khoneken (17.0 – 17.1km)
9	School	19.35 – 19.5km
10	Borders Mekong River	18.05 – 19.95km
11	Borders Mekong River	20.6 – 21.3km
12	Temple	B. Vataxay (21.6 – 21.7km)
13	School	B. Vataxay (22.6 – 22.7km)
14	Borders Mekong River	22.55 – 23.7km
15	Temple	B. Phatthanakham (24.5 – 24.55km)
16	Empty Lot (possible telecom office & district office)	27.1 – 27.3km
17	Temple	B. Vatthong (27.45 – 27.55km)
18	School	27.55 – 27.8km
19	Temple	27.8 – 28.0km
20	Hospital	28.0 – 28.1km
21	Jct. with Existing Rd.	35.8km
22	Intersection with District Rd.	B. Thangbeng (39.15km)
23	School	42.05 – 42.25km
24	Jct. with Rt. 14A1	42.3km
25	Storehouse & Local Market	42.5 – 42.75km
26	Temple	B. Nong Bouakhao (47.95km)
27	School	B. Bak (52.3 – 52.4km)
28	Temple	B. Samkha (54.75km)
29	Jct. with Rt. 14C1	B. Samyak (55.55km)
30	School	57.95 – 58.15km

(7) List of Control Points on Route 14A

(8) List of Control Points on Route 16A

(i) For Shortcut Route

No.	Point Type	Location (km post)
1	Jct. with Local Rd.	0.15km
2	Cemetery	0.7 – 0.9km
3	High Tension Line	3.2 – 3.4km
4	Access Rd. to UXO	4.55km
5	Disposal Site	D Nonchon $(9, 1, 9, 251 \text{m})$
3	SCHOOL	B. Nonchan $(8.1 - 8.25$ km)
6	School	B. Lak 11 (10.35 – 10.5km)
7	School	B. Lak 12 (12.7 – 12.8km)
8	School	B. Bak $(7.35 - 7.45 \text{km})$
9	Temple	B. Nong Bouakhao (11.8km)
10	Cemetery	14.55 – 14.7km
11	Access Rd. to School	B. Lak 15 (15.5km)
12	School	B. Chansavang (17.2 – 17.3km)
13	Temple	B. Chansavang $(17.3 - 17.4 \text{ km})$
14	Dispensary Center	B Chansayang (17 35km)
15	School	B. Nongkhaung (21.45 –
16	Comotom	21.0Kiii) 22.1 22.2km
10	A seese D.1. to	25.1 – 25.2KIII
17	Village	23.8km
18	School	23.9 – 24.0km
19	Cemetery	24.6 – 24.9km
20	Cemetery	31.1 – 31.25km
21	Jct. with Existing Rd.	B. Nong I-Oy (33.8km)
22	Cliff (Left)	42.0 – 44.2km
23	Steep Mountain Surface (Right)	42.0 – 44.3km
24	Cliff (Left)	44.8 – 44.9km
25	Inadequate Alignment (Bridge Section)	45.7 – 46.1km
26	Steep Mountain Surface (Left)	46.1 – 46.3km
27	Cliff (Right)	46.0 – 46.4km
20	Steep Mountain	47.0 47.81mm
28	Surface (Left)	4/.0 - 4/.8KIII
29	Cliff (Right)	47.6 – 47.8km
30	Steep Mountain Slope (Right)	49.0 – 51.2km
31	Cliff (Left)	49.0 – 51.2km
32	3 Bridge Section	51.5 – 52.5km
33	Steep Mountain	52.3 – 54.9km
34	Cliff (Left)	52.3 - 55.2km
57		52.5 55.2Km

(ii)	Existing	Road	Section	excluded	from
	Shortcut 1	Route			

	Shorteut result	
No.	Point Type	Location (km post)
1	Cliff (Right)	1.4 – 1.8km
2	Access Rd. to Hydro Project Site	5.45km
3	Cliff (Right)	8.4 – 8.55km
4	Cliff (Right)	9.4 – 9.8km
5	School	10.05 – 10.15km
6	Inadequate Alignment (Bridge Section)	10.3 – 10.7km
7	Cliff (Right)	10.5 - 10.7km
8	Cliff (Right)	12.0 – 12.2km
9	School	13.55 – 13.65km

ANNEX F-2 UXO LOCATION MAP IN CHAMPASACK PROVINCE



ANNEX F-2 UXO LOCATION MAP IN CHAMPASACK PROVINCE

FINAL REPORT – ANNEXES









ANNEX F-3 BRIDGE INVENTORY SURVEY DATA

	ANN	IEX F-3 I	BRIDG	E IN	VENTO	RY SUR	VEY DATA	
Route :14A(i)	Km Pos	:t : 5+390 m			Village Na	ame: Ban	Natakou	
Bridge or River	Name: 1	1 Houy Thok	River					
Existence of Brid	dge:	Yes /	No		Within or	Outside of	f Village: Within / Outside	
	Bridg L	ength.(m):			Span Arra	angement	t(m):	
	Carriag	eway & Ped	e. Widtl	h(m):				
	Superst	ructure type	:				Load Capacity(t):	
	Girder I	Description:						
	Substructure Type: Pier:					Abutment:		
Existing Bridge	Protecti	on Work:						
Condition	Girder:			r:				
		Slab			lab: .			
ļ	Damage Condition Subst			Subst	ubstructure: -			
	F		Bank	Protection	a:			
	Othe			Other	'S: -			
	Yearly I	Low Water I	Level(m)): No w	vater	Yearly H	igh Water Level (m): GL+0.0	
River Condition	Highest	Water Leve	l(m): GI	L+1.5n	n(1978)	River Wi	idth(m): 22 m	
Collution	Riverbe	d Material:	Silt			Gradien	t: 1/1000 (V=0.2m/s Existing)	
	Height ł	Height between Riverbed and Riverbanks: 6 m						
	Land U	se: Agricultu	ral field			No. Hous	ses Affected: Noting	
Surrounding Conditions		lot reported						
Other Info.	-A prope	osed bridge si	ite will t	be affec	ted by bac	kwater fro	om Mekong.	
	- The hig	ghest water le	evel is re	ported	in 1978			
Comments	-Since th stable an - New al	ne river is me nd flood wate lignment will	eanderin r level is be set a	ig, aligned s relative t north	nment show vely high. side of the	uld be set e village to	at the point which the river channel is avoid relocation of houses	
			1. N. 1. 195	8 . S. S.	1 A. 1			

FINAL REPORT – ANNEXES





View from Right Bank to Left Bank

View to Downstream Side

IMPROVEMENT OF ROADS IN THE SOUTHERN REGION IN LAO P.D.R.

Route :14A(i)	:14A(i) Km Post : 7+450 m		Village Name: Ban Nonghoy						
Bridge or River	<u>Name:</u>	2 Huay Makn	ao Rive	r					
Existence of Brid	dge:	¥es /	No		Within or	Outside o	of Village: Within	/	Outside
	Bridg L	ength.(m):			Span Arr	angemen	t(m):		
	Carriag	eway & Ped	• Widtl	h(m)•	DPm.	<u></u>	v(m):		
	Superst	Eway a I cu	<u> </u>	I(III).			Land Canadity(t):		
	Supersu	ructure type.					Load Capacity(1):		
	Girder I	Description:		Γ					
	Substru	Substructure Type: Pier:					Abutment:		
Existing Bridge Condition	Protecti	on Work:							
		Girde Slab			<u>::</u>				
	Damage	Damage Condition S		Subst	ructure:				
				Bank	Rank Protection				
	Other			rs: -	1.				
	Vearly J	ow Water L	evel(m)	No v	vater	Vearly F	fioh Water Level (1	m): 1	5m
River Condition I	Lighost	Highest Water Level(m):		River Width(m): 5m					
	Riverbe	Riverbed Material: Silt				Gradien	it: 1/1000		
	Height	Height between Riverbed and Riv			erbanks: 2	<u>2 m</u>			
gding	Land U	se: Agricultur	al field			No. Hou	ses Affected: Notin	g	
Conditions	UXO: N	lot reported							
Other Info.									
	- No afte	ection of back	water II	om M	ekong Rive	er			
Comments	- Box cu width an	ulvert shall b 1d low river h	e appro eight.	priate	for this cr	cossing po	oint in consideration	n wi	th narrow river

Route :14A(i)	Km Post : 7+950 m				Village Name: -		
Bridge or River	Name: 3	3 Huay Nams	an River				
Existence of Brid	dge:	¥es /	No		Within or	r Outside of Village: Within / Outside	
	Bridg L	ength.(m):			Span Arra	rangement(m):	
	Carriag	ewav & Pede	e. Width	(m):			
	Superst	ructure type		()•		Load Canacity(t).	
	Girder I	Description	<u>.</u>			Loud Cupacity(t):	
		Description.					
Evicting Bridge	Substru	cture Type:	<u> </u>	Pier:		Abutment:	
Condition	Protectio	on Work:	(Girde	. . .		
			<u> </u>	<u>Slab:</u>	·		
	Damage	Damage Condition		Subst	ructure:		
]		Bank Protection:				
	Other			Other	'S:		
	Yearly I	Low Water L	evel(m):	No w	ater	Yearly High Water Level (m): 1.5m	
River Condition	Highest	Water Level	(m) not	avail	ahle	River Width(m): 8m	
	Riverbe	Riverbed Material: Silt				Gradient: 1/1000	
	Height between Riverbed and Rive			d Riv	verbanks: 2 m		
Surrounding	Land Us	se: agricultura	al area			No. Houses Affected: Noting	
Conditions	UXO: N	ot reported					
Other Info.	- Little a	ffection of ba	ic <u>kwater</u>	from	Mekong R	River	
Comments	 Box cu width an 	ulvert shall b d lower HWI	e approp	oriate	for this cr	crossing point in consideration with narrow river	

View from Right Bank

View to Downstream

IMPROVEMENT OF ROADS IN THE SOUTHERN REGION IN LAO P.D.R.

Route :14A(i)	Km Post : 8+450 m			ļ	Village Name: -				
Bridge or River	r Name:	4 No name			Timbe	41110.			
Existence of Bri	dge:	Yes /	No		Within or	Outside o	of Village: Within / Outside		
	Rridg I	ength (m):			Snan Arr	engemen	t(m).		
		eligui.(iii).	XX7: dth	().	Spanzin	allgemen	u(m).		
	Саггіад	eway & reut	2. Wium	<u>(m):</u>					
	Supersu	ructure type:					Load Capacity(t):		
	Girder I	Description:							
	Substru	icture Type:	J	Pier:			Abutment:		
Existing Bridge	Protecti	ion Work:	——						
Condition				Girde Slah	<u>r:</u>				
	Damage	- Condition	ľ	Siav.	·				
	Dannas	Duning Continue			Protoction				
				Dank Other	<u> </u>	1:			
	Voorly		creel(m)	· No v		Voorly F	P-L Water I aval (m): () 5m		
River	Yearry 1		ever(m).	<u>, INU w</u>			lign water Level (iii): 0.5m		
Condition	Highest	Water Level	(m): not	availa	able	River W	idth(m) : 3m		
	Height !	between Rive	erbed an	ıd Riv	erbanks: (0.7 m			
	Land U	se agricultur	alarea	<u>.</u>		No. Hou	uses Affected. Nothing		
Surrounding Conditions		T-+ monortad	11 11-04			110. 440.	Stofficture a vouning		
Other Info.	UAU. 13	lot reported							
	- No affe	ection of back	water fro	om Me	ekong Rive	er			
Comments	- Box cu and low	ılvert shall be /er HW <u>L</u>	appropri	iate at	this crossi	ng point i	in consideration with narrow river width		

·					·					
Route :14A(i)	Km Pos	st: 9+050 m			Village N:	ame: -				
Bridge or <u>River</u>	: Name: :	5 No name								
Existence of Bri	dge <u>:</u>	¥es_/	No		Wit <u>hin or</u>	Out <u>side c</u>	of Village: Within /	Ou <u>tside</u>		
,	Rridg L	enoth (m):			Snan Arr	angemen				
	C-mion	Cligenting.	• W(:44)	· ()•	Opun	<u>11150110</u>	um).			
	Carriag	eway & reu	<u>e. Wluu</u>	<u>n(m):</u>						
	Superst	ructure type	<u>):</u>				Load Capacity(t):			
	Girder J	Description:								
	Substru	icture Type:		Pier:			Abutment:			
Existing Bridge	Protecti	ion Work:								
Condition				Girde	der:					
				<u>Slab:</u>	Slab: .					
	Damage	Condition		Subst	ructure:					
				Bank	Protection	1:				
'				Other	r s: -					
	Yearly I	Low Water I	Level(m)): No v	vater	Yearly F	ligh Water Level (m):	: 1.0m		
River Condition	Highest	Water Leve	- el(m): 1.(0m	-	River W	/idth(m): 5m			
Collution	Riverbe	ed Material:	Silt			Gradien	it: 1/100			
'	Height	between Riv	erbed a	nd Riv	erbanks: 1	1.5 m				
	Land U	se: agricultur	ral a <u>rea</u>			No. <u>Hou</u>	ses Affected: Nothing			
Surrounaing Conditions	UXO: N	Jot renorted								
Other Info.	- No affe	ection of bacl	kwater fr	rom M	ekong Rive	er				
'	- Rock e	exposes on the	e riverbe	ed.						
Comments	- Box cu and low	ılvert shall be er HWL.	e appropi	riate at	this crossi	ng point i	in consideration with n	arrow river width		
				A No	A A A					

r	·				·				
Route :14A(i)	Km Pos	st: 9+380 m			Village N:	ame: -			
B <mark>ridge or River</mark>	: <u>Name: (</u>	<u>6:Huay Gnan</u>	g River						
Existence of Bri	dge:	¥es /	No		Within or	Outside o	of Village: Within	/ Outside	
	Rridge 1	I ength (m)·			Snan Arr	angemen			
	Diluge .	Leligui.(m).			Spanzin	allgemen	<u>u(m).</u>		
	Carriag	jeway & Pede	e. Width	<u>1(m):</u>			1		
	Superst	ructure type	<u>: </u>				Load Capacity(t):		
	Girder]	Description:							
	Substru	ıctur <u>e Type:</u>		Pier:			Abutment:		
Existing Bridge	Protecti	ion Work:							
Condition				Girde	irder:				
			ļ	Slab:					
	Damage	<u>Condition</u>	ł	Subst	ructure:	-			
			I	Bank	Protectior	n:			
				Other	rs: -				
	Yearly I	Low Water L	Level(m)): No v	vater	Yearly H	ligh Water Level (m	n): 1.0m	
River Condition	Highest	t Water Leve	l(m): 1.(Jm	I	River W	/ idth(m) : 5m		
Condition	Riverbed Material: boulders				i	Gradien	at: 1/50		
	Height	between Rive	erbed ar	nd Riv	erbanks: 1	1.0 m			
	Land U	se: bush			!	No. <u>Hou</u>	ses Affected: Nothin	ng	
Surrounding Conditions	UXO: N	Jot reported							
Other Info.	04400	lot reported							
	- No affe	ection of back	water fr	om Me	ekong Rive	er			
Comments	- Box cu	ılvert shall be er HWL.	appropr	riate at	this crossi	ng point i	in consideration with	1 narrow river width	

\mathbf{D} outo $(1/\Lambda(i))$	Km Post: 0 ± 480 m								
		<u>31: 9+480 III</u>			Village INA	ame: -			
Bridge or River	Name: [^]	7: No name			<u> </u>				
Existence of Brid	dge:	Yes /	No		Within or	Outside o	of Village: Within / Outside		
	Bridge]	Length.(m):			Span Arra	angemen	t(m):		
	Carriag	geway & Pede	e. Width(n	n):					
	Superst	tructure type:	•				Load Capacity(t):		
	Girder	Description:							
	Substru	icture Type:	Pi	er:			Abutment:		
Existing Bridge	Protecti	ion Work:			L. <u>127474474474</u>				
Condition			Gi	irde	r:				
		~	Sla	ab:					
	Damage	<u>: Condition</u>	Su	Substructure: -					
					Protection	n :			
				<u>tnei</u>	'S: -				
River Condition	Yearly I	Yearly Low Water Level(m): No w				Yearly H	figh Water Level (m): 0.5m		
	Highest	Highest Water Level(m): 1.0m				River W	idth(m) : 8m		
	Riverbe Height	ed Material: b	oulders	Riv	erhanks	Gradien	t: 1/20		
	I and II	In hugh	1 beu unu :	1111		No Hou	Affantad. Nathina		
Surrounding		se: busn				N0. F10u	ses Affected: Nothing		
Conditions Other Info.	UXO: N	lot reported							
	- No affe	ection of back	water from	n M	ekong Rive	er			
Comments	- Box cu and low	ulvert shall be er HWL.	appropriat	te at	this crossi	ng point i	in consideration with narrow river width		

View to Upstream

	1			T						
Route : 14A(i)	Km Pos	st:		Village Na	ame: -					
Bridge or River	Name:	8 Huay Imet (Nang	gnam) Ri	ver						
Existence of Brid	dge:	Yes / No		Within or	Outside c	of Village: Within	/ Outside			
	Bridg L	Length.(m):		Span Arr	angemen	nt(m):				
	Carriag	wav & Pede. Wi	idth(m):	<u> </u>						
	Superst	moture type	<u>uuu</u> (,			Load Canacity(t):	•			
	Cirder	Description:				Luau Capacity (1).	•			
		Description.	D • - 200			41 4 4				
Tvicting Bridge	Substru	cture Type:	Pier:			Abutment:				
Condition	Protecu	on Work:								
00110			Girae Slab:	er:						
	Damage	e Cond <u>ition</u>	Subst	tructure:	_					
			Bank	Protection	n:					
			Othe	rs:						
	Yearly I	Low Water Level	(m): 0 m		Yearly F	High Water Level ()	m):			
River Condition	Uighest	Flood Water Lev	vol(m).		Divor W	\mathbf{W} dth(m) · 10 m				
	Riverhe	- Floor Water Leve ad Material Bould	ders & sa	nd	Gradien	10000000000000000000000000000000000000				
	Height]	Height between Riverbed & River bank or Bridge Surface(m): 2m (LB), 5m(RB)								
	Land U	See Forest & Bush	· ••• =	N 442	No Hou	uses Affected. No h	ouses around river			
Surrounding Conditions		SC. FUICOL & Duoin			110, 1100	1909 AHUUUU. 110 AK	Juses around river			
Other Info	UXU: IN Redroc	lot Reported	abt bank							
Other mo.	- The riv	ver menders near th	ie propos	ed bridge s	ite. Some	e branch stream com	ne together?			
Comments	The bri	idae length should	be carefu		ad based	on hydrological ana	lucie			
Comments	- The cro	ossing point should	1 be also	carefully er	xamined (considering the stab	bility of the channel.			
		1 March	n All			Ten al				
	EN ELS	A A A A A A A A A A A A A A A A A A A	in the second		Sec. 1					
Al Real			A STALL				A CONTRACTOR			
a the way is		1 Santan 1		and the second	e-e-upi	A CONTRACTOR				
ALL AND	1	A State Barrie	NS 12		6. 19 1		P - Andre			
ALL ALL ALL ALL					Me a	WE HORE AND				
Assessment of the							piles aligned			
							ET ANT			
Ser Strand	the second		1		1	State i have				
			STREAM.			Lines -				
	A		1 Are							

View from Right Bank to Left Bank

View to Downstream Side

IMPROVEMENT OF ROADS IN THE SOUTHERN REGION IN LAO P.D.R.

Route :14A(i)	Km Pos	t : 11+580 m			Village Na	ame: -			
Bridge or River	Name: 9): Huay Kaun	am River	•					
Existence of Brid	dge:	Yes /	No		Within or	Outside o	of Village: Within	/	<u>Outside</u>
	Bridge I	Length.(m):			Span Arra	angement	t(m):		
	Carriag	eway & Pede	e. Width((m):					
	Superst	ructure type:	:				Load Capacity(t)):	
	Girder l	Description:					·		
	Substru	cture Type:	F	Pier:			Abutment:		
Existing Bridge	Protecti	on Work:							
Condition			<u>(</u>	<u> Jirde</u>	r:				
	Damage	Condition	<u>0</u> 6	ilab:					
	Damage	Condition	<u>כ</u> ד	ounsu Ponk	Protection	-			
				Other	r:-	1.			
	Vearly I	ow Water L	evel(m):	No w	vater	Vearly H	ligh Water Level	(m): ()	5m
River	wer bindition Riverbed Material: boulders			n <u>1,0 .</u> ,	uter	River Wi	idth(m)· 8m	(11), 5	.511
Condition				<u>11</u>		Gradien	t: 1/100		
	Height b	oetween Rive	erbed and	l Riv	erbanks:	l.0 m			
Surrounding	Land Us	se: bush				No. Hous	ses Affected: Noth	ning	
Conditions	UXO: N	ot reported							
Other Info.	- No affe	ection of back	water fro	om M	ekong Rive	er			
Comments	- Box cu and lowe	lvert shall be er HWL.	appropria	ate at	this crossi	ng point i	in consideration wi	ith nar	row river width

Km Pos	t : 12+120 m			Village Na	ame: -			
Name: 1	10: Huay Kha	o Dam F	River					
lge:	¥es /	No		Within or	Outside o	f Village: Within / O	<u>Dutside</u>	
Bridge I	Length.(m):			Span Arra	angemen	t(m):		
Carriag	eway & Pede	. Width	u(m):					
Superst	ructure type:					Load Capacity(t):		
Girder I	Description:							
Substru	cture Type:		Pier:			Abutment:		
Protecti	on Work:							
			Girde	r:				
Damage	Condition	-	Substructure -					
Damage	Condition	-	Bank Protection:					
		-	Other	'S: -	1			
Yearly I	Low Water Lo	evel(m):	: No w	ater	Yearly H	ligh Water Level (m): 1.0r	n	
ver mdition Highest Water Level(m): 1		(m): 1.0	m		River W	idth(m): 8m		
nditionHighest Water Level(m): 1Riverbed Material: Silt					Gradien	t: 1/100		
Height b	oetween Rive	rbed an	d Riv	erbanks:	l.0 m			
Land Us	se: bush				No. Hou	ses Affected: Nothing		
UXO: N	ot reported							
- No affe	ection of back	water fr	om M	ekong Rive	er			
- Box cu and lowe	lvert shall be er HWL.	appropr	iate at	this crossi	ng point i	n consideration with narrow	w river width	
	<u>, 11 (2.</u>							
	Km Post Name: 1 ige: Bridge I Carriag Superstr Girder I Substrue Protectie Damage Vearly I Highest Riverbe Height I Land U: UXO: N - No affe - Box cu and lowe	Km Post: 12+120 m Name: 10: Huay Khad ige: ¥es / Bridge Length.(m): Carriageway & Pede Superstructure type: Girder Description: Substructure Type: Protection Work: Damage Condition Yearly Low Water Level(Riverbed Material: S Height between River Land Use: bush UXO: Not reported - No affection of back - Box culvert shall be and lower HWL.	Km Post: 12+120 m Name: 10: Huay Khao Dam F ige: ¥es / No Bridge Length.(m): Carriageway & Pede. Width Superstructure type: Girder Description: Substructure Type: Protection Work: Damage Condition Yearly Low Water Level(m): Highest Water Level(m): Highest Water Level(m): Highest Water Level(m): Land Use: bush UXO: Not reported - No affection of backwater fr - Box culvert shall be appropr and lower HWL.	Km Post: 12+120 m Name: 10: Huay Khao Dam River ige: ¥es / No Bridge Length.(m): Carriageway & Pede. Width(m): Superstructure type: Girder Description: Substructure Type: Pier: Protection Work: Girde Damage Condition Subst Damage Condition Subst Yearly Low Water Level(m): No w Bighest Water Level(m): 1.0m Riverbed Material: Silt Height between Riverbed and Riv Land Use: bush UXO: Not reported - No affection of backwater from Material: and lower HWL. Bappropriate at and lower HWL.	Km Post: 12+120 m Village Name: Name: 10: Huay Khao Dam River ige: ¥es / No Within or Bridge Length.(m): Span Arra Carriageway & Pede. Width(m): Span Arra Carriageway & Pede. Width(m): Span Arra Girder Description: Signerstructure type: Girder Description: Pier: Substructure Type: Pier: Protection Work: Slab: . Damage Condition Substructure: Bank Protection Others: - Yearly Low Water Level(m): No water Highest Water Level(m): No water Highest Water Level(m): 1.0m Riverbed Material: Silt Height between Riverbed and Riverbanks: 1 Land Use: bush UXO: Not reported - - No affection of backwater from Mekong River - Box culvert shall be appropriate at this crossi and lower HWL.	Km Post: 12+120 m Village Name: - Name: 10: Huay Khao Dam River ige: ¥es / No Within or Outside or	Km Post: 12+120 m Village Name: - Name: 10: Huay Khao Dam River ige: ¥es / No Within or Outside of Village: Within / C Bridge Length.(m): Span Arrangement(m): Carriageway & Pede. Width(m): Span Arrangement(m): Carriageway & Pede. Width(m): Load Capacity(t): Girder Description: Load Capacity(t): Substructure Type: Pier: Abutment: Protection Work:	

	Km Dost: 13 630m				Village Name: B Houseskho					
Route : 14A(1)	Km Pos	<u>t: 13+6300</u>	<u>n</u>		Village INa	ате: в п	Iouapakho			
Bridge or River	Name: 1	11 Huay Tł	nakhong R	iver						
Existence of Brid	dge:	¥es /	No	_	Within or	Outside c	of Village: Within	/	Outside	
	Bridg L	_ _ength.(m)	-		Span Arr	angemen	- nt(m):			
	Carriag	rowav & P	ede Widt	h(m):	<u>_~</u>					
	Gamoret	circy co	<u></u>	11(111).						
	Supersu	ructure ty	pe:				Load Capacity(1)	<u>.</u>		
	Girder 1	Descriptio	<u>n:</u>	Τ						
	Substru	cture Type	e:	Pier:			Abutment:			
Existing Bridge	Protecti	on Work:		T~• •						
Condition				Girde Slah	er:					
	Damage	Condition	`	Siav.	twistire					
	Daniase	Condition		Donk	Bank Protection:					
					Protection	1:				
	L_{1}		- 14	Unic	.8					
River	Yearly 1	Low Water	<u>c Level(m)</u>): 0 m		Yearly H	High Water Level (<u>т):</u> к	B+3-4m	
Condition	Highest	Water Le	vel(m): RF	<u>B+5m (</u>	(2000)	River W	/idth(m): 30 m			
	Riverbe Height	<u>d Materia</u> between R	l: Silt viverhed &	& Rive	r hank or]	Gradien Rridge St	<u>1t: 1/1000</u> urface(m): 4.8 m			
	T J II	Aioul		* <u>* * * * * * * * * * * * * * * * * * </u>			A Martad. Noth	• _		
Surrounding	Lana Us	se: Agricui	tural Use()	Danana	trees)	N0. 110u	ises Affecteu: noun	ing		
Conditions Other Info	UXO: N	iot Reporte	d the crossi	ng poir	nt will be a	ffected h	y backwater from M	Iakon	~	
	-The cro	ossing poin	t is located	l just n	orth of the	village.		ICKUI		
Commonte	A bride		ill be et		ists and the	- bridge 1		£.,11 ₁₇ e		
Comments	on the hyperbolic contract h	ydrologica	l analysis	рюри		Diluge K		fully c	Xammeu basea	
								£.,	St Mr.	
Alter og hi	la tile.		1	ANT OF CAL						
		E.	AL AL	The state		358	States -	S.	and the	
		A State			-	S ALLES		100	- AND	
B.T. TA	and the second	The	20-3	25						
		Act		er the		and the second	-1-17	177	Stree 1	
				A.M.			Sector -		200	
the Ally	T. S.	1. 33	A. Com		SAL		A State of the second	3.0		
and the state	W.				1	1.2	A BEACH	And the second	ASI TH	
	1	200								

View from Left Bank to Right Bank

View to Upstream Side

	I								
Route : 14A(i)	Km Pos	t : 14+540m			Village Na	ame: B H	ouapakho		
Bridge or River	Name:	12 Huay Tabxa	n River						
Existence of Brid	dge:	¥es /	No		Within or	Outside o	f Village: Within / Outside		
	Bridg L	ength (m):			Snan Arr	angement	t(m)•		
			XX /* J /L (Span Arra	angemen			
	Carriag	eway & Pede.	wiath()	m):					
	Superst	ructure type:					Load Capacity(t):		
	Girder]	Description:							
	Substru	cture Type:	Р	Pier: Abutment:					
Existing Bridge	Protecti	on Work:							
Condition			G	lirde	r:				
			S	lab:	•				
	Damage	Condition	S	ubst	ructure:	-			
			B	ank	Protection	1:			
					thers: -				
Divor	Yearly I	Low Water Le	vel(m):	0.2 n	1	Yearly H	ligh Water Level (m): RB+3-4m		
Condition	Highest	Water Level(m): GL+	-0 (20	(000	River W i	idth(m) : 40m		
Riverbed Material: Silt			ilt	<u></u>		Gradien	t: 1/1000		
	Height	between River	bed & F	lver	bank or l	Bridge Su	irface(m): 4.7m		
Surrounding	Land U	se: Agricultura	l Use			No. Hous	ses Affected: Nothing		
Conditions	UXO: N	lot Reported							
	-The wa	ter level at the	crossing	poin	t will be a	ffected by	backwater from Mekong		
Other Info.	- A bran - This riv	ch stream enter	rs into th ust south	1s riv 1 of tl	er just ups ne village.	tream side	e of the crossing point. more than 500 residences live.		
		j							
Comments	- The cr stream.	ossing point w	vill be c	arefu	Ily examin	ned consid	dering the meeting point of the branch		

View from Left Bank to Right Bank

View to Upstream Side

Route : 14A(i)	Km Pos	t : 15+82	20m			Village Na	ame: -				
Bridge or River	Name: 1	13 Huay	Khor	ieliao Ri	iver						
Existence of Brid	dge:	Yes	/	No		Within or (Outside o	of Village: Within	/	Outside	
	Bridg L	ength.(r	m):			Span Arra	angement	t(m):			
	Carriag	eway &	Pede	Width	(m):						
	Curring	<u>,cway a</u>	tronge	· · · · · uu	(III)•		Load Canacity(t):				
	Supersu	<u>ructure</u>	<u>type:</u> 					Load Capacity(1)	:		
	Girder I	Descript	tion:								
	Substru	cture T	ype:		Pier:	er: Abutment:					
Existing Bridge	Protecti	on Wor	<u>k:</u>	[
Continuin				-	Girder:						
	Demogra	Canditi		-	Slad:						
	Damage	Condition	<u>on</u>	i	Substructure: -						
				-	Bank	Protection	1:				
	 				Other	'S: -					
Divon	Yearly I	Low Wa	ter Le	evel(m):	:0 m		Yearly H	ligh Water Level ((m):		
River Condition	Highest	Water I	Level	(m): RB	3+6m ((2000)	River W i	/idth(m): 15-20 m			
	Riverbe	d Mater	rial: E	Bedrock	& silt		Gradien	it: 1/1000			
	Height t	between	Rive	rbed &	River	· bank or H	Bridge Su	urface(m): 5 m			
Surrounding	Land Us	se: Bush	1 & ba	nana fie	ld	No. Houses Affected: Nothing					
Conditions	UXO: N	lot Repo	rted				_		_		
Other Info.	- The	water le	evel at	the cros	ssing p	point will b	e affected	d by backwater from	m Mek	ong	
	- Sandsto	one, bea	rock,	exposed	l at the	e riverbea.					
Comments	- Abr	ridge stru	ucture	will be	appro	priate for t	his site.		_		
		T .									

View from Right Bank to Left Bank

W.F

View toward Upstream Side

Har war war

2.82

A VI MONT

	1								
Route : 14A(i)	Km Pos	t : 17+040m		Village Na	ame: Ban	Khoneken			
Bridge or River	Name: 1	14 Huay Khoneke	en River						
Existence of Brid	dge:	Yes / No)	Within or	Outside o	f Village: Within / Outside			
	Rridge l	Length (m)•		Snan Arr	angemen	t(m)•			
	Comica	oway & Dada W		Spannin	angemen				
	Carriag	eway & Pede. w							
	Superst	ructure type:				Load Capacity(t):			
	Girder I	Description:							
	Substru	cture Type:	Pier:			Abutment:			
Existing Bridge	Protecti	on Work:							
Condition			Girde	er:					
			Slab:						
	Damage	Condition	Subst	ructure:	-				
			Bank	Bank Protection:					
				'S: -					
	Yearly I	Low Water Level	l (m): 0.3 n	n	Yearly H	ligh Water Level (m): 6.0m			
River Condition Highest Water Level(m):			• 9.0m		River W				
Condition	Riverbe	d Material: Silt	• 7.011		Gradien	t: 1/1000			
	Height l	between Riverbe	d & River	bank or l	Bridge Su	urface(m): 5 m			
a P	Land U	se: Agricultural U	se (paddy	field)	No. Hou	ses Affected: Nothing			
Surrounding Conditions	UXO [.] N	lot Reported				-			
	- The	water level at the	crossing p	ooint will b	e affected	d by backwater from Mekong			
Other Info.	- The	crossing point is	located jus	st north of	the village	e and the river menders			
	- The	flood water level	in 1978 is	quite high	at this po	pint (GL+1.2m(2000))			
Comments	- A bridg	ge structure will b	e appropri	ate and the	e bridge le	evel should be carefully examined based			
	on the h	yurological analy	818	1475					
ek.									
	. 64	2	No. A.			a Likit			
		a strange	Sugar .		Hale	NI STATE			
Trates and		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		d anne	and the				
			be a	X,					
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Alt In			A Charles		Elst in	Manager of the State			
	and the second	and the shafe	State and						

View from Right Bank to Left Bank

View toward Downstream Side

Route : 14A(i)	Km Pos	t : 18+320 m		Village N	ame: Ban	Khonken		
Bridge or River	Name: 1	15 Huay Hong R	River					
Existence of Brid	dge:	Ves / N	No	Within or	Outside o	of Village: Within / Outside		
	D. 1		<u>.</u>	C. A				
	Bridge	Length.(m):		Span Arr	angemen	t(m):		
	Carriag	eway & Pede. V	Width(m):	:				
	Superst	ructure type:				Load Capacity(t):		
	Girder I	Description:						
	Substru	cture Type:	Pier	:		Abutment:		
Existing Bridge	Protecti	on Work:		<u>.</u>				
Condition	1100000		Gira	ler:				
			Slab	: .				
	Damage	Condition	Sub	structure:	-			
			Ban	Bank Protection:				
			Oth	ers: -				
	Yearly I	Low Water Lev	el(m): 0 m	ı	Yearly H	ligh Water Level (m): 6.0m		
River	liver Highest Water Level(m): 9 (t				Dimon W	3 4 t h (m): 15, 25 m		
Condition Highes River		d Material: Silt	i): 9 .0m t		Gradien	idtn(m) : 15-35 m t: 1/1000		
	Height l	oetween Riverb	ed & Riv	er bank or I	Bridge Su	urface(m): 10 m		
	Land U	se: Agricultural	Use (bana	na field)	No. Hou	ses Affected:		
Surrounding Conditions		ot Peported						
Contantions	-The wa	ter level at the c	rossing po	int will be a	iffected by	backwater from Mekong		
Other Info.	-The cro	ssing point is lo	cated just	south of the	village ar	nd a vehicle can not pass this river.		
	-Sugarca	ne is cultivated	on the rive	er slope.				
Comments	- A brids	e structure will	be approp	riate and the	e bridge le	evel should be carefully examined based		
	on the h	ydrological anal	ysis		U	5		
No.14				100	1914 ST -			
A Contractor			Cape Se		P LORD			
			A los		lai			
AND AND AND	1. P	ALC: NO	2 19.76			No. of the second second		
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		199			A COL			
Contraction of the second	-	IEI ST			A CARTA			
	· · · ·			1	M. Carl			
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View from Right Bank to Left Bank

View toward Upstream Side

r	T			1					
Route : 14A(i)	Km Pos	t: 19+000 m		Village Name: -					
Bridge or River	Name:	16 Huay He River							
Existence of Brid	dge:	Yes / No	<u>)</u>	Within or	Outside c	of Village: Within / Outsi	de		
	Bridge I	Length.(m):		Span Arra	angemen	t(m):			
	Carriag	eway & Pede, W	idth(m):		8				
	Superst	ructure type:	<u>14411(111)</u>			Load Canacity(t).			
	Girdor	Description:				Loau Capacity(t).			
	Gilderi		D	Abutmonte					
Existing Bridge	Substru Drotooti	cture Type:	Pier:	Abutment:					
Condition	Protecti	on work:	Circle						
			Girue Slah	Slab:					
	Damage	Condition	Subst	Substructure [.] -					
			Bank	Bank Protection:					
			Other	rs: -					
	Yearly I	Low Water Level	(m): 0 m		Yearly H	High Water Level (m): 5.7m			
River	II:ah aat		. 9 5		Dimon W	(idth(m)): 25, 20, m			
Condition H F	Highest Riverbe	<u>water Level(III):</u> d Material: Silt	; 8.3111		Gradien	t. 1/1000			
	Height	Height between Riverbed & River bank or Bridge Surface(m): 5.8 m							
	Land U	se: Agricultural us	se or bush		No. Hou	ses Affected:			
Surrounding Conditions		lot Peported			100 2200				
Other Info.	- The	water level at the	crossing	point will b	e affected	d by backwater from Mekong			
Comments	- A bridg	ge structure will b	e appropri	iate and the	e bridge le	evel should be carefully examine	ed based		
	on the h	ydrological analys	sis						
	F	-			134 	ALL ALL ALL ALL ALL ALL ALL ALL ALL ALL	1 - A		
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View from Left Bank to Right Bank

Downstream View

Route : 14A(i)	Km Pos	t: 19+890 m			Village Name: Ban Khangneng					
Bridge or River	Name: 1	17 Huav Dua	River							
Existence of Brid	lge:	Yes /	No		Within or	Outside of	f Village: Within / Outside			
	Bridge I	Length.(m):			Span Arra	angement	t(m):			
	Carriag	eway & Pede	e. Widt	h(m):						
	Superst	ructure type:	:				Load Capacity(t):			
	Girder l	Description:								
	Substru	cture Type:		Pier:	Abutment:					
Existing Bridge	eProtection Work:									
Condition				Girde	er:					
Ī				Slab:	•					
	Damage Condition S			Subst	ructure:	-				
				Bank	Protection	n:				
				Other	'S: -					
	Yearly I	Low Water L	evel(m)) : 0 m		Yearly H	figh Water Level (m): 3.2m			
River Condition	Highest	Water Level	(m): G	L+1.0n	n(2000)	River Wi	idth(m): 10 m			
Condition	Riverbe	d Material: S	Silt			Gradient	t: 1/1000			
	Height h	between Rive	erbed &	z River	bank or l	Bridge Su	rface(m): 4.2m			
	Land Us	se: Agricultur	al Use (naddy	field)	No. Hous	ses Affected: a few houses may			
Surrounding Conditions				(1))					
Other Info	UAU: N	ot Reported	t the cro	necina 1	oint will b	e affected	by backwater from Mekong			
Other mo.	- The crossing point is located just north of the village.									
Comments	- A culvert structure will be appropriate because of small catchment area.									



View from Right Bank to Left Bank

View toward Upstream Side

Route : 14A(i)	Km Pos	t : 21+430m	1		Village Name: Ban Vatxai						
Bridge or River	Name:	18 Huay Sa	i River								
Existence of Bri	dge:	¥es /	No		Within or	Outside of	f Village: Within	/	Outside		
	Bridge]	Length.(m)):		Span Arra	angement	t(m):				
	Carriag	eway & Pe	de. Widtl	h(m):		0	· · ·				
	Superst	ructure tvi	oe:				Load Capacity(t):				
	Girder]	Description	n:								
	Substru	eturo Typo	•	Pior:	A hutmont.						
Existing Bridge	Brotocti	ion Work:		rier.	Abutment:						
Condition	1101001	UII WUIK.		Girde	r:						
				Slab: .							
	Damage	Condition		Substructure: -							
				Bank	Bank Protection:						
				Other	'S: -						
	Yearly I	Low Water	Level(m)) : 0.3 n	n	Yearly H	ligh Water Level (r	n): 6	.5m		
River Condition	Highest	Water Lev	vel(m): Gl	[1m (2000)	River Wi	idth(m): 50 m				
Condition	Riverbe	d Material	l: Silt			Gradien	t: 1/5000 (V=0.1m/	s)			
	Height	between Ri	iverbed &	River	bank or l	Bridge Su	urface(m): 8.1 m				
Sumounding	Land U	se: Agricult	ural Use (paddy	field) No. Houses Affected: Nothing						
Conditions	UXO: N	lot Reported	d								
Other Info.	- The	water level	at the cro	ossing p	point will b	e affected	l by backwater from	ı Mel	kong		
	- The	crossing po	oint is loca	ated jus	st north of	the village	e and the river meno	lers 1	noderately.		
Comments	- Abi	ridge structu	ure will be	e appro	priate and	abutment	location should be	exam	ined.		
	- The	bridge leve	el should t	be care	fully exam	ined based	d on the hydrologica	al ana	alysis		

View from Right Bank to Left Bank

View toward Upstream Side

	1											
Route : 14A(i)	Km Pos	t : 24+35	0 m			Village Name: Champasack Town						
Bridge or River	Name: 1	19 Huay	Phap	hin Riv	er							
Existence of Bri	dge:	¥es	/	No		Within or	Outside of	f Village: Within	1	Outside		
	Bridge I	ength.(m):			Snan Arra	angement	t(m):				
	Carriad	oway &	Pode	Widt	h(m)•	Spunnin	angemen					
		<u>eway œ</u>	<u>1 cut</u>	. Wiuu	u(m).							
	Supersu	ructure	<u>туре:</u>					Load Capacity(t)):			
	Girder I	Descript	zion:									
	Substru	cture Ty	pe:		Pier:	Abutment:						
Existing Bridge Condition	Protecti	on Worl	k:		C : 1							
					Girde Slab:	Girder:						
	Damage	Conditi	on		Substructure: -							
	-				Bank	Protection	1:					
					Other	rs: -						
	Yearly I	Low Wat	ter L	evel(m)): 0 m		Yearly H	ligh Water Level	(m): 4:	m		
River Condition	Highest Water Level(m): 7.0m						River Wi					
	Riverbe	d Mater	rial: S	Silt	Gradient: 1/1000 (V=0.1m/s)							
	Height l	oetween	Rive	rbed &	z River	r bank or I	Bridge Su	urface(m): 4.5m				
Surrounding	Land Us	se: Bush	& fie	eld			No. Houses Affected: Nothing					
Conditions	UXO: N	ot Repor	rted									
Other Info.	- Irrigati	on dam v	with a	a water	level a	djusting ga	te is locat	ted 100m upstream	ı side.			
Comments	- A struc	tural typ	e sho	uld be s	studied	l on the bas	is of cons	struction cost.				

View from Left Bank to Right Bank

View toward Downstream Side

Route : 14A(i)	Km Pos	st : 28.9 km		Village N	ame: Champ	basack Town			
Bridge or River	Name:	20 Huay Phal	ban Bridge						
Existence of Brid	dge:	Yes /	<u>Ne</u>	Within or	Outside of V	/illage: Within /	<u>Outside</u>		
	Bridge]	Length.(m):	49.0 m	Span Arr	angement(m	a): 24.5 m x 2			
	Carriag	zeway <u>& Ped</u>	e. Width(m)	: 3.6 m					
	Superst	tructure type	e: Bailey		Lo	oad Capacity(t): 15	ton		
	Girder	Description:	Double pane	l is applied					
	Substru	icture Type:	Pier	:: RC H-	Frame Type	Abutment: RC			
	Protecti	ion Work: N	ot observed		<u> </u>				
Existing Bridge			Gir	irder: Minor corrosion is observed					
Condition			Slał	Woode : slab wo	en slab has m	ninor damages with	loss of a part of		
Ĩ	Damage	e Condition	Sub	structur <u>e</u> :	Sound				
				k Protection	n: -				
			Oth	ers: Corrosi	on on other s	steel parts but not se	rious damage		
	Yearly]	Low Water I	L evel(m): 0 n	n	Yearly Higl	h Water Level (m):	6 m		
River	Highest	Water Lev	vel(m): Top	of pier or	r				
Condition	Bridge s	surface-0.75m	n(2000)	-	River Widt	h(m) : <u>36-75 m</u>			
	Riverbe	ed Material:	Silt		Gradient: 1	/1000			
	Height	between Rive	erbed & Riv	er bank or l	Bridge Surfa	ace(m): 8 m			
Surrounding	Land U	se: Fruit trees	s and bush		No. Houses	Affected: Nothing			
Conditions	U <u>XO:</u> N	Not Reported							
	- Since r	new alignmer	nt will be set	at 200m upst	tream side, th	ne bridge site will be	e moved.		
Other Info.	The water level at the crossing point will be affected by backwater from Mekong.								
	- Previous flood records are marked on a pier of the existing bridge.								
	-The proposed bridge is required with similar scale of the existing bridge. Since the river								
Comments	menders at upstream side, the crossing point should be set at a place where the channel is stable.								





Side View of Existing Bridge

Upstream View at Proposed Bridge Site

Route : 14A(i)	Km Pos	t : 32+210m			Village Name: Ban Khoneken					
Bridge or River	· Name: 2	21-1 Huay Sa	thoua Ri	ver						
Existence of Brid	dge:	Yes /	No		Within or	Outside of	f Village: Within	/ Outside		
	Bridge I	Length.(m):	48.7 m		Span Arrangement(m): 24.5 m x 2					
	Carriag	ewav & Ped	e. Widtl	h(m): 4	4.2 m					
	Superst	ructure type	·Bailev	Type	Load Canacity(t).					
	Girder 1	Description [.]	Double	nanel i	s mainly a	nnlied (a d	louble papel with h	peam at some parts)		
	Substru	oturo Turo	Double	Dior		mo Tuno	A hutmont: E	C Frame tune		
Existing Bridge	Brotecti	on Work: N	ot obser	rier.	KC FI	ame Type	Abutment: F	C Flame type		
Condition	1101001			Girde	r: Minor	corrosion	is observed.			
				Slab:	Small	damages w	with loss of wooder	slab are observed		
	Damage	Condition		Substructure: Sound						
				Bank	Protection	n: -				
				Other	s: Corrosi	on on cros	s-beams and bracir	ngs but not serious		
	Yearly I	Low Water I	.evel(m)	: 0.2 n	1	Yearly H	igh Water Level (1	m): 5m		
River Condition	Highest	Water Leve	l(m)•7 ()	m		River Wi	dth(m): 35 m			
(Proposed site)	Riverbed Material : gravels, sand & silt Gradient: 1/1000									
	Height between Riverbed & River bank or Bridge Surface(m): 5.5 m									
C 1'	Land U	se: Paddy Fie	eld			No. Hous	ses Affected			
Surrounding Conditions	UXO: N	lot Reported								
Other Info.	- The riv	ver menders s	ignifica	ntly.		1 1 .				
	- Alıgnn	ient will be s	hifted to	lkm u	ipstream si	de due to	detouring the ancie	ent city area		
Comments	- The cr	ossing point	should b	be sele	cted the pl	ace where	the channel is stat	ble. Backwater from		
	Mekong	may not be a	affected	at the p	proposed b	ridge site.				

Side View of Existing Bridge

Downstream Side View at Proposed Bridge Site

Route : 14A(i)	Km Pos	t: 32+620) m		Village N	ame: -				
Bridge or River	<u>Name: 2</u>	21-2 Huar	y Sahoua	River						
Existence of Bri	dge:	Yes	/ <u>No</u>		Within or	Outside of	Village: Within	/	Outside	
	Bridge J	Length.(r	m): 48.7 r	n	Span Arr	angement((m): 24.5 m x 2			
	Carriag	ewav &]	Pede. Wie	dth(m):	: 4.2 m					
	Superst	ructure t	vne Bail	ev Type		Т	oad Canacity(t)	• ?		
	Girder]	<u>Nescrinti</u>	on Douh	le nanel	is mainly a		ouble nanel with 1	<u>beam</u>	at some parts)	
	Shotm	-4 Ten								
Existing Bridge	Substrue	<u>cture 19</u>	pe:	Pier:	KU FR	ame Type	Abutment: r	<u>(C</u> FI	ame type	
Condition	Protection	OII WULK	: INOL 005	Girde	er: Minor	corrosion i	s observed.			
				Slab:	Slab: Small damages with loss of wooden slab are observed					
	Damage	Conditio	<u>n</u>	Subst	Substructure: Sound					
				Bank	nk Protection: -					
				Other	rs: Corrosi	on on cross	s-beams and bracin	ngs bi	ut not serious	
	Yearly I	Low Wat	er Level ()	m): 0 m		Yearly Hi	gh Water Level (m): 3	m	
River Condition	Highest	Water L	evel(m):4	1.1m		River Wid	dth(m)∙ 10 m			
(Proposed site)	Riverbe	d Materi	al: sand	/•		Gradient:	: 1/500			
	Height k	between I	Riverbed	& River	r bank or I	Bridge Sur	face(m): 3.6 m			
Surrounding	Land Us	se: Paddy	Field		No. Houses Affected: Nothing					
Conditions	UXO: N	lot Report	ted							
Other Info.	- Alignm	ient will t	be shifted	to 1km v	ıpstream si	ide due to d	letouring the ancie	ent cit	y area	
Comments	- The cro Mekong	ossing po ; may not	oint should be affecte	d be sele d at the j	cted the pl proposed b	ace where ridge site.	the channel is sta	ıble. H	Backwater from	

Side View of Existing Bridge

Downstream Side View at Proposed Bridge Site

Route : 14A(i)	Km Pos	Xm Post : 39+600m				Village Name: Ban Dontalat				
Bridge or River	· Name: 2	22 <u>-1 No r</u>	name							
Existence of Brid	dge:	Yes	/ <u>No</u>		Within or	Outside c	of Village: Within	/ Outside		
	Bridge]	Length.(r	m): 15m		Span Arr	angemen	t(m): 15m (slab:12.2	2m)		
	Carriag	geway &]	Pede. Wie	dth(m):	3.5 m					
	Superst	ructure t	ype : Baile	ey			Load Capacity(t):	Not indicated		
	Girder]	Descripti	on: Single	e panel is	s utilized					
	Substru	cture Ty	pe:	Pier:	-		Abutment: -			
Existing Bridge	Protecti	ion Work	Not obs	erved						
Condition				Girde	er: Minor	corrosion	is observed			
				Slab:	No dar	mage				
	Damage	<u>Conditio</u>	<u>n</u>	Subst	ructure:	-				
				Bank	Protectio	n:				
				Other	rs:					
	Yearly I	Low Wat	er Level(I	m): 0 m		Yearly F	High Water Level (m	n): Br surface-0.5m		
River	Highest	Water L	evel(m):	Br. surfa	ce –0.5m		_	_		
Condition	(2002)					River W	/idth(m): 10 m			
	Riverbe Unight	d Materi	al: Silt	Q. Dive	- bonk or	Gradien	<u>it: 1/50</u>			
	neigni i	Detween	KIVEIDeu	& KIVU	Dalls of 1	Bridge or	Jriace (m): 2 m			
Surrounding	Land Us	se: Agricu	ultural Use	e (paddy	field)	No. Hou	ises Affected: nothing	g		
Conditions	UXO: N	lot Report	ted							
	- Two pi	ipe culver	s of 0.8 m	ı in diam	leter were (originally	installed at this cross	sing point but those		
Other Info.	were des	stroyed du	le to lack	of flow (capacity of	the culve	erts and replaced by a	a bailey bridge. One		
'	pipe is o	bserved n	lot to func	tion due:	to maybe	debris in	the pipe.			
Comments	The off		as should	1-2 otudi	-d on the k	asis of an	analysis on courses o	f destination		
	<u>- 1 ne su</u>	ucture typ	se snourd	be studie		asis or an	analysis on causes o	of destruction.		
						1	the second			



View from Left Band to Right Bank

Downstream Side View

PAGE F3-23

Route : 14A(i)	Km Pos	t : 40+610m			Village Name: Ban Dontalat						
Bridge or River	Name: 2	22-2 Huay Th	ateng Riv	ver							
Existence of Brid	lge:	Yes /	No		Within or	Outside of	f Village: Within-	/ Outside			
	Bridge I	Length.(m): 1	18.5m		Span Arra	angement	t(m): 18.5m (slab:12	.2m)			
	Carriag	eway & Pede	e. Width((m): 3	3.9 m						
	Superst	ructure type:	Bailey	_			Load Capacity(t): N	Not indicated			
	Girder l	Description: S	Single pa	inel is	utilized						
	Substru	cture Type:	I	Pier:	-		Abutment: RC	c frame type			
Existing Bridge	kisting Bridge Protection Work: Not observed										
Condition			(Girde	r: Minor	corrosion	is observed				
			S	Slab:	Small o	damages s	such as loss of parts of	of wooden slab			
Ī	Damage Condition			Subst	ructure:	-					
				Bank	Protection	n: -					
			(Other	s: 1-2 mm	corrosion	on cross beam & br	aising not sirious			
	Yearly I	Low Water L	evel(m):	0.5 n	1	Yearly H	ligh Water Level (m): Br surface-0.5m			
River	Highest	Water Level	(m): Br. :	surfac	ce –0.5m						
Condition	(2000)					River Wi	idth(m): 12 m				
	Riverbe	d Material: S	Silt			Gradient	t: 1/5000 (almost no	flow)			
	Height k	oetween Rive	rbed &]	River	· bank or I	Bridge Su	rface(m): 3.2 m				
a u	Land Us	se: Agricultur	al Use (p	addy	field)	No. Hous	ses Affected: a few h	ouses			
Surrounding Conditions	UXO: Not Reported										
Other Info.	- The wa surround - Drainag	JAO: Not Reported The water level at the crossing point won't be affected by backwater from Mekong and the surrounding area is inundated during rainy season. Drainage works including cross-sectional culverts have been improved along the road.									
Comments	-The new bridge should be set at the same position considering the straight alignment -The bridge length should be considered on the basis of hydrological analysis										



View from Left Band to Right Bank

Upstream Side View

Route : 14A(i)	Km Pos	st· 45+490 m			Village N	ame: Ban	Village Name: Ban Nongbeng				
Reidge or River	• Name•	22 Huay Mar		ar	Things	unic, 20					
Existence of Brid	dge:	Yes /	<u>Ne</u>	51	Within or	Outside c	of Village: Within /	Outside			
	Bridge	Length.(m):	24.5 m		Span Arr	angemen	ut(m): 24.5m				
	Carriag	zeway & Ped	e. Width	n(m): •	4.2 m	<u> </u>	<u> </u>				
	Superst	tructure type	: Bailey	Туре			Load Capacity(t): ?				
	Girder	Description:	Single p	anel w	with beam is applied.						
	Substru	icture Type:		Pier:			Abutment: RC 1	frame type			
	Protection Work: Not observed										
Existing Bridge	Girder: Minor corrosion is observed										
Condition			ļ	Slab:	Fair co	ondition w	vith small damages				
<u>I</u>		Damage Condition			ructure:	Not o	observed				
	Damage				Protectio	n:					
				Other	rs: 1-2 mr	n corrosic	on on cross beams and	braising but not			
	Vearly	Low Water	Level(m	1): 0.2	$\frac{51y}{m}$ m but no						
	water at	upstream sid	le	I)• 0.2	In out in	Yearly F	High Water Level (m):	Br.surface-1.5m			
River Condition	Highest	t Water Leve	l(m): Br	surfac	xe-1.5m	n River Width(m) : 22m					
o o numero	Riverbe	ed Material:	Silt			Gradien	at: 1/1000				
	Height	between Rive	erbed &	River	r bank or	Bridge St	urface(m): 4 m				
Surrounding	Land U	se: Bush & a	gricultur	al use		No. Hou	ses Affected: Nothing	_			
Conditions	UXO: N	Vot Reported									
	- Previo	us abutments	inclined	1 due 1	to scourin;	g under th	ne bridge so that the br	idge was replace			
Other Info.	by one v	with the longe	er span.								
	- Backwater from Mekong is not affected at the bridge site.										
Comments	- The p	proposed bric	lge shor	ıld be	set at th	ie same r	position to keep good	alignment. The			
	surround	ding area is so	ometime	s inune	dated in ra	inv seasor	n.				



View from Right Bank to Left Bank

Side View of Existing Bridge

Route : 16A	Km Pos	s t : 17.8kn	n		Village Na	Village Name: Nkh.l No.34				
Br <u>idge or River</u>	[•] <u>Name:</u>]	Huay Mc	kchan-(G <u>unai</u>						
Existence of Brid	dge:	Yes	/	<u>+</u>	Within or	Outside o	f Village: Within	/ Outside		
	Bridg L	ength.(n	ı): 25.0) m	Span Arr:	angemen	t(m) : 12.5m x 2			
	Carriag	eway &	 Pede, V	Width(m):	0 m + 4	5m + 0m				
	Gumonat	, chay a s		-:1	0 111 - 1.2		I and Connectivity			
	Supersu	ructure t	уре: Ба	alley	Load Capacity(t): not indicated					
	Girder I	Descripti	ion: Sin	igle truss pa	inel 1s appli	ied.				
	Substru	cture Ty	pe:	Pier:	Steel-fram	Steel-frame pier Abutment: Gravity concrete				
	Height l	Height between Riverbed & Bridge Surface(m): 3.2m								
Existing Bridge				Girder:	Minor cor	rosion is c	observed			
Condition				Slab:	Wooden sl	lab keeps	relatively fair condi	tion.		
	Damage Condition			Substruct	ure:	-	·			
	Damage	Conditio	<u>'11</u>	Donk Dro	taatian.	No prot	tion would			
				Others: -	tection:	NO Prou	ection work			
D'	Yearly J	Low Wat	er Lev	el(m): 0.3-().5m	Yearly H	ligh Water Level (r	n):		
Condition	Highest	Flood W	Vater L	evel(m): R]	B+2.0m	River W	idth(m) : 20-25 m			
	Riverbe	ed Materi	ial: Boi	ulders & sar	nd	Gradient: 1/200				
	Land U	se: Resid	ential a	irea		No. Hou	ses Affected: No			
Surrounding Conditions	IIXO' n	ot reporte	ad he				~~~			
Other Info.	-River w	vater is ut	ilized f	or washing	or water st	upply by l	ocal people.			
	-Two str	eams con	ne toge	ther at upstr	ream side o	of the brid	lge.			
Comments	-Existinş -New br	g Bridge : ridge cent	should er shou	be replaced ild be kept a	by perman t same pos	nent bridg	e with 2 lane carriag	geway. ad alignment		
		All and a second					THE REAL			

r	Г								
Route :16A	Km Pos	t :39.5km			Village Name: No Village				
Bridge or River	Name: I	Huay Namtar	ng River						
Existence of Brid	dge:	¥es /	No		Within or	Outside o	f Village: Within	/ Outside	
	Bridg L	ength.(m):			Span Arra	angemen	t(m):		
	Carriag	eway & Ped	e. Width	(m):		0	· · ·		
	Superst	ructure type	:				Load Capacity(t):		
	Girder l	Description:							
	Substru	cture Type:		Pier:	Abutment:				
	Height l	oetween Riv	erbed &	Bridg	e Surface	(m):			
Existing Bridge				Cindo	,	<u>``</u>			
Condition				Girae	<u>r:</u>				
				Slab:					
	Damage	<u>Condition</u>	<u> </u>	Substructure: -					
]	Bank	Protection	1:			
				Otner	'S: -				
River Condition	Yearly I	Low Water L	Level(m):	0.5 n	1	Yearly H	ligh Water Level (r	n):	
	Highest Flood Water Level(m): 2.0)m	River W	idth(m) : 25-30 m		
	Riverbe	d Material:	Boulders	as and sand Gradient: 1/500					
Surrounding	Land Us	se: Forest				No. Hou	ses Affected: Nothin	ng	
Conditions	UXO: N	ot reported							
Other Info.	- The he - River c	ight between hannel at the	riverbed proposed	and g d brid	round leve ge site is st	l at left ba traight and	ank is approximately d stable.	y 10m.	
Commonts	Approx	ah rood align	mont cho	uld be	oorofully	studied to	most geometry stor	ndord	
Comments	-Арргоа	ch foau aligh	ment sno		carefully	studied it.	meet geometry star	nuaru.	
	S. 46	1	100						
111 1	127			1		1. An	Y		
ALC: NO		1 4 4					1 2 12	and the	
Charles ?			3	<u>N</u> .		A	A. Aller	A SHELL	
EP 25 CA		ALL AND				1	E ALLER		
	Contraction of the second	AND REAL	是這	25	3/	金平山	S. 2. 2.		
all the state		* 20	1		100	-	Theorem		
The second		a chall	-	4		100		S Ster	
SAME NO	Ser. C	11.45		1				the contract	
CONTRACTOR OF	- Second	Jul ma				- THY			

View from left bank

Upstream side

r	I				1				,ī			
Route : 16A	Km Pos	s t : 52.4 km			Village Name: -							
Bridge or River	Name:	Xe Katam Riv	ver Bridg	e								
Existence of Brid	lge:	Yes /	No		Within or	Outside o	f Village: Within	/	Outside			
	Bridg L	ength.(m): 4	8.4 m		Span Arra	angemen	t(m): 12.1m x 4					
	Carriageway & Pede. Width(m): 0 m + 4.5 m + 0 m											
	Superst	ructure type	: Steel-I (Girde	r	Load Capacity(t): Not indicated						
	Girder]	Girder Description: 4-girders with 0.8m in depth										
	Substru	cture Type:		Pier:	RC T s	haped	Abutment: F	CR	eversed T			
	Protection Work: Dry masonry with large boulders protects around abutments											
Existing Bridge	Height between Riverbed & Bridge Surface(m): 10.2 m											
Condition	Giro				rder: Minor corrosion under the drainage pipe is observed							
			Slab: No damage									
	Damage	Condition	5	Substructure: Sound								
			Bank	Protection	n: No da	amage						
				Other	s: Handrai	l has no damage. No expansion joint is set.						
River	Yearly l	Low Water L	evel(m):	0.5 n	n	Yearly H	ligh Water Level (1	m):				
Condition	Highest	Flood Water	r Level(n	n):		River W	idth(m): 40 m					
	Riverbe	d Material:]	Boulders	and s	and	Gradient: 1/500						
G	Land U	se: forest			No. Houses Affected: Nothing							
Surrounding Conditions	UXO: Unknown											
Other Info.	 The bridge was constructed by Daewoo as a part of an access road to the dam site in 1995. Horizontal alignment of the approach roads should be improved. 							site in 1995.				
Comments	- The existing bridge shall be examined with designated design live load for this project. If it bears the live load, additional one-lane bridge is required at either up or down streamside.											
S. merty			1				ASSA					



·	·					·1						
Route : 16A	Km Pos	t <u>: 58.1 k</u>	<u>«m</u>			Village N	a <u>me: -</u>					
Bridge or River	r Name:]	Xe Nam	noy I	River 1		<u> </u>						
Existence of Bri	dge:	Yes	/	No		With <u>in or</u>	Outs <u>ide c</u>	of Village: Within / <u>Outside</u>				
			<u> </u>					<u> </u>				
	Bridg L	ength.(r	n): 5	0.4 m		Span Arra	Span Arrangement(m): 12.3 + 18.0 + 18.0 + 12.1					
	Carriag	eway &	: Ped	e. Widt	.h(m): (<u>0 m + 4.5 r</u>	<u>n + 0 m</u>					
	Superst	r <u>ucture</u>	type	: <u>Steel-J</u>	I Girde	r		Load Capacity(t): Not indicated				
	Girder J	Descript	tion:	Side sp:	$an: 4-\epsilon$	girders with	10.8m in	depth are arranged.				
	 		<u> </u>	Center 5	span. o	-gliueis wi	<u>th 0.011 11</u>	n deptn are arrangeu.				
	Substru	cture T	ype:	,	Pier:	RC T s	shaped	Abutment: RC Reversed T				
	Protecti	o <u>n Wor</u>	<u>k: D</u> 1	r <u>y maso</u>	on <u>ry wi</u> t	th large boy	ul <u>ders pro</u>	otect around abutments.				
Existing Bridge	Height	between	Rive	erbed 8	& Brid	ge Surf <u>ace</u>	(m): 9 <u>.1-</u>	10.7 m				
Condition		<u> </u>		<u> </u>	Girde	er: Min <u>or c</u>	orrosion y	under the drainage pipes are observed				
l	1				Slab:	No crac	ks and loc	oks sound				
	Damage	Conditi	on		Subst	tructu <u>re:</u>	No da	amage				
1					Bank	Protection	n : N <u>o d</u> a	amage				
					Other	rs: <u>Handra</u> i	il has no c	damage and no expansion joint.				
River	Yearly J	Low Wa	ter L	Level(m	i): 1.0 r	n	Yearly F	High Water Level (m):				
Condition	Highest	<u>Flood V</u>	<u>Wate</u>	r <u>Level(</u>	(<u>m): 7r</u>	n +RB	River W	/idth(m): 40-45m				
	Riverbe	d Mate	rial: [Boulder	rs and s	sand	Gradien	at: 1/300 (V=1-1.5m/s)				
- ding	Land U	se: Fore	st <u>anc</u>	d b <u>ush</u>			No <u>. Hou</u>	uses Affected: Nothing				
Surrounding Conditions	UXO: U	Jnknowr	1									
Other Info.	- The bri	idge was	s cons	structed	by Da	ewoo as a r	part of an	access road to the dam site in 1995.				
l	- Kiver in	las detor	ır sue	eam rou	te at m	Joding. A i	ew house	s are located 200m upstream side				
Comments	- The ex bears th	tisting b e live loa	ridge ad, ac	shall b ditiona	e exan l one-l:	nined with ane bridge	designate is require	ed design live load for this project. If i ad at either up or down streamside.				
		in the second se					-	Sementic Part				



Upstream View

	W D (50.21										
Route : 16A	Km Post: 58.3 km			Village N	Village Name: -						
Bridge or River	Name: 2	Xe Namnoy 2									
Existence of Brid	dge:	Yes /	No	Within or	Outside o	f Village: Within / Outside					
	Bridg L	ength.(m): 24	.2 m	Span Arr	Span Arrangement(m): 12 1 m x 2						
	Carriageway & Pede. Width(m): $0 \text{ m} + 4.5 \text{ m} + 0 \text{ m}$										
	Superst	ructure type:	Steel-I Gird	er		Load Capacity(t): Not indicated					
	Girder l	Girder Description: 4-girders with 0.8 m in depth are arranged									
	Substructure Type: Pi			: RC T-sh	aped Abutment: RC Reversed T						
	Protection Work: Dry masonry with large boulders protect around abutments.										
Existing Bridge	Height between Riverbed & Bridge Surface(m): 7.1 m										
Condition	8		Gira	ler: Minor	er: Minor corrosion under the drainage pipe are observed						
			Slab): -		<u> </u>					
	Damage	Condition	Sub	Substructure: No damage							
				Bank Protection: Looks stable							
			Oth	ers: No damages on handrail. No expansion joints							
River	Yearly I	Low Water Le	evel(m): No	water	Yearly H	ligh Water Level (m):					
Condition	Highest	Flood Water	Level(m):		River Width(m): 20 m						
	Riverbe	d Material : m	nedium boul	ders & sand	Gradient: ?						
Surrounding	Land Us	se: Bush			No. Houses Affected: Nothing						
Conditions	UXO: N	ot reported									
Other Info.	- The bri - This riv	dge was const ver is a detour	ructed by D stream of X	aewoo as a j e Namnoy a	part of an at flooding	access road to the dam site in 1995. g so that there is no water in dry season					
Comments	- The existing bridge shall be examined with designated design live load for this project. If it										



Upstream View

Douto 16A	Km Dost: 58.6 km			Villaga N							
	KIII FOS	t. 38.0 Kill			v mage IN	ame: -					
Bridge or River	· Name: 2	Xe Katak-	Tok River								
Existence of Brid	dge:	Yes /	No		Within or	Outside c	of Village: Within	/	<u>Outside</u>		
	Bridg L	ength.(m)): 24.2 m		Span Arrangement(m): 12.1 m x 2						
	Carriageway & Pede. Width(m): 0 m + 4.5 m + 0 m										
	Superst	ructure ty	pe: Steel-	I Girdei	•	Load Capacity(t): Not indicated					
	Girder Description: 4-girders with 0.8m in depth are arranged										
	Substru	cture Typ	e:	Pier:	RC T-s	haped	Abutment: F	C Re	eversed-T		
	Protecti	Protection Work: Dry Masonry with large boulders protect around abutments									
Evicting Bridge	Height l	between F	Riverbed &	& Bridg	ge Surface	(m): 7.4 ı	m				
Condition	·			Girde	r: Minor	corrosion	under the drainage	pipes	s are observed		
				Slab: Looks sound							
	Damage Condition	Substructure: No damage									
			Bank Protection: Stable Others: Damage on handrail at upstream side due to vehicle								
				collisi	sion. No expansion joint.						
River	Yearly I	Low Wate	r Level(m	n): 0.2 m	ı	Yearly H	High Water Level (m):			
Condition	Highest	Flood Wa	ater Level	(m):		River Width(m): 20 m					
	Riverbe	d Materia	al: Sand ro	ock expo	oses	Gradien	nt: 1/500				
	Land Us	se: Forest	and bush	•		No. Hou	uses Affected: Nothi	ing			
Surrounding Conditions	UXO: Not reported										
Other Info.	-Hydro	dam is loc	cated at 13	3 km up	stream bu	t discharg	ge from the dam m	aybe	not affected to		
	HWL at	WL at the bridge site due to no water level adjusting gate at the dam									
Comments	- The existing bridge shall be examined with designated design live load for this project. If it										
	bears the live load, additional one-lane bridge is required at either up or down streamside.								eamside.		
	No.	e get	1	L.S.C.	Ser.			se -			
	TE AM	Event	1000	1							
/ 11 21				pro-		Linit and the second	2993年1月1日	-	A STATE		
- /	- 1 (A)	All and a state	II.I.	TC:	No.	對此意	A CONTRACTOR				
2			1			TEL	THE POP CA	14			
				R		TO THE	NIM THE OWNER OF	1	and the second second		
El in La			A		19		- and		A L		

Route : 16A	Km Pos	st: 61+473		Village Name: -								
Bridge or River	: Name:]	No name										
Existence of stru	icture:	Yes / Nr	<u>0</u>	<u>2.0m</u>	pipe cilve	ert						
	Bridg L	ength.(m):		Span Arr:	angemen	ut(m):						
	Carriag	Carriageway & Pede. Width(m):										
	Superst	ructure type:				Load Capacity(t):						
	Girder]	Girder Description:										
	Substru	cture Type:	Pier:			Abutment:						
	Protecti	ion Work:	I									
Existing Bridge Condition	2		Girde	er:								
-	Demogra	Condition	Slab:									
	Damage Condition		Subst	Substructure: -								
			Other	nk Protection:								
	Vearly I	ow Water Leve	l(m);		Yearly High Water Level (m): GL+1.0m							
River	Highost	Flood Water I a	nulling.	 I ⊨ 1.0m	Om River Width(m): 10m							
Condition	Riverhe	<u>Flood Water Le</u>	der⊥silt	L+1.011	Credien	10111(111). 10111 +• 1/100						
	Height	Height between Riverbed & River bank or Bridge Surface(m): 3.0m										
	Land U:	se forest			No. Hou	uses Affected N_0						
Surrounding Conditions	UXO n	ot reported			1100 1100							
Other Info.	2.0m in diameter of pipe culvert is set at the crossing point. However, the overflow of the stream was observed in rainy season. The overflowed area spread 20m in length and 1m in the maximum depth. This occurs 3 to 4 times a year.											
Comments	The type its chara	e of crossing strue	cture shall	be well ex	amined ir	n consideration with river condition and						

View from Left Bank to Right Bank

100