(2) Package C

1) Badiwan Bridge

BRIDGE SEISMIC INVENTORY DATA													
A. GENERAL													
(1) Bridge Name:			*Badiwan Bridge*					(2) Posted Load Limit	*15*	tons			
(3) Location:	km.:	*276+885*	Route:	*Marcos Highway*			Prov./ City	*CAR, Baguio City*					
(4) Crossing Condition:		Crossing River,( ) Railway,( ) Roadway,( ) Valley,(•) Others ( )											
(5) AADT:		(6) Detour Distance:			(7) Essential Bridge?		Yes( ) No( )						
(8) Alignment:		Straight , Curved (Radius) _____m Skewed, (Skew Angle)°											
(9) No. of Spans:	***13***	(10) Span Lengths				(11) Total Length:	***519m***						
(12) Left Sidewalk Width:	***0.80m***	(13) Carriageway Width:	***8.75m***	(14) Right Sidewalk Width:	***0.80m***								
(15) Overall Width (including sidewalk):		***10.35m***			(16) Year Built:	***2002***							
(17) As-builts or design drawings available?		Yes No											
(18) Design calculations available?		Yes No											
(19) Structure hydraulically adequate?		Yes No Don't know ()											
(21) Seismically Retrofitted?		Yes No Description											
B. SUPERSTRUCTURE													
(23) Superstructure Type:		Steel Truss, Steel Girder, RCDG, PSCG, Others(PC Box Girder)											
(24) Number of Girders/Span:		***1***		(25) Continuous?		Yes No							
(26) Number of Expansion Joints:		***2***	(27) Type of Expansion Joints:			Steel, Rubber, Seam							
C. BEARINGS													
(28) Bearing Type:		Roller, Rocker, Rubber, Others (Teflon coating steel plate bearing)				Condition:		Functioning( ) Not Functioning ( )					
(29) Type of Restraint (Transverse):		***F***			(30) Type of Restraint (Longitudinal):			***P5,P6:R Others:M***					
(31) Seating Length :		Abutments:	***2.0m***	Piers:		Hinges:							
D. ABUTMENTS													
(32) Type:					(33) Height:			***3***					
(34) Foundation Type:		Spread Footing, On Piles, Others (RCP)			(35) Wingwall Lengths			L: —		R: —			

E. COLUMNS AND PIERS

(36) Column Type:	*circular cylinder*				
(37) Min. Transverse Cross-Section Dimension:	***2.0m***	(38) Min. Longitudinal Cross-Section Dimension			***2.0m***
(39) Height Range:		(40) Fixity:	Top	Others Bottom	P5, P6 Both
(41) Percentage of Longitudinal Reinforcement:					
(42) Transverse Reinforcements:	Bar Size: Spacing:		Tied	Spiral	
(43) Foundation Type:	Spread Footing	P5, P6 On Piles	Others ( )		

F. SITE

(44) Estimated Peak Ground Accelaration (0.4-0.7g):	
(45) Soil Profile Type:	I II III IV Don't Know
(46) Liquefaction Potential:	Yes No Don't Know ( )
(47) Boring Data Available:	Yes No

G. OTHER ITEMS

(48) Approach Slab:Yes ( ) Length		(47) Embankment Side-slope type(Approach Road):	***Masonry Embankment***	(H:V):	
(49) Slope Bank Protection Type:					

PHOTOGRAPHS / SKETCHES (Use additional sheets if necessary)

Main Viewpoints of the Bridge

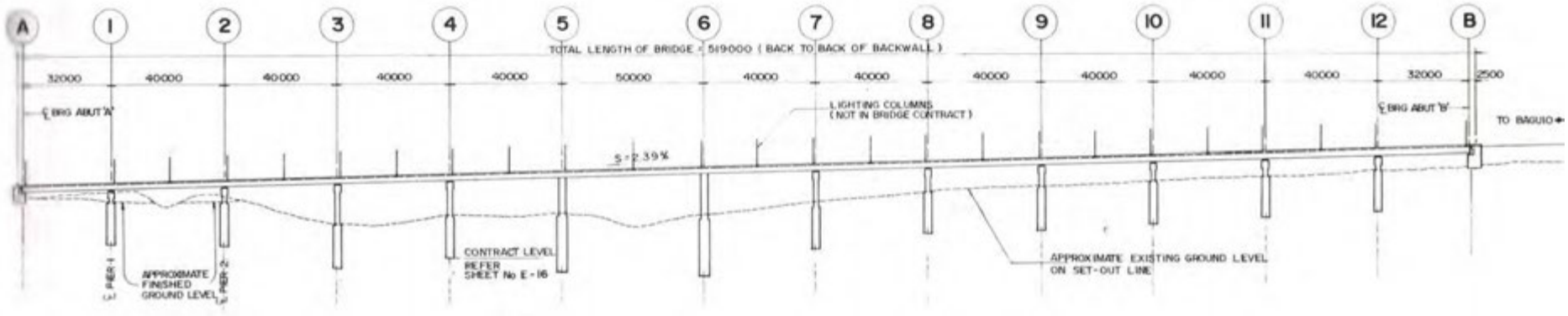
1. 	2. 
3. no picture	4. no picture
5. no picture	6. 
7. 	8. 
9. 	10. no picture

Main Viewpoints of the Bridge

Component/ Material/ Classification	Type of Damages	Picture of the Damage	Reasoning for the Evaluation
Deck Slab (Primary)	Cracking		Minor cracks are observed at the part of overhanging deck slab.
Concrete Beam/ Girder (Primary)	Exposure /corrosion of rebars		Corrosion of rebars is observed at the part of concrete box girder.
	Honeycomb		Honeycomb is observed at the part of concrete box girder.
	Black stain by fire		Black stain by fire is observed at the concrete box girder between P12 and A2.
Shoe/Bearing (Primary)	Corrosion		Corrosion at the steel bearings is observed at abutments.

Component/ Material/ Classification	Type of Damages	Picture of the Damage	Reasoning for the Evaluation
Expansion Joint (Primary)	Cracking Water leaking		Water leaking due to section loss is observed at expansion joints.
Drainage Pipe (Secondary)	Clogged		Clogged drain is observed at drainage pipes
River Condition (Secondary)	Sedimentation		Debris flow is observed between P1 and P2, and between P5 and P6.

Bridge Profile



Main Features of the Bridge

Anti-seismic devices

Repair of the box girder cracking

2) Buntun Bridge

BRIDGE SEISMIC INVENTORY DATA													
A. GENERAL													
(1) Bridge Name:			*Buntun Bridge*					(2) Posted Load Limit	*18*	tons			
(3) Location:	km.:	486+883	Route:	*Cagayan-Apayao Road*			Prov./ City	*Cagayan Valley, Tuguegarao*					
(4) Crossing Condition:		Crossing River,( ) Railway,( ) Roadway,( ) Valley,( ) Others ( )											
(5) AADT:		(6) Detour Distance:			(7) Essential Bridge?		Yes( ) No( )						
(8) Alignment:		Straight, Curved, (Radius) _____m Skewed, (Skew Angle)^o											
(9) No. of Spans:	***17***	(10) Span Lengths					(11) Total Length:	***1102m***					
(12) Left Sidewalk Width:	***0.80m***	(13) Carriageway Width:	***7.3m***	(14) Right Sidewalk Width:	***0.80m***								
(15) Overall Width (including sidewalk):	***8.9m***	(16) Year Built:	***1968***										
(17) As-builts or design drawings available?	Yes No												
(18) Design calculations available?	Yes No												
(19) Structure hydraulically adequate?	Yes No Don't know ()												
(21) Seismically Retrofitted?	Yes No Description												
B. SUPERSTRUCTURE													
(23) Superstructure Type:	Steel Truss, Steel Girder, RCDG, PSCG, Others( )												
(24) Number of Girders/Span:	***Steel I girder:4 Steel truss:2***	(25) Continuous?	Yes No										
(26) Number of Expansion Joints:	***18***	(27) Type of Expansion Joints:	Steel, Rubber, Seam										
C. BEARINGS													
(28) Bearing Type:	Roller, Rocker, Rubber, Others (steel)					Condition:	Functioning( ) Not Functioning ( )						
(29) Type of Restraint (Transverse):	***F***	(30) Type of Restraint (Longitudinal):	***F, M***										
(31) Seating Length :	Abutments:	***A1:60cm A2:65cm***	Piers:		Hinges:								
D. ABUTMENTS													
(32) Type:			(33) Height:										
(34) Foundation Type:	Spread Footing, On Piles, Others (RCP)		(35) Wingwall Lengths	L:	***3.0m***	R:	***3.0m***						

E. COLUMNS AND PIERS

(36) Column Type:	*rigid frame columns, rigid frame columns with shear wall*			
(37) Min. Transverse Cross-Section Dimension:		(38) Min. Longitudinal Cross-Section Dimension		
(39) Height Range:		(40) Fixity:	Top (Bottom) Both	
(41) Percentage of Longitudinal Reinforcement:				
(42) Transverse Reinforcements:	Bar Size: Spacing:		Tied Spiral	
(43) Foundation Type:	Spread Footing On Piles Others ( )			

F. SITE

(44) Estimated Peak Ground Accelaration (0.4-0.7g):	
(45) Soil Profile Type:	I II III (IV) Don't Know
(46) Liquefaction Potential:	(Yes) No Don't Know ( )
(47) Boring Data Available:	Yes (No)

G. OTHER ITEMS

(48) Approach Slab:Yes ( ) Length		(47) Embankment Side-slope type(Approach Road):	(H:V):
(49) Slope Bank Protection Type:			

PHOTOGRAPHS / SKETCHES (Use additional sheets if necessary)

Main Viewpoints of the Bridge

Main Viewpoints of the Bridge

1. 	2. 
3. 	4. 
5. 	6. 
7. no picture	8. no picture
9. 	10. no load limit id

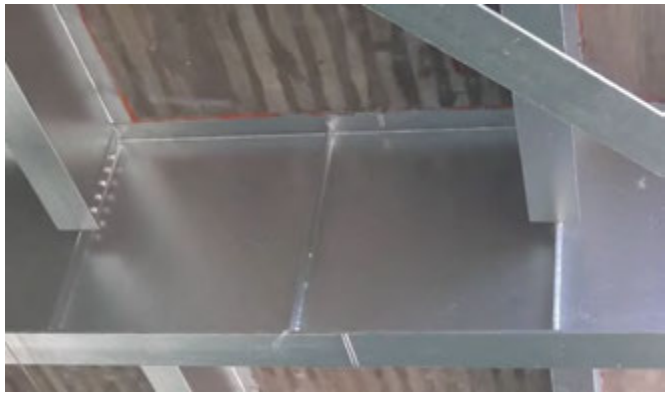
Component/ Material/ Classification	Type of Damages	Picture of the Damage	Reasoning for the Evaluation
Deck Slab (Primary)	Cracking		Minor cracks are observed at the part of the deck slab.
	Water leaking/ Free lime		Water leaking & free lime are observed at the overhanging deck slab.
Steel Beam/ Truss Members (Bracings, etc.) (Primary)	Deformation/ Buckling		Deformation is observed at part of the primary steel member.
	Abnormal Vibrations		Abnormal vibration of secondary steel members (bracings) is observed.
Shoe/Bearing (Primary)	Displacement		Abnormal displacement is observed at Movable bearings

Component/ Material/ Classification	Type of Damages	Picture of the Damage	Reasoning for the Evaluation
Piers (Primary)	Cracking concrete		Cracks are observed at piers.
	Scouring		Scouring is observed at P4.
Expansion Joint (Secondary)	Water leaking		Water leaking is observed at expansion joints.
Curb and Railing (Secondary)	Impact damage		Impact damage is observed at the part of railing.
Slope Protection (Secondary)	Pot-holes		Pot-holes and cracks are observed at the slope protection of A2.

Bridge Profile

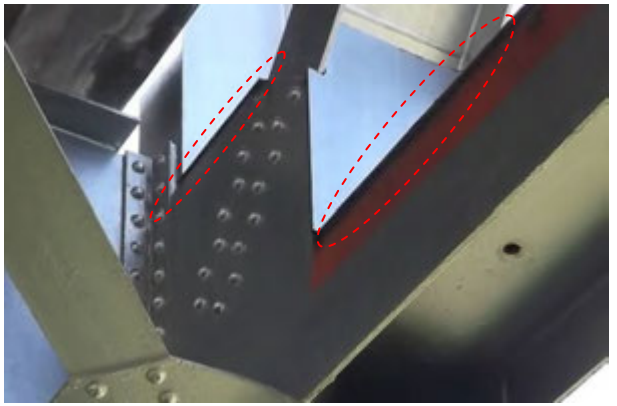
Main Features of the Bridge

Main Features of the Bridge



Repaint of steel members

Reinforcement of gusset plates with steel plates



Reinforcement of primary steel members with steel plates

3) Lucban Bridge

BRIDGE SEISMIC INVENTORY DATA

A. GENERAL

(1) Bridge Name:	*Lucban Bridge*			(2) Posted Load Limit	*8*	tons	
(3) Location:	km.:	667+815	Route:	*Asian Highway 26*	Prov./ City	*Cagayan Valley, Abulug*	
(4) Crossing Condition:	Crossing River,( ) Railway,( ) Roadway,( ) Valley,( ) Others ( )						
(5) AADT:		(6) Detour Distance:		(7) Essential Bridge?	Yes( ) No( )		
(8) Alignment:	Straight , Curved, (Radius) _____m Skewed, (Skew Angle)°						
(9) No. of Spans:	***19***	(10) Span Lengths	***Seel truss:50m Steel I-girders:35m***		(11) Total Length:	***502m***	
(12) Left Sidewalk Width:	***0.80m***	(13) Carriageway Width:	***7.30m***	(14) Right Sidewalk Width:	***0.80m***		
(15) Overall Width (including sidewalk):	***8.9m***			(16) Year Built:	***1968***		
(17) As-builts or design drawings available?	Yes No						
(18) Design calculations available?	Yes No						
(19) Structure hydraulically adequate?	Yes No Don't know ()						
(21) Seismically Retrofitted?	Yes No Description Bridge replacement is planned by DPWH						

B. SUPERSTRUCTURE

(23) Superstructure Type:	Steel Truss, Steel Girder, RCDG, PSCG, Others(PC Box Girder)				
(24) Number of Girders/Span:	***Steel truss:2 Steel I-girders:4, 5***	(25) Continuous?	Yes No		
(26) Number of Expansion Joints:	***2***	(27) Type of Expansion Joints:	Steel, Rubber, Seam		

C. BEARINGS

(28) Bearing Type:	Roller, Rocker, Rubber, Others (steel)		Condition:	Functioning( ) Not Functioning ( )	
(29) Type of Restraint (Transverse):	***F***	(30) Type of Restraint (Longitudinal):		***F, M***	
(31) Seating Length :	Abutments:	***A1:1.0m A2:0.45m***	Piers:		Hinges:

D. ABUTMENTS

(32) Type:		(33) Height:	-				
(34) Foundation Type:	Spread Footing, On Piles, Others (RCP)	(35) Wingwall Lengths	L:	***3.5m***	R:	***3.5m***	

E. COLUMNS AND PIERS

(36) Column Type:	*Rigid frame columns with shear wall*				
(37) Min. Transverse Cross-Section Dimension:	***1.5m***	(38) Min. Longitudinal Cross-Section Dimension	***1.5m***		
(39) Height Range:		(40) Fixity:	Top	Bottom	Both
(41) Percentage of Longitudinal Reinforcement:					
(42) Transverse Reinforcements:	Bar Size: Spacing:		Tied	Spiral	
(43) Foundation Type:	Spread Footing	On Piles	Others ( )		

F. SITE

(44) Estimated Peak Ground Accelaration (0.4-0.7g):	
(45) Soil Profile Type:	I II (III) IV Don't Know
(46) Liquefaction Potential:	(Yes) No Don't Know ( )
(47) Boring Data Available:	(Yes) No

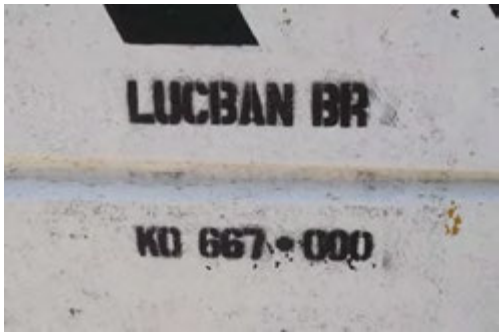
G. OTHER ITEMS

(48) Approach Slab:Yes ( ) Length		(47) Embankment Side-slope type(Approach Road):	***Masonry Embankment***	(H:V):	
(49) Slope Bank Protection Type:					

PHOTOGRAPHS / SKETCHES (Use additional sheets if necessary)

Main Viewpoints of the Bridge

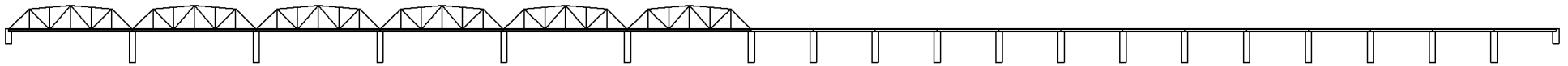
Main Viewpoints of the Bridge

1. 	2. 
3. 	4. 
5. 	6. 
7. no picture	8. no picture
9. 	10. 

Component/ Material/ Classification	Type of Damages	Picture of the Damage	Reasoning for the Evaluation
Deck Slab (Primary)	Hanycomb/ Water leaking		Hanycomb and water leaking are observed at the part of overhanging deck slab.
	Scaling/Spalling		Spalling is observed at the end of deck slab.
Steel Beam/ Truss Members (Bracings, etc.) (Primary)	Corrosion/ Paint Peel Off	  	Corrosion and Paint Peel Off are observed at steel members.
Shoe/Bearing (Primary)	Corrosion		Corrosion is observed at bearings.

Component/ Material/ Classification	Type of Damages	Picture of the Damage	Reasoning for the Evaluation
Abutment (Primary)	Scaling/Spallin/ Disintegration		Spalling due to hanycomb is observed at A1.
Curb and Railing (Secondary)	Cracking (Loose Connection)		Loose connection due to cracking is observed at the railing.
Expansion Joint (Secondary)	Water leaking		Water leaking is observed at expansion joints.
	Abnormal Space/Noise		Abnormal space/noise is observed at expansion joints.
Slope Protection (Secondary)	Material Loss		Pot-holes are observed at the slope protection of A2.

Bridge Profile



Main Features of the Bridge

Main Features of the Bridge

The 7th span is already replaced.

Replacement of gusset plates

Replacement of steel

Temporary supports at the center of side spans

Repair of the deck slab cracking with mortar

Repaint of steel I girders

4) Magapit Bridge

BRIDGE SEISMIC INVENTORY DATA

A. GENERAL

(1) Bridge Name:	*Magapit Bridge*				(2) Posted Load Limit	*18*	tons
(3) Location:	km.: 276+885	Route:	*Pan-Philippine Highway / Maharlika highway*		Prov./ City	*Cagayan Valley, Lal-lo*	
(4) Crossing Condition:	(Crossing River,) ( ) Railway,( ) Roadway,( ) Valley,( ) Others ( )						
(5) AADT:		(6) Detour Distance:		(7) Essential Bridge?	Yes( ) No( )		
(8) Alignment:	(Straight,) Curved, (Radius) _____m Skewed, (Skew Angle)^{o}						
(9) No. of Spans:	***4***	(10) Span Lengths			(11) Total Length:	***410m***	
(12) Left Sidewalk Width:	***0.80m***	(13) Carriageway Width:	***7.3m***	(14) Right Sidewalk Width:		***0.80m***	
(15) Overall Width (including sidewalk):	***8.9m***				(16) Year Built:	***1979***	
(17) As-builts or design drawings available?	(Yes) No						
(18) Design calculations available?	(Yes) No						
(19) Structure hydraulically adequate?	Yes No Don't know ()						
(21) Seismically Retrofitted?	(Yes) No Description Under repair work by DPWH						

B. SUPERSTRUCTURE

(23) Superstructure Type:	Steel Truss, (Steel Girder,) RCDG, PSCG, Others(Stee) suspension)			
(24) Number of Girders/Span:	***Steel truss:2 Steel suspension:2 Steel I-girder:4***	(25) Continuous?	Yes (No)	
(26) Number of Expansion Joints:	***5***	(27) Type of Expansion Joints:	(Steel,) Rubber, Seam	

C. BEARINGS

(28) Bearing Type:	Roller, (Rocker) Rubber,(Others) (Steel)	Condition:	Functioning( ) Not Functioning ( )		
(29) Type of Restraint (Transverse):	***F***	(30) Type of Restraint (Longitudinal):	***F, M***		
(31) Seating Length :	Abutments: ***0.9m***	Piers:		Hinges:	

D. ABUTMENTS

(32) Type:		(33) Height:	***3.0m***				
(34) Foundation Type:	Spread Footing, On Piles, Others (RCP)	(35) Wingwall Lengths	L:	***none***	R:	***none***	

E. COLUMNS AND PIERS

(36) Column Type:	*rigid frame columns, rigid frame columns with shear wall*			
(37) Min. Transverse Cross-Section Dimension:		(38) Min. Longitudinal Cross-Section Dimension		
(39) Height Range:		(40) Fixity:	Top (Bottom)	Both
(41) Percentage of Longitudinal Reinforcement:				
(42) Transverse Reinforcements:	Bar Size: Spacing:		Tied	Spiral
(43) Foundation Type:	Spread Footing	On Piles	Others ( )	

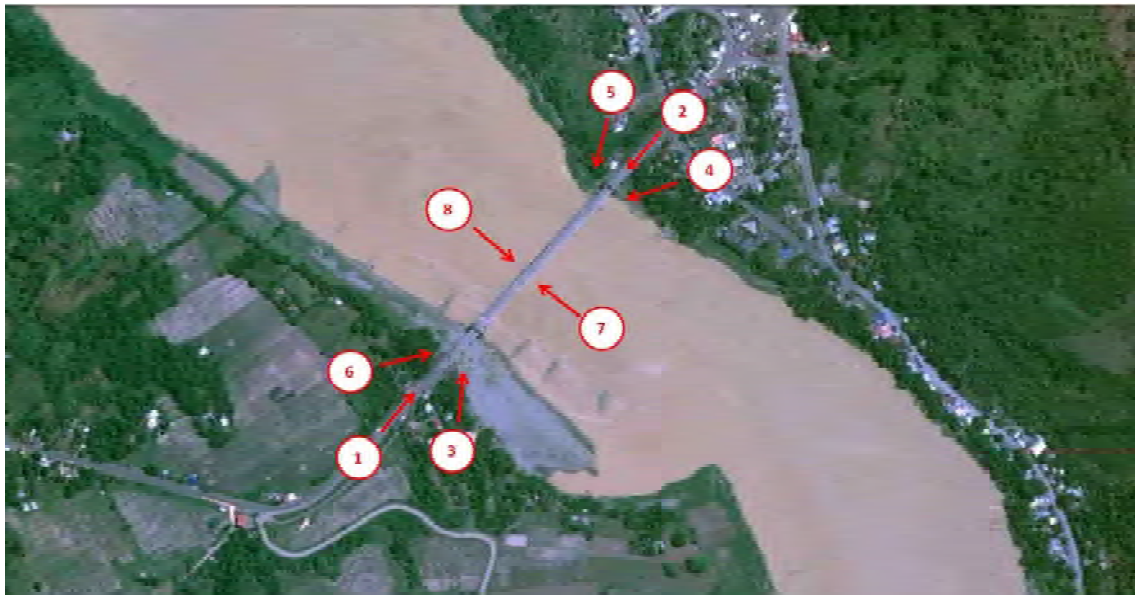
F. SITE

(44) Estimated Peak Ground Accelaration (0.4-0.7g):				
(45) Soil Profile Type:	I	II	(III) IV	Don't Know
(46) Liquefaction Potential:	(Yes)	No	Don't Know ( )	
(47) Boring Data Available:	(Yes)	No		

G. OTHER ITEMS

(48) Approach Slab:Yes ( ) Length		(47) Embankment Side-slope type(Approach Road):	***Masonry Embankment***	(H:V):	
(49) Slope Bank Protection Type:					

PHOTOGRAPHS / SKETCHES (Use additional sheets if necessary)



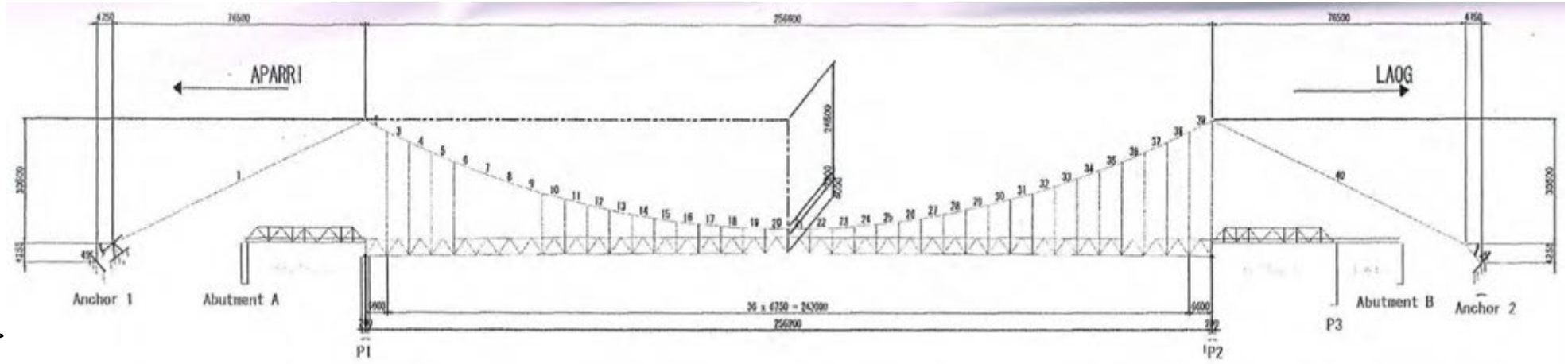
Main Viewpoints of the Bridge

1. 	2. 
3. 	4. 
5 	6. 
7. no picture	8. 
9. 	10. 

Component/ Material/ Classification	Type of Damages	Picture of the Damage	Reasoning for the Evaluation
Deck Slab (Primary)	Cracking		Cracks are observed at the part of the deck slab.
Steel Beam/ Truss Members (Bracings, etc.) (Primary)	Corrosion		Corrosion is observed at the part of steel members.
	Loose connection	 	Loose connection due to lack of bolts is observed at splices of steel members. Also, loose connection due to lack of damper cables is observed at steel members.
	Paint peel off		Paint peel off is observed at steel members & the suspension member.
Shoe/Bearing (Primary)	Abnormal displacement		Abnormal displacement is observed at A1.

Component/ Material/ Classification	Type of Damages	Picture of the Damage	Reasoning for the Evaluation
Abutment (Primary)	Hanycomnb		Hanycomnb is observed at A2.
Curb and Railing (Secondary)	Loose connection		Loose connection due to lack of bolts is observed at the railing.
Expansion Joint (Primary)	Water leaking		Water leaking is observed under expansion joints.
Slope Protection (Secondary)	Cracking		Major cracks are observed at A2.

Bridge Profile



Main Features of the Bridge

Main Features of the Bridge

RC-jacketing on piers

Repair of loose connection at steel member

【Under repair work by DPWH】

- RC-jacketing on piers
- Asphalt pavement overlay
- Replacement of pony truss at the side spans
- Repaint of steel members
- Repair of the deck slab cracking with epoxy injection
- Reinforcement of the deck slab with Carbon fiber sheet
- Repair of loose connection at steel member

5) Sicsican Bridge

BRIDGE SEISMIC INVENTORY DATA

A. GENERAL

(1) Bridge Name:	*Sicsican Bridge*				(2) Posted Load Limit	*15*	tons
(3) Location:	km.:	132+570	Route:	*Pan Philippines Highway*	Prov./ City	*Nueva Ecija, Talavera*	
(4) Crossing Condition:	Crossing River,( ) Railway,( ) Roadway,( ) Valley,( ) Others ( )						
(5) AADT:		(6) Detour Distance:		(7) Essential Bridge?	Yes( ) No( )		
(8) Alignment:	Straight, Curved, (Radius) _____m Skewed, (Skew Angle)^o						
(9) No. of Spans:	*3*	(10) Span Lengths	*3@48.971m*	(11) Total Length:	*149.59m*		
(12) Left Sidewalk Width:	*0.87m*	(13) Carriageway Width:	*7.39m*	(14) Right Sidewalk Width:	*0.84m*		
(15) Overall Width (including sidewalk):	*9.1m*	(16) Year Built:	*1962*				
(17) As-builts or design drawings available?	Yes No Retrofit drawing only						
(18) Design calculations available?	Yes No						
(19) Structure hydraulically adequate?	Yes No Don't know ()						
(21) Seismically Retrofitted?	Yes No Description						

B. SUPERSTRUCTURE

(23) Superstructure Type:	Steel Truss, Steel Girder, RCDG, PSCG, Others(PC Box Girder)				
(24) Number of Girders/Span:	*2*	(25) Continuous?	Yes No		
(26) Number of Expansion Joints:	*4*	(27) Type of Expansion Joints:	Steel, Rubber, Seam	*unknown*	

C. BEARINGS

(28) Bearing Type:	Roller, Rocker, Rubber, Others (Hinge)	Condition:	Functioning( ) Not Functioning ( )		
(29) Type of Restraint (Transverse):	*F*	(30) Type of Restraint (Longitudinal):	*H, F*		
(31) Seating Length :	Abutments: *1.1m*	Piers: *1.05m*	Hinges: *1.05m*		

D. ABUTMENTS

(32) Type:		(33) Height:					
(34) Foundation Type:	Spread Footing, On Piles, Others (RCP)	(35) Wingwall Lengths	L:	*5.0m*	R:	*4.8m*	

E. COLUMNS AND PIERS

(36) Column Type:	*rgid frame columns, rgid frame columns with shear wall*			
(37) Min. Transverse Cross-Section Dimension:		(38) Min. Longitudinal Cross-Section Dimension		
(39) Height Range:		(40) Fixity:	Top (Bottom)	Both
(41) Percentage of Longitudinal Reinforcement:				
(42) Transverse Reinforcements:	Bar Size: Spacing:		Tied	Spiral
(43) Foundation Type:	Spread Footing	On Piles	Others ( )	

F. SITE

(44) Estimated Peak Ground Accelaration (0.4-0.7g):	
(45) Soil Profile Type:	I II III (IV) Don't Know
(46) Liquefaction Potential:	Yes (No) Don't Know ( )
(47) Boring Data Available:	Yes (No)

G. OTHER ITEMS

(48) Approach Slab:Yes ( ) Length		(47) Embankment Side-slope type(Approach Road):	(H:V):
(49) Slope Bank Protection Type:	*A1 :gabion, head regulator*		

PHOTOGRAPHS / SKETCHES (Use additional sheets if necessary)

Main Viewpoints of the Bridge

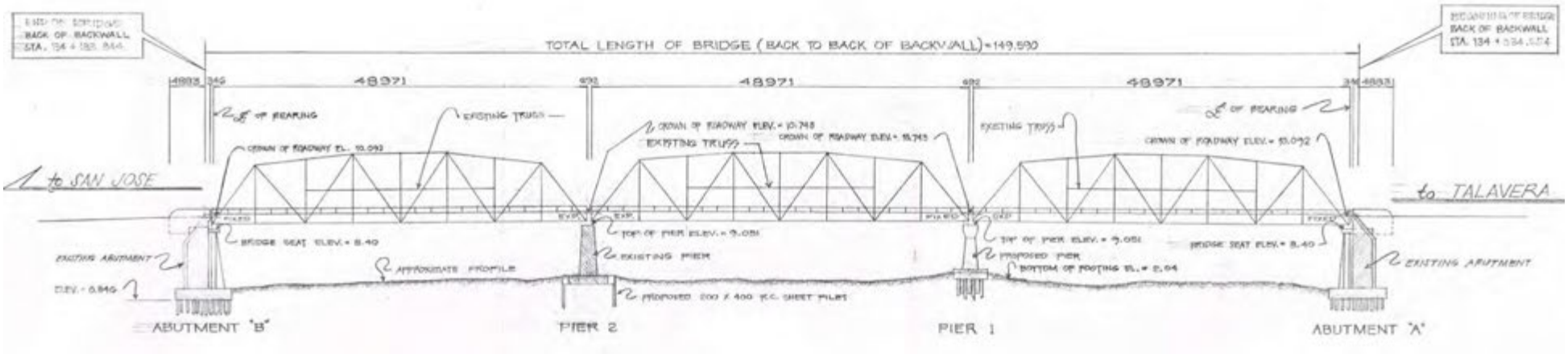
Main Viewpoints of the Bridge

1. 	2. 
3. no picture	4. no picture
5. 	6. 
7. no picture	8. 
9. 	10. 

Component/ Material/ Classification	Type of Damages	Picture of the Damage	Reasoning for the Evaluation
Deck Slab (Primary)	Exposure/ Corrosion of Rebars		Exposure of rebar due to spalling is observed at the part of overhanging deck slab.
Steel Beam/ Truss Members (Bracings, etc.) (Primary)	Deformation/ Buckling		Deformation is observed at the part of secondary steel members.
	Abnormal vibration/noise		Abnormal vibration of secondary steel members (bracings) is observed.
	Corrosion Paint peel off		Corrosion & paint peel off is observed at the part of steel members.
Shoe/Bearing (Primary)	Bed (support) damage by debris flow		Debris flow around bearings of A2 is observed.

Component/ Material/ Classification	Type of Damages	Picture of the Damage	Reasoning for the Evaluation
Shoe/Bearing (Primary)	Abnormal displacement		Abnormal displacement is observed at the bearings.
Abutments (Primary)	Cracking		Major cracks (over 1mm in width) are observed at A1.
	Scouring		Scouring is observed at A1.
Curb and Railing (Secondary)	Impact Damaged		Impact damage is observed at the part of the railing.
	Loose connection		Loose connection due to lack of bolts is observed at the railing.
Expansion Joint (Primary)	Water leaking		Water leaking is observed under expansion joints

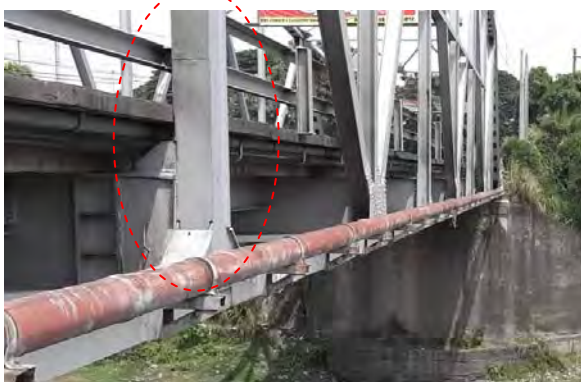
Bridge Profile



Main Features of the Bridge

Main Features of the Bridge

Replacement of the deck slab with the precast deck slab at carriageway



Reinforcement of primary steel members with steel plates

Reinforcement of bearings with concrete

Asphalt pavement overlay

Head regulator on A1 side

6) Bamban Bridge

BRIDGE SEISMIC INVENTORY DATA													
A. GENERAL													
(1) Bridge Name:	*Bamban Bridge*								(2) Posted Load Limit	*14*	tons		
(3) Location:	km.:	97+232	Route:	*Mac Arthur Highway*					Prov./ City	*Tarlac, Bamban*			
(4) Crossing Condition:	Crossing River,( ) Railway,( ) Roadway,( ) Valley,( ) Others ( )												
(5) AADT:		(6) Detour Distance:			(7) Essential Bridge?	Yes( ) No( )							
(8) Alignment:	Straight , Curved, (Radius) _____m Skewed, (Skew Angle)^{o}												
(9) No. of Spans:		(10) Span Lengths	*174.0m*						(11) Total Length:	*177.0m*			
(12) Left Sidewalk Width:	*0.70m*	(13) Carriageway Width:	*8.60m*		(14) Right Sidewalk Width:	*0.70m*							
(15) Overall Width (including sidewalk):	*10.0m*				(16) Year Built:	*1998*							
(17) As-builts or design drawings available?	Yes No												
(18) Design calculations available?	Yes No												
(19) Structure hydraulically adequate?	Yes No Don't know ()												
(21) Seismically Retrofitted?	Yes No Description												
B. SUPERSTRUCTURE													
(23) Superstructure Type:	Steel Truss, Steel Girder, RCDG, PSCG, Others(Nilsan Lohze Steel Arch)												
(24) Number of Girders/Span:		(25) Continuous?	Yes No										
(26) Number of Expansion Joints:	*2*	(27) Type of Expansion Joints:	Steel, Rubber, Seam										
C. BEARINGS													
(28) Bearing Type:	Roller, Rocker, Rubber, Others (Teflon coating beaaring)				Condition:	Functioning( ) Not Functioning ( )							
(29) Type of Restraint (Transverse):	*F*				(30) Type of Restraint (Longitudinal):	*F, M*							
(31) Seating Length :	Abutments:	*2.6m*	Piers:		Hinges:								
D. ABUTMENTS													
(32) Type:			(33) Height:										
(34) Foundation Type:	Spread Footing, On Piles, Others (RCP)				(35) Wingwall Lengths	L:	*8.0m*	R:	*8.0m*				

E. COLUMNS AND PIERS

(36) Column Type:			
(37) Min. Transverse Cross-Section Dimension:		(38) Min. Longitudinal Cross-Section Dimension	
(39) Height Range:		(40) Fixity:	Top (Bottom) Both
(41) Percentage of Longitudinal Reinforcement:			
(42) Transverse Reinforcements:	Bar Size: Spacing:		Tied Spiral
(43) Foundation Type:	Spread Footing On Piles Others ( )		

F. SITE

(44) Estimated Peak Ground Accelaration (0.4-0.7g):	
(45) Soil Profile Type:	I II (III) IV Don't Know
(46) Liquefaction Potential:	Yes (No) Don't Know ( )
(47) Boring Data Available:	Yes (No)

G. OTHER ITEMS

(48) Approach Slab:Yes ( ) Length		(47) Embankment Side-slope type(Approach Road):	(H:V):
(49) Slope Bank Protection Type:	*Concrete*		

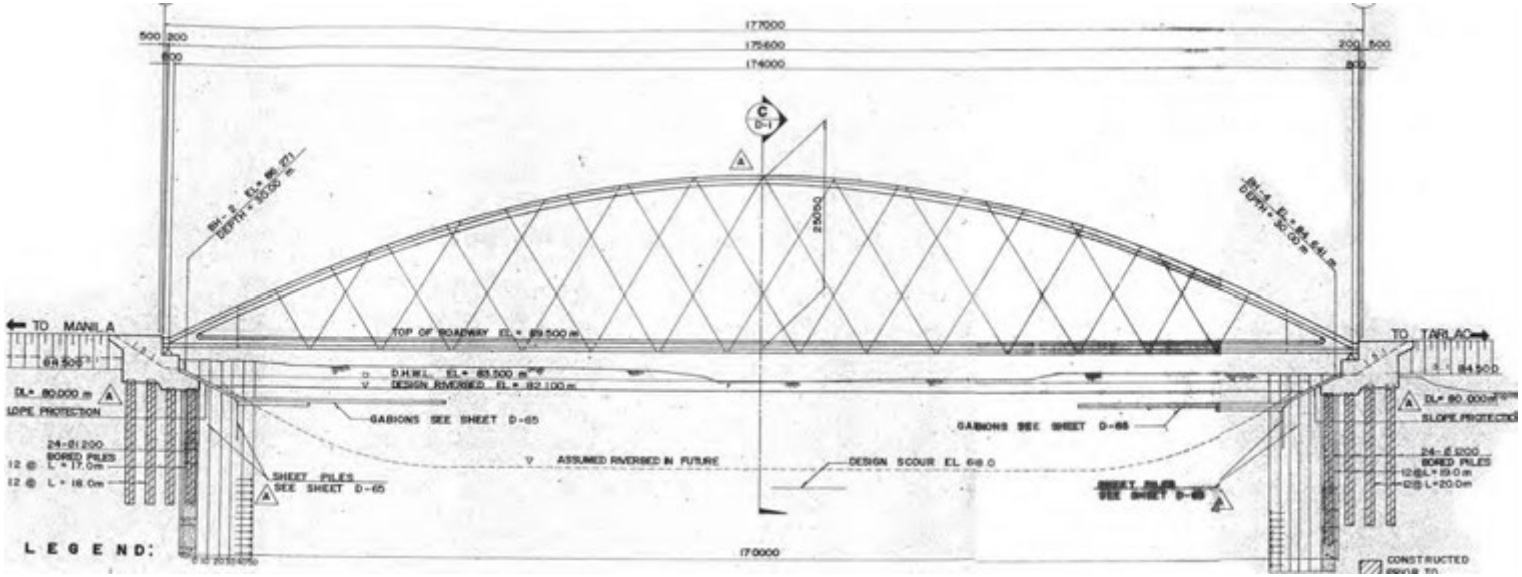
PHOTOGRAPHS / SKETCHES (Use additional sheets if necessary)

Mail Viewpoints of the Bridge

1. 	2. 
3. 	4. 
5. 	6. 
7. no picture	8. no picture
9. 	10. no load limit id

Component/ Material/ Classification	Type of Damages	Picture of the Damage	Reasoning for the Evaluation
Steel Beam/Truss Members (Bracings, etc.) (Primary)	Corrosion		Corrosion is observed at the part of primary steel members
Abutment (Primary)	Cracking		Cracks are observed at abutments. The width of cracks is over 1mm, but those are considered to be only superficial cracks.
Steel Beam/Truss Members (Bracings, etc.) (Primary)	Loose Connection (Material Loss)		Lack of most of hand hole covers at primary steel members
Curb and Railing (Secondary)	Impact damaged		Impact damage is observed at the part of the railing.
Fall-prevention Cable			Lack of covers and bolts is observed at fall-prevention cables of A2.

Bridge Profile



Main Features of the Bridge

Total replacement after Pinatubo volcano explosion in 1995

7) 1st Mandaue-Mactan Bridge

BRIDGE SEISMIC INVENTORY DATA

A. GENERAL

(1) Bridge Name:	*1st Mandaue-Mactan Bridge*				(2) Posted Load Limit	*15*	tons
(3) Location:	km.:		Route:	*Pan-Philippine Highway / Cortez Ave*	Prov./ City	*Central Visaya, Lapu-Lapu City*	
(4) Crossing Condition:	(Crossing River,) Railway,( ) Roadway,( ) Valley,( ) Others ( )						
(5) AADT:		(6) Detour Distance:		(7) Essential Bridge?	Yes( ) No( )		
(8) Alignment:	(Straight), Curved, (Radius) _____m Skewed, (Skew Angle)°						
(9) No. of Spans:	***14***	(10) Span Lengths			(11) Total Length:	***859m***	
(12) Left Sidewalk Width:	***0.80m***	(13) Carriageway Width:	***7.50m***	(14) Right Sidewalk Width:	***0.80m***		
(15) Overall Width (including sidewalk):	***9.1m***				(16) Year Built:	***1972***	
(17) As-builts or design drawings available?	(Yes) No						
(18) Design calculations available?	Yes (No)						
(19) Structure hydraulically adequate?	Yes No Don't know ()						
(21) Seismically Retrofitted?	Yes (No) Description						

B. SUPERSTRUCTURE

(23) Superstructure Type:	(Steel Truss), (Steel Girder), RCDG, PSCG, Others(PC Box Girder)			
(24) Number of Girders/Span:	***Steel truss:3 Steel I-girder:11***	(25) Continuous?	(Yes) No	
(26) Number of Expansion Joints:	***6***	(27) Type of Expansion Joints:	(Steel), Rubber, Seam	

C. BEARINGS

(28) Bearing Type:	Roller, Rocker, Rubber, Others ( )		Condition:	Functioning( ) Not Functioning ( )	
(29) Type of Restraint (Transverse):		(30) Type of Restraint (Longitudinal):			
(31) Seating Length :	Abutments:	***1.0m***	Piers:	Hinges:	

D. ABUTMENTS

(32) Type:		(33) Height:				
(34) Foundation Type:	Spread Footing, On Piles, Others (RCP)	(35) Wingwall Lengths	L:	***4.0m***	R:	***4.0m***

E. COLUMNS AND PIERS

(36) Column Type:	*Single circular column*			
(37) Min. Transverse Cross-Section Dimension:		(38) Min. Longitudinal Cross-Section Dimension		
(39) Height Range:		(40) Fixity:	Top Bottom Both	
(41) Percentage of Longitudinal Reinforcement:				
(42) Transverse Reinforcements:	Bar Size: Spacing:		Tied Spiral	
(43) Foundation Type:	Spread Footing On Piles Others ( )			

F. SITE

(44) Estimated Peak Ground Accelaration (0.4-0.7g):	
(45) Soil Profile Type:	I II III (IV) Don't Know
(46) Liquefaction Potential:	(Yes) No Don't Know ( )
(47) Boring Data Available:	Yes (No)

G. OTHER ITEMS

(48) Approach Slab:Yes ( ) Length		(47) Embankment Side-slope type(Approach Road):	(H:V):	
(49) Slope Bank Protection Type:				

PHOTOGRAPHS / SKETCHES (Use additional sheets if necessary)

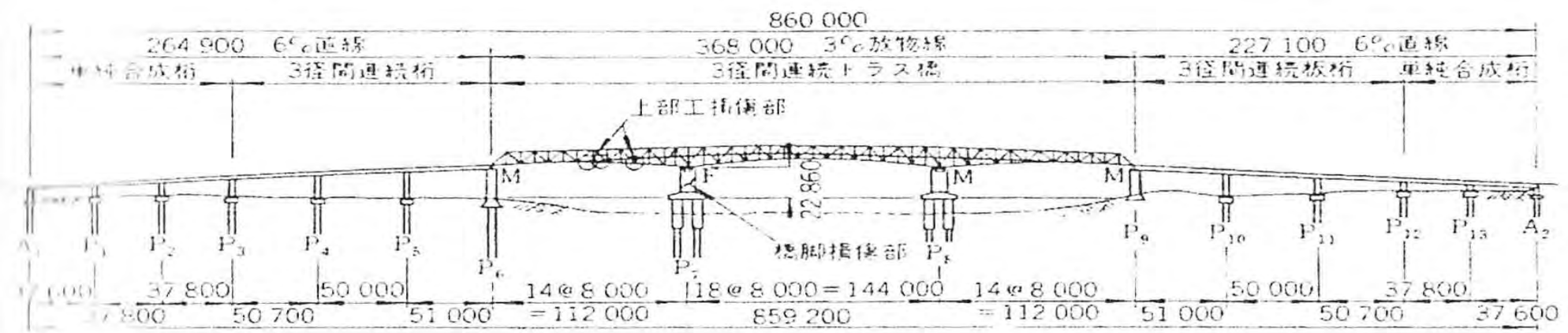
Main Viewpoints of the Bridge

1. 	2. 
3. 	4. no picture
5. 	6. 
7. no picture	8. no picture
9. no bridge id	10. no load limit id

Component/ Material/ Classification	Type of Damages	Picture of the Damage	Reasoning for the Evaluation
Deck Slab (Primary)	Exposure/Corrosion of Rebars		Exposure of rebar due to spalling is observed at the part of overhanging deck slab on A2 side.
	Water leaking	 	Water leaking is observed at the part of the deck slab.
Steel Beam/ Truss Members (Bracings, etc.) (Primary)	Corrosion/ Section loss	 	Corrosion and section loss due to corrosion is observed at the part of secondary steel members.
Shoe/Bearing (Primary)	Corrosion		Corrosion is observed at bearings.

Component/ Material/ Classification	Type of Damages	Picture of the Damage	Reasoning for the Evaluation
Shoe/Bearing (Primary)	Bed (Support) Damage		Accumulated dirt is observed at bearings of A2
Abutments (Primary)	Cracking		Cracking is observed at overall A1.
Piers (Primary)	Exposure/Corrosion of Reinf.		Major exposure/corrosion of reinf. is observed at the bottom of pile caps
	Scouring		Scouring is observed at P10.
Expansion Joint (Primary)	Water leaking		Water leaking is observed under expansion joints.
Curb and Railing (Secondary)	Section loss		Section loss is observed at the part of the railing.

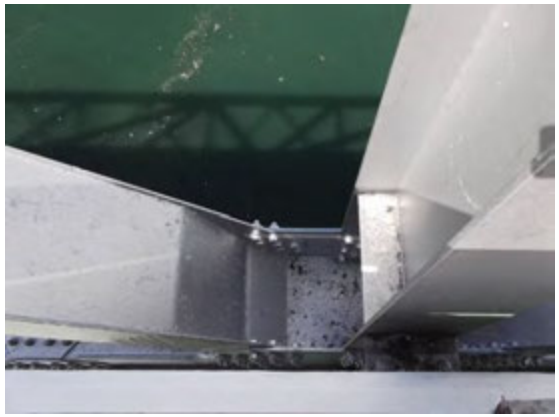
Bridge Profile



Main Features of the Bridge

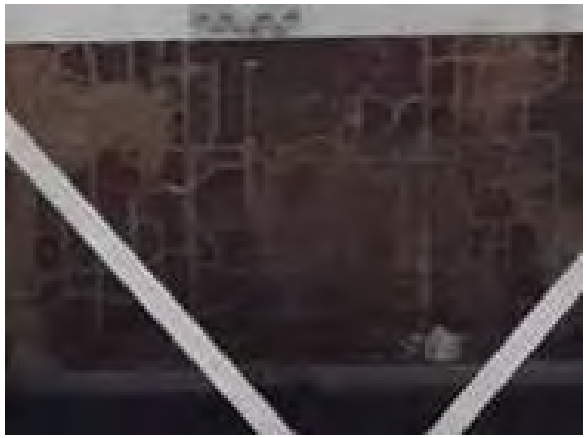
Main Features of the Bridge

Reinforcement of the deck slab with steel plates



Repaint of steel

Replacement of asphalt pavement



Repair of the deck slab cracking with epoxy injection

8) Marcelo Ferman Bridge

BRIDGE SEISMIC INVENTORY DATA

A. GENERAL

(1) Bridge Name:	*Marcelo Fernan Bridge*			(2) Posted Load Limit	*None*	tons	
(3) Location:	km.:		Route:	*Old Patiller Road*	Prov./ City	*Cebu, Mandaue City*	
(4) Crossing Condition:	Crossing River,( ) Railway,( ) Roadway,( ) Valley,(O) Others ( )						
(5) AADT:		(6) Detour Distance:		(7) Essential Bridge?	Yes( ) No( )		
(8) Alignment:	Straight, Curved, (Radius) _____m Skewed, (Skew Angle)°						
(9) No. of Spans:	***25***	(10) Span Lengths		(11) Total Length:	***1237m***		
(12) Left Sidewalk Width:	***0.80m***	(13) Carriageway Width:	***7.5m+7.5m***	(14) Right Sidewalk Width:	***0.80m***		
(15) Overall Width (including sidewalk): 2.5m		***16.6m***		(16) Year Built:	***1999***		
(17) As-builts or design drawings available?	Yes No						
(18) Design calculations available?	Yes No						
(19) Structure hydraulically adequate?	Yes No Don't know ()						
(21) Seismically Retrofitted?	Yes No Description						

B. SUPERSTRUCTURE

(23) Superstructure Type:	Steel Truss, Steel Girder, RCDG, PSCG, Others (PC I-Girder, PC Extradozed, PC Box Girder)				
(24) Number of Girders/Span:		(25) Continuous?	Yes No		
(26) Number of Expansion Joints:	***6***	(27) Type of Expansion Joints:	Steel, Rubber, Seam		

C. BEARINGS

(28) Bearing Type:	Roller, Rocker, Rubber, Others ( )		Condition:	Functioning( ) Not Functioning ( )	
(29) Type of Restraint (Transverse):		(30) Type of Restraint (Longitudinal):			
(31) Seating Length :	Abutments:	***A1:125cm A2:90cm***	Piers:	Hinges:	

D. ABUTMENTS

(32) Type:		(33) Height:					
(34) Foundation Type:	Spread Footing, On Piles, Others (RCP)	(35) Wingwall Lengths	L:	–	R:	–	

E. COLUMNS AND PIERS

(36) Column Type:	*rigid frame columns*				
(37) Min. Transverse Cross-Section Dimension:	***4.0m***	(38) Min. Longitudinal Cross-Section Dimension			***2.0m***
(39) Height Range:		(40) Fixity:	Top	(Bottom)	Both
(41) Percentage of Longitudinal Reinforcement:					
(42) Transverse Reinforcements:	Bar Size: Spacing:		Tied	Spiral	
(43) Foundation Type:	Spread Footing	On Piles	Others ( )		

F. SITE

(44) Estimated Peak Ground Accelaration (0.4-0.7g):	
(45) Soil Profile Type:	I II III (IV) Don't Know
(46) Liquefaction Potential:	(Yes) No Don't Know ( )
(47) Boring Data Available:	(Yes) No

G. OTHER ITEMS

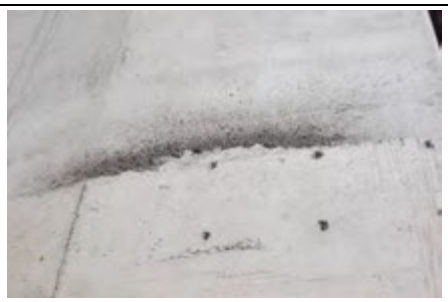
(48) Approach Slab:Yes ( ) Length		(47) Embankment Side-slope type(Approach Road):	(H:V):	
(49) Slope Bank Protection Type:				

PHOTOGRAPHS / SKETCHES (Use additional sheets if necessary)

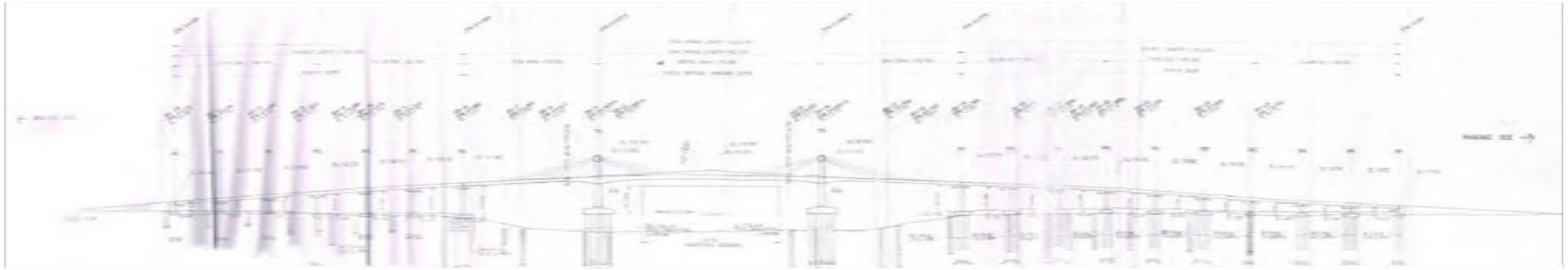
Main Viewpoints of the Bridge

Main Viewpoints of the Bridge

1. 	2. 
3. 	4. 
5. 	6. 
7. no picture	8. 
9. no bridge id	10. no load limit id

Component/ Material/ Classification	Type of Damages	Picture of the Damage	Reasoning for the Evaluation
Piers (Primary)	Hanycomb/ Cracking		Hanycomb and cracks are observed at piers.
	Spalling/ Cracking		Spalling and cracks are observed at piers.
	Cracking		Cracks are observed at pylons. Cracks are considered to be due to alkali - aggregate reaction.
Expansion Joint (Primary)	Water leaking/ Abnormal noise	 	Water leaking and abnormal noise are observed under expansion joints. Some of expansion joints are heavily deteriorated.

Bridge Profile



Appendix 3-B-169

Main Features of the Bridge

Main Features of the Bridge

Repair of expansion joint with steel plates covered by asphalt pavement

Repair of shear blocks (in 2008)

【Uunder repair work by DPWH.】

・Replacement of rubber expansion joints

9) Palanit Bridge

BRIDGE SEISMIC INVENTORY DATA													
A. GENERAL													
(1) Bridge Name:			*Palanit Bridge*							(2) Posted Load Limit		*7*	tons
(3) Location:	km.:	685+695	Route:	*Pan-Philippine Highway/Calbayog Catarman Rd.*					Prov./ City	*Eastern Visayas, Calbayog City*			
(4) Crossing Condition:			Crossing River,( ) Railway,( ) Roadway,( ) Valley,( ) Others ( )										
(5) AADT:			(6) Detour Distance:				(7) Essential Bridge?			Yes( ) No( )			
(8) Alignment:			Straight , Curved, (Radius) _____m Skewed, (Skew Angle)^{o}										
(9) No. of Spans:			(10) Span Lengths							(11) Total Length:		***150 m***	
(12) Left Sidewalk Width:		***0.70m***	(13) Carriageway Width:			***7.5m***			(14) Right Sidewalk Width:			***0.70m***	
(15) Overall Width (including sidewalk):			***8.9m***						(16) Year Built:			***1972***	
(17) As-builts or design drawings available?			Yes No										
(18) Design calculations available?			Yes No										
(19) Structure hydraulically adequate?			Yes No Don't know ()										
(21) Seismically Retrofitted?			Yes No Description										
B. SUPERSTRUCTURE													
(23) Superstructure Type:			Steel Truss, Steel Girder, RCDG, PSCG, Others( )										
(24) Number of Girders/Span:			***Steel truss: 2 Steel I-girder: 2***			(25) Continuous?			Yes No				
(26) Number of Expansion Joints:			***4***	(27) Type of Expansion Joints:			Steel, Rubber, Seam						
C. BEARINGS													
(28) Bearing Type:			Roller, Rocker, Rubber, Others (Steel)						Condition:	Functioning( ) Not Functioning ( )			
(29) Type of Restraint (Transverse):			***F***			(30) Type of Restraint (Longitudinal):				***F, M***			
(31) Seating Length :			Abutments:	***75cm***		Piers:			Hinges:				
D. ABUTMENTS													
(32) Type:						(33) Height:							
(34) Foundation Type:			Spread Footing, On Piles, Others (RCP)			(35) Wingwall Lengths			L:	***2.5m***	R:	***2.5m***	

E. COLUMNS AND PIERS

(36) Column Type:				
(37) Min. Transverse Cross-Section Dimension:		(38) Min. Longitudinal Cross-Section Dimension		
(39) Height Range:		(40) Fixity:	Top (Bottom)	Both
(41) Percentage of Longitudinal Reinforcement:				
(42) Transverse Reinforcements:	Bar Size: Spacing:		Tied	Spiral
(43) Foundation Type:	Spread Footing	On Piles	Others ( )	

F. SITE

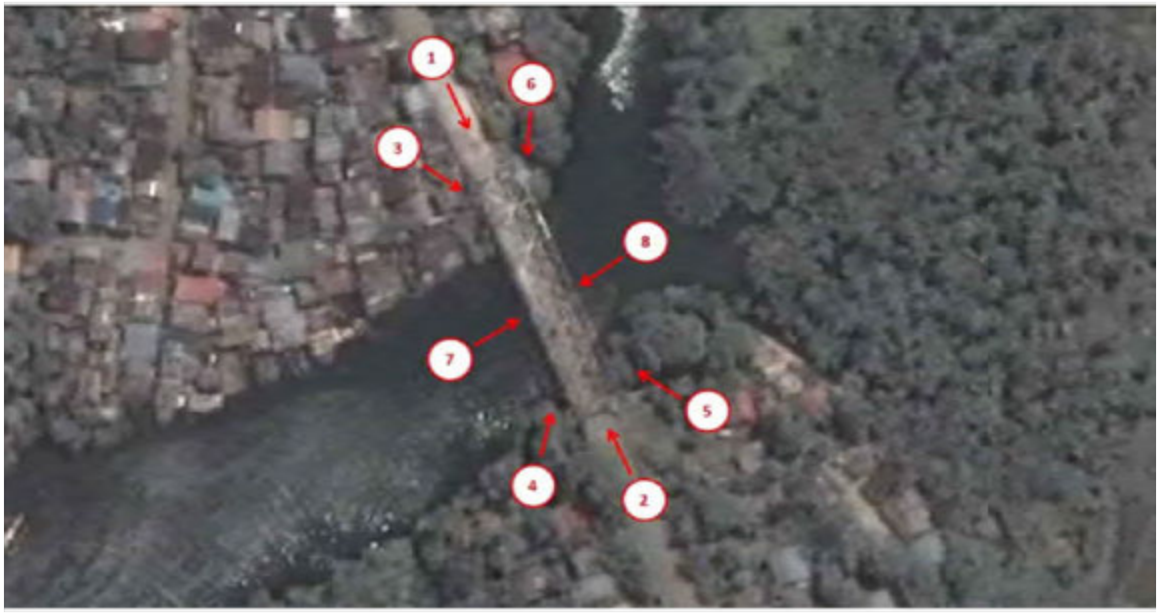
(44) Estimated Peak Ground Accelaration (0.4-0.7g):	
(45) Soil Profile Type:	I II (III) IV Don't Know
(46) Liquefaction Potential:	Yes (No) Don't Know ( )
(47) Boring Data Available:	Yes (No)

G. OTHER ITEMS

(48) Approach Slab:Yes ( ) Length		(47) Embankment Side-slope type(Approach Road):	(H:V):	
(49) Slope Bank Protection Type:				

PHOTOGRAPHS / SKETCHES (Use additional sheets if necessary)

Main Viewpoints of the Bridge



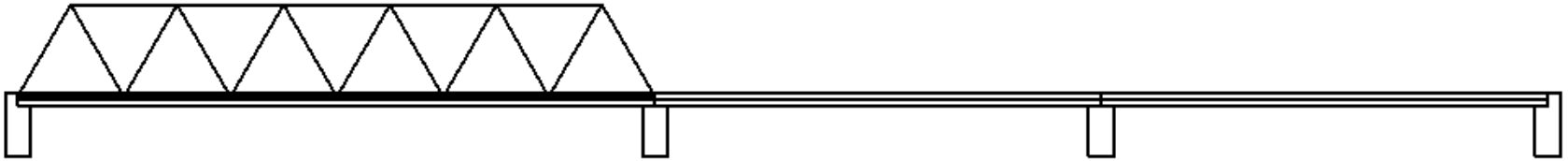
Main Viewpoints of the Bridge

1. 	2. 
3. 	4. 
5. 	6. 
7. no picture	8. no picture
9. 	10. 

Component/ Material/ Classification	Type of Damages	Picture of the Damage	Reasoning for the Evaluation
Deck Slab (Primary)	Cracking/ Free lime		Major cracks and free lime are observed at the deck slab.
	Water leaking		Water leaking is observed at the deck slab.
	Exposure/ Corrosion of Rebars	 	Rebar exposure due to spalling is observed at the overhanging deck slab.
	Hanycomb/ Spalling, Scaing, Disintegration	 	Hanycomb and disintegration due to spalling are observed at the deck slab.

Component/ Material/ Classification	Type of Damages	Picture of the Damage	Reasoning for the Evaluation
Steel Beam/Truss Members (Bracings, etc.) (Primary)	Corrosion	 	Corrosion is observed at steel members.
	Section loss		Section loss is observed at the part of steel members.
	Deformation/ Buckling		Deformation is observed at the part of primary steel members.
Shoe/Bearing (Primary)	Corrosion		Corrosion at steel bearings is observed.
Expansion Joint (Primary)	Water leaking		Water leaking is observed under expansion joints.

Bridge Profile



Main Features of the Bridge

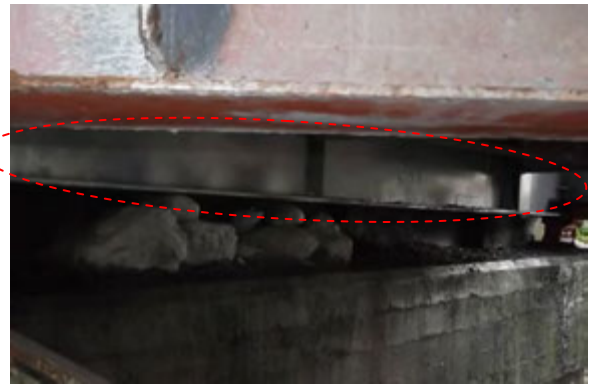
Main Features of the Bridge

Repair of the deck slab cracking with mortar

Partial replacement of the deck slab

Reinforcement of gusset plates with steel plates

Reinforcement of secondary steel members with steel plates



Additional steel cross beam at P2

10) Jibatang Bridge

BRIDGE SEISMIC INVENTORY DATA

A. GENERAL

(1) Bridge Name:	*Jibatang Bridge*				(2) Posted Load Limit	*5*	tons
(3) Location:	km.:	724+307	Route:	*Pan-Philippine Highway*	Prov./ City	*Eastern Visayas, Calbayog City*	
(4) Crossing Condition:	Crossing River,( ) Railway,( ) Roadway,( ) Valley,( ) Others ( )						
(5) AADT:		(6) Detour Distance:	***60 km***	(7) Essential Bridge?	Yes( ) No( )		
(8) Alignment:	Straight, Curved, (Radius) _____m Skewed, (Skew Angle)^{o}						
(9) No. of Spans:	***5***	(10) Span Lengths	***20+3@30+20m***	(11) Total Length:	***130m***		
(12) Left Sidewalk Width:	***0.50m***	(13) Carriageway Width:	***7.30m***	(14) Right Sidewalk Width:	***0.5m***		
(15) Overall Width (including sidewalk):	***8.3m***	(16) Year Built:	***1976***				
(17) As-builts or design drawings available?	Yes No						
(18) Design calculations available?	Yes No						
(19) Structure hydraulically adequate?	Yes No Don't know ()						
(21) Seismically Retrofitted?	Yes No Description						

B. SUPERSTRUCTURE

(23) Superstructure Type:	Steel Truss, Steel Girder, RCDG, PSCG, Others(PC Box Girder)				
(24) Number of Girders/Span:	***4***	(25) Continuous?	Yes No		
(26) Number of Expansion Joints:	***6***	(27) Type of Expansion Joints:	Steel, Rubber, Seam		

C. BEARINGS

(28) Bearing Type:	Roller, Rocker, Rubber, Others (Teflon coating beaaring)			Condition:	Functioning( ) Not Functioning ( )
(29) Type of Restraint (Transverse):	***F***	(30) Type of Restraint (Longitudinal):	***F, M***		
(31) Seating Length :	Abutments:	***55cm***	Piers:		Hinges:

D. ABUTMENTS

(32) Type:		(33) Height:					
(34) Foundation Type:	Spread Footing, On Piles, Others (RCP)	(35) Wingwall Lengths	L:	***3.5m***	R:	***3.5m***	

E. COLUMNS AND PIERS

(36) Column Type:	*rigid frame columns with shear wall*			
(37) Min. Transverse Cross-Section Dimension:		(38) Min. Longitudinal Cross-Section Dimension		
(39) Height Range:		(40) Fixity:	Top (Bottom)	Both
(41) Percentage of Longitudinal Reinforcement:				
(42) Transverse Reinforcements:	Bar Size: Spacing:		Tied	Spiral
(43) Foundation Type:	Spread Footing	On Piles	Others ( )	

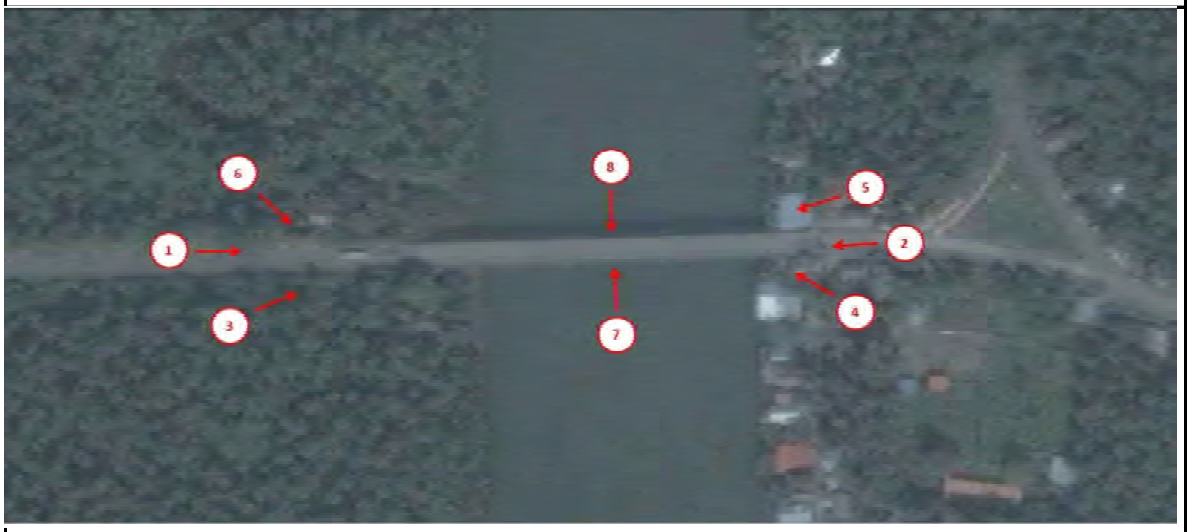
F. SITE

(44) Estimated Peak Ground Accelaration (0.4-0.7g):	
(45) Soil Profile Type:	I II III (IV) Don't Know
(46) Liquefaction Potential:	(Yes) No Don't Know ( )
(47) Boring Data Available:	Yes (No)

G. OTHER ITEMS

(48) Approach Slab:Yes ( ) Length		(47) Embankment Side-slope type(Approach Road):	***Masonry Embankment***	(H:V):
(49) Slope Bank Protection Type:				

PHOTOGRAPHS / SKETCHES (Use additional sheets if necessary)



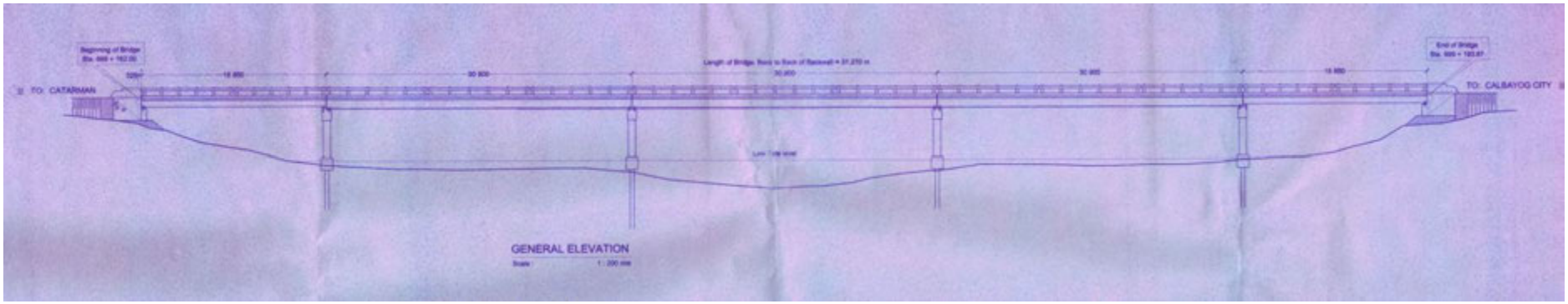
Main Viewpoints of the Bridge

1. 	2. 
3. 	4. 
5. 	6. 
7. 	8. no picture
9. 	10. 

Component/ Material/ Classification	Type of Damages	Picture of the Damage	Reasoning for the Evaluation
Deck Slab (Primary)	Scaling/Spalling		Section loss due to spalling is observed at the end of deck slab.
Steel Beam/Truss Members (Bracings, etc.) (Primary)	Corrosion	  	Corrosion is observed at bottom flanges of steel members.
Abutments (Primary)	Hanycomb		Hanycomb is observed at abutments.

Component/ Material/ Classification	Type of Damages	Picture of the Damage	Reasoning for the Evaluation
Piers (Primary)	Spalling		Spalling is observed at piers.
Curb and Railing (Secondary)	Section loss		Section loss is observed at the part of curbstone.
Expansion Joint (Primary)	Water leaking		Water leaking is observed under expansion joints.
	Cracking/ Rupture		Section loss due to cracking is observed at some of expansion joints.
Slope Protection (Secondary)	Material loss		Pot-holes are observed at the slope protection of A1.

Bridge Profile



Main Features of the Bridge

Main Features of the Bridge

Under construction of additional driven piles

Under repair work of substructures

【Under repair work】

- Additional driven piles
- RC-jacketing on piers
- Repair of retaining walls & slope protection
- Replacement of bolts at steel members
- Repair of the deck slab with steel plates

11) Mawo Bridge

BRIDGE SEISMIC INVENTORY DATA

A. GENERAL

(1) Bridge Name:	*Mawo Bridge*				(2) Posted Load Limit	*7*	tons
(3) Location:	km.:	688+985	Route:	*Pan-Philippine Highway*	Prov./ City	*Northern Samar, Victoria*	
(4) Crossing Condition:	(Crossing River,) Railway,( ) Roadway,( ) Valley,( ) Others ( )						
(5) AADT:		(6) Detour Distance:		(7) Essential Bridge?	Yes( ) No( )		
(8) Alignment:	(Straight,) Curved, (Radius) _____m Skewed, (Skew Angle)°						
(9) No. of Spans:	*2*	(10) Span Lengths		(11) Total Length:	*259.1m*		
(12) Left Sidewalk Width:	*0.75m*	(13) Carriageway Width:	*7.30m*	(14) Right Sidewalk Width:	*0.75m*		
(15) Overall Width (including sidewalk):	*8.8m*	(16) Year Built:	*1976*				
(17) As-builts or design drawings available?	Yes (No)						
(18) Design calculations available?	Yes (No)						
(19) Structure hydraulically adequate?	Yes No Don't know ()						
(21) Seismically Retrofitted?	Yes (No) Description						

B. SUPERSTRUCTURE

(23) Superstructure Type:	Steel Truss, Steel Girder, RCDG, PSCG, (Others, Steel Ranger Arch)				
(24) Number of Girders/Span:	*2*	(25) Continuous?	Yes (No)		
(26) Number of Expansion Joints:	*3*	(27) Type of Expansion Joints:	(Steel,) Rubber, Seam		

C. BEARINGS

(28) Bearing Type:	(Roller,) Rocker, Rubber,(Others,) (Steel)	Condition:	Functioning( ) Not Functioning ( )		
(29) Type of Restraint (Transverse):	*F*	(30) Type of Restraint (Longitudinal):	*F, M*		
(31) Seating Length :	Abutments:	*A1:95cm A2:90cm*	Piers:		Hinges:

D. ABUTMENTS

(32) Type:		(33) Height:					
(34) Foundation Type:	Spread Footing, On Piles, Others (RCP)	(35) Wingwall Lengths	L:	*4.3m*	R:	*4.3m*	

E. COLUMNS AND PIERS

(36) Column Type:	*ellipsoidal column*			
(37) Min. Transverse Cross-Section Dimension:		(38) Min. Longitudinal Cross-Section Dimension		
(39) Height Range:		(40) Fixity:	Top (Bottom) Both	
(41) Percentage of Longitudinal Reinforcement:				
(42) Transverse Reinforcements:	Bar Size: Spacing:		Tied Spiral	
(43) Foundation Type:	Spread Footing On Piles Others ( )			

F. SITE

(44) Estimated Peak Ground Accelaration (0.4-0.7g):	
(45) Soil Profile Type:	I (II) III IV Don't Know
(46) Liquefaction Potential:	Yes (No) Don't Know ( )
(47) Boring Data Available:	Yes (No)

G. OTHER ITEMS

(48) Approach Slab:Yes ( ) Length		(47) Embankment Side-slope type(Approach Road): ***Side slope:wall***	(H:V):	
(49) Slope Bank Protection Type:				

PHOTOGRAPHS / SKETCHES (Use additional sheets if necessary)

Main Viewpoints of the Bridge

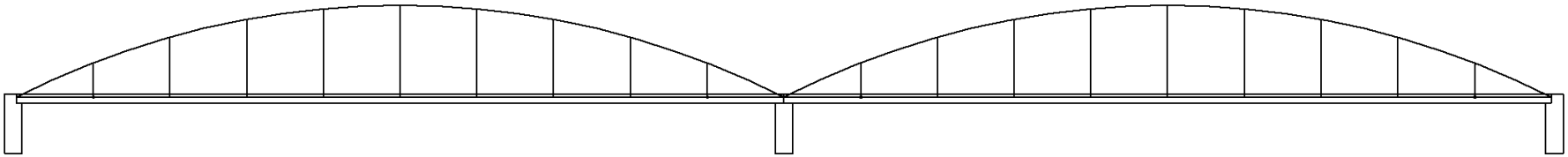
Main Viewpoints of the Bridge

1. 	2. 
3. 	4. 
5. 	6. 
7. no picture	8. no picture
9. 	10. 

Component/ Material/ Classification	Type of Damages	Picture of the Damage	Reasoning for the Evaluation
Deck Slab (Primary)	Exposure/Corrosion of Rebars, Scaling/Spalling, disintegration	 	Exposure of rebar due to spalling is observed at the part of the overhanging deck slab.
	Hanycomb	 	Hanycomb is observed at the part of the deck slab.
	Water leaking		Water leaking is observed at the part of the deck slab.

Component/ Material/ Classification	Type of Damages	Picture of the Damage	Reasoning for the Evaluation
Steel Beam/Truss Members (Bracings, etc.) (Primary)	Corrosion	 	Corrosion is observed at the overall steel members.
	Paint Peel Off		Paint peel off and corrosion is observed at the side of primary steel members.
Steel Beam/Truss Members (Bracings, etc.) (Primary)	Abnormal vibration		Abnormal vibration of secondary steel members (bracings) is observed.
Curb and Railing (Secondary)	Corrosion/ Impact damaged		Impact damage is observed at the part of the railing.

Bridge Profile



Main Features of the Bridge

Main Features of the Bridge

Repair of the deck slab cracking with mortar

Replacement of bolts at steel members

Replacement of secondary steel members

Asphalt pavement overlay

12) Biliran Bridge

BRIDGE SEISMIC INVENTORY DATA									
A. GENERAL									
(1) Bridge Name:	*Biliran Bridge*					(2) Posted Load Limit	*15*	tons	
(3) Location:	km.:	1005+50	Route:	*Lemon-Leyte-Biliran Road*		Prov./ City	*Eastern Visayas, Biliran*		
(4) Crossing Condition:	(Crossing River,( ) Railway,( ) Roadway,( ) Valley,( ) Others ( )								
(5) AADT:		(6) Detour Distance:		(7) Essential Bridge?	Yes( ) No( )				
(8) Alignment:	(Straight, Curved, (Radius) _____m Skewed, (Skew Angle)°								
(9) No. of Spans:	*6*	(10) Span Lengths	*2@30,5+15,5+128.1+15.5+30.5*			(11) Total Length:	*252m*		
(12) Left Sidewalk Width:	*0.80m*	(13) Carriageway Width:	*7.3m*	(14) Right Sidewalk Width:	*0.80m*				
(15) Overall Width (including sidewalk):	*8.9m*					(16) Year Built:	*1976*		
(17) As-builts or design drawings available?	(Yes) No								
(18) Design calculations available?	Yes (No)								
(19) Structure hydraulically adequate?	Yes No Don't know ()								
(21) Seismically Retrofitted?	Yes (No) Description								
B. SUPERSTRUCTURE									
(23) Superstructure Type:	Steel Truss, (Steel Girder,) RCDG, PSCG, Others(Steel Ranger Arch)								
(24) Number of Girders/Span:	*Steel arch:2 Steel I-girder :4*	(25) Continuous?	Yes (No)						
(26) Number of Expansion Joints:	*7*	(27) Type of Expansion Joints:	(Steel,) Rubber, Seam						
C. BEARINGS									
(28) Bearing Type:	(Roller,) Rocker, Rubber, (Others (Teflon coating beaaring)					Condition:	Functioning( ) Not Functioning ( )		
(29) Type of Restraint (Transverse):	*Steel arch: F Steel I-girder: F*	(30) Type of Restraint (Longitudinal):	*Steel arch: H Steel I-girder: F, M*						
(31) Seating Length :	Abutments:	*2.0m*	Piers:		Hinges:				
D. ABUTMENTS									
(32) Type:		(33) Height:							
(34) Foundation Type:	Spread Footing, On Piles, Others (RCP)	(35) Wingwall Lengths	L:	*2.5m*	R:	*2.5m*			

E. COLUMNS AND PIERS

(36) Column Type:	*Column Circular Pier*				
(37) Min. Transverse Cross-Section Dimension:	***2.5m***	(38) Min. Longitudinal Cross-Section Dimension	***2.5m***		
(39) Height Range:		(40) Fixity:	Top	(Bottom)	Both
(41) Percentage of Longitudinal Reinforcement:					
(42) Transverse Reinforcements:	Bar Size: Spacing:		Tied	Spiral	
(43) Foundation Type:	Spread Footing	On Piles	Others ( )		

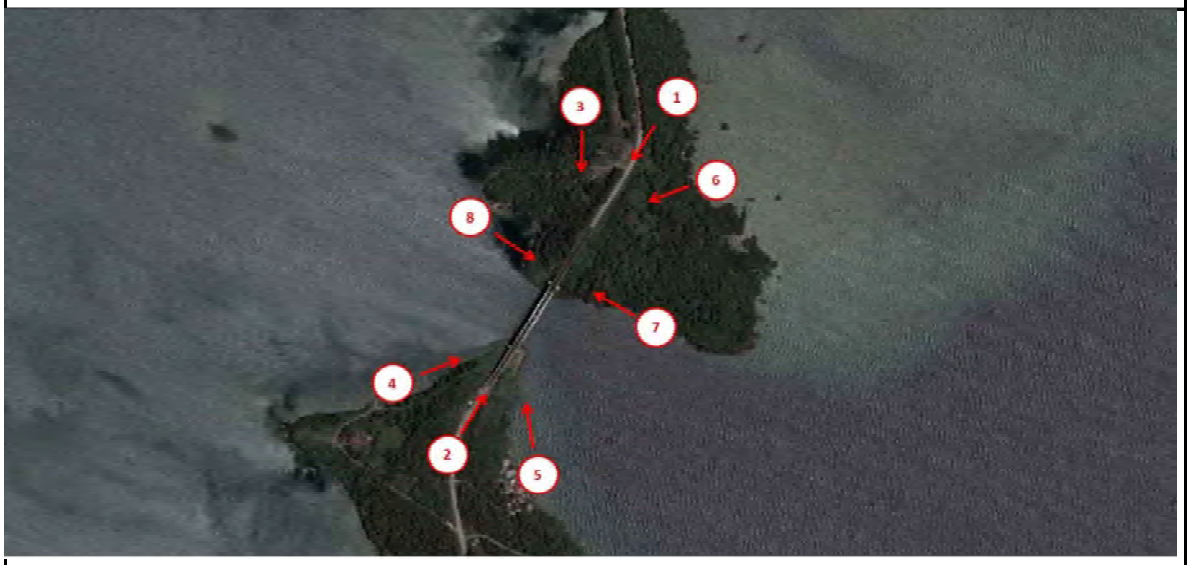
F. SITE

(44) Estimated Peak Ground Accelaration (0.4-0.7g):				
(45) Soil Profile Type:	I	(II)	III	IV	Don't Know
(46) Liquefaction Potential:	Yes	(No)	Don't Know ( )	
(47) Boring Data Available:	(Yes)	No		

G. OTHER ITEMS

(48) Approach Slab:Yes ( ) Length		(47) Embankment Side-slope type(Approach Road): *Concrete* ***Concrete***	(H:V):	
(49) Slope Bank Protection Type:				

PHOTOGRAPHS / SKETCHES (Use additional sheets if necessary)



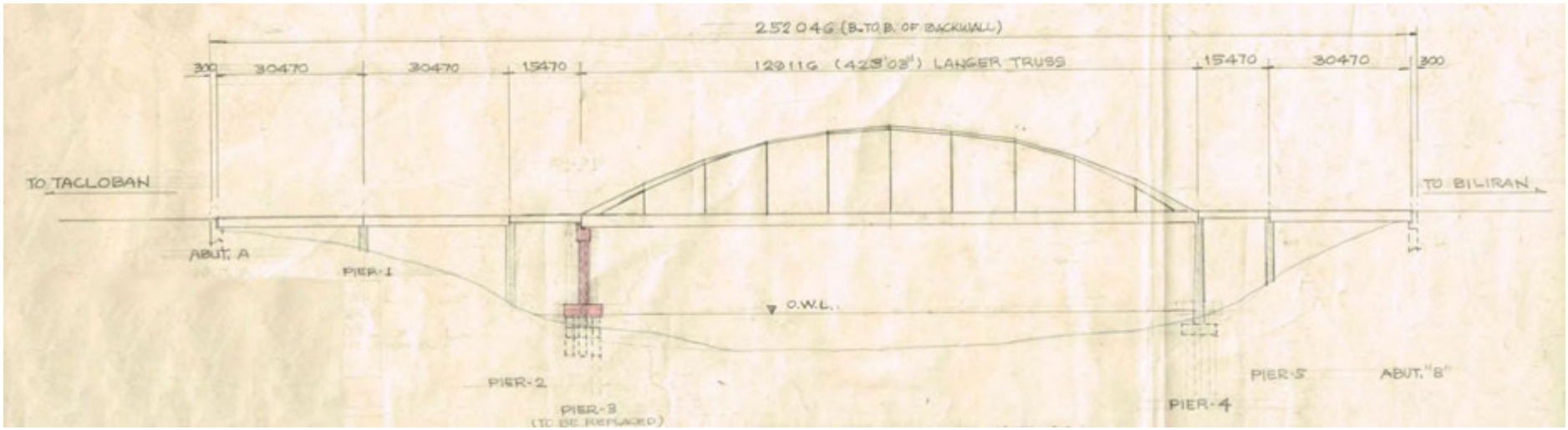
Main Viewpoints of the Bridge

1. 	2. 
3. 	4. 
5. 	6. 
7. no picture	8. no picture
9. 	10. 

Component/ Material/ Classification	Type of Damages	Picture of the Damage	Reasoning for the Evaluation
Deck Slab (Primary)	Exposure/Corrosion of Rebars, Spalling		Exposure of rebar due to spalling is observed at the part of overhanging deck slab.
	Hanycomb		Hanycomb is observed at the part of the deck slab.
	Water leaking/ Free lime		Water leaking and free lime are observed at the overhanging deck slab.
Steel Beam/ Truss Members (Bracings, etc.) (Primary)	Corrosion	 	Corrosion is observed at the part of steel members. Especially, Bottoms of I girders are corroded.

Component/ Material/ Classification	Type of Damages	Picture of the Damage	Reasoning for the Evaluation
Steel Beam/ Truss Members (Bracings, etc.) (Primary)	Deformation/ Buckling		Deformation is observed at part of the primary steel member. The steel member is considered to be damaged during its installation.
Shoe/Bearing (Primary)	Corrosion		Corrosion is observed at bearings.
Piers (Primary)	Hanycomb/ Free lime		Hanycomb & free lime are observed at the part of piers
	Settlement		Settlement is observed at P3.

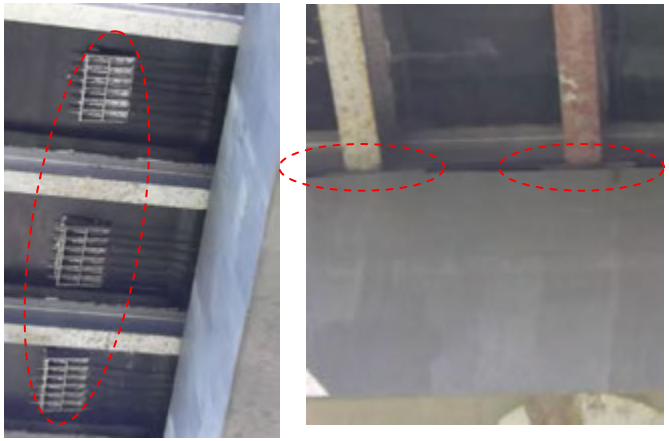
Bridge Profile



Main Features of the Bridge

Main Features of the Bridge

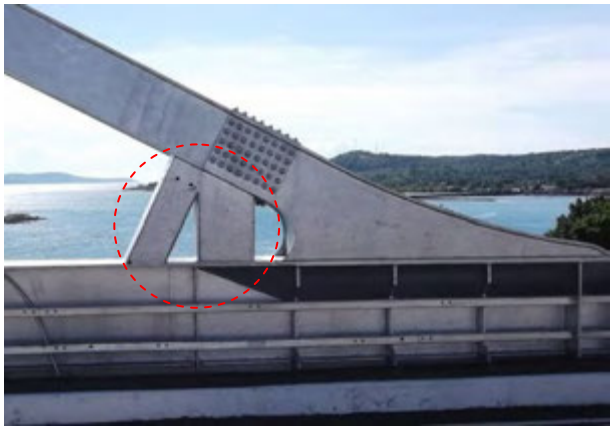
Replacement of piers (in 1990s)



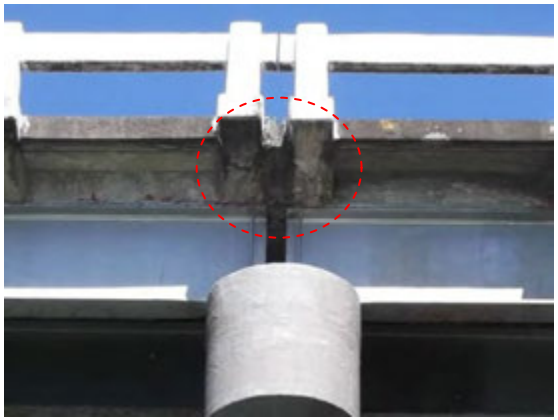
Setting fall-down prevention system & shear blocks

Reinforcement of pier copings with Carbon fiber sheet (in 2008)

Reinforcement of the deck slab with Carbon fiber sheet (in 2008)



Reinforcement at steel members' connections



Joint-less deck slab

13) San Juanico Bridge

BRIDGE SEISMIC INVENTORY DATA							
A. GENERAL							
(1) Bridge Name:	*San Juanico Bridge*				(2) Posted Load Limit	*15*	tons
(3) Location:	km.:		Route:	*Pan-Philippine Highway*		Prov./ City	*Eastern Visayas, Basey*
(4) Crossing Condition:	Crossing River,( ) Railway,( ) Roadway,( ) Valley,( ) Others ( )						
(5) AADT:		(6) Detour Distance:		(7) Essential Bridge?		Yes( ) No( )	
(8) Alignment:	Straight , Curved, (Radius) _____m Skewed, (Skew Angle)^o						
(9) No. of Spans:	***43***	(10) Span Lengths			(11) Total Length:	***2162m***	
(12) Left Sidewalk Width:	***0.8m***	(13) Carriageway Width:	***7.3m***	(14) Right Sidewalk Width:		***0.8m***	
(15) Overall Width (including sidewalk):	***8.9m***				(16) Year Built:	***1972***	
(17) As-builts or design drawings available?	Yes No						
(18) Design calculations available?	Yes No						
(19) Structure hydraulically adequate?	Yes No Don't know ( )						
(21) Seismically Retrofitted?	Yes No Description						
B. SUPERSTRUCTURE							
(23) Superstructure Type:	Steel Truss, Steel Girder, RCDG, PSCG, Others(Steel Box Girder)						
(24) Number of Girders/Span:	***Steel I-girder:4 Steel truss:2 Steel box girder:2***	(25) Continuous?	Yes No *(Only Steel Box Girder is continuous)*				
(26) Number of Expansion Joints:	***41***	(27) Type of Expansion Joints:	Steel, Rubber, Seam				
C. BEARINGS							
(28) Bearing Type:	Roller, Rocker, Rubber, Others (Teflon coating beaaring)		Condition:	Functioning( ) Not Functioning ( )			
(29) Type of Restraint (Transverse):		(30) Type of Restraint (Longitudinal):					
(31) Seating Length :	Abutments:	***A1:3.6m A2:0.75m***	Piers:		Hinges:		
D. ABUTMENTS							
(32) Type:		(33) Height:					
(34) Foundation Type:	Spread Footing, On Piles, Others (RCP)	(35) Wingwall Lengths	L:	***4.0m***	R:	***4.0m***	

E. COLUMNS AND PIERS

(36) Column Type:	*Single Column*			
(37) Min. Transverse Cross-Section Dimension:		(38) Min. Longitudinal Cross-Section Dimension		
(39) Height Range:		(40) Fixity:	Top (Bottom)	Both
(41) Percentage of Longitudinal Reinforcement:				
(42) Transverse Reinforcements:	Bar Size: Spacing:		Tied	Spiral
(43) Foundation Type:	Spread Footing	On Piles	Others ( )	

F. SITE

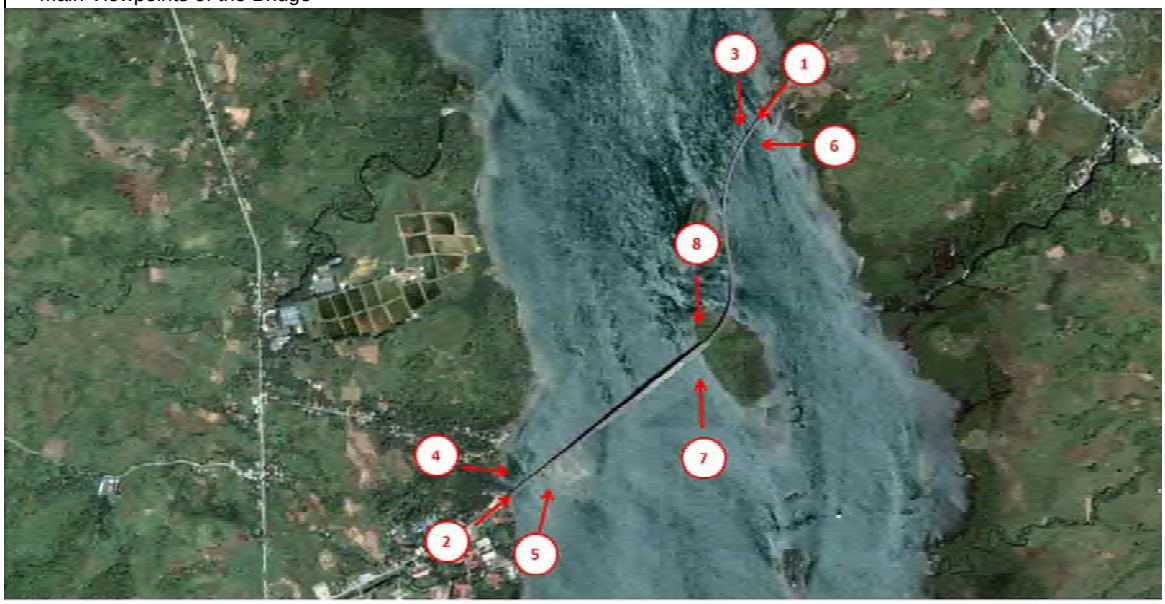
(44) Estimated Peak Ground Accelaration (0.4-0.7g):	
(45) Soil Profile Type:	I (II) III IV Don't Know
(46) Liquefaction Potential:	(Yes) No Don't Know ( )
(47) Boring Data Available:	(Yes) No

G. OTHER ITEMS

(48) Approach Slab:Yes ( ) Length		(47) Embankment Side-slope type(Approach Road):	(H:V):	
(49) Slope Bank Protection Type:				

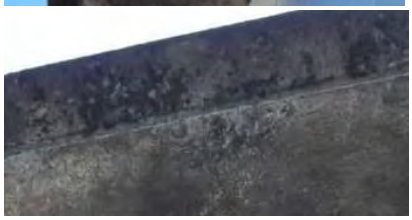
PHOTOGRAPHS / SKETCHES (Use additional sheets if necessary)

Main Viewpoints of the Bridge

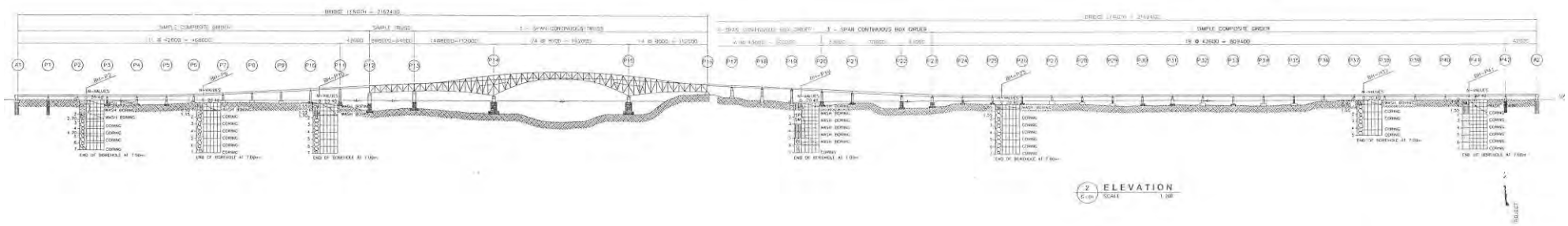


Main Viewpoints of the Bridge

1. 	2. 
3. 	4. 
5. 	6. 
7. 	8. no picture
9. no bridge id	10. no load limit id

Component/ Material/ Classification	Type of Damages	Picture of the Damage	Reasoning for the Evaluation
Deck Slab (Primary)	Cracking		Cracking is observed at the part of overhanging deck slab.
	Hanycomb	 	Hanycomb is observed at the part of overhanging deck slab.
	Water leaking		Water leaking is observed at the overall overhanging deck slab.
Steel Beam/Truss Members (Bracings, etc.) (Primary)	Corrosion		Corrosion is observed at the part of steel members over the sea water.
Piers (Primary)	Spalling, Scaling, Disintegration		Spalling, is observed at piers near sea water.
Expansion Joint (Primary)	Water leaking		Water leaking is observed under expansion joints.

Bridge Profile



Main Features of the Bridge

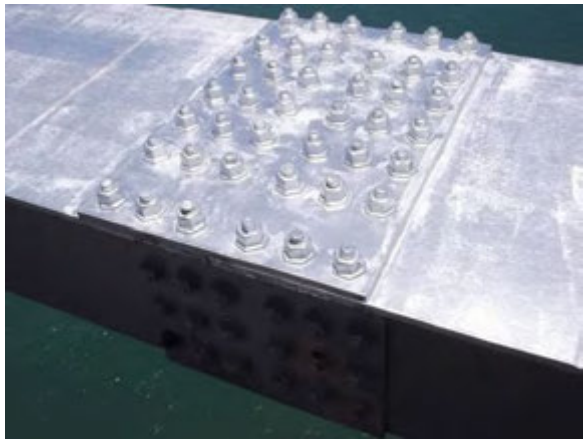
Main Features of the Bridge

・Reinforcement of the deck slab with Carbon fiber sheet
・Additional driven piles

Reinforcement of the deck slab with Carbon fiber sheet

Fall-down prevention device and shear blocks

Repaint of steel I-girders



Repaint of steel truss members

14) Liloan Bridge

BRIDGE SEISMIC INVENTORY DATA													
A. GENERAL													
(1) Bridge Name:			*Lilo-an Bridge*						(2) Posted Load Limit		*20*		tons
(3) Location:		km.:	1054+509		Route:		*Pan-Philippine Highway/Central Nautical Highway*			Prov./ City		*Central Visayas , Liloan*	
(4) Crossing Condition:			(Crossing River,( ) Railway,( ) Roadway,( ) Valley,( ) Others ( )										
(5) AADT:			(6) Detour Distance:				(7) Essential Bridge?			Yes( ) No( )			
(8) Alignment:			(Straight) Curved, (Radius) _____m Skewed, (Skew Angle)^{o}										
(9) No. of Spans:			(10) Span Lengths						(11) Total Length:		***298m***		
(12) Left Sidewalk Width:		***0.8m***	(13) Carriageway Width:		***7.3m***		(14) Right Sidewalk Width:				***0.8m***		
(15) Overall Width (including sidewalk):									(16) Year Built:		***1979***		
(17) As-builts or design drawings available?			Yes (No)										
(18) Design calculations available?			Yes (No)										
(19) Structure hydraulically adequate?			Yes No Don't know ()										
(21) Seismically Retrofitted?			(Yes) No Description										
B. SUPERSTRUCTURE													
(23) Superstructure Type:			Steel Truss, Steel Girder, RCDG, PSCG, (Others( )										
(24) Number of Girders/Span:			***PC I-girder:4 Steel arch:2***		(25) Continuous?				Yes (No)				
(26) Number of Expansion Joints:			***6***		(27) Type of Expansion Joints:				(Steel, Rubber, Seam				
C. BEARINGS													
(28) Bearing Type:			(Roller,) Rocker, Rubber, (Others) (Steel)						Condition:		Functioning( ) Not Functioning ( )		
(29) Type of Restraint (Transverse):			***F***				(30) Type of Restraint (Longitudinal):				***F, M***		
(31) Seating Length :			Abutments:		***A1:110cm A2:60cm***		Piers:		***60cm***		Hinges:		
D. ABUTMENTS													
(32) Type:							(33) Height:						
(34) Foundation Type:			Spread Footing, On Piles, Others (RCP)				(35) Wingwall Lengths		L:	***3.0m***	R:	***3.0m***	

E. COLUMNS AND PIERS

(36) Column Type:	*Rigid frame Columns*			
(37) Min. Transverse Cross-Section Dimension:		(38) Min. Longitudinal Cross-Section Dimension		
(39) Height Range:		(40) Fixity:	Top (Bottom) Both	
(41) Percentage of Longitudinal Reinforcement:				
(42) Transverse Reinforcements:	Bar Size: Spacing:		Tied Spiral	
(43) Foundation Type:	Spread Footing On Piles Others ( )			

F. SITE

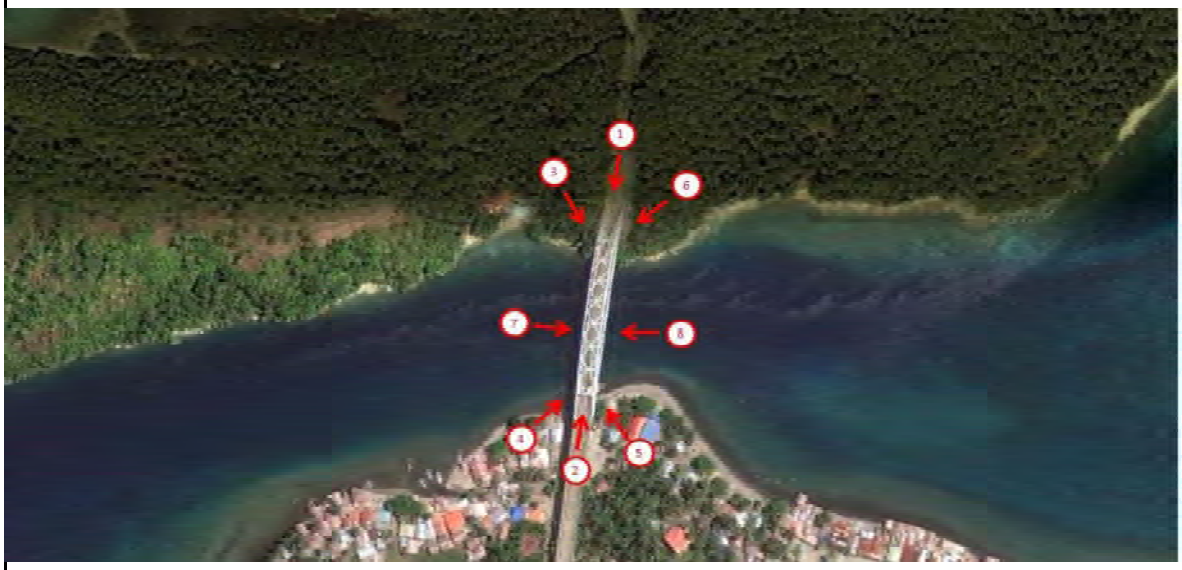
(44) Estimated Peak Ground Accelaration (0.4-0.7g):	
(45) Soil Profile Type:	I (II) III IV Don't Know
(46) Liquefaction Potential:	Yes (No) Don't Know ( )
(47) Boring Data Available:	Yes (No)

G. OTHER ITEMS

(48) Approach Slab:Yes ( ) Length		(47) Embankment Side-slope type(Approach Road):	(H:V):	
(49) Slope Bank Protection Type:				

PHOTOGRAPHS / SKETCHES (Use additional sheets if necessary)

Main Viewpoints of the Bridge



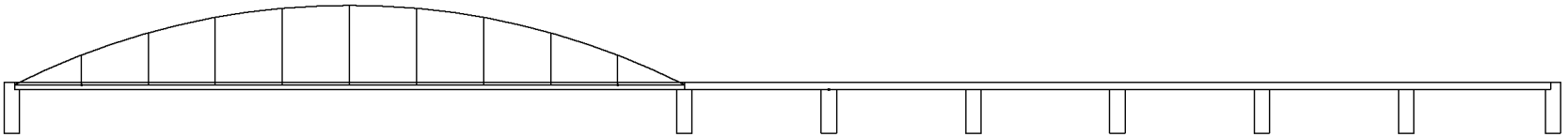
Main Viewpoints of the Bridge

1. 	2. 
3. 	4. 
5. 	6. 
7. no picture	8. 
9. 	10. 

Component/ Material/ Classification	Type of Damages	Picture of the Damage	Reasoning for the Evaluation
Deck Slab (Primary)	Cracking		Cracks are observed at the part of the deck slab.
	Hanycomb		Hanycomb is observed at the part of the deck slab.
	Water leaking		Water leaking is observed at the part of overhanging deck slab.
Concrete Beam/Girder (Primary)	Water leaking		Water leaking & free lime are observed at concrete girders.
Steel Beam/ Truss Members (Bracings, etc.) (Primary)	Corrosion	 	Corrosion is observed at primary steel members.

Component/ Material/ Classification	Type of Damages	Picture of the Damage	Reasoning for the Evaluation
Steel Beam/ Truss Members (Bracings, etc.) (Primary)	Corrosion		Corrosion is observed at primary steel members.
	Loose Connection		Loose connection due to lack of bolts is observed at splices of steel members.
Shoe/Bearing (Primary)	Corrosion		Corrosion is observed at bearings.
	Abnormal Displacement		Abnormal deformation is observed at the movable bearings
Abutments (Primary)	Spalling, Scaling, Disintegration		Section loss due to disintegration is observed at A2.
Piers （Primary）	Cracking concrete		Major cracks are observed at some piers. The width of cracks is over 1mm.

Bridge Profile



Main Features of the Bridge

RC-jacketing on piers （in 2007)

15) Wawa Bridge

BRIDGE SEISMIC INVENTORY DATA

A. GENERAL

(1) Bridge Name:	*Wawa Bridge*				(2) Posted Load Limit	*10*	tons
(3) Location:	km.: 1257+479	Route:	*Pan-Philippine Highway*		Prov./ City	*CARAGA, Sibagat*	
(4) Crossing Condition:	(Crossing River,( ) Railway,( ) Roadway,( ) Valley,( ) Others ( )						
(5) AADT:		(6) Detour Distance:		(7) Essential Bridge?	Yes( ) No( )		
(8) Alignment:	(Straight), Curved, (Radius) _____m Skewed, (Skew Angle)^{o}						
(9) No. of Spans:	***13***	(10) Span Lengths			(11) Total Length:	***228.1m***	
(12) Left Sidewalk Width:	***0.8m***	(13) Carriageway Width:	***7.3m***	(14) Right Sidewalk Width:	***0.8m***		
(15) Overall Width (including sidewalk):	***8.9m***			(16) Year Built:	***1967***		
(17) As-builts or design drawings available?	(Yes) No						
(18) Design calculations available?	Yes (No)						
(19) Structure hydraulically adequate?	Yes No Don't know ()						
(21) Seismically Retrofitted?	Yes (No) Description						

B. SUPERSTRUCTURE

(23) Superstructure Type:	(Steel Truss), (Steel Girder), RCDG, PSCG, Others( )				
(24) Number of Girders/Span:	***Steel truss:2 Steel I-girder:4***	(25) Continuous?	Yes (No)		
(26) Number of Expansion Joints:	***6***	(27) Type of Expansion Joints:	Steel, Rubber, Seam		

C. BEARINGS

(28) Bearing Type:	Roller, (Rocker), Rubber, (Others (steel)	Condition:	Functioning( ) Not Functioning ( )		
(29) Type of Restraint (Transverse):		(30) Type of Restraint (Longitudinal):			
(31) Seating Length :	Abutments: ***45cm***	Piers:		Hinges:	

D. ABUTMENTS

(32) Type:		(33) Height:					
(34) Foundation Type:	Spread Footing, On Piles, Others (RCP)	(35) Wingwall Lengths	L:	***2.5m***	R:	***2.5m***	

E. COLUMNS AND PIERS

(36) Column Type:	*rigid frame columns with shear wall*			
(37) Min. Transverse Cross-Section Dimension:		(38) Min. Longitudinal Cross-Section Dimension		
(39) Height Range:		(40) Fixity:	Top (Bottom)	Both
(41) Percentage of Longitudinal Reinforcement:				
(42) Transverse Reinforcements:	Bar Size: Spacing:		Tied	Spiral
(43) Foundation Type:	Spread Footing	On Piles	Others ( )	

F. SITE

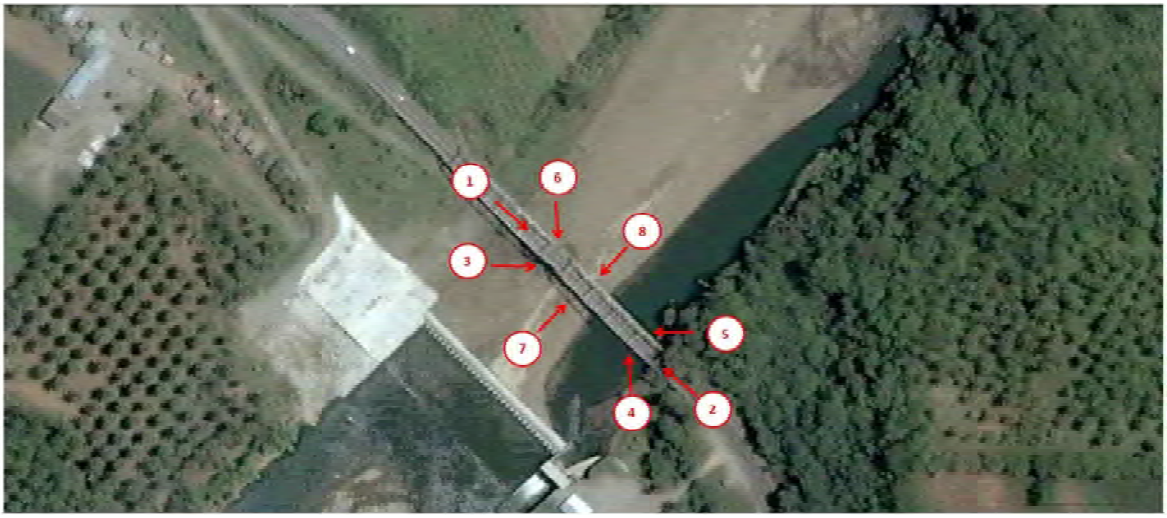
(44) Estimated Peak Ground Accelaration (0.4-0.7g):	
(45) Soil Profile Type:	I II (III) IV Don't Know
(46) Liquefaction Potential:	Yes (No) Don't Know ( )
(47) Boring Data Available:	Yes (No)

G. OTHER ITEMS

(48) Approach Slab:Yes ( ) Length		(47) Embankment Side-slope type(Approach Road):	(H:V):	
(49) Slope Bank Protection Type:				

PHOTOGRAPHS / SKETCHES (Use additional sheets if necessary)

Main Viewpoints of the Bridge



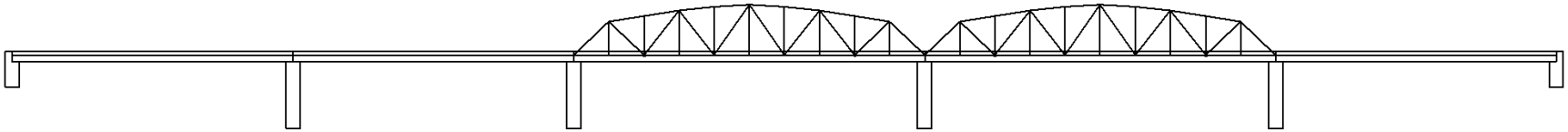
Main Viewpoints of the Bridge

1. 	2. 
3. 	4. 
5. 	6. 
7. no picture	8. no picture
9. 	10. 

Component/ Material/ Classification	Type of Damages	Picture of the Damage	Reasoning for the Evaluation
Deck Slab (Primary)	Cracking		Major cracks are observed at the side of the deck slab.
	Hanycomb/ Spalling/ Water leaking		Hanycomb, spalling, and water leaking is observed at the part of the deck slab.
	Water leaking		Water leaking is observed along the center steel I girder.
	Abnormal vibration		Abnormal vibration is observed at the deck slab on the A1 side.
Steel Beam/ Truss Members (Bracings, etc.) (Primary)	Corrosion		Corrosion is observed at the part of steel members.
	Deformation		Deformation due to impact damage is observed at the secondary steel members (cross beams).

Component/ Material/ Classification	Type of Damages	Picture of the Damage	Reasoning for the Evaluation
Shoe/Bearing (Primary)	Corrosion	 	Corrosion is observed at bearings.
	Abnormal displacement		Abnormal displacement is observed at Movable bearings.
Curb and Railing (Secondary)	Loose connection		Loose connection due to lack of bolts is observed at the railing.
	Impact damaged		Impact damage is observed at the part of the railing.
Expansion Joint (Primary)	Water leaking		Water leaking is observed under expansion joints.

Bridge Profile



Appendix 3-B-216

Main Features of the Bridge

Main Features of the Bridge

Additional bearing support at A2

Temporary supports at the center of side spans (in 2011)

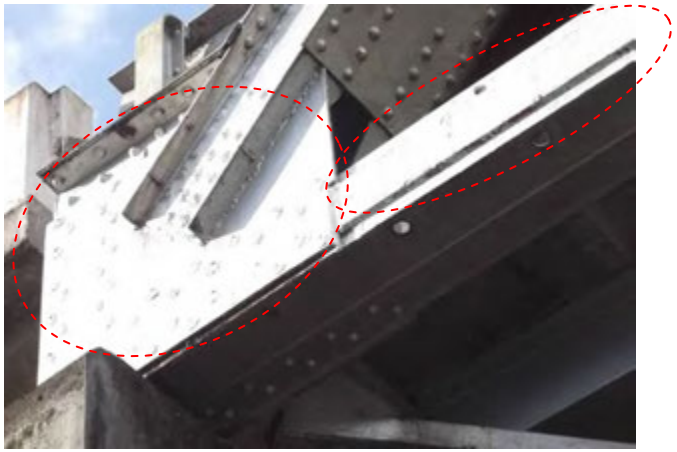
Replacement of the deck slab with the precast deck slab at carriageway

Replacement of the deck slab with the steel plates at sidewalks

Reinforcement of the deck slab with steel I-girders

Repaint of steel members

Main Features of the Bridge



・Reinforcement of gusset plates with steel plates
・Reinforcement of primary steel members with steel plates

Reinforcement of secondary steel members with steel plates

Reinforcement of the river bank protection with gabions

Steel plate cover over the expansion joint

16) 2nd Magsaysay Bridge

BRIDGE SEISMIC INVENTORY DATA									
A. GENERAL									
(1) Bridge Name:	*Macapagal Bridge (2nd Magsaysay Bridge)*					(2) Posted Load Limit	*15*	tons	
(3) Location:	km.:		Route:	*Pan-Philippines Highway*		Prov./ City	*CARAGA, Butuan City*		
(4) Crossing Condition:	Crossing River,( ) Railway,( ) Roadway,( ) Valley,( ) Others ( )								
(5) AADT:		(6) Detour Distance:		(7) Essential Bridge?	Yes( ) No( )				
(8) Alignment:	Straight , Curved, (Radius) _____m Skewed, (Skew Angle)^{o}								
(9) No. of Spans:	***13***	(10) Span Lengths				(11) Total Length:	***882m***		
(12) Left Sidewalk Width:	***0.8m***	(13) Carriageway Width:	***8.0m***	(14) Right Sidewalk Width:	***0.8m***				
(15) Overall Width (including sidewalk):						(16) Year Built:	***2007***		
(17) As-builts or design drawings available?	Yes No								
(18) Design calculations available?	Yes No								
(19) Structure hydraulically adequate?	Yes No Don't know ()								
(21) Seismically Retrofitted?	Yes No Description								
B. SUPERSTRUCTURE									
(23) Superstructure Type:	Steel Truss, Steel Girder, RCDG, PSCG, Others(Cable Stayed Bridge, RCIG)								
(24) Number of Girders/Span:	***Cable stayed:2 Steel-I girder:2 RCIG:4***	(25) Continuous?	Yes No						
(26) Number of Expansion Joints:	***6***	(27) Type of Expansion Joints:	Steel, Rubber, Seam						
C. BEARINGS									
(28) Bearing Type:	Roller, Rocker, Rubber, Others (Teflon coating beaaring)			Condition:	Functioning( ) Not Functioning ( )				
(29) Type of Restraint (Transverse):	***F***	(30) Type of Restraint (Longitudinal):	***E, F, M***						
(31) Seating Length :	Abutments:	***85cm***	Piers:		Hinges:				
D. ABUTMENTS									
(32) Type:		(33) Height:							
(34) Foundation Type:	Spread Footing, On Piles, Others (RCP)	(35) Wingwall Lengths	L:	***7.0m***	R:	***7.0m***			

E. COLUMNS AND PIERS

(36) Column Type:	*ellipsoidal column*				
(37) Min. Transverse Cross-Section Dimension:	***7.5m***	(38) Min. Longitudinal Cross-Section Dimension	***1.8m***		
(39) Height Range:		(40) Fixity:	Top	Bottom	Both
(41) Percentage of Longitudinal Reinforcement:					
(42) Transverse Reinforcements:	Bar Size: Spacing:		Tied	Spiral	
(43) Foundation Type:	Spread Footing	On Piles	Others ( )		

F. SITE

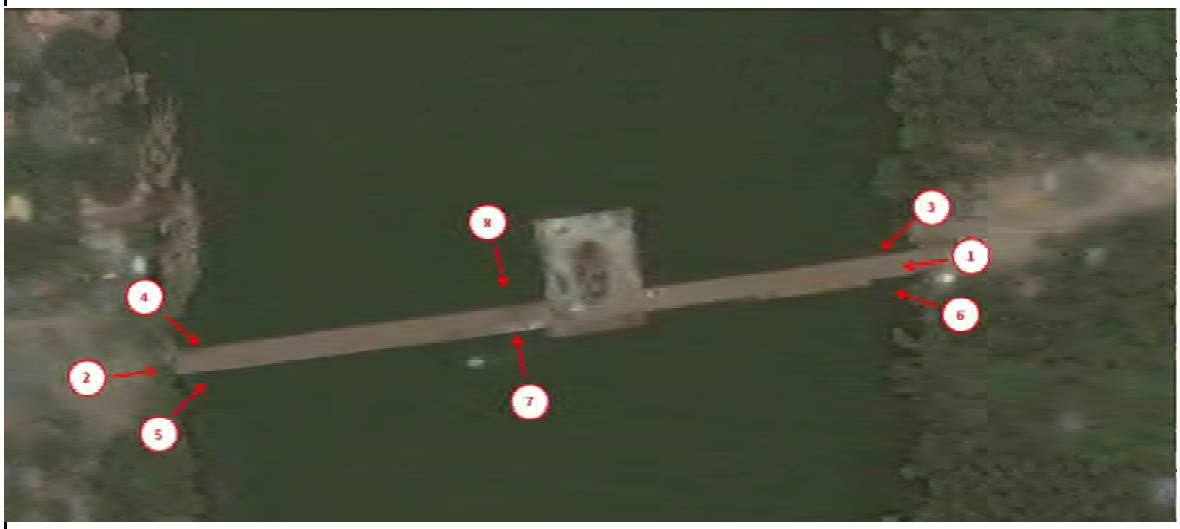
(44) Estimated Peak Ground Accelaration (0.4-0.7g):	
(45) Soil Profile Type:	I II III (IV) Don't Know
(46) Liquefaction Potential:	(Yes) No Don't Know ( )
(47) Boring Data Available:	(Yes) No

G. OTHER ITEMS

(48) Approach Slab:Yes ( ) Length		(47) Embankment Side-slope type(Approach Road):	(H:V):	
(49) Slope Bank Protection Type:				

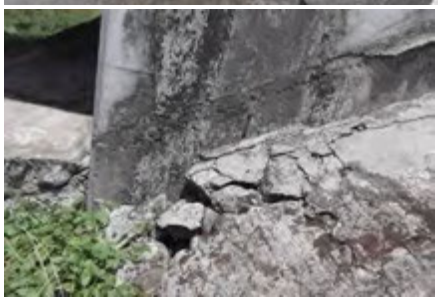
PHOTOGRAPHS / SKETCHES (Use additional sheets if necessary)

Main Viewpoints of the Bridge

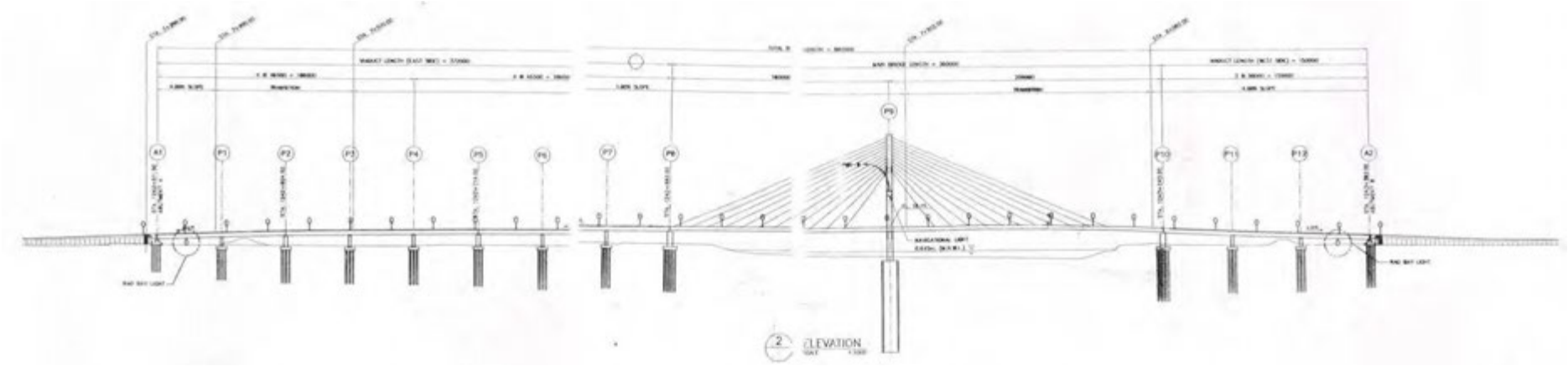


Main Viewpoints of the Bridge

1. 	2. 
3. 	4. 
5. 	6. 
7. no picture	8. no picture
9. no bridge id	10. no load limit id

Component/ Material/ Classification	Type of Damages	Picture of the Damage	Reasoning for the Evaluation
Shoe/Bearing (Primary)	Abnormal Displacement		Deformation of rubber bearings is observed at abutments and nearby piers.
Expansion Joint (Primary)	Water leaking		Water leaking is observed under expansion joints.
Slope Protection (Secondary)	Cracking	 	Major cracks due to ground settlement are observed at slope protection of A2.
Approach Road (Secondary)	Settlement		Settlement of approach road is observed on A2 side. The amount of settlement is about 20cm.

Bridge Profile



Main Features of the Bridge

Main Features of the Bridge

Asphalt pavement overlay at the approach road on A2 side

Repair of concrete cracking with mortar at A2

Fall-down prevention systems at discontinuous point

Elastomeric rubber bearing

APPENDIX 3-C

SUMMARY OF STAKEHOLDER MEETING

Summary of First Stakeholder Meeting

Lambingan Bridge
Summary of Consultations

Barangay	Purpose of Meeting	Date and Venue	Attendees & Designation	Method of explanation	Concerns/Issues
Brgy 894	Permission to conduct survey & introduction of possible proposed project	04 Sept 2012 / 10AM / Brgy. Hall	Eduardo Natividad – Brgy. Chairman Sherwin Canete – Brgy. Kagawad Rolando Sta. Lucia – Survey Personnel Josefino Trinidad – Survey Personnel Darwin Gozun – Survey Personnel Resty Villesis – Survey Personnel	Focus Group Discussion	• Definite time when will the project starts • Are the residents living beside the bridge will be affected? • How much is the compensation
Brgy 892	Permission to conduct survey & introduction of possible proposed project	05 Sept 2012 / 11AM / Brgy. Hall	Sonia Manzano – Brgy. Chairman Gaylord Ocampo – Brgy. Kagawad Eduardo Sibal – Brgy. Kagawad Mercidita Timano – Brgy. Secretary Alodia Maria Timano – Survey Personnel	Focus Group Discussion	• Definite time when will the project starts • Confirmation on what are the affected areas and if these areas are to be relocated
Brgy 888	Permission to conduct survey & introduction of possible proposed project	05 Sept 2012 / 1PM / Brgy. Hall	Nemia Dalisay – Brgy. Kagawad Rogelio Manrique – Brgy. Kagawad	Focus Group Discussion	• Definite time when will the project starts • Confirmation on what are the affected areas and if these areas are to be relocated • How much is the compensation
Brgy 891	Permission to conduct survey & introduction of possible proposed project	05 Sept 2012 / 3PM / Brgy. Hall	Rosendo Parel – Barangay Chairman Cristina Samson – Brgy. Kagawad Erlinda Tee – Brgy. Kagawad	Focus Group Discussion	• Definite time when will the project starts • Confirmation on what are the affected areas and if these areas are to be relocated • How much is the compensation

Guadalupe Bridge
Summary of Consultations

Barangay	Purpose of Meeting	Date and Venue	Attendees & Designation	Method of explanation	Concerns/Issues
Brgy Guadalupe Viejo (Makati)	Permission to conduct survey & introduction of possible proposed project	11 Sept 2012 / 10AM / Brgy. Hall	Priscilla U. Brillantes – Brgy. Secretary	Focus Group Discussion	• Definite time when will the project starts • Does the project affect the residents which is about 500 m away from EDSA • Does the nearby park will be affected?
Brgy Guadalupe Nuevo (Makati)	Permission to conduct survey & introduction of possible proposed project	12 Sept 2012 / 1PM / Brgy. Hall	Ernesto Q. Balibag – Brgy. Secretary	Focus Group Discussion	• Definite time when will the project starts • Does the project affect the residents which is about 500 m away from EDSA • Does the nearby park will be affected?
Brgy Ilaya (Mandaluyong)	Permission to conduct survey & introduction of possible proposed project	12 Sept 2012 / 10AM / Brgy. Hall	Lito C. Pangilinan – Brgy. Kagawad Mila C. Riñoza – Brgy. Staff Elizabeth Muceros – Desk Officer Arnold Santos – Brgy. Tanod Charity Bohol – Survey Personnel Vilma Gabe – Survey Personnel Marilou Masilang – Survey Personnel	Focus Group Discussion	• Definite time when will the project starts • Confirmation on what are the affected areas and if these areas are to be relocated • How much is the compensation

1st Mandaue Mactan Bridge
Summary of Consultations

Barangay	Purpose of Meeting	Date and Venue	Attendees & Designation	Method of explanation	Concerns/Issues
Brgy Looc (Mandaue City)	Permission to conduct survey & introduction of possible proposed project	17 Sept 2012 / 3PM / Brgy. Hall	Raul Cabahug- Brgy. Kagawad Mary Ann Estrellado – DPWH Cebu 6 Foreman Blenda Mejias – Brgy. Social Welfare Officer/ Survey Personnel Gina Gonzaga – Brgy. Development Officer/Survey Personnel Roland Gonzales – Survey Personnel Charito Sinadjan – Survey Personnel Almira Basubas – Survey Personnel Mila Gamuhay – Survey Personnel Adelina Morta – Survey Personnel	Focus Group Discussion	• Definite time when will the project starts • Relocation for the households under the bridge • How much is the compensation • Confirmation on what are the affected areas aside from the under the bridge and if these areas are to be relocated • How long will the construction time?
Brgy Pajo (Lapu-Lapu City)	Permission to conduct survey & introduction of possible proposed project	19 Sept 2012 / 10AM / Brgy. Hall	Emeliano Ladera – Brgy. Secretary Mitchelle Pantonial – Social Worker/Survey Personnel Teresita Israel – Social Worker/Survey Personnel Evelyn Soon – Social Worker/Survey Personnel Lilibeth Pantonial – Survey Personnel Joel Ruiz – Survey Personnel Rechie Villegas – Survey Personnel	Focus Group Discussion	• Definite time when will the project starts • Relocation for the households under the bridge • How much is the compensation • Confirmation on what are the affected areas aside from the under the bridge and if these areas are to be relocated

Palanit Bridge
Summary of Consultations

Barangay	Purpose of the Meeting	Date and Venue	Attendees & Designation	Method of Explanation	Concerns/Issues
Palanit	Courtesy call to Barangay Officials to conduct survey and introduction of proposed project	September 3-4, 2012 Palanit Barangay Hall	Cristito F. Catarungan – Barangay Captain Rudito P. Grimpula – Barangay Kagawad Ludito s. Gordo – Barangay Kagawad Nancy Portiles – Barangay Kagawad Melchor A Morales – Barangay Kagawad Reynaldo V. Castillo Sr. – Barangay Kagawad Remie V. Bangga – Barangay Kagawad Rosalie P. Padida – Barangay Kagawad Luisito G. Yruma – Barangay Kagawad Levie C. Neri – Barangay Kagawad	Focus Group Discussion	• Would residents be allowed to work in the construction, if the project continues? • The bridge must be replaced since it is already old, and had to be closed off to heavy vehicles • Where would the families living under the bridge be moved?

Mawo Bridge
Summary of Consultations

Barangay	Purpose of the Meeting	Date and Venue	Attendees & Designation	Method of Explanation	Concerns/Issues
Zone III Poblacion	Courtesy call to Barangay Officials and the residents of the barangay nearest to the bridge, to conduct survey and introduction of proposed project	September 3-4, 2012 House of Barangay Treasurer Angie Dagum	Angie Dagum (Barangay Treasurer)	Focus Group Discussion	• Would residents be allowed to work in the construction, if the project continues? • Where the families, living under the bridge, would be moved? • Relocation Area must be somewhere close by.

Liloan Bridge
Summary of Consultations

Barangay	Purpose of the Meeting	Date and Venue	Attendees & Designation	Method of Explanation	Concerns/Issues
San Roque, Biliran	Courtesy call to Barangay Officials, to conduct survey and introduction of proposed project	September 12, 2012 Barangay Hall	Elsie J. Tangpos (Barangay Secretary) And other Barangay Officials	Focus Group Discussion	• Would residents be allowed to work in the construction, if the project continues? • Would the barangay be consulted again before the actual construction? • Would the bridge be widened?

Wawa Bridge
Summary of Consultations

Barangay	Purpose of the Meeting	Date and Venue	Attendees & Designation	Method of Explanation	Concerns/Issues
San Vicente	Courtesy call to Purok Chairman and the residents of the Purok nearest to the bridge, to conduct survey and introduction of proposed project	September 26-27, 2012 House of Purok Chairman Vilma Castro	Vilma Castro (Purok Chairman) Resident Housewives from the Community	Focus Group Discussion	• Would residents be allowed to work in the construction, if the project continues? • Where would the families, which will be affected by the construction, be moved? • Would their small community be asked to leave? • Relocation Area must be somewhere close by since their source of livelihood is the farms within the vicinity.

Summary of Second Stakeholder Meeting

PROJECT STUDY ON IMPROVEMENT OF THE BRIDGES THROUGH DISASTER MITIGATING MEASURES FOR LARGE SCALE EARTHQUAKES IN THE REPUBLIC OF THE PHILIPPINES

Public Consultation for Lambingan Bridge

Activity:	Lambingan Bridge Consultation
Date	June 20,2013
Venue	Brgy 894, Multipurpose Hall, Punta, Manila
Attendance	1. Mr. Harada – JICA 2. Joma Lim – LCI 3. Joseph Lalo – LCI 4. Joana Medina – LCI 5. Bryan Magante – LCI 6. Neil Lacson – LCI 7. Esther Angeles – Brgy. 894 8. Benjamin Efre – C.E.O. Manila 9. Peter Paul Lim – CEO Manila 10. Cesar S. Japzon – CEO Manila 11. Rito Badillo – DPWH 12. Emilo Franco – DPWH 13. Romeo Clieto – DPWH 14. Ronel Cruz Jr. – DPWH 15. Fernando Valdez – DPWH 16. Rosendo Parel – Brgy. 891 17. Bel Arguelles – Brgy 894 18. Cesar Sta. Ana – Brgy 894 19. Eduardo Sibal – Brgy 894 20. Dioquino Vicencio – Brgy. 892 21. Eduard Cornes – Brgy 892 22. Joseph Bulanon – CEO Manila 23. Anna-lyn Guilas – CEO Manila
Issues, Concerns and Suggestions	• The citizens of the nearby barangays stated that the noticed that ever since the bridge was re-fitted, some parts have shown signs of rusting. • 30 years had since passed since the repair of the bridge. • Consider coordinating with the Coast Guard for the vertical clearance of water based vehicles particularly when water level rises • Despite dredging activities 2 years ago, consider dredging to avoid drastic water level rise • The issue with the relocation with the waterpipes must be addressed well before the start of construction. • Proper signage to ensure that the people know that the bridge is being repaired.

	• A rerouting scheme should be developed in coordination with the concerned LGUs (Makati, Manila, Mandaluyong), the Metro Manila Development Authority, and the traffic department of the Philippine National Police before construction begins. • A sturdy and safe mini-bridge should be constructed for pedestrians during construction phase. • Coordinate with traffic enforcers regarding traffic and control of people lining up for public transportations • The last known strong earthquake experienced was in 1990 but the bridge did not sustain any significant damage. • There is a need to establish water pollution mitigating measures and protocols • The City Engineer's Office of Manila requests that the material that will be used for the construction of the bridge be identified.
Report Prepared by:	Joana Medina Neil Lacson

PUBLIC CONSULTATION ATTENDANCE SHEET
PROJECT STUDY ON IMPROVEMENT OF THE BRIDGES THROUGH DISASTER MITIGATING MEASURES FOR LARGE SCALE EARTHQUAKES IN THE REPUBLIC OF THE PHILIPPINES

Bridge Name: Lambingan Bridge
Venue: Barangka 894 Multipurpose Hall **Date:** June 20, 2013

Name	Barangay/Organization /Affiliation	Contact No.	Signature
1. Esther Angeles	894		
2. BENJAMIN ERFE	C.E.O. - MANILA	3365354	
3. PETER PAUL G. LIM	C.E.O - MANILA	3365354	
4. CESAR S. JAPZON	C.E.O - MANILA	3365354	
5. RITO BADILLO	DPWH - URPO	3043766	
6. CAMILO FRANCO	DPWH	3043766	
7. ROMEO CHETO	DEPW - MANILA		
8. Reyes Cruz Jr	URO - DRIVE	304 3760	
9. FERNANDO VALDEZ	DPWH - URPO	09166439603	
10. JOSEPH LAO	LCI	07594 8772	
11. ROSENDO L. PAREL	BRGY - 891	09321904430	
12. Joma Lim	LCI	09178198378	
13. Bel Arguelles	894	0916 5708131	
14. CESAR A. STA. ANA	894	09327727731	
15. Eduardo Sibal	892	419-88-57	
16. DIOQUINTO VICENCIO	892	531-81-17	
17. EDUARD CORNES	892		
18. JOSEPH BIILAN ON	CEO Mla.	5274924	
19. ANNA-LYN GUILAS	CEO MLA	7348747	
20.			

FIGURE TITLE:

Public Consultation Photos

PROJECT PROPONENT:	PROJECT LOCATION:	PRAP REPORT PREPARER:
DEPARTMENT OF PUBLIC WORKS & HIGHWAYS **&** **JAPAN INTERNATIONAL COOPERATION AGENCY**	**LAMBINGAN BRIDGE- CITY OF MANILA**	**LCI ENVI CORPORATION** **&** **CTI ENGINEERING INTERNATIONAL CO, LTD.**

FIGURE TITLE:

Public Consultation Photos

PROJECT PROPONENT:	PROJECT LOCATION:	PRAP REPORT PREPARER:
DEPARTMENT OF PUBLIC WORKS & HIGHWAYS & JAPAN INTERNATIONAL COOPERATION AGENCY	**LAMBINGAN BRIDGE- CITY OF MANILA**	**LCI ENVI CORPORATION & CTI ENGINEERING INTERNATIONAL CO, LTD.**

PROJECT STUDY ON IMPROVEMENT OF THE BRIDGES THROUGH DISASTER MITIGATING MEASURES FOR LARGE SCALE EARTHQUAKES IN THE REPUBLIC OF THE PHILIPPINES

Public Consultation for Guadalupe Bridge

Activity:	Guadalupe Bridge Consultation
Date	June 21,2013
Venue	Barangka Ilaya Multipurpose Hall, Brgy Ilaya, Madaluyong City
Attendance	1. Mr. Harada – JICA 2. Joma Lim – LCI 3. Joseph Lalo – LCI 4. Bryan Magante – LCI 5. Neil Lacson – LCI 6. Dominador Bautista - LCI 7. Vicente Atienda – DEPW CPMO – Makati 8. Engr. Gerry Comaling – DEPW CPMO – Makati 9. Audie Vicente – DEPW Makati 10. Shayne Deomano – Brgy. Ilaya 11. Hazel Santos – Brgy. Ilaya 12. Mary Jane Dela Cruz – Mandaluyong LGU 13. Ellen Tuezon – Brgy Ilaya 14. Jackielyn Rioteres – Brgy Ilaya 15. Ruby Rhoze Garcia – Brgy Ilaya 16. Alfie Romera – Brgy Ilaya 17. Joana rose Lebrilla – Brgy llaya 18. Roy Galang – Engr. Dept Mandaluyong 19. Marilyn Datanao – Brgy Ilaya 20. Rosario Antiforda – Brgy Ilaya 21. Sonia Brown – Brgy Ilaya 22. Marn Claverion – GNFRV 23. Ray Glenn Veruen EMT. –GNFRV 24. Charlene Ibanez – GNFRV 25. Bong Gonzaga – Brgy Ilaya
Issues, Concerns and Suggestions	• The .Engineering Department of Makati would like to be notified once an official timeline has been agreed upon. • A rerouting and traffic scheme must be developed well before the start of construction in coordination with Makati LGU, Mandaluyong LGU, MMDA, and PNP. • A closer coordination with the Engineering department of Makati should be made. • The barangays of Guadalupe Viejo and Guadalupe Nuevo should be engaged. • The LGU of Makati expressed its disapproval towards the usage of the parks beside the bridge as a staging ground for construction.

	• The Engineering Department of Mandaluyong requests a full census and survey be conducted on the adjacent area to verify the population and the official land owners. • The issue regarding informal settlers should be addressed • The issue regarding those that will be displaced should be addressed. This could be done in coordination with the MHDP (Mandaluyong Housing and Development Project?) • 1960 was the last strong earthquake where the residents witnessed that the bridge shook visibly. • Engineering Department of Makati asked what factors were considered in terms of selecting which bridges will be replaced and repaired. (Age, Degree of Damage, Stress) • An education drive should be initiated in coordination with the LGU • Guadalupe Nuevo Rescue team expressed their cooperation and volunteered their services for any role that they could play.
Report Prepared by:	Neil Lacson

PUBLIC CONSULTATION ATTENDANCE SHEET
PROJECT STUDY ON IMPROVEMENT OF THE BRIDGES THROUGH DISASTER MITIGATING MEASURES FOR LARGE SCALE EARTHQUAKES IN THE REPUBLIC OF THE PHILIPPINES

Bridge Name: GUADALUPE BRIDGE

Venue: BARANGKA ILAYA AMPHITHEATER **Date:** 21 JUNE 2013

Name	Barangay/Organization /Affiliation	Contact No.	Signature
1. VICENTE C. ATIENDA	DEPW-CPMO - MAKATI CITY HALL	09163591792	
2. ENGR. GERRY CONSALING	DEPW CPMO, MAKATI	8701261	
3. AUDIE VICENTE	DEPW - MAKATI	09294468049	
4. SHAYNE DEOMANO	BRGY. STAFF		
5. HAZEL SANTOS	BRGY. STAFF		
6. MARY JANE L. DELA CRUZ	LGU - Mandaluyong	5324198	
7. Ellen Tuazon	BRGY. ILAYA		
8. JACKIELYN RIOTERES	BRGY ILAYA	09433385034	
9. Ruby Rhoze H. Garcia	BRGY ILAYA	09103431424	
10. Alpie J. Romera	BRGY ILAYA	09464641278	
11. JOANA ROSE LEBRILLA	BRGY ILAYA	09182921807	
12. ROY GALANG	ENG'G DEPT.	09 5324198	
13. JOMA LIM	LCI	09178198378	
14. MARILYN DATANAO	BRGY ILAYA		
15. JOSEPH LALO	LCI	09105471772	
16. ROSARIE ANTIFORDA	Barangay Ilaya		
17. VINNACOR BAUTISTA	LCI		
18. Sonia BROWN	ILAYA		
19. Mario Clemente	GNARV	09473555222	
20. Ray Glenn F. Verney, EMT	Guad. Nuevo Rescue	09159124618	
21. Charlene F. Ibañez	Guad. Nuevo Rescue		

PUBLIC CONSULTATION ATTENDANCE SHEET
PROJECT STUDY ON IMPROVEMENT OF THE BRIDGES THROUGH DISASTER MITIGATING MEASURES FOR LARGE SCALE EARTHQUAKES IN THE REPUBLIC OF THE PHILIPPINES

Bridge Name: GUADALUPE BRIDGE

Venue: BARANGKA ILAYA AMPHITHEATER **Date:** 21 JUNE 2013

Name	Barangay/Organization /Affiliation	Contact No.	Signature
1. Bong Bongaga	Bantay-Bayan	Brgy. ILAYA	
2. Ray Glenn R. Verner, EMT	Guad. Nuevo Rescue	rgvdnavigator@yahoo	
3. Neil Lacson	LCI	09175814760	
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FIGURE TITLE:

Public Consultation Photos

PROJECT PROPONENT:	PROJECT LOCATION:	PRAP REPORT PREPARER:
DEPARTMENT OF PUBLIC WORKS & HIGHWAYS **&** **JAPAN INTERNATIONAL COOPERATION AGENCY**	**GUADALUPE BRIDGE – MAKATI & MANDALUYONG CITY**	**LCI ENVI CORPORATION** **&** **CTI ENGINEERING INTERNATIONAL CO, LTD.**

FIGURE TITLE:

Public Consultation Photos

PROJECT PROPONENT:	PROJECT LOCATION:	PRAP REPORT PREPARER:
DEPARTMENT OF PUBLIC WORKS & HIGHWAYS **&** **JAPAN INTERNATIONAL COOPERATION AGENCY**	**GUADALUPE BRIDGE – MAKATI & MANDALUYONG CITY**	**LCI ENVI CORPORATION** **&** **CTI ENGINEERING INTERNATIONAL CO, LTD.**

PROJECT STUDY ON IMPROVEMENT OF THE BRIDGES THROUGH DISASTER MITIGATING MEASURES FOR LARGE SCALE EARTHQUAKES IN THE REPUBLIC OF THE PHILIPPINES

Public Consultation for 1st Mandaue-Mactan Bridge

Activity:	1st Mandaue-Mactan Bridge Consultation
Date	July 1, 2013
Venue	Barangay Looc Barangay Hall, Brgy Looc, Mandaue City
Attendance	1. Mr. Harada – JICA 2. Joma Lim – LCI 3. Joana Medina – LCI 4. Bryan Magante – LCI 5. Olivia Baguio– DPWH ESSO 6. Emil Ladera – Brgy. Pajo Secretary 7. Garry Omolon – Brgy. Pajo Kagawad 8. Otto Bullos Brgy. Pago Kagawad 9. Editha Buaron – UTB Looc 10. Susana Lusiana – UTB Looc 11. Mirasol Baton– UTB Looc 12. Julita Guioguic– UTB Looc 13. Avita Qunio– UTB Looc 14. Emma Canedo– UTB Looc 15. Jaime Sanchez– UTB Looc 16. Norman Abayabay– DPWH Cebu 6th DEO 17. Venzon Ulila– DPWH Cebu 6th DEO 18. Frank Edibalzado Sr. – DPWH Cebu 6th DEO 19. Jasmin Buaron– UTB Looc 20. Cecilio Pantaleon– UTB Looc 21. Allan Villaganas– UTB Looc 22. Linda Hagodini– UTB Looc 23. Saralyn Villaganas– UTB Looc 24. Liza Hayodeni– UTB Looc 25. Daisy Munez– UTB Looc 26. Jeffrey Villaganas– UTB Looc 27. Manuel Villaganas– UTB Looc 28. Richard Cole– UTB Looc 29. Nelson Cabezas DPWH Cebu 6th DEO 30. Teodoro Tarano– UTB Looc 31. Olive Ermeditha Inot– UTB Looc 32. Nicolas Villaganas– UTB Looc 33. Raul Cabahug- Chairman of Brgy. Looc 34. Salvador Rodelas– Brgy. Looc Secretary 35. Alejandro Sabanal– UTB Looc
Issues, Concerns and Suggestions	• Cost of retrofitting is expensive, so if we are spending this much why not replace the whole bridge instead

	• Main problem of the bridges is traffic congestion. It cannot accommodate traffic passing by. If possible consider widening the bridge or additional extension lane • What will happen to the superstructure if the main construction is for the substructure? • Is this project connected to other JICA projects in Cebu? • What is the method of retrofitting? Does this abide by JICA standards or methods for retrofitting bridges? • If relocation is necessary, provide a relocation site still within their respective cities since they have been staying here for a long time and their whole life has been established there. • If Japan will provide the loan for the retrofitting of the bridge, will the resettlement costs be obtained from this loan as well? • Can you provide us an estimate of compensation? From experience of past projects, what happened to the people that needed relocation? What is our assurance that compensation will be provided • On-going repair of the bridge has been started and work cannot resume properly since the informal settlers refuse to move. Illness from paint fumes or fire from welding works may occur if they don't move.
Report Prepared by:	Joana Medina

PROJECT STUDY ON IMPROVEMENT OF THE BRIDGES THROUGH DISASTER MITIGATING MEASURES FOR LARGE SCALE EARTHQUAKES IN THE REPUBLIC OF THE PHILIPPINES

Bridge Name: 1st Mandaue-Mactan Bridge

Date: July 1, 2013

Venue: Brgy Hall Looc, Mandaue City

Attendance Sheet

Name	Barangay/Organization /Affiliation	Contact No.	Signature
1. Emil Cabrera	Sec. Brgy Pajo	340-893	
2. Garry Omolon	Councilor Brgy Pajo	09476994702	
3. Otto Bullos	Brgy Pajo Kagawad	09231664188	
4. Editha Buaron	UTB Looc	09222211253	
5. Susana Ruiana	UTB Looc	2368597	
6. Mirapal M Baton	UTB Looc	09321854683	
7. Julita GuioGuio	UTB Looc	09334654724	
8. Avita Quiño	UTB Looc		
9. Emma Cañedo	UTB Looc	09107208 3r4	
10. Jaime Sanchez	UTB Looc		
11. Normao Wilfred G. [illegible]	DPWH-Cebu 6th DEO	0925[illegible]	
12. Venzon Charles Ulila	DPWH Cebu 6th DEO	09238433863	
13. Frank [illegible] Jr.	DPWH-Cebu 6th DEO	09222121777	
14. Kunihiko Harada	JICA Study Team		
15. Buaron, Jasmin	UTB Looc		
16. Cecilio Pantaleon	UTB Looc		
17. Allan Villaganas	UTB Looc		
18. Linda V. Hayodini	UTB Looc	09232716638	
19. Saralyn Villaganas	UTB Looc	09064029753	
20. Liza Hayoden	UTB Looc		

PROJECT STUDY ON IMPROVEMENT OF THE BRIDGES THROUGH DISASTER MITIGATING MEASURES FOR LARGE SCALE EARTHQUAKES IN THE REPUBLIC OF THE PHILIPPINES

Bridge Name: 1st Mandue- Mactan

Date: July 1, 2013 Venue: Brgy Hall of Looc

Attendance Sheet

Name	Barangay/Organization /Affiliation	Contact No.	Signature
1. Daisy Muñez	UTB Looc		[signature]
2. Jeffrey Villagana	UTB Looc		[signature]
3. MANUEL VILLAGANAS	UTB, Looc		[signature]
4. RICHARD COLE	UTB LOOC		[signature]
5. NELSON L. CABEZAS	DPWH, CebuDEO		[signature]
6. Teodoro M. Tarona	None retired		[signature]
7. Olive Benedictha Inot	UTB		[signature]
8. Nicolas Villaganas	U.T.B.		[signature]
9. Brgy Capatain Raul Yuzon Cabahug	Brgy Looc		[signature]
10. Salvador Rodelas	Brgy. Cer / Looc	09339232024	[signature]
11. Alejandro Sabanal	UTB Looc	09058266582	[signature]
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FIGURE TITLE:

Public Consultation Photos

PROJECT PROPONENT:	PROJECT LOCATION:	PRAP REPORT PREPARER:
DEPARTMENT OF PUBLIC WORKS & HIGHWAYS & JAPAN INTERNATIONAL COOPERATION AGENCY	**1ST MANDAUE-MACTAN BRIDGE- LAPU-LAPU AND MANDAUE CITY**	**LCI ENVI CORPORATION & CTI ENGINEERING INTERNATIONAL CO, LTD.**

FIGURE TITLE:

Public Consultation Photos

PROJECT PROPONENT:	PROJECT LOCATION:	PRAP REPORT PREPARER:
DEPARTMENT OF PUBLIC WORKS & HIGHWAYS **&** **JAPAN INTERNATIONAL COOPERATION AGENCY**	**1ST MANDAUE-MACTAN BRIDGE- LAPU-LAPU AND MANDAUE CITY**	**LCI ENVI CORPORATION** **&** **CTI ENGINEERING INTERNATIONAL CO, LTD.**

PROJECT STUDY ON IMPROVEMENT OF THE BRIDGES THROUGH DISASTER MITIGATING MEASURES FOR LARGE SCALE EARTHQUAKES IN THE REPUBLIC OF THE PHILIPPINES

Public Consultation for Palanit Bridge

Activity:	Palanit Bridge Consultation
Date	June 25,2013
Venue	Brgy. Palanit Barangay Hall
Attendance	1. Mr. Harada – JICA 2. Joseph Lalo – LCI 3. Jinji Quiambao - LCI 4. Luisito G. Yuma – Brgy Council 5. Remjie Bengga – Brgy. Council 6. Julia Bohol 7. Nenita Alcoy 8. Carmencita Genara 9. Nieves Alcoy 10. Leonardo Permale 11. Milo Vicario 12. Ronald Capales 13. Rosalie Padioa 14. Mayril Rubia – Brgy. Council 15. Immaculate Magdaraog 16. Nelly Sauno – Brgy Council 17. Josefina Bandal 18. Menchu Lucero 19. Purificacion Galecio 20. Juanita Sabayo 21. Beatriz Brazil 22. Syrna Espino 23. Nanette Cadajas 24. Romeo Horca – DPWH 25. Rita Paitilis 26. Lucila Orticio 27. Evangilen Pobadora 28. Ronald Capales 29. Nonito Amor Jr. 30. Nancy Portiles – Brgy Council 31. Reynaldo Castillo – Brgy Council 32. Oscar Galecio 33. Jose Gonzales – DPWH 34. Jeffrey Cabullo - DPWH
Issues, Concerns and Suggestions	• The respondents asked if the bridge would be elevated. According to the design bridge elevation would be raised because the water level already reached the maximum clearance. • They clarified if the truss would be removed. The design would be evaluated to see if there is a need to remove the truss.

	• Regarding the concerns for compensations for affected residents, the government would be acquiring the affected land area so that owners would be compensated. Existing laws on acquisition would apply. • The respondents asked if the project would be passed on to Philippine contractors. Government policy dictates that projects over 15 million would require bidding. • Light post for the bridge would be provided but its maintenance would fall under the LGU. • There was a possibility of embankment further upstream for flood control. • There is an ongoing bridge repair but only for temporary resolution for problems regarding bridge stability. • It was raised that the current ongoing repair project cost at around Php 60 million, which is sufficient for a new bridge. The respondents asked why would the bridge be repaired/replaced in 2 years? The proponents maintained that these are still plans and final decisions for repair/replacement selection would still depend on the feasibility study. • There were concerns that the proposed abatement would restrict/increase flow of water. It was maintained that there would still be further hydrological studies. • For detours and traffic rerouting, visible signs and advance announcements would be made. • The respondents asked if there would be employment opportunities for the affected communities. Proponents maintained that there would be a need for skilled and unskilled workers and they would be coming from the host barangays. • Concerns about relocation could be answered once a design has been finalized. So far, the proposed design does not require anyone to be relocated.
Report Prepared by:	Jinji Quiambao Neil Lacson

PUBLIC CONSULTATION ATTENDANCE SHEET
PROJECT STUDY ON IMPROVEMENT OF THE BRIDGES THROUGH DISASTER MITIGATING MEASURES FOR LARGE SCALE EARTHQUAKES IN THE REPUBLIC OF THE PHILIPPINES

Venue: Brgy. Palanit, Brgy. Hall   Bridge Name: Palanit Bridge   Date: June 27 2013

Name	Barangay/Organization /Affiliation	Contact No.	Signature
1. Liceito G. Yruma	Brgy. Secretary	09099274321	[illegible]
2. ROMIB V. BANCOLAA	BRGY. KGWD	09129354040	[illegible]
3. Anita Bolal			[illegible]
4. Ninita B Alcoy			[illegible]
5. Concita Garcia			[illegible]
6. Lauro Dacoy Jr.			[illegible]
7. LEONARDO M. PERMALE			[illegible]
8. MILO VICARIO			[illegible]
9. RONALD CAPALES			[illegible]
10. RODRITE J. PADIOA	BRGY. KGWD	09194358877	[illegible]
11. MAYRIL A. RUBIA	BRGY. CLERK	09993859111	[illegible]
12. IMMACULATE C. MAGDARAOG			[illegible]
13. NELLY SALINO	BRGY TANOD		[illegible]
14. Josefina Bandal			
15. Menchu G. Lucero			[illegible]
16. Purificacion Balico			
17. Jeaneth G Sabayo			
18. Beatriz B. Brazil			
19. Syrna C. Espino			[illegible]
20. Nanette G. Cadajas			[illegible]

PUBLIC CONSULTATION ATTENDANCE SHEET
PROJECT STUDY ON IMPROVEMENT OF THE BRIDGES THROUGH DISASTER MITIGATING MEASURES FOR LARGE SCALE EARTHQUAKES IN THE REPUBLIC OF THE PHILIPPINES

Bridge Name: Palanit Bridge

Venue: ____________ Date: June 25 2013

Name	Barangay/Organization /Affiliation	Contact No.	Signature
1. JOSEPH LAO	Lgl - Mun.	0926947777L	[signature]
2. ROMEO P. AORCA	DPWH 1st Dist.	09177940714 ~~090~~	[signature]
3. Rita F. Portiles			[signature]
4. Lucila G. Ortico			[signature]
5. POBADORA EVANGILEN			[signature]
6. RONALD CAPALES			[signature]
7. NONITO AMOR Jr			[signature]
8. NANCY V. Portiles	KWGD		[signature]
9. REYNALDO Y. CASTRO	KWBD		[signature]
10. OSCAR P GALGCIO			[signature]
11. JOSE C. GONZALES	DPWH – NS1	09186466513	[signature]
12. JEFFREY CABULLO	DPWH – NS 1	09192602804	[signature]
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FIGURE TITLE:

Public Consultation Photos

PROJECT PROPONENT:	PROJECT LOCATION:	PRAP REPORT PREPARER:
DEPARTMENT OF PUBLIC WORKS & HIGHWAYS & JAPAN INTERNATIONAL COOPERATION AGENCY	**PALANIT BRIDGE—SAN ISIDRO, NORTHERN SAMAR**	**LCI ENVI CORPORATION & CTI ENGINEERING INTERNATIONAL CO, LTD.**

FIGURE TITLE:

Public Consultation Photos

PROJECT PROPONENT:	PROJECT LOCATION:	PRAP REPORT PREPARER:
DEPARTMENT OF PUBLIC WORKS & HIGHWAYS **&** **JAPAN INTERNATIONAL COOPERATION AGENCY**	**PALANIT BRIDGE- SAN ISIDRO, NORTHERN SAMAR**	**LCI ENVI CORPORATION** **&** **CTI ENGINEERING INTERNATIONAL CO, LTD.**

PROJECT STUDY ON IMPROVEMENT OF THE BRIDGES THROUGH DISASTER MITIGATING MEASURES FOR LARGE SCALE EARTHQUAKES IN THE REPUBLIC OF THE PHILIPPINES

Public Consultation for Mawo Bridge

Activity:	Mawo Bridge Consultation
Date	June 26, 2013
Venue	Poblacion, Victoria
Attendance	1. Mr. Harada – JICA 2. Joseph Lalo – LCI 3. Jinji Quiambao - LCI 4. Marlita Purog 5. Evelyn Cavanyo 6. Gregorio Escalicas 7. Nicolas Purog 8. Ruben Purog Jr. 9. Samson Mahayag 10. Rese Ledesma 11. Endie Bartulay 12. Rinito Llagas 13. Romeo Horcia - DPWH 14. Angelita Obediencia - DPWH 15. Vicente Gelecio - DPWH 16. Emelene Dictado - DPWH 17. Meretis Gallego - DPWH 18. Nora Gentiles 19. Romy Gonzales 20. Ebbie Derotos 21. Arnold Purog 22. Lady May Achazo – DSWD 23. Eladio Lim III – DPWH 24. Ailene Hapa 25. Lene Din 26. Maria Castante 27. Elizabeth Siago 28. Lioneda Silonga 29. Merwi Ledesma 30. Jerald Gonzaga 31. Joyce K. Virgo 32. Lenie Siago 33. Susan Lledo - DPWH 34. Aida Bandal
Issues, Concerns and Suggestions	• Concerns about relocation were raised. Further studies would be done to see extent of relocation and identify affected households. • Regarding start of construction, it was clarified that possible start would be no earlier than 2016

	• The residents reported that during the last earthquake, the bridge moved visibly. The bridge also exhibited movement when heavy vehicles passed through. The proponent will be conducting further studies but this alone is one factor why replacement is needed. • The residents reported that the middle portion of the bridge usually depresses when heavy vehicles pass by, and takes a significant amount of time to revert back to its original shape. • The previous workers were the ones who took residence near the bridge.
Report Prepared by:	Jinji Quiambao Neil Lacson

PUBLIC CONSULTATION ATTENDANCE SHEET
PROJECT STUDY ON IMPROVEMENT OF THE BRIDGES THROUGH DISASTER MITIGATING MEASURES FOR LARGE SCALE EARTHQUAKES IN THE REPUBLIC OF THE PHILIPPINES

Bridge Name: Mawo Bridge

Venue: ______ **Date:** June 26 2013

Name	Barangay/Organization /Affiliation	Contact No.	Signature
1. Marlita R. Purog			[signature]
2. Evelyn P. Covango			[signature]
3. Gregorio G. Escalicas			[signature]
4. Nicolas R. Purog Jr.			[signature]
5. Ruben Purog Jr.			[signature]
6. SAMSON G. MAHAYAG			[signature]
7. RECE P. LEDESMA			[signature]
8. EDDIE BARITUA			[signature]
9. Renito Llagas			[signature]
10. ROMEO P. HORCA	DPWH, 1st Dist Catarman	09177940714	[signature]
11. ANGELITA C. UMEDENCIA	DPWH R.O. #8	0917321 8842	[signature]
12. VICENTE C. GALEDO	DPWH-NSPED	09069277170	[signature]
13. Emelen Dictado	DPWH - NSPED	09300481 2883	[signature]
14. Maretu Gallego	DPWH - NSPED	09277084429	[signature]
15. NORA GENTILES			[signature]
16. Romy Gonzales		09099224405	+
17. Eldie Dereta			[signature]
18. ARNOLD PUROG			[signature]
19. LADY MAY T. ACHAZO	DSWD FOVIII - NL	09212170929 09855629248	[signature]
20. ELADIO L. LIM III	DPWH R.O. #8	09292975906	[signature]

PUBLIC CONSULTATION ATTENDANCE SHEET
PROJECT STUDY ON IMPROVEMENT OF THE BRIDGES THROUGH DISASTER MITIGATING MEASURES FOR LARGE SCALE EARTHQUAKES IN THE REPUBLIC OF THE PHILIPPINES

Bridge Name: Mawo Bridge
Venue: _____ Date: June 26 2013

Name	Barangay/Organization /Affiliation	Contact No.	Signature
1. Arlene P. HAPA			
2. Irene P. Rin			
3. Maria Caetante			
4. Elizabeth Singo			
5. [illegible]			
6. [illegible]			
7. Jerald Gomaga			
8. Joyce K. Virgo			
9. LENIE C. SIAGO			
10. SUSAN P. LLEDO	DPWH, Regional Office	323-1009	
11. Aida E. Bandal			
12. Kunihiko HARADA	JICA Study Team		
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FIGURE TITLE:

Public Consultation Photos

PROJECT PROPONENT:	PROJECT LOCATION:	PRAP REPORT PREPARER:
DEPARTMENT OF PUBLIC WORKS & HIGHWAYS **&** **JAPAN INTERNATIONAL COOPERATION AGENCY**	**MAWO BRIDGE- VICTORIA, NORTHERN SAMAR**	**LCI ENVI CORPORATION** **&** **CTI ENGINEERING INTERNATIONAL CO, LTD.**




FIGURE TITLE:

Public Consultation Photos

PROJECT PROPONENT:	PROJECT LOCATION:	PRAP REPORT PREPARER:
DEPARTMENT OF PUBLIC WORKS & HIGHWAYS **&** **JAPAN INTERNATIONAL COOPERATION AGENCY**	**MAWO BRIDGE VICTORIA NORTHERN SAMAR**	**LCI ENVI CORPORATION** **&** **CTI ENGINEERING INTERNATIONAL CO, LTD.**

PROJECT STUDY ON IMPROVEMENT OF THE BRIDGES THROUGH DISASTER MITIGATING MEASURES FOR LARGE SCALE EARTHQUAKES IN THE REPUBLIC OF THE PHILIPPINES

Public Consultation for Liloan Bridge

Activity:	Liloan Bridge Consultation
Date	July 3, 2013
Venue	San Roque Covered Court, Liloan, Southern Leyte
Attendance	
Issues, Concerns and Suggestions	• Questions were raised regarding which houses along the approach would be removed or affected. This would be determined through further studies under the detailed design, to specify the exact number of structures to be affected • The estimated distance of the affected area would be 15m from the centreline of the bridge itself, on both sides. This area is under the road right of way established by DPWH. Private houses that fall under the affected area would be compensated for the bridge repair. • For those who are renting the lot, following RA 8974, the compensation would go to the land title holder and a rental allowance would be provided for the ones currently using the lot. • The resettlement area would be determined by the LGU. • In cases that only a portion of the property would be affected, a complete compensation would be given if the affected portion is over 20% of the property area. • The basketball court under the bridge, which was commissioned by the barangay, would be relocated to an area outside the road right of way. • Possible employment for residents would be provided for skilled and unskilled workers needed during the start of the project. • Some residents were concerned about the timeframe they would have if ever they would be given compensation, since it may not be enough time to relocate and reconstruct. The contractors would not be given a Notice to proceed until all the affected residents have moved and deconstructed their homes. A request for an extension may be given in cases the residents still haven't been able to demolish their houses. • The road crossing under the bridge would be rerouted during the rapir with the help of the LGU. • Only the structures and materials listed during the final assessment in the detailed design would be compensated, so the residents are requested not to make drastic changes to their respective houses between the point of survey and before the construction.
Report Prepared by:	

FIGURE TITLE:

Public Consultation Photos

PROJECT PROPONENT:	PROJECT LOCATION:	PRAP REPORT PREPARER:
DEPARTMENT OF PUBLIC WORKS & HIGHWAYS **&** **JAPAN INTERNATIONAL COOPERATION AGENCY**	**LILOAN BRIDGE – LILOAN, SOUTHERN LEYTE**	**LCI ENVI CORPORATION** **&** **CTI ENGINEERING INTERNATIONAL CO, LTD.**

FIGURE TITLE:

Public Consultation Photos

PROJECT PROPONENT:	PROJECT LOCATION:	PRAP REPORT PREPARER:
DEPARTMENT OF PUBLIC WORKS & HIGHWAYS **&** **JAPAN INTERNATIONAL COOPERATION AGENCY**	**LILOAN BRIDGE – LILOAN, SOUTHERN LEYTE**	**LCI ENVI CORPORATION** **&** **CTI ENGINEERING INTERNATIONAL CO, LTD.**

PROJECT STUDY ON IMPROVEMENT OF THE BRIDGES THROUGH DISASTER MITIGATING MEASURES FOR LARGE SCALE EARTHQUAKES IN THE REPUBLIC OF THE PHILIPPINES

Public Consultation for Wawa Bridge

Activity:	Wawa Bridge Consultation
Date	June 20,2013
Venue	San Vicente Covered Court
Attendance	1. Mr. Harada – JICA 2. Joseph Lalo – LCI 3. Jinji Quiambao - LCI 4. Maura Mayormita – Purok 5 5. Glen Bahica – Purok 5 6. Erwin Castro – Purok 5 7. Paulino Castro – Purok 5 8. Benjamin Coles – Purok 5 9. Mailyn Panday – Purok 5 10. Sovilin Salamana – Purok 5 11. Nena Castro – Purok 5 12. Engelyn Maglasang – Purok 5 13. Nedelyn Molo – Purok 5 14. Leonardo Leorna – Purok 5 15. Lilibeth Nudalo – Purok 5 16. Marcela Castro – Purok 5 17. Junny Dizon – Purok 5 18. Antonia Panday – Purok 5 19. Charlito Panday – Purok 5 20. Dodong Deolas – Purok 5 21. Ralph Heludo – Purok 5 22. Estrelia Geneloza – Purok 5 23. Patrixa Castro Jr. – Purok 5 24. Geralyn Gata – San Vicente SADS 25. Emie Naquines – San Vicente SADS 26. Dominica Goder – San Vicente SADS 27. Chela Maslog – San Vicente SADS 28. Marvelyn Castro – San Vicente SADS 29. Caridad Castro – San Vicente SADS 30. Joey Maglasang – San Vicente SADS 31. Anna Teresa Castro – San Vicente SADS 32. Enriqueta Castro – San Vicente SADS 33. Mahatama Tomoso – San Vicente SADS 34. Madil Cabusog – San Vicente SADS 35. Nicodima Tomoso – San Vicente SADS 36. Lelia Montero- San Vicente SADS 37. Juanita Sewayunda – San Vicente SADS 38. Teresita Montero – San Vicente SADS 39. Nerisa Colis – San Vicente SADS 40. Alecia Castro – San Vicente SADS 41. Arlene Macahilos – San Vicente SADS

	42. Vilma Castro – San Vicente SADS 43. Editha Mangitngit – San Vicente SADS 44. Nadelyn Castro – Brgy Council 45. Emma Dumale – Brgy Council 46. Joseph Castro 47. William Castro 48. Richard Castro 49. Jojo Castro 50. A. Avenido – DPWH 51. Ruel Nazareno – DPWH 52. Nestor Vahente – DPWH 53. Aquiles Estillore – DPWH 54. Gleen Castaneda – DPWH 55. Edgardo Butil - DPWH
Issues, Concerns and Suggestions	• The residents were concerned about possible relocation and how this would go about. Further studies would be conducted and it will we be able to identify specifically which households will be relocated. • Regarding compensation for possible relocates, it was explained to them that the government would be acquiring the land and thus the owners will be compensated by the government. Procedures and regulations on acquisition as per Philippine law will be followed.
Report Prepared by:	Jinji Quiambao Neil Lacson

PUBLIC CONSULTATION ATTENDANCE SHEET
PROJECT STUDY ON IMPROVEMENT OF THE BRIDGES THROUGH DISASTER MITIGATING MEASURES FOR LARGE SCALE EARTHQUAKES IN THE REPUBLIC OF THE PHILIPPINES

Bridge Name: Wawa Bridge

Venue: San Vicente Covered Court **Date:** June 28, 2013

Name	Barangay/Organization /Affiliation	Contact No.	Signature
1. Maura Magnaeta	Purok – 5		[signature]
2. Glenn Palma	Purok 5		[signature]
3. Erwin Castro	Purok – 5	09306293094	[signature]
4. Paulino Castro	Purok – 5		[signature]
5. Benjamen Coles	Purok – 5		
6. Marilyn Panday	San Vicente Purok 5	09122657704	[signature]
7. Sovilin Salamaña	Purok – 5		[signature]
8. Nena Castro	Purok – 5	09076602562	[signature]
9. Engelyn Haglasang	Women's " "	09469002093	[signature]
10. Nedelyn Molo	Women's " "		[signature]
11. Leonardo Leoma	" "		L. Leoma
12. Lilebeth Mudalo	Purok – 5	09482790090	[signature]
13. Marcela Castro	Purok – 5	09479889971	[signature]
14. Jimmy Dizon	Purok – 5		[signature]
15. Antonio Panday	Purok – 5		Panday
16. Charlito Panday	" "		Panday
17. Jodomy Diolas	" "		D. D.
18. Ralph Heludo	" "		[signature]
19. Estrelita Gendoza	" "		E. G.
20. Restituto Castro Jr.	" "		[signature]

PUBLIC CONSULTATION ATTENDANCE SHEET
PROJECT STUDY ON IMPROVEMENT OF THE BRIDGES THROUGH DISASTER MITIGATING MEASURES FOR LARGE SCALE EARTHQUAKES IN THE REPUBLIC OF THE PHILIPPINES

Bridge Name: Wawa Bridge

Venue: San Vicente Council Court Date: June 28, 2013

	Name	Barangay/Organization /Affiliation	Contact No.	Signature
41.	Nadielyn P. Castro	Women / Brgy. Council		
42.	Emma G. Rumale	Women/Brgy. Council		
43.	Joseph H. Castro			
44.	William Castro			
45.	RICHARD CASTRO			
46.	Jojo Castro			
47.	A. AVENTUD	DPWH R.O. XIII	342-04-55	
48.	Ruel M. Nazareno	DPWH R.O. XIII	815-05-17	
49.	Nestor Valiente	DPWH - Patin-ay	343-3719	
50.	Aquiles R. Estillore	DPWH - Patin-ay		
51.	GLENN A. CASTAÑEDA	DPWH - RO XIII	342-04-55	
52.	EDGARDO A. BUTIL	DPWH-1, PATIN-AY	343-3719	
53.	Elma Jingi Elaid Quimbano	LCI		
54.				
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59.				
60.				

FIGURE TITLE:

Public Consultation Photos

PROJECT PROPONENT:	PROJECT LOCATION:	PRAP REPORT PREPARER:
DEPARTMENT OF PUBLIC WORKS & HIGHWAYS **&** **JAPAN INTERNATIONAL COOPERATION AGENCY**	**WAWA BRIDGE – BUTUAN CITY, AGUSAN DEL NORTE**	**LCI ENVI CORPORATION** **&** **CTI ENGINEERING INTERNATIONAL CO, LTD.**

FIGURE TITLE:

Public Consultation Photos

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