

SANRAL RRM WORKSHOP

STRUCTURAL SAFETY INSPECTIONS

18TH FEBRUARY 2020

SESSION 3 - PRACTICAL EXAMPLES



EXAMPLE 1: BRIDGE STRUCTURE

The Droer River bridge is located in the Eastern Cape on the National Route R75, Section 4 at km36.02. For this example, you are required to complete a Safety Inspection Sheet and Summary Sheet using the information and photograph log provided below.



Figure 1.1 Locality of Droer River Bridge

<u>Type of structure:</u>	Reinforced Concrete (Simply supported)
<u>Number of spans:</u>	4
<u>Start Longitude:</u>	32d 38m 25.2s
<u>Start Latitude:</u>	24d 41m 30.5s
<u>End Longitude:</u>	32d 38m 23.9s
<u>End Latitude:</u>	24d 41m 30.5s

PHOTOGRAPH LOG : INVENTORY

Bridge Approaches



Insert Picture Reference:

Elevation



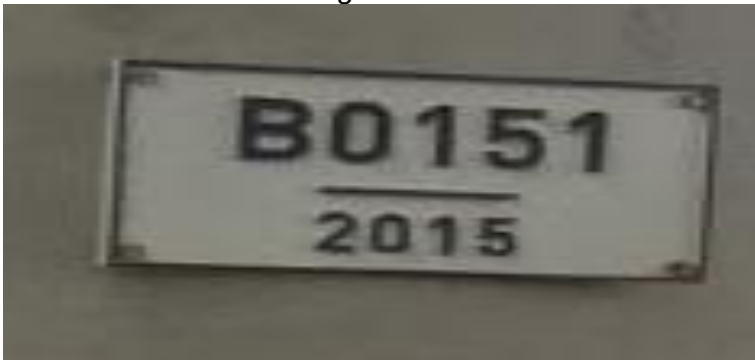
Insert Picture Reference:

Underside of Deck







Insert Picture Reference:

Bridge Number



Insert Picture Reference:

PHOTOGRAPH LOG : OBSERVED DEFECTS

<p><i>Bridge Approaches (South and North Bound)</i></p> 	<p><u>Insert Picture Reference:</u></p> <hr/>
<p><i>Bridge Piers</i></p> 	<p><u>Insert Picture Reference:</u></p> <hr/>
<p><i>Top of Deck</i></p> 	<p><u>Insert Picture Reference:</u></p> <hr/>
<p><i>Parapets</i></p> 	<p><u>Insert Picture Reference:</u></p> <hr/>

Expansion Joints




Insert Picture Reference:

Flood Damage



Insert Picture Reference:

EXAMPLE 1: SAFETY SHEET

	EDMS # 4578657/5	SAFETY INSPECTION FORM I.t.o. Occupational Health and Safety Act (1993) and Construction Regulations (2014)				BRIDGES												
Route		Section			Road km													
Structure No.		Start Latitude (south)	D	D	M	M	S	S	. s	Start Longitude (east)	D	D	M	M	S	S	. s	
No of Spans		End Latitude (south)	D	D	M	M	S	S	. s	End Longitude (east)	D	D	M	M	S	S	. s	
Structure Name																		
<p>The purpose of this Safety Inspection, to be undertaken by a competent person, is to identify safety related defects that require urgent attention to ensure the structure is safe for continued use. It is not required to record routine maintenance defects. These inspections are to be captured and hard copy and electronic records kept. Data shall also captured in SANRAL ITIS system. For existing structures Inspections shall at 12 months maximum intervals. For new structures they shall be done every 6 months for the first 24 months and at 12 months maximum intervals thereafter.</p>																		
INSPECTION (mark with an X as applicable for Defect and Degree)																		
Item	Description	Defect?			If Yes Degree Rating				Photo No's.									
		Yes	No	N/A	1	2	3	4										
1	Upper approaches (incl. guardrails)																	
2	Abutments (incl. retaining walls)																	
3	Piers																	
4	Top of deck																	
5	Underside of deck																	
6	Handrails/parapets (incl. sidewalks)																	
7	Expansion joints																	
8	Flood damage?																	
9	Impact damage?																	
10	Other defects?																	
PHOTOGRAPHS																		
Photo No.	Inventory Description	Photo No.	Location	Defect Description														
P01	Upper approach showing parapets	P11																
P02	Bridge elevation	P12																
P03	Underside of deck	P13																
P04	Bridge number	P14																
P05		P15																
P06		P16																
P07		P17																
P08		P18																
P09		P19																
P10		P20																
Urgent Action or Attention required?		Yes	No	If Yes, Urgency?	Immediate	Within 2 months	Within 6 months											
If Yes, specify details:																		
Inspector's comments:																		
Inspected by						Date												
Signature						Firm												
Degree Rating Description		No Defect	0	Minor	1	Moderate	2	Warning	3	Severe	4							

EXAMPLE 1: SUMMARY SHEET

[illegible]