



Bridge Management System BRIDGE Inventory Sheet

Structure No	R023_02N_B153
Structure Name	Suikerbosrand River

Location Details

N-Route No. :	R023	Primary Feature :	River or Stream
Section No. :	02N	Feature Name :	Suikerborand River
Route Description :		Feature Road No. :	
Route km :	86.46	Featue Road km :	
N-Route Over/Under :	Over	Farm :	
Province :	Mpumalanga	Secondary Feature :	N/A
Magisterial District :		Secondary Feature Name :	
Other Authority :		Other Bridge No. :	NB0153
Orientation :	North/South	Elevation (m) :	
		Direction of River Flow :	South

1:50,000 TOPOGRAPHICAL MAP		GIS Coordinates	
Map Name :		Latitude (South)	Longitude (East)
Map No. :		Start :	26d 36m 29.50s 28d 29m 37.70s
Survey System :		End :	26d 36m 28.10s 28d 29m 35.70s

Contract Details

Design Engineers :		Contract Number :	
Contractors :		Year Built :	1971
Contract Price :		Completion Time :	
Escalated Cost :			
Total Cost (Design & Construct) :			

Structural Features

No. of Spans :	6	No. of Piers :	5	No. of Abutments :	2
Facility Carried :	Road			Approach Slabs :	Unknown
Structure Type :	Simply supported			Abutment Gallery :	No
Bridge Description :	River bridge			fcu Slabs :	
Deck Constr. Method :	Cast insitu and precast beam with infill concrete			fcu Beams :	
Parapet Handrails :	NJ or F-Shape Barrier with concrete handrail			fcu Piers :	
No of arches :	0	Arch Span (m) :	0	fcu Abutments :	
Springer Thickness (m) :	0			fcu Arches :	0
Crown Thickness (m) :	0				

Deck Cross Section

Position	Type	Material	Span Length	Deck Soffit Profile	Avg Deck Depth (m)	Min Deck Depth (m)	Max Deck Depth (m)
S1	Box beams	Reinforced concrete	12.7	Straight	0.45	0.9	0
S2	Box beams	Reinforced concrete	12	Haunched	1.15	0.9	1.4
S3	Box beams	Reinforced concrete	12.6	Straight	0.45	0.9	0
S4	Box beams	Reinforced concrete	12.7	Straight	0.45	0.9	0
S5	Box beams	Reinforced concrete	12.2	Haunched	1.15	0.9	1.4
S6	Box beams	Reinforced concrete	12.7	Straight	0.45	0.9	0



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Bearings

Position	Type	Fixity
BA	Elastomeric neoprene	Multi directional
P1,P2	Monolithic	Pier monolithic with deck
P3	Rocker Steel	Unidirectional in the longitudinal direction
P4,P5	Monolithic	Pier monolithic with deck

Expansion Joints

Position	Type	Dir Movement	Photos
UN,US	Buried under surfacing	Longitudinal	

Piers

Position	Type	Material	Foundation Type	Founding Material	Hmax	Dmax
P1	Multiple column	Reinforced Concrete	Spread footings	Unknown	6.80	0.60
P2	Multiple column	Reinforced Concrete	Spread footings	Unknown	6.80	0.60
P3	Solid wall	Reinforced Concrete	Spread footings	Unknown	7.00	0.60
P4	Multiple column	Reinforced Concrete	Spread footings	Unknown	5.90	0.60
P5	Multiple column	Reinforced Concrete	Spread footings	Unknown	5.25	0.60

Abutments

Position	Type	Material	Foundation Type	Founding Material	Hmax	Dmax
BA	Anchor Block	Reinforced Concrete	Unknown	Unknown	2.70	0.60
BA	Anchor Block	Reinforced Concrete	Unknown	Unknown	5.50	0.60

Wing/Retaining Walls

Position	Type	Material	Foundation Type	Founding Material	Hmax	Dmax
A1	Cantilever	Reinforced Concrete	Unknown	Unknown	3.25	0.60
A2	Cantilever	Reinforced Concrete	Unknown	Unknown	6.40	0.60

Embankment Protection

Position	Type	Material	Thickness	Slope
BA	Grass or other vegetation	Grass	0.00	40

Arches

No Arches	Span Length	Springer Thickness	Crown Thickness	FCU
0	0	0	0.00	0.00

Design Characteristics

Design Live Load :	<input type="text"/>	Perc. Overloading :	<input type="text"/>
Design Codes :	<input type="text"/>	Wind Load :	<input type="text"/> kN/m ²
Temp. Range From :	<input type="text"/> 0C	Frequency :	<input type="text"/> Hz
Temp. Range To :	<input type="text"/> 0C		
Temp. Gradients :	<input type="text"/>		

Hydraulic Data

Peak Discharge :	<input type="text"/> m ³ /sec	Scour Protection :	<input type="text"/> None
Design Discharge :	<input type="text"/> 0 m ³ /sec	Risk of Scour :	<input type="text"/> No
Design Flood Level :	<input type="text"/> 0	Design Scour Depth :	<input type="text"/> m
Soffit Level :	<input type="text"/> 0 m ASL	Ht Above/Below Soffit :	<input type="text"/> m
Clearance (Freeboard) :	<input type="text"/> 0 m	Catchment Area :	<input type="text"/> km ²
Peak Year :	<input type="text"/>	Angle Between :	<input type="text"/>
Return Period :	<input type="text"/> 0 yrs	Max Scour Depth :	<input type="text"/> m
Depth of Design Flow :	<input type="text"/> m		



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Drainage

Support Drainage :	Unknown
Superstructure Drainage :	Small diameter pipes (< 150 mm) on deck
Seepage Drains :	

Dimensions, Geometry and Road Clearances

Overall Length :	73	m	Vertical Alignment :	
Overall Width :	14	m	Horizontal Alignment :	
Kerb Width :	12.9	m	Camber/Crossfall :	
Carriageway :	Single		Angle of Skew :	0 degrees
Direction Traffic :	W		Ht of highest Pier/Abutment :	7 m
Min Road Width :	7.4	m	Opening Area :	
Approach Width :	12.9	m		

Minimum Horizontal Clearances			
ID	Date Recorded	Clearance (m)	Description

Minimum Vertical Clearances			
ID	Date Recorded	Clearance (m)	Description
16	2006/02/06	4.2	S1
16	2016/06/25	4.4	S1
16	2006/02/06	8.1	S3
16	2012/01/27	6.9	North Bound Carriage Way
16	2012/01/27	6.8	North Bound Carriage Way
16	2012/01/27	6.8	North Bound Carriage Way

Services

Type	Description	Location	Authority
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Road Type, Traffic Volumes and Surfacing

	Road Over	Road
Class of Road :	2- Major route(Freeways and Highways)	Not applicable
No. of Carriageways :	2	
Names of Carriageways :	Single Carriageway	
No./Dimensions of Lanes (m) :	2x3.7	
No./Dimensions of Shoulders (m) :	2x2	
No./Dimensions of Sidewalks (m) :		
Average Daily Traffic :		
Year ADT Recorded :		
Truck Factor (%) :		
Detour Length (km) :		
Minimum Class of Detour :	Not applicable	Not applicable
Surface Slab :	Asphalt	
Surface Approach :	Asphalt	

Archive Details

Project No. :	<input type="text"/>	Correspondence File :	<input type="text"/>	Strip Map :	<input type="text"/>
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Drawing No.	Title	Location	Type
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Microfilm No.	Title	Location
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Reg.No.1998/009584/30

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Maintenance Agreements and Responsibilities

Responsibilities :	
Agreement No. :	
Share of Costs :	
Agreement Location :	

Maintenance History

Details	Design Engineer	Contractor	Completion Date	Cost
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Widening, Strengthening, Retrofitting

Details	Design Engineer	Contractor	Completion Date	Cost
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Additional Remarks

Remarks :

Factors Influencing Field Inspection

Access Factors :		
Piers :	Easy access - binoculars adequate	Deck Soffit : Easy Access or binoculars
Bearings :	Require 6 m ladder	
Box Girder :	No Box	
Effective Bridge Area :	1022	
Availability of Drawings :		Traffic Volume : Medium
General Info :		