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Schoeman's Bridge Preliminary Study

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DECEMBER 2021

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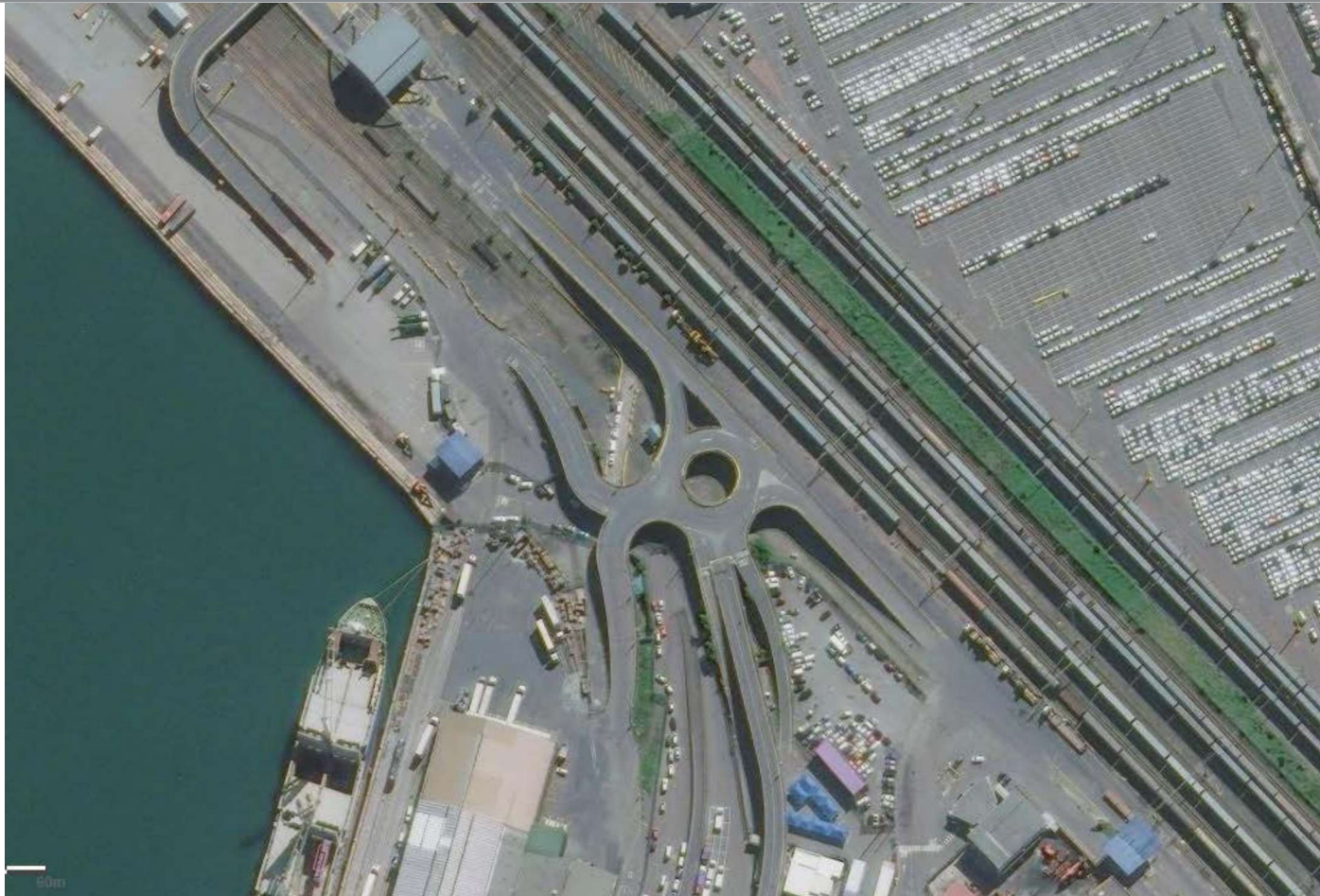
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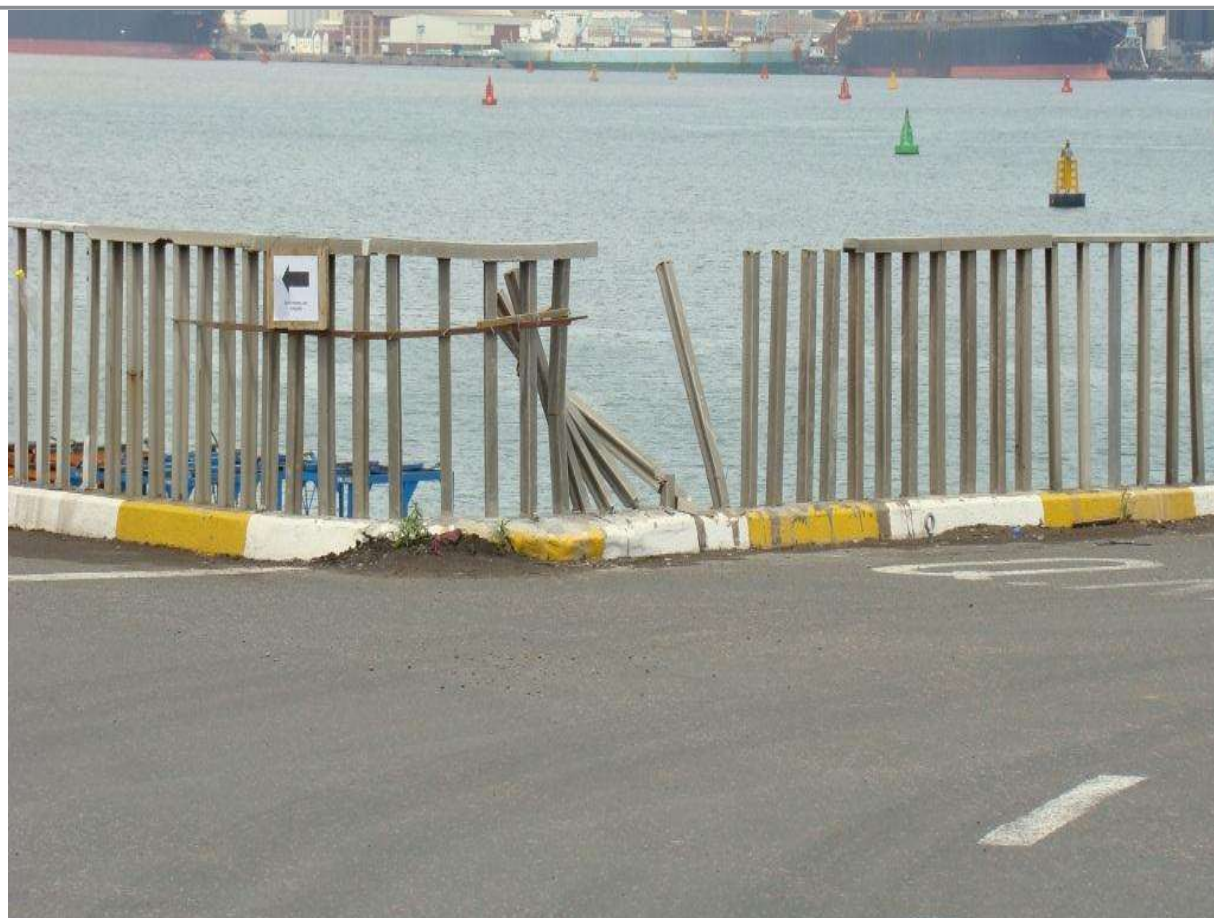
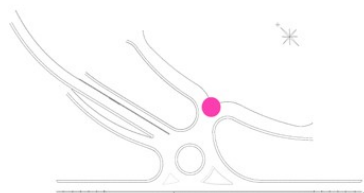
BACKGROUND

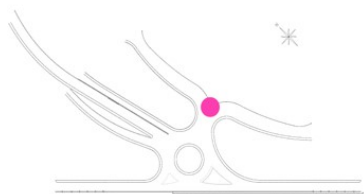
- Schoeman's Bridge is located near the Cato Creek main entrance [No. 3] of the Port of Durban
- The site is accessible via Margaret Mncadi Ave and Quayside road.
- It provides access for employees, clients and private port users to the various areas of the T-Jetty.
- It was designed in early 1960's and did not cater for abnormal multi-axle trailers with axle loads in excess of 20 tonnes.

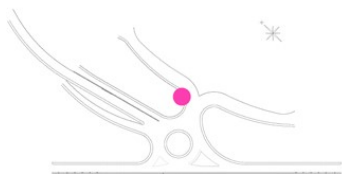


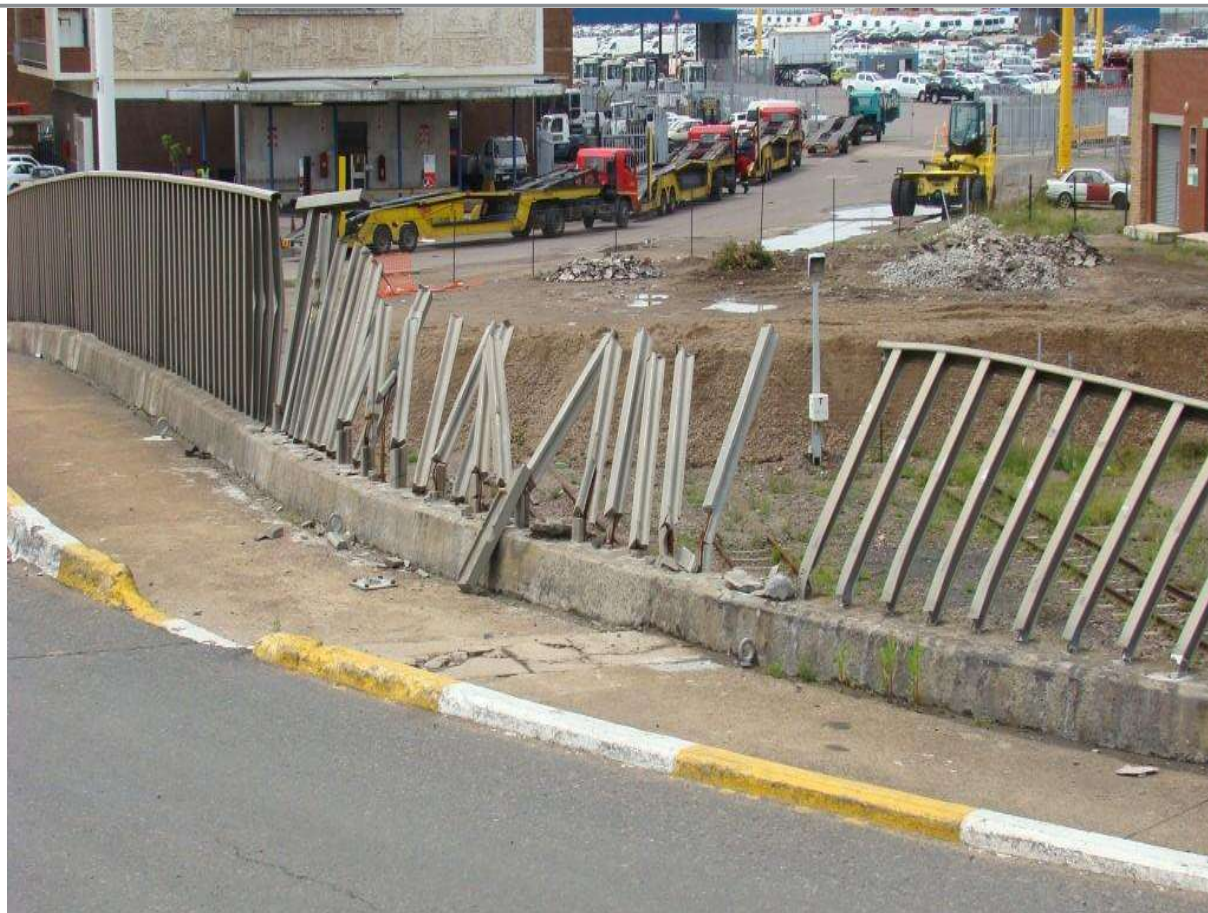
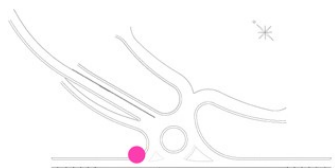
BACKGROUND

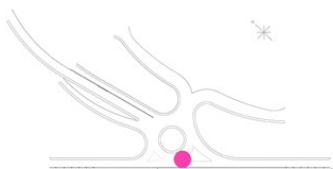












OBJECTIVES

- The Employer's objective is to identify all possible solutions and select a cost effective and efficient design solution, to accommodate vehicles from passenger cars to abnormal multi-axle vehicles in order to avoid damages to the bridge and mitigate the potential risks to pedestrians and motorists.

SCOPE OF WORK

The Consultant shall perform the following tasks:

- Conduct a detailed condition assessment to determine the remaining useful life and the overall condition of the bridge.
- Review available information such as as-built or construction drawings and loading a report
- Assess and analyse the geometry of the bridge against heavy vehicles currently using the bridge to confirm the actual cause of damages to the bridge infrastructure
- Simulate the heavy vehicular movement to guarantee the suitability of the bridge geometry for smooth and safe manoeuvrability
- Establish a new design criteria for the bridge
- Investigate alternative options to improve the geometry and increase the loading capacity of the bridge and rank the option using multi-criteria analysis
- Prepare preliminary bridge modification designs and related documentation
- Conduct quantitative and qualitative risk assessment

SCOPE OF WORK

The Consultant shall perform the following tasks:

- Provide recommendation on the way forward to make improvements on the bridge
- Provide a detailed preliminary study report incorporating among others, aspects of environmental impacts (if any) of the recommended option, and how these should be dealt with during the design development phase
- Prepare a detailed scope of work for the next phase including cost engineering report incorporating the cost estimate and basis of estimate
- Prepare indicative programme for the next phase and execution phase.

SCOPE OF WORK

The Consultant shall be expected to submit the following deliverables as part of the preliminary study:

- Preliminary study report
- Design criteria report
- Preliminary engineering design reports including all design calculations
- Preliminary design drawings
- Condition assessment report and Review of as-built information
- Multi-Criteria Analysis for the evaluation of options
- Qualitative and initial Quantitative Risk Assessment
- Cost Engineering Report incorporating the cost estimates and basis of estimate
- Project execution Programme Report
- Detailed scope of work for the next phase (detailed engineering design development)

EVALUATION CRITERIA

Quality criteria	Sub-criteria	Maximum number of points
Company Previous Experience	Company's experience on vehicular concrete bridge design projects completed in the last 10 years. Tenderer to submit a sufficiently detailed reference list with names & contact details of Clients for which projects were undertaken and also provide completion certificates or letters completion from Clients as proof of project completion. Refer to T2.2-2 for points allocation	30
Qualifications and Experience of Key Persons	Bridge Engineer: weighting is 0.7 The tenderer shall submit certified copies of Qualifications and Professional Registration with Engineering Council of South Africa (ECSA) for the Bridge Engineer. The tender shall submit a CV for the Bridge Engineer which shall have at-least 5 years of experience in the design of vehicular concrete bridge design projects. Electrical Engineer: weighting is 0.2 The tenderer shall submit certified copies of Qualifications and Professional Registration with Engineering Council of South Africa (ECSA) for the Electrical Engineer. The tenderer shall submit a CV for the Electrical Engineer which shall have at-least 3 years of experience in the design of electrical projects. Planner: weighting is 0.1 The tenderer shall submit certified copies of Qualification in one of the built environment disciplines with advance Microsoft Project Certificate for the Planner. The tenderer shall submit a CV for th Planner which shall have a minimum of 3 years' experience working in civil engineering projects undertaking the role of a Planner. Refer to T2.2-3 for points allocation	30

EVALUATION CRITERIA

Evaluation Criteria cont...

Quality criteria	Sub-criteria	Maximum number of points
Approach Paper	Approach paper that responds to the scope of work and outlines proposed approach / methodology including that relating but not limited to programme, method statement, technical approach and an understanding of the project objective. Refer to T2.2-4 for points allocation	25
Project Programme	Ability to execute the works in terms of the <i>Employer's</i> requirements within seven (7) months' timeframe, indicating in a logical sequence, the order and timing of the pre-feasibility study activities that will take place in order to provide the works in a logical sequence. Refer to T2.2-5 for points allocation	10
Project Organogram	The tenderer should propose the structure and composition of their team i.e. the main disciplines involved, the key persons / expert responsible for each discipline, and the proposed technical, support and site staff. The roles and responsibilities of each key persons/ expert should be set out as job descriptions. In the case of an association/ joint venture/ consortium, it should, indicate how the duties and responsibilities are to be shared. Refer to T2.2-6 for points allocation	5
Total		100

EVALUATION CRITERIA



Typical Scoring

	Company's Previous Experience
No Response (score 0) No submission	The tenderer has submitted no information or inadequate information to determine the score or submitted no completion certificates or letters of completion from the Client.
Not Acceptable (score 20)	The tenderer's experience is not on vehicular concrete bridge design projects and therefore deemed irrelevant.
Poor (score 40)	The tenderer has submitted a completion certificate or a letter of completion for one (1) vehicular concrete bridge project completed in the last ten (10) years and therefore deemed to have limited experience.
Satisfactory (score 60)	The tenderer has submitted completion certificates or letters of completion for three (3) vehicular concrete bridge projects completed in the last ten (10) years and therefore deemed to have satisfactory experience.
Good (score 80)	The tenderer has submitted completion certificates or letters of completion for four (4) vehicular concrete bridge projects completed in the last ten (10) years and therefore deemed to have good experience.
Very Good (score 100)	The tenderer has submitted completion certificates or letters of completion for five (5) or more than five (5) vehicular concrete bridge projects completed in the last ten (10) years and therefore deemed to have outstanding experience.

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THANK YOU