THE LOCATION
THE LOCATION
THE NEED
THE NEED
THE NEED
THE APPROACH

- More robust replacement – not like for like
- Minimal impact on tidal area
- Close consideration of constructability (fabricate / transport / erect)
- Safety in Design for the whole life-cycle

- All pointed to a box girder truss bridge
THE DESIGN CHALLENGES

- Tides & the elements (corrosion protection)
- High flowrate / velocities in storm conditions
- Floating debris impact & debris mat loading
- Thermal expansion of truss elements (fixed / roller) & PE pipe
- Pipe material selection & connections
- Abutment load bearing and overturning considerations
- Crane outrigger loading
- Vandalism prevention / safety
- Satisfying Council / DILGP / Aurizon requirements
- Constructability (civil & structural)
THE DESIGN

LEGAL

NOTES

1. All levels to be 1 in 25.
2. For details of bridge control, contact phone: 123-456-7890
3. The contractor shall maintain the site and remove all existing structures not essential to the work area. All structures shall be protected against accidental damage during construction of the works. The contractor shall be responsible for all costs incurred by damage to existing structures. The owner shall maintain all work not interfered with by the contractor in a neat and workable condition to the satisfaction of the owner.

IPWEAQ CQ BRANCH CONFERENCE
THE DESIGN
THE DESIGN
THE CONSTRUCTION CHALLENGES

• Access (tides)
• Asbestos removal & alteration
• Crocs
• Coordination with nearby levee works
• Acid Sulphate Soils
• Abutment bolt assembly location
• Raw sewage (especially when the bungs let go!)
• Crane selection & the lift
THE CONSTRUCTION
THE CONSTRUCTION
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THE SECRET TO SUCCESS

• Thinking outside the box early
• Making constructability & SiD top priority
• Working collaboratively between Council, Consultants & Contractor
THANK-YOU