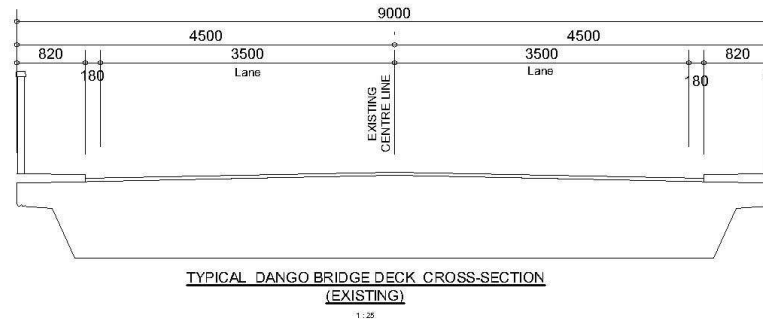
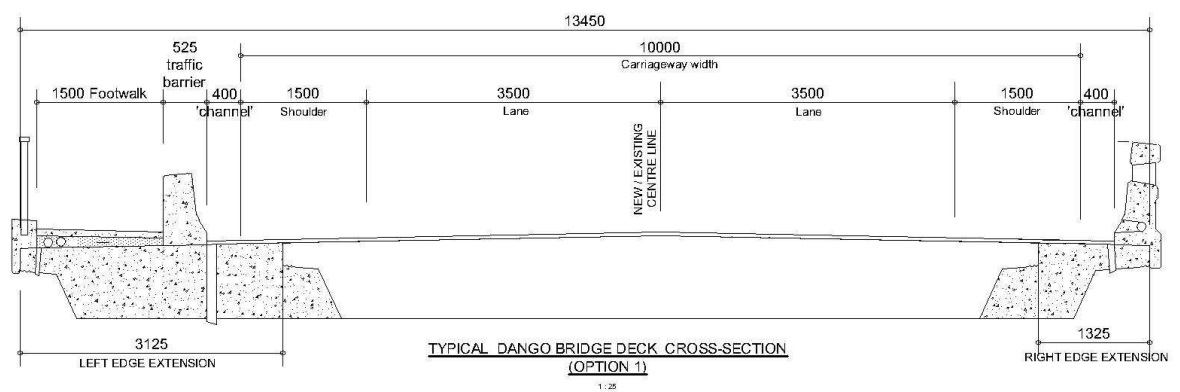


B1372 DANGO BRIDGE WIDENING PROPOSED STRUCTURAL SOLUTIONS

Alternative Structural Configurations

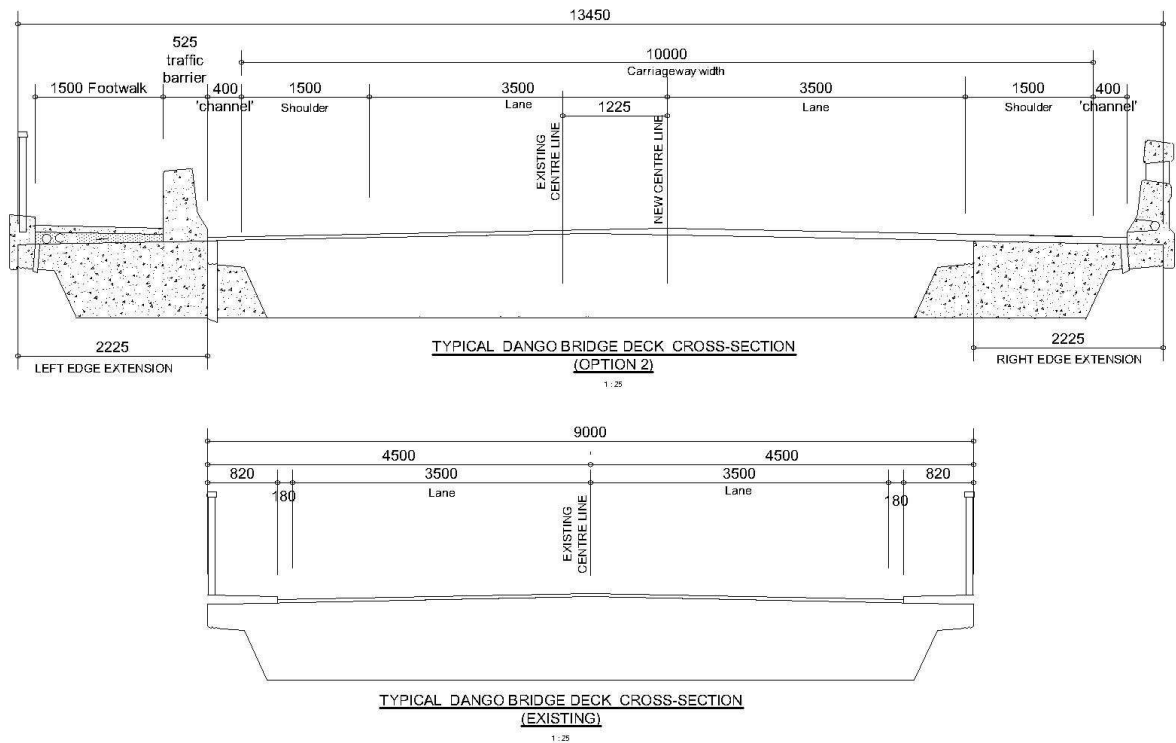
Alternative bridge widening configurations were identified as possible solutions, and are briefly discussed below.

Option 1: Widening 3.125m upstream and 1.325m downstream.



This option proposes widening the bridge by 3.125m upstream and 1.325m downstream edges. The carriageway centreline of the upgraded road will be at the same position as the existing road. This option will follow the proposed geometric design of the upgraded road.

Option 2: Widening 2.225m both upstream and downstream.



This option proposes widening the bridge by 2.225m both upstream and downstream edges. The carriageway centreline of the upgraded road will be offset by 1.225m to the upstream from the centreline of the existing road. This option will require a realignment of the proposed geometric design of the upgraded road.

Preferred Option

Bridge construction costs for Option 2 are cheaper than for Option 1 as similar activities are carried out on both sides. However, the combined costs for the bridge and the road construction for Option 1 are cheaper than for Option 2. Option 2 requires the realignment of the existing road resulting in large quantities of earthworks and road formation when compared to option 1. The Option 2 road realignment will result in encroachment outside the road reserve requiring additional expropriation. Option 1 is therefore the preferred over option.