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Ref: 21264

3rd November 2022

Brett Hutton
JCDecaux
Unit 2-3, 182-190 Euston Rd,
Alexandria NSW 2015

RE: Darcy St, Parramatta, NSW, Southbound
Super 8 Signage, Structural Feasibility Statement

This Structural Feasibility Statement has been conducted by Dennis Bunt Consulting Engineers Pty Ltd (DBCE) at the request of JCDecaux.

The proposed sign is documented in the DA drawing by DBCE 21264 / DA02(F).

A survey of the site was commissioned by JCDecaux.

There will be a LED Super 8 sign with the visual screen dimensions being 7936mm horizontally x 2048mm vertically. The sign will have an ACM skirt located under the screen with a vertical dimension of 400mm, and the sign will be fixed to the side of an existing railway bridge and be located over Church St, Parramatta to be viewed by Southbound traffic.

Site Description

The sign will to be fixed to a recently constructed railway bridge where the main/edge beam is a welded steel girder.
Due to the location of the Sydney trains boundary the screen will be supported off a 2d frame set between the top and bottom flanges of the girder rather than a 3D box.
For maintenance the screen will be accessed from the front using a cherry picker which will require a temporary road closure, most likely at night

Structural Description

The structure will consist of a 2D fully welded frame. Vertical members will be located adjacent to the main girders web and welded to the underside of the top flange and the top of the bottom flange.
Horizontal rails will be fixed to the vertical members.
Z brackets fixed to the back of the 2D frame slot over the top of the rails when the 2D frame and LED screen are lifted into position by crane and are screw fixed to the rails at each end.

The LED screens will be assembled in the contractor's factory and clamped to the welded 2D frame so it can be transported to site as one unit.
The vertical members and rails will be transported separately.

The existing bridge will need to be checked for the extra weight of the sign and their support structures in combination with the existing dead loads from the bridges and live loads from the trains.

The weight of the 2D frame including the digital screens, cladding and support structure is approximately 2 tonnes.

Compared to the loads on the main girder of the bridge from the dead load of the bridge and the live load from the trains the extra vertical load from the sign and its support structure will be approximately 1% of the total load.

The sign is to be designed for a wind load for region A, terrain category 2.5 and a 50 year design life in accordance with AS1170.2. The height of the sign and structure is less than the height of the main beam so the overall wind load on the bridges will be no greater due to the addition of the sign.

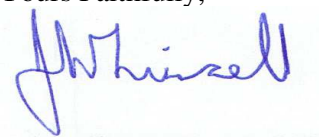
Recommendations

Based on the survey and our preliminary design we see no reason why the digital screen cannot be installed.

The existing bridge drawings will need to be accessed so the bridge can be checked for the additional load from the sign.

If you have any questions, please do not hesitate to ring the undersigned on 9451 7757

Yours Faithfully,



John Linsell BE(Hons), MIEAust, CPEng, NPER(Struct)
for Dennis Bunt Consulting Engineers Pty Ltd