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Ref: 21240

14th October 2022

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

**RE: Princes Hwy, Loftus, NSW, Outbound, Supersite,
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 drawings by DBCE 21240 / DA01(B) and DA02(B).

A survey of the site was commissioned by JCDecaux.

The signage will consist of a new Supersite LED screen with the visual screen dimensions being 12480mm horizontally x 3200mm vertically. The top of the LED screen will be located approximately 8.75m above Princes Hwy. There will be a 400mm skirt under the sign consisting of black ACM sheet.

The LED screen will be fixed to one side of a steel box that is supported off a steel column cantilevering from a concrete footing. The inside of the box will be able to be accessed from a ladder on the column and a door in the back of the box to enable maintenance of the LED screens from behind.

Site Description

The site is located to the north of Princes Hwy. It is also located to the east of an existing concrete culvert allowing the Sydney Trains tracks to pass under Princes Hwy.

The ground where the signs footing will be located is approximately 14m below the top of the sign. There are numerous trees and bushes in the area where the footing will be constructed that may require some to be removed to install the footing. The centre of the column is approximately 8m away from the wall of the concrete culvert. The site can be accessed from a street behind the site at approximately the same level as the footing.

Structural Description

Steel frame

The structure will consist of a rectangular steel box which will act as a 3D welded steel frame.

A steel column will be bolted to a concrete footing and cantilever vertically approximately 14m.

Three horizontal rails will be bolted to the column behind the location of the signbox, these rails will cantilever 6.3m to each side of the column's centreline.

Z brackets will be fixed to the back of the box and slot over the rails when the box and screen are lifted into place with a crane.

The LED screens will be assembled in the contractor's factory and clamped to the 3D box so it can be transported to site as one unit.

The column will be transported separately.

The weight of the steel box including the digital screen and the cladding is approximately 5 tonnes. The weight of the steel support structure is approximately 6 tonnes.

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.

Footing

Due to the difficult access to the site from the street behind, due to the number of trees and bushes it would be easier to move a smaller excavator into position to excavate for a pad footing instead of a drilling rig for a pile footing.

A 5m x 5m a 1.5m deep footing should be sufficient. The wall of the footing should be shored to ensure there are no effects on the wall of the culvert during construction.

Recommendations

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

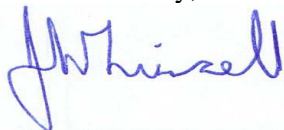
A geotechnical report is commissioned to provide information on the soil and its profile.

Shoring for the footing installation to be designed by a structural engineer to ensure no effects on the culvert wall.

A services search is undertaken in the area of the footing.

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