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Ref: 23135-2

4th October 2023

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

RE: King St, Newtown, NSW, Outbound
Column Mounted P50 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 drawings by DBCE 23135-2 / DA01(C), DA02(C) and DA03(A).

A survey of the site was commissioned by JCDecaux.

The P50 sign is a single sided LED screen with visual screen dimensions of 3072mm horizontally x 4608mm vertically. The top of the LED screen will be located 8.15m above the adjacent Enmore Rd footpath. The sign is to be located above a column and horizontal beam that will form an L shape under the screen. The column and horizontal beam will be clad in stainless steel.

Site Description

The site is in an area between the Enmore Rd footpath to the south and Sydney Trains tracks to the north. There is a brick wall between the footpath and the grassed area where the sign will be relocated. The grassed area slopes downwards at approximately 20 degrees for a distance of 7m, the ground then drops vertically 2m to the track level. At the vertical drop the ground is retained by a sheet pile wall.

The rear of the sign will be accessed by placing a new door in the Sydney Trains fence behind the sign with a new steel walkway added between the door and the sign's column.

For maintenance the digital screen in the front of the sign can be accessed by a cherry picker temporarily located on Enmore Road. The traffic lane closest to the sign will need be closed at night to enable the cherry picker to be used.

There are existing static signs fixed to the brick wall near the Enmore Rd footpath as shown on DA03(A) that are too be removed after the P50 digital sign is installed.

Structural Description

Steel frame

The structure will consist of a fabricated steel column 600mm x 400mm x 20mm thick and a rectangular box section welded to the top of the column to form an L shape.

A door is to be located in the rear of the column to store equipment so the column will act as a C section for most of its height.

A welded steel frame consisting of 200 x 100 RHS (Rectangular Hollow Section) vertical members and 100x100 SHS (Square Hollow Section) horizontal members will be bolted to the top of the horizontal box section. Spigots will be welded to the top of this section and the vertical members in the welded frame will drop over the spigots and be fixed with bolts.

The LED screen will be assembled in the contractor's factory and clamped to the welded frame so it can be transported to site as one unit.

The L shaped structure will have stainless steel cladding fixed to it also in the contractor's factory and be transported to the site as one unit.

On site the L shaped structure will be bolted to the top of the concrete footing and the welded frame supporting the LED screen bolted to the L shaped frame.

The weight of the structure including the digital screen and the cladding is approximately 3.1 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

A concrete pile and pile cap are proposed to due to the sloping ground and the above ground cable trays for Sydney Trains being located in the area.

The pile cap will be 1m square in area and 1m deep. The concrete pile will be 750mm in diameter and extend below the track level by approximately 5m.

If the ground is non-cohesive ie sand a continuous flight augur pile (CFA) is recommended.

For a CFA pile the concrete is pumped into the hole as the drill bit is removed so the concrete stops the walls of the hole from collapsing inwards.

Recommendations

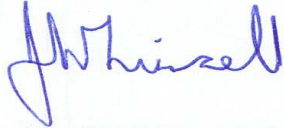
Based on the survey and our preliminary design we see no reason why the cantilevered signage cannot be installed.

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

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 0400 023 714.

Yours Faithfully,

A handwritten signature in blue ink, appearing to read 'John Linsell', is written over a light blue rectangular background.

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