

Re: Use of digital display at 1404 Mabury Road, San Jose, CA

To whom it may concern,

Media Resources Inc. has been engaged by Clear Channel Outdoor to review and assess the lighting impact of the proposed digital billboard installation at 1404 Mabury Road. This document will describe the lighting impacts of our VISIONiQ digital billboards in this specific application, and further commit a maximum luminance value of the display as observed from the nearby light-sensitive areas.

Background on Media Resources Digital Display Ambient-Aware Brightness Controls

During dusk, dawn, or cloudy days, the operation of the digital display according to ambient light readings is the ideal way to maintain a glare-free, light-trespass free image. Media Resources digital billboards are all equipped with factory-mounted dual photocell sensors that are redundant and capable of reading ambient brightness even if one unit suffers a hardware failure. The ambient brightness to output brightness response curves have been carefully developed into a standard to provide good readability on the display while keeping in line with the brightness of the overall visual context.

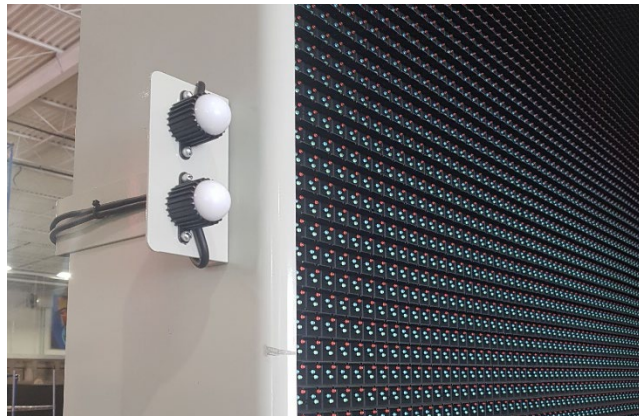


Figure 1. Media Resources standard - dual ambient brightness measuring photocells for hardware redundancy

During night-time, brightness control becomes critical as the digital billboards must be operated at a small percentage of its maximum brightness in order to avoid glare or light trespass. Media Resources endeavors to have the most comprehensive system of safeties and traceability for night-time brightness management. The proposed digital billboards are well equipped with modern brightness controls. Besides the redundant photocells above, a number of secondary fail-safes are also implemented including a communications watchdog (automatic reduction to night-time brightness in the event of a communication loss), and fallback to a location/season aware time-based schedule in the event of catastrophic photocell system failure. With these safety features in place, it becomes extremely unlikely for the digital billboard to operate at high brightness levels at night.

Additionally, the Media Resources Network Operations Centre can monitor brightness and recall brightness history for traceability. See Figure 2 and Figure 3 below on our internal control system for configuring brightness and recalling brightness history.

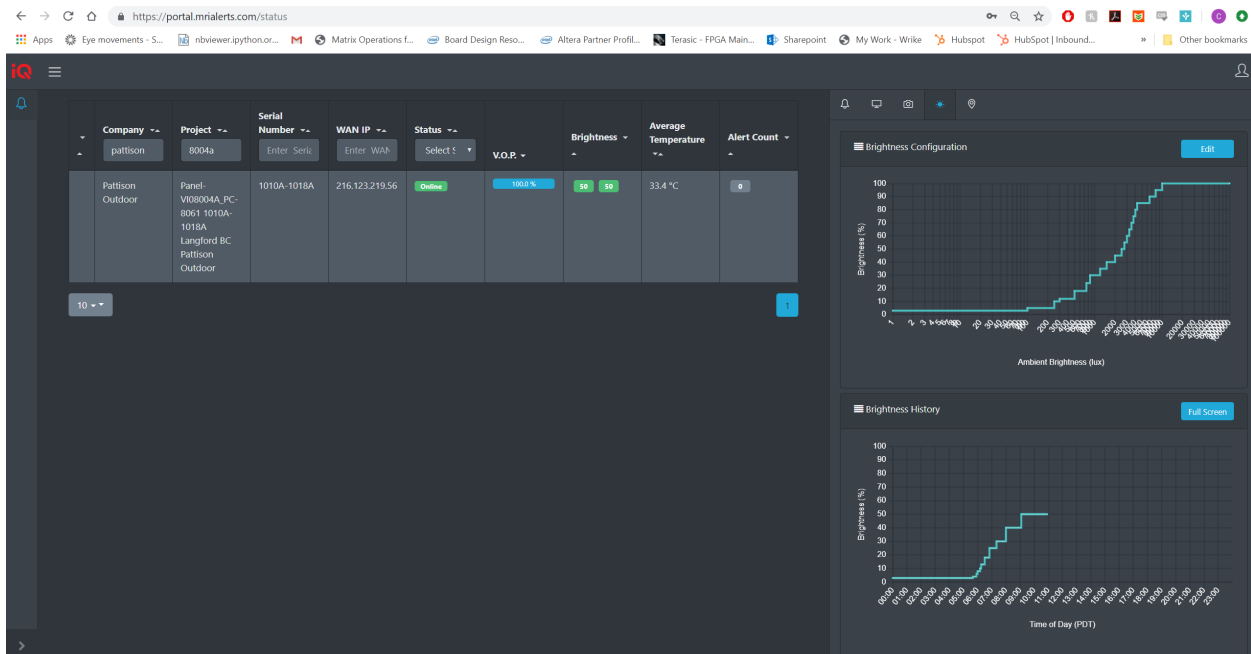


Figure 2. Media Resources web portal showing brightness configuration and history of the current day

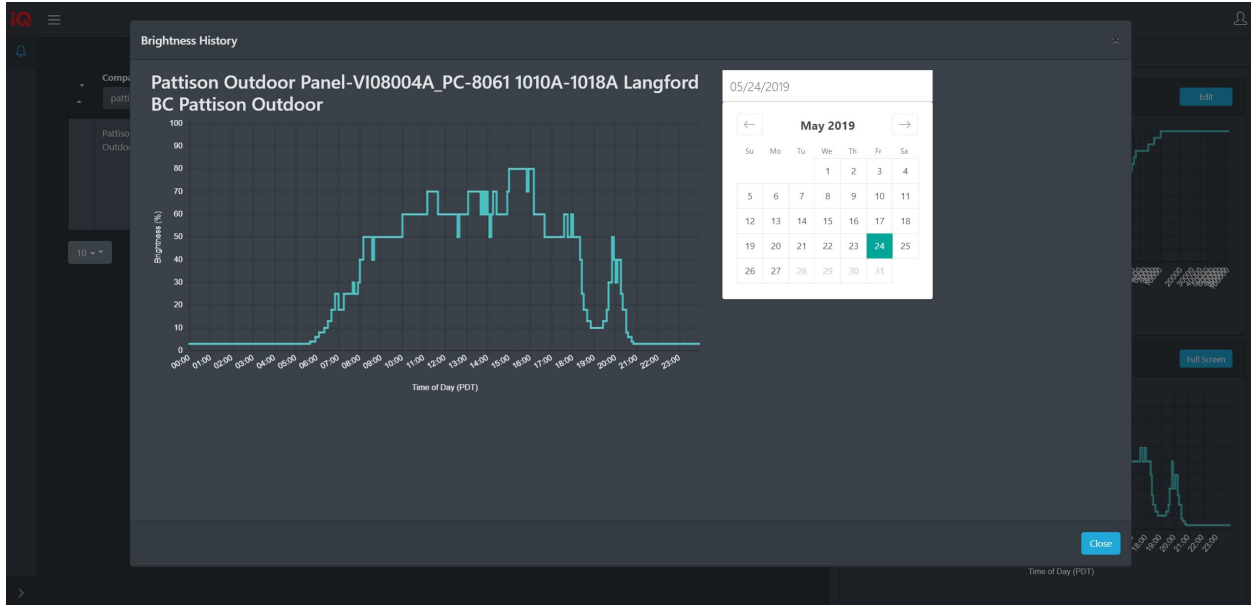


Figure 3. Media Resources web portal showing brightness history of any selected previous date. Brightness history data is logged indefinitely on Media Resources servers.

Media Resources commits to the effectiveness of this light restriction technology when deployed at 1404 Mabury Road. We have calculated the expected illuminance impact to surrounding areas of concern, shown in Figure 4, along with a table showing foot candle (fc) values at various distances and angles. Media Resources guarantees that the display will operate within 20% of illuminance impact calculated below. If approved and constructed, we can provide on-site lighting measurements to confirm correct installation and light restriction performance.



Figure 4. Site satellite photo overlay of distances and angles from proposed digital billboard site, corresponding to calculated illuminance figures in fc provided in Table 1.

Distance (ft)	-80°	-60°	-40°	-20°	0°	20°	40°	60°	80°
200'	0.063fc	0.209fc	0.462fc	0.612fc	0.637fc	0.612fc	0.462fc	0.209fc	0.063fc
350'	0.021fc	0.070fc	0.157fc	0.211fc	0.222fc	0.211fc	0.157fc	0.070fc	0.021fc
400'	0.016fc	0.053fc	0.121fc	0.163fc	0.171fc	0.163fc	0.121fc	0.053fc	0.016fc
600'	0.007fc	0.024fc	0.054fc	0.073fc	0.078fc	0.073fc	0.054fc	0.024fc	0.007fc
800'	0.004fc	0.013fc	0.030fc	0.041fc	0.044fc	0.041fc	0.030fc	0.013fc	0.004fc
1000'	0.003fc	0.009fc	0.020fc	0.027fc	0.028fc	0.027fc	0.020fc	0.009fc	0.003fc

Table 1. Site calculations in fc for the RHR Facing East display based on MRI VIQ Standard RGB Modules



1-800-667-4554
1387 Cornwall Rd.
Oakville, ON L6J 7T5
mediaresources.com

We are always committed to the responsible application of LED digital technology and are happy to engage with regulatory stakeholders at any time. Please feel free to contact us if you have any questions.

Sincerely,

Anthony Knight
Product Implementation Specialist
Media Resources Inc.
(289) 289-0035
aknight@mediaresources.com