



City of Richmond

Report to Committee

To: General Purposes Committee **Date:** May 30, 2008
From: Andrew Nazareth **File:**
General Manager, Business & Financial
Services
Re: Canada Line Information and Advertising Displays

Staff Recommendation

1. That staff be directed to implement a pilot program of Canada Line information and advertising displays as outlined in the attached report.
 2. That the General Manager of Business & Financial Services be authorized to execute the agreements in relation to the approved pilot program.

Andrew Nazareth
Andrew Nazareth
General Manager, Business & Financial Services
(4095)

FOR ORIGINATING DEPARTMENT USE ONLY		
ROUTED TO:	CONCURRENCE	CONCURRENCE OF GENERAL MANAGER
Law.....	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
Major Projects.....	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
Transportation.....	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
Communications.....	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
REVIEWED BY TAG	YES <input checked="" type="checkbox"/> DW	NO <input type="checkbox"/>
	REVIEWED BY CAO (Active) 	YES <input checked="" type="checkbox"/>
	NO <input type="checkbox"/>	

Staff Report

Origin

Based on a January 7, 2008 Report to Council, staff were directed by Council to:

(1) Explore opportunities with InTransit BC for multi-media technology along the Canada Line on No. 3 Road that could be used in providing public information, visual displays, audio and advertising.

(2) Report back to Council with a pilot implementation plan.

This report identifies the specific technologies and placement of displays that could be considered for a pilot implementation program along the Canada Line on No. 3 Road.

Analysis

Subsequent to the completion of the Canada Line Rapid Transit System, the IBI Group has been working with the City to create and implement the No. 3 Rd Restoration Plan which includes the Richmond City Council "Approved Streetscape Concept Design".

As the urban designers for the No. 3 Rd Road Restoration project, IBI Group is uniquely positioned to assess the appropriateness of multi-media display and advertising components and the ability for them to be seamlessly integrated into the current urban design components.

As any implementation of display and advertising technologies along No. 3 Rd would need to integrate with and enhance this Streetscape Concept, IBI Group scope was expanded to include:

- Identify which technologies (LED Screens, 360 Revolution Displays, Interactive Kiosks, Interactive Projection Systems) or combination of technologies, would be suitable for implementation along the No 3 Rd/Canada Line
- Identify specific locations for implementing these technologies and provide the reasons/benefits of implementing in each location
- Identify placement configuration, type of technology and specific numbers of displays that could be implemented in the chosen locations
- Provide artists renditions of how the selected technologies would integrate into the overall streetscape along this corridor

Some of the guiding principles elements that the IBI Group established for restoration of the No. 3 Rd corridor, many of which were considered in evaluating the use of the information and display technologies for this initiative, include:

- Great Streets – That the No. 3 Rd corridor shall become a 'Great Street" and the focus of Richmond's downtown as it grows to become a vibrant, attractive urban place

- Design Features and Materials – With qualities that engage the eye such as fountains, public art, and added interest and enjoyment
- Variety - Variety, activity and liveliness usually result from diversity and animate the street

The IBI Group considered the following technologies for display and advertising use along the No. 3 Rd corridor:

Technology	Description
1. Interactive Projection technology	Images projected on to sidewalk surface
2. Revolution 360° high resolution displays	Stand alone wrap-around virtual content panels with built in computer, media player and communications components
3. Interactive Kiosks and Station hi-tech posters	Interactive Multi-media kiosks where users can access information, download videos and ring tones, take and send photos as well as be able to shop online
4. LED screens	LED flat screens for use at stations, attached to guide way and around guide way pillars

Many other public transit systems around the world have successfully introduced similar types of advertising at stations and other prime locations. With careful consideration given to design standards, this has been achieved in a manner that is aesthetically pleasing, engaging and informative without creating a sense of visual pollution or overload, while still providing the benefits of a new public revenue stream.

After detailed technical analysis and aesthetic consideration, IBI Group “believes that through a measured approach several of the proposed technologies will positively contribute to the richness of the public realm and urban design along No. 3 Rd and at Canada Line Station Plazas”. The IBI Group recommends that the following technologies would compliment the “Approved Streetscape Concept Design”:

- 1 large format LED screen attached to the exterior wall of three Canada Line stations (Aberdeen, Lansdowne and Brighouse)
- 10 Revolution 360° high resolution displays located at various points (between Cambie Rd to Saba Rd) under the Canada Line guide way.

The electronic equipment identified by the IBI Group incorporates cutting edge technology that creates images which are as sharp in daylight as they are in darkness. As well, the equipment is designed to withstand tough exterior conditions, is easy to maintain and allow instantaneous secured access to content via the Internet.

In addition to providing advertising content and revenues, the selected equipment will offer the City the ability to deploy information and messaging to the public in the form of traffic updates, emergency alerts, special event notices and other general community information. Broadcasts of the audio and visual content could be programmed to change based on time of day or other requirements. (The IBI Group report is attached for review.)

The Canada Line Information and Advertising project is in keeping with one of the core principles of the Long Term Financial Management Strategy which identifies the development of alternative revenue sources as an important piece of preserving and enhancing the City's financial sustainability. As recent analysis presented to Council have shown, the development of alternative revenues is one of the areas that requires improvement if the City is to fully achieve all of the objectives of the Long Term Financial Management Strategy and this proposed project would begin to address that shortfall.

Financial Impact

Initial indications are that this project could net the City approximately \$1.3 million in revenues over a five year period and, at a steady state, provide approximately \$0.4 million annually. This would be based upon a tri-party revenue sharing model between the City, Intransit BC and a full service agency partner, with the agency partner 'front-ending' the capital costs and recovering them from future revenue streams. With this model, the agency partner would also be responsible for installing, operating and marketing the displays at no cost or risk to the City. The City would have access to portions of the electronic displays for use by City departments at no cost. This new revenue source could potentially go towards the City's Public Art Reserve, Leisure Facilities Development Reserve and general revenue.

Conclusion

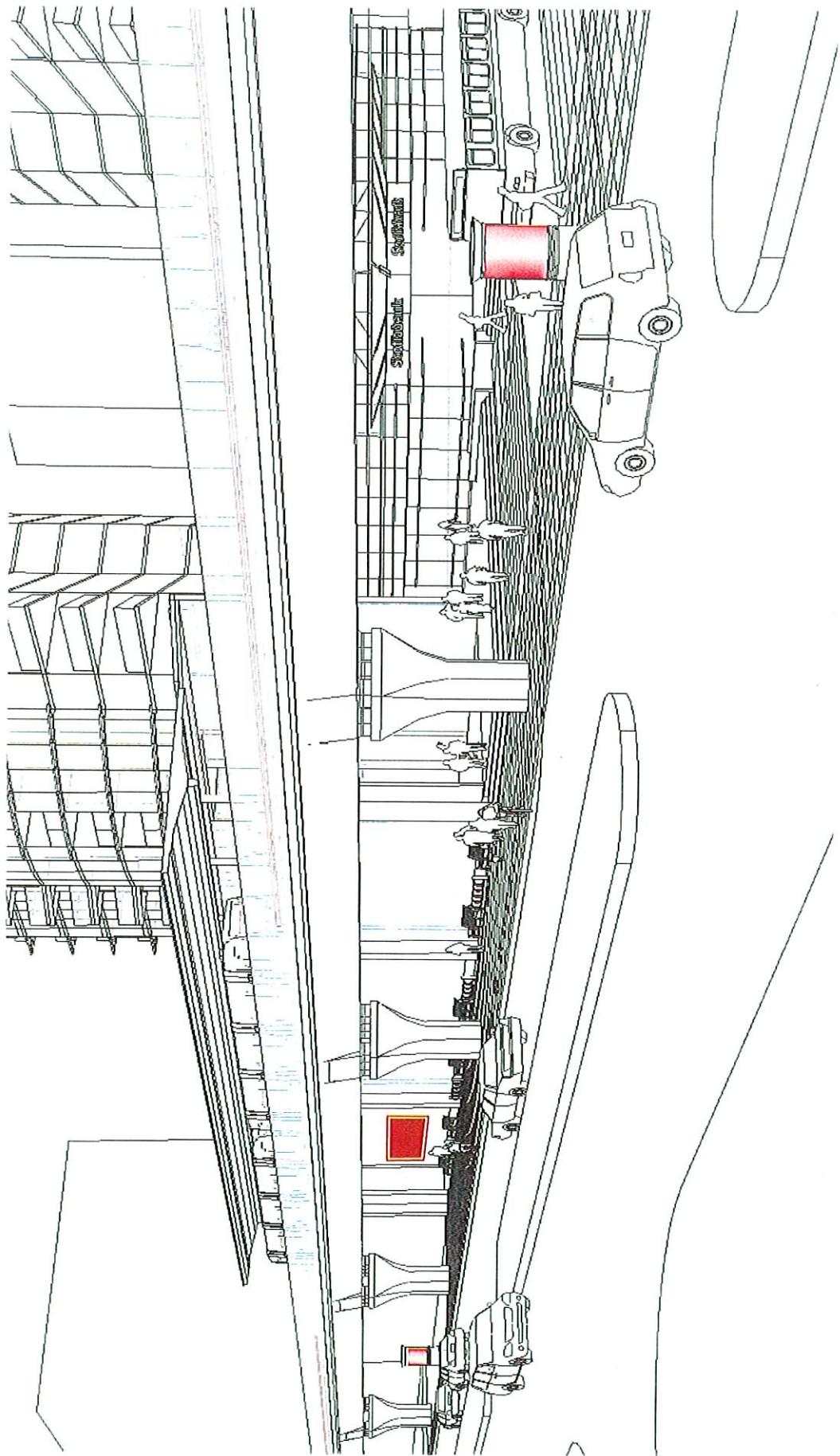
The City retained the services of the IBI Group to determine if display and advertising technologies would be complimentary to the "Approved Streetscape Concept Design" along the No. 3 Rd corridor. Based on the IBI Group analysis, it is recommended that the City proceed with implementation of a pilot program using high resolution Revolution 360° and LED screen displays as outlined in this report. The proposed locations for the displays are approximate and the exact sitting details will be determined in conjunction with Transportation and other appropriate City divisions to ensure public safety.



Amarjeet S. Rattan
Director, Corporate Programs Management Group
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AR:ar

Attachment (1)



Canada Line Multimedia Information Display & Advertising
Integration with No.3 Road Restoration
June 2008

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Appropriate Advertising Technologies Defined

As the urban designers for the No. 3 Road Restoration project, IBI Group is uniquely positioned to assess the appropriateness of multi-media display and advertising components and the ability for them to be seamlessly integrated into the current urban design components. IBI Group believes that through a measured approach several of the proposed technologies will positively contribute to the richness of the public realm and urban design along No. 3 Road and at Canada Line Station Plazas.

On March 14th, 2008, IBI Group and City representatives reviewed and evaluated the various technologies that have been proposed.

These technologies include:

Interactive Projection Technologies: by Living Surfaces (Not Recommended)

This involves projected images and motion detectors so that the images respond/interact with pedestrians. We do not support the use of this technology because we believe it will not contribute towards achieving the vision for No. 3 Road. The technology lacks a timeless quality that is important for the project to be successful beyond the excitement of opening day. We believe its video game-like character will very quickly lose its appeal and 'date' the street in an undesirable way. We are also mindful of the relationship of technologies to one another and believe that this product may compete for attention with other preferable technologies (see below). It is important that these technologies be employed judiciously to become a timeless feature in the urban environment and not contribute to a streetscape that is cluttered and over-stimulating.

However, IBI Group is interested in the use of gobo light projection technology and would be like to see it investigated and implemented on the eastside of No. 3 Road between Lansdowne and Alderbridge Roads. The No. 3 Road Restoration preliminary design contemplated the use of gobo technology and City of Richmond Special Projects Office is in the process of arranging a demonstration for Council of special effects lighting including a post top mounted gobo projector. Ideally, the projection could take on a seasonal reference with leaves in autumn, snowflakes in winter, flower petals in spring and so forth.

Revolution 360 High Resolution Displays: by Litelogic (Exhibit 1)

IBI Group supports the use of these free standing stainless steel kiosks by Litelogic. We understand that this technology will allow for a one third portion of the image be designated to a proposed City of Richmond 'art poster' program to advertise City events and programs. It is important that these kiosks be installed in locations that are fully mindful of their relationship to the guideway columns and other streetscape furnishing and appointments.



Evolution LED Displays: by Litelogic (Not Recommended)

IBI Group supports the use of these surface mounted LED screens. We are interested in exploring how the modular format of this product may allow it to be applied as a faceted guideway column surround. Litelogic is currently strategizing on how this product might be fabricated.

Interactive Kiosks and Station Posters: by iGotcha (Not Recommended)

We do not support the use of interactive kiosks to access City information, download videos and ring tones, take and send photos and shopping online. We do not support these activities as part of the urban design program for No. 3 Road as it invites a range of activities that do not necessarily fit into the idea of place making objectives. We would like to ensure that the family of technologies works to the City of Richmond's best advantage. To that end, we are proposing a 'less-is-more' approach and would prefer not to have these interactive products compete with the preferred technologies we have been asked to review as part of this exercise. It should be noted that TransLink has undertaken a system wide wayfinding study that will likely result in a comprehensive wayfinding program that may contemplate the use of some interactive technologies. We would be supportive in principle of a network wide interactive TransLink sponsored wayfinding system.

Guideway LED Screens: by Orion (Exhibit 2)

We are interested in the use of large LED Screens at each Canada Line Station including Aberdeen, Lansdowne and Richmond-Briarhouse.

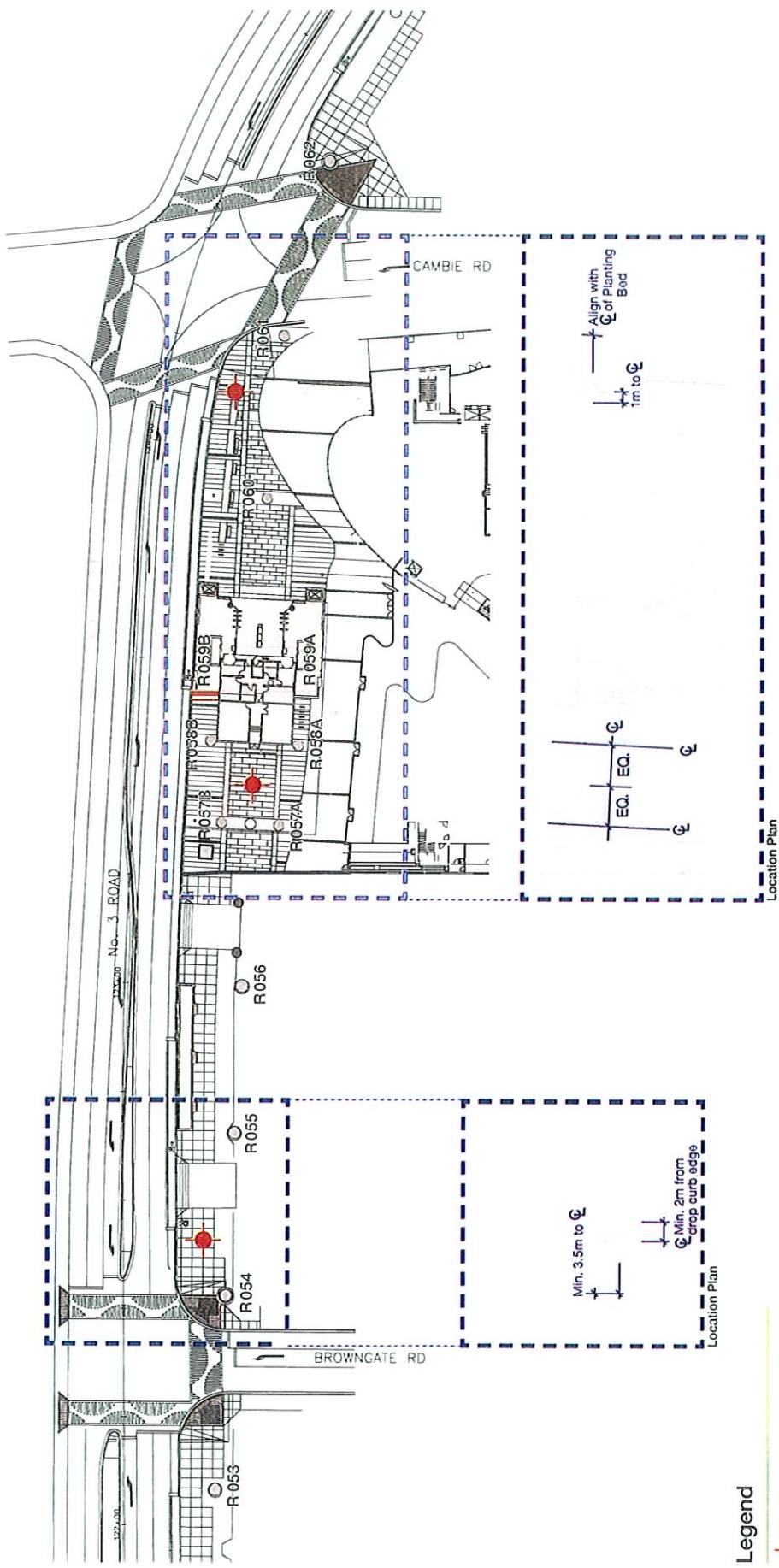
IBI Group does not support putting screens on the guideway. Screens on the guideway do not fit within our vision for an integrated design approach. We believe that they will look like an afterthought and work at cross purposes with the streetscape design by competing for driver attention along with planting, wayfinding signage and safe operation of their vehicle.

* For exhibits, see Appendix

Urban Design Principles	Technology & Installation	Visibility: Ease of Legibility
Large Format LED Screens by Orion	<p>BENEFITS: Creates a prominent landmark</p> <p>ISSUES: Locate close to major intersections. Integrate with architecture or building to be mounted on</p> <p>ISSUES: Position to be viewed from open spaces (plazas), stations, approaches to major intersections, high pedestrian & vehicular traffic zones.</p> <p>Coordinate location and installation with consulting architects.</p>	<p>BENEFITS: Large format Big Screen TV; Pixel Number: 853Wx480H Pixels; lightweight construction</p> <p>ISSUES: Best installed on building wall</p> <p>Power Supply: 240V service Consumption: 300-400W</p> <p>Power: Low Resolution image when viewed closely</p>
Revolution 360° by LiteLogic	<p>BENEFITS: 'Hi-tech' version of traditional corner information kiosk</p> <p>ISSUES: Can serve as venue for Public Art in addition to conventional advertising</p> <p>ISSUES: Freestanding vertical format relates to guideway column design language</p> <p>ISSUES: Locate at prominent locations, as local landmark: station plazas, entry points.</p>	<p>BENEFITS: Flexible; potential for custom messaging by location, time of day, etc., daylight viewable</p> <p>ISSUES: Bullet proof: highly durable, all-weather product</p> <p>ISSUES: Internal computer/processors</p> <p>Power Supply: AC 120V service</p> <p>Litecast Software: Remote, real-time management of digital content via internet; vary language, content per location, any time of day</p> <p>Option to deliver community & emergency content on demand.</p> <p>Built-in Computer: Embedded Media Player & integrated communications options: 3G, GPRS, WiFi, Bluetooth, ADSL</p>



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Legend

- Revolution 360° Display
- Orion LED Display
- R01 Column/Column Number
- Station Zone
- Planting Beds

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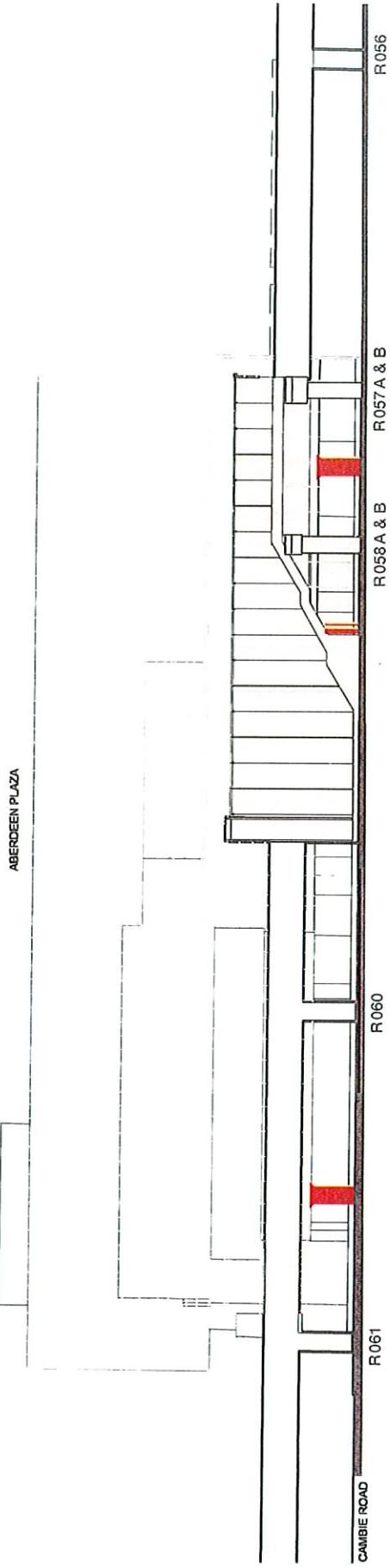
CANADA LINE MULTIMEDIA INFORMATION DISPLAY & ADVERTISING
June 2008

Scale 1:750
N

Scale 1:400

CANADA LINE MULTIMEDIA INFORMATION DISPLAY & ADVERTISING
June 2008

**Aberdeen Station West Elevation
Integration with No.3 Road Restoration**

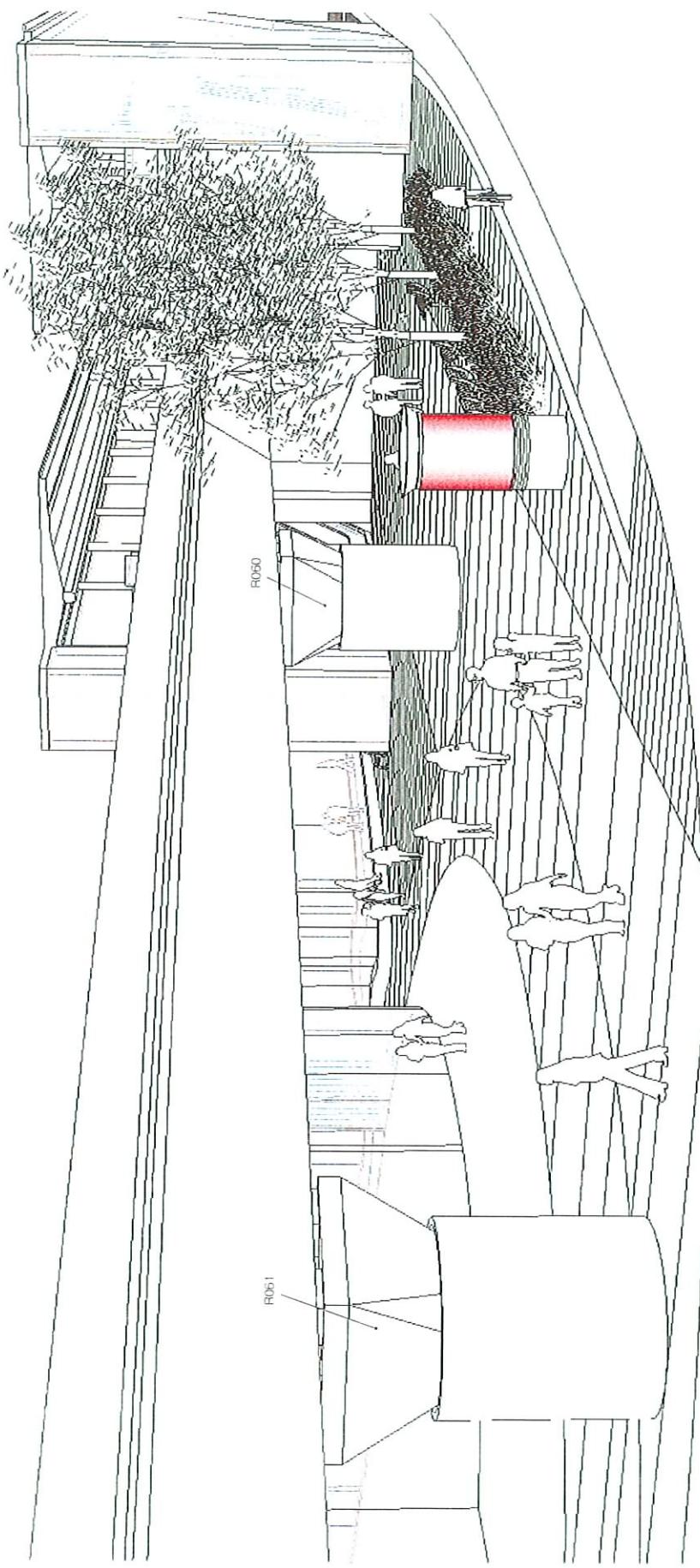


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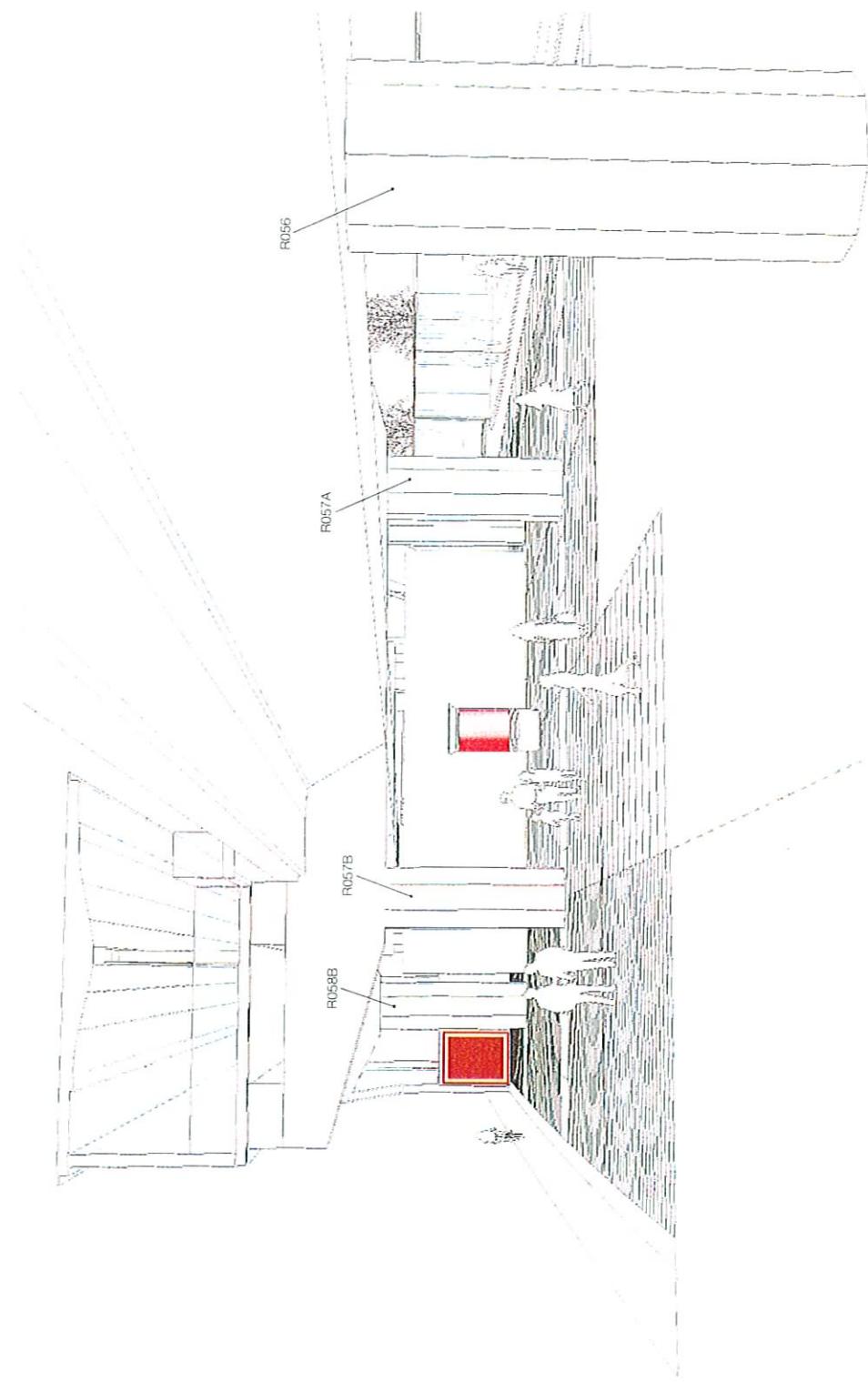
- █ Revolution 360°
- █ Orion LED Display
- █ Station Zone

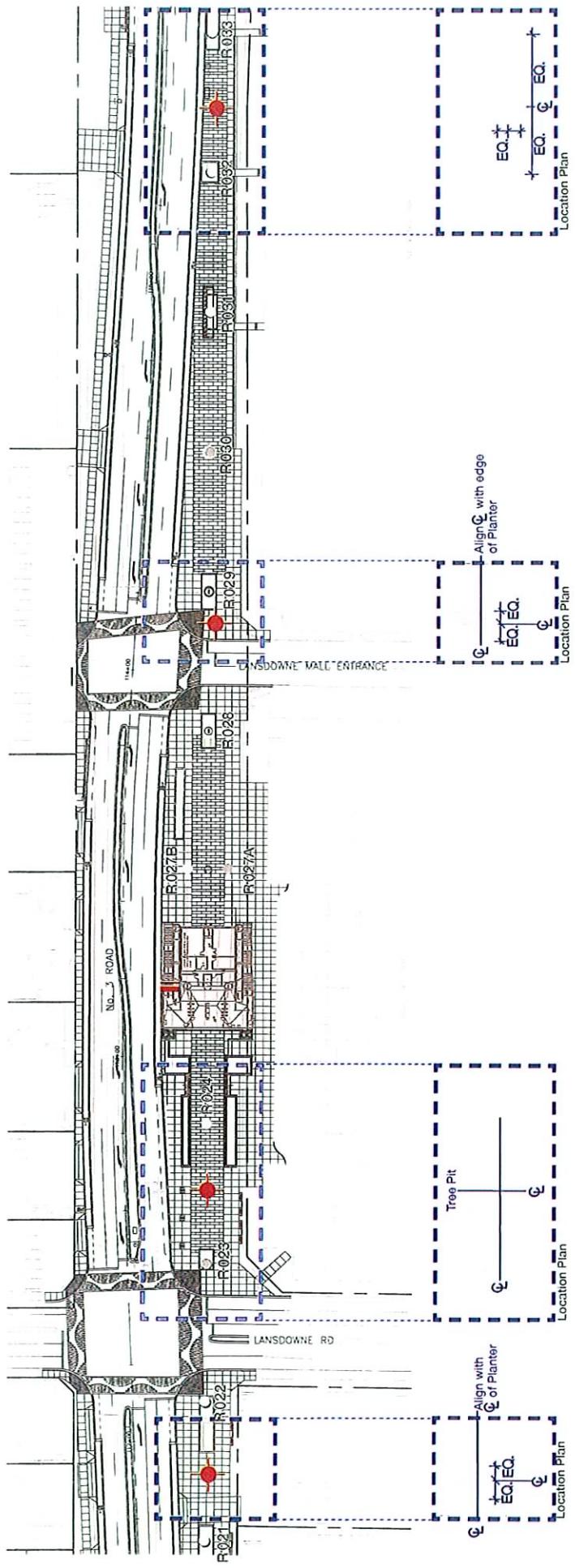
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Aberdeen Station Northwest View
Integration with No.3 Road Restoration



Aberdeen Station Southwest View
Integration with No.3 Road Restoration





Legend

- Revolution 360° Display
- Orion LED Display
- R01 Column / Column Number
- Station Zone
- Planting Beds

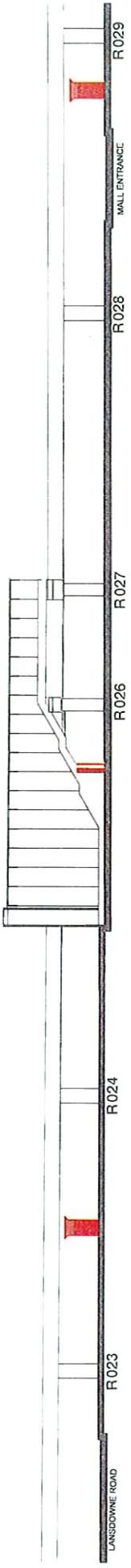
**Lansdowne Station Elevation
Integration with No.3 Road Restoration**

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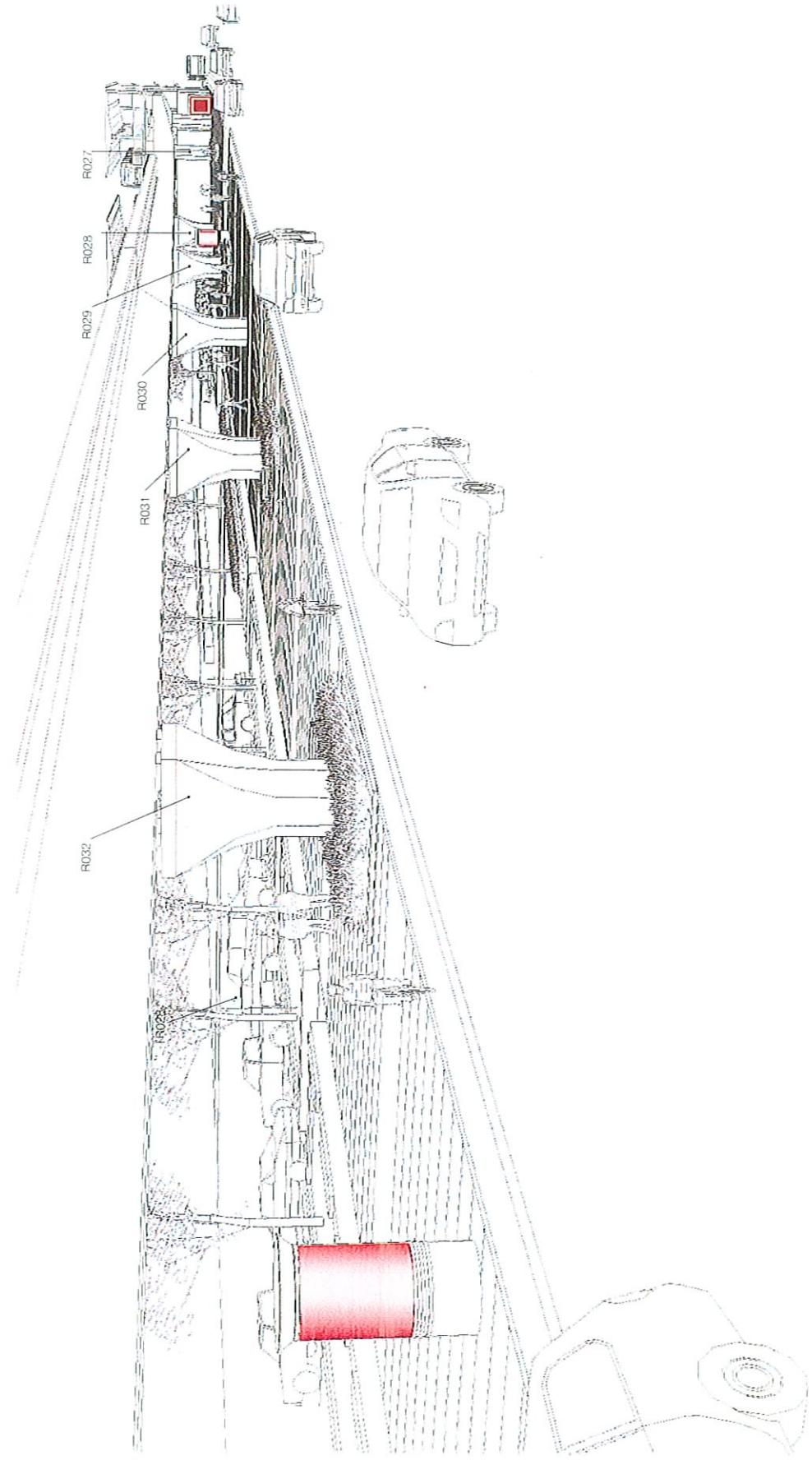


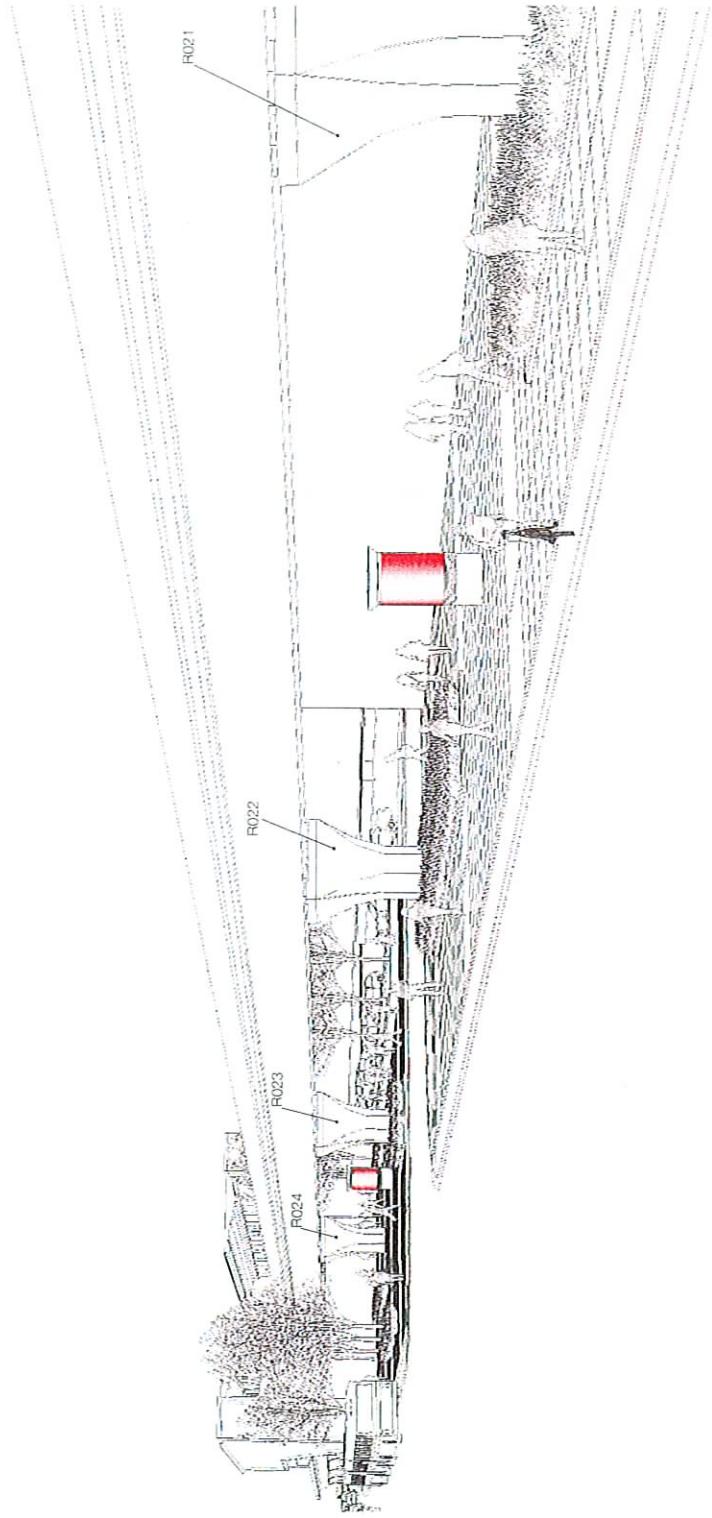
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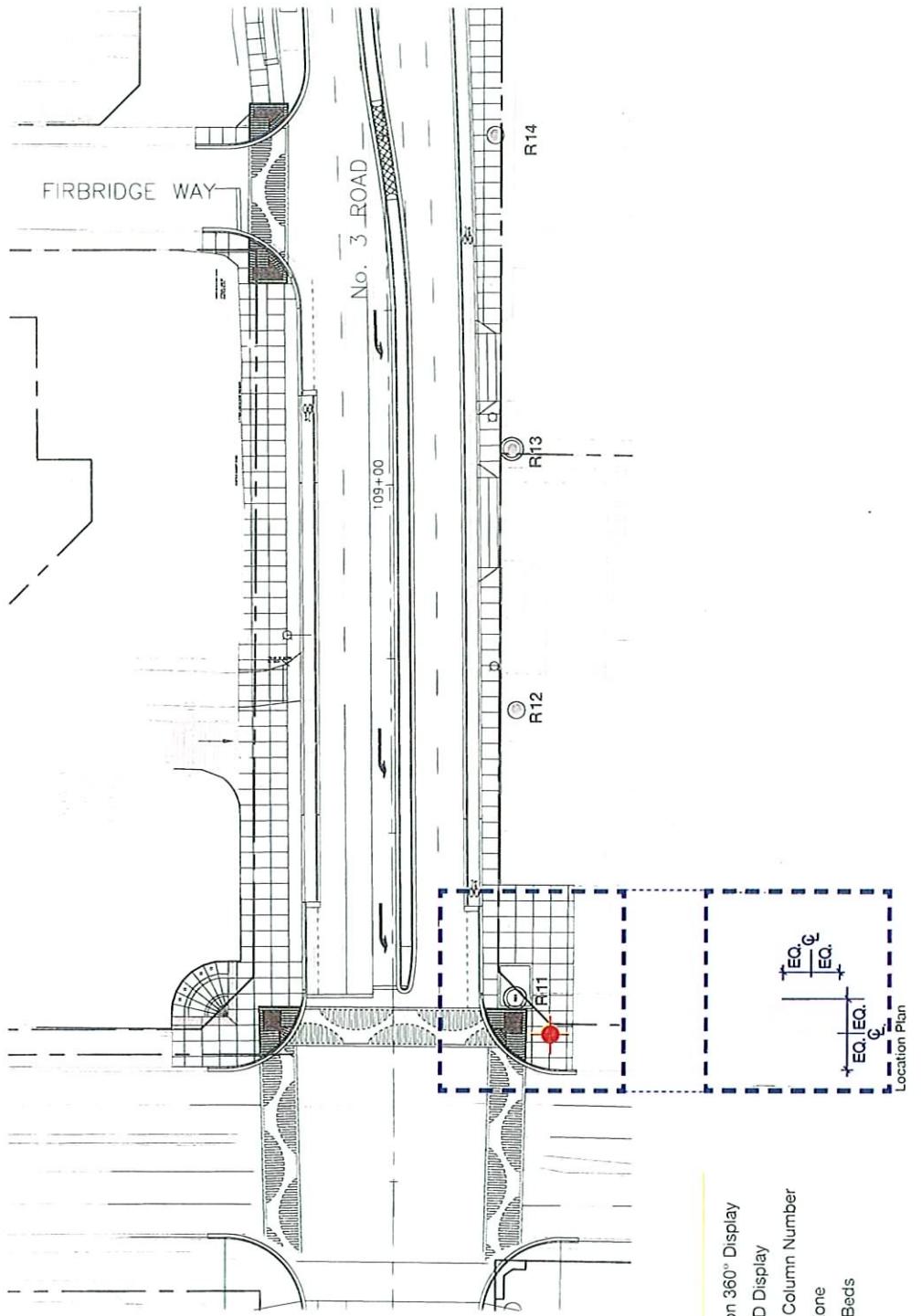
- Legend**
- Revolution 360°
 - Orion LED Display
 - Station Zone



Lansdowne Station Northwest North Block View
Integration with No.3 Road Restoration



Lansdowne Station Southwest South Block View
Integration with No.3 Road Restoration



Legend

- Revolution 360° Display
- Orion LED Display
- R01 Column/Column Number
- Station Zone
- Planting Beds



Scale 1:500

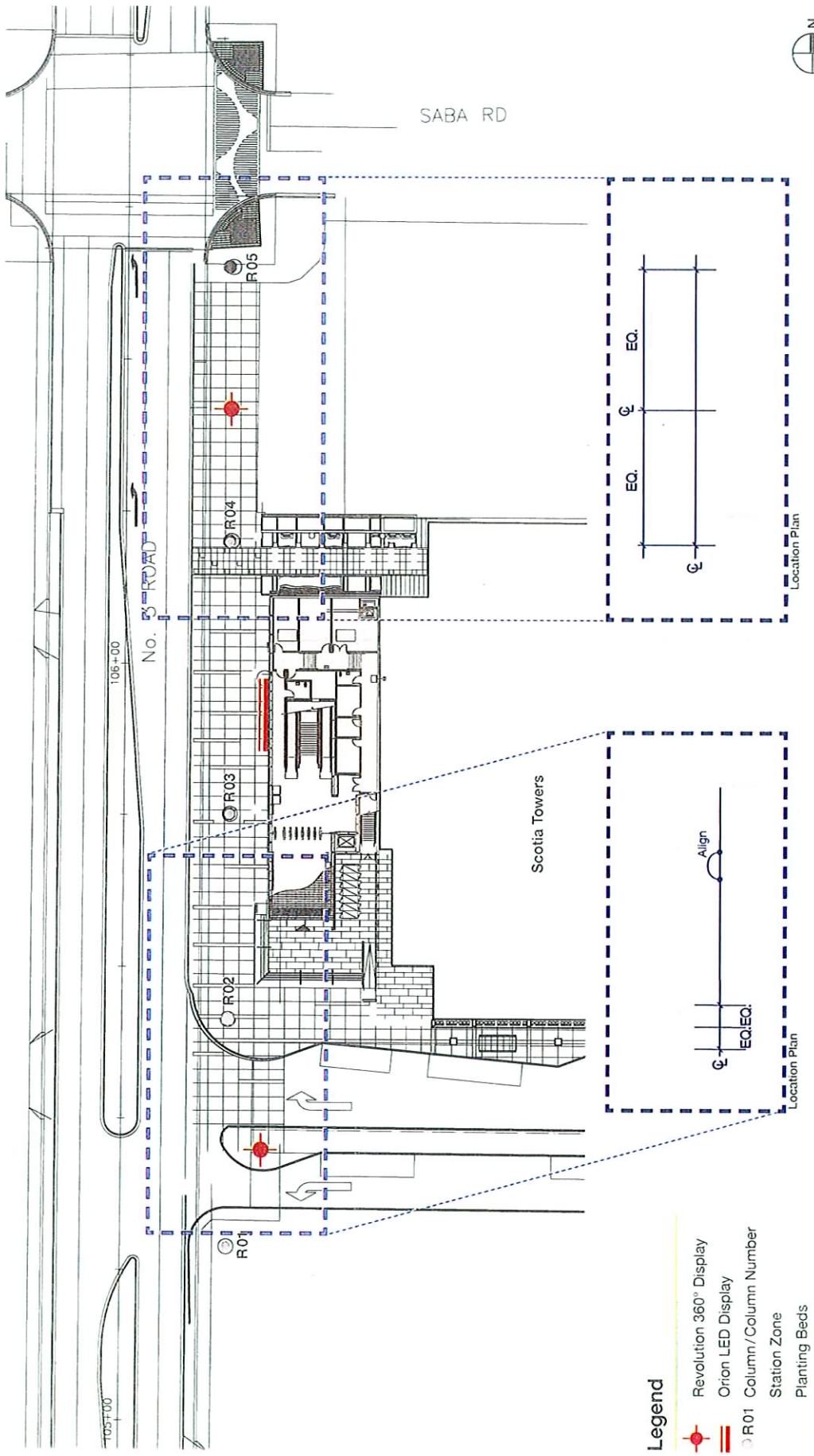
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Westminster Hwy. At No.3 Road
Integration with No.3 Road Restoration

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CANADA LINE MULTIMEDIA INFORMATION DISPLAY & ADVERTISING
June 2008

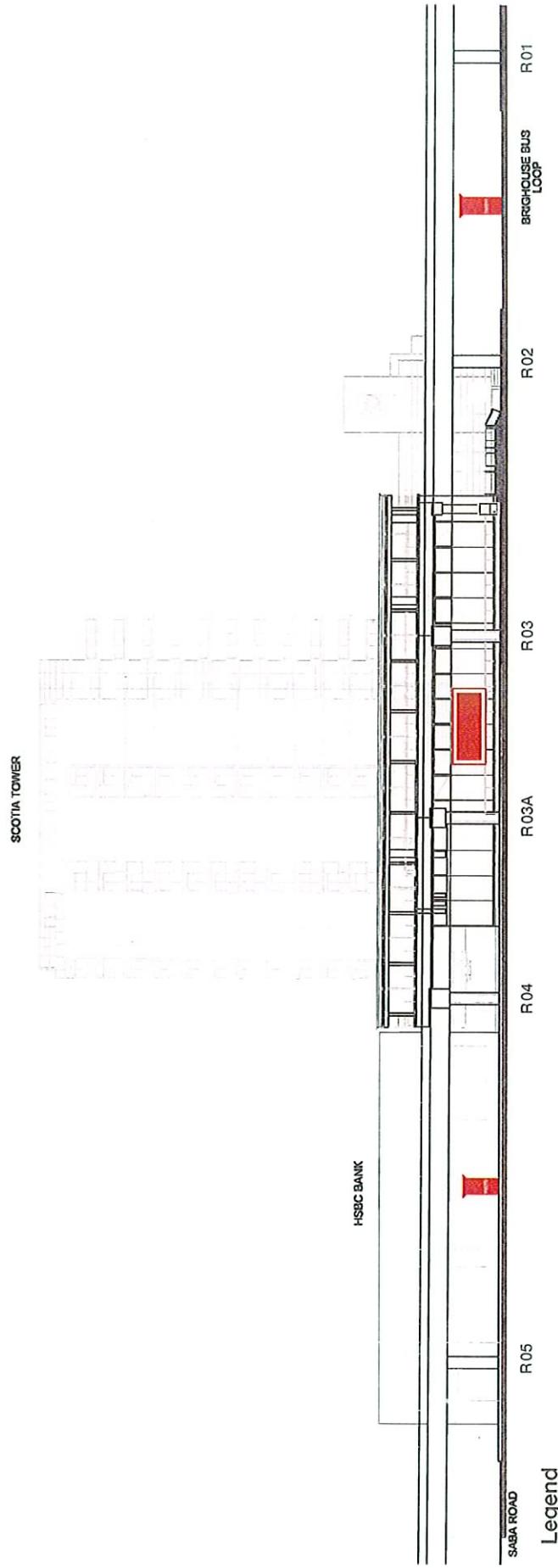


Brighouse Station Plan
Integration with No.3 Road Restoration

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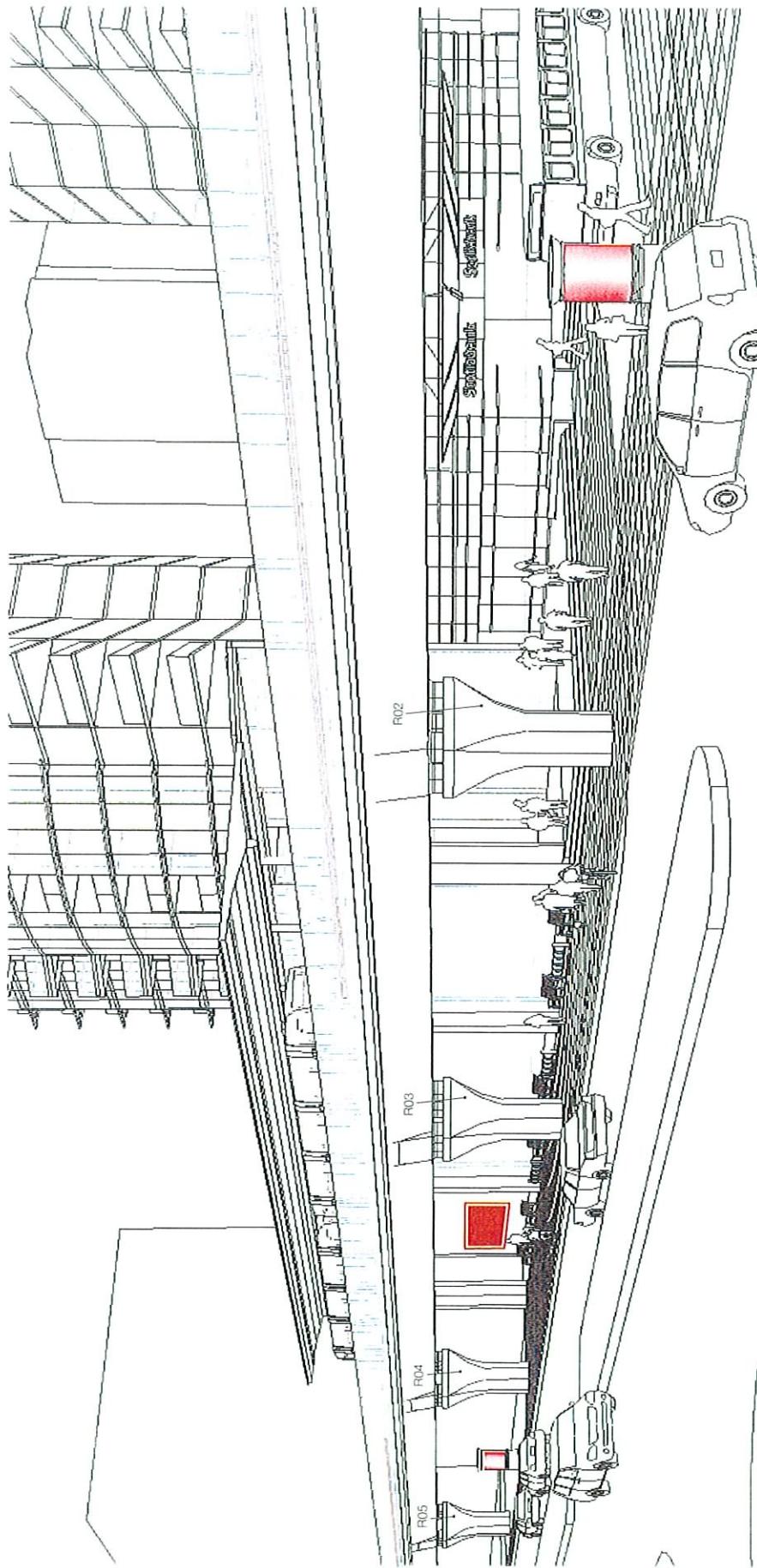
CANADA LINE MULTIMEDIA INFORMATION DISPLAY & ADVERTISING
June 2008



Legend

- Revolution 360°
- Orion LED Display
- Station Zone

Scale 1:400



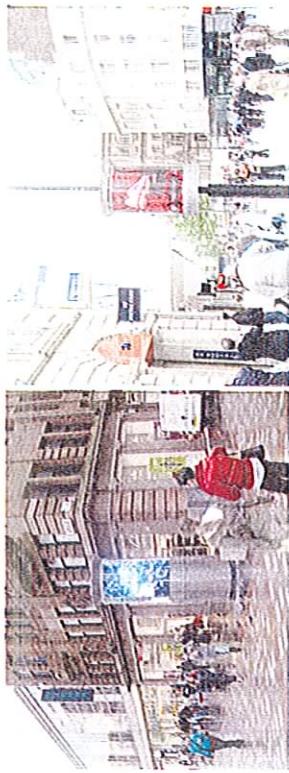
Brighthouse Station Southwest View
Integration with No.3 Road Restoration

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Appendix: Exhibit 1
Integration with No.3 Road Restoration

2



Revolution 360°

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Revolution 360° Specifications
October 2007

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Appendix: Exhibit 1
Integration with No.3 Road Restoration

Revolution 360°

- Display Configuration

1	2	3
1800mm		1289mm
		3867mm

The Revolution 360° 6-Sheet display has three virtual content panels but can also operate as one 360° display

3

4

Revolution 360°

PHYSICAL SPECIFICATION

USAGE	Indoor or Outdoor
PHYSICAL DIMENSIONS (Diameter x H)	1,345mm x 2,500mm
ENCLOSURE	6 mm polycarbonate
WEIGHT	300kgs
POWER	Existing supply AC 240V 20 Amp Max
BUILT-IN COMPUTER	Embedded Media Player and integrated communications options including 3G, GPRS, WiFi, Bluetooth or ADSL

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Revolution 360°

DISPLAY SPECIFICATION

IMAGE DISPLAY SIZE (W x H)	3.867mm x 1.800mm
SCREENS	1, 2 or 3 screens
VIDEO RESOLUTION	1024 x 720
LED TYPE	Surface Mount
DOT PITCH	3.8mm (H) 2.5mm (V)
COLOUR SPECTRUM	R:620nm, G:580nm, B:470nm
COLOUR DEPTH	16 bit (24 bit best option)
ASPECT RATIO	Variable
REFRESH/FRAME RATE	50Hz
HORIZONTAL VIEWING	120°

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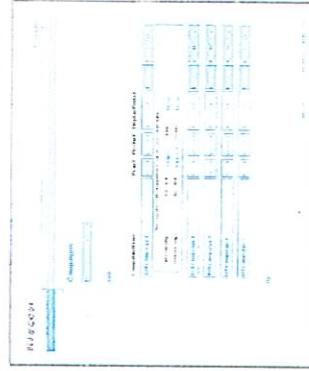
Revolution 360°

- Massive 7m² high resolution display area with 360° visibility
- Daylight viewable with auto brightness adjustment
- Operates from existing AC 240V power supply
- Designed to withstand tough exterior conditions
- Significantly cheaper than the cost of the highest resolution LED technology available today
- Includes integrated software, media player and communications components



Powered by Litecast™ Software

- Efficient management of digital content
- Integrated diagnostic software for real-time monitoring
- Site owners can create, schedule & deploy new outdoor campaigns
- Dynamic broadcast of targeted ad content (including language) based on time of day
- Secure access via the Internet



MPDP COMPARISON

COMPARISON

New MIS=220		MIS=210	
Power supply	100 - 240V AC, 50/60Hz	100 - 240V AC, 50/60Hz	MIS=210
AVL	Applied	None	
Power consumption	Max	10W	10W
Display Panel	Typical	10W	40W
Display Panel	DRC R	10,000 : 1	1,000 : 1
Display Panel	DRR R	1:40 : 1	>6 : 1
Brightness	(W/O DRC)	Brightness 1,000 : 1000	Brightness 1,000 : 1000
Color Scale		Color Difference Auto Color / Anti-Reflection	Color Difference Auto Color / Anti-Reflection
Input Buffer			
Effectiveness		1.97%	2.82%
Number of Pixel			
Number of Pixel		853W x 480H Panels	5mm = 5mm
Video Signal		NATIVE/PC/SIGNAL	
PC Signal		RGB/G/ANAG/NSX/G/ANAG	Vertical frequency 15.5 ~ 75Hz
Frequencies		Horizontal frequency 15.5 ~ 75KHz	Vertical frequency 50/55/60Hz
Output/Output Signal		Video [R, G, B], Component, YUV	
Power Consumption	3.5W	Rotary SW	DIP SW
Environment WxHxD	924 mm x 521 mm x 75 mm	926.2 mm x 521.7 mm x 76.5 mm	278g
Right		10kg	
Model	This model is loaded with BCU (In Compensation function) on MIS=4220 specification.		

*MITS-4210 Model is loaded with BIC (Burn In Compensation) function on MITS-4210 specification this model is scheduled for production

Appendix: Exhibit 2
Integration with No.3 Road Restoration

Appendix: Exhibit 2 Integration with No.3 Road Restoration