Land Transport Authority ITSO Division	Division/Section: **ITSO Division /ITSO OCC Traffic Operations**	**Rev No.** **2**
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Sentosa Gateway Dynamic Lane Operations

Table of Contents

DOCUMENT CONTROL

REV	DOCUMENT TITLE & COPY NUMBER	Date	Prepared by	Reviewed by	Approved by
0	Sentosa Gateway Dynamic Lane Operations Copy____of _____	15th December 2009	Uthyakumar S/O Anamalay (OE)	Alfred Loh (SOE)	Soh Ling Tim (MOPN)
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AMENDMENT HISTORY RECORD

Rev. No.	Effective Date of Change	Section & Sub-Section Amended	Amendments/ References	Party Requesting for Change
1	XX Oct 2013	Whole Document	Due to organization change of division name from ITSO to ITSO.	DOM, ITSO OCC
2	XX Dec 2020	Whole Document	Due to change of Staff Designations in ITSO OCC. Delete SOE, insert DM Delete DySOE, insert DyAM	Mgr, ITSO OCC

Section 1. Introduction

1.1.1 The operational concept for the Sentosa Gateway dynamic lane is based on traffic management traffic scheme and criteria when deciding to close the lane leading to Vivocity shopping center car park.

TM's Criteria:

1) Default status-All lanes will lead to Sentosa Gateway, Vivocity CP2 access will be cordoned off. This status is when traffic flow to Vivo city and Sentosa is normal.

2) Access road to Vivocity CP2 will be open only if peak traffic flow is observed around the Sentosa Gateway/Telok Blangah junction during any planned event caused by traffic going to Vivocity with a tailback to Telok Blangah/Kampong Bahru junction

3) This access road can also be opened during any road incident along Telok Blangah Road near the vicinity of the access road that causes at one lane reduction. NOTE for clause 2 & 3 DyAM shall inform DM, who will in turn inform Manager(ITSO OCC) who will seek concurrence from management before opening the access road.

Section 2. Personnel Involved

2.1.1 DyAM, DM, LTM and LTM DO

Section 3 Process

Sub-Section 3.1 Opening (Removing of Barrier)

3.1.1 Once the traffic condition around vicinity of Vivo City near Sentosa gateway requires the opening of the lane to Vivo City car park 2 as observed by the control room operator via the CCTV. DyAM shall inform the LTM DO to activate 2 LTMs (Land Transport Authority Traffic Marshal) to remove the barrier poles to open the lane allowing access to Vivo City car park 2 & inform DM.

3.1.2 Once LTMs arrive on site they shall park their vehicle to block the access road to Vivocity with their emergency beacon lights on, LTM to remove the barrier poles downstream nearer the traffic light junction first followed by the upstream poles (See Attachment 1).

3.1.3 Once done LTMs shall inform LTM DO, who in turn shall inform the DyAM that the barrier has been removed. DyAM shall change the information on the static gentry with VMS & the hybrid directional sign to inform motorists of lane opening access to Vivocity car park 2.

3.1.4 Once the barrier is removed and safely stored, LTMs shall inform DyAM and shall release the LTMs to resume their expressway duties.

Sub-Section 3.2 Closure (Implementation of Barrier-Resuming of Default Status)

3.2.1 When the traffic condition observed via CCTV by the control room operator around the vicinity of Vivocity subsided and the congestion is no longer present at Telok Blangah/Kampong Bahru junction (i.e. there is no sustained tailback for 15mins) DyAM shall inform the LTM DO to activate 2 LTMs (Land Transport Authority Traffic Marshal) to site.

3.2.2 Before the arrival of LTM on site the DyAM can change the information on the static gentry with VMS & the hybrid directional sign informing the motorists of the lane closure to Vivocity CP 2 and only left turn to Sentosa is allowed.

3.2.3 Once LTMs arrive on site they shall park their vehicle to block the access road to Vivocity with their emergency beacon lights on, LTM to put back the barrier poles upstream first followed by the downstream poles nearer the traffic light junction (See Attachment 1).

3.2.4 Once the barrier is safely in place, LTMs shall inform the DyAM who will release the LTMs to resume his/her expressway duties after observing that traffic flow is normal for 3 cycle after barrier implementation.

Sub-Section 3.3 Contingency Activation of LTMs For Yellow Box Enforcement

3.3.1 If LTM are activated for Yellow Box enforcement at Sentosa Gateway/Telok Blangah junction, they will inform DyAM once they have arrived on site.

3.3.2 LTM on site shall observe and should any yellow box encroachment occurs with obstruction to flow of traffic the LTM will record down the offending vehicle registration number, date and time of the offence and stating that the encroachment causes obstruction in the MP401 form and at the same time inform the DyAM.

3.3.3 DyAM shall try and zoom in junction eye 103119 to capture the offense and the offending vehicle.

3.3.4 LTM will bring the filled up MP401 form to OCC, DM will request FC to retrieve the captured snapshot footage of the offending vehicle.

3.3.5 The MP401 and the recovered footage will be slotted into Manager(ITSO OCC) in tray on the DM's desk. ITSO OCC Ops support section will forward the captured snapshot with the corresponding MP401 form to VTL for processing.

4. Abbreviations

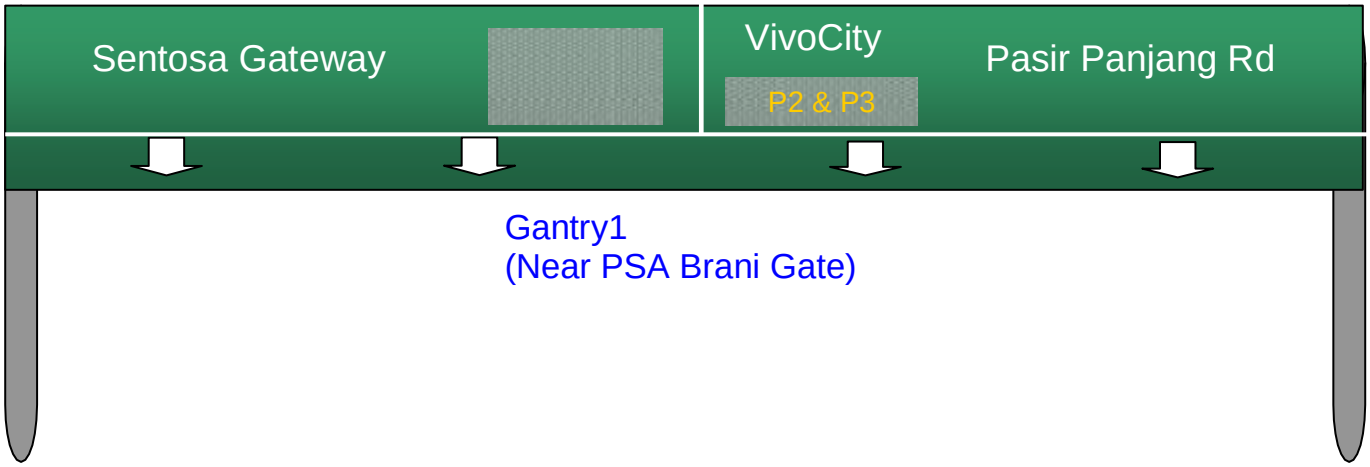
ERMS	Enhance Road Management System
EMAS	Expressway Monitoring Advisory System
FC	Fault Coordinator
ITSO OCC	Intelligent Transport Systems Operations Operations Control Room
OE	Operations Executive
LTM	Land Transport Authority Traffic Marshal
LTM DO	Land Transport Authority Traffic Marshal Deployment Officer
DyAM	Deputy Assistant Manager
DM	Deputy Manager
VTL	Vehicle Transit & Licensing

ATTACHMENT 1- Removable Barrier Poles

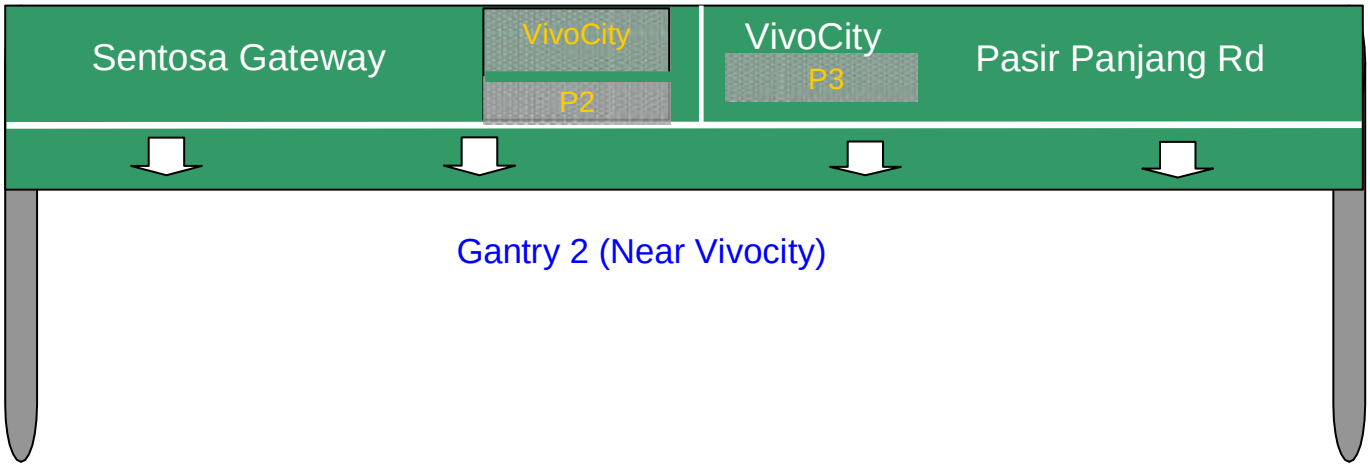
Downstream barrier poles nearer traffic light junction

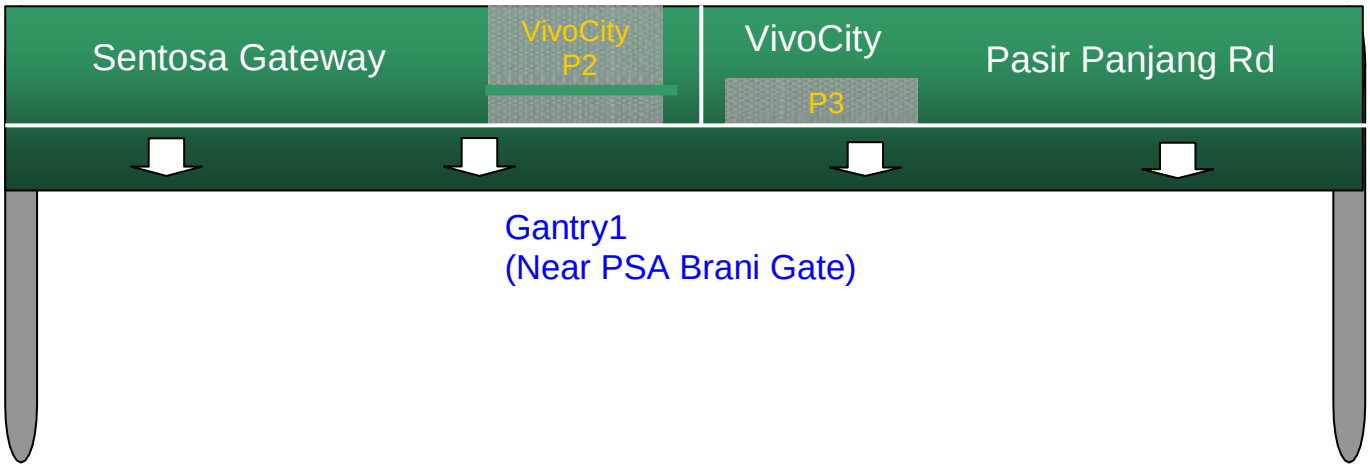
Upstream Barrier Poles

ATTACHMENT 2- Equipment For Sentosa Gateway Dynamic Lane Operation



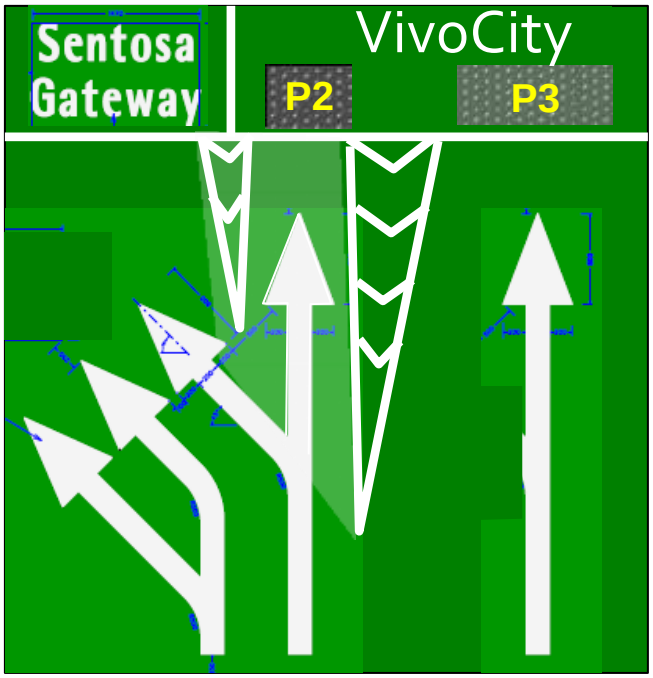
Two Static Gantry signs with Variable Message System (Default Status)





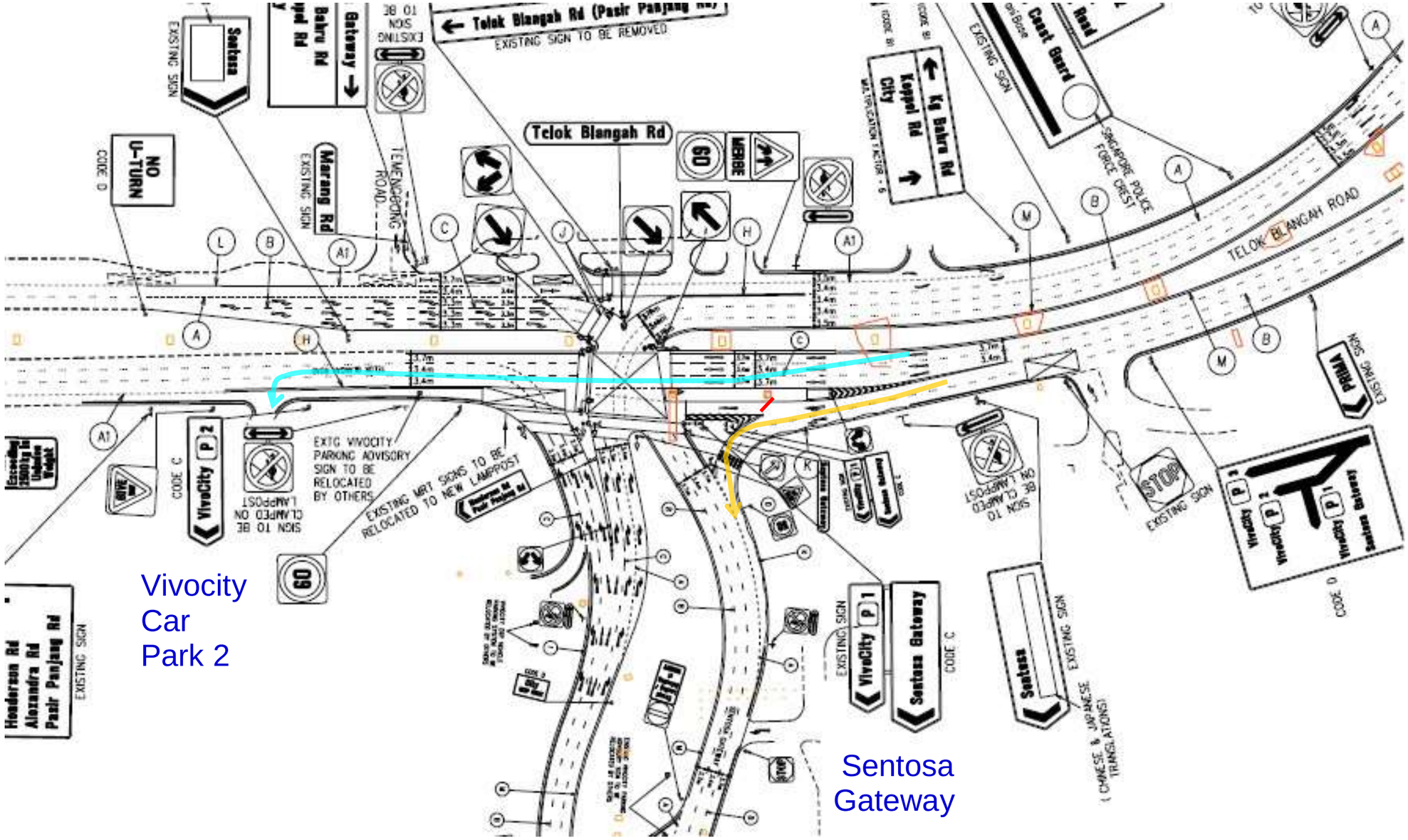
Two Static Gantry signs with Variable Message System (Access to VivoCity Open)

Hybrid Electronic Directional Sign (Default)

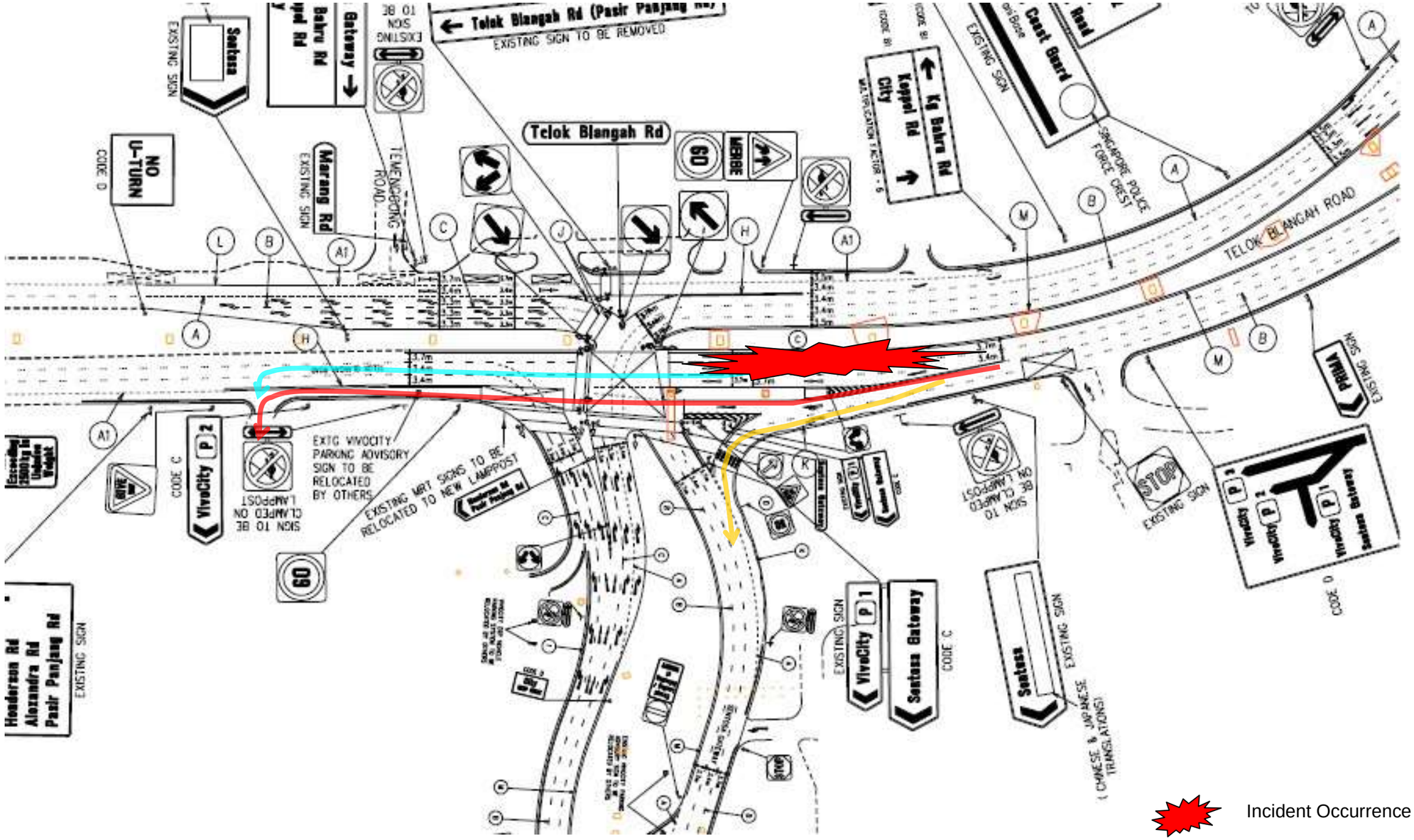


Hybrid Electronic Directional Sign (Access Road Open)

This sign is for future implementation upon completion of the variable graphic portion



Attachment 1a)- Sentosa Gateway Default Flow (Access Road to ViVo City CP2 closed)



Attachment 1b) Sentosa Gateway Alternate Flow (Access Road to Vivo City CP2 Open)