JQZ

TRANSPORT ASPECTS OF PLANNING PROPOSAL FOR PROPOSED RESIDENTIAL DEVELOPMENT, 11-17 COLUMBIA LANE, HOMEBUSH

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COLSTON BUDD ROGERS & KAFES PTY LTD
ACN 002 334 296
Level 18 Tower A
Zenith Centre
821 Pacific Highway
CHATSWOOD NSW 2067

Telephone: (02) 9411 2411
Facsimile: (02) 9411 2422
Email: cbrk@cbrk.com.au

REF: 10480

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1. INTRODUCTION

1.1 Colston Budd Rogers and Kafes Pty Ltd has been commissioned by JQZ to review the traffic aspects of its planning proposal for a site at 11-17 Columbia Lane in Homebush. The site location is shown on Figure 1.

1.2 The site has Part 3A Concept Plan approval for mixed use development. That approval also covered adjacent sites to the north (6-18 Parramatta Road) and east (Kennards site). For the subject site, the approval includes 787m^2 commercial, 620m^2 community uses and some 244 apartments.

1.3 The site at 6-18 Parramatta Road has since been developed for a mixed use development comprising 430 residential apartments plus 1,369m^2 commercial, basement car parking and a road connection to Parramatta Road at George Street. We prepared reports[1,2] in support of the approved Part 3A development and the development at 6-18 Parramatta Road.

1.4 We also previously prepared a report[3] for the subject site which accompanied a planning proposal to provide some 287 residential apartments.

1.5 The current planning proposal for 11-17 Columbia Lane would provide for some 382 residential apartments. The traffic aspects of the planning proposal are reviewed in the following chapter.

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1 "Transport and Accessibility Impact Assessment for Part 3A Concept Plan Application for Columbia Precinct at Homebush." Prepared for Columbia Precinct Consortium, June 2011.

2 "Transport Report for Proposed Mixed Use Development, 6-18 Parramatta Road, Homebush." Prepared for Columbia Lane Development Pty Ltd, April 2014.

3 "Transport Aspects of Planning Proposal for Proposed Residential Development, 11-17 Columbia Lane, Homebush." Prepared for JQZ, April 2015.

2. TRANSPORT ASPECTS OF PLANNING PROPOSAL

2.1 Our review of the transport aspects of the planning proposal is set down through the following sections:

- site location and road network;
- approved developments;
- Parramatta Road Urban Transformation Program;
- proposed development;
- public transport, walking and cycling;
- traffic generation; and
- summary.

Site Location and Road Network

2.2 The site is located at 11-17 Columbia Lane, Homebush, as shown on Figure 1. It has frontage to Columbia Lane to the east and north. There is a stormwater channel west of the site. The site is vacant and was previously occupied by industrial buildings.

2.3 Surrounding land use includes the Kennards self-storage facility to the east, substation and railway land to the south and south-east. There is a recently completed mixed use residential development north of the site at 6-18 Parramatta Road, which has vehicular access from Columbia Lane.

2.4 Parramatta Road provides a four lane carriageway with two traffic lanes in each direction. There is a third westbound lane west of the site. Clearways operate in both directions during weekday peak periods. There are bus stops on both sides of the road, close to the site.

2.5 George Street runs north from Parramatta Road at a signalised intersection, north of the site. George Street provides for one traffic lane and one parking lane in each direction, clear of intersections. It provides access to retail and commercial development. There is a right turn bay in Parramatta Road for turns into George Street.

2.6 A southern connection to the intersection of Parramatta Road with George Street has been constructed in association with the development at 6-18 Parramatta Road. It is also controlled by the traffic signals at the intersection. Currently the southern road extension provides for vehicles to exit the precinct, with left turns from Parramatta Road not permitted. Once the works in association with the modifications to the intersection are completed (including the additional westbound through traffic lane on Parramatta Road), all turns will be permitted at the intersection.

2.7 Columbia Lane connects to Parramatta Road at an unsignalised t-intersection. All movements are provided at this intersection, with a right turn storage lane in Parramatta Road for movements into Columbia Lane.

Approved Developments

2.8 11-17 Columbia Lane has Part 3A Concept Plan approval for mixed use development. That approval also covered adjacent sites to the north (6-18 Parramatta Road) and east (Kennards site). For the subject site, the approval includes 787m^2 commercial, 620m^2 community uses and some 244 apartments.

2.9 The site has also been rezoned to accommodate some 287 residential apartments, with vehicular access from Columbia Lane.

Parramatta Road Urban Transformation Program

2.10 The Parramatta Road Urban Transformation Program identifies the Parramatta Road corridor to cater for 27,000 new dwellings and 50,000 jobs.

2.11 For the Homebush precinct, the plan identifies the potential for more than a third of the population growth in the Parramatta Road corridor (some 9,500 dwellings), as well as 12,900 new jobs. The precinct is close to Sydney Olympic Park, Burwood, Parramatta, Rhodes, Macquarie Park and the city.

2.12 One of the infrastructure projects identified to cater for the increased development is the WestConnex Motorway. This project includes widening of the M4 Motorway, construction of the M4 East, the M4/M5 link and the new M5. The M4 widening is expected to be completed in 2017. The M4 East is under construction and is expected to be open in 2019.

2.13 The plan identifies the Parramatta Light Rail as providing opportunities for improved transport. It also identifies the development potential around the key transport nodes, including Strathfield and Homebush stations.

2.14 An infrastructure schedule has been prepared to identify improvements required to accommodate new development in the corridor, including transport infrastructure. For the Homebush precinct, the infrastructure schedule includes the following:

- new cycle link along Queen Street, Parramatta Road and Cooper Street to Strathfield railway station;

- longer term cycle links to and from Mason Park;
- through site pedestrian links, including to Concord West railway station;
- pedestrian improvements to George Street and Parramatta Road;
- extension or duplication of right turn lane from Parramatta Road into George Street;
- improvements to Pomeroy Street intersections;
- new traffic signals at Cooper Street/Parramatta Road;
- extension of Pomeroy Street to Parramatta Road via Derowie Avenue, including new traffic signals at Parramatta Road/Derowie Avenue;
- improved rail frequencies at Homebush, North Strathfield and Concord West rail stations; and
- potential new bus route between Parramatta and Burwood via Parramatta Road.

2.15 The infrastructure schedule includes cost estimates and assigns responsibilities for the various measures between councils, RMS and TfNSW, and developers, where appropriate, for measures such as through site links.

2.16 The cost estimates have been used to determine a contribution per dwelling, to fund the local measures in each precinct.

Proposed Development

2.17 The planning proposal for 11-17 Columbia Lane would provide for some 382 residential apartments. The new road connection through 6-18 Parramatta Road would continue through the subject site to connect to Columbia Lane near its southern end. East of this new road connection through the site, a public park would be provided on the eastern part of the site.

2.18 Parking would be provided in accordance with appropriate council controls, with the final parking provision to be determined at the development application stage.

Public Transport, Walking and Cycling

2.19 The site is well located to public transport networks. It is within walking distance of the railway stations at Homebush and Strathfield. Homebush Station is some 300 metres from the site and Strathfield Station is some 900 metres.

2.20 Services on the two main lines through these stations generally operate with headways of some five to 10 minutes in each direction during peak periods and 10 to 15 minutes in each direction outside peaks. Passengers can transfer to and from other parts of the rail system at various locations, notably at Central.

2.21 Local and regional bus services through the area are provided by Sydney Buses. As previously noted, there are bus stops on both sides of Parramatta Road in the vicinity of the site. Bus services in the area include the following routes:

- Route 408 - Flemington Station or Rookwood Cemetery to Burwood via Homebush and Strathfield;

- Route 458 - Ryde to Burwood via Rhodes, Concord Hospital, North Strathfield and Strathfield;

- Route 459 - Macquarie University to Strathfield via Macquarie Centre and Ryde;

- Route 525 - Sydney Olympic Park and Parramatta to Burwood via Newington and Strathfield; and

- Route 526 - Sydney Olympic Park Wharf to Burwood via Newington and Strathfield.

2.22 Strathfield Railway Station also provides a major transport interchange for local and regional bus services operating in the area. The site therefore has good access to regular public transport services.

2.23 The proposed development will increase residential densities close to existing good public transport services. To provide accessibility for cyclists, bicycle parking will be provided in the basement car parking areas.

2.24 Improved pedestrian connectivity is being provided between George Street and areas to the south in association with the extension of George Street across Parramatta Road, and through the subject site.

2.25 The proposed development is therefore consistent with government objectives and the planning principles of:

(a) improving accessibility to employment and services by walking, cycling, and public transport;

(b) improving the choice of transport and reducing dependence solely on cars for travel purposes;

(c) moderating growth in the demand for travel and the distances travelled, especially by car; and

(d) supporting the efficient and viable operation of public transport services.

Traffic Generation

2.26 Traffic generated by the proposed development will have its greatest effects during weekday morning and afternoon peak periods when it combines with commuter traffic on the surrounding road network.

2.27 Surveys of the existing buildings at 6-18 Parramatta Road found a traffic generation rate of some 0.15 to 0.2 vehicles per hour per apartment two-way during peak hours. On this basis, the proposed development, with 382 apartments, would generate some 60 to 80 vehicles per hour two-way during weekday peak hours.

2.28 This compares to our assessed traffic generation of some 85 vehicles per hour two-way for the development envisaged in the previous planning proposal for the site. The development envisaged in the current planning proposal would therefore result have a similar traffic generation to the previous development.

2.29 It is likely that access to a future redevelopment of the adjacent Kennards site would be provided from Columbia Lane. The applicant's town planner has advised that redevelopment of the Kennards site could accommodate some 456 residential apartments.

2.30 A development of this scale on the Kennards site would therefore have a traffic generation of some 70 to 90 vehicles per hour two-way at peak times.

2.31 We have undertaken traffic counts at the intersections of Parramatta Road with George Street and Columbia Lane during weekday morning and afternoon peak periods.

2.32 The results of the surveys are shown in Figures 2 and 3, and summarised in Table 2.1. Parramatta Road carried some 2,300 to 2,900 vehicles per hour two-way during the morning and afternoon peak hour. Traffic flows on George Street were lower at some 1,000 to 1,050 vehicles per hour two-way. Columbia Lane and the new precinct access road south of Parramatta Road that forms part of the intersection carried some 80 vehicles per hour.

Table 2.1: Two-way (sum of both directions) peak hour traffic flows

Road	Location	AM peak hour	PM peak hour
Parramatta Road	East of George Street	2,265	2,580
	West of George Street	2,695	2,870
Columbia Lane	South of Parramatta Road	25	45
George Street	North of Parramatta Road	1,030	1,000
Precinct access road	South of Parramatta Road	80	80

2.33 The capacity of the road network is largely determined by the capacity of its intersections to cater for peak period traffic flows. The signalised intersection of Parramatta Road with George Street/precinct access road has been analysed using the SIDRA program for the traffic flows shown in Figures 2 and 3, plus the following additional development traffic:

- 60 and 80 vehicles per hour two-way (during morning and afternoon peak hours respectively) for the planning proposal at 11-17 Columbia Lane; and

- 70 and 90 vehicles per hour two-way (during morning and afternoon peak hours respectively) for residential development on the Kennards site.

2.34 The analysis also includes the Parramatta Road widening along the site frontage which is being completed in association with the development at 6-18 Parramatta Road.

2.35 SIDRA simulates the operations of intersections to provide a number of performance measures. The most useful measure provided is average delay per vehicle expressed in seconds per vehicle. Based on average delay per vehicle, SIDRA estimates the following levels of service (LOS):

- For traffic signals, the average delay per vehicle in seconds is calculated as delay/(all vehicles), for roundabouts the average delay per vehicle in seconds is selected for the movement with the highest average delay per vehicle, equivalent to the following LOS:

0 to 14	=	"A"	Good
15 to 28	=	"B"	Good with minimal delays and spare capacity
29 to 42	=	"C"	Satisfactory with spare capacity
43 to 56	=	"D"	Satisfactory but operating near capacity
57 to 70	=	"E"	At capacity and incidents will cause excessive delays. Roundabouts require other control mode.
>70	=	"F"	Unsatisfactory and requires additional capacity

- For give way and stop signs, the average delay per vehicle in seconds is selected from the movement with the highest average delay per vehicle, equivalent to following LOS:

0 to 14	=	"A"	Good
15 to 28	=	"B"	Acceptable delays and spare capacity
29 to 42	=	"C"	Satisfactory but accident study required
43 to 56	=	"D"	Near capacity and accident study required
57 to 70	=	"E"	At capacity and requires other control mode
>70	=	"F"	Unsatisfactory and requires other control mode

2.36 It should be noted that for roundabouts, give way and stop signs, in some circumstances, simply examining the highest individual average delay can be misleading. The size of the movement with the highest average delay per vehicle should also be taken into account. Thus, for example, an intersection where all movements are operating at a level of service A, except one which is at level of service E, may not necessarily define the intersection level of service as E if that movement is very small. That is, longer delays to a small number of vehicles may not justify upgrading an intersection unless a safety issue was also involved.

2.37 The SIDRA analysis found that with the additional traffic from the two developments (planning proposal for 11-17 Columbia Lane and residential development on the Kennards site), the signalised intersection of Parramatta Road and George Street would operate with average delays of less than 42 seconds per vehicle during peak periods. This represents level of service C, a satisfactory level of service.

2.38 Therefore, with the road works currently under construction, the road network will be able to cater for the traffic from the planning proposal for 11-17 Columbia Lane and future residential development on the Kennards site.

2.39 The proposed development at 11-17 Columbia Lane will make appropriate contributions, under the infrastructure schedule for the Parramatta Road Corridor Urban Transformation Program, towards other local works identified for the precinct.

Summary

2.40 In summary, the main points relating to the transport aspects of the planning proposal for 11-17 Columbia Lane are as follows:

i) the site has Part 3A Concept Plan approval for a mixed use development comprising commercial, retail, community and residential uses;

ii) the Part 3A approval also includes the adjacent Kennards site;

iii) 6-18 Parramatta Road has recently been redeveloped, including a new road connection to Parramatta Road opposite George Street;

iv) the planning proposal for 11-17 Columbia Lane would provide for some 382 residential apartments, an extension of the road connection to Parramatta Road/George Street and open space;

v) the planning proposal is consistent with planning for the area identified in the Parramatta Road Corridor Urban Transformation Strategy;

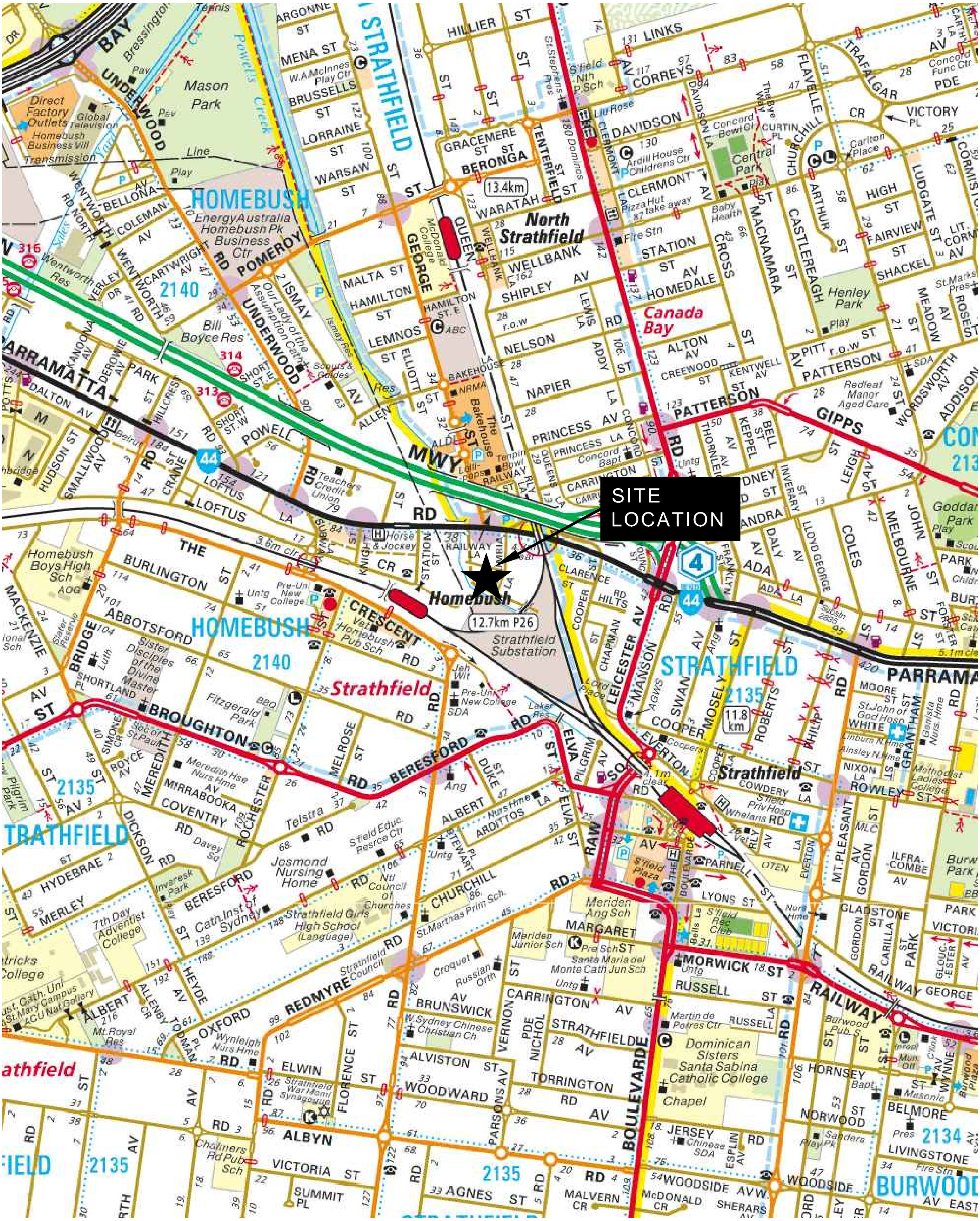
vi) the site is well located to existing and future planned public transport services;

vii) traffic generation of the planning proposal for 11-17 Columbia Lane would be similar to that assessed in the previous planning proposal;

viii) road works are under construction on Parramatta Road in association with the development at 6-18 Parramatta Road, to cater for that development, as well as development of 11-17 Columbia Lane and the Kennards site;

ix) with these works, the road network will be able to cater for the additional traffic from the planning proposal for 11-17 Columbia Lane and residential development on the Kennards site; and

x) the proposed development at 11-17 Columbia Lane will make appropriate contributions towards other local works identified for the precinct, under the infrastructure schedule for the Parramatta Road Corridor Urban Transformation Program.



Location Plan

Colston Budd Hunt & Kafes Pty Ltd

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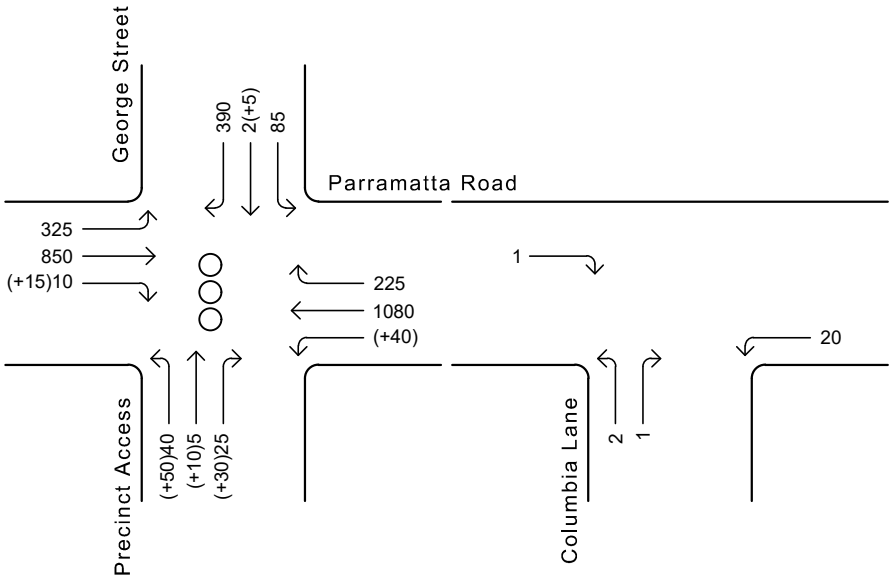
Figure 1

North



LEGEND

100 - Existing Peak Hour Traffic Flows
(+10) - Additional Development Traffic
- Traffic Signals

Existing plus development weekday morning peak hour traffic flows

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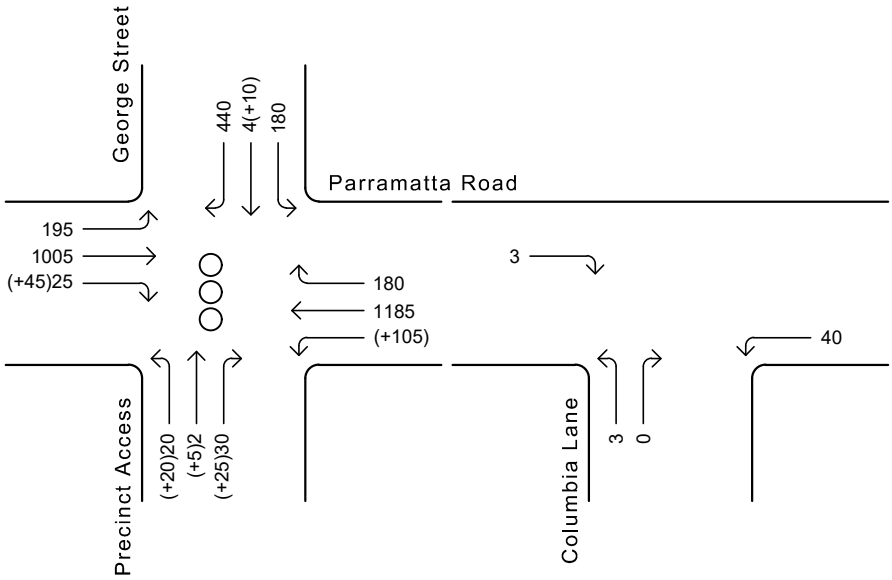
Figure 2

North



LEGEND

100 - Existing Peak Hour Traffic Flows
(+10) - Additional Development Traffic
- Traffic Signals

Existing plus development weekday afternoon peak hour traffic flows

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Figure 3