Herring Road Urban Activation Precinct
Submission

112 Talavera Road, Macquarie Park

Submitted to the NSW Department of Planning & Environment

On Behalf of Goodman Property Services (Aust) Pty Ltd

13 August 2014 ■ 14405

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JBA operates under a Quality Management System that has been certified as complying with ISO 9001:2008. This report has been prepared and reviewed in accordance with that system. If the report is not signed below, it is a preliminary draft.

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This report has been reviewed by:

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1.0 Introduction

This submission has been prepared by JBA on behalf of Goodman Property Services (Aust) Pty Ltd (**Goodman**). This submission relates to the NSW Department of Planning & Environment's (the **Department**) proposal for the Herring Road Urban Activation Precinct (**UAP**) which is currently on exhibition. Specifically, this submission is made in respect of 112 Talavera Road, Macquarie Park (the **Site**) which is owned by Goodman Industrial Funds Management Limited.

The Herring Road precinct proposal comprises:

- A mix of land uses to transform the precinct into an active place for living, learning and working;
- A quality higher density urban community that utilises excellent transport infrastructure and access to job markets, educational facilities, retail, local services and recreational assets;
- Increased building heights and densities that can improve housing supply and choice;
- A transformation of Herring Road into an active street, with wider pavements, new landscaping and new places to meet;
- Better connected and finer-grained streets and pedestrian / cycle and networks providing safer, more convenient and pleasant access; and
- Opportunities for new and improved parks, spaces, playgrounds and community facilities.

The Herring Road UAP presents an exciting opportunity to deliver additional housing and employment in close proximity to existing public transport infrastructure, social infrastructure such as Macquarie University and services including the Macquarie Shopping Centre.

The Department's new *Population and Dwelling Projections* released in June 2014 demonstrate increased demand for residential dwellings in the Ryde LGA compared to the targets presented in the draft *Metropolitan Strategy for Sydney to 2031*, on which the Herring Road UAP is based. The new data suggests there is a net projected demand for a further 7,500 dwellings within the Ryde LGA by 2031 over and above those already approved and planned for in the Herring Road and North Ryde UAPs. The Herring Road UAP presents an opportunity to meet this additional demand, subject to appropriate transport and social infrastructure to meet the needs of the incoming population.

For the subject Site, the Herring Road UAP proposes two maximum building height controls of 45m and 90m which are proposed to apply to different parts of the Site, together with a maximum floor space ratio (**FSR**) control of 3.5:1. The purpose of this submission is to:

- Request a realignment of the building height controls to optimise the future development outcomes; and
- Request an increase in the maximum FSR control to 4.5:1. The FSR for the already developed commercial portion of the Site could be capped at 2.84:1 if the Department considers this appropriate (see section 3.3 for further explanation).

2.0 The Site

2.1 Site Location and Context

The Site is located at 112 Talavera Road, Macquarie Park, within the Ryde Local Government Area (**LGA**). The Site is situated on the north-western side of the intersection between Talavera and Herring Roads, adjacent to an on-ramp providing access to the M2 Motorway. The Site is adjacent to the Herring Road off-ramp which means it enjoys direct access to the M2 in both directions.

The Site is located approximately 14km north-west of the Sydney Central Business District, and is in the north-western edge of Macquarie Park, which forms a key part of Sydney's Global Economic Corridor. Macquarie Park is classified as a 'Specialised Precinct' in the Draft Metropolitan Strategy for Sydney to 2031.

The Site is within close proximity to a number of services, including:

- Macquarie University, which is directly across the road on the southern side of Talavera Road;
- Macquarie University Station, which is a 7 minute walk to the south (500 metres); and
- Macquarie Shopping Centre and bus interchange, which are a 4 minute walk (300 metres) at the closest point to the south-east.

These walking distances are well within the desirable walking catchment for high density residential development from local centres and transport hubs (400 to 800 metres).

The site's locational context is shown at **Figure 1**.

2.2 Site Description & Existing Development

The site area is 23,810m^2 and is essentially triangularly shaped. The Site generally slopes down towards the north, although the topography within the Site is undulating.

The Site is occupied by a commercial office and industrial unit complex known as the Macquarie View Estate. The total lettable area of the complex is approximately 22,241m^2 and 348 car spaces are provided. There are thirteen industrial units on the lower ground and ground levels of the complex, and above this there are two four-storey commercial office buildings. There is also a new child care centre on the site, which is opening later in August 2014.

The north-western end of the Site accommodates a recently built commercial office building, occupied by Fujitsu. The building is six storeys and provides parking for 240 cars. The gross floor area (**GFA**) of the Fujitsu building is 12,768m^2. The building was completed in early 2014. Therefore this part of the Site is essentially quarantined for a substantial period of time.

Vehicular entry and egress is provided to the Site from Talavera Road, and additional separate vehicular entry and exit points are provided from Herring Road and Christie Road, respectively. Talavera Road is a two-way, four lane divided carriageway, with slip lanes leading to Christie Road and Herring Road.

Figure 1 – Site Location and Context

2.3 Proposed Subdivision of Land

Goodman recently lodged a development application (**DA**) for the subdivision of the Site in order to place the Fujitsu building on its own allotment, thereby enabling the remaining parcel to be developed for residential purposes. The proposed land areas are as follows:

- Fujitsu site: 4,490m^2;
- Residential site: 19,320m^2.

The proposed subdivision includes rights of carriageway to facilitate access to both sites from Talavera, Herring and Christie Roads.

As the Fujitsu building is a new, purpose designed modern office building, completed in early 2014, the Fujitsu site is essentially locked up or quarantined for a substantial period of time, potentially 50 years adopting the typical lifespan of a building. This means that the Fujitsu site has no ability to deliver the objectives of the Herring Road UAP, namely to provide substantial new dwelling supply to house Sydney's growing population.

The loss of the development potential of the Fujitsu site should not be ignored; and can be rectified through the transfer of the development rights onto the remainder of the Site. This is discussed further in section 4.2.1 of this submission.

The Fujitsu building does, however, contribute to the mixed use vision for the Site in the UAP.

2.4 Surrounding Development

The site is surrounded by:

- The M2 Motorway to the north and the Lane Cove National Park further to the north on the opposite side of the M2;
- An access ramp to/from the M2 to the south-east, and four x 8-9 storey buildings further to the south-east at 84-92 Talavera Road, two of which are used for residential purposes and two of which are used as serviced apartments;
- Talavera Road to the south, and commercial offices and the Macquarie University Hospital on the southern side of Talavera Road; and
- Christie Road to the north-west, and vacant land on the opposite side of Christie Road.

3.0 Goodman's Proposal

Goodman submits that:

- The maximum building heights of 90m and 45m should be realigned in the manner illustrated in the Height Limit Diagram at **Figure 4**; and
- The maximum FSR control should be increased to 4.5:1. The FSR for the already developed commercial portion of the Site could be capped at 2.84:1 if considered appropriate (see section 3.3 for further explanation).

Goodman has commissioned Nettleton Tribe to prepare an indicative concept plan to illustrate how the proposed height and FSR controls could be realised on the Site. The indicative concept plans, provided under separate cover and extracted in **Figure 2** below, include the following:

- A total of six (6) residential flat buildings, ranging from 12 to 28 storeys, in accordance with the proposed realigned maximum building heights; and
- A substantial parcel of public open space, measuring approximately 1,987m^2, or 10% of the residential site area. The open space will be located partially under a reverse podium to increase visibility/accessibility from the street and the green/pedestrian link alongside Kikkiya Creek.

The residential flat buildings have been designed to comply with the proposed DCP controls for the Herring Road UAP proposal, and the building separation, building depth and solar access guidelines of the SEPP 65 *Residential Flat Design Code* (**RFDC**). This further supports the argument that the Site is capable of accommodating additional FSR.

Figure 2 – Extract of Goodman's Concept Plan
Source: Nettleton Tribe

3.1 Land Use

The current zoning of the land is B4 Mixed Use under the *Ryde Local Environmental Plan 2010*. The UAP proposes to retain this zoning. The Indicative Structure Plan in the UAP proposal designates the future use of this Site for "mainly residential" purposes.

Goodman raises no objection to the retention of the B4 Mixed Uses Zone.

Consistent with the vision of the UAP, this submission envisages that the Site will be developed for mostly residential purposes, comprising the retention of the existing commercial Fujitsu building and the redevelopment of the remainder of the Site for residential purposes. The Site is suitable for predominantly residential development given its close proximity to public transport, a shopping centre and a university, as well as local and regional open space such as Lane Cove National Park.

3.2 Realignment of Maximum Building Height

The Herring Road UAP proposes a predominant height limit for the Site of 45 metres, with a 90 metre height limit on the southern corner (see **Figure 3**). Goodman requests that the 90m height limit be realigned in the manner shown in **Figure 4**. The proposed 90m height limit area is:

- Extended along the Talavera Road frontage of the development site, up to the boundary of the Fujitsu site;
- Narrowed along the Talavera Road frontage; and
- Slightly extended along the Herring Road frontage.

Due to the narrowing of the 90m height limit area along the Talavera Road frontage, the 90m height limit area has actually been reduced from approximately 7,660m^2 under the UAP proposal, to approximately 7,511m^2.

The purpose of this is to relocate height to where it is better placed in terms of urban design outcomes as it will create separation from the M2, increase solar access to the proposed residential buildings and allow a larger consolidated open space area to be created.

3.3 Increase in Maximum Floor Space Ratio

The Herring Road UAP proposes a maximum FSR for the Site of 3.5:1. Goodman submits that the maximum FSR control should be increased to 4.5:1, to provide the opportunity to deliver up to 262 additional dwellings (approximately, and based on an average apartment size of 62m^2) above and beyond that contemplated by the Herring Road UAP proposal.

An FSR of 4.5:1 would allow up to 86,940m^2 of GFA on the residential site (after subdivision). When combined with the existing GFA of the Fujitsu building, this would result in a total GFA potential of 99,708m^2, or a combined site FSR of 4.19:1.

The FSR of the Fujitsu building is 12,768m^2. With a site area after subdivision of 4,490m^2, this results in an FSR of 2.84:1. Should the Department deem this appropriate, the FSR of the Fujitsu site could be capped at 2.84:1 either on the FSR map or with a site-specific clause in the Ryde LEP.

As demonstrated in the following section, the Site is capable of supporting a maximum FSR of 4.5:1. The justification for this is discussed below.

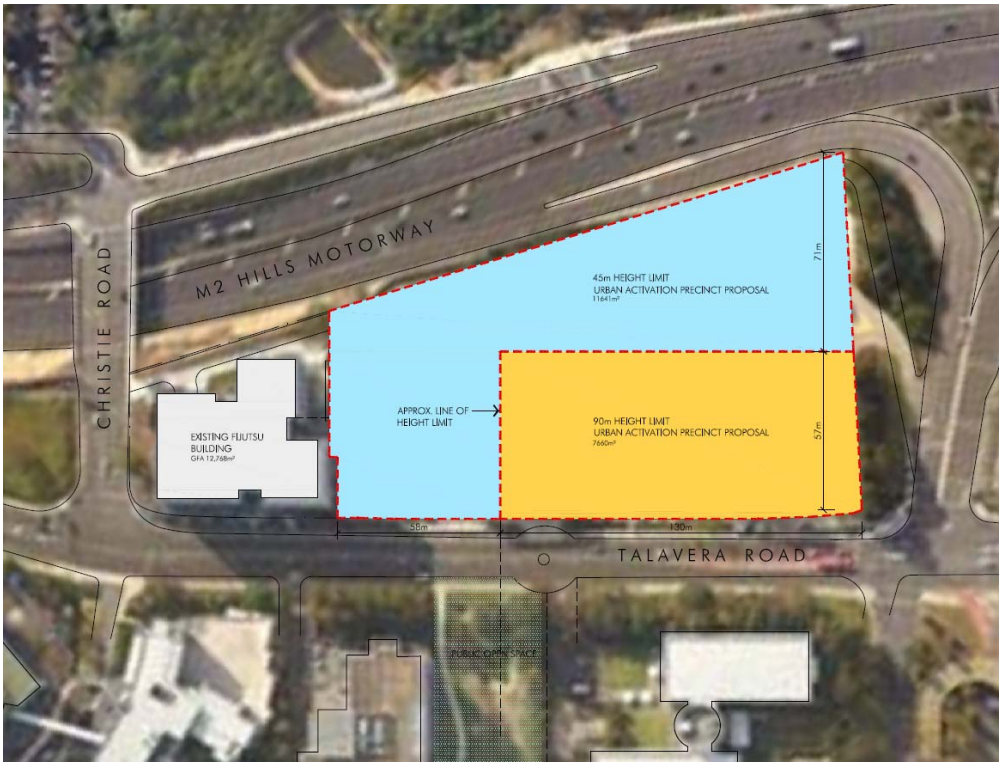

Figure 3 – Proposed Height Controls (Department of Planning and Environment)
Source: Nettleton Tribe

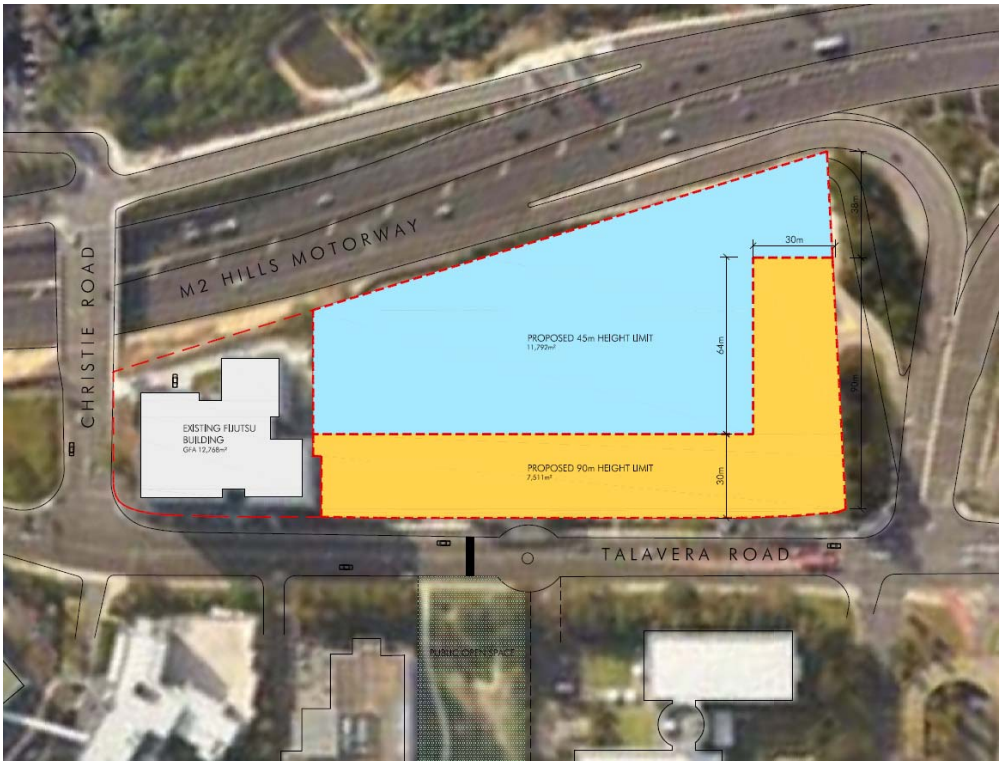

Figure 4 – Proposed Height Controls (Goodman)
Source: Nettleton Tribe

4.0 Justification

4.1 Realignment of Maximum Building Height

The UAP's proposed height map indicates that the area of the 90m height limit was designed to line up with the 90m + height limits proposed along the north-western side of Herring Road. There does not appear to be a strong urban design justification for the building heights to have to be lined up in this way, particularly given that the Site is separated from the rest of the precinct by a substantial road. In other words, the Site is not part of a row of sites where consistency in built form outcomes might be desirable.

Goodman's proposal to realign the 90m maximum building height is a better outcome for three reasons:

1. It concentrates the highest density as far away from the M2 Motorway as possible, which is beneficial from an acoustic impact perspective for future residents;
2. Narrowing the 90m area increases the number of apartments with direct solar access. The Department's proposed alignment would result in a cluster of tall buildings within this area (in order to achieve adequate yield) which would reduce the number of apartments with direct solar access;
3. Narrowing the 90m area also allows a larger, consolidated area of public open space to be created.

In terms of impacts, the proposal to extend the 90m area further along Talavera and Herring Roads will not have adverse overshadowing impacts on surrounding properties. Specifically:

- The land to the south and south-west on the opposite side of Talavera Road is occupied by commercial office uses and Macquarie University Hospital, therefore additional overshadowing of those properties is not an issue from a planning perspective. The UAP proposes to maintain the hospital/commercial use of this land and the recent construction of these buildings means that the redevelopment of those sites for an alternative use (i.e. residential) is not anticipated in the foreseeable future.
- To the east is a recent residential/serviced apartment development by Meriton. The two buildings fronting Talavera Road are the serviced apartment buildings and the other two are residential. Shadow diagrams prepared by Nettleton Tribe demonstrate that the extension of the 90m height limit further along Herring Road will not affect the Meriton site's ability to receive 3 hours solar access in mid-winter.

4.2 Increase in Maximum Floor Space Ratio

It is submitted that the proposed increased in FSR to 4.5:1 is justified on a number of grounds, including:

1. The loss of development potential over the long term from the recently developed Fujitsu site should be transferred onto the residential site;
2. The additional 262 dwellings (approximately) that can be delivered by the additional 1:1 will assist Ryde Council to achieve its dwelling targets in light of the Department's new population and dwelling projections released in June 2014;

3. The Site is strategically located, being in a 'Gateway' position to the Herring Road precinct, only a 4-7 minute walk from key infrastructure and services, and not immediately adjacent to any residential uses;
4. The Site is capable of achieving 4.5:1 while complying with the proposed height limits, the current/proposed DCP controls and the RFDC building separation, building depth and solar access controls;
5. The Traffic Report prepared by Traffix demonstrates that the Site and surrounding road and public transport networks are capable of supporting the additional development; and
6. Finally, the additional FSR can be achieved while still delivering significant public benefits, including public open space.

Each of these arguments is elaborated on below.

4.2.1 Transfer of Development Rights from the Fujitsu Site to the Residential Site

As discussed in section 2.3 of this submission, the north-western portion of the Site was recently developed with the construction of a modern purpose built commercial office building. Construction completed earlier this year. With the proposed subdivision of the Site (the subject of a current DA), the proposed land areas are as follows:

- Fujitsu site: 4,490m^2;
- Residential site: 19,320m^2.

As a result of the proposed subdivision, the Fujitsu building will have a FSR of 2.84:1. This is well below the maximum FSR proposed for the Site by the Herring Road UAP proposal of 3.5:1. Based on these existing and proposed FSRs, the unrealised GFA potential of the Fujitsu site is 2,947m^2. This is explained in **Table 1**.

Table 1 – Fujitsu site – remaining GFA potential

Fujitsu site – GFA/FSR potential	
Site area	4,490m^2
Fujitsu building GFA	12,768m^2
Existing site FSR	2.84:1
Maximum FSR (Herring Road UAP proposal)	3.5:1
Maximum GFA	15,715m^2
Unrealised GFA potential	2,947m^2

As for the residential site, the proposed subdivision results in a residential site area of 19,320m^2. The maximum FSR of 3.5:1 as proposed in the UAP would generate a maximum GFA of 67,620m^2. A maximum FSR of 4.5:1 as proposed by Goodman would generate a maximum GFA of 86,940m^2 – an additional 19,320m^2 of GFA (1:1).

However, the Fujitsu site's redevelopment this year means that it has no ability to deliver the objectives of the Herring Road UAP, namely to provide substantial new dwelling supply to house Sydney's growing population. That site is essentially locked up or quarantined for a substantial period of time. Applying the maximum FSR of 3.5:1 as proposed by the UAP, the Fujitsu site's recent redevelopment means a loss of residential development potential of 15,715m^2.

This lost development potential of the Fujitsu site should not be ignored, and can be rectified through the transfer of the development rights onto the remainder of the Site. This will enable the residential site to deliver much needed housing supply in the precinct. The transfer of the excess 15,715m^2 to the residential site would result in a maximum GFA potential of 83,335m^2 (i.e. 67,620m^2 + 15,715m^2) – resulting in an FSR of 4.3:1. This submission requests a maximum FSR of 4.5:1, which means an additional **3,605m^2** of GFA is needed. **This additional GFA is essentially available by transferring the unrealised GFA of 2,947m^2 from the Fujitsu site to the residential site (there is little difference between 2,947m^2 and 3,605m^2).**

The above figures are set out in **Table 2**.

Table 2 – GFA potential of the residential site

GFA potential of the residential site	
Residential site area	19,320m^2
Maximum FSR (Herring Road UAP proposal)	3.5:1
Maximum GFA	67,620m^2
Maximum FSR (Goodman's proposal)	4.5:1
Maximum GFA	86,940m^2
Difference	19,320m^2 (1:1)
Lost residential development potential of the Fujitsu site (based on 3.5:1 maximum FSR)	15,715m^2
Maximum GFA potential of the residential site following transfer of 15,715m^2 to the residential site	83,335m^2
Additional GFA requested to increase the maximum FSR to 4.5:1	3,605m^2

If the Department requires comfort that the Fujitsu site cannot be further developed in future, the FSR of 4.5:1 could be applied to the residential site only, while the FSR of the Fujitsu site can be capped at 2.84:1 (i.e. the existing FSR of the Fujitsu site if the Site is subdivided).

4.2.2 New Population & Dwelling Projections in the Ryde LGA

The Herring Road UAP Planning Report states (page 63) that *"the Herring Road precinct has significant potential for increased development density and improved local housing supply. … [T]he rapid sales and take-up of recent Herring Road residential development commencements indicate a latent local demand for apartments."*

In June 2014, the Department released new population, household and dwelling projections to 2031 for all LGAs in NSW, including Ryde. The Department's projections and annual local performance monitoring data indicate that:

- 62,950 dwellings will be required to accommodate the projected population growth in Ryde, compared to 55,516 projected in 2011 – an increase of 7,434 dwellings.
- There were 44,050 dwellings in the Ryde LGA as at 2011.
- To meet the projected demand for 62,950 dwellings by 2031, total dwellings in Ryde will need to increase by **18,900 dwellings**.

- Between 2004 and 2011, Ryde Council averaged 485 dwelling approvals per year. In the 12 months to June 2012, Ryde approved 1,003 dwellings and in the 12 months to June 2013, 952 dwellings were approved.

Based on the projected dwelling demand of 18,900 dwellings, and assuming that:

- Council approved another 1,000 dwellings to June 2014;
- 3,000 new dwellings will be provided at North Ryde UAP, and
- 5,400 new dwellings will be provided at Herring Rd UAP (as currently proposed),

then there is still a net projected demand for a **further 7,500 dwellings** within the LGA by 2031.

The Department's projections also project an additional 44,300 people in the Ryde LGA by 2031 compared to 2011 figures. This represents an additional 8,700 people compared to the preliminary population projections released in 2013. Based on average occupancy rates of 2.1 persons per dwelling, this equates to approximately 4,142 dwellings.

The Herring Road UAP proposal was placed on public exhibition in June 2014, around the same time that the Department released its new projections. Given their (approximately) concurrent release, it is possible that the Herring Road UAP proposal did not take the new figures into account when arriving at the target of 5,400 dwellings for the precinct. If that is the case, then the proposed height and FSR standards proposed in the Herring Road UAP fall short because the base projections are outdated.

The additional 262 dwellings (approximately) that can be achieved by increasing the GFA from 3.5:1 to 4.5:1 would help to contribute to the shortfall. The Herring Road UAP is a precinct in which the market is keen to develop. If the precinct can be accelerated and brought to market faster, then Council and the Department will not have to rely on other sites to make up this shortfall.

4.2.3 Strategic Location of the Site

The subject Site is well-placed to accommodate additional FSR. That is because:

- It is within 4 minutes' walking distance of the nearest entrance to the Macquarie Centre and 7 minutes' walking distance to the Macquarie University Station, as illustrated in **Figure 1**;
- There are 27 different bus routes which service the Herring Road precinct, six of which stop directly outside the subject Site and provide connections to Blacktown, Rouse Hill, Castle Hill, Norwest and the Sydney CBD;
- The Site is very easily accessible from other areas of Sydney given its position adjacent to the M2 Motorway.

While a number of sites in the precinct possess the above attributes, the subject Site is particularly well-placed to accommodate additional FSR because:

- It is located at a 'Gateway' entrance to the precinct. As stated in the UAP proposal, *"highest densities are located close to Macquarie University Train Station, Macquarie Shopping Centre, precinct gateways and along key streets"*. Given its Gateway location, it would be reasonable to allocate the Site the highest density, consistent with the general approach of the UAP.

- The Site is physically separated from other mixed use/residential sites by wide roads and/or non-residential land uses, therefore overshadowing and privacy are less of a concern on this site than many other sites in the precinct.

4.2.4 Compliance with DCP & RFDC Guidelines

Nettleton Tribe's concept plan has been designed to comply with the current Ryde Development Control 2010 and the proposed amendments set out in the Herring Road UAP Planning Report, as well as the building separation, building depth and solar access guidelines in the SEPP 65 RFDC. This demonstrates that the Site can accommodate 4.5:1 within the planning control framework. The conceptual scheme includes buildings that:

- Are setback at least 5m from Talavera Road and Herring Road;
- Have street wall heights of 6 storeys, with upper level setbacks of 4 metres;
- Have maximum depths of 18m (plus balconies), consistent with the RFDC;
- Have tower floorplates above the streetwall of approximately 800m^2;
- Are separated by 24 metres in accordance with the RFDC (less in the case of Building D which has graduating heights, but still in accordance with the RFDC); and
- Due to their significant separation, are likely to achieve at least 2 hours of solar access for at least 70% of apartments.

This adds further support to the submission that the Site is capable of accommodating additional FSR.

4.2.5 Traffic Impacts

Goodman has engaged Traffix to analyse the likely traffic impacts of the increased density on the Site. The Traffic Report, attached at **Appendix A**, concludes that the proposed higher FSR scheme on the Site is not expected to generate a markedly higher level of traffic than an FSR of 3.5:1, with a predicted increase of less than one additional vehicle trip per minute during the morning and evening peak hours. Traffic generation is summarised in **Table 3**. These additional trips would be distributed across multiple driveways and diluted with increasing distance from the site, and accordingly, it is anticipated that the impact of the higher FSR scheme upon the surrounding road network would be negligible.

Table 3 – Traffic generation

	FSR	No. of Units	AM Peak	PM Peak
Current traffic generation (surveyed July 2014)	-	-	105	99
Predicted traffic generation (compliant FSR scheme)	3.5:1	913	173	137
Predicted traffic generation (proposed FSR scheme)	4.5:1	1,175	223	176
Additional traffic generated by proposed FSR (over and above existing traffic)	-	-	+118	+77
Additional traffic generated by proposed FSR (over and above 3.5:1)	-	-	+50	+39

4.2.6 Community Benefits

Public Benefits Generally

Generally speaking, higher densities on the subject Site are likely to have substantial community benefits including:

- Increased housing affordability, as more dwellings can be provided with economies of scale in production leading to reduced costs of construction;
- Transport savings, which become manifest with travel time savings due to greater dwelling yields within closer proximity to workplaces and public transport networks; and
- Leveraging existing assets, as higher yields will lead to more effective use of existing infrastructure in the immediate area.

Public Open Space

The concept scheme prepared by Nettleton Tribe demonstrates that higher densities of 4.5:1 can be achieved on the Site while delivering public open space in close proximity to the commercial core, at no cost to Council.

The public open space included in the concept scheme measures approximately 1,987m^2, or 10% of the residential site area, which is significant. The open space is located partially under a reverse podium to increase visibility/accessibility from the street and provide a connection from the green/pedestrian link alongside Kikkiya Creek.

The provision of public open space on the Site is particularly beneficial as there is currently a deficit of public open space in the Herring Road UAP (page 26 of the UAP Planning Report). While the Herring Road UAP proposal aims to address this deficit, it does so by providing linear connections between public open spaces rather than by significantly increasing the quantum of public open space in the precinct. Therefore, Goodman's proposal to offer almost 2,000sqm of public open space on a privately owned site has the potential to provide a significant public benefit.

Furthermore, the Site is partly flood affected and the provision of open space will reduce the impervious surfaces of the Site and therefore reduce site runoff.

Public open space could be delivered either by:

- A site-specific LEP clause requiring a quantum of public open space to be provided on the Site in the event that the developer utilises the full amount of allowable GFA; or
- The DCP being amended to show 2,000sqm of open space on the Site, ensuring that its location/configuration is flexible.

This approach is preferable to, say, rezoning part of the Site to RE1 Public Recreation to mandate the delivery of public open space in a pre-empted location.

Child Care Centre

There is an existing child care centre on the Site, which is opening in late August 2014. This can be rebuilt in any new scheme on the Site, to address the shortage of childcare places in the precinct as recognised in the Community Consultation Report at Appendix E to the Herring Road UAP Planning Report. The new child care centre has entered into a 10 year lease with Goodman. Goodman should be compensated through additional FSR for already providing this public benefit, and for the inevitable costs associated with terminating this lease early to bring the Site to market.

5.0 Conclusion

This submission relates to 112 Talavera Road, Macquarie Park and the planning framework proposed by the Herring Road UAP.

For the subject Site, the Herring Road UAP proposes two maximum building height controls of 45m and 90m which are proposed to apply to different parts of the Site, together with a maximum FSR control of 3.5:1. The purpose of this submission is to:

- Request a realignment of the building height controls so that the 90m height control is extended along the Talavera Road frontage and narrowed in depth to optimise future development outcomes; and
- Request an increase in the maximum FSR control to 4.5:1. The FSR for the already developed commercial portion of the Site could be capped at 2.84:1 if considered appropriate (see section 3.3 for further explanation).

Justification for Height Limit Realignment

The proposed height limit realignment is justified for the following reasons:

- It concentrates the highest density as far away from the M2 Motorway as possible, which is beneficial from an acoustic impact perspective for future residents;
- Narrowing the 90m area increases the number of apartments with direct solar access. The Department's proposed alignment would result in a cluster of tall buildings within this area (in order to achieve adequate yield) which would reduce the number of apartments with direct solar access;
- Narrowing the 90m area also allows a larger, consolidated area of public open space to be created;
- The extension of the 90m area further along Talavera and Herring Roads will not have adverse overshadowing impacts on surrounding properties.

Justification for FSR Increase on the Residential Site

The proposed FSR increase on the residential site is justified for the following reasons:

- The loss of residential development potential over the long term from the recently developed Fujitsu site should and can be transferred onto the residential site;
- The additional 262 dwellings (approximately) that can be delivered by the additional 1:1 will assist Ryde Council to achieve its dwelling targets in light of the Department's new population and dwelling projections released in June 2014;
- The Site is strategically located, being in a 'Gateway' position to the Herring Road precinct, only a 4-7 minute walk from key infrastructure and services, and not immediately adjacent to any residential uses;
- The Site is capable of achieving 4.5:1 while complying with the proposed height limits, the current/proposed DCP controls and the RFDC building separation, building depth and solar access controls;
- The Traffic Report prepared by Traffix demonstrates that the Site and surrounding road and public transport networks are capable of supporting the additional development; and
- Finally, the additional FSR can be achieved while still delivering significant public benefits, including public open space.

Traffic Report

Traffix

Appendix A

Reference: 14.320p01v2

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traffic & transport planners

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8 August 2014

Goodman Property Services (Aust) Pty Ltd
Level 17, 60 Castlereagh Street
Sydney NSW 2000

Attention: Mr Will Dwyer, National Manager Planning

Re: 112 Talavera Road, Macquarie Park

Dear Will,

We refer to your recent correspondence concerning the potential rezoning and redevelopment of the site at 112 Talavera Road, Macquarie Park.

We have considered the intent of the Herring Road Urban Activation Precinct Proposal with respect to the suggested density of redevelopment on the subject site, in terms of traffic generation and its associated impact upon the surrounding road network. The results of our investigations are summarised in the following sections.

Location and Site

The subject site is bounded by the M2 Motorway to the north-east, the M2 Motorway westbound on-ramp to the south-east, Talavera Road to the south-west, and the recently constructed Fujitsu Building to the north-west at 118 Talavera Road. Internal vehicular connectivity between the subject site and the Fujitsu site is currently provided via a roadway adjacent to the north-eastern boundary of the sites.

Vehicular access to the subject site is currently provided via:

- An entry (left-in) only driveway from the M2 Motorway westbound on-ramp
- A driveway on Talavera Road, located approximately 100m to the west of the intersection with Herring Road / the M2 Motorway westbound on-ramp;
- An exit (left-out) only driveway on Talavera Road, located approximately 25m to the west of the intersection with Herring Road / the M2 Motorway westbound on-ramp;
- A driveway on Christie Street (with access to and egress from the subject site via the recently completed Fujitsu development).

A Location Plan is presented in **Figure 1** below, and a Site Plan is provided as **Figure 2**.

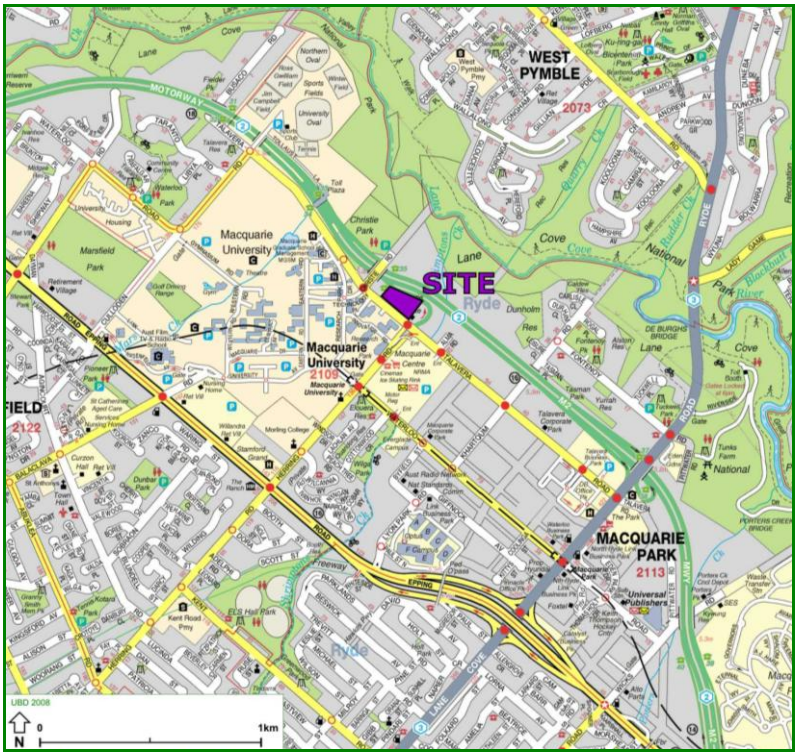


Figure 1: Location Plan

Figure 2: Site Plan

Existing Development

The site currently accommodates a commercial building with a number of industrial / commercial tenancies. A total of 348 parking spaces are provided on the subject site, with an additional 240 parking spaces within the adjacent Fujitsu site. Of the 240 parking spaces on the Fujitsu site, it is understood that approximately 180 parking spaces are currently allocated to tenants within this building, with the remaining 60 spaces being effectively vacant.

Traffic surveys were undertaken at the four access driveways, to establish the level of traffic currently generated by them during the morning and evening peak hours. The results of these surveys are provided as **Attachment A**, and summarised in **Table 1** and **Table 2** below.

Table 1: Existing Development Traffic Generation (AM Peak)

	Access 1 (Christie Rd)		Access 2 (Talavera Rd - west)		Access 3 (Talavera Rd - east)		Access 4 (M2 Ramp)		TOTAL		Hourly Totals
Time Per	In	Out	In	Out	In	Out	In	Out	In	Out	In + Out
0700 - 0715	0	0	6	1	1	0	6	0	13	1	
0715 - 0730	3	1	4	1	0	0	16	0	23	2	
0730 - 0745	4	1	4	1	1	2	20	0	29	4	
0745 - 0800	9	1	14	1	0	1	18	0	41	3	116
0800 - 0815	8	2	9	2	1	1	19	0	37	5	144
0815 - 0830	6	1	5	0	0	2	17	0	28	3	150
0830 - 0845	6	1	14	2	1	1	16	0	37	4	158
0845 - 0900	7	3	11	5	2	3	14	0	34	11	159

Table 2: Existing Development Traffic Generation (PM Peak)

	Access 1 (Christie Rd)		Access 2 (Talavera Rd - west)		Access 3 (Talavera Rd - east)		Access 4 (M2 Ramp)		TOTAL		Hourly Totals
Time Per	In	Out	In	Out	In	Out	In	Out	In	Out	In + Out
1600 - 1615	1	10	2	3	0	8	2	0	5	21	
1615 - 1630	0	11	5	8	0	12	0	0	5	31	
1630 - 1645	0	6	0	5	0	12	2	0	2	23	
1645 - 1700	2	15	3	4	0	17	2	0	7	36	130
1700 - 1715	0	11	1	6	0	19	1	0	2	36	142
1715 - 1730	0	11	2	8	0	12	2	0	4	31	141
1730 - 1745	1	7	2	8	0	14	2	0	5	29	150
1745 - 1800	0	8	2	3	0	10	6	0	8	21	136

The traffic volumes outlined in the table above include traffic associated with the existing development on the subject site at 112 Talavera Road, as well as the Fujitsu development at 118 Talavera Road.

The traffic associated with the subject site (112 Talavera Road) in isolation has been estimated by means of a pro-rata approach, using the proportion of parking provided within this site, of the total (allocated) parking provision across the two sites.

On the basis of the above, the resulting estimated traffic generation of the development on the subject site is:

- 105 vph in the morning peak hour
- 99 vph in the evening peak hour

The Proposal

It is understood that the site at 112 Talavera Road is to be rezoned and redeveloped for residential purposes.

For the subject site, a floor space ratio (FSR) of 3.5 : 1 is suggested in the Herring Road Urban Activation Precinct Planning Proposal, which would support in the order of 913 units based on information provided by Nettleton Tribe Architects.

It is understood however that a higher FSR of 4.5 : 1 is sought, which would support in the order of 1,175 residential units.

As requested, we have considered the traffic impact of a residential development of 1,175 residential units upon the surrounding road network, taking into consideration the level of traffic generated by the existing use on the subject site. The results are outlined in **Table 3** below.

The assumed traffic generation rates for the proposed residential use are based upon those outlined in the RMS' Technical Direction 2014/04a (Guide to Traffic Generating Developments - Updated traffic surveys), which are as follows:

- AM Peak Hour: 0.19 trips per unit
- PM Peak Hour: 0.15 trips per unit

Table 3: Existing and Predicted Traffic Generation

Scenario	FSR	No of Units	AM Peak (vph)	PM Peak (vph)
Current Estimated Traffic Generation (Based upon Surveys completed July 2014)			105	99
Predicted Traffic Generation Compliant FSR Scheme	3.5 : 1	913	173	137
Predicted Traffic Generation Proposed FSR Scheme	4.5 : 1	1,175	223	176
Additional Traffic Generated by Proposed FSR Scheme (over and above Existing Traffic)			**+118**	**+77**
Additional Traffic Generated by Proposed FSR Scheme (over and above Compliant FSR Scheme)			**+50**	**+39**

As outlined in **Table 3** above, a residential development of FSR 4.5 : 1 (approximately 1,175 units) is expected to generate in the order of 80 - 120 additional vehicle trips during the morning and evening peak hours, when compared with the existing use on the site. This equates to approximately 1.5 – 2 additional vehicle trips per minute, one average, during the morning and evening peak hours.

Furthermore, it should be noted that a residential development of FSR 4.5 : 1 is expected to generate less than one additional vehicle per minute than a compliant scheme (FSR 3.5 : 1) during the morning and evening peak hours.

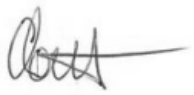
These additional trips would be distributed across multiple driveways and diluted with increasing distance from the site, and accordingly, it is anticipated that the impact of the higher FSR Scheme upon the surrounding road network would be negligible.

On the basis of the above, it is considered that a residential development of the scale of that proposed (1,175 units based upon an FSR of 4.5 : 1) is generally supportable on traffic planning grounds.

Please contact the undersigned should you have any queries or require any further information regarding the above.

Yours faithfully,

traffix



Anne Coutts
Senior Engineer

ATTACHMENT A

Results of Traffic Surveys

R.O.A.R. DATA

Reliable, Original & Authentic Results

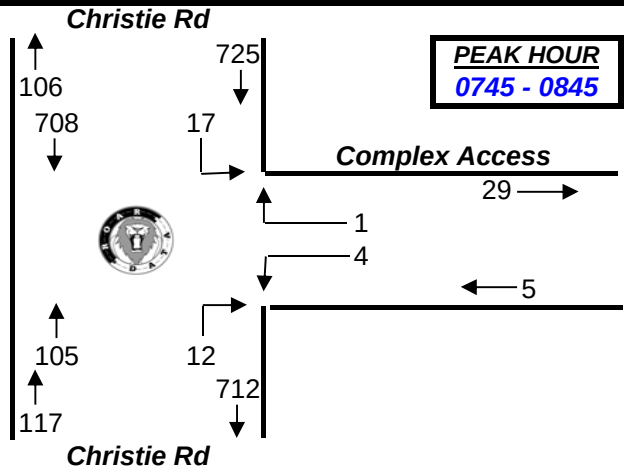
Ph.88196847, Fax 88196849, Mob.0418-239019

Client : Traffix
Job No/Name : 5252 MACQUARIE PARK Accesses
Day/Date : Friday / 18th July 2014

All Vehicles	NORTH		EAST		SOUTH		
	Christie Rd		*Complex*		*Christie Rd*		
Time Per	**T**	**L**	**R**	**L**	**R**	**T**	**TOTAL**
0700 - 0715	68	0	0	0	0	5	**73**
0715 - 0730	114	1	0	1	2	15	**133**
0730 - 0745	125	1	0	1	3	17	**147**
0745 - 0800	179	6	1	0	3	13	**202**
0800 - 0815	161	2	0	2	6	35	**206**
0815 - 0830	188	4	0	1	2	26	**221**
0830 - 0845	180	5	0	1	1	31	**218**
0845 - 0900	175	4	0	3	3	15	**200**
Period End	**1190**	**23**	**1**	**9**	**20**	**157**	**1400**

	NORTH		EAST		SOUTH		
	Christie Rd		*Complex*		*Christie Rd*		
Peak Per	**T**	**L**	**R**	**L**	**R**	**T**	**TOTAL**
0700 - 0800	486	8	1	2	8	50	**555**
0715 - 0815	579	10	1	4	14	80	**688**
0730 - 0830	653	13	1	4	14	91	**776**
0745 - 0845	708	17	1	4	12	105	**847**
0800 - 0900	704	15	0	7	12	107	**845**

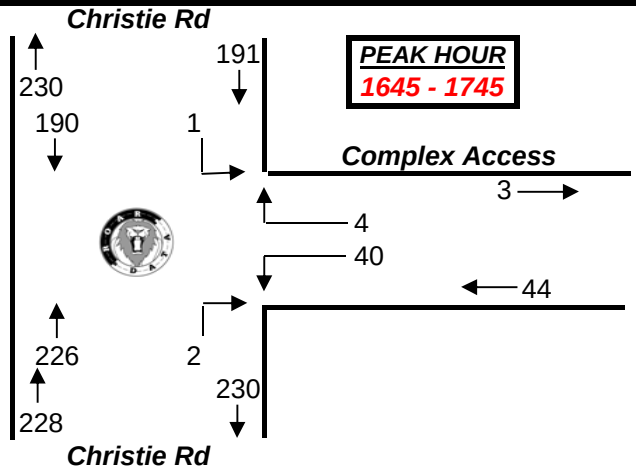
PEAK HR	**708**	**17**	**1**	**4**	**12**	**105**	**847**



All Vehicles	NORTH		EAST		SOUTH		
	Christie Rd		*Complex*		*Christie Rd*		
Time Per	**T**	**L**	**R**	**L**	**R**	**T**	**TOTAL**
1600 - 1615	49	0	2	8	1	30	**90**
1615 - 1630	48	0	4	7	0	34	**93**
1630 - 1645	35	0	0	6	0	49	**90**
1645 - 1700	56	1	0	15	1	61	**134**
1700 - 1715	44	0	2	9	0	51	**106**
1715 - 1730	44	0	2	9	0	60	**115**
1730 - 1745	46	0	0	7	1	54	**108**
1745 - 1800	44	0	0	8	0	45	**97**
Period End	**366**	**1**	**10**	**69**	**3**	**384**	**833**

	NORTH		EAST		SOUTH		
	Christie Rd		*Complex*		*Christie Rd*		
Peak Per	**T**	**L**	**R**	**L**	**R**	**T**	**TOTAL**
1600 - 1700	188	1	6	36	2	174	**407**
1615 - 1715	183	1	6	37	1	195	**423**
1630 - 1730	179	1	4	39	1	221	**445**
1645 - 1745	190	1	4	40	2	226	**463**
1700 - 1800	178	0	4	33	1	210	**426**

PEAK HR	**190**	**1**	**4**	**40**	**2**	**226**	**463**

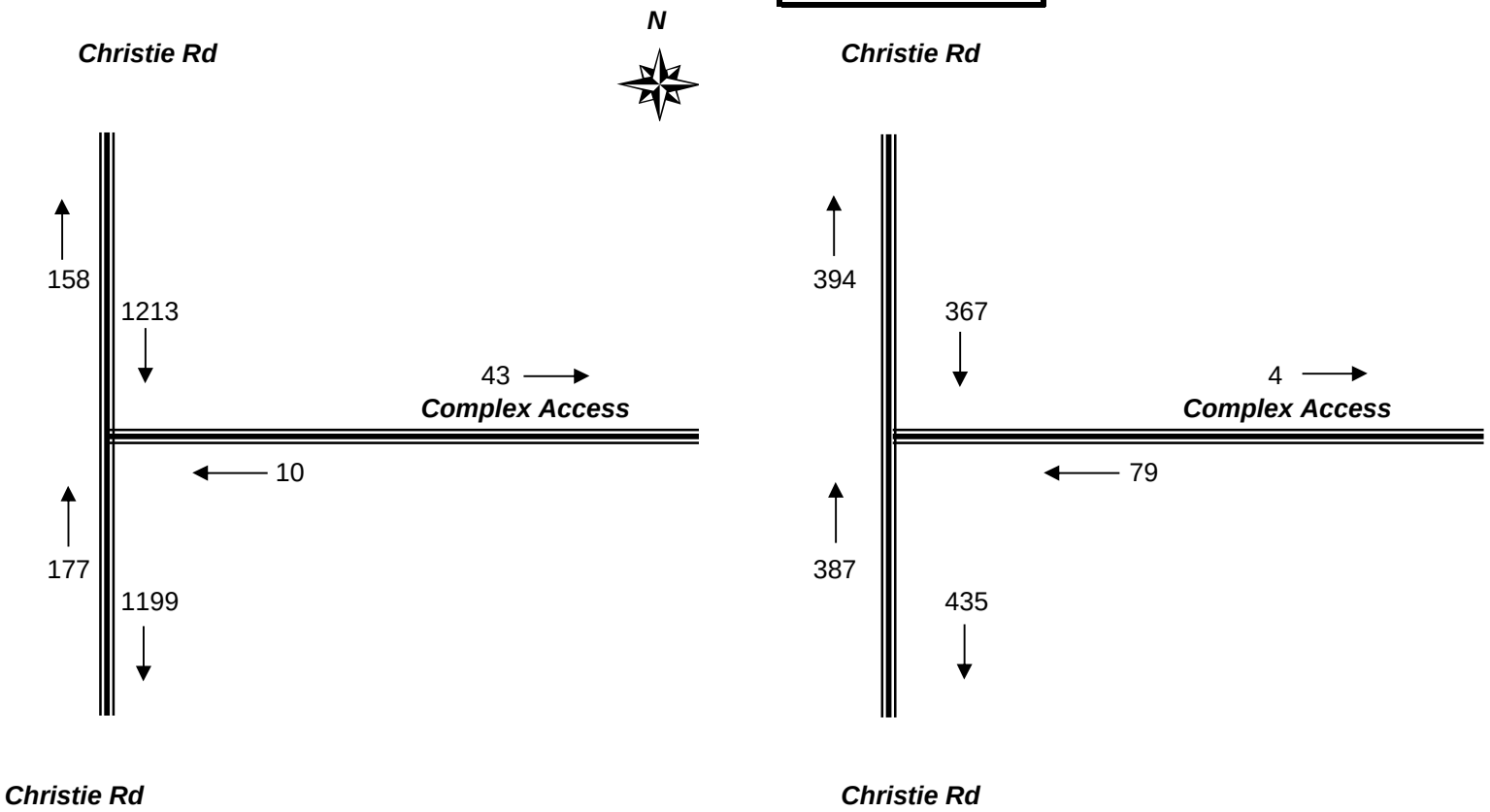


R.O.A.R DATA
Reliable, Original & Authentic Results
Ph.88196847, Fax 88196849, Mob.0418-239019

Client : Traffix
Job No/Name : 5252 MACQUARIE PARK Accesses
Day/Date : Friday / 18th July 2014

AM ***PM***

TOTAL VOLUMES FOR COUNT PERIODS



R.O.A.R. DATA

Reliable, Original & Authentic Results

Ph.88196847, Fax 88196849, Mob.0418-239019

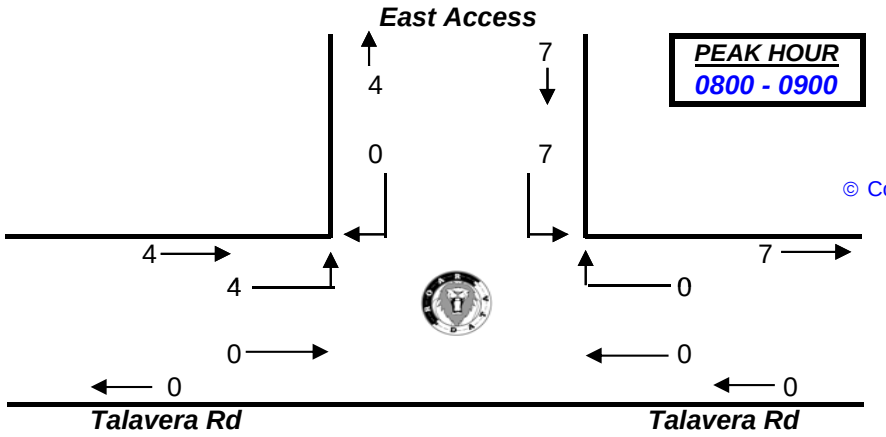
Client : Traffix

Job No/Name : 5252 MACQUARIE PARK Accesses

Day/Date : Friday / 18th July 2014

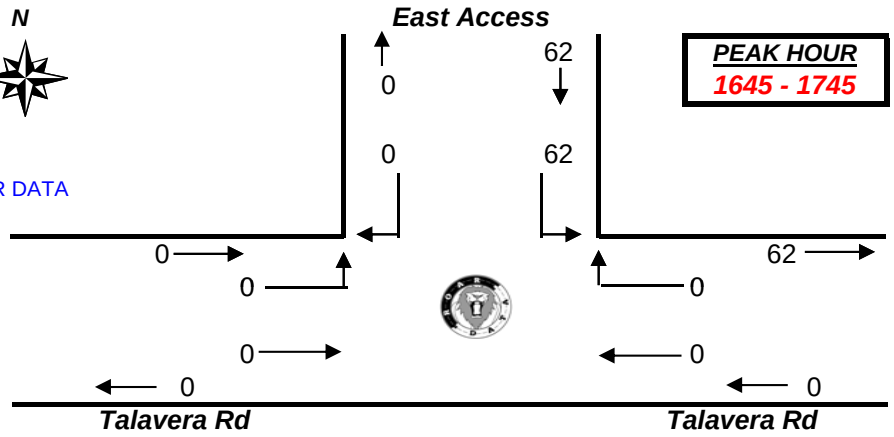
All Vehicles	WEST		NORTH		EAST		
	Talavera Rd		East Access		Talavera Rd		
Time Per	L	T	R	L	T	R	TOTAL
0700 - 0715	1		0	0		0	**1**
0715 - 0730	0		0	0		0	**0**
0730 - 0745	1		0	2		0	**3**
0745 - 0800	0		0	1		0	**1**
0800 - 0815	1		0	1		0	**2**
0815 - 0830	0		0	2		0	**2**
0830 - 0845	1		0	1		0	**2**
0845 - 0900	2		0	3		0	**5**
Period End	**6**	**0**	**0**	**10**	**0**	**0**	**16**

	WEST		NORTH		EAST		
	Talavera Rd		East Access		Talavera Rd		
Peak Per	L	T	R	L	T	R	TOTAL
0700 - 0800	2	0	0	3	0	0	**5**
0715 - 0815	2	0	0	4	0	0	**6**
0730 - 0830	2	0	0	6	0	0	**8**
0745 - 0845	2	0	0	5	0	0	**7**
0800 - 0900	4	0	0	7	0	0	**11**
PEAK HR	**4**	**0**	**0**	**7**	**0**	**0**	**11**



All Vehicles	WEST		NORTH		EAST		
	Talavera Rd		East Access		Talavera Rd		
Time Per	L	T	R	L	T	R	TOTAL
1600 - 1615	0		0	8		0	**8**
1615 - 1630	0		0	12		0	**12**
1630 - 1645	0		0	12		0	**12**
1645 - 1700	0		0	17		0	**17**
1700 - 1715	0		0	19		0	**19**
1715 - 1730	0		0	12		0	**12**
1730 - 1745	0		0	14		0	**14**
1745 - 1800	0		0	10		0	**10**
Period End	**0**	**0**	**0**	**104**	**0**	**0**	**104**

	WEST		NORTH		EAST		
	Talavera Rd		East Access		Talavera Rd		
Peak Per	L	T	R	L	T	R	TOTAL
1600 - 1700	0	0	0	49	0	0	**49**
1615 - 1715	0	0	0	60	0	0	**60**
1630 - 1730	0	0	0	60	0	0	**60**
1645 - 1745	0	0	0	62	0	0	**62**
1700 - 1800	0	0	0	55	0	0	**55**
PEAK HOUR	**0**	**0**	**0**	**62**	**0**	**0**	**62**

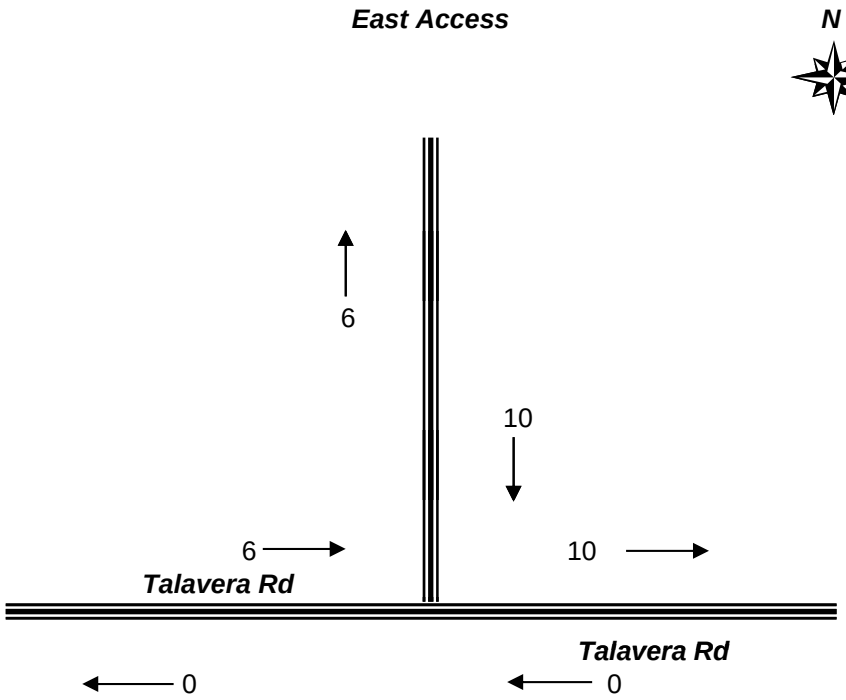


R.O.A.R DATA
Reliable, Original & Authentic Results
Ph.88196847, Fax 88196849, Mob.0418-239019

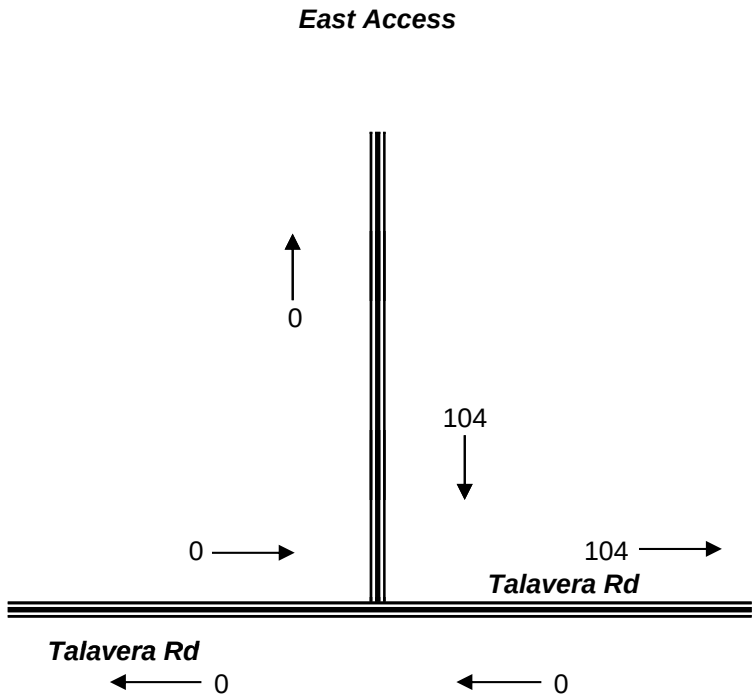
Client : Traffix
Job No/Name : 5252 MACQUARIE PARK Accesses
Day/Date : Friday / 18th July 2014

TOTAL VOLUMES FOR COUNT PERIODS

AM



PM



R.O.A.R. DATA

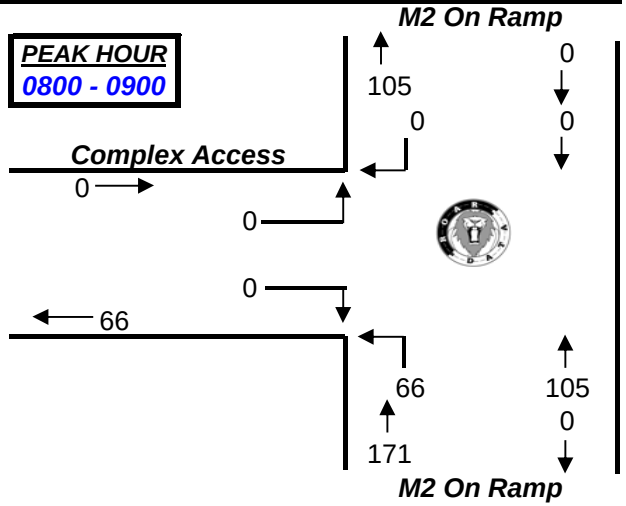
Reliable, Original & Authentic Results

Ph.88196847, Fax 88196849, Mob.0418-239019

Client : Traffix
Job No/Name : 5252 MACQUARIE PARK Accesses
Day/Date : Friday/ 18th July 2014

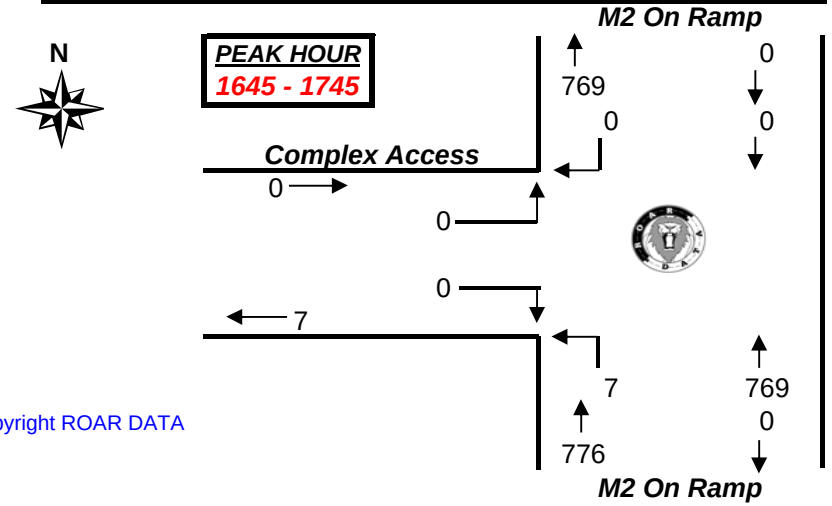
All Vehicles	NORTH		WEST		SOUTH		
	M2 On Ramp		*Complex*		*M2 On Ramp*		
Time Per	**T**	**R**	**L**	**R**	**L**	**T**	**TOTAL**
0700 - 0715					6	18	**24**
0715 - 0730					16	13	**29**
0730 - 0745					20	24	**44**
0745 - 0800					18	23	**41**
0800 - 0815					19	26	**45**
0815 - 0830					17	24	**41**
0830 - 0845					16	28	**44**
0845 - 0900					14	27	**41**
Period End	**0**	**0**	**0**	**0**	**126**	**183**	**309**

	NORTH		WEST		SOUTH		
	M2 On Ramp		*Complex*		*M2 On Ramp*		
Peak Per	**T**	**R**	**L**	**R**	**L**	**T**	**TOTAL**
0700 - 0800	0	0	0	0	60	78	**138**
0715 - 0815	0	0	0	0	73	86	**159**
0730 - 0830	0	0	0	0	74	97	**171**
0745 - 0845	0	0	0	0	70	101	**171**
0800 - 0900	0	0	0	0	66	105	**171**
PEAK HR	**0**	**0**	**0**	**0**	**66**	**105**	**171**



All Vehicles	NORTH		WEST		SOUTH		
	M2 On Ramp		*Complex*		*M2 On Ramp*		
Time Per	**T**	**R**	**L**	**R**	**L**	**T**	**TOTAL**
1600 - 1615					2	157	**159**
1615 - 1630					0	194	**194**
1630 - 1645					2	168	**170**
1645 - 1700					2	195	**197**
1700 - 1715					1	203	**204**
1715 - 1730					2	198	**200**
1730 - 1745					2	173	**175**
1745 - 1800					6	143	**149**
Period End	**0**	**0**	**0**	**0**	**17**	**1431**	**1448**

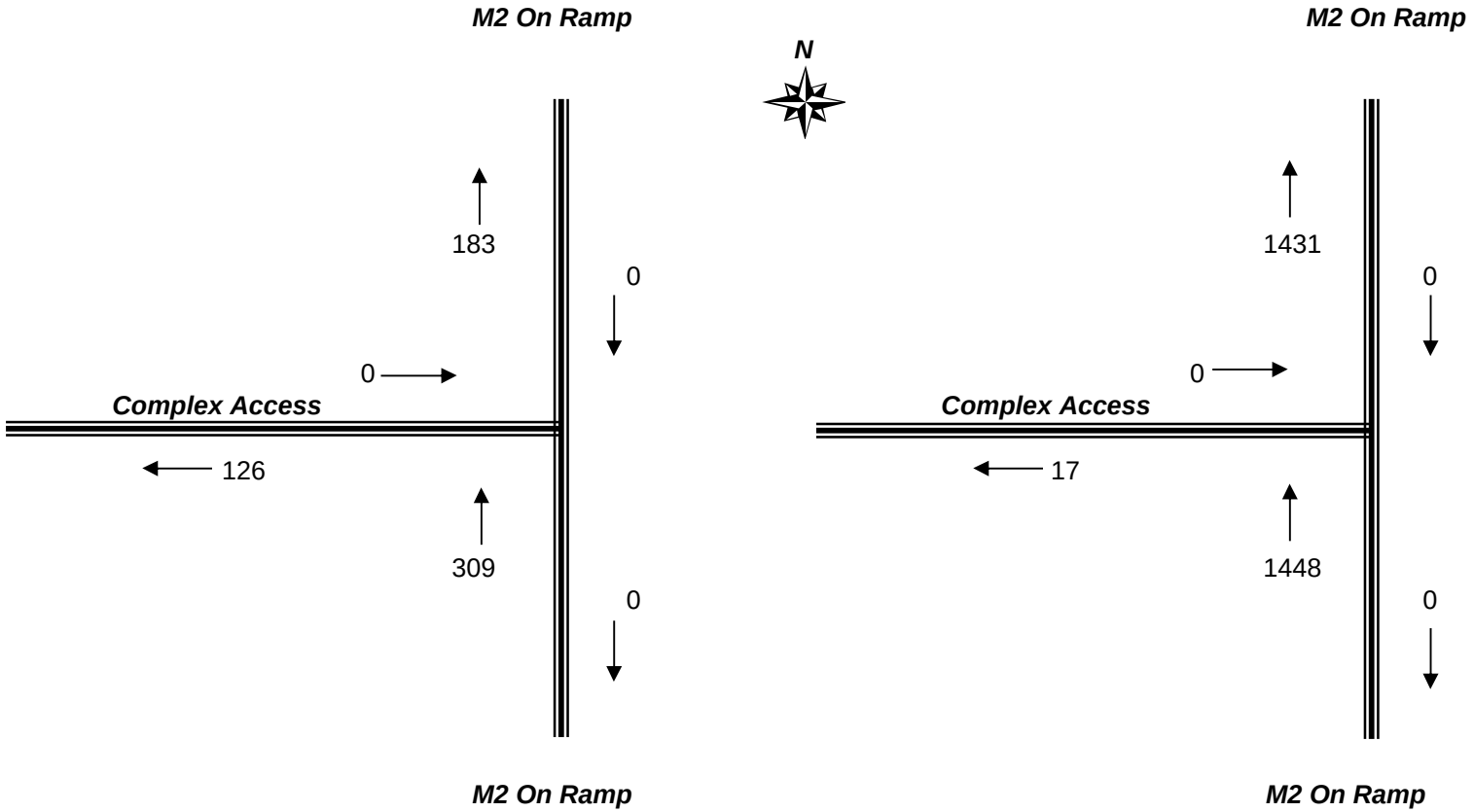
	NORTH		WEST		SOUTH		
	M2 On Ramp		*Complex*		*M2 On Ramp*		
Peak Per	**T**	**R**	**L**	**R**	**L**	**T**	**TOTAL**
1600 - 1700	0	0	0	0	6	714	**720**
1615 - 1715	0	0	0	0	5	760	**765**
1630 - 1730	0	0	0	0	7	764	**771**
1645 - 1745	0	0	0	0	7	769	**776**
1700 - 1800	0	0	0	0	11	717	**728**
PEAK HR	**0**	**0**	**0**	**0**	**7**	**769**	**776**



R.O.A.R DATA
Reliable, Original & Authentic Results
Ph.88196847, Fax 88196849, Mob.0418-239019

Client : Traffix
Job No/Name : 5252 MACQUARIE PARK Accesses
Day/Date : Friday/ 18th July 2014

TOTAL VOLUMES FOR COUNT PERIODS



R.O.A.R. DATA

Reliable, Original & Authentic Results

Ph.88196847, Fax 88196849, Mob.0418-239019

Client : Traffix

Job No/Name : 5252 MACQUARIE PARK Accesses

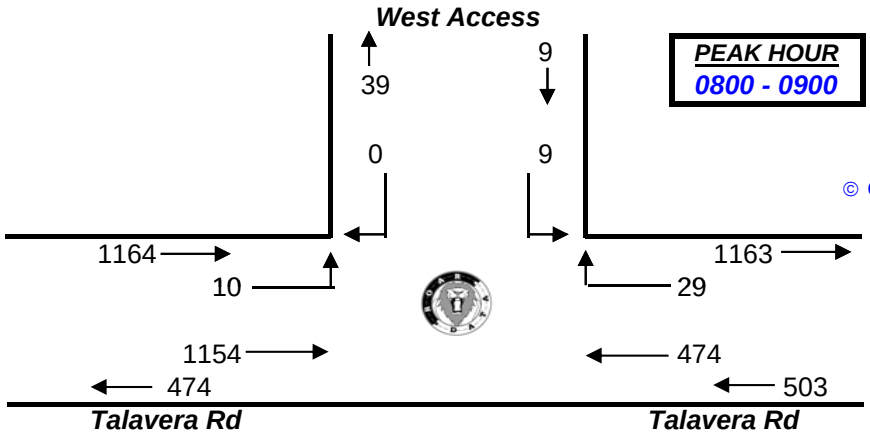
Day/Date : Friday / 18th July 2014

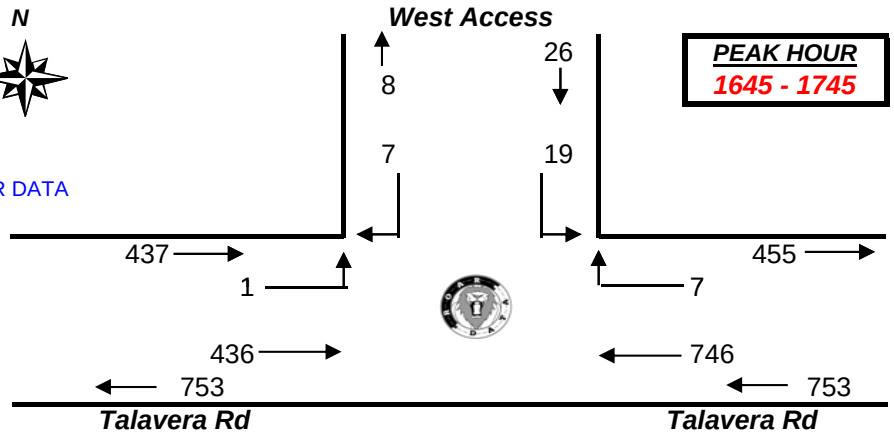
All Vehicles	WEST		NORTH		EAST		
	Talavera Rd		West Access		Talavera Rd		
Time Per	L	T	R	L	T	R	TOTAL
0700 - 0715	1	138	0	1	79	5	**224**
0715 - 0730	1	168	1	0	89	3	**262**
0730 - 0745	0	216	0	1	87	4	**308**
0745 - 0800	5	257	0	1	103	9	**375**
0800 - 0815	2	290	0	2	118	7	**419**
0815 - 0830	1	312	0	0	112	4	**429**
0830 - 0845	5	290	0	2	127	9	**433**
0845 - 0900	2	262	0	5	117	9	**395**
Period End	**17**	**1933**	**1**	**12**	**832**	**50**	**2845**

	WEST		NORTH		EAST		
	Talavera Rd		West Access		Talavera Rd		
Peak Per	L	T	R	L	T	R	TOTAL
0700 - 0800	7	779	1	3	358	21	**1169**
0715 - 0815	8	931	1	4	397	23	**1364**
0730 - 0830	8	1075	0	4	420	24	**1531**
0745 - 0845	13	1149	0	5	460	29	**1656**
0800 - 0900	10	1154	0	9	474	29	**1676**
PEAK HR	**10**	**1154**	**0**	**9**	**474**	**29**	**1676**

All Vehicles	WEST		NORTH		EAST		
	Talavera Rd		West Access		Talavera Rd		
Time Per	L	T	R	L	T	R	TOTAL
1600 - 1615	0	111	0	3	106	2	**222**
1615 - 1630	0	118	0	8	146	5	**277**
1630 - 1645	0	111	1	4	139	0	**255**
1645 - 1700	0	118	0	4	206	3	**331**
1700 - 1715	0	105	1	5	198	1	**310**
1715 - 1730	1	106	3	5	174	1	**290**
1730 - 1745	0	107	3	5	168	2	**285**
1745 - 1800	1	99	2	1	150	1	**254**
Period End	**2**	**875**	**10**	**35**	**1287**	**15**	**2224**

	WEST		NORTH		EAST		
	Talavera Rd		West Access		Talavera Rd		
Peak Per	L	T	R	L	T	R	TOTAL
1600 - 1700	0	458	1	19	597	10	**1085**
1615 - 1715	0	452	2	21	689	9	**1173**
1630 - 1730	1	440	5	18	717	5	**1186**
1645 - 1745	1	436	7	19	746	7	**1216**
1700 - 1800	2	417	9	16	690	5	**1139**
PEAK HOUR	**1**	**436**	**7**	**19**	**746**	**7**	**1216**



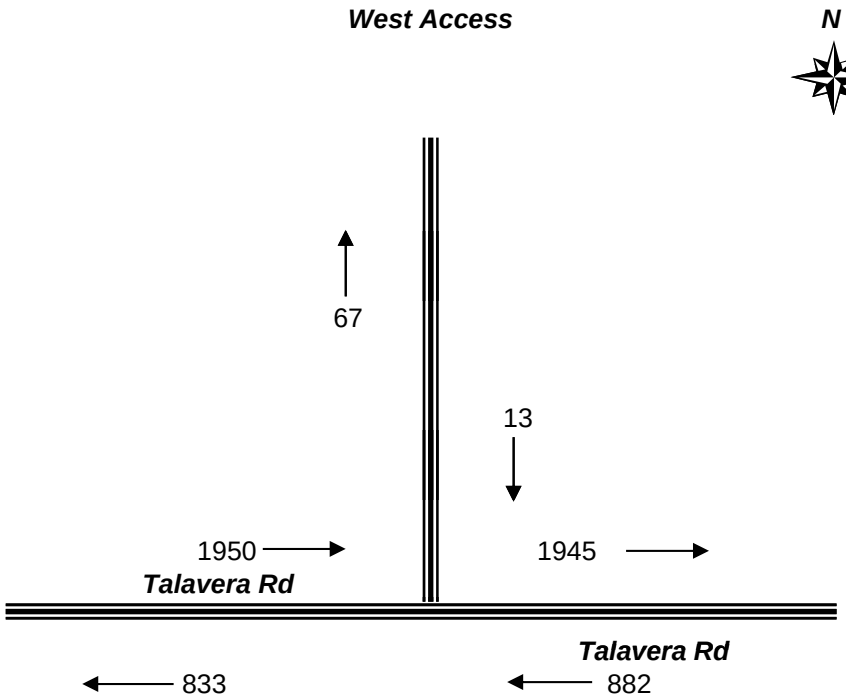


R.O.A.R DATA
Reliable, Original & Authentic Results
Ph.88196847, Fax 88196849, Mob.0418-239019

Client : Traffix
Job No/Name : 5252 MACQUARIE PARK Accesses
Day/Date : Friday / 18th July 2014

TOTAL VOLUMES FOR COUNT PERIODS

AM



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