

Precise Planning

Traffic Study: Proposed Rezoning 95 Great Southern Road, Bargo, NSW



ENVIRONMENTAL



WATER



WASTEWATER



GEOTECHNICAL



CIVIL



PROJECT
MANAGEMENT



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All enquiries regarding this project are to be directed to the Project Manager.



Executive Summary

This traffic study has been prepared to support a proposed rezoning of lands at 95 Great Southern Road, Bargo, NSW. We understand that if the site is fully developed for residential purposes, then it could accommodate up to 222 total residential lots, which may generate up to 1,998 additional vehicle movements per day.

Traffic monitoring has been undertaken at 16 sites across the existing road network. Additional traffic from the nearby approved Bargo Waste Transfer Station (WTS) has also been considered to determine background traffic conditions.

Traffic impact analysis has been undertaken at 6 key intersections using intersection modelling software (SIDRA) and at 6 additional assessment sites, and impacts to Wollondilly Council's traffic network model (TRACKS) was also assessed by Traffic Design Group (TDG). Results of these assessments show:

- The level of service at all key intersections is not detrimentally affected by the proposed development for all scenarios assessed.
- All roads are considered capable of absorbing the additional traffic that may be generated should the land be rezoned. This is shown by the large degree of spare capacity determined for the existing road network by the SIDRA analysis.
- Traffic volumes in Ironbark Road will increase. We note that this assessment assumes site traffic will only use Ironbark Road, however it is likely that traffic will also use Dymond Street and Bargo Road as shown in Attachment B SK007. It is likely that Ironbark Road traffic increases will not be significantly impacted and will have sufficient capacity to accept the additional traffic loads.
- Traffic volumes at Wellers Road Bridge will increase. We expect the upgrade works recommended as part of the Bargo WTS traffic study will sufficiently mitigate these impacts.
- Traffic volumes at the primary school may be increased by up to 50% should the land be rezoned and developed as residential. This is acceptable considering the large degree of spare capacity on Great Southern Road determined by SIDRA.
- Negligible changes to traffic volumes are expected on Remembrance Driveway and Avon Dam Road.
- There will be no material impact to the proportion of heavy vehicles on the local road network.
- The impact of the proposed development on Council's TRACKS model was evaluated as being negligible. TDG does not recommend any upgrades to local intersections, roads or existing infrastructure to support the proposed concept development.

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1 Introduction

1.1 Overview and Scope

This traffic study has been prepared to support a proposed rezoning of lands at 95 Great Southern Road, Bargo, NSW. See Attachment B SK001 for regional context and SK002 for study area location and local area overview.

The study objective is to investigate likely traffic load implications, impacts and management options should the land be rezoned from rural to low density / large lot residential. At this stage, the ultimate development footprint is unknown, but we have used preliminary advice supplied by the Client to evaluate impacts of the site if fully utilised for residential purposes.

Our works scope includes:

1. Describe existing traffic loads in local road network including approved waste transfer station.
2. Determine likely traffic generation for rezoned and developed site.
3. Analyse the impacts on key intersections using SIDRA, accounting for waste transfer station approval.
4. Assessment of Council's TRACKS network model (outsourced).
5. Recommend junction treatment options and traffic controls.
6. Identify likely options for traffic and safety management.
7. Review likely options for pedestrians, cyclists and public transport infrastructure.
8. Comment on timing of infrastructure requirements.

1.2 Likely Future Land Use

We understand that the future land use will include 'R2 – low density residential' in western portion of site and 'R5 – large lot residential' in eastern portion of site. Whilst detailed layout has not been provided at this stage, we understand that if the site is fully developed, then it could accommodate up to 222 total residential lots.

1.3 Previous Studies

Martens and Associates have previously undertaken nearby traffic studies (REF: P1103296JR02V02 120626 and P1103296JR03V01 130301) in support of a development application for a waste transfer station at Anthony Road, Bargo ('Bargo WTS', see Attachment B SK002 for local area overview). This development has since been approved. Due to the proximity of the two sites and overlap of study areas, much of the data and assumptions utilised in the Bargo WTS traffic study (MA, 2012 & 2013) has also been utilised by this traffic study.

1.4 Definitions

AADT	Is the Average Annual Daily Traffic assessed as the volume of traffic recorded at a specific road location in both directions taken over a calendar year and divided by the number of days in that year.
ADT	Is the Average Daily Traffic assessed as the total number of vehicles in a time period (more than 1 day and < 1 year) in both directions divided by the number of days in the period. It is a figure that may be used for a specific time period for the purposes of relating to that time period.
AVD	Average Vehicle Delay (s)
Council	Wollondilly Shire Council
DOS	Degree of Saturation (%)
Heavies	Refers to Austroads vehicle classes ≥ 3 (refer Attachment B SK010 for definitions)
Lights	Refers to Austroads vehicle classes < 3 (refer Attachment B SK010 for definitions)
LOS	Level of Service
VPD	Vehicles per day (vehicles / day)
VPH	Vehicles per hour (vehicles / hour)
VPW	Vehicles per week (vehicles / week)
WMD	Worst Movement Delay (s)

2 Existing Site and Road Network Conditions

2.1 Existing Land-use and Site Context

The 28.3 ha site (Lot 1 of DP 996286) is located east of Great Southern Road and west of Government Road (the 'site', Attachment B SK002).

The site is largely cleared and used for rural purposes (grazing) with a vacant dilapidated dwelling and several sheds in the western portion. A watercourse traverses the site south – north diagonally through the eastern portion of the site, with some tree and shrub vegetation located along the watercourse corridor. Surrounding land use is presently rural and residential. The site is bounded by:

1. Rural residential allotments to the north, east and south
2. Residential development to the south west
3. Great Southern Road to the west

2.2 Local Road Network

2.2.1 Overview

The existing local road network is shown in Attachment B SK003 and is summarised in Table 1.

Table 1: Overview of existing local road network.

Road	Type	Comment
Hume Highway	Arterial	Located 3 km south of Bargo
Remembrance Driveway	Sub-arterial	Located west of railway line
Great Southern / Avon Dam Road	Collector	Located adjacent to site and east of railway line
Wellers Road	Collector	Crosses over railway line
Anthony Road (existing)	Local	Located north east of site, fronts Bargo WTS
Anthony Road (unformed) ¹	Local	Portion north of site not currently constructed
Government Road	Local	Link between Anthony and Ironbark Road
Ironbark Road	Local	Link between Great Southern and Government Road
Hawthorne Road	Local	Links local residential traffic to Ironbark Road

Notes:

1. Design and construction of this road was approved as part of the Bargo WTS DA. This section of Anthony Road is assumed to be constructed for the purposes of this study.

Two bridges over the railway line support local traffic flows:

1. Wellers Road bridge
Linking Great Southern Road and Remembrance Driveway over railway. Distance between parapets 9.15 m. Bitumen seal width 6.15 m.
2. Avon Dam Road bridge
Linking Avon Dam road and Remembrance Driveway over railway. Distance between parapets 9.15 m. Bitumen seal width has recently been widened by Council to approximately 7.40 m.

2.2.2 Existing Pavements

Existing pavement widths were surveyed in April 2012 by Sydney Registered Surveyors with a summary provided in Table 2. Detailed pavement inspections were not conducted as part of this investigation. However, the following general comments are made:

1. Anthony Road (east of Government Road – formed portion)
Reasonable quality pavement. Some surface wear and pot-holing in places. Gravel shoulders limited. Fill placed on northern side. Swale drainage in poor condition.
2. Government Road
Reasonable quality pavement. Some surface wear and pot-holing in places. Grassed shoulders limited. Swale or direct runoff drainage.
3. Great Southern Road
Southern areas within residential zone have good quality pavement with some kerbside parking and sections with kerb and gutter. Northern section, north of intersection with unformed Anthony Street, has reasonable quality pavement with some surface wear, pot-holing in places and gravel shoulders between say 0.5 – 1.5 m. Swale drainage in reasonable condition.
4. Wellers Road
Reasonable quality pavement. Some surface wear and pot-holing in places. Grassed shoulder. Swale or direct runoff drainage.
5. Wellers Road Bridge
Reasonable quality pavement. Grassed shoulder.
6. Avon Dam Road Bridge
New pavement. Negligible grassed shoulder.

7. Remembrance Driveway
Good quality pavement with some kerbside parking and sections with kerb and gutter. Generally swale drainage in reasonable condition with pit and pipe system in urban area.
8. Ironbark Road
Reasonable quality pavement. Some surface wear in places. Grassed shoulders. Swale drainage in good condition.
9. Hawthorne Road
Reasonable quality pavement. Some surface wear in places. Grassed shoulders. Swale drainage in reasonable condition.

Table 2: Existing pavement widths (bitumen seal).

Location	Road Length (m)	Number of Measure Points ¹	Average Pavement Width (m)	Minimum Width (m)	Maximum Width (m)
Anthony Rd (formed)	480	19	5.33	4.87	6.47
Great Southern Rd	145	5	6.91	6.14	9.39
Wellers Rd	176	6	7.41	6.73	9.29
Wellers Rd Bridge	26	2	6.15	5.79	6.51

Notes:

1. Pavement width measured at approximately 25 m intervals.

2.2.3 Existing Traffic Controls

Existing traffic controls are shown in Attachment B SK004 and include:

1. 40 km / hour in school zone during school times.
2. 50 km / hour speed zones generally within most residential areas.
3. 60 km / hour speed zones along collector and sub-arterial roads.
4. 80 km / hour on Remembrance Driveway and Avon Dam Road. The eastern section of Wellers Road and the northern section of Great Southern Road was 80 km / hour but will be reduced to 60 km / hour in accordance with the Bargo WTS traffic study (MA, 2012 & 2013) recommendations.
5. Various give way and stop signs.
6. The RTA approved B Double truck route which runs along Remembrance Driveway from the north to the Avon Dam Road bridge, crossing the railway line (via the bridge) then connecting southerly to the Hume Highway.

7. Various controls to be built as per approved development application for Bargo WTS. These are discussed further at Section 3.2.

3 Traffic Volumes and Route Allocation

3.1 Existing Traffic Conditions

3.1.1 Traffic Monitoring Sites

Traffic monitoring undertaken as part of the Bargo WTS traffic study (MA, 2012 & 2013) has been utilised for the purposes of this study.

Traffic monitoring was commissioned by Transport and Traffic Planning Consultants for a previous DA at Bargo WTS. Monitoring was undertaken by CFE Technologies for the period 3 – 9 March, 2011, at the following locations:

Site A Ironbark Road western end.

Site B Wellers Road bridge over railway line.

Site C Great Southern Road between Avon Dam Road and Bargo Road.

Supplementary monitoring was undertaken by Martens and Associates as part of the DA for Bargo WTS at 9 separate locations. Monitoring was undertaken by CFE Technologies for the period 10 – 16 February, 2012, at the following sites:

Site 1 Remembrance Driveway south of Avon Dam Road bridge.

Site 2 Avon Dam bridge over railway line.

Site 3 Great Southern Road north of Avon Dam Road bridge.

Site 4 Government Road between Ironbark Road and Dymond Street.

Site 5 Anthony Road adjacent to Bargo WTS.

Site 6 Ironbark Road at intersection with Great Southern Road.

Site 7 Great Southern Road north of intersection with Ironbark Road.

Site 8 Remembrance Driveway south of intersection with Wellers Road.

Site 9 Wellers Road bridge over railway line.

Further monitoring was undertaken by Martens and Associates at the intersection of Wellers Road and Remembrance Driveway at 4 locations. Monitoring was undertaken by CFE Technologies for the period 8 – 14 February, 2013, at the following points around the intersection:

Site W Remembrance Driveway, south of the intersection.

Site X Wellers Road, east of the intersection (on bridge).

Site Y Remembrance Driveway, north of the intersection.

Site Z Wellers Road, west of the intersection.

Monitoring locations are shown in Attachment B SK005. Whilst these do not cover all roads within the Bargo locality, the counter / monitoring locations enable a good understanding of general traffic flow in the area to be developed.

We note that monitoring sites A, B and C correspond respectively with monitoring sites 6, 9 and 3. Further, we note that monitoring sites 8 and 9 correspond respectively with monitoring sites W and X. Given sampling times are approximately 1 year apart, these provide a useful level of quality control on data gathered.

3.1.2 7 Day Traffic Data

7 day traffic data in terms of total vehicles (both directions) and heavies (Austroads class ≥ 3 for all heavies and ≥ 6 for long heavies) are summarised in Table 3 with counts given in Attachment C.

Table 3: 7 day traffic data summary.

Site	7 day total (VPW)	7 day heavies (≥ class 3) (VPW)	7 day long heavies (≥ class 6) (VPW)	Heavies (%)
1	26135	2051	535	7.8%
2	28348	1861	484	6.6%
3	15066	702	115	4.7%
4	571	76	6	13.3%
5	865	125	22	14.5%
6	3209	220	20	6.9%
7	10607	477	70	4.5%
8	40087	3032	642	7.6%
9	11005	497	52	4.5%
A (= site 6)	3438	193	17	5.6%
B (= site 9)	12078	1005	53	8.3%
C (= site 3)	15595	726	101	4.7%
W (= site 8)	40438	3017	837	7.5%
X (= site 9)	11292	598	49	5.3%
Y	38520	3049	765	7.9%
Z	8990	402	63	4.5%

3.1.3 Average Daily Traffic (ADT) and peak data

Average daily traffic (ADT) in terms of total vehicles (both directions) and heavies (Austroads class ≥ 3 for all heavies and ≥ 6 for long heavies) and AM/PM peak flows for the monitoring periods are summarised in Table 4 with counts given in Attachment C.

Table 4: ADT and peak data summary.

Site	ADT (VPD)	ADT Heavies (≥ class 3) (VPD)	ADT Long heavies (≥ class 6) (VPD)	AM Peak (VPH)	PM Peak (VPH)
1	3734	293	76	319	368
2	4050	266	69	355	430
3	2152	100	16	232	309
4	82	11	1	15	13
5	124	18	3	24	47
6	458	31	3	48	68
7	1515	68	10	145	188
8	5727	433	92	499	583
9	1572	71	7	144	195
A (= site 6)	491	28	2	58	72
B (= site 9)	1725	144	8	163	223
C (= site 3)	2228	104	14	250	315
W (= site 8)	5777	431	120	477	573
X (= site 9)	1613	85	7	157	196
Y	5503	436	109	512	550
Z	1284	57	9	115	147

3.1.4 Day / Night ADT data

ADT for total vehicles and heavies (both directions) during day (7am – 10pm) and night periods (10pm – 7am) are given in Table 5 with counts given in Attachment C.

Table 5: Day / Night ADT data summary.

Site	Day Traffic (7am – 10pm) (VPD)			Night Traffic (10pm – 7am) (VPD)		
	All Vehicles	Heavies	Heavies (%)	All Vehicles	Heavies	Heavies (%)
1	3355	238	7.1%	378	55	14.6%
2	3508	213	6.1%	542	53	9.8%
3	1943	86	4.4%	210	15	7.1%
4	75	10	13.3%	6	1	16.7%
5	123	18	14.6%	0	0	0.0%
6	420	28	6.7%	39	3	7.7%
7	1377	60	4.4%	139	8	5.8%
8	5090	357	7.0%	636	76	11.9%
9	1438	65	4.5%	134	6	4.5%
A (= site 6)	456	24	5.3%	35	3	8.6%
B (= site 9)	1569	136	8.7%	157	7	4.5%
C (= site 3)	2027	90	4.4%	201	14	7.0%
W (= site 8)	5176	346	6.7%	600	85	14.2%
X (= site 9)	1469	80	5.4%	144	5	3.5%
Y	4860	354	7.3%	642	82	12.8%
Z	1169	51	4.4%	115	6	5.2%

3.1.5 Adopted Values

Traffic data at sites where multiple counters are present were averaged for the purposes of traffic modelling. These adopted average values are given in Table 6.

Table 6: Adopted values for sites with multiple traffic counters.

Site	7 day total (VPW)	ADT (VPD)	ADT Heavies (≥ class 3) (VPD)	ADT Long heavies (≥ class 6) (VPD)	Heavies (%)	AM Peak (VPH)	PM Peak (VPH)
6, A	3324	475	30	3	6.2%	53	70
9, B, X	11458	1637	100	7	6.1%	155	205
3, C	15331	2190	102	15	4.7%	241	312
8, W	40263	5752	432	106	7.5%	488	578

3.2 Bargo WTS Traffic & Route Allocation

Council have recommended in their specialist study requirements for this rezoning application that the traffic generated by Bargo WTS should be considered. The following has been adopted from the previous traffic studies:

1. The worst case Bargo WTS traffic generation scenario producing the highest volume of total traffic, as summarised in Table 7. This traffic is added to the existing traffic load and is adopted as the basic case traffic for development impact analysis.
2. The expected route allocation scenario for development traffic (MA, 2012 & 2013) as follows:
 - a. Anthony Road will receive 100 % of traffic generated.
 - b. At Great Southern Road, 95 % will be from / to the north and 5 % will be from / to the south.
 - c. Wellers Road bridge will receive 95 % of traffic generated.
 - d. At the Wellers Road bridge intersection with Remembrance Driveway, 76 % will be from / to the north (ie. 4 out of 5 vehicles use the north) and 19 % will be from / to the south (ie. 1 out of 5 vehicles use the south).
 - e. There would be a 50 % split in traffic using the southern portion of Remembrance Driveway with 9.5 % using the Avon Dam Road bridge in order to reach the Hume and travel to the north.
3. Recommendations for local civil works and traffic controls are assumed to have been constructed and are operational. This includes the construction of the currently unformed portion of Anthony Road adjacent to the northern site boundary, road widening and intersection upgrades, as shown in Attachment B SK004.

Table 7: Bargo WTS adopted worst case traffic generation summary (MA, 2013).

Class	ADT (VPD)	AM Peak (VPH)	PM Peak (VPH)
Lights	36	7	7
Heavies	86	17	14
Total	122	24	21

3.3 Development Traffic Generation

Traffic generation was estimated from NSW RTA (2002) *Guide to Traffic Generating Developments*. Generation calculation details and estimates are provided in Table 8 representing total vehicles (lights and heavies) in both directions. This data has been determined in consultation with the project planner. We note that these are preliminary estimates based on a 'typical' development footprint

occupying all of the site and are considered as a maximum likely 'envelope' for traffic generation at this site.

Table 8: Development traffic generation summary – total vehicles (lights and heavies) in both directions.

Generator	Proposed Lots ¹	ADT		AM Peak		PM Peak	
		Rate ²	VPD	Rate ²	VPH	Rate ²	VPH
Proposed Development	222	9.0	1998	0.85	189	0.85	189

Notes:

1. Based on advice provided by the Client.
2. Generation rates come from NSW RTA (2002) *Guide to Traffic Generating Developments* Section 3.3.1. As NSW RTA does not specify AM peak rates from PM peak rates, they are assumed to be the same.

3.4 Route Allocation

3.4.1 Site Route Allocation

Preliminary advice supplied by the Client suggests the site may introduce 4 – 5 new intersections where internal roads link to the existing local road network. For the purposes of this assessment we assume there will be 4 intersections as shown in Attachment B SK006:

1. To the north connecting to the newly constructed Anthony Road.
2. To the east connecting to Government Road.
3. To the south connecting to Hawthorne Road.
4. To the west connecting to Great Southern Road (GSR).

A riparian corridor following the diagonal watercourse in the eastern portion of the site will likely be required and will prevent vehicles in the site's east from travelling to GSR via internal roads.

Based on this information four internal traffic generating catchments (Catchments A, B, C and D) are defined as shown in Attachment B SK006. Traffic generation proportions and route allocation for each catchment is summarised in Table 9 and are derived based on the most direct routes to GSR. We assume that all site traffic will utilise GSR to access the wider traffic network, and that half the traffic from each internal site catchment will travel north and the other half will travel south at GSR.

Table 9: Site catchments and route allocation summary as shown in Attachment B SK006.

Catchment	A	B	C	D
Site Traffic Generated (%)	10%	20%	20%	50%
Local Network Intersection	Government Road	Anthony Road (new portion)	Hawthorne Road	Great Southern Road (GSR)
Northbound Route ¹	Government – Anthony – GSR	Anthony – GSR	Internal roads – GSR	GSR
Southbound Route ¹	Government – Ironbark – GSR ²	Half: Anthony – GSR Half: Internal roads – GSR	Hawthorne – Ironbark – GSR ²	GSR

Notes:

1. 50% of each catchment's traffic generated will travel north and 50% will travel south on GSR.
2. Southbound traffic from Catchment A and Catchment C may use Dymond Street or Bargo Road as an alternative to Ironbark Road.

3.4.2 Local Network Route Allocation

To assess route allocation on the local road network we assume the following trip destinations for site residents:

1. Trips staying within Bargo Town
 - a. Bargo Town features an IGA supermarket, petrol station, train station, primary school, and several other shops and eating facilities.
 - b. We expect that approximately 30% of development traffic will remain within Bargo to access these facilities, and approximately 70% will leave Bargo to travel to work or access specific shopping needs.
 - c. Approximately two thirds of the commercial district of Bargo town is west of the railway line on Remembrance Driveway, with the remainder located east of the railway line on GSR.
 - d. It follows that 20% of site traffic will travel to the shops on Remembrance Driveway and 10% of site traffic will travel to the shops on GSR.
2. Trips leaving Bargo Town
 - a. We assume that approximately half of all site residents will work in Tahmoor, Picton and other local townships, to

which the most direct route is to travel north on Remembrance Driveway.

- b. We assume the other half of site residents will work in the Sydney metro area (i.e. north of Campbelltown), to which the most direct route is to travel south from the site on Avon Dam Road to access Hume Highway.
- c. Based on this, of the 70% of development traffic leaving Bargo town, we expect half (35%) will travel north and half (35%) will travel south.
- d. We assume a nominal 5% of site traffic will utilise Remembrance Driveway to travel south on Hume Highway to access Bowral, Goulburn and other southern NSW towns.

All site traffic route allocation is based on the most direct route to these destinations. For the purposes of traffic analysis, we expect traffic generation splits to be assigned as follows (also shown in Attachment B SK007):

- 1. GSR will receive 100% of traffic generated, with 50% travelling from / to the north and 50% from / to the south.
- 2. Of the 50% of total site traffic travelling north on GSR:
 - a. All traffic will travel via Wellers Road to Remembrance Driveway rather than using the northern portion of GSR.
 - b. At the intersection of Remembrance Driveway and Wellers Road, 35% of total traffic will be from / to the north (leaving Bargo town) and 15% will be from / to the south (staying within Bargo travelling to the shopping area/station).
- 3. Of the 50% of total site traffic travelling south on GSR:
 - a. 10% of total traffic will be from / to Bargo (travelling to the shopping area/station) prior to reaching Avon Dam Road and 40% will be from / to the south continuing on GSR.
 - b. At Avon Dam Road, 30% of total traffic will be from / to the south (leaving Bargo town) and 10% will be from / to the east.
 - c. At the intersection of Remembrance Driveway and Avon Dam Road, 5% of total traffic will be from / to the south

(leaving Bargo town) and 5% will be from / to the north (staying within Bargo travelling to the shopping area/station).

Expected route allocation is summarised in Attachment B SK007. Different 'worst case' route allocation scenarios are analysed in SIDRA to account for the uncertainty in route allocation. These scenarios are summarised in Table 10.

Table 10: Site generated traffic route allocation including expected traffic route (A) and worst case traffic route scenarios (B and C).

Intersection	Case ²	Route Allocation ¹ (%)			
		North Side	East Side	South Side	West Side
1. Main Site Access and Great Southern Road	A	57 / 40	93 / 65	50 / 35	-
	B	63 / 50	94 / 75	44 / 35	-
	C	50 / 40	94 / 75	56 / 45	-
2. Anthony Road and Great Southern Road	A	91 / 50	36 / 20	73 / 40	-
	B	93 / 60	46 / 30	62 / 40	-
	C	93 / 60	31 / 20	77 / 50	-
3. Wellers Road and Remembrance Driveway	A	70 / 35	100 / 50	30 / 15	0 / 0
	B	58 / 35	100 / 60	42 / 25	0 / 0
	C	75 / 45	100 / 60	25 / 15	0 / 0
4. Great Southern Road and Ironbark Road	A	70 / 35	30 / 15	100 / 50	-
	B	75 / 45	25 / 15	100 / 60	-
	C	58 / 35	42 / 25	100 / 60	-
5. Avon Dam Road and Great Southern Road	A	100 / 40	-	75 / 30	25 / 10
	B	100 / 50	-	60 / 30	40 / 20
	C	100 / 50	-	80 / 40	20 / 10
6. Remembrance Driveway and Avon Dam Road	A	50 / 5	100 / 10	50 / 5	-
	B	75 / 15	100 / 20	25 / 5	-
	C	25 / 5	100 / 20	75 / 15	-

Notes

¹ X / Y represents the following:

X: % split at the intersection for developed traffic arriving at the intersection.

Y: % of total traffic generated by development proposal.

² Cases represent the following:

A: Expected route allocation scenario as in Attachment B SK007.

B: Worst case route allocation scenario 1.

C: Worst case route allocation scenario 2.

4 Traffic Impact Analysis

4.1 SIDRA Analysis

4.1.1 Software

The intersection analysis software SIDRA INTERSECTION v6.0 was used to determine the impacts of changed traffic conditions at key intersections along the proposed route to the development.

4.1.2 Assumptions

The following assumptions were made:

1. As discussed in Section 3.2, recommendations from the Bargo WTS traffic study (MA, 2012 & 2013) for local civil works and traffic controls are assumed to have been constructed and are operational, including the construction of the currently unformed portion of Anthony Road at the northern site boundary.
2. Existing traffic controls and those recommended in the Bargo WTS traffic study (MA, 2012 & 2013) such as stop or give-way signs are used. The main site access is assumed to be give-way controlled.
3. Base case / existing traffic volumes are based on the monitoring data (Section 3.1) plus Bargo WTS traffic (Section 3.2). Developed traffic volumes add the site generated traffic (Section 3.3) at each intersection analysed according to the route allocation (Section 3.4). Input volumes are summarised in Attachment A (Section 8.1).
4. The base case / existing proportion of heavy vehicles is based on the monitoring data (Section 3.1) plus Bargo WTS (MA, 2012 & 2013) generation estimates (Section 3.2). The proportion of developed heavy vehicles is based on existing heavies at each intersection assessed. Proportions of heavy vehicles are summarised in Attachment A (Section 8.1).
5. The peak flow period (the ratio of average demand flow rate in the total flow period to the demand flow in the peak flow period) is 30 minutes.
6. The peak flow factor (a safety factor) is 90%.

7. The population growth rate is 1.06% / year. Population forecasts provided by forecast2.id.com.au give a mean annual growth rate for the period 2016-2021 of 1.06 % averaged across the townships of Bargo, Yanderra, Pheasants Nest, Picton, Mowbray Park, Maldon and Tahmoor.
8. The growth model is uniform.
9. Saturation, movement and gap acceptance data are default values based on SIDRA and Austroads guidelines (SIDRA 2013).
10. Approach and exit cruise speeds match existing speed limits as shown in Attachment B SK004.
11. The Level of Service (LOS) method is the RMS NSW method based on delay.
12. Directional splits are 50% in each direction.
13. A nominal value of 50 pedestrians per hour is assumed to cross each approach of each intersection as a conservative estimate.

4.1.3 Scenarios

The following intersections were modelled as shown in Attachment B SK007:

1. The main site access at Great Southern Road.
2. Anthony Road & Great Southern Road.
3. Remembrance Driveway & Wellers Road.
4. Great Southern Road & Ironbark Road.
 - a. As discussed in Section 3.4.1 and as shown in Attachment B SK007, traffic may use Dymond Street or Bargo Road as an alternative to Ironbark Road.
 - b. Should these alternative roads be used, overall development traffic will have a greater spread and less impact on Ironbark Road.
 - c. The largest traffic loads will occur if all traffic used only one of these roads, and this is assumed as the worst case distribution.

- d. The intersection analysis at Great Southern Road and Ironbark Road therefore conservatively assumes all traffic will travel down this road.
 - e. Parameters used for this intersection analysis are applicable to the intersections of Great Southern Road with Dymond Street and Bargo Road, which have been labelled intersections 4B and 4C respectively.
- 5. Great Southern Road & Avon Dam Road.
 - 6. Avon Dam Road & Remembrance Drive.

Analysis was undertaken for the following scenarios at each intersection:

- 1. Weekly AM and PM peaks.
- 2. Existing traffic volumes with and without the development, noting that the existing volumes include the Bargo WTS traffic.
- 3. 10 year projected traffic volumes with and without the development.
- 4. Varying developed traffic route allocations as outlined in Section 3.4 (Table 10).

4.1.4 Parameter Interpretation

The SIDRA outputs can be interpreted using the following criteria:

- 1. The Level of Service (LOS) is a measure of an intersection's performance. 'A' denotes the highest LOS, ranging to 'F' which denotes an unacceptable LOS.
- 2. The Average Vehicle Delay (AVD) is the average time taken for a vehicle to manoeuvre through an intersection. It takes into account the geometry of the intersection and traffic (lights, heavies and pedestrians).
- 3. The Degree of Saturation (DOS) is the ratio of modelled traffic volume (including the peak flow factor) to the capacity of an intersection. The intersection DOS is taken as the highest DOS for any leg of the intersection.

LOS, AVD and DOS are related as shown in Table 11, based on the RMS NSW model as reported in SIDRA (2013). For unsignalised intersections DOS rather than AVD provides a more reliable assessment of LOS.

Table 11: Relationship between LOS, AVD and DOS.

LOS	AVD (s)	DOS (%)	Intersection Performance
A	≤ 14.5	≤ 60	Good
B	14.5 – 28.5	60 – 70	Good with acceptable delays and spare capacity
C	28.5 – 42.5	70 – 80	Satisfactory
D	42.5 – 55	80 – 90	Operating near capacity
E	55 – 70.5	90 – 100	At capacity
F	> 70.5	> 100	Unsatisfactory and require additional capacity

4.1.5 Results

The generated traffic volumes and the operational performance of each as modelled by SIDRA is summarised in Attachment A. We note the following:

1. LOS is 'A' at all existing intersections and is not detrimentally affected by the proposed development for any peak scenario or any route allocation scenario both now and with the 10 year projected traffic.
2. The maximum increase in AVD is 2.9 seconds at all intersections and is considered negligible.
3. The worst AVD is at Intersection 3 (Remembrance Driveway and Wellers Road) and is less than 8 seconds, well within the criteria for LOS 'A'.
4. The maximum increase in DOS is 19.8% at all intersections and is considered negligible.
5. The worst DOS is at Intersection 3 (Remembrance Driveway and Wellers Road) and is 52% in 2025, which is within the criteria for LOS 'A'.
6. Most intersections have a low value for DOS, and all intersections have 'spare capacities' for increased traffic loads.

4.2 Local Area Impacts

4.2.1 Assessment Sites

In order for development impacts on local traffic conditions to be determined, a number of assessment sites were identified (Table 12, see Attachment B SK008 for assessment site locations).

Table 12: Traffic impact assessment sites.

Location	Representative Counter Sites
Primary School	3, 7, C
Ironbark Road	6, A
Wellers Road Bridge	9, B, X
Remembrance Driveway North	8, W
Remembrance Driveway South	1, 8, W
Avon Dam Road Bridge	2

4.2.2 ADT – Average Daily Traffic Impacts

Potential changes to ADT counts for existing conditions and with the development load imposed are provided in Table 13. The expected case and the worst case scenarios for route allocation of the developed site were compared as summarised in Table 10 and are not significant.

Table 13: Existing and modified ADT (VPD).

Location	Existing	Developed – Route Allocation			
		Expected		Worst Case	
		Developed	Change (%)	Developed	Change (%)
Primary School	1965	2764	40.7%	2964	50.8%
Ironbark Rd	475	775	63.1%	975	105.2%
Wellers Rd Bridge	1637	2636	61.0%	2836	73.2%
Remembrance Drive. North	5752	6451	12.2%	6651	15.6%
Remembrance Drive. South	5079	5379	5.9%	5579	9.8%
Avon Dam Rd Bridge	4050	4250	4.9%	4450	9.9%

4.2.3 Day / Night Traffic Impacts

Potential changes to traffic loads during day and night periods are shown in Table 14 and Table 15 respectively. The expected case and worst case scenarios for route allocation of the developed site were compared as summarised in Table 10. The proportion of day / night traffic at Ironbark Road (average of monitoring Site 6 and Site A) is adopted for development traffic.

Table 14: Impact on vehicle movements (both directions) during day hours (7am – 10 pm).

Location	Existing	Developed – Route Allocation			
		Expected		Worst Case	
		Developed	Change (%)	Developed	Change (%)
Primary School	1782	2519	41.4%	2703	51.7%
Ironbark Rd	438	714	63.1%	899	105.2%
Wellers Rd Bridge	1492	2413	61.7%	2597	74.1%
Remembrance Drive. North	5133	5778	12.6%	5962	16.2%
Remembrance Drive. South	4541	4817	6.1%	5002	10.1%
Avon Dam Rd Bridge	3508	3692	5.3%	3876	10.5%

Table 15: Impact on vehicle movements (both directions) during night hours (10 pm – 7am).

Location	Existing	Developed – Route Allocation			
		Expected		Worst Case	
		Developed	Change (%)	Developed	Change (%)
Primary School	183	245	34.0%	261	42.5%
Ironbark Rd	37	60	63.1%	76	105.2%
Wellers Rd Bridge	145	223	53.7%	238	64.4%
Remembrance Drive. North	619	673	8.8%	689	11.3%
Remembrance Drive. South	538	561	4.3%	577	7.2%
Avon Dam Rd Bridge	542	558	2.9%	573	5.7%

4.2.4 Impact Summary

We note the following:

1. All roads are considered capable of absorbing the additional traffic that may be generated should the land be rezoned. This is shown by the large degree of spare capacity determined for the existing road network by the SIDRA analysis.
2. Traffic volumes in Ironbark Road will increase. We note that this assessment assumes site traffic will only use Ironbark Road, however it is likely that traffic will also use Dymond Street and Bargo Road as shown in Attachment B SK007. It is likely that Ironbark Road traffic increases will not be significantly impacted and will have sufficient capacity to accept the additional traffic loads.

3. Traffic volumes at Wellers Road Bridge will increase. We expect the upgrade works recommended as part of the Bargo WTS traffic study will sufficiently mitigate these impacts.
4. Traffic volumes at the primary school may be increased by up to 50% should the land be rezoned and developed as residential. This is acceptable considering the large degree of spare capacity on Great Southern Road determined by SIDRA.
5. Negligible changes to traffic volumes are expected on Remembrance Driveway and Avon Dam Road.
6. There will be no material impact to the proportion of heavy vehicles on the local road network.

5 TRACKS Assessment

As part of this traffic study, Traffic Design Group (TDG) was contracted to undertake a TRACKS assessment. The full report is presented in Attachment D. We note the following:

1. Council's base TRACKS network model has been updated to include the Bargo WTS traffic in accordance with the volumes given in Table 7.
2. Council's TRACKS network model has been updated to include the impact of traffic generated by the concept development in accordance with the volumes given in Table 8.
3. Scenarios for AM and PM peaks at 2011, 2026 and 2036 have been analysed with and without the addition of traffic generated by the proposed development to determine traffic impacts.
4. Background land use files were updated for each scenario.
5. Plots of LOS and traffic volumes are updated for each scenario.
6. The impact of the proposed development was evaluated as being negligible. TDG does not recommend any upgrades to local intersections, roads or existing infrastructure to support the proposed concept development.

6 Recommendations

6.1 Intersection Treatment

Based on the SIDRA analysis and the TRACKS assessment, we do not recommend treatment for any of the key intersections assessed. The development impact on traffic is minimal and the existing road network has sufficient spare capacity so that local intersections are not adversely affected.

We propose the new intersections where internal roads link to the existing local road network be treated as follows and as shown in Attachment B SK009:

1. To the north connecting to the newly constructed Anthony Road: give-way control for the internal road.
2. To the east connecting to Government Road: give-way control for the internal road.
3. To the south connecting to Hawthorne Road: extension of Hawthorne Road into site, i.e. no new intersection.
4. To the west connecting to Great Southern Road (GSR): give-way control for the internal road. We note this intersection treatment has been modelled in SIDRA and results show acceptable level of service.

If the development footprint is significantly larger than that evaluated herein, then these recommendations should be re-evaluated.

6.2 Civil Works

This traffic study has identified that there will be an increase in traffic loads on local roads. The following road network civil works are recommended as a part of a future development proposal. These will improve existing road safety and mitigate any possible detrimental impacts of the proposal. They are summarised in Attachment B SK009.

1. All new intersections with site internal roads should be designed and constructed in accordance with Council's standard design codes / specifications.
2. Extend kerb and gutter & pit and pipe fronting the site on GSR to the south connecting to the existing network.

3. Extend swale drainage from the site on the western side of Hawthorne Road to connect with existing swale drainage.

6.3 Traffic Control

Whilst the ultimate development footprint is not known at this stage, we would envisage the following amendments to existing controls. They are summarised in Attachment B SK009.

1. Installation of give way signage and line marking at the main western site access on GSR.
2. Installation of give way signage and line marking at the northern site access on Anthony Road.
3. Installation of give way signage and line marking at the eastern site access on Government Road.
4. Installation of give way signage and line marking on the approach from Ironbark Road to GSR to formalise the current intersection control.

6.4 Road User Safety Management

We note the following:

- Based on the SIDRA analysis and the TRACKS assessment, the impact of the proposed development to local traffic is negligible.
- Road users such as pedestrians, cyclists and public transport users are not expected to be detrimentally affected.
- Pedestrian traffic was included as part of the SIDRA analysis. Pedestrian / traffic interaction did not increase AVD or reduce the serviceability of the road network.
- There are adequate shoulders on GSR to adequately provide for an increased number of cyclists.
- Existing public transport infrastructure is expected to be able to cope with the increased demand, and hence upgrades to the existing system are not required.

The following pedestrian management strategy is recommended to improve pedestrian safety and accessibility around the site, and is shown in Attachment B SK009.

1. Provision of a pedestrian footpath along the GSR site frontage allowing for possible future connection between the site and the footpath currently terminating at the intersection of Dymond Street and GSR. The footpath is to be constructed in accordance with Council's Design Specifications.

7

References

Forecast id (2015), *Population Forecasts | Wollondilly Shire*,
<forecast2.id.com.au>

Martens & Associates (2012), *Traffic Study, Proposed Waste or Resource Transfer Station, Resource Recovery Facility and Truck Depot, Anthony Road, Bargo, NSW*.

Martens & Associates (2013), *Response to RMS, Proposed Waste or Resource Transfer Station, Resource Recovery Facility and Truck Depot, Anthony Road, Bargo, NSW*.

NSW RTA (2002), *Guide to Traffic Generating Developments*.

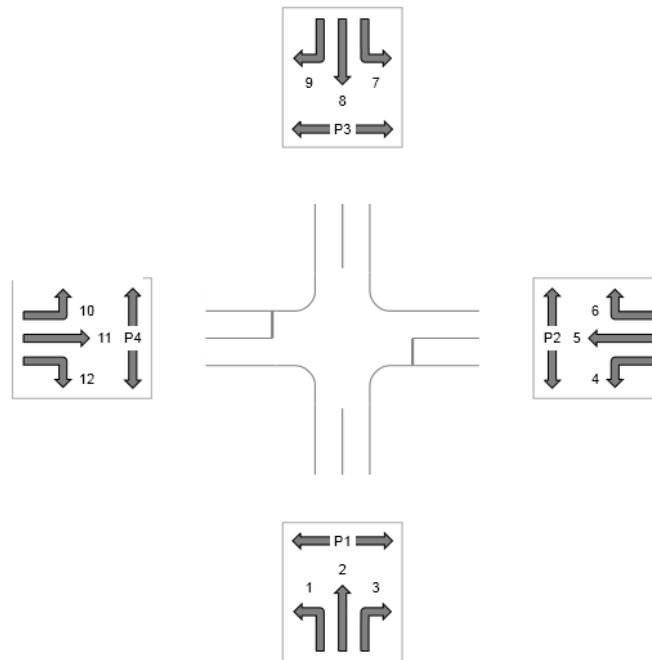
SIDRA (2013), *SIDRA Intersection User Guide*.

Wollondilly Shire Council (2013), *Special Study Requirements – 95 Great Southern Road Bargo*.

8 Attachment A – SIDRA Analysis

8.1 Volume Summaries

8.1.1 Movement Identifications



Notes:

1. Movements designated P1 – P4 represent pedestrian movements. Movements designated 1 – 12 represent vehicle movements.
2. Not all movements exist for all intersections assessed. Where this is the case, the volumes are left blank.

8.1.2 Intersection 1 Volumes: Main site access & Great Southern Road

Movement					Developed					
	Existing		Existing with Waste Transfer Station		Case A		Case B		Case C	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
1	-	-	-	-	-	-	-	-	-	-
2	81	97	82	98	87	103	87	103	87	103
3	-	-	-	-	29	29	29	29	38	38
4	-	-	-	-	29	29	29	29	38	38
5	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	34	34	43	43	34	34
7	-	-	-	-	34	34	43	43	34	34
8	64	91	65	92	70	97	70	97	70	97
9	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-
Intersection Heavies (%)	4.5%	4.5%	5.0%	4.8%	4.8%	4.7%	4.8%	4.7%	4.8%	4.7%

8.1.3 Intersection 2 Volumes: Anthony Road & Great Southern Road

Movement					Developed					
	Existing		Existing with Waste Transfer Station		Case A		Case B		Case C	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
1	-	-	-	-	-	-	-	-	-	-
2	81	97	73	87	107	121	111	125	111	125
3	-	-	19	31	24	36	24	36	29	41
4	-	-	10	20	15	25	15	25	20	30
5	-	-	-	-	-	-	-	-	-	-
6	-	-	14	14	29	29	33	33	29	29
7	-	-	21	24	36	39	40	43	36	39
8	64	91	57	81	91	115	95	119	95	119
9	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-
Intersection Heavies (%)	4.5%	4.5%	13.8%	11.5%	10.4%	9.4%	10.1%	9.2%	10.1%	9.2%

8.1.4 Intersection 3 Volumes: Remembrance Driveway & Wellers Road

Movement					Developed					
	Existing		Existing with Waste Transfer Station		Case A		Case B		Case C	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
1	23	27	23	27	23	27	23	27	23	27
2	189	223	189	223	189	223	189	223	189	223
3	35	42	44	50	59	64	68	74	59	64
4	28	37	37	45	52	59	61	69	52	59
5	12	16	12	16	12	16	12	16	12	16
6	40	53	53	64	87	98	87	98	96	107
7	37	40	50	51	84	85	84	85	93	94
8	198	213	198	213	198	213	198	213	198	213
9	24	25	24	25	24	25	24	25	24	25
10	30	36	30	36	30	36	30	36	30	36
11	10	12	10	12	10	12	10	12	10	12
12	21	26	21	26	21	26	21	26	21	26
Intersection Heavies (%)	7.9%	7.9%	12.3%	10.9%	11.8%	10.6%	11.7%	10.5%	11.7%	10.5%

8.1.5 Intersection 4 Volumes: Great Southern Road & Ironbark Road

Movement					Developed					
	Existing		Existing with Waste Transfer Station		Case A		Case B		Case C	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
1	-	-	-	-	-	-	-	-	-	-
2	73	88	74	89	108	123	117	132	108	123
3	20	29	20	29	35	44	35	44	44	53
4	12	19	12	19	27	34	27	34	36	43
5	-	-	-	-	-	-	-	-	-	-
6	15	16	15	16	15	16	15	16	15	16
7	22	26	22	26	22	26	22	26	22	26
8	58	82	59	83	93	117	102	126	93	117
9	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-
Intersection Heavies (%)	5.0%	5.0%	12.1%	9.6%	9.7%	8.3%	9.5%	8.2%	9.5%	8.2%

8.1.6 Intersection 5 Volumes: Great Southern Road & Avon Dam Road

Movement					Developed					
	Existing		Existing with Waste Transfer Station		Case A		Case B		Case C	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
1	108	130	115	137	115	137	115	137	115	137
2	49	63	55	69	84	98	84	98	93	107
3	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-
8	49	63	55	69	84	98	84	98	93	107
9	72	87	72	87	82	97	91	106	82	97
10	72	87	72	87	82	97	91	106	82	97
11	-	-	-	-	-	-	-	-	-	-
12	108	130	115	137	115	137	115	137	115	137
Intersection Heavies (%)	7.0%	6.4%	10.3%	9.2%	9.8%	8.9%	9.8%	8.8%	9.8%	8.8%

8.1.7 Intersection 6 Volumes: Avon Dam Road & Remembrance Driveway

Movement					Developed					
	Existing		Existing with Waste Transfer Station		Case A		Case B		Case C	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
1	-	-	-	-	-	-	-	-	-	-
2	71	82	83	93	83	93	83	93	83	93
3	90	105	90	105	95	110	95	110	105	120
4	89	109	89	109	94	114	94	114	104	124
5	-	-	-	-	-	-	-	-	-	-
6	89	109	93	113	98	118	108	128	98	118
7	90	105	94	109	99	114	109	124	99	114
8	71	82	83	93	83	93	83	93	83	93
9	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-
Intersection Heavies (%)	7.6%	8.1%	11.8%	11.2%	11.6%	11.1%	11.5%	11.0%	11.5%	11.0%

8.2 Intersection Operational Performance

8.2.1 Intersection 1 Performance: Main site access & Great Southern Road

Intersection	Scenario	Parameter	2015 Peaks		2025 Peaks	
			AM	PM	AM	PM
1. Main Site Access & Great Southern Road	Existing	Level of Service	A	A	A	A
		Average Vehicle Delay (s)	0.0	0.0	0.0	0.0
		Degree of Saturation (%)	4.8	5.8	5.3	6.4
	Case A	Level of Service	A	A	A	A
		Average Vehicle Delay (s)	2.6	2.4	2.7	2.5
		Degree of Saturation (%)	7.4	8.2	8.4	9.1
	Case B	Level of Service	A	A	A	A
		Average Vehicle Delay (s)	2.9	2.6	2.9	2.7
		Degree of Saturation (%)	8.8	9.2	9.9	10.5
	Case C	Level of Service	A	A	A	A
		Average Vehicle Delay (s)	2.8	2.6	2.9	2.7
		Degree of Saturation (%)	8.3	8.9	9.4	9.9
	Largest Change	Level of Service	None	None	None	None
		Average Vehicle Delay (s)	2.9	2.6	2.9	2.7
		Degree of Saturation (%)	4.0	3.4	4.6	4.1

8.2.2 Intersection 2 Performance: Anthony Road & Great Southern Road

Intersection	Scenario	Parameter	2015 Peaks		2025 Peaks	
			AM	PM	AM	PM
2. Anthony Road & Great Southern Road	Existing	Level of Service	A	A	A	A
		Average Vehicle Delay (s)	2.0	2.1	2.0	2.2
		Degree of Saturation (%)	6.0	7.7	6.6	8.5
	Case A	Level of Service	A	A	A	A
		Average Vehicle Delay (s)	2.2	2.4	2.3	2.4
		Degree of Saturation (%)	8.4	10.2	9.3	11.3
	Case B	Level of Service	A	A	A	A
		Average Vehicle Delay (s)	2.3	2.4	2.4	2.5
		Degree of Saturation (%)	8.6	10.4	9.6	11.6
	Case C	Level of Service	A	A	A	A
		Average Vehicle Delay (s)	2.3	2.4	2.4	2.5
		Degree of Saturation (%)	9.0	10.8	10.0	12.0
	Largest Change	Level of Service	None	None	None	None
		Average Vehicle Delay (s)	0.3	0.3	0.4	0.3
		Degree of Saturation (%)	3.0	3.1	3.4	3.5

8.2.3 Intersection 3 Performance: Remembrance Driveway & Wellers Road

Intersection	Scenario	Parameter	2015 Peaks		2025 Peaks	
			AM	PM	AM	PM
3. Remembrance Driveway & Wellers Road	Existing	Level of Service	A	A	A	A
		Average Vehicle Delay (s)	5.2	5.7	5.6	6.2
		Degree of Saturation (%)	19.9	26.4	24.0	32.2
	Case A	Level of Service	A	A	A	A
		Average Vehicle Delay (s)	6.3	6.8	6.8	7.6
		Degree of Saturation (%)	31.6	39.3	38.4	48.4
	Case B	Level of Service	A	A	A	A
		Average Vehicle Delay (s)	6.4	7.0	7.0	7.8
		Degree of Saturation (%)	33.0	41.0	40.1	50.5
	Case C	Level of Service	A	A	A	A
		Average Vehicle Delay (s)	6.5	7.1	7.1	7.9
		Degree of Saturation (%)	34.3	42.2	41.7	52.0
	Largest Change	Level of Service	None	None	None	None
		Average Vehicle Delay (s)	1.3	1.4	1.5	1.7
		Degree of Saturation (%)	14.4	15.8	17.7	19.8

8.2.4 Intersection 4 Performance: Great Southern Road & Ironbark Road

Intersection	Scenario	Parameter	2015 Peaks		2025 Peaks	
			AM	PM	AM	PM
4. Great Southern Road & Ironbark Road	Existing	Level of Service	A	A	A	A
		Average Vehicle Delay (s)	2.1	2.1	2.1	2.2
		Degree of Saturation (%)	6.0	7.6	6.7	8.4
	Case A	Level of Service	A	A	A	A
		Average Vehicle Delay (s)	2.1	2.2	2.1	2.2
		Degree of Saturation (%)	9.2	10.8	10.2	12.0
	Case B	Level of Service	A	A	A	A
		Average Vehicle Delay (s)	2.0	2.1	2.1	2.2
		Degree of Saturation (%)	9.8	11.4	10.8	12.6
	Case C	Level of Service	A	A	A	A
		Average Vehicle Delay (s)	2.3	2.4	2.3	2.4
		Degree of Saturation (%)	9.9	11.5	11.0	12.8
	Largest Change	Level of Service	None	None	None	None
		Average Vehicle Delay (s)	0.2	0.3	0.2	0.2
		Degree of Saturation (%)	3.9	3.9	4.3	4.4

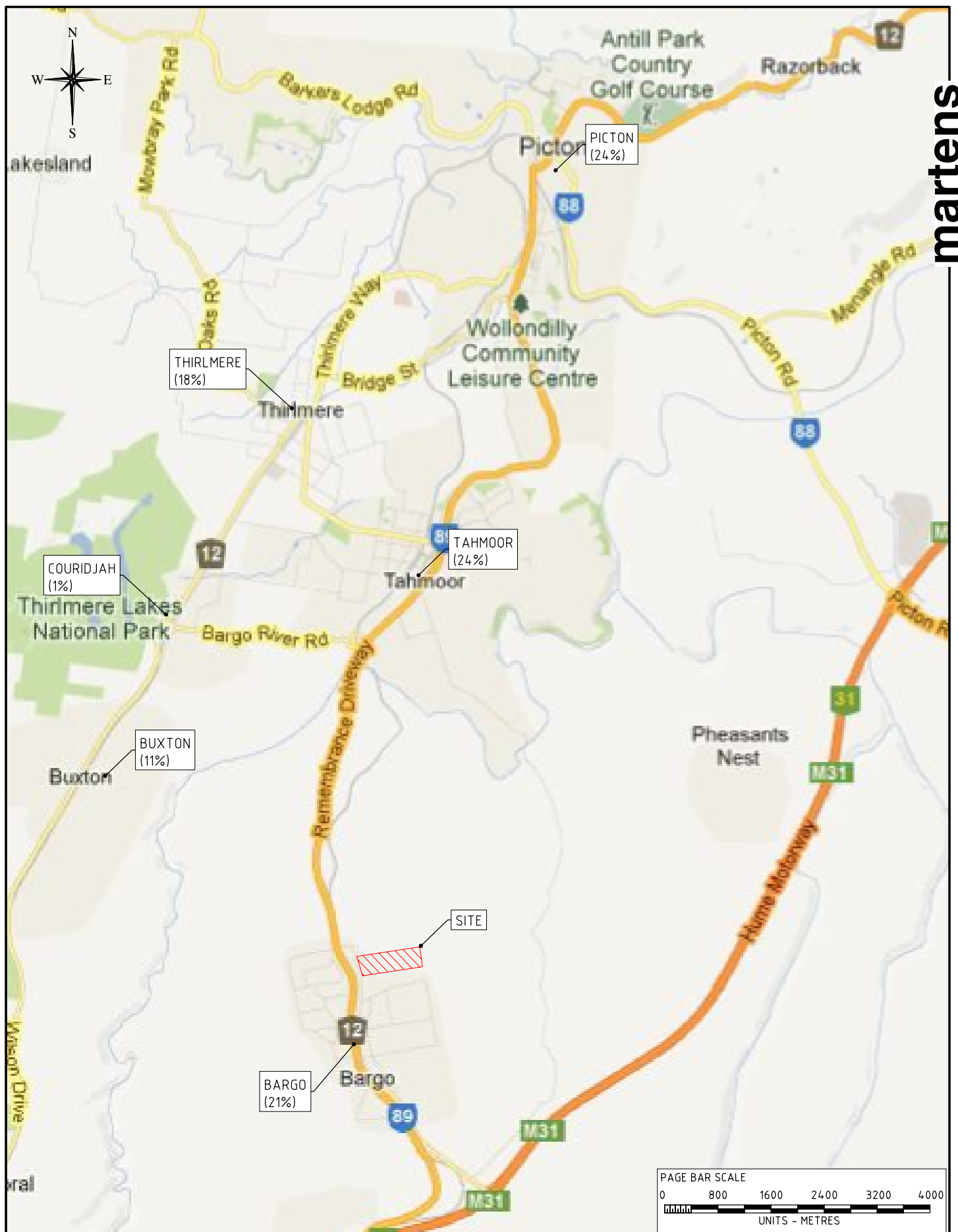
8.2.5 Intersection 5 Performance: Great Southern Road & Avon Dam Road

Intersection	Scenario	Parameter	2015 Peaks		2025 Peaks	
			AM	PM	AM	PM
5. Great Southern Road & Avon Dam Road	Existing	Level of Service	A	A	A	A
		Average Vehicle Delay (s)	4.3	4.4	4.4	4.5
		Degree of Saturation (%)	17.8	22.2	20.2	25.3
	Case A	Level of Service	A	A	A	A
		Average Vehicle Delay (s)	4.5	4.7	4.6	4.9
		Degree of Saturation (%)	19.7	24.5	22.5	28.1
	Case B	Level of Service	A	A	A	A
		Average Vehicle Delay (s)	4.6	4.8	4.7	4.9
		Degree of Saturation (%)	20.5	25.3	23.4	29.0
	Case C	Level of Service	A	A	A	A
		Average Vehicle Delay (s)	4.5	4.7	4.6	4.8
		Degree of Saturation (%)	20.1	24.9	22.9	28.6
	Largest Change	Level of Service	None	None	None	None
		Average Vehicle Delay (s)	0.3	0.4	0.3	0.4
		Degree of Saturation (%)	2.7	3.1	3.2	3.7

8.2.6 Intersection 6 Performance: Avon Dam Road & Remembrance Driveway

Intersection	Scenario	Parameter	2015 Peaks		2025 Peaks	
			AM	PM	AM	PM
6. Avon Dam Road & Remembrance Drive	Existing	Level of Service	A	A	A	A
		Average Vehicle Delay (s)	4.9	5.2	5.0	5.6
		Degree of Saturation (%)	25.0	32.0	28.8	37.1
	Case A	Level of Service	A	A	A	A
		Average Vehicle Delay (s)	5.0	5.4	5.2	5.7
		Degree of Saturation (%)	26.6	33.7	30.7	39.2
	Case B	Level of Service	A	A	A	A
		Average Vehicle Delay (s)	5.1	5.5	5.4	6.0
		Degree of Saturation (%)	28.6	35.9	33.0	41.7
	Case C	Level of Service	A	A	A	A
		Average Vehicle Delay (s)	5.1	5.5	5.3	5.9
		Degree of Saturation (%)	27.8	35.1	32.1	40.8
	Largest Change	Level of Service	None	None	None	None
		Average Vehicle Delay (s)	0.2	0.3	0.4	0.4
		Degree of Saturation (%)	3.6	3.9	4.2	4.6

9 **Attachment B – Figures**

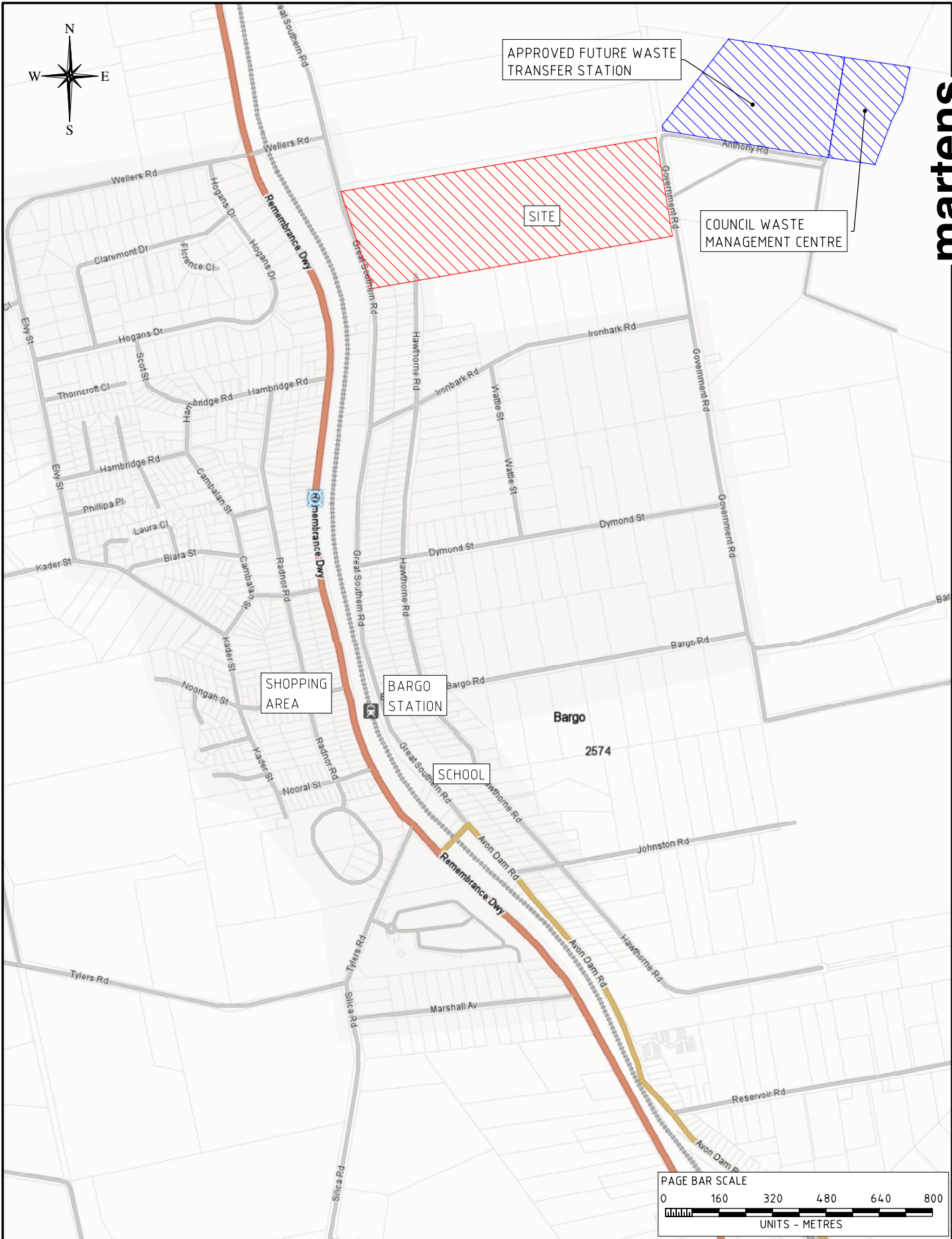


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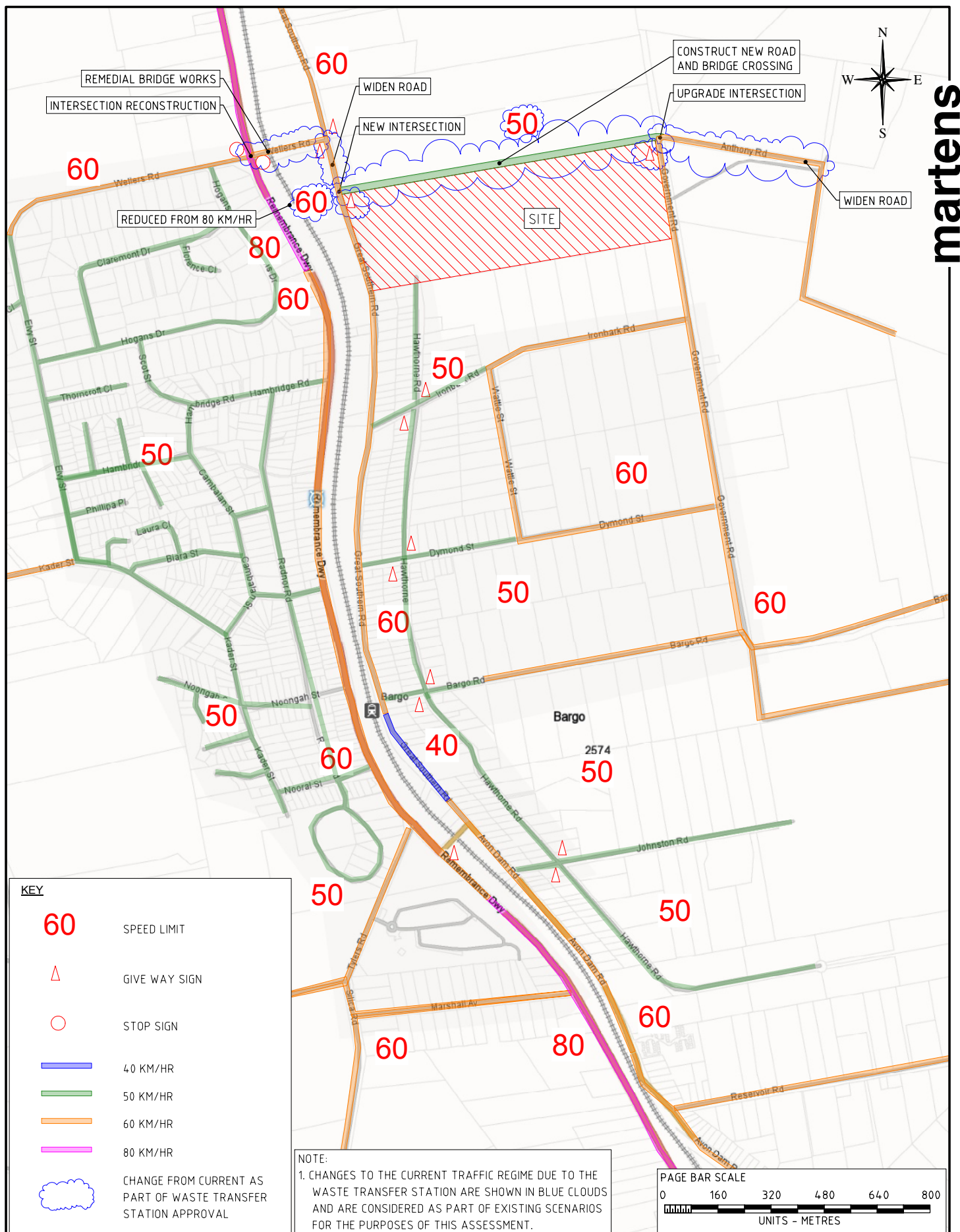
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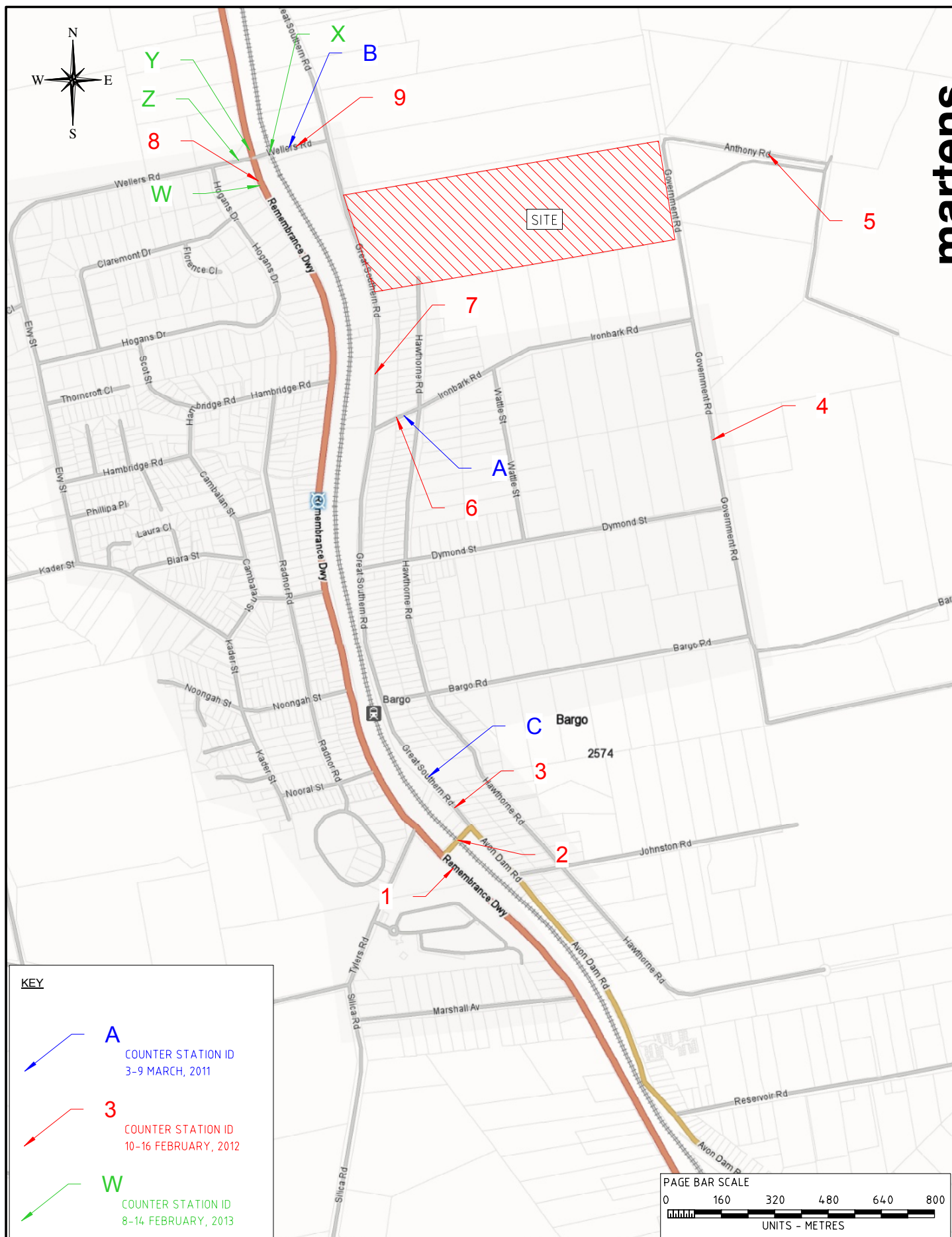
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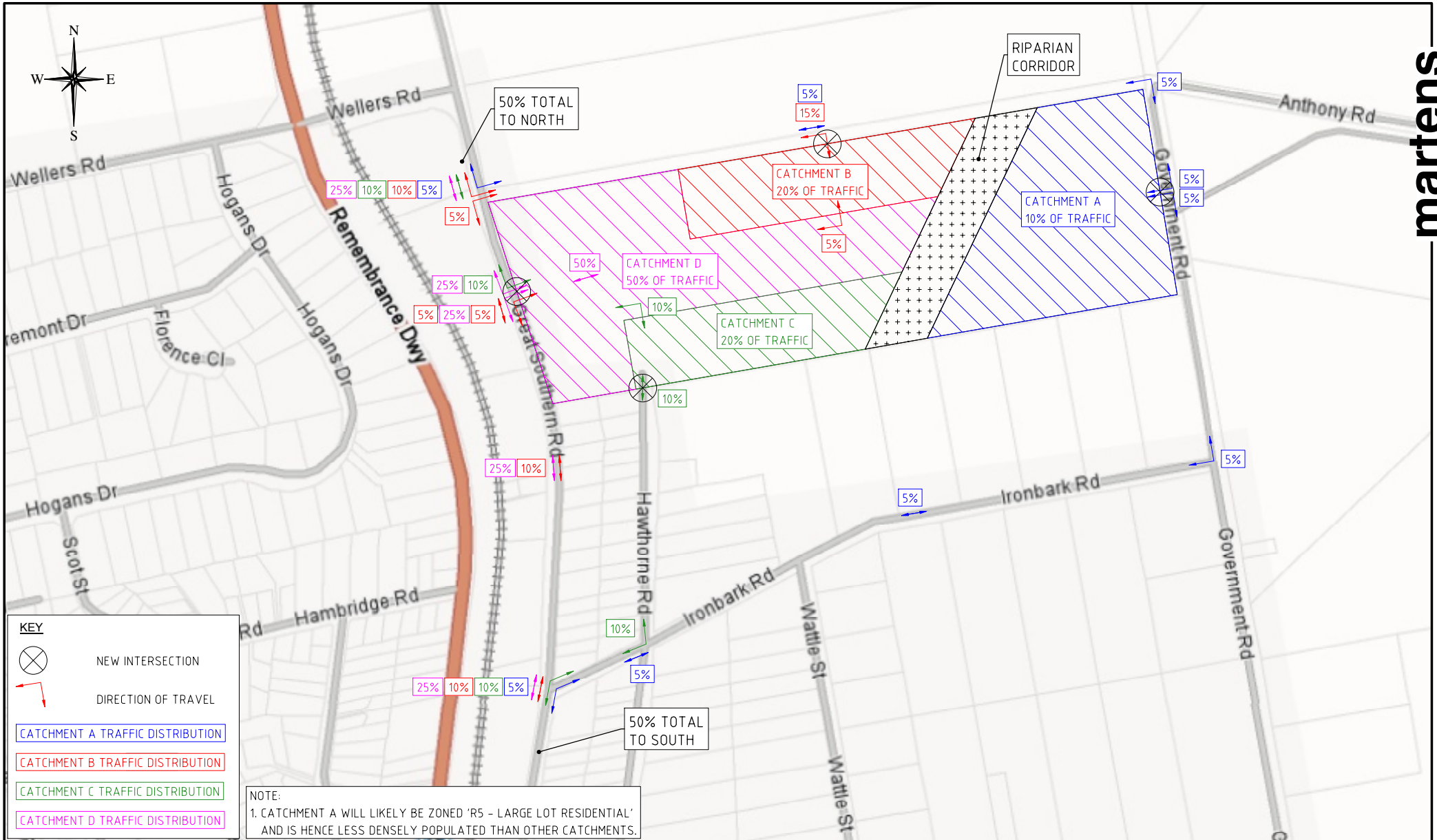
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TRAFFIC COUNTER SITES

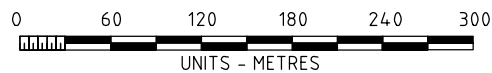
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EXPECTED SITE ROUTE ALLOCATION (CASE A)

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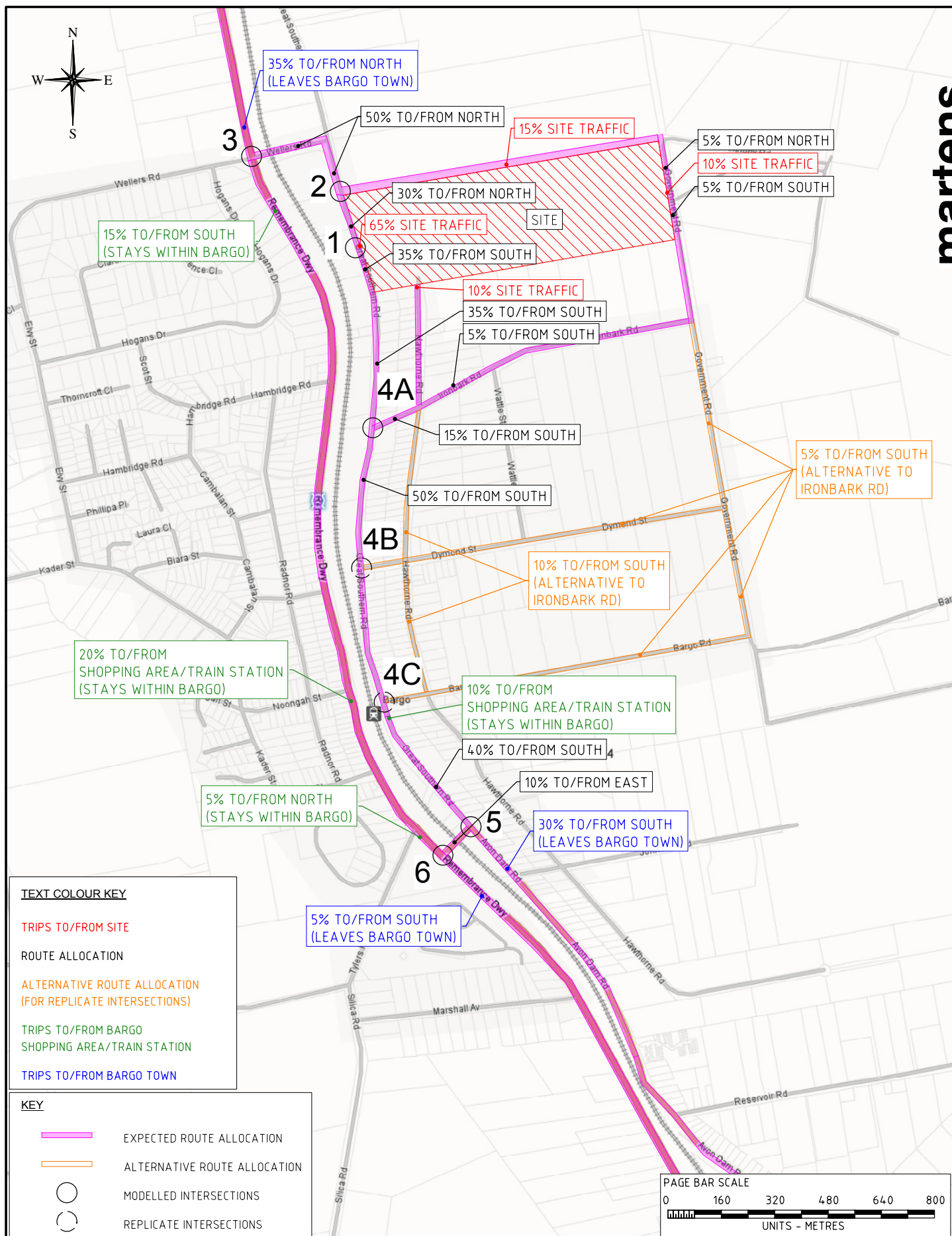
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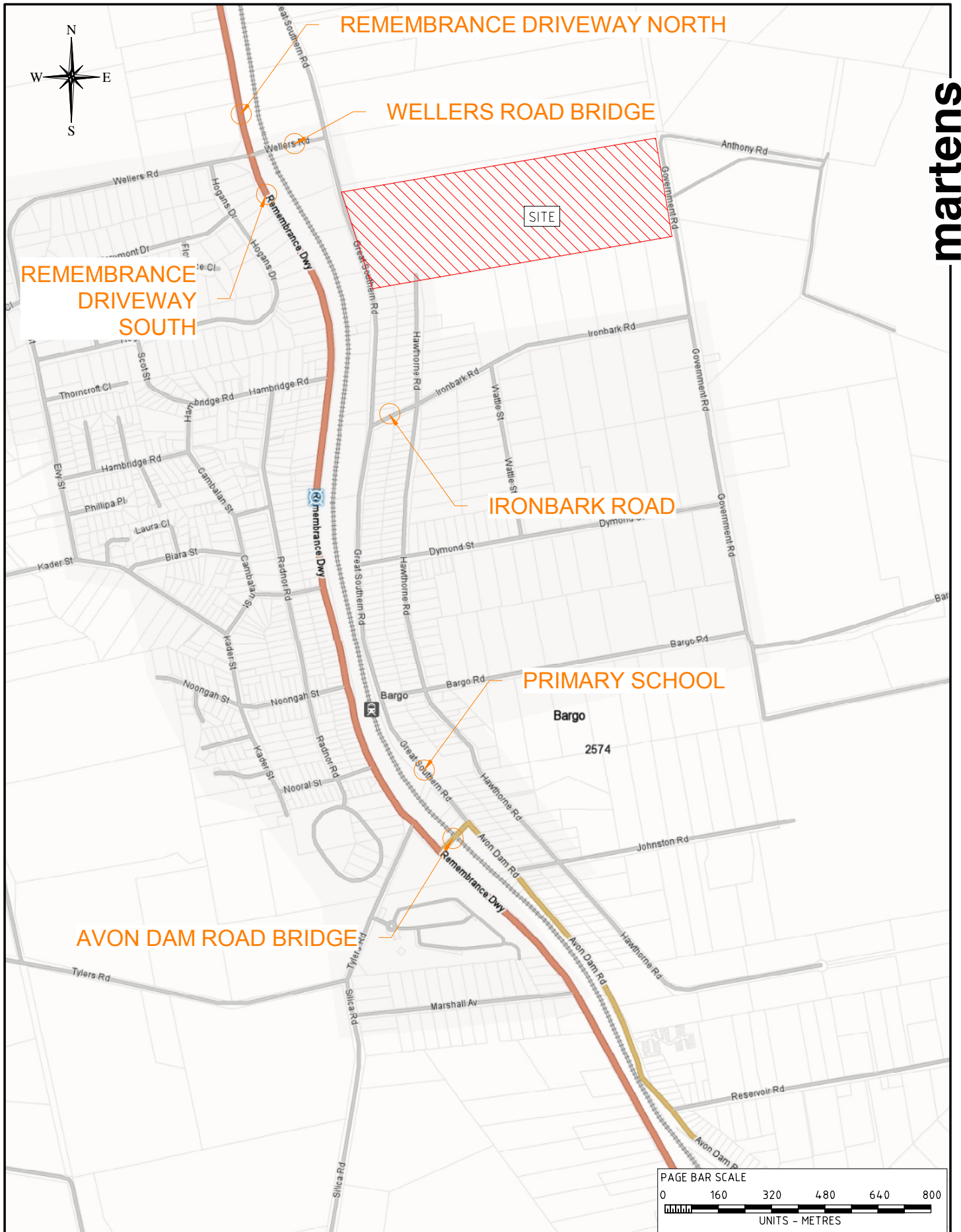
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**EXPECTED LOCAL NETWORK ROUTE ALLOCATION (CASE A)
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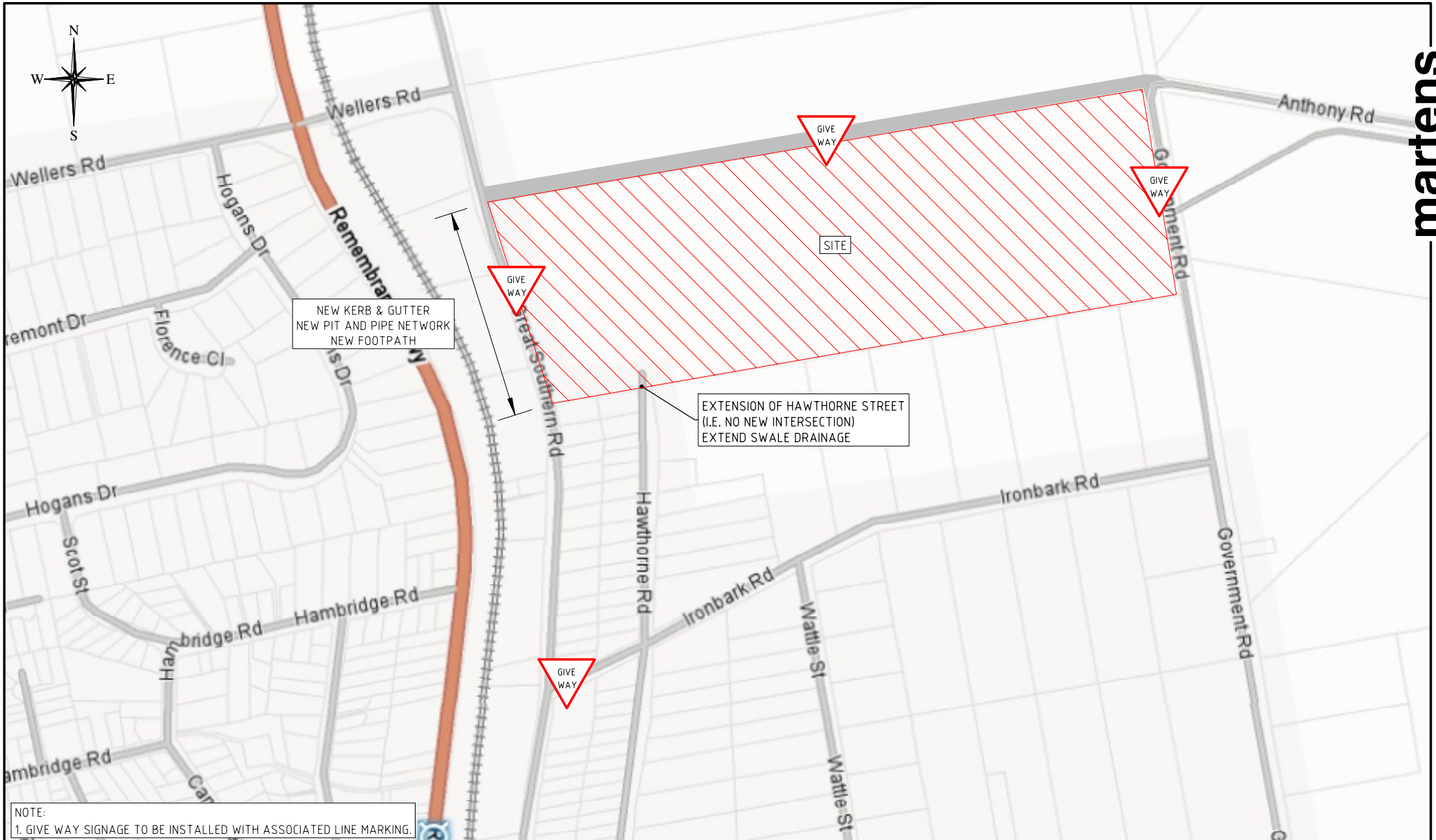
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NOTE:
1. GIVE WAY SIGNAGE TO BE INSTALLED WITH ASSOCIATED LINE MARKING.

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PROPOSED TRAFFIC MANAGEMENT CONTROLS

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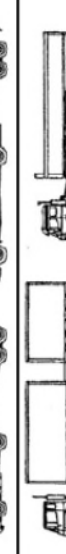
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AUSTROADS Vehicle Classification System

AUSTROADS Classification						
Level 1 Length (indicative) Type	Level 2		Level 3 Vehicle Type	Class	Parameters	Typical Configuration
	Axles and Axle Groups	Groups				
Short up to 5.5m		1 or 2	Short Sedan, Wagon, 4WD, Utility, Light Van, Bicycle, Motorcycle, etc	1	$d(1) \leq 3.2m$ and axles = 2	  
	3, 4 or 5	3	Short - Towing Trailer, Caravan, Boat, etc	2	groups = 3 $d(1) \geq 2.1m$, $d(1) \leq 3.2m$, $d(2) \geq 2.1m$ and axles = 3, 4 or 5	  
	HEAVY VEHICLES					
Medium 5.5m to 14.5m	2	2	Two Axle Truck or Bus	3	$d(1) > 3.2m$ and axles = 2	  
	3	2	Three Axle Truck or Bus	4	axles = 3 and groups = 2	  
	> 3	2	Four Axle Truck	5	axles > 3 and groups = 2	
	3	3	Three Axle Articulated Three axle articulated vehicle, or Rigid vehicle and trailer	6	$d(1) > 3.2m$, axles = 3 and groups = 3	  
Long 11.5m to 19.0m	4	> 2	Four Axle Articulated Four axle articulated vehicle, or Rigid vehicle and trailer	7	$d(2) < 2.1m$ or $d(1) < 2.1m$ or $d(1) > 3.2m$ axles = 4 and groups > 2	  
	5	> 2	Five Axle Articulated Five axle articulated vehicle, or Rigid vehicle and trailer	8	$d(2) < 2.1m$ or $d(1) < 2.1m$ or $d(1) > 3.2m$ axles = 5 and groups > 2	  
	≥ 6	> 2	Six Axle Articulated Six axle articulated vehicle, or Rigid vehicle and trailer	9	axles = 6 and groups > 2 or axles > 6 and groups = 3	  
	> 6	4	B Double B Double, or Heavy truck and trailer	10	groups = 4 and axles > 6	  
Medium Combination 17.5m to 36.5m	> 6	5 or 6	Double Road Train Double road train, or Medium articulated vehicle and one dog trailer (M.A.D.)	11	groups = 5 or 6 and axles > 6	  
Large Combination Over 33.0m	> 6	> 6	Triple Road Train Triple road train, or Heavy truck and three trailers	12	groups > 6 and axles > 6	  

d(1): Distance between first and second axle
d(2): Distance between second and third axle

Group: Axle group, where adjacent axles are less than 2.1m apart
Groups: Number of axle groups
Axles: Number of axles (maximum axle spacing of 10.0m)

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AUSTROADS VEHICLE TYPES

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10 **Attachment C – Traffic Count Data**

Count Number **8256** Ref : **MART** Lat/Long : **S34 17 48.7 / E150 35 04.3** UBD **371 H-10**
 Street **REMEMBRANCE DRIVE, TAHMOOR : Between BARGO RIVER ROAD & WELLERS ROAD (bidirectional) :**
 Location **Site 1, South of Avon Dam Road Railway Bridge, ELP 248** Carriageway

Start Date 10-FEB-12
 Start Time 100
 Duration 7 DAYS
 Interval 1 HOUR

Weekly 50th Percentile Speed 74
 Weekly 85th Percentile Speed 83
 Five Day AADT 3987
 Seven Day AADT 3734

TOTAL COUNT MATRIX

	MON 13TH	TUE 14TH	WED 15TH	THU 16TH	FRI 10TH	SAT 11TH	SUN 12TH	5 Day Total Average		7 Day Total Average	
Midnight - 1am	8	25	19	21	19	28	15	92	18	135	19
1am - 2am	11	16	8	11	13	24	13	59	12	96	14
2am - 3am	6	7	5	6	11	13	9	35	7	57	8
3am - 4am	12	18	15	13	19	7	9	77	15	93	13
4am - 5am	46	34	32	34	33	13	11	179	36	203	29
5am - 6am	84	98	91	102	62	29	10	437	87	476	68
6am - 7am	188	182	167	189	162	87	42	888	178	1017	145
7am - 8am	265	241	266	247	235	103	57	1254	251	1414	202
8am - 9am	254	303	300	280	285	160	102	1422	284	1684	241
9am - 10am	249	228	267	238	275	221	191	1257	251	1669	238
10am - 11am	212	213	231	238	255	243	269	1149	230	1661	237
11am - Midday	242	201	237	252	296	273	319	1228	246	1820	260
Midday - 1pm	210	223	239	211	278	309	268	1161	232	1738	248
1pm - 2pm	236	220	248	208	293	246	271	1205	241	1722	246
2pm - 3pm	264	244	285	272	310	259	239	1375	275	1873	268
3pm - 4pm	310	318	330	344	339	239	257	1641	328	2137	305
4pm - 5pm	308	343	326	368	322	203	223	1667	333	2093	299
5pm - 6pm	295	366	330	341	321	194	215	1653	331	2062	295
6pm - 7pm	177	246	196	230	270	189	130	1119	224	1438	205
7pm - 8pm	95	123	150	152	148	126	97	668	134	891	127
8pm - 9pm	61	109	103	124	95	85	102	492	98	679	97
9pm - 10pm	59	79	102	118	106	87	56	464	93	607	87
10pm - 11pm	40	54	38	49	69	72	39	250	50	361	52
11pm - Midnight	18	30	24	31	58	32	16	161	32	209	30
Total	3650	3921	4009	4079	4274	3242	2960	19933	3986	26135	3733

Count Number 8256

Ref : MART

Lat/Long : S34 17 48.7 / E150 35 04.3

UBD 371 H-10

Street REMEMBRANCE DRIVE, TAHMOOR : From BARGO RIVER ROAD to WELLERS ROAD : NORTH BOUND

Location Site 1, South of Avon Dam Road Railway Bridge, ELP 248

Carriageway

Start Date 10-FEB-12

Start Time 100

Duration 7 DAYS

Interval 1 HOUR

Weekly 50th Percentile Speed 74

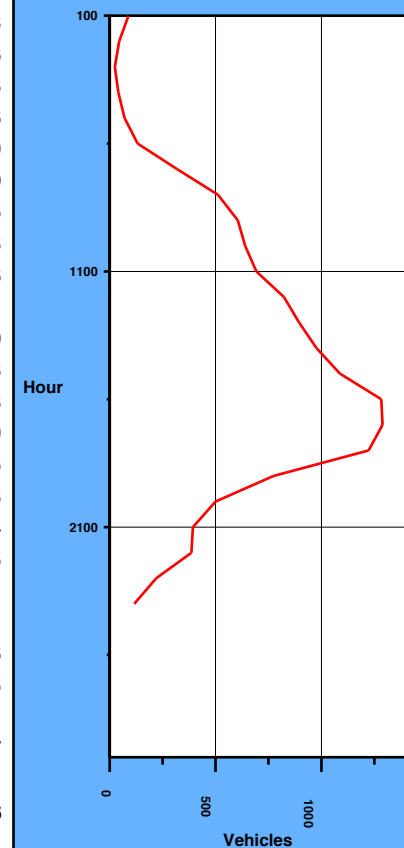
Weekly 85th Percentile Speed 84

Five Day AADT 1992

Seven Day AADT 1876

THE BODY OF THIS REPORT
SHOWS : SEVENDAY
TRAFFIC

Time	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total	Avg
Midnight - 1am	0	77	2	2	3	1	0	0	1	3	0	0	0	0	89	13
1am - 2am	0	36	0	3	1	0	0	0	2	3	0	0	0	0	45	6
2am - 3am	1	17	0	1	0	0	0	0	2	3	0	0	0	0	24	3
3am - 4am	0	28	0	1	2	1	0	0	2	5	2	0	0	0	41	6
4am - 5am	0	54	0	10	2	0	0	0	1	3	0	0	0	0	70	10
5am - 6am	1	105	0	7	0	4	0	0	0	11	4	0	0	0	132	19
6am - 7am	2	273	4	20	6	1	1	1	0	9	1	0	0	0	318	45
7am - 8am	4	450	2	38	7	1	2	1	0	6	0	0	0	0	511	73
8am - 9am	5	519	12	52	7	0	2	1	1	6	0	0	0	0	605	86
9am - 10am	7	562	9	39	9	4	1	0	0	6	3	0	0	0	640	91
10am - 11am	11	600	12	40	7	5	0	2	3	12	1	0	0	0	693	99
11am - Midday	24	721	18	36	12	4	0	0	2	6	0	0	0	0	823	118
Midday - 1pm	21	784	17	43	11	5	2	2	0	8	2	0	0	0	895	128
1pm - 2pm	30	848	17	46	15	2	1	2	1	13	2	0	0	0	977	140
2pm - 3pm	19	957	25	67	8	1	2	2	2	5	0	0	0	0	1088	155
3pm - 4pm	17	1165	22	57	3	3	4	0	4	8	0	0	0	0	1283	183
4pm - 5pm	14	1163	30	65	2	1	2	1	1	9	1	0	0	0	1289	184
5pm - 6pm	14	1145	14	29	6	1	2	3	0	9	0	0	0	0	1223	175
6pm - 7pm	11	711	16	17	3	3	5	3	1	2	2	0	0	0	774	111
7pm - 8pm	3	449	10	21	5	0	3	2	0	4	3	0	0	0	500	71
8pm - 9pm	1	366	5	7	1	0	4	2	0	6	1	0	0	0	393	56
9pm - 10pm	1	374	2	1	2	0	1	0	0	5	0	0	0	0	386	55
10pm - 11pm	1	204	1	8	1	0	1	1	0	2	1	0	0	0	220	31
11pm - Midnight	1	109	1	1	0	0	0	1	0	3	0	0	0	0	116	17
Total	188	11717	219	611	113	37	33	24	23	147	23	0	0	0	13135	1876
% of Total	1	89	2	5	1					1						



Count Number 8256

Ref : MART

Lat/Long : S34 17 48.7 / E150 35 04.3

UBD 371 H-10

Street REMEMBRANCE DRIVE, TAHMOOR : From BARGO RIVER ROAD to WELLERS ROAD : NORTH BOUND

Location Site 1, South of Avon Dam Road Railway Bridge, ELP 248

Carriageway

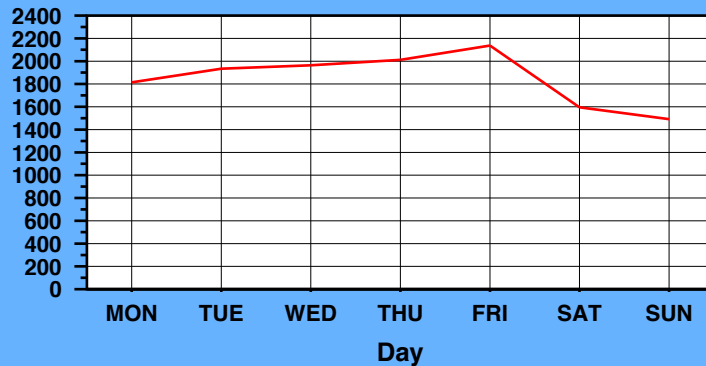
Start Date 10-FEB-12
 Start Time 100
 Duration 7 DAYS
 Interval 1 HOUR

Weekly 50th Percentile Speed 74
 Weekly 85th Percentile Speed 84
 Five Day AADT 1992
 Seven Day AADT 1876

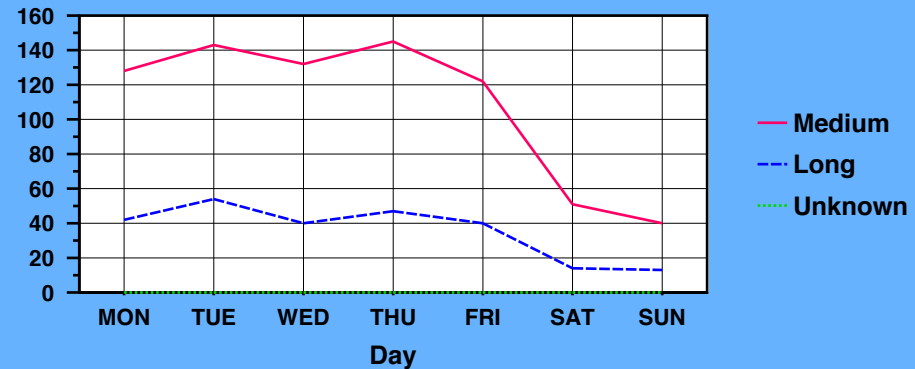
THE BODY OF THIS REPORT
 SHOWS : SEVENDAY
 TRAFFIC

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total
MONDAY	15	1614	30	101	23	4	4	3	2	27	6	0	0	0	1829
TUESDAY	15	1718	19	117	19	7	3	6	6	34	5	0	0	0	1949
WEDNESDAY	16	1768	24	107	17	8	6	4	1	25	4	0	0	0	1980
THURSDAY	38	1788	32	114	21	10	8	0	6	29	4	0	0	0	2050
FRIDAY	14	1942	33	99	19	4	4	6	5	21	4	0	0	0	2151
SATURDAY	15	1494	36	44	5	2	3	2	2	7	0	0	0	0	1610
SUNDAY	75	1393	45	29	9	2	5	3	1	4	0	0	0	0	1566
5 Day Total	98	8830	138	538	99	33	25	19	20	136	23	0	0	0	9959
5 Day Pct	1	89	1	5	1					1					
7 Day Total	188	11717	219	611	113	37	33	24	23	147	23	0	0	0	13135
7 Day Pct	1	89	2	5	1					1					

Volume



Class Volumes



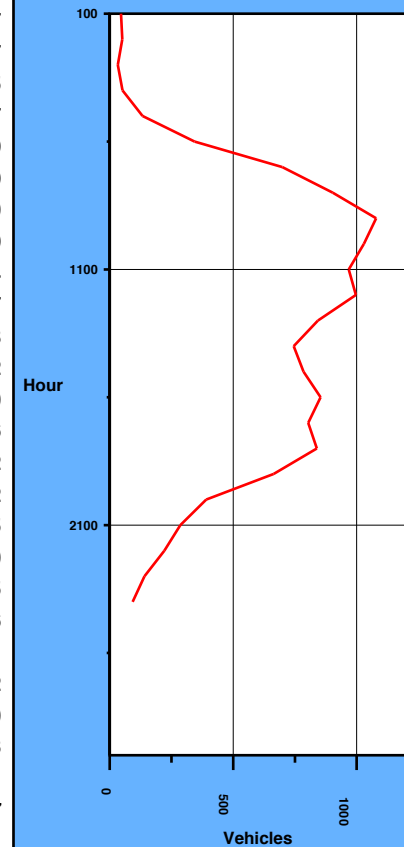
Count Number **8256** Ref : **MART** Lat/Long : **S34 17 48.7 / E150 35 04.3** UBD **371 H-10**
 Street **REMEMBRANCE DRIVE, TAHMOOR : From WELLERS ROAD to BARGO RIVER ROAD : SOUTH BOUND**
 Location **Site 1, South of Avon Dam Road Railway Bridge, ELP 248** Carriageway

Start Date **10-FEB-12**
 Start Time **100**
 Duration **7 DAYS**
 Interval **1 HOUR**

Weekly 50th Percentile Speed 74
Weekly 85th Percentile Speed 83
Five Day AADT 1995
Seven Day AADT 1857

**THE BODY OF THIS REPORT
 SHOWS : SEVENDAY
 TRAFFIC**

Time	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total	Avg
Midnight - 1am	0	37	1	5	0	0	0	0	0	3	0	0	0	0	46	7
1am - 2am	0	29	2	13	1	0	1	0	1	4	0	0	0	0	51	7
2am - 3am	0	22	0	3	2	0	1	0	1	2	2	0	0	0	33	5
3am - 4am	0	29	1	5	2	0	0	0	2	11	2	0	0	0	52	7
4am - 5am	1	95	2	8	3	11	1	0	4	7	1	0	0	0	133	19
5am - 6am	0	294	8	24	3	1	2	2	4	6	0	0	0	0	344	49
6am - 7am	6	589	17	49	20	3	3	1	1	7	3	0	0	0	699	100
7am - 8am	2	800	19	53	9	2	4	0	2	11	1	0	0	0	903	129
8am - 9am	9	972	14	63	7	1	3	0	1	8	1	0	0	0	1079	154
9am - 10am	15	920	27	47	11	1	1	0	2	5	0	0	0	0	1029	147
10am - 11am	12	855	20	55	11	4	2	1	0	6	2	0	0	0	968	138
11am - Midday	9	890	16	54	7	2	2	0	1	15	1	0	0	0	997	142
Midday - 1pm	2	754	15	46	5	2	4	0	5	8	2	0	0	0	843	120
1pm - 2pm	1	668	14	41	7	0	1	0	2	9	2	0	0	0	745	106
2pm - 3pm	0	725	17	22	7	1	2	1	3	4	3	0	0	0	785	112
3pm - 4pm	4	771	16	38	5	0	4	0	1	14	1	0	0	0	854	122
4pm - 5pm	3	743	20	23	1	2	2	0	0	10	0	0	0	0	804	115
5pm - 6pm	2	794	13	17	4	0	1	0	1	7	0	0	0	0	839	120
6pm - 7pm	4	613	8	29	0	0	0	0	1	9	0	0	0	0	664	95
7pm - 8pm	0	362	9	11	2	1	3	0	0	3	0	0	0	0	391	56
8pm - 9pm	1	263	1	7	1	0	0	0	3	8	2	0	0	0	286	41
9pm - 10pm	0	196	5	7	0	0	0	1	0	12	0	0	0	0	221	32
10pm - 11pm	0	133	3	4	0	0	0	0	0	1	0	0	0	0	141	20
11pm - Midnight	0	86	1	1	0	1	0	0	0	3	1	0	0	0	93	13
Total	71	11640	249	625	108	32	37	6	35	173	24	0	0	0	13000	1857
% of Total	1	90	2	5	1					1						



Count Number 8256

Ref : MART

Lat/Long : S34 17 48.7 / E150 35 04.3

UBD 371 H-10

Street REMEMBRANCE DRIVE, TAHMOOR : From WELLERS ROAD to BARGO RIVER ROAD : SOUTH BOUND

Location Site 1, South of Avon Dam Road Railway Bridge, ELP 248

Carriageway

Start Date 10-FEB-12

Start Time 100

Duration 7 DAYS

Interval 1 HOUR

Weekly 50th Percentile Speed 74

Weekly 85th Percentile Speed 83

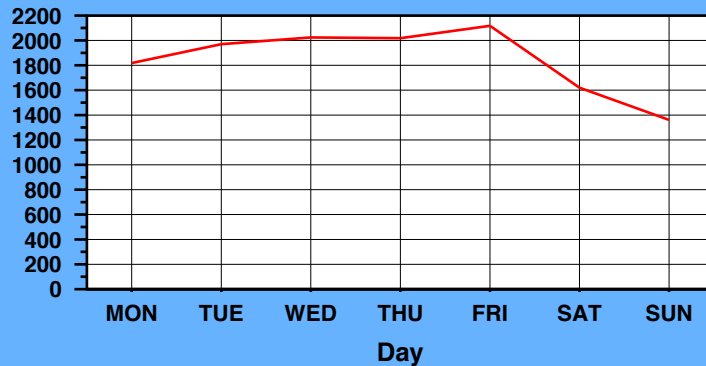
Five Day AADT 1995

Seven Day AADT 1857

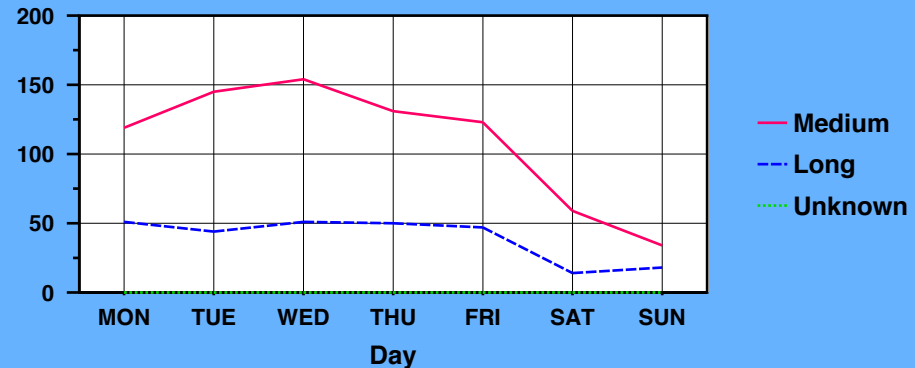
THE BODY OF THIS REPORT
SHOWS : SEVENDAY
TRAFFIC

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total
MONDAY	3	1620	28	96	19	4	2	1	4	40	4	0	0	0	1821
TUESDAY	2	1755	26	113	24	8	11	1	8	22	2	0	0	0	1972
WEDNESDAY	5	1793	26	123	24	7	7	2	5	33	4	0	0	0	2029
THURSDAY	11	1799	38	110	16	5	5	1	6	33	5	0	0	0	2029
FRIDAY	5	1908	40	102	16	5	5	1	8	29	4	0	0	0	2123
SATURDAY	12	1491	56	50	6	3	3	0	2	7	2	0	0	0	1632
SUNDAY	33	1274	35	31	3	0	4	0	2	9	3	0	0	0	1394
5 Day Total	26	8875	158	544	99	29	30	6	31	157	19	0	0	0	9974
5 Day Pct		89	2	5	1					2					
7 Day Total	71	11640	249	625	108	32	37	6	35	173	24	0	0	0	13000
7 Day Pct	1	90	2	5	1					1					

Volume



Class Volumes



Count Number **8257** Ref : **MART** Lat/Long : **S34 17 41.3 / E150 35 00.3** UBD **371 G-9**
 Street **AVON DAM ROAD, BARGO : Between REMEMBRANCE DRIVE & HUME HIGHWAY OVERPASS (bidirectional) :**
 Location **Site 2, on southern Railway Bridge, On rail guard.** Carriageway

Start Date 10-FEB-12
 Start Time 100
 Duration 7 DAYS
 Interval 1 HOUR

Weekly 50th Percentile Speed 36
 Weekly 85th Percentile Speed 44
 Five Day AADT 4464
 Seven Day AADT 4055

TOTAL COUNT MATRIX

	MON 13TH	TUE 14TH	WED 15TH	THU 16TH	FRI 10TH	SAT 11TH	SUN 12TH	5 Day Total Average		7 Day Total Average	
Midnight - 1am	8	30	34	36	41	41	27	149	30	217	31
1am - 2am	6	26	31	19	20	16	30	102	20	148	21
2am - 3am	13	10	7	6	12	9	12	48	10	69	10
3am - 4am	26	25	14	23	22	5	12	110	22	127	18
4am - 5am	59	62	61	45	62	23	14	289	58	326	47
5am - 6am	138	142	150	138	117	55	22	685	137	762	109
6am - 7am	247	231	254	250	233	100	62	1215	243	1377	197
7am - 8am	284	288	290	296	268	132	82	1426	285	1640	234
8am - 9am	302	324	300	316	332	171	110	1574	315	1855	265
9am - 10am	308	317	355	313	309	202	159	1602	320	1963	280
10am - 11am	210	186	198	191	230	216	197	1015	203	1428	204
11am - Midday	171	175	231	192	176	285	250	945	189	1480	211
Midday - 1pm	186	190	216	183	199	262	225	974	195	1461	209
1pm - 2pm	206	190	230	205	241	235	213	1072	214	1520	217
2pm - 3pm	305	289	296	280	279	244	200	1449	290	1893	270
3pm - 4pm	424	430	390	415	415	223	190	2074	415	2487	355
4pm - 5pm	337	362	380	417	356	184	198	1852	370	2234	319
5pm - 6pm	371	367	359	379	326	204	220	1802	360	2226	318
6pm - 7pm	238	278	284	307	329	206	140	1436	287	1782	255
7pm - 8pm	117	179	174	180	242	142	150	892	178	1184	169
8pm - 9pm	91	114	114	124	120	112	116	563	113	791	113
9pm - 10pm	77	87	95	122	110	86	68	491	98	645	92
10pm - 11pm	53	60	73	70	68	69	53	324	65	446	64
11pm - Midnight	34	45	43	47	63	68	23	232	46	323	46
Total	4211	4407	4579	4554	4570	3290	2773	22321	4464	28384	4054

Count Number 8257

Ref : MART

Lat/Long : S34 17 41.3 / E150 35 00.3

UBD 371 G-9

Street AVON DAM ROAD, BARGO : From REMEMBRANCE DRIVE to HUME HIGHWAY OVERPASS : EAST BOUND

Location Site 2, on southern Railway Bridge, On rail guard.

Carriageway

Start Date 10-FEB-12

Start Time 100

Duration 7 DAYS

Interval 1 HOUR

Weekly 50th Percentile Speed 36

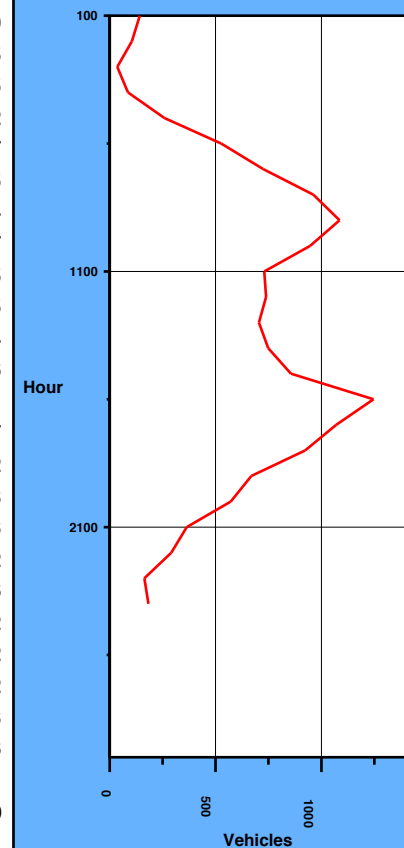
Weekly 85th Percentile Speed 44

Five Day AADT 2231

Seven Day AADT 2019

THE BODY OF THIS REPORT
SHOWS : SEVENDAY
TRAFFIC

Time	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total	Avg
Midnight - 1am	1	133	1	3	0	0	0	0	1	3	0	0	0	0	142	20
1am - 2am	0	95	0	4	3	0	0	0	0	3	0	0	0	0	105	15
2am - 3am	2	25	0	1	3	0	0	0	2	2	1	0	0	0	36	5
3am - 4am	1	62	1	10	1	0	0	0	0	6	5	0	0	0	86	12
4am - 5am	1	225	1	12	7	4	0	0	2	5	1	0	0	0	258	37
5am - 6am	0	464	3	40	10	1	3	0	0	6	0	0	0	0	527	75
6am - 7am	2	622	18	47	10	1	7	1	1	15	1	0	0	0	725	104
7am - 8am	0	884	16	38	11	1	2	3	0	7	0	0	0	0	962	137
8am - 9am	1	988	19	52	12	0	6	1	0	7	0	0	0	0	1086	155
9am - 10am	1	878	12	36	8	1	1	0	1	8	1	0	0	0	947	135
10am - 11am	1	654	18	37	6	1	1	0	0	11	1	0	0	0	730	104
11am - Midday	1	680	19	16	9	1	1	0	1	11	0	0	0	0	739	106
Midday - 1pm	0	640	16	33	3	0	2	1	0	9	1	0	0	0	705	101
1pm - 2pm	1	663	24	36	6	2	4	2	2	9	0	0	0	0	749	107
2pm - 3pm	1	778	20	38	7	0	0	1	0	11	0	0	0	0	856	122
3pm - 4pm	0	1188	17	34	2	0	0	0	0	5	0	0	0	0	1246	178
4pm - 5pm	2	1010	13	32	3	1	1	3	0	5	0	0	0	0	1070	153
5pm - 6pm	0	872	7	27	5	1	2	0	0	9	0	0	0	0	923	132
6pm - 7pm	1	643	5	11	4	0	0	4	0	1	0	0	0	0	669	96
7pm - 8pm	1	535	11	15	3	0	1	0	2	4	0	0	0	0	572	82
8pm - 9pm	2	332	8	12	5	0	1	0	1	3	0	0	0	0	364	52
9pm - 10pm	0	276	6	4	1	0	0	0	0	4	0	0	0	0	291	42
10pm - 11pm	0	155	1	5	2	0	0	0	0	1	0	0	0	0	164	23
11pm - Midnight	0	176	0	4	1	0	0	0	0	2	0	0	0	0	183	26
Total	19	12978	236	547	122	14	32	16	13	147	11	0	0	0	14135	2019
% of Total		92	2	4	1					1						



Count Number 8257

Ref : MART

Lat/Long : S34 17 41.3 / E150 35 00.3

UBD 371 G-9

Street AVON DAM ROAD, BARGO : From REMEMBRANCE DRIVE to HUME HIGHWAY OVERPASS : EAST BOUND

Location Site 2, on southern Railway Bridge, On rail guard.

Carriageway

Start Date 10-FEB-12

Start Time 100

Duration 7 DAYS

Interval 1 HOUR

Weekly 50th Percentile Speed 36

Weekly 85th Percentile Speed 44

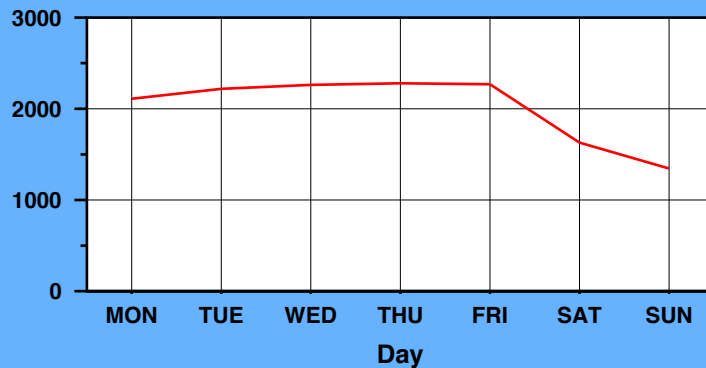
Five Day AADT 2231

Seven Day AADT 2019

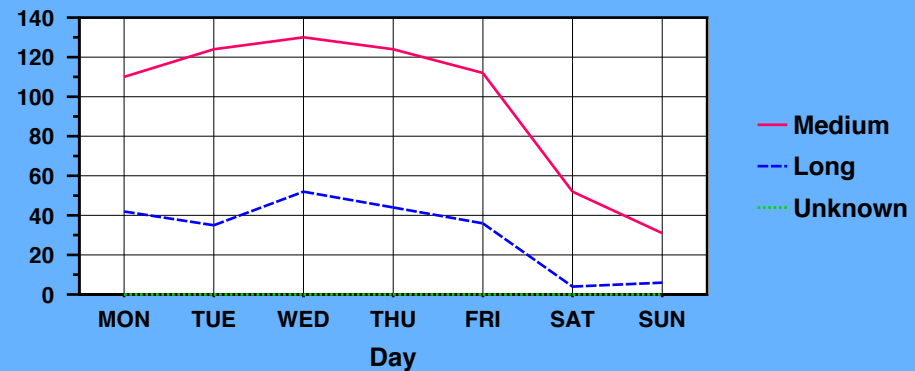
THE BODY OF THIS REPORT
SHOWS : SEVENDAY
TRAFFIC

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total
MONDAY	4	1922	36	82	23	5	7	1	2	28	4	0	0	0	2114
TUESDAY	5	2032	28	90	29	5	6	1	0	26	2	0	0	0	2224
WEDNESDAY	0	2048	32	108	21	1	9	6	2	34	1	0	0	0	2262
THURSDAY	4	2068	44	107	16	1	6	4	4	30	0	0	0	0	2284
FRIDAY	3	2096	25	93	17	2	3	4	3	22	4	0	0	0	2272
SATURDAY	1	1544	30	42	10	0	1	0	0	3	0	0	0	0	1631
SUNDAY	2	1268	41	25	6	0	0	0	2	4	0	0	0	0	1348
5 Day Total	16	10166	165	480	106	14	31	16	11	140	11	0	0	0	11156
5 Day Pct		91	1	4	1					1					
7 Day Total	19	12978	236	547	122	14	32	16	13	147	11	0	0	0	14135
7 Day Pct		92	2	4	1					1					

Volume



Class Volumes



Count Number 8257

Ref : MART

Lat/Long : S34 17 41.3 / E150 35 00.3

UBD 371 G-9

Street AVON DAM ROAD, BARGO : From HUME HIGHWAY OVERPASS to REMEMBRANCE DRIVE : WEST BOUND

Location Site 2, on southern Railway Bridge, On rail guard.

Carriageway

Start Date 10-FEB-12

Start Time 100

Duration 7 DAYS

Interval 1 HOUR

Weekly 50th Percentile Speed 36

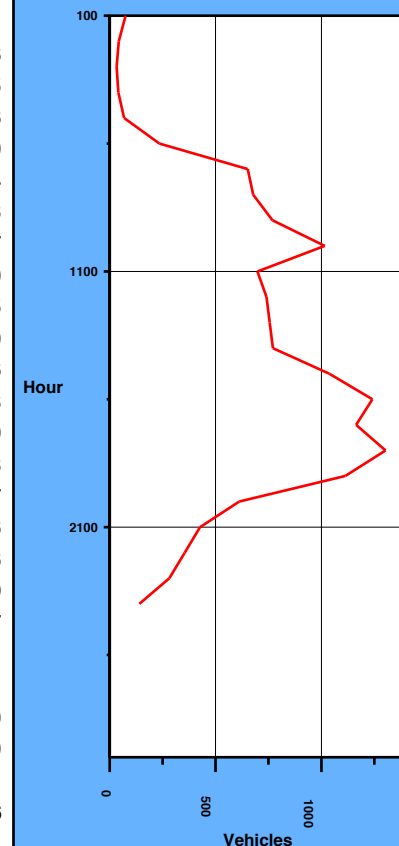
Weekly 85th Percentile Speed 44

Five Day AADT 2233

Seven Day AADT 2036

THE BODY OF THIS REPORT
SHOWS : SEVENDAY
TRAFFIC

Time	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total	Avg
Midnight - 1am	0	71	2	0	0	0	0	0	0	2	0	0	0	0	75	11
1am - 2am	0	38	0	3	0	0	0	0	0	2	0	0	0	0	43	6
2am - 3am	0	23	0	6	0	0	0	0	1	2	1	0	0	0	33	5
3am - 4am	0	31	0	3	0	0	0	0	2	5	0	0	0	0	41	6
4am - 5am	2	45	1	7	0	3	0	1	3	6	0	0	0	0	68	10
5am - 6am	1	214	5	6	0	0	0	0	0	8	1	0	0	0	235	34
6am - 7am	7	584	4	31	7	1	3	2	2	11	0	0	0	0	652	93
7am - 8am	2	597	15	40	5	0	2	0	1	16	0	0	0	0	678	97
8am - 9am	1	706	13	30	7	1	0	0	0	10	1	0	0	0	769	110
9am - 10am	0	933	22	37	9	2	6	1	0	6	0	0	0	0	1016	145
10am - 11am	4	620	11	38	6	0	2	0	2	14	1	0	0	0	698	100
11am - Midday	3	662	20	27	6	0	3	1	0	19	0	0	0	0	741	106
Midday - 1pm	1	668	22	42	6	0	1	2	2	12	0	0	0	0	756	108
1pm - 2pm	3	694	15	36	9	1	2	0	2	8	1	0	0	0	771	110
2pm - 3pm	2	953	17	43	10	1	1	0	2	7	1	0	0	0	1037	148
3pm - 4pm	1	1140	24	46	14	0	5	1	2	8	0	0	0	0	1241	177
4pm - 5pm	0	1064	20	50	13	1	5	1	0	8	2	0	0	0	1164	166
5pm - 6pm	9	1208	17	42	11	0	5	1	0	8	2	0	0	0	1303	186
6pm - 7pm	3	1040	12	35	8	0	4	3	0	6	2	0	0	0	1113	159
7pm - 8pm	0	573	13	18	5	0	1	0	0	2	0	0	0	0	612	87
8pm - 9pm	4	394	6	8	4	0	1	1	0	8	1	0	0	0	427	61
9pm - 10pm	4	335	2	7	0	0	1	0	0	5	0	0	0	0	354	51
10pm - 11pm	1	275	0	5	0	0	0	0	0	1	0	0	0	0	282	40
11pm - Midnight	0	130	3	2	2	0	0	0	0	3	0	0	0	0	140	20
Total	48	12998	244	562	122	10	42	14	19	177	13	0	0	0	14249	2036
% of Total		91	2	4	1					1						



Count Number 8257

Ref : MART

Lat/Long : S34 17 41.3 / E150 35 00.3

UBD 371 G-9

Street AVON DAM ROAD, BARGO : From HUME HIGHWAY OVERPASS to REMEMBRANCE DRIVE : WEST BOUND

Location Site 2, on southern Railway Bridge, On rail guard.

Carriageway

Start Date 10-FEB-12

Start Time 100

Duration 7 DAYS

Interval 1 HOUR

Weekly 50th Percentile Speed 36

Weekly 85th Percentile Speed 44

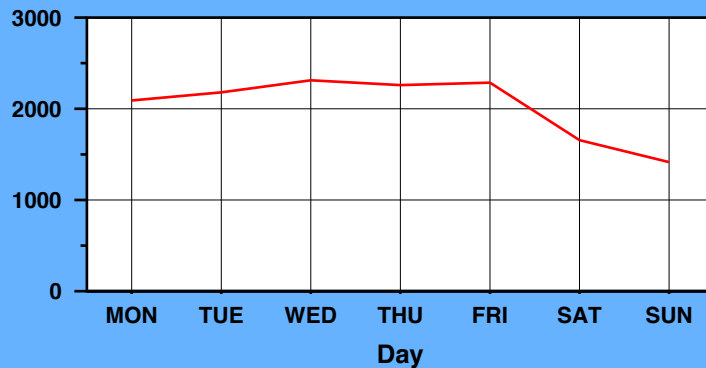
Five Day AADT 2233

Seven Day AADT 2036

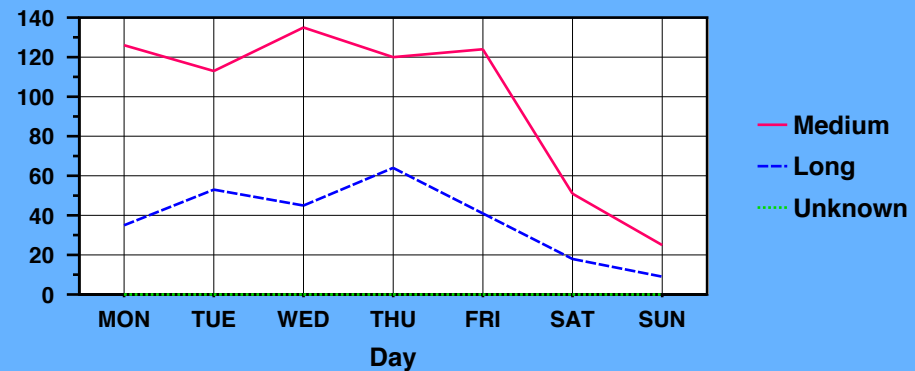
THE BODY OF THIS REPORT
SHOWS : SEVENDAY
TRAFFIC

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total
MONDAY	5	1907	24	95	28	3	4	1	1	27	2	0	0	0	2097
TUESDAY	3	1975	39	92	19	2	8	3	6	36	0	0	0	0	2183
WEDNESDAY	5	2096	36	108	26	1	7	4	3	30	1	0	0	0	2317
THURSDAY	10	2040	36	98	22	0	10	3	5	42	4	0	0	0	2270
FRIDAY	12	2083	38	107	14	3	6	2	2	27	4	0	0	0	2298
SATURDAY	3	1556	31	45	5	1	4	1	1	10	2	0	0	0	1659
SUNDAY	10	1341	40	17	8	0	3	0	1	5	0	0	0	0	1425
5 Day Total	35	10101	173	500	109	9	35	13	17	162	11	0	0	0	11165
5 Day Pct		90	2	4	1					1					
7 Day Total	48	12998	244	562	122	10	42	14	19	177	13	0	0	0	14249
7 Day Pct		91	2	4	1					1					

Volume



Class Volumes



Count Number 8258 Ref : MART Lat/Long : S34 17 36.9 / E150 34 57.2 UBD 371 G-9
 Street GREAT SOUTHERN ROAD, BARGO : Between AVON DAM ROAD & CHARLES POINT ROAD (bidirectional) :
 Location Site 3. north of Avon Dam Road Railway Bridge, Across from public school, ELP 575 Carriageway

Start Date 10-FEB-12
 Start Time 100
 Duration 7 DAYS
 Interval 1 HOUR

Weekly 50th Percentile Speed 52
 Weekly 85th Percentile Speed 63
 Five Day AADT 2366
 Seven Day AADT 2152

TOTAL COUNT MATRIX

	MON 13TH	TUE 14TH	WED 15TH	THU 16TH	FRI 10TH	SAT 11TH	SUN 12TH	5 Day Total Average		7 Day Total Average	
Midnight - 1am	3	3	9	12	6	30	20	33	7	83	12
1am - 2am	1	3	4	6	6	10	16	20	4	46	7
2am - 3am	4	2	1	2	4	10	5	13	3	28	4
3am - 4am	6	7	7	12	5	3	6	37	7	46	7
4am - 5am	17	17	24	28	21	6	7	107	21	120	17
5am - 6am	56	51	58	54	54	17	9	273	55	299	43
6am - 7am	98	81	93	76	86	41	24	434	87	499	71
7am - 8am	126	116	129	140	132	43	32	643	129	718	103
8am - 9am	145	167	183	188	187	78	43	870	174	991	142
9am - 10am	219	232	232	201	219	98	79	1103	221	1280	183
10am - 11am	113	111	102	112	122	134	112	560	112	806	115
11am - Midday	108	92	122	90	84	166	134	496	99	796	114
Midday - 1pm	103	109	113	115	124	154	103	564	113	821	117
1pm - 2pm	111	107	117	108	140	121	121	583	117	825	118
2pm - 3pm	141	138	148	129	144	136	126	700	140	962	137
3pm - 4pm	274	309	258	285	249	108	125	1375	275	1608	230
4pm - 5pm	199	208	201	216	183	107	98	1007	201	1212	173
5pm - 6pm	173	198	188	206	191	124	114	956	191	1194	171
6pm - 7pm	139	160	148	162	147	116	80	756	151	952	136
7pm - 8pm	79	103	111	90	126	78	81	509	102	668	95
8pm - 9pm	37	46	51	67	79	62	63	280	56	405	58
9pm - 10pm	38	47	42	90	58	53	32	275	55	360	51
10pm - 11pm	23	17	42	33	28	53	24	143	29	220	31
11pm - Midnight	10	13	20	25	27	22	10	95	19	127	18
Total	2223	2337	2403	2447	2422	1770	1464	11832	2366	15066	2152

Count Number 8258

Ref : MART

Lat/Long : S34 17 36.9 / E150 34 57.2

UBD 371 G-9

Street GREAT SOUTHERN ROAD, BARGO : From AVON DAM ROAD to CHARLES POINT ROAD : NORTH BOUND

Location Site 3. north of Avon Dam Road Railway Bridge, Across from public school, ELP 575

Carriageway

Start Date 10-FEB-12

Start Time 100

Duration 7 DAYS

Interval 1 HOUR

Weekly 50th Percentile Speed 51

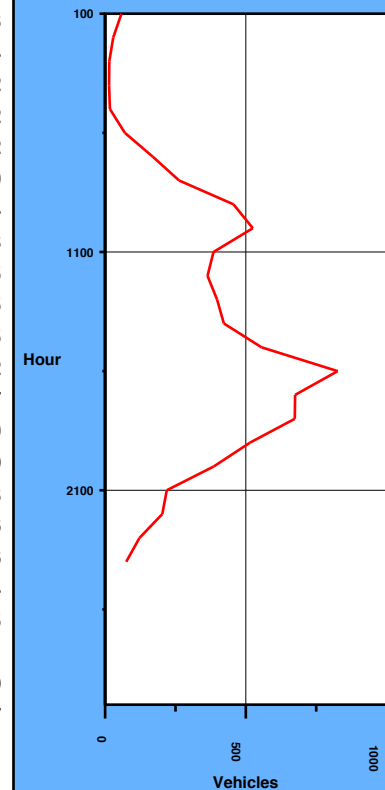
Weekly 85th Percentile Speed 62

Five Day AADT 1170

Seven Day AADT 1062

THE BODY OF THIS REPORT
SHOWS : SEVENDAY
TRAFFIC

Time	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total	Avg
Midnight - 1am	0	54	3	0	1	0	0	0	0	0	0	0	0	0	58	8
1am - 2am	0	25	2	0	1	0	0	0	0	1	0	0	0	0	29	4
2am - 3am	0	12	0	0	3	0	0	0	0	0	0	0	0	0	15	2
3am - 4am	0	13	0	0	1	0	0	0	0	0	0	0	0	0	14	2
4am - 5am	0	15	1	1	0	0	0	0	0	0	0	0	0	0	17	2
5am - 6am	0	68	1	1	0	0	0	0	0	0	0	0	0	0	70	10
6am - 7am	1	163	1	4	0	0	0	0	0	0	0	0	0	0	169	24
7am - 8am	0	238	1	19	3	0	0	1	0	1	0	0	0	0	263	38
8am - 9am	1	426	4	22	2	0	0	0	0	1	0	0	0	0	456	65
9am - 10am	2	502	9	5	3	0	2	0	0	2	0	0	0	0	525	75
10am - 11am	1	350	11	16	2	0	2	1	0	2	0	0	0	0	385	55
11am - Midday	8	330	13	7	1	2	1	0	0	2	0	0	0	0	364	52
Midday - 1pm	13	350	11	13	2	0	2	0	0	6	1	0	0	0	398	57
1pm - 2pm	1	373	19	20	2	1	2	3	0	1	0	0	0	0	422	60
2pm - 3pm	0	514	15	22	2	1	0	0	1	1	0	0	0	0	556	79
3pm - 4pm	0	778	21	22	3	0	0	0	0	2	0	0	0	0	826	118
4pm - 5pm	1	639	9	18	2	1	1	1	0	3	0	0	0	0	675	96
5pm - 6pm	2	647	7	11	3	2	0	0	0	2	0	0	0	0	674	96
6pm - 7pm	0	489	5	9	6	1	0	2	0	3	0	0	0	0	515	74
7pm - 8pm	2	366	9	7	0	0	0	0	0	2	0	0	0	0	386	55
8pm - 9pm	4	202	6	5	1	0	1	0	0	0	0	0	0	0	219	31
9pm - 10pm	0	186	8	5	1	0	0	0	0	2	1	0	0	0	203	29
10pm - 11pm	0	110	4	4	2	0	0	0	0	1	1	0	0	0	122	17
11pm - Midnight	0	71	3	1	0	0	0	0	0	0	0	0	0	0	75	11
Total	36	6921	163	212	41	8	11	8	1	32	3	0	0	0	7436	1062
% of Total		93	2	3	1											



Count Number 8258

Ref : MART

Lat/Long : S34 17 36.9 / E150 34 57.2

UBD 371 G-9

Street GREAT SOUTHERN ROAD, BARGO : From AVON DAM ROAD to CHARLES POINT ROAD : NORTH BOUND

Location Site 3. north of Avon Dam Road Railway Bridge, Across from public school, ELP 575

Carriageway

Start Date 10-FEB-12

Start Time 100

Duration 7 DAYS

Interval 1 HOUR

Weekly 50th Percentile Speed 51

Weekly 85th Percentile Speed 62

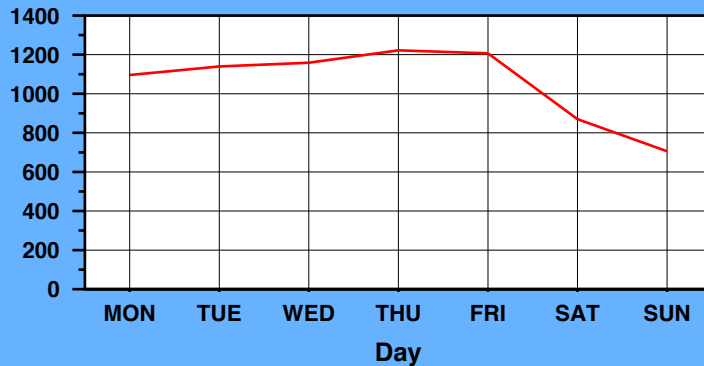
Five Day AADT 1170

Seven Day AADT 1062

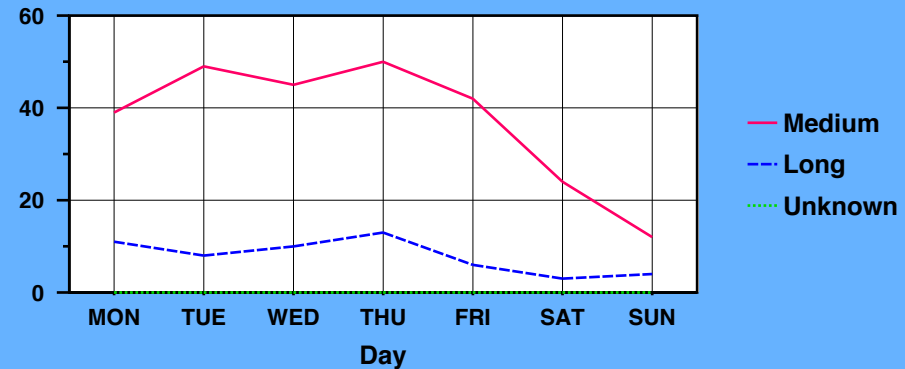
THE BODY OF THIS REPORT
SHOWS : SEVENDAY
TRAFFIC

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total
MONDAY	2	1030	16	29	10	0	2	2	0	7	0	0	0	0	1098
TUESDAY	3	1063	20	37	8	4	0	1	0	7	0	0	0	0	1143
WEDNESDAY	2	1084	20	39	6	0	3	1	0	4	2	0	0	0	1161
THURSDAY	17	1136	23	44	4	2	3	1	1	8	0	0	0	0	1239
FRIDAY	3	1134	25	34	7	1	0	2	0	4	0	0	0	0	1210
SATURDAY	3	815	28	22	1	1	2	0	0	1	0	0	0	0	873
SUNDAY	6	659	31	7	5	0	1	1	0	1	1	0	0	0	712
5 Day Total	27	5447	104	183	35	7	8	7	1	30	2	0	0	0	5851
5 Day Pct		93	2	3	1					1					
7 Day Total	36	6921	163	212	41	8	11	8	1	32	3	0	0	0	7436
7 Day Pct		93	2	3	1										

Volume



Class Volumes



Count Number 8258

Ref : MART

Lat/Long : S34 17 36.9 / E150 34 57.2

UBD 371 G-9

Street GREAT SOUTHERN ROAD, BARGO : From CHARLES POINT ROAD to AVON DAM ROAD : SOUTH BOUND

Location Site 3. north of Avon Dam Road Railway Bridge, Across from public school, ELP 575

Carriageway

Start Date 10-FEB-12

Start Time 100

Duration 7 DAYS

Interval 1 HOUR

Weekly 50th Percentile Speed 53

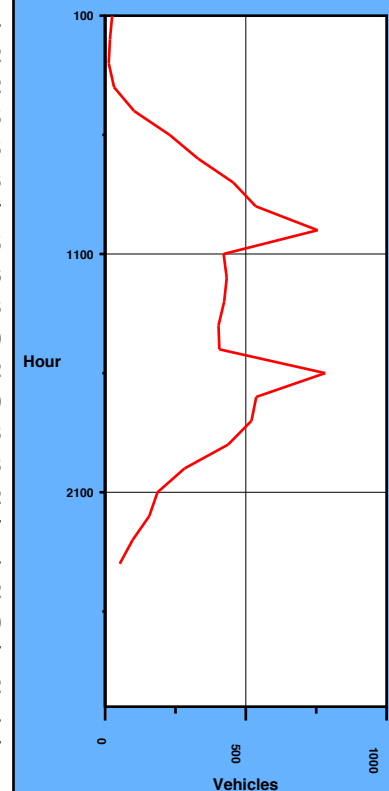
Weekly 85th Percentile Speed 64

Five Day AADT 1196

Seven Day AADT 1090

THE BODY OF THIS REPORT
SHOWS : SEVENDAY
TRAFFIC

Time	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total	Avg
Midnight - 1am	0	22	3	0	0	0	0	0	0	0	0	0	0	0	25	4
1am - 2am	0	16	0	0	0	0	0	0	0	1	0	0	0	0	17	2
2am - 3am	0	13	0	0	0	0	0	0	0	0	0	0	0	0	13	2
3am - 4am	0	28	0	0	0	0	0	0	0	1	3	0	0	0	32	5
4am - 5am	0	81	3	14	0	1	0	0	0	3	1	0	0	0	103	15
5am - 6am	0	205	6	12	0	0	2	1	0	3	0	0	0	0	229	33
6am - 7am	1	290	4	23	6	0	2	0	0	1	3	0	0	0	330	47
7am - 8am	1	415	14	17	2	0	2	0	0	4	0	0	0	0	455	65
8am - 9am	0	500	9	23	1	0	1	0	0	1	0	0	0	0	535	76
9am - 10am	1	704	18	24	5	0	1	0	0	2	0	0	0	0	755	108
10am - 11am	2	383	11	18	5	0	0	0	0	2	0	0	0	0	421	60
11am - Midday	0	401	17	9	0	1	3	0	0	1	0	0	0	0	432	62
Midday - 1pm	1	384	13	17	3	1	1	0	0	3	0	0	0	0	423	60
1pm - 2pm	0	363	12	20	2	0	1	0	0	5	0	0	0	0	403	58
2pm - 3pm	0	371	10	17	4	1	1	0	0	2	0	0	0	0	406	58
3pm - 4pm	0	738	16	21	4	0	0	1	0	2	0	0	0	0	782	112
4pm - 5pm	0	495	6	35	0	0	0	0	0	0	1	0	0	0	537	77
5pm - 6pm	2	502	3	10	0	0	0	0	0	3	0	0	0	0	520	74
6pm - 7pm	0	416	3	17	0	1	0	0	0	0	0	0	0	0	437	62
7pm - 8pm	0	273	4	3	1	1	0	0	0	0	0	0	0	0	282	40
8pm - 9pm	0	180	2	2	1	0	1	0	0	0	0	0	0	0	186	27
9pm - 10pm	0	154	1	1	0	0	0	0	0	1	0	0	0	0	157	22
10pm - 11pm	0	94	1	2	1	0	0	0	0	0	0	0	0	0	98	14
11pm - Midnight	0	51	1	0	0	0	0	0	0	0	0	0	0	0	52	7
Total	8	7079	157	285	35	6	15	2	0	35	8	0	0	0	7630	1090
% of Total		93	2	4												



Count Number 8258

Ref : MART

Lat/Long : S34 17 36.9 / E150 34 57.2

UBD 371 G-9

Street GREAT SOUTHERN ROAD, BARGO : From CHARLES POINT ROAD to AVON DAM ROAD : SOUTH BOUND

Location Site 3. north of Avon Dam Road Railway Bridge, Across from public school, ELP 575

Carriageway

Start Date 10-FEB-12

Start Time 100

Duration 7 DAYS

Interval 1 HOUR

Weekly 50th Percentile Speed 53

Weekly 85th Percentile Speed 64

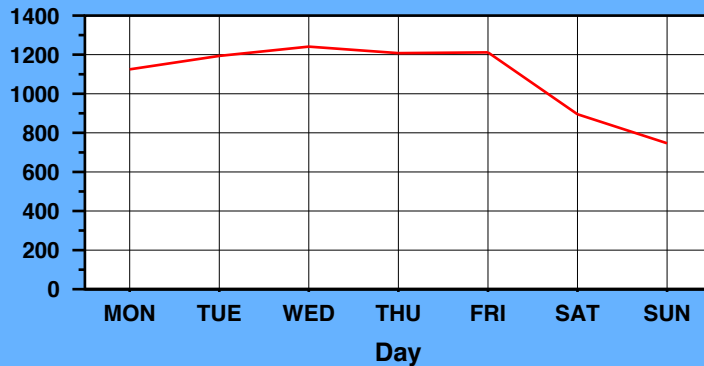
Five Day AADT 1196

Seven Day AADT 1090

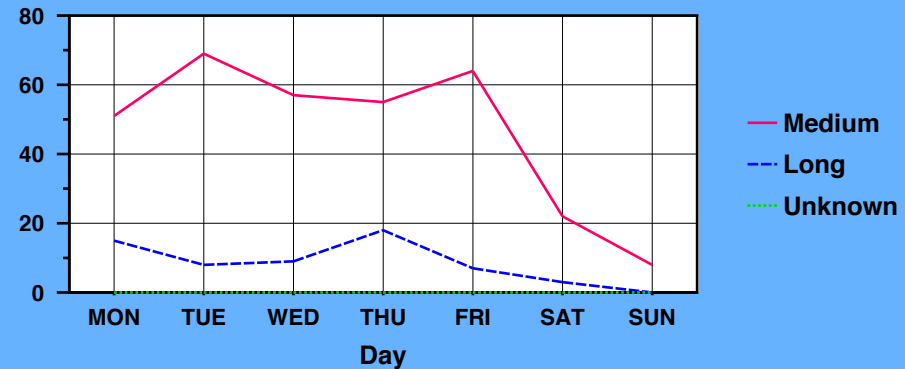
THE BODY OF THIS REPORT
SHOWS : SEVENDAY
TRAFFIC

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total
MONDAY	0	1044	15	44	6	1	2	0	0	11	2	0	0	0	1125
TUESDAY	0	1095	22	59	9	1	2	1	0	4	1	0	0	0	1194
WEDNESDAY	1	1153	22	52	5	0	3	0	0	4	2	0	0	0	1242
THURSDAY	0	1117	18	51	4	0	4	1	0	10	3	0	0	0	1208
FRIDAY	0	1121	20	56	6	2	2	0	0	5	0	0	0	0	1212
SATURDAY	2	841	29	19	1	2	2	0	0	1	0	0	0	0	897
SUNDAY	5	708	31	4	4	0	0	0	0	0	0	0	0	0	752
5 Day Total	1	5530	97	262	30	4	13	2	0	34	8	0	0	0	5981
5 Day Pct		92	2	4	1					1					
7 Day Total	8	7079	157	285	35	6	15	2	0	35	8	0	0	0	7630
7 Day Pct		93	2	4											

Volume



Class Volumes



Count Number 8259 Ref : MART Lat/Long : S34 17 06.6 / E150 35 30.2 UBD 371 K-4
 Street GOVERNMENT ROAD, BARGO : Between BARGO ROAD & ANTHONY ROAD (bidirectional) :
 Location Site 4, north of Dymond Street, ELP 44 Carriageway

Start Date 10-FEB-12
 Start Time 100
 Duration 7 DAYS
 Interval 1 HOUR

Weekly 50th Percentile Speed 55
 Weekly 85th Percentile Speed 71
 Five Day AADT 83
 Seven Day AADT 82

TOTAL COUNT MATRIX

	MON 13TH	TUE 14TH	WED 15TH	THU 16TH	FRI 10TH	SAT 11TH	SUN 12TH	5 Day Total Average		7 Day Total Average	
Midnight - 1am	0	1	0	0	2	1	1	3	1	5	1
1am - 2am	0	0	0	2	0	0	0	2	0	2	0
2am - 3am	0	0	0	0	0	0	0	0	0	0	0
3am - 4am	0	0	1	2	0	0	0	3	1	3	0
4am - 5am	0	1	0	1	0	0	0	2	0	2	0
5am - 6am	1	2	3	3	1	1	1	10	2	12	2
6am - 7am	5	1	1	0	1	0	0	8	2	8	1
7am - 8am	5	4	6	6	5	1	0	26	5	27	4
8am - 9am	4	9	4	15	4	6	1	36	7	43	6
9am - 10am	8	9	4	9	5	7	3	35	7	45	6
10am - 11am	0	7	5	9	6	2	9	27	5	38	5
11am - Midday	2	2	2	4	6	6	6	16	3	28	4
Midday - 1pm	5	3	3	3	8	5	6	22	4	33	5
1pm - 2pm	3	7	5	4	7	9	6	26	5	41	6
2pm - 3pm	4	6	12	3	3	11	3	28	6	42	6
3pm - 4pm	6	6	9	6	5	9	10	32	6	51	7
4pm - 5pm	6	10	6	12	9	6	8	43	9	57	8
5pm - 6pm	2	6	3	5	8	2	8	24	5	34	5
6pm - 7pm	0	7	3	4	2	1	7	16	3	24	3
7pm - 8pm	5	0	2	1	13	3	6	21	4	30	4
8pm - 9pm	1	5	1	1	4	3	2	12	2	17	2
9pm - 10pm	3	3	2	2	2	4	1	12	2	17	2
10pm - 11pm	0	0	2	1	2	2	1	5	1	8	1
11pm - Midnight	0	1	2	1	0	0	0	4	1	4	1
Total	60	90	76	94	93	79	79	413	82	571	81

Count Number 8259

Ref : MART

Lat/Long : S34 17 06.6 / E150 35 30.2

UBD 371 K-4

Street GOVERNMENT ROAD, BARGO : From BARGO ROAD to ANTHONY ROAD : NORTH BOUND

Location Site 4, north of Dymond Street, ELP 44

Carriageway

Start Date 10-FEB-12

Start Time 100

Duration 7 DAYS

Interval 1 HOUR

Weekly 50th Percentile Speed 56

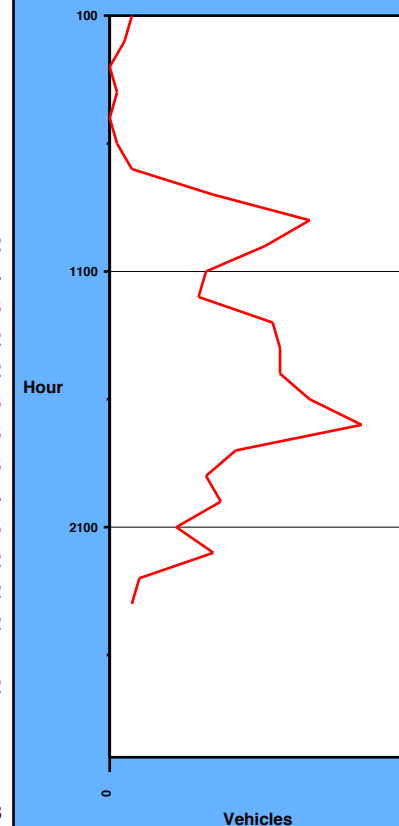
Weekly 85th Percentile Speed 74

Five Day AADT 43

Seven Day AADT 43

THE BODY OF THIS REPORT
SHOWS : SEVENDAY
TRAFFIC

Time	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total	Avg
Midnight - 1am	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3	
1am - 2am	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	
2am - 3am	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
3am - 4am	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	
4am - 5am	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
5am - 6am	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	
6am - 7am	0	2	0	0	1	0	0	0	0	0	0	0	0	0	3	
7am - 8am	0	10	0	1	3	0	0	0	0	0	0	0	0	0	14	2
8am - 9am	0	20	0	7	0	0	0	0	0	0	0	0	0	0	27	4
9am - 10am	0	11	2	7	0	0	0	0	0	1	0	0	0	0	21	3
10am - 11am	0	8	4	0	1	0	0	0	0	0	0	0	0	0	13	2
11am - Midday	0	10	1	0	1	0	0	0	0	0	0	0	0	0	12	2
Midday - 1pm	0	18	3	1	0	0	0	0	0	0	0	0	0	0	22	3
1pm - 2pm	0	18	1	1	3	0	0	0	0	0	0	0	0	0	23	3
2pm - 3pm	0	16	3	1	1	1	0	0	0	1	0	0	0	0	23	3
3pm - 4pm	0	22	2	2	1	0	0	0	0	0	0	0	0	0	27	4
4pm - 5pm	0	29	0	5	0	0	0	0	0	0	0	0	0	0	34	5
5pm - 6pm	0	16	0	0	0	1	0	0	0	0	0	0	0	0	17	2
6pm - 7pm	0	13	0	0	0	0	0	0	0	0	0	0	0	0	13	2
7pm - 8pm	0	14	0	1	0	0	0	0	0	0	0	0	0	0	15	2
8pm - 9pm	0	9	0	0	0	0	0	0	0	0	0	0	0	0	9	1
9pm - 10pm	0	14	0	0	0	0	0	0	0	0	0	0	0	0	14	2
10pm - 11pm	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4	1
11pm - Midnight	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3	
Total	0	244	16	26	11	2	0	0	0	2	0	0	0	0	301	43
% of Total		81	5	9	4	1				1						



Count Number 8259

Ref : MART

Lat/Long : S34 17 06.6 / E150 35 30.2

UBD 371 K-4

Street GOVERNMENT ROAD, BARGO : From BARGO ROAD to ANTHONY ROAD : NORTH BOUND

Location Site 4, north of Dymond Street, ELP 44

Carriageway

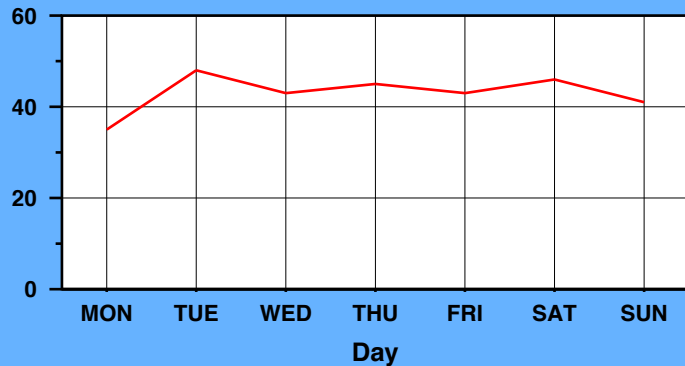
Start Date 10-FEB-12
 Start Time 100
 Duration 7 DAYS
 Interval 1 HOUR

Weekly 50th Percentile Speed 56
 Weekly 85th Percentile Speed 74
 Five Day AADT 43
 Seven Day AADT 43

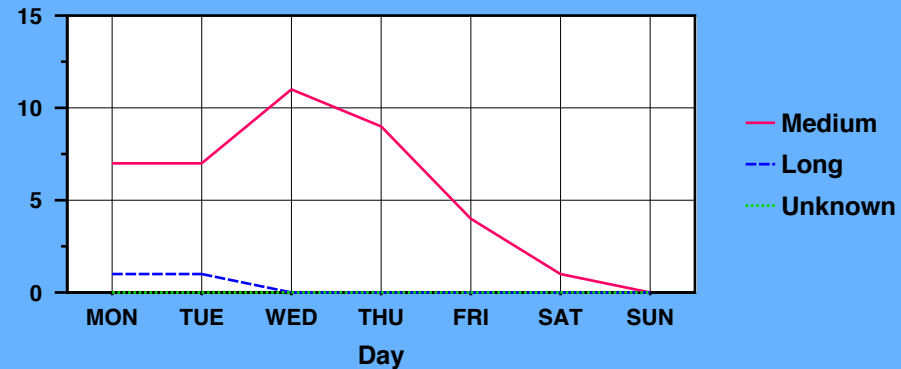
THE BODY OF THIS REPORT
 SHOWS : SEVENDAY
 TRAFFIC

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total
MONDAY	0	27	0	4	3	0	0	0	0	1	0	0	0	0	35
TUESDAY	0	37	3	4	2	1	0	0	0	1	0	0	0	0	48
WEDNESDAY	0	27	5	6	5	0	0	0	0	0	0	0	0	0	43
THURSDAY	0	35	1	8	1	0	0	0	0	0	0	0	0	0	45
FRIDAY	0	38	1	4	0	0	0	0	0	0	0	0	0	0	43
SATURDAY	0	44	1	0	0	1	0	0	0	0	0	0	0	0	46
SUNDAY	0	36	5	0	0	0	0	0	0	0	0	0	0	0	41
5 Day Total	0	164	10	26	11	1	0	0	0	2	0	0	0	0	214
5 Day Pct		77	5	12	5					1					
7 Day Total	0	244	16	26	11	2	0	0	0	2	0	0	0	0	301
7 Day Pct		81	5	9	4	1				1					

Volume



Class Volumes



Count Number 8259

Ref : MART

Lat/Long : S34 17 06.6 / E150 35 30.2

UBD 371 K-4

Street GOVERNMENT ROAD, BARGO : From ANTHONY ROAD to BARGO ROAD : SOUTH BOUND

Location Site 4, north of Dymond Street, ELP 44

Carriageway

Start Date 10-FEB-12

Start Time 100

Duration 7 DAYS

Interval 1 HOUR

Weekly 50th Percentile Speed 54

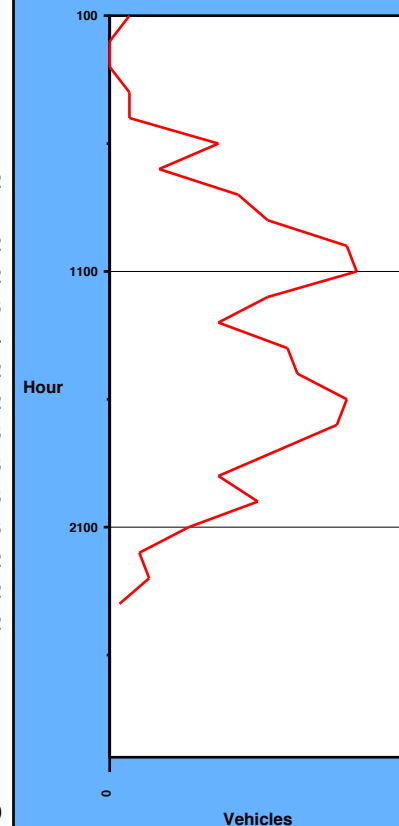
Weekly 85th Percentile Speed 69

Five Day AADT 40

Seven Day AADT 39

THE BODY OF THIS REPORT
SHOWS : SEVENDAY
TRAFFIC

Time	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total	Avg
Midnight - 1am	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	
1am - 2am	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
2am - 3am	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
3am - 4am	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	
4am - 5am	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	
5am - 6am	0	10	0	0	0	0	0	0	0	1	0	0	0	0	11	2
6am - 7am	0	3	0	0	1	0	0	0	0	1	0	0	0	0	5	1
7am - 8am	0	13	0	0	0	0	0	0	0	0	0	0	0	0	13	2
8am - 9am	0	7	0	5	4	0	0	0	0	0	0	0	0	0	16	2
9am - 10am	0	20	1	2	1	0	0	0	0	0	0	0	0	0	24	3
10am - 11am	0	17	3	3	2	0	0	0	0	0	0	0	0	0	25	4
11am - Midday	0	11	5	0	0	0	0	0	0	0	0	0	0	0	16	2
Midday - 1pm	0	9	0	1	1	0	0	0	0	0	0	0	0	0	11	2
1pm - 2pm	0	15	2	0	0	0	0	0	0	1	0	0	0	0	18	3
2pm - 3pm	0	12	2	2	2	1	0	0	0	0	0	0	0	0	19	3
3pm - 4pm	0	19	3	2	0	0	0	0	0	0	0	0	0	0	24	3
4pm - 5pm	0	21	1	1	0	0	0	0	0	0	0	0	0	0	23	3
5pm - 6pm	0	14	1	1	0	0	0	0	0	1	0	0	0	0	17	2
6pm - 7pm	1	8	0	1	1	0	0	0	0	0	0	0	0	0	11	2
7pm - 8pm	0	15	0	0	0	0	0	0	0	0	0	0	0	0	15	2
8pm - 9pm	0	8	0	0	0	0	0	0	0	0	0	0	0	0	8	1
9pm - 10pm	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3	
10pm - 11pm	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4	1
11pm - Midnight	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	
Total	1	216	18	18	12	1	0	0	0	4	0	0	0	0	270	39
% of Total		80	7	7	4					1						



Count Number 8259

Ref : MART

Lat/Long : S34 17 06.6 / E150 35 30.2

UBD 371 K-4

Street GOVERNMENT ROAD, BARGO : From ANTHONY ROAD to BARGO ROAD : SOUTH BOUND

Location Site 4, north of Dymond Street, ELP 44

Carriageway

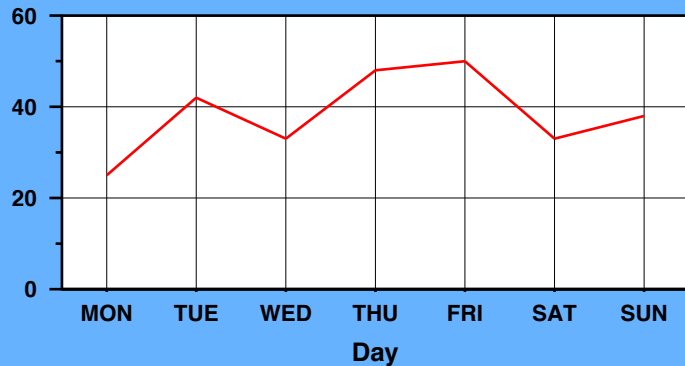
Start Date 10-FEB-12
 Start Time 100
 Duration 7 DAYS
 Interval 1 HOUR

Weekly 50th Percentile Speed 54
 Weekly 85th Percentile Speed 69
 Five Day AADT 40
 Seven Day AADT 39

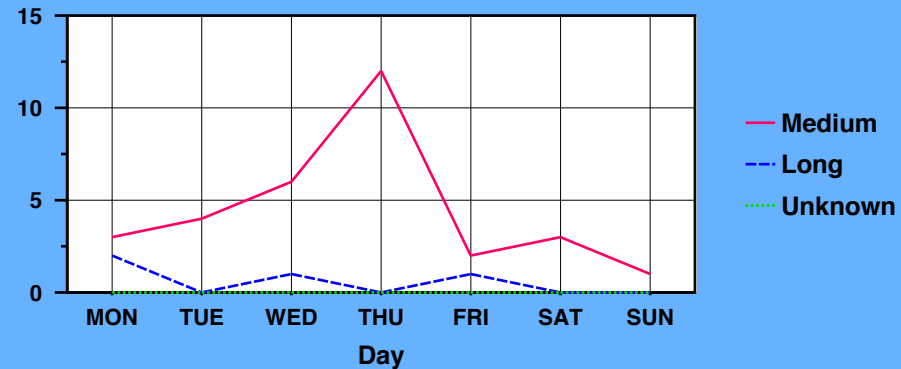
THE BODY OF THIS REPORT
 SHOWS : SEVENDAY
 TRAFFIC

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total
MONDAY	0	19	1	0	3	0	0	0	0	2	0	0	0	0	25
TUESDAY	0	34	4	2	2	0	0	0	0	0	0	0	0	0	42
WEDNESDAY	0	23	3	3	3	0	0	0	0	1	0	0	0	0	33
THURSDAY	1	34	2	8	4	0	0	0	0	0	0	0	0	0	49
FRIDAY	0	45	2	2	0	0	0	0	0	1	0	0	0	0	50
SATURDAY	0	27	3	2	0	1	0	0	0	0	0	0	0	0	33
SUNDAY	0	34	3	1	0	0	0	0	0	0	0	0	0	0	38
5 Day Total	1	155	12	15	12	0	0	0	0	4	0	0	0	0	199
5 Day Pct	1	78	6	8	6					2					
7 Day Total	1	216	18	18	12	1	0	0	0	4	0	0	0	0	270
7 Day Pct		80	7	7	4					1					

Volume



Class Volumes



Count Number 8260 Ref : MART Lat/Long : S34 16 35.6 / E150 35 37.0 UBD 371 L-1
 Street ANTHONY ROAD, BARGO : Between GOVERNMENT ROAD & TIP ROAD (bidirectional) :
 Location Site 5, towards eastern end, on waste and environment sign. Carriageway

Start Date 10-FEB-12
 Start Time 100
 Duration 7 DAYS
 Interval 1 HOUR

Weekly 50th Percentile Speed 56
 Weekly 85th Percentile Speed 68
 Five Day AADT 101
 Seven Day AADT 124

TOTAL COUNT MATRIX

	MON 13TH	TUE 14TH	WED 15TH	THU 16TH	FRI 10TH	SAT 11TH	SUN 12TH	5 Day Total Average		7 Day Total Average	
Midnight - 1am	0	0	0	0	2	0	0	2	0	2	0
1am - 2am	0	0	0	0	0	0	0	0	0	0	0
2am - 3am	0	0	0	0	0	0	0	0	0	0	0
3am - 4am	0	0	0	0	0	0	0	0	0	0	0
4am - 5am	0	0	0	0	0	0	0	0	0	0	0
5am - 6am	0	0	0	0	0	0	0	0	0	0	0
6am - 7am	0	0	0	0	0	0	0	0	0	0	0
7am - 8am	1	1	1	1	0	0	0	4	1	4	1
8am - 9am	1	4	3	5	1	4	2	14	3	20	3
9am - 10am	3	5	8	13	5	12	19	34	7	65	9
10am - 11am	6	14	7	15	6	14	24	48	10	86	12
11am - Midday	15	13	16	18	9	19	23	71	14	113	16
Midday - 1pm	16	17	11	15	26	28	47	85	17	160	23
1pm - 2pm	13	16	24	22	7	23	44	82	16	149	21
2pm - 3pm	6	5	23	24	17	20	30	75	15	125	18
3pm - 4pm	18	10	17	9	10	18	21	64	13	103	15
4pm - 5pm	3	3	3	3	7	5	9	19	4	33	5
5pm - 6pm	0	1	1		0	0	0	2	0	2	0
6pm - 7pm	0	2	1		0	0	0	3	1	3	1
7pm - 8pm	0	0	0		0	0	0	0	0	0	0
8pm - 9pm	0	0	0		0	0	0	0	0	0	0
9pm - 10pm	0	0	0		0	0	0	0	0	0	0
10pm - 11pm	0	0	0		0	0	0	0	0	0	0
11pm - Midnight	0	0	0		0	0	0	0	0	0	0
Total	82	91	115	125	90	143	219	503	100	865	123

Count Number 8260

Ref : MART

Lat/Long : S34 16 35.6 / E150 35 37.0

UBD 371 L-1

Street ANTHONY ROAD, BARGO : From GOVERNMENT ROAD to TIP ROAD : EAST BOUND

Location Site 5, towards eastern end, on waste and environment sign.

Carriageway

Start Date 10-FEB-12

Start Time 100

Duration 7 DAYS

Interval 1 HOUR

Weekly 50th Percentile Speed 59

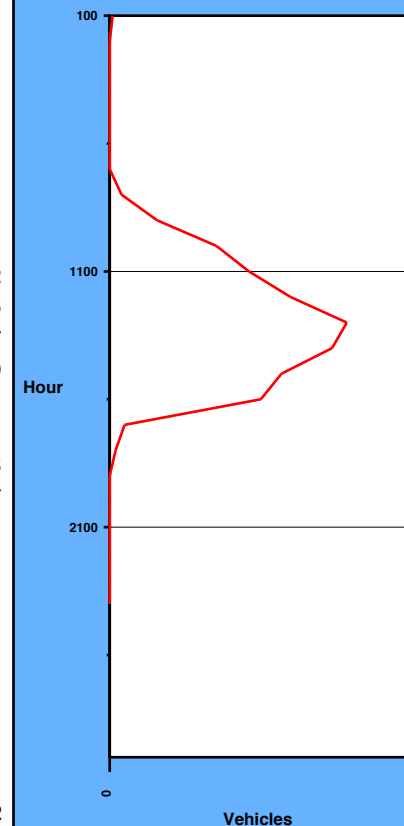
Weekly 85th Percentile Speed 70

Five Day AADT 51

Seven Day AADT 62

THE BODY OF THIS REPORT
SHOWS : SEVENDAY
TRAFFIC

Time	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total	Avg
Midnight - 1am	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	
1am - 2am	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
2am - 3am	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
3am - 4am	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
4am - 5am	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
5am - 6am	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
6am - 7am	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
7am - 8am	0	0	0	1	3	0	0	0	0	0	0	0	0	0	4	1
8am - 9am	0	15	0	1	0	0	0	0	0	0	0	0	0	0	16	2
9am - 10am	0	23	9	2	0	0	1	0	0	1	0	0	0	0	36	5
10am - 11am	0	24	14	4	3	0	2	0	0	0	0	0	0	0	47	7
11am - Midday	0	33	18	9	0	0	1	0	0	0	0	0	0	0	61	9
Midday - 1pm	0	53	22	4	1	0	0	0	0	0	0	0	0	0	80	11
1pm - 2pm	0	39	21	8	3	0	4	0	0	0	0	0	0	0	75	11
2pm - 3pm	0	27	20	6	3	0	1	1	0	0	0	0	0	0	58	8
3pm - 4pm	0	28	18	2	2	0	1	0	0	0	0	0	0	0	51	7
4pm - 5pm	0	3	1	1	0	0	0	0	0	0	0	0	0	0	5	1
5pm - 6pm	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2	
6pm - 7pm	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
7pm - 8pm	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
8pm - 9pm	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
9pm - 10pm	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
10pm - 11pm	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
11pm - Midnight	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Total	0	246	123	39	16	0	10	1	0	1	0	0	0	0	436	62
% of Total		56	28	9	4		2									



Count Number 8260

Ref : MART

Lat/Long : S34 16 35.6 / E150 35 37.0

UBD 371 L-1

Street ANTHONY ROAD, BARGO : From GOVERNMENT ROAD to TIP ROAD : EAST BOUND

Location Site 5, towards eastern end, on waste and environment sign.

Carriageway

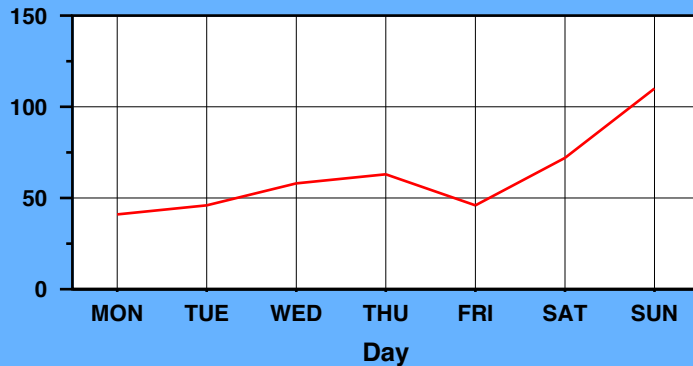
Start Date 10-FEB-12
 Start Time 100
 Duration 7 DAYS
 Interval 1 HOUR

Weekly 50th Percentile Speed 59
 Weekly 85th Percentile Speed 70
 Five Day AADT 51
 Seven Day AADT 62

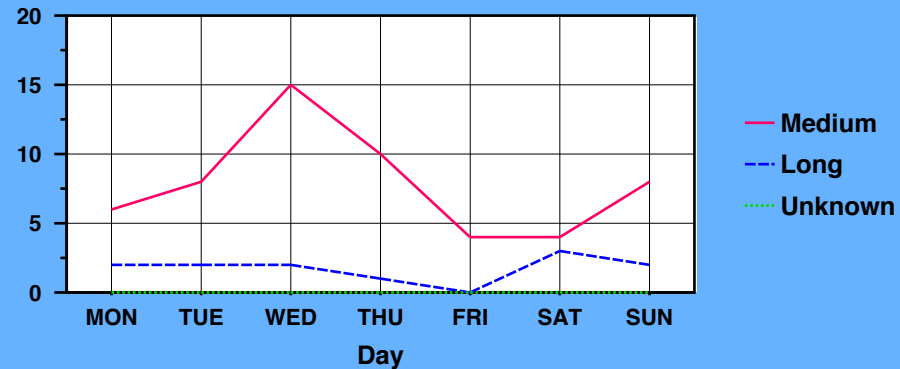
THE BODY OF THIS REPORT
 SHOWS : SEVENDAY
 TRAFFIC

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total
MONDAY	0	23	10	5	1	0	2	0	0	0	0	0	0	0	41
TUESDAY	0	29	7	2	6	0	1	0	0	1	0	0	0	0	46
WEDNESDAY	0	26	15	10	5	0	2	0	0	0	0	0	0	0	58
THURSDAY	0	40	12	7	3	0	1	0	0	0	0	0	0	0	63
FRIDAY	0	31	11	4	0	0	0	0	0	0	0	0	0	0	46
SATURDAY	0	37	28	3	1	0	2	1	0	0	0	0	0	0	72
SUNDAY	0	60	40	8	0	0	2	0	0	0	0	0	0	0	110
5 Day Total	0	149	55	28	15	0	6	0	0	1	0	0	0	0	254
5 Day Pct		59	22	11	6		2								
7 Day Total	0	246	123	39	16	0	10	1	0	1	0	0	0	0	436
7 Day Pct		56	28	9	4		2								

Volume



Class Volumes



Count Number 8260

Ref : MART

Lat/Long : S34 16 35.6 / E150 35 37.0

UBD 371 L-1

Street ANTHONY ROAD, BARGO : From TIP ROAD to GOVERNMENT ROAD : WEST BOUND

Location Site 5, towards eastern end, on waste and environment sign.

Carriageway

Start Date 10-FEB-12

Start Time 100

Duration 7 DAYS

Interval 1 HOUR

Weekly 50th Percentile Speed 50

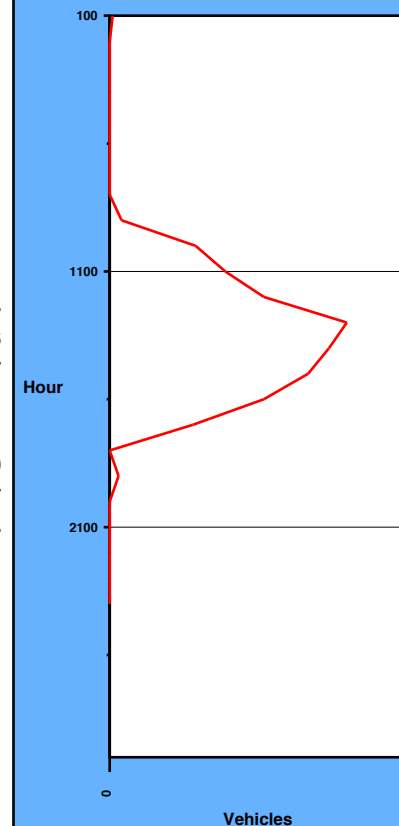
Weekly 85th Percentile Speed 65

Five Day AADT 50

Seven Day AADT 61

THE BODY OF THIS REPORT
SHOWS : SEVENDAY
TRAFFIC

Time	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total	Avg
Midnight - 1am	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	
1am - 2am	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
2am - 3am	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
3am - 4am	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
4am - 5am	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
5am - 6am	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
6am - 7am	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
7am - 8am	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
8am - 9am	0	2	0	0	2	0	0	0	0	0	0	0	0	0	4	1
9am - 10am	0	19	8	1	1	0	0	0	0	0	0	0	0	0	29	4
10am - 11am	0	20	12	2	3	1	0	0	0	1	0	0	0	0	39	6
11am - Midday	0	26	17	6	0	1	2	0	0	0	0	0	0	0	52	7
Midday - 1pm	0	53	23	4	0	0	0	0	0	0	0	0	0	0	80	11
1pm - 2pm	0	41	23	6	1	0	3	0	0	0	0	0	0	0	74	11
2pm - 3pm	0	33	19	8	3	1	3	0	0	0	0	0	0	0	67	10
3pm - 4pm	0	26	21	3	1	0	1	0	0	0	0	0	0	0	52	7
4pm - 5pm	0	21	6	1	0	0	0	0	0	0	0	0	0	0	28	4
5pm - 6pm	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
6pm - 7pm	0	0	0	1	2	0	0	0	0	0	0	0	0	0	3	
7pm - 8pm	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
8pm - 9pm	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
9pm - 10pm	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
10pm - 11pm	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
11pm - Midnight	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Total	0	242	129	32	13	3	9	0	0	1	0	0	0	0	429	61
% of Total		56	30	7	3	1	2									



Count Number 8260

Ref : MART

Lat/Long : S34 16 35.6 / E150 35 37.0

UBD 371 L-1

Street ANTHONY ROAD, BARGO : From TIP ROAD to GOVERNMENT ROAD : WEST BOUND

Location Site 5, towards eastern end, on waste and environment sign.

Carriageway

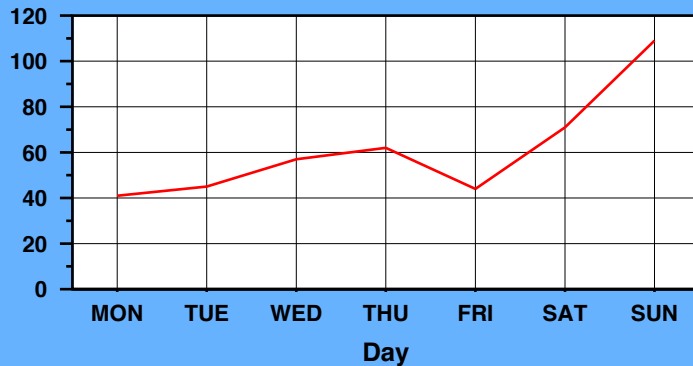
Start Date 10-FEB-12
 Start Time 100
 Duration 7 DAYS
 Interval 1 HOUR

Weekly 50th Percentile Speed 50
 Weekly 85th Percentile Speed 65
 Five Day AADT 50
 Seven Day AADT 61

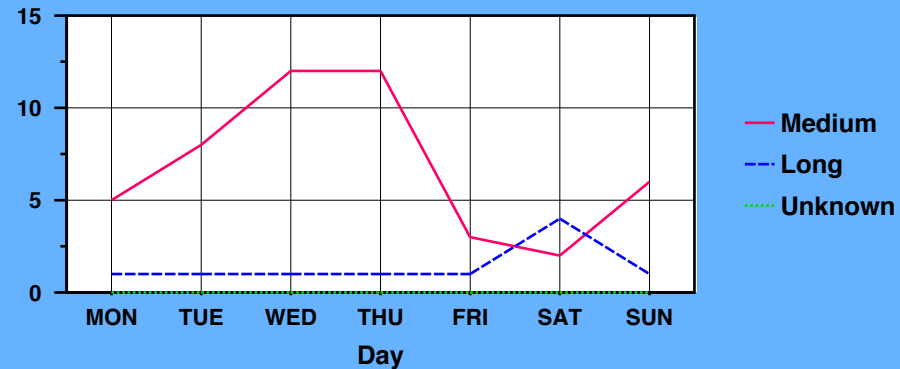
THE BODY OF THIS REPORT
 SHOWS : SEVENDAY
 TRAFFIC

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total
MONDAY	0	25	10	4	1	0	1	0	0	0	0	0	0	0	41
TUESDAY	0	27	9	3	4	1	0	0	0	1	0	0	0	0	45
WEDNESDAY	0	27	17	7	5	0	1	0	0	0	0	0	0	0	57
THURSDAY	0	39	10	9	3	0	1	0	0	0	0	0	0	0	62
FRIDAY	0	30	10	2	0	1	1	0	0	0	0	0	0	0	44
SATURDAY	0	34	31	1	0	1	4	0	0	0	0	0	0	0	71
SUNDAY	0	60	42	6	0	0	1	0	0	0	0	0	0	0	109
5 Day Total	0	148	56	25	13	2	4	0	0	1	0	0	0	0	249
5 Day Pct		59	22	10	5	1	2								
7 Day Total	0	242	129	32	13	3	9	0	0	1	0	0	0	0	429
7 Day Pct		56	30	7	3	1	2								

Volume



Class Volumes



Count Number **8261** Ref : **MART** Lat/Long : **S34 17 01.1 / E150 34 52.0** UBD **371 G-4**
 Street **IRONBARK ROAD, BARGO : Between THE GREAT SOUTHERN ROAD & GOVERNMENT ROAD (bidirectional) :**
 Location **Site 6, between The Great Southern Road and Government Road, ELP 115** Carriageway

Start Date 10-FEB-12
 Start Time 100
 Duration 7 DAYS
 Interval 1 HOUR

Weekly 50th Percentile Speed 47
 Weekly 85th Percentile Speed 57
 Five Day AADT 441
 Seven Day AADT 458

TOTAL COUNT MATRIX

	MON 13TH	TUE 14TH	WED 15TH	THU 16TH	FRI 10TH	SAT 11TH	SUN 12TH	5 Day Total Average		7 Day Total Average	
Midnight - 1am	0	1	3	1	2	5	7	7	1	19	3
1am - 2am	0	1	0	1	1	2	3	3	1	8	1
2am - 3am	6	0	0	2	0	2	4	8	2	14	2
3am - 4am	0	1	0	0	1	1	4	2	0	7	1
4am - 5am	7	1	2	4	1	0	1	15	3	16	2
5am - 6am	8	8	10	5	4	4	1	35	7	40	6
6am - 7am	16	23	19	14	20	9	6	92	18	107	15
7am - 8am	15	17	15	20	19	10	7	86	17	103	15
8am - 9am	33	40	32	43	30	18	12	178	36	208	30
9am - 10am	19	21	24	33	21	25	36	118	24	179	26
10am - 11am	14	29	23	31	27	46	45	124	25	215	31
11am - Midday	35	27	38	28	24	42	48	152	30	242	35
Midday - 1pm	34	28	34	24	41	65	68	161	32	294	42
1pm - 2pm	27	26	30	35	22	42	66	140	28	248	35
2pm - 3pm	23	26	41	40	38	31	49	168	34	248	35
3pm - 4pm	51	32	47	35	29	36	48	194	39	278	40
4pm - 5pm	41	39	39	53	34	30	35	206	41	271	39
5pm - 6pm	20	37	29	32	24	21	20	142	28	183	26
6pm - 7pm	21	26	33	29	24	22	24	133	27	179	26
7pm - 8pm	20	18	17	15	23	23	16	93	19	132	19
8pm - 9pm	5	17	8	15	16	16	15	61	12	92	13
9pm - 10pm	5	8	6	23	6	12	6	48	10	66	9
10pm - 11pm	1	3	4	6	10	6	4	24	5	34	5
11pm - Midnight	3	1	4	4	3	6	5	15	3	26	4
Total	404	430	458	493	420	474	530	2205	441	3209	458

Count Number 8261

Ref : MART

Lat/Long : S34 17 01.1 / E150 34 52.0

UBD 371 G-4

Street IRONBARK ROAD, BARGO : From THE GREAT SOUTHERN ROAD to GOVERNMENT ROAD : EAST BOUND

Location Site 6, between The Great Southern Road and Government Road, ELP 115

Carriageway

Start Date 10-FEB-12

Start Time 100

Duration 7 DAYS

Interval 1 HOUR

Weekly 50th Percentile Speed 46

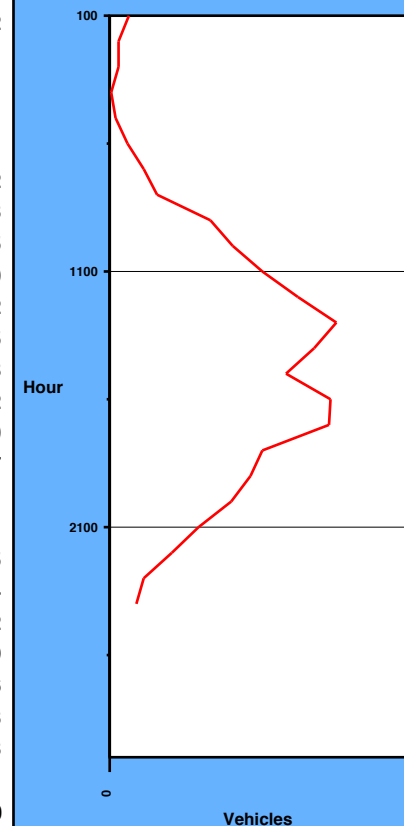
Weekly 85th Percentile Speed 56

Five Day AADT 222

Seven Day AADT 230

THE BODY OF THIS REPORT
SHOWS : SEVENDAY
TRAFFIC

Time	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total	Avg
Midnight - 1am	0	13	0	0	0	0	0	0	0	0	0	0	0	0	13	2
1am - 2am	0	6	0	0	0	0	0	0	0	0	0	0	0	0	6	1
2am - 3am	0	6	0	0	0	0	0	0	0	0	0	0	0	0	6	1
3am - 4am	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	
4am - 5am	0	3	0	1	0	0	0	0	0	0	0	0	0	0	4	1
5am - 6am	0	12	0	0	0	0	0	0	0	0	0	0	0	0	12	2
6am - 7am	0	20	0	1	2	0	0	0	0	0	0	0	0	0	23	3
7am - 8am	0	31	0	1	0	0	0	0	0	0	0	0	0	0	32	5
8am - 9am	0	62	0	4	2	0	0	0	0	0	0	0	0	0	68	10
9am - 10am	0	71	11	1	0	0	0	0	0	0	0	0	0	0	83	12
10am - 11am	0	74	18	7	2	1	0	0	0	1	0	0	0	0	103	15
11am - Midday	0	99	21	5	1	1	0	0	0	0	0	0	0	0	127	18
Midday - 1pm	0	125	22	3	0	0	0	0	0	3	0	0	0	0	153	22
1pm - 2pm	1	100	19	12	1	0	4	0	0	1	0	0	0	0	138	20
2pm - 3pm	0	85	22	9	2	0	0	1	0	0	0	0	0	0	119	17
3pm - 4pm	0	124	17	7	0	0	0	0	0	1	0	0	0	0	149	21
4pm - 5pm	0	136	8	4	0	0	0	0	0	0	0	0	0	0	148	21
5pm - 6pm	1	95	0	7	0	0	0	0	0	0	0	0	0	0	103	15
6pm - 7pm	3	79	2	8	2	0	0	0	0	1	0	0	0	0	95	14
7pm - 8pm	1	73	1	5	1	0	0	0	0	1	0	0	0	0	82	12
8pm - 9pm	2	52	1	5	0	0	0	0	0	0	0	0	0	0	60	9
9pm - 10pm	0	40	1	1	0	0	0	0	0	0	0	0	0	0	42	6
10pm - 11pm	0	21	0	1	0	0	0	0	0	1	0	0	0	0	23	3
11pm - Midnight	0	18	0	0	0	0	0	0	0	0	0	0	0	0	18	3
Total	8	1346	143	82	13	2	4	1	0	9	0	0	0	0	1608	230
% of Total		84	9	5	1					1						



Count Number 8261

Ref : MART

Lat/Long : S34 17 01.1 / E150 34 52.0

UBD 371 G-4

Street IRONBARK ROAD, BARGO : From THE GREAT SOUTHERN ROAD to GOVERNMENT ROAD : EAST BOUND

Location Site 6, between The Great Southern Road and Government Road, ELP 115

Carriageway

Start Date 10-FEB-12

Start Time 100

Duration 7 DAYS

Interval 1 HOUR

Weekly 50th Percentile Speed 46

Weekly 85th Percentile Speed 56

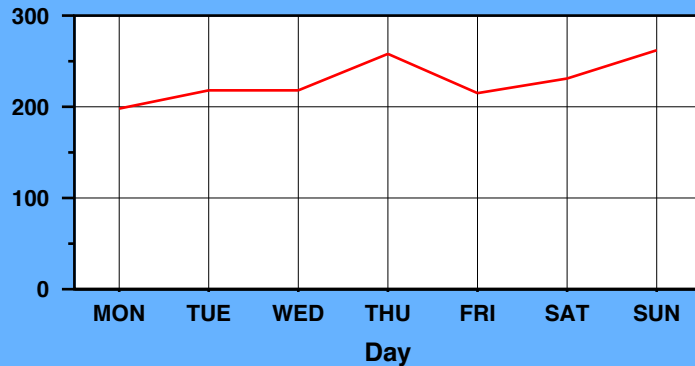
Five Day AADT 222

Seven Day AADT 230

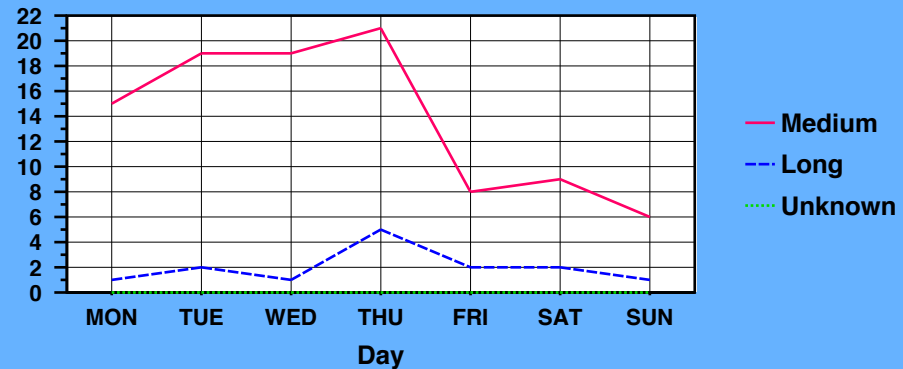
THE BODY OF THIS REPORT
SHOWS : SEVENDAY
TRAFFIC

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total
MONDAY	1	170	12	13	2	0	0	0	0	1	0	0	0	0	199
TUESDAY	0	189	8	15	3	1	0	0	0	2	0	0	0	0	218
WEDNESDAY	1	181	17	16	3	0	0	0	0	1	0	0	0	0	219
THURSDAY	1	219	13	16	5	0	2	1	0	2	0	0	0	0	259
FRIDAY	0	193	12	7	0	1	0	0	0	2	0	0	0	0	215
SATURDAY	2	183	37	9	0	0	2	0	0	0	0	0	0	0	233
SUNDAY	3	211	44	6	0	0	0	0	0	1	0	0	0	0	265
5 Day Total	3	952	62	67	13	2	2	1	0	8	0	0	0	0	1110
5 Day Pct		86	6	6	1					1					
7 Day Total	8	1346	143	82	13	2	4	1	0	9	0	0	0	0	1608
7 Day Pct		84	9	5	1					1					

Volume



Class Volumes



Count Number 8261

Ref : MART

Lat/Long : S34 17 01.1 / E150 34 52.0

UBD 371 G-4

Street IRONBARK ROAD, BARGO : From GOVERNMENT ROAD to THE GREAT SOUTHERN ROAD : WEST BOUND

Location Site 6, between The Great Southern Road and Government Road, ELP 115

Carriageway

Start Date 10-FEB-12

Start Time 100

Duration 7 DAYS

Interval 1 HOUR

Weekly 50th Percentile Speed 47

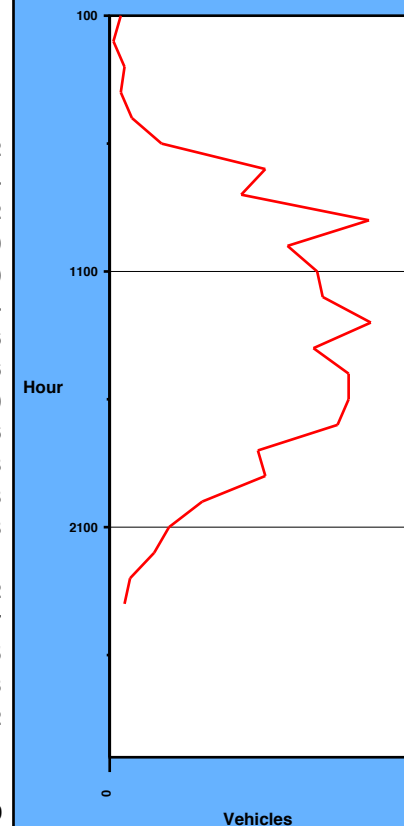
Weekly 85th Percentile Speed 58

Five Day AADT 219

Seven Day AADT 229

THE BODY OF THIS REPORT
SHOWS : SEVENDAY
TRAFFIC

Time	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total	Avg
Midnight - 1am	0	6	0	0	0	0	0	0	0	0	0	0	0	0	6	1
1am - 2am	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	
2am - 3am	0	8	0	0	0	0	0	0	0	0	0	0	0	0	8	1
3am - 4am	0	6	0	0	0	0	0	0	0	0	0	0	0	0	6	1
4am - 5am	0	10	0	2	0	0	0	0	0	0	0	0	0	0	12	2
5am - 6am	0	25	1	2	0	0	0	0	0	0	0	0	0	0	28	4
6am - 7am	1	67	2	10	4	0	0	0	0	0	0	0	0	0	84	12
7am - 8am	1	66	0	4	0	0	0	0	0	0	0	0	0	0	71	10
8am - 9am	0	128	0	11	1	0	0	0	0	0	0	0	0	0	140	20
9am - 10am	0	81	7	8	0	0	0	0	0	0	0	0	0	0	96	14
10am - 11am	0	90	15	4	2	1	0	0	0	0	0	0	0	0	112	16
11am - Midday	1	88	17	8	0	1	0	0	0	0	0	0	0	0	115	16
Midday - 1pm	0	115	22	4	0	0	0	0	0	0	0	0	0	0	141	20
1pm - 2pm	0	78	22	7	1	0	2	0	0	0	0	0	0	0	110	16
2pm - 3pm	0	90	23	8	4	0	1	0	0	3	0	0	0	0	129	18
3pm - 4pm	1	108	18	2	0	0	0	0	0	0	0	0	0	0	129	18
4pm - 5pm	0	100	10	13	0	0	0	0	0	0	0	0	0	0	123	18
5pm - 6pm	0	78	2	0	0	0	0	0	0	0	0	0	0	0	80	11
6pm - 7pm	6	75	0	2	0	1	0	0	0	0	0	0	0	0	84	12
7pm - 8pm	0	49	1	0	0	0	0	0	0	0	0	0	0	0	50	7
8pm - 9pm	1	29	0	2	0	0	0	0	0	0	0	0	0	0	32	5
9pm - 10pm	1	22	0	1	0	0	0	0	0	0	0	0	0	0	24	3
10pm - 11pm	0	11	0	0	0	0	0	0	0	0	0	0	0	0	11	2
11pm - Midnight	0	8	0	0	0	0	0	0	0	0	0	0	0	0	8	1
Total	12	1340	140	88	12	3	3	0	0	3	0	0	0	0	1601	229
% of Total	1	84	9	5	1											



Count Number 8261 Ref : MART Lat/Long : S34 17 01.1 / E150 34 52.0 UBD 371 G-4
 Street IRONBARK ROAD, BARGO : From GOVERNMENT ROAD to THE GREAT SOUTHERN ROAD : WEST BOUND
 Location Site 6, between The Great Southern Road and Government Road, ELP 115 Carriageway

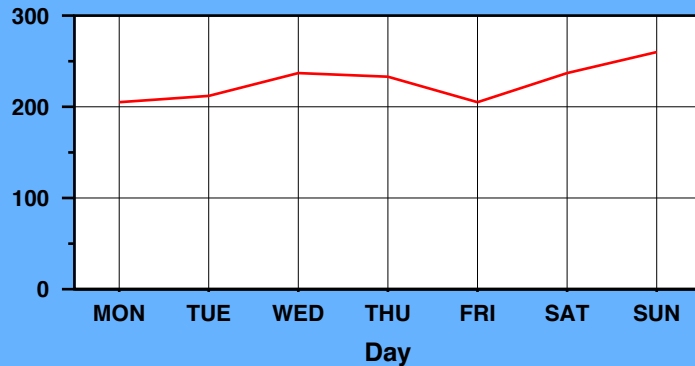
Start Date 10-FEB-12
 Start Time 100
 Duration 7 DAYS
 Interval 1 HOUR

Weekly 50th Percentile Speed 47
 Weekly 85th Percentile Speed 58
 Five Day AADT 219
 Seven Day AADT 229

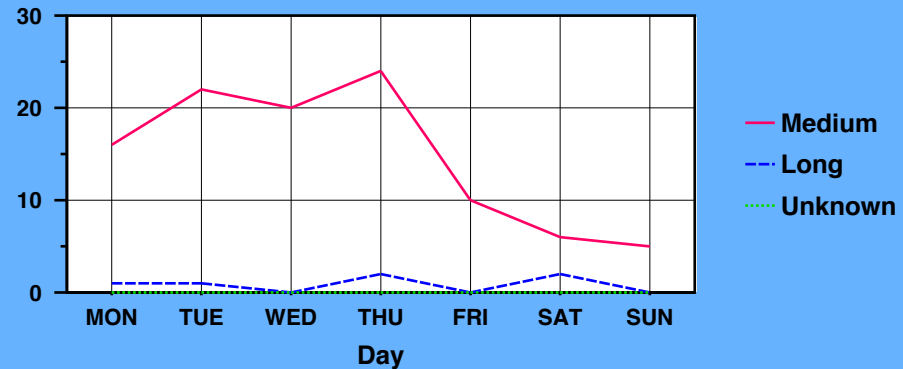
THE BODY OF THIS REPORT
 SHOWS : SEVENDAY
 TRAFFIC

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total
MONDAY	0	175	13	14	2	0	0	0	0	1	0	0	0	0	205
TUESDAY	0	181	8	17	3	2	0	0	0	1	0	0	0	0	212
WEDNESDAY	2	199	18	17	3	0	0	0	0	0	0	0	0	0	239
THURSDAY	1	195	12	21	3	0	1	0	0	1	0	0	0	0	234
FRIDAY	0	183	12	8	1	1	0	0	0	0	0	0	0	0	205
SATURDAY	4	193	36	6	0	0	2	0	0	0	0	0	0	0	241
SUNDAY	5	214	41	5	0	0	0	0	0	0	0	0	0	0	265
5 Day Total	3	933	63	77	12	3	1	0	0	3	0	0	0	0	1095
5 Day Pct		85	6	7	1										
7 Day Total	12	1340	140	88	12	3	3	0	0	3	0	0	0	0	1601
7 Day Pct	1	84	9	5	1										

Volume



Class Volumes



Count Number 8262 Ref : MART Lat/Long : S34 16 55.9 / E150 34 50.0 UBD 371 F-4
 Street GREAT SOUTHERN ROAD, BARGO : Between AVON DAM ROAD & CHARLES POINT ROAD (bidirectional) :
 Location Site 7, north of Ironbark Road, across from House No. 135, ELP 122. Carriageway

Start Date 10-FEB-12
 Start Time 100
 Duration 7 DAYS
 Interval 1 HOUR

Weekly 50th Percentile Speed 67
 Weekly 85th Percentile Speed 77
 Five Day AADT 1650
 Seven Day AADT 1515

TOTAL COUNT MATRIX

	MON 13TH	TUE 14TH	WED 15TH	THU 16TH	FRI 10TH	SAT 11TH	SUN 12TH	5 Day Total Average		7 Day Total Average	
Midnight - 1am	4	2	4	5	4	16	18	19	4	53	8
1am - 2am	0	1	2	2	5	5	7	10	2	22	3
2am - 3am	6	1	1	0	3	8	8	11	2	27	4
3am - 4am	0	0	1	6	1	2	4	8	2	14	2
4am - 5am	9	7	14	13	8	3	3	51	10	57	8
5am - 6am	34	40	37	35	34	10	10	180	36	200	29
6am - 7am	71	80	58	54	63	17	16	326	65	359	51
7am - 8am	70	76	76	79	66	23	18	367	73	408	58
8am - 9am	110	128	111	131	121	47	34	601	120	682	97
9am - 10am	140	144	111	145	142	82	58	682	136	822	117
10am - 11am	80	79	101	99	100	100	80	459	92	639	91
11am - Midday	81	70	89	72	88	94	105	400	80	599	86
Midday - 1pm	87	79	99	75	107	112	117	447	89	676	97
1pm - 2pm	97	92	84	99	92	82	124	464	93	670	96
2pm - 3pm	97	117	122	132	125	85	95	593	119	773	110
3pm - 4pm	188	177	175	170	188	84	96	898	180	1078	154
4pm - 5pm	156	147	142	158	117	62	82	720	144	864	123
5pm - 6pm	111	139	135	137	119	77	94	641	128	812	116
6pm - 7pm	79	105	123	94	80	65	80	481	96	626	89
7pm - 8pm	63	63	59	63	82	67	67	330	66	464	66
8pm - 9pm	17	52	43	47	59	43	36	218	44	297	42
9pm - 10pm	22	30	32	51	38	30	23	173	35	226	32
10pm - 11pm	15	17	29	30	21	25	14	112	22	151	22
11pm - Midnight	5	7	9	17	23	16	11	61	12	88	13
Total	1542	1653	1657	1714	1686	1155	1200	8252	1650	10607	1515

Count Number 8262

Ref : MART

Lat/Long : S34 16 55.9 / E150 34 50.0

UBD 371 F-4

Street GREAT SOUTHERN ROAD, BARGO : From AVON DAM ROAD to CHARLES POINT ROAD : NORTH BOUND

Location Site 7, north of Ironbark Road, across from House No. 135, ELP 122.

Carriageway

Start Date 10-FEB-12

Start Time 100

Duration 7 DAYS

Interval 1 HOUR

Weekly 50th Percentile Speed 68

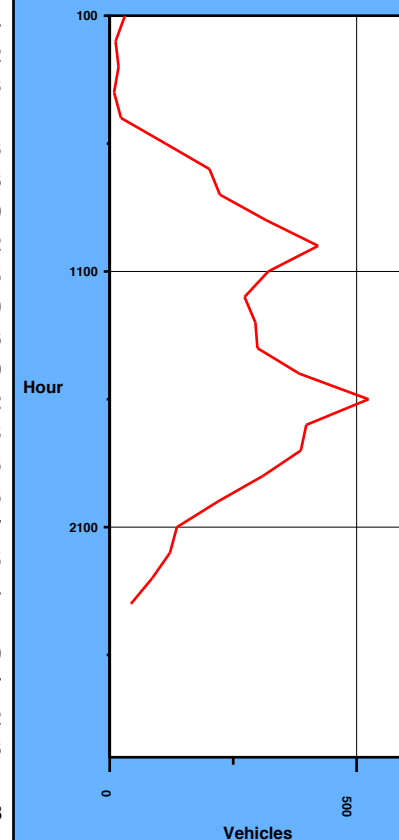
Weekly 85th Percentile Speed 79

Five Day AADT 804

Seven Day AADT 738

THE BODY OF THIS REPORT
SHOWS : SEVENDAY
TRAFFIC

Time	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total	Avg
Midnight - 1am	0	28	1	0	1	0	0	1	0	0	0	0	0	0	31	4
1am - 2am	0	9	1	0	1	0	0	0	0	0	1	0	0	0	12	2
2am - 3am	0	15	0	0	3	0	0	0	0	0	0	0	0	0	18	3
3am - 4am	0	8	0	0	1	0	0	0	0	0	0	0	0	0	9	1
4am - 5am	0	23	0	0	0	0	0	0	0	0	0	0	0	0	23	3
5am - 6am	0	108	1	3	0	0	0	1	0	0	0	0	0	0	113	16
6am - 7am	2	190	1	8	0	0	0	1	0	0	0	0	0	0	202	29
7am - 8am	0	208	3	11	0	0	0	0	0	1	0	0	0	0	223	32
8am - 9am	1	296	2	16	1	0	0	1	0	0	0	0	0	0	317	45
9am - 10am	2	404	5	9	0	0	1	0	0	1	0	0	0	0	422	60
10am - 11am	0	286	17	9	5	1	1	2	0	0	0	0	0	0	321	46
11am - Midday	1	240	18	11	0	1	0	1	0	1	0	0	0	0	273	39
Midday - 1pm	2	260	21	8	0	0	1	0	0	2	1	0	0	0	295	42
1pm - 2pm	4	257	21	11	3	1	1	1	0	0	0	0	0	0	299	43
2pm - 3pm	1	347	20	12	1	0	1	0	0	2	0	0	0	0	384	55
3pm - 4pm	2	485	22	14	0	0	1	0	0	0	0	0	0	0	524	75
4pm - 5pm	3	364	8	18	1	0	2	0	0	1	1	0	0	0	398	57
5pm - 6pm	0	374	4	5	2	0	0	1	0	1	0	0	0	0	387	55
6pm - 7pm	4	295	2	5	2	0	0	0	0	2	0	0	0	0	310	44
7pm - 8pm	2	214	2	0	0	0	0	0	0	1	0	0	0	0	219	31
8pm - 9pm	4	127	1	2	1	0	1	0	0	0	0	0	0	0	136	19
9pm - 10pm	1	115	2	2	0	0	0	0	0	0	2	0	0	0	122	17
10pm - 11pm	0	83	0	1	0	0	0	1	0	0	1	0	0	0	86	12
11pm - Midnight	0	41	0	1	0	0	0	1	0	0	0	0	0	0	43	6
Total	29	4777	152	146	22	3	9	11	0	12	6	0	0	0	5167	738
% of Total	1	92	3	3												



Count Number 8262

Ref : MART

Lat/Long : S34 16 55.9 / E150 34 50.0

UBD 371 F-4

Street GREAT SOUTHERN ROAD, BARGO : From AVON DAM ROAD to CHARLES POINT ROAD : NORTH BOUND

Location Site 7, north of Ironbark Road, across from House No. 135, ELP 122.

Carriageway

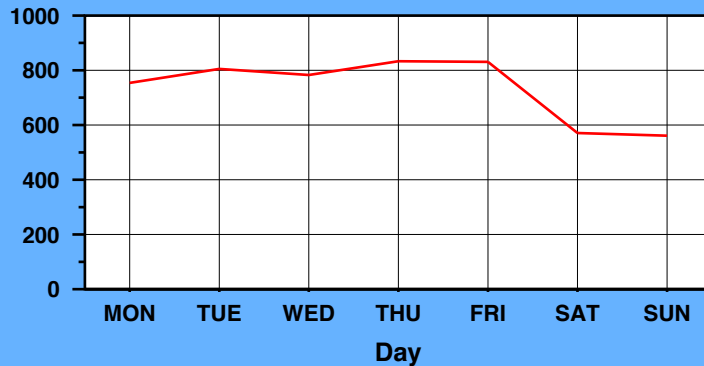
Start Date 10-FEB-12
 Start Time 100
 Duration 7 DAYS
 Interval 1 HOUR

Weekly 50th Percentile Speed 68
 Weekly 85th Percentile Speed 79
 Five Day AADT 804
 Seven Day AADT 738

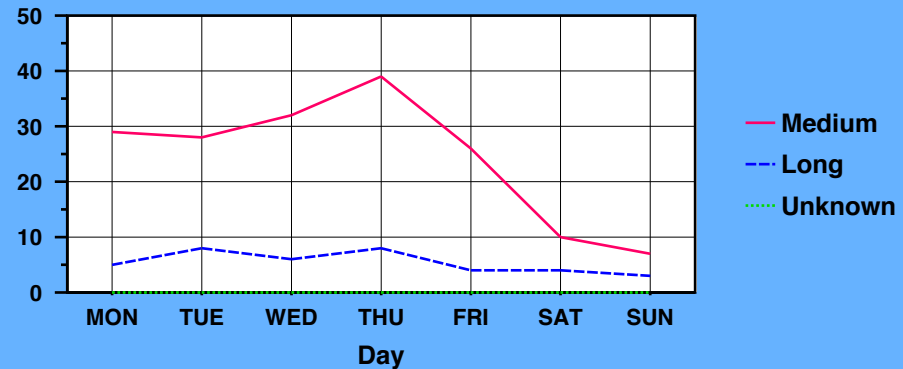
THE BODY OF THIS REPORT
 SHOWS : SEVENDAY
 TRAFFIC

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total
MONDAY	1	701	19	24	5	0	1	1	0	3	0	0	0	0	755
TUESDAY	4	757	12	23	4	1	2	1	0	3	2	0	0	0	809
WEDNESDAY	6	730	15	28	4	0	1	1	0	2	2	0	0	0	789
THURSDAY	3	767	19	34	5	0	3	1	0	3	1	0	0	0	836
FRIDAY	1	785	16	23	2	1	0	3	0	1	0	0	0	0	832
SATURDAY	2	521	36	10	0	0	2	2	0	0	0	0	0	0	573
SUNDAY	12	516	35	4	2	1	0	2	0	0	1	0	0	0	573
5 Day Total	15	3740	81	132	20	2	7	7	0	12	5	0	0	0	4021
5 Day Pct		93	2	3											
7 Day Total	29	4777	152	146	22	3	9	11	0	12	6	0	0	0	5167
7 Day Pct	1	92	3	3											

Volume



Class Volumes



Count Number 8262

Ref : MART

Lat/Long : S34 16 55.9 / E150 34 50.0

UBD 371 F-4

Street GREAT SOUTHERN ROAD, BARGO : From CHARLES POINT ROAD to AVON DAM ROAD : SOUTH BOUND

Location Site 7, north of Ironbark Road, across from House No. 135, ELP 122.

Carriageway

Start Date 10-FEB-12

Start Time 100

Duration 7 DAYS

Interval 1 HOUR

Weekly 50th Percentile Speed 65

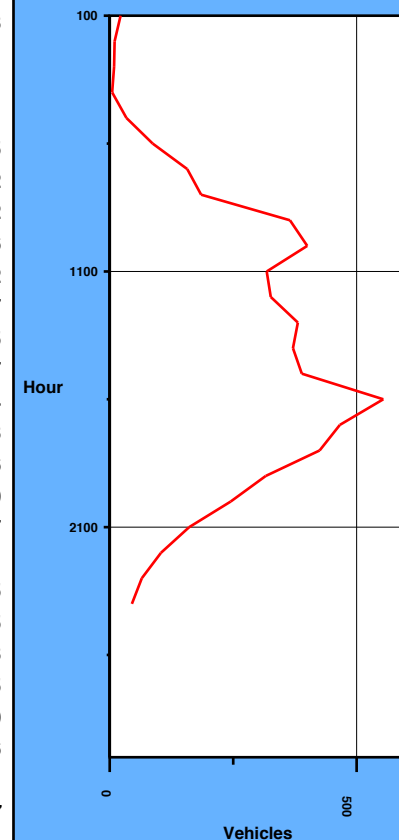
Weekly 85th Percentile Speed 76

Five Day AADT 846

Seven Day AADT 777

THE BODY OF THIS REPORT
SHOWS : SEVENDAY
TRAFFIC

Time	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total	Avg
Midnight - 1am	0	20	2	0	0	0	0	0	0	0	0	0	0	0	22	3
1am - 2am	0	10	0	0	0	0	0	0	0	0	0	0	0	0	10	1
2am - 3am	0	9	0	0	0	0	0	0	0	0	0	0	0	0	9	1
3am - 4am	0	2	0	0	0	0	0	0	0	0	3	0	0	0	5	1
4am - 5am	0	29	0	2	0	1	0	0	0	1	1	0	0	0	34	5
5am - 6am	0	84	2	0	0	0	0	1	0	0	0	0	0	0	87	12
6am - 7am	0	136	0	11	4	0	1	0	0	2	3	0	0	0	157	22
7am - 8am	0	172	3	8	0	0	2	0	0	0	0	0	0	0	185	26
8am - 9am	0	343	1	15	3	0	1	0	0	2	0	0	0	0	365	52
9am - 10am	1	368	19	9	2	0	0	0	0	1	0	0	0	0	400	57
10am - 11am	3	275	22	15	2	1	0	0	0	0	0	0	0	0	318	45
11am - Midday	1	292	21	10	0	1	1	0	0	0	0	0	0	0	326	47
Midday - 1pm	1	334	27	13	2	1	1	0	0	2	0	0	0	0	381	54
1pm - 2pm	2	323	19	19	2	0	1	0	0	5	0	0	0	0	371	53
2pm - 3pm	1	338	22	24	3	0	1	0	0	0	0	0	0	0	389	56
3pm - 4pm	0	510	17	26	1	0	0	0	0	0	0	0	0	0	554	79
4pm - 5pm	4	428	7	25	0	0	1	0	0	0	1	0	0	0	466	67
5pm - 6pm	3	398	6	18	0	0	0	0	0	0	0	0	0	0	425	61
6pm - 7pm	2	301	2	10	1	0	0	0	0	0	0	0	0	0	316	45
7pm - 8pm	2	237	2	3	1	0	0	0	0	0	0	0	0	0	245	35
8pm - 9pm	0	156	2	2	0	0	1	0	0	0	0	0	0	0	161	23
9pm - 10pm	0	104	0	0	0	0	0	0	0	0	0	0	0	0	104	15
10pm - 11pm	0	63	1	1	0	0	0	0	0	0	0	0	0	0	65	9
11pm - Midnight	0	45	0	0	0	0	0	0	0	0	0	0	0	0	45	6
Total	20	4977	175	211	21	4	10	1	0	13	8	0	0	0	5440	777
% of Total		91	3	4												



Count Number 8262

Ref : MART

Lat/Long : S34 16 55.9 / E150 34 50.0

UBD 371 F-4

Street GREAT SOUTHERN ROAD, BARGO : From CHARLES POINT ROAD to AVON DAM ROAD : SOUTH BOUND

Location Site 7, north of Ironbark Road, across from House No. 135, ELP 122.

Carriageway

Start Date 10-FEB-12

Start Time 100

Duration 7 DAYS

Interval 1 HOUR

Weekly 50th Percentile Speed 65

Weekly 85th Percentile Speed 76

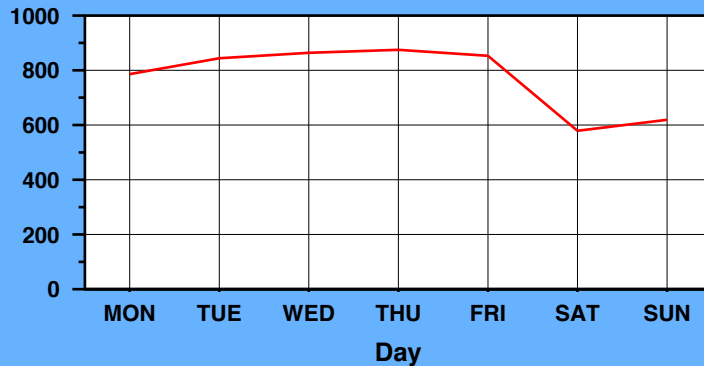
Five Day AADT 846

Seven Day AADT 777

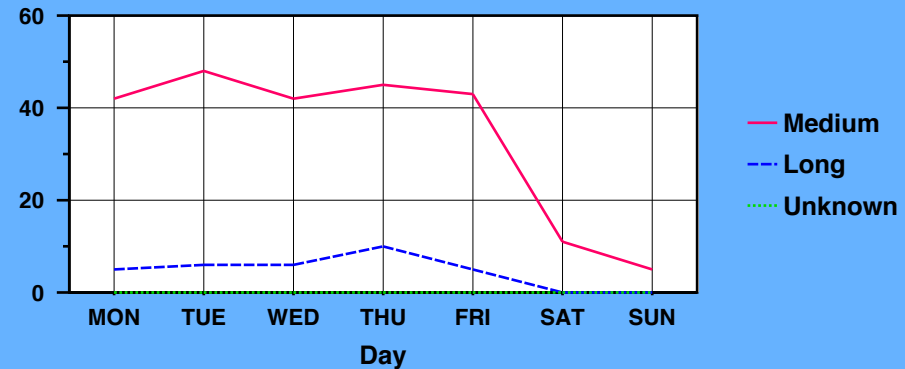
THE BODY OF THIS REPORT
SHOWS : SEVENDAY
TRAFFIC

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total
MONDAY	1	716	23	40	2	0	1	0	0	2	2	0	0	0	787
TUESDAY	0	778	12	40	8	0	2	0	0	3	1	0	0	0	844
WEDNESDAY	4	796	20	40	1	1	2	0	0	2	2	0	0	0	868
THURSDAY	3	800	20	38	7	0	3	1	0	3	3	0	0	0	878
FRIDAY	1	789	16	39	2	2	2	0	0	3	0	0	0	0	854
SATURDAY	3	528	40	10	0	1	0	0	0	0	0	0	0	0	582
SUNDAY	8	570	44	4	1	0	0	0	0	0	0	0	0	0	627
5 Day Total	9	3879	91	197	20	3	10	1	0	13	8	0	0	0	4231
5 Day Pct		92	2	5											
7 Day Total	20	4977	175	211	21	4	10	1	0	13	8	0	0	0	5440
7 Day Pct		91	3	4											

Volume



Class Volumes



Count Number **8263** Ref : **MART** Lat/Long : **S34 16 40.9 / E150 34 38.8** UBD **371 E-2**
 Street **REMEMBRANCE DRIVE, TAHMOOR : Between BARGO RIVER ROAD & WELLERS ROAD (bidirectional) :**
 Location **Site 8, south of Wellers Road, on road sign.** Carriageway

Start Date 10-FEB-12
 Start Time 100
 Duration 7 DAYS
 Interval 1 HOUR

Weekly 50th Percentile Speed 75
 Weekly 85th Percentile Speed 84
 Five Day AADT 6224
 Seven Day AADT 5727

TOTAL COUNT MATRIX

	MON 13TH	TUE 14TH	WED 15TH	THU 16TH	FRI 10TH	SAT 11TH	SUN 12TH	5 Day Total Average		7 Day Total Average	
Midnight - 1am	17	54	36	45	43	36	41	195	39	272	39
1am - 2am	15	30	34	24	23	25	27	126	25	178	25
2am - 3am	10	12	9	8	18	14	16	57	11	87	12
3am - 4am	21	21	24	30	25	16	10	121	24	147	21
4am - 5am	72	59	46	51	49	25	15	277	55	317	45
5am - 6am	133	166	159	165	122	50	22	745	149	817	117
6am - 7am	318	283	295	309	270	132	85	1475	295	1692	242
7am - 8am	364	358	377	364	355	144	83	1818	364	2045	292
8am - 9am	399	499	440	437	419	270	168	2194	439	2632	376
9am - 10am	419	364	420	386	422	339	270	2011	402	2620	374
10am - 11am	348	333	321	376	371	365	367	1749	350	2481	354
11am - Midday	304	335	374	339	372	425	382	1724	345	2531	362
Midday - 1pm	338	324	350	320	391	410	348	1723	345	2481	354
1pm - 2pm	340	340	378	286	381	347	304	1725	345	2376	339
2pm - 3pm	473	429	482	462	498	362	339	2344	469	3045	435
3pm - 4pm	525	540	505	512	522	358	348	2604	521	3310	473
4pm - 5pm	480	567	583	563	489	304	314	2682	536	3300	471
5pm - 6pm	494	505	503	488	447	297	281	2437	487	3015	431
6pm - 7pm	294	389	321	406	420	290	229	1830	366	2349	336
7pm - 8pm	164	228	227	232	287	209	165	1138	228	1512	216
8pm - 9pm	111	176	165	177	164	141	137	793	159	1071	153
9pm - 10pm	91	125	139	161	144	119	86	660	132	865	124
10pm - 11pm	63	90	89	89	106	105	55	437	87	597	85
11pm - Midnight	32	46	44	55	80	66	24	257	51	347	50
Total	5825	6273	6321	6285	6418	4849	4116	31122	6224	40087	5726

Count Number 8263

Ref : MART

Lat/Long : S34 16 40.9 / E150 34 38.8

UBD 371 E-2

Street REMEMBRANCE DRIVE, TAHMOOR : From BARGO RIVER ROAD to WELLERS ROAD : NORTH BOUND

Location Site 8, south of Wellers Road, on road sign.

Carriageway

Start Date 10-FEB-12

Start Time 100

Duration 7 DAYS

Interval 1 HOUR

Weekly 50th Percentile Speed 76

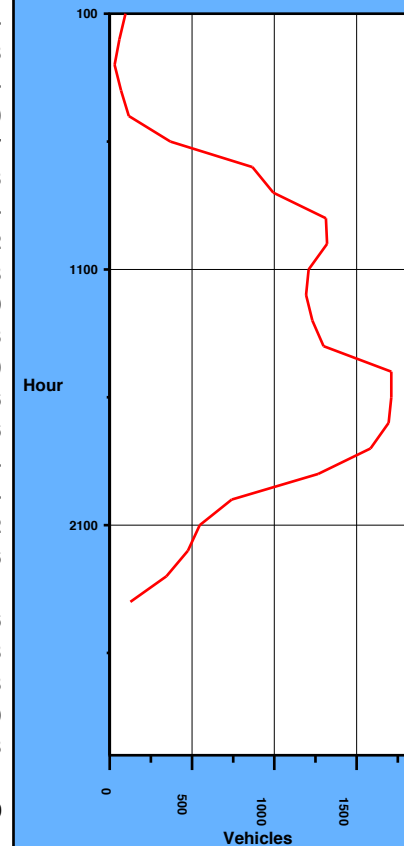
Weekly 85th Percentile Speed 86

Five Day AADT 3151

Seven Day AADT 2909

THE BODY OF THIS REPORT
SHOWS : SEVENDAY
TRAFFIC

Time	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total	Avg
Midnight - 1am	1	83	2	3	2	1	1	0	1	2	0	0	0	0	96	14
1am - 2am	0	53	0	5	0	0	0	0	1	0	0	0	0	0	59	8
2am - 3am	0	23	0	5	0	0	0	0	1	1	0	0	0	0	30	4
3am - 4am	0	54	0	4	2	1	0	0	2	5	1	0	0	0	69	10
4am - 5am	2	97	0	12	0	0	0	0	1	4	0	0	0	0	116	17
5am - 6am	1	337	0	10	3	3	1	0	0	11	3	0	0	0	369	53
6am - 7am	8	771	7	49	8	3	0	4	1	12	4	0	0	0	867	124
7am - 8am	15	883	12	49	9	2	3	1	0	20	0	0	0	0	994	142
8am - 9am	11	1201	16	59	6	2	1	1	2	13	1	0	0	0	1313	188
9am - 10am	5	1214	15	54	14	6	3	1	0	5	3	0	0	0	1320	189
10am - 11am	20	1079	22	51	8	6	1	0	1	18	2	0	0	0	1208	173
11am - Midday	17	1062	26	55	10	4	2	1	2	14	0	0	0	0	1193	170
Midday - 1pm	12	1110	21	53	12	4	3	2	2	12	0	0	0	0	1231	176
1pm - 2pm	12	1168	12	64	21	3	4	1	2	10	2	0	0	0	1299	186
2pm - 3pm	18	1556	26	74	20	1	1	1	0	12	1	0	0	0	1710	244
3pm - 4pm	17	1544	27	77	16	1	3	1	5	19	0	0	0	0	1710	244
4pm - 5pm	16	1537	26	74	19	1	5	2	1	12	1	0	0	0	1694	242
5pm - 6pm	22	1472	16	43	13	2	1	2	1	10	2	0	0	0	1584	226
6pm - 7pm	14	1194	17	23	6	1	5	0	0	4	2	0	0	0	1266	181
7pm - 8pm	2	700	9	16	9	0	2	1	0	0	2	0	0	0	741	106
8pm - 9pm	1	520	6	5	3	0	4	2	1	4	1	0	0	0	547	78
9pm - 10pm	4	454	3	7	1	0	1	0	0	5	0	0	0	0	475	68
10pm - 11pm	2	329	0	8	2	0	2	0	1	0	1	0	0	0	345	49
11pm - Midnight	0	121	1	2	1	0	0	1	0	0	0	0	0	0	126	18
Total	200	18562	264	802	185	41	43	21	25	193	26	0	0	0	20362	2909
% of Total	1	91	1	4	1					1						



Count Number 8263

Ref : MART

Lat/Long : S34 16 40.9 / E150 34 38.8

UBD 371 E-2

Street REMEMBRANCE DRIVE, TAHMOOR : From BARGO RIVER ROAD to WELLERS ROAD : NORTH BOUND

Location Site 8, south of Wellers Road, on road sign.

Carriageway

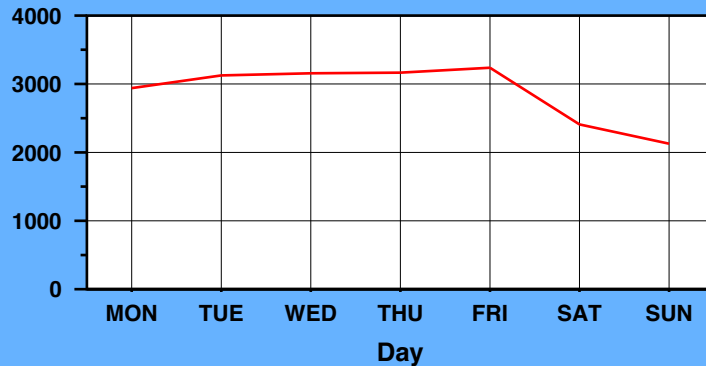
Start Date 10-FEB-12
 Start Time 100
 Duration 7 DAYS
 Interval 1 HOUR

Weekly 50th Percentile Speed 76
 Weekly 85th Percentile Speed 86
 Five Day AADT 3151
 Seven Day AADT 2909

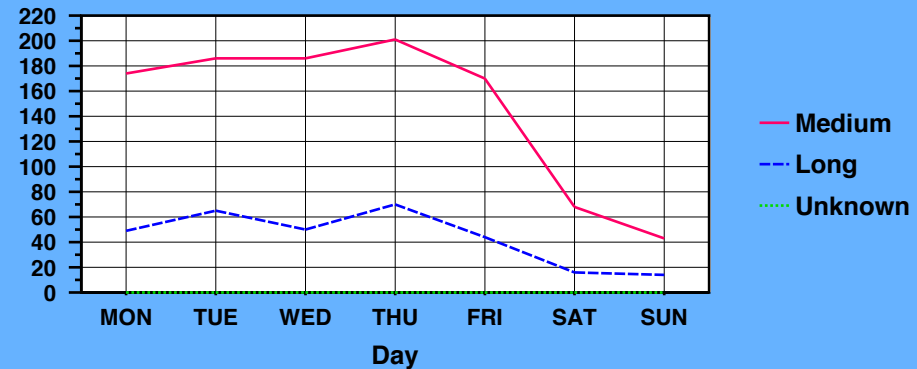
THE BODY OF THIS REPORT
 SHOWS : SEVENDAY
 TRAFFIC

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total
MONDAY	23	2681	35	127	42	5	10	1	3	31	4	0	0	0	2962
TUESDAY	18	2839	36	147	30	9	3	4	6	48	4	0	0	0	3144
WEDNESDAY	30	2887	34	147	30	9	5	4	4	32	5	0	0	0	3187
THURSDAY	36	2853	41	151	43	7	10	3	6	45	6	0	0	0	3201
FRIDAY	23	2994	30	140	25	5	8	4	2	24	6	0	0	0	3261
SATURDAY	23	2287	38	54	9	5	4	1	2	8	1	0	0	0	2432
SUNDAY	47	2021	50	36	6	1	3	4	2	5	0	0	0	0	2175
5 Day Total	130	14254	176	712	170	35	36	16	21	180	25	0	0	0	15755
5 Day Pct	1	90	1	5	1					1					
7 Day Total	200	18562	264	802	185	41	43	21	25	193	26	0	0	0	20362
7 Day Pct	1	91	1	4	1					1					

Volume



Class Volumes



Count Number 8263

Ref : MART

Lat/Long : S34 16 40.9 / E150 34 38.8

UBD 371 E-2

Street REMEMBRANCE DRIVE, TAHMOOR : From WELLERS ROAD to BARGO RIVER ROAD : SOUTH BOUND

Location Site 8, south of Wellers Road, on road sign.

Carriageway

Start Date 10-FEB-12

Start Time 100

Duration 7 DAYS

Interval 1 HOUR

Weekly 50th Percentile Speed 75

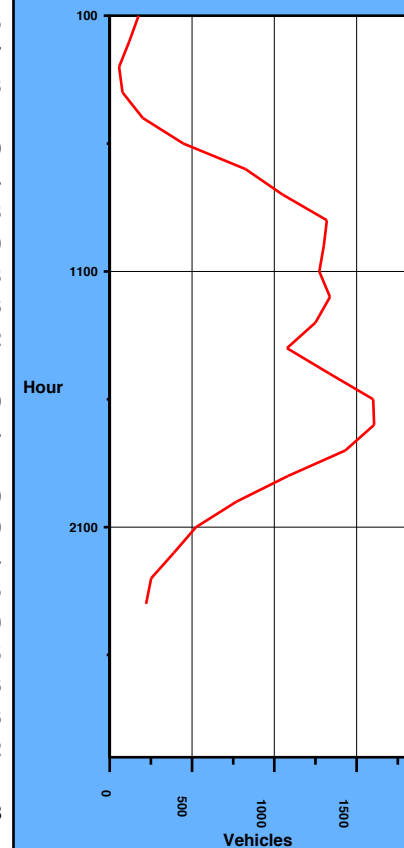
Weekly 85th Percentile Speed 84

Five Day AADT 3073

Seven Day AADT 2818

THE BODY OF THIS REPORT
SHOWS : SEVENDAY
TRAFFIC

Time	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total	Avg
Midnight - 1am	1	163	1	8	0	0	0	0	0	3	0	0	0	0	176	25
1am - 2am	0	96	2	15	2	0	1	0	2	1	0	0	0	0	119	17
2am - 3am	1	44	0	4	2	0	1	0	1	2	2	0	0	0	57	8
3am - 4am	0	45	1	11	6	0	1	0	4	6	4	0	0	0	78	11
4am - 5am	1	152	2	16	6	11	3	0	3	6	1	0	0	0	201	29
5am - 6am	0	383	5	36	11	3	2	2	4	2	0	0	0	0	448	64
6am - 7am	5	651	23	86	33	4	5	1	3	13	1	0	0	0	825	118
7am - 8am	6	875	24	101	11	3	9	2	4	15	1	0	0	0	1051	150
8am - 9am	21	1142	20	94	17	2	9	0	2	10	2	0	0	0	1319	188
9am - 10am	22	1155	21	83	6	1	2	1	3	4	2	0	0	0	1300	186
10am - 11am	24	1112	22	80	13	5	2	1	0	13	1	0	0	0	1273	182
11am - Midday	12	1197	21	76	8	2	3	0	2	16	1	0	0	0	1338	191
Midday - 1pm	3	1106	21	85	8	2	5	1	3	14	2	0	0	0	1250	179
1pm - 2pm	5	965	15	63	10	1	4	0	2	10	2	0	0	0	1077	154
2pm - 3pm	8	1198	24	76	8	2	0	1	3	13	2	0	0	0	1335	191
3pm - 4pm	11	1456	18	80	9	1	4	2	2	16	1	0	0	0	1600	229
4pm - 5pm	12	1476	23	80	1	2	0	0	1	8	3	0	0	0	1606	229
5pm - 6pm	9	1326	14	62	4	1	7	0	1	7	0	0	0	0	1431	204
6pm - 7pm	4	1020	7	36	3	0	2	1	0	10	0	0	0	0	1083	155
7pm - 8pm	4	721	10	25	2	1	1	0	3	4	0	0	0	0	771	110
8pm - 9pm	5	486	7	19	2	0	0	0	3	2	0	0	0	0	524	75
9pm - 10pm	1	362	7	8	0	0	0	1	1	10	0	0	0	0	390	56
10pm - 11pm	1	239	1	8	0	1	0	0	1	0	1	0	0	0	252	36
11pm - Midnight	0	213	1	5	1	0	0	0	0	0	1	0	0	0	221	32
Total	156	17583	290	1157	163	42	61	13	48	185	27	0	0	0	19725	2818
% of Total	1	89	1	6	1				1							



Count Number 8263

Ref : MART

Lat/Long : S34 16 40.9 / E150 34 38.8

UBD 371 E-2

Street REMEMBRANCE DRIVE, TAHMOOR : From WELLERS ROAD to BARGO RIVER ROAD : SOUTH BOUND

Location Site 8, south of Wellers Road, on road sign.

Carriageway

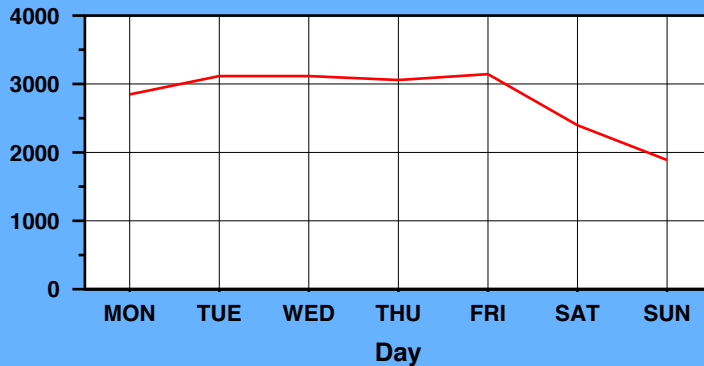
Start Date 10-FEB-12
 Start Time 100
 Duration 7 DAYS
 Interval 1 HOUR

Weekly 50th Percentile Speed 75
 Weekly 85th Percentile Speed 84
 Five Day AADT 3073
 Seven Day AADT 2818

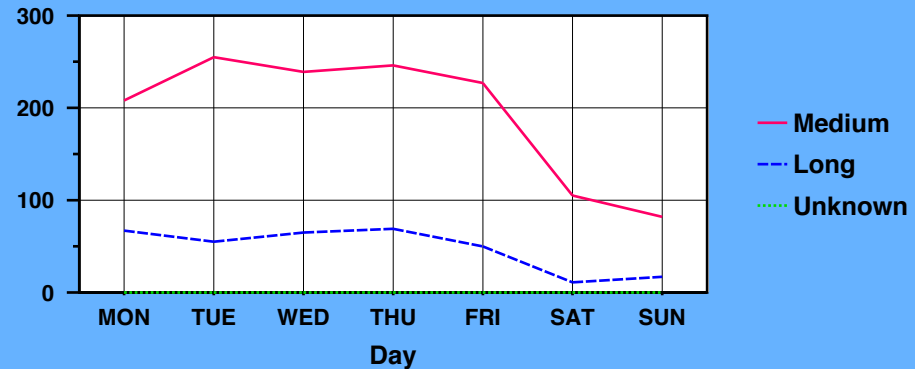
THE BODY OF THIS REPORT
 SHOWS : SEVENDAY
 TRAFFIC

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total
MONDAY	15	2533	40	172	31	5	12	1	8	40	6	0	0	0	2863
TUESDAY	13	2771	35	210	33	12	11	2	8	31	3	0	0	0	3129
WEDNESDAY	18	2774	38	200	34	5	9	5	7	40	4	0	0	0	3134
THURSDAY	25	2697	47	212	28	6	13	2	13	37	4	0	0	0	3084
FRIDAY	13	2834	33	190	28	9	8	2	8	26	6	0	0	0	3157
SATURDAY	20	2223	58	95	7	3	2	1	1	5	2	0	0	0	2417
SUNDAY	52	1751	39	78	2	2	6	0	3	6	2	0	0	0	1941
5 Day Total	84	13609	193	984	154	37	53	12	44	174	23	0	0	0	15367
5 Day Pct	1	89	1	6	1					1					
7 Day Total	156	17583	290	1157	163	42	61	13	48	185	27	0	0	0	19725
7 Day Pct	1	89	1	6	1					1					

Volume



Class Volumes



Count Number **8264** Ref : **MART** Lat/Long : **S34 16 34.4 / E150 34 41.9** UBD **371 E-1**
 Street **WELLERS ROAD, BARGO : Between THE GREAT SOUTHERN ROAD & ELVY STREET (bidirectional) :**
 Location **Site 9, on Railway Bridge, between Great Southern Road and Remembrance Driveway, ELP 90/48876** Carriageway

Start Date 10-FEB-12
 Start Time 100
 Duration 7 DAYS
 Interval 1 HOUR

Weekly 50th Percentile Speed 54
 Weekly 85th Percentile Speed 62
 Five Day AADT 1705
 Seven Day AADT 1572

TOTAL COUNT MATRIX

	MON 13TH	TUE 14TH	WED 15TH	THU 16TH	FRI 10TH	SAT 11TH	SUN 12TH	5 Day Total Average		7 Day Total Average	
Midnight - 1am	4	4	7	4	4	16	22	23	5	61	9
1am - 2am	2	1	3	3	5	2	8	14	3	24	3
2am - 3am	5	2	1	0	4	8	8	12	2	28	4
3am - 4am	0	0	1	6	1	1	6	8	2	15	2
4am - 5am	8	5	11	12	7	2	2	43	9	47	7
5am - 6am	31	35	36	34	32	11	10	168	34	189	27
6am - 7am	67	79	59	48	67	18	16	320	64	354	51
7am - 8am	76	75	85	85	74	27	22	395	79	444	63
8am - 9am	122	132	110	137	122	53	40	623	125	716	102
9am - 10am	138	137	115	144	137	87	63	671	134	821	117
10am - 11am	88	83	103	104	90	106	78	468	94	652	93
11am - Midday	74	77	97	71	92	94	100	411	82	605	86
Midday - 1pm	90	85	108	84	104	122	122	471	94	715	102
1pm - 2pm	96	99	89	96	100	91	118	480	96	689	98
2pm - 3pm	100	122	138	143	143	87	96	646	129	829	118
3pm - 4pm	195	182	172	178	192	107	99	919	184	1125	161
4pm - 5pm	157	155	160	157	125	75	82	754	151	911	130
5pm - 6pm	121	160	145	144	122	75	105	692	138	872	125
6pm - 7pm	81	100	131	96	85	75	87	493	99	655	94
7pm - 8pm	65	67	65	65	77	64	68	339	68	471	67
8pm - 9pm	24	49	53	51	63	51	32	240	48	323	46
9pm - 10pm	21	30	34	56	38	34	26	179	36	239	34
10pm - 11pm	12	16	27	27	20	26	11	102	20	139	20
11pm - Midnight	4	7	6	17	20	17	10	54	11	81	12
Total	1581	1702	1756	1762	1724	1249	1231	8525	1705	11005	1572

Count Number 8264

Ref : MART

Lat/Long : S34 16 34.4 / E150 34 41.9

UBD 371 E-1

Street WELLERS ROAD, BARGO : From THE GREAT SOUTHERN ROAD to ELVY STREET : WEST BOUND

Location Site 9, on Railway Bridge, between Great Southern Road and Remembrance Driveway, ELP 90/48876

Carriageway

Start Date 10-FEB-12

Start Time 100

Duration 7 DAYS

Interval 1 HOUR

Weekly 50th Percentile Speed 54

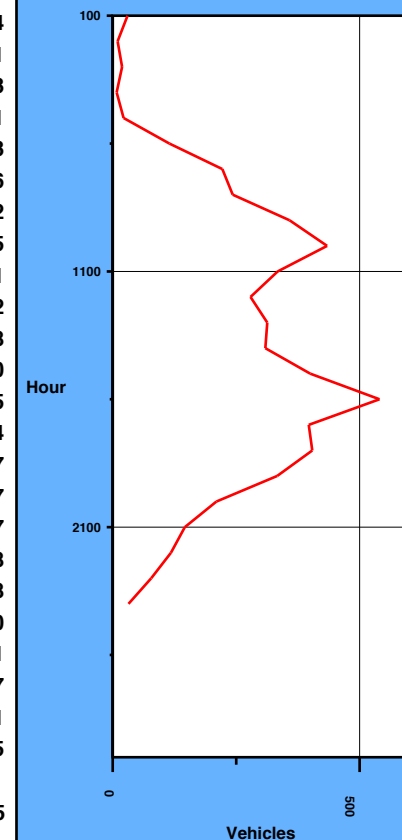
Weekly 85th Percentile Speed 60

Five Day AADT 832

Seven Day AADT 765

THE BODY OF THIS REPORT
SHOWS : SEVENDAY
TRAFFIC

Time	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total	Avg
Midnight - 1am	0	28	1	0	1	0	0	0	0	0	0	0	0	0	30	4
1am - 2am	0	8	1	0	1	0	0	0	0	0	0	0	0	0	10	1
2am - 3am	0	16	0	0	3	0	0	0	0	0	0	0	0	0	19	3
3am - 4am	0	7	0	0	1	0	0	0	0	0	0	0	0	0	8	1
4am - 5am	0	22	0	0	0	0	0	0	0	0	0	0	0	0	22	3
5am - 6am	0	108	3	4	0	0	0	0	0	0	0	0	0	0	115	16
6am - 7am	0	212	2	8	0	0	0	0	0	0	0	0	0	0	222	32
7am - 8am	0	225	2	9	5	0	0	0	0	2	0	0	0	0	243	35
8am - 9am	1	331	2	18	6	0	0	0	0	0	0	0	0	0	358	51
9am - 10am	3	410	7	10	3	0	1	0	0	0	0	0	0	0	434	62
10am - 11am	0	297	20	10	4	1	2	0	0	0	0	0	0	0	334	48
11am - Midday	1	248	17	11	0	1	0	0	0	1	0	0	0	0	279	40
Midday - 1pm	0	278	23	8	0	0	1	0	0	2	1	0	0	0	313	45
1pm - 2pm	2	273	22	8	4	0	0	0	0	0	0	0	0	0	309	44
2pm - 3pm	1	360	22	14	1	0	0	0	0	2	0	0	0	0	400	57
3pm - 4pm	1	492	23	21	1	0	2	0	0	0	0	0	0	0	540	77
4pm - 5pm	0	371	10	13	1	0	1	0	0	1	0	0	0	0	397	57
5pm - 6pm	0	388	8	6	1	0	0	0	0	1	0	0	0	0	404	58
6pm - 7pm	3	318	4	4	2	0	0	0	0	2	0	0	0	0	333	48
7pm - 8pm	2	203	1	1	0	0	0	0	0	3	0	0	0	0	210	30
8pm - 9pm	2	137	1	3	1	1	1	0	0	0	0	0	0	0	146	21
9pm - 10pm	1	112	2	2	1	0	0	0	0	0	0	0	0	0	118	17
10pm - 11pm	0	76	1	1	0	0	0	0	0	0	0	0	0	0	78	11
11pm - Midnight	0	30	1	1	0	0	0	0	0	0	0	0	0	0	32	5
Total	17	4950	173	152	36	3	8	0	0	14	1	0	0	0	5354	765
% of Total		92	3	3	1											



Count Number 8264

Ref : MART

Lat/Long : S34 16 34.4 / E150 34 41.9

UBD 371 E-1

Street WELLERS ROAD, BARGO : From THE GREAT SOUTHERN ROAD to ELVY STREET : WEST BOUND

Location Site 9, on Railway Bridge, between Great Southern Road and Remembrance Driveway, ELP 90/48876

Carriageway

Start Date 10-FEB-12

Start Time 100

Duration 7 DAYS

Interval 1 HOUR

Weekly 50th Percentile Speed 54

Weekly 85th Percentile Speed 60

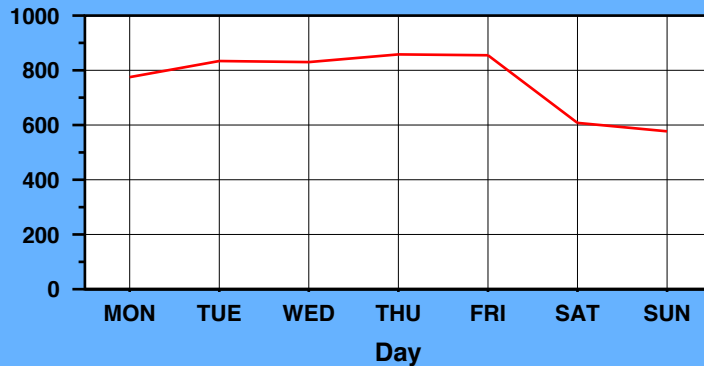
Five Day AADT 832

Seven Day AADT 765

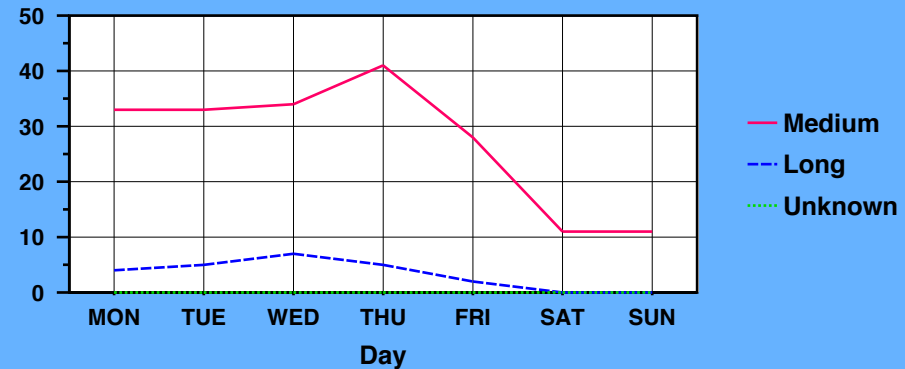
THE BODY OF THIS REPORT
SHOWS : SEVENDAY
TRAFFIC

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total
MONDAY	1	719	19	25	8	0	1	0	0	3	0	0	0	0	776
TUESDAY	2	784	12	26	6	1	3	0	0	2	0	0	0	0	836
WEDNESDAY	3	771	18	25	8	1	2	0	0	4	1	0	0	0	833
THURSDAY	1	791	21	34	7	0	2	0	0	3	0	0	0	0	859
FRIDAY	0	807	18	23	4	1	0	0	0	2	0	0	0	0	855
SATURDAY	3	556	41	10	1	0	0	0	0	0	0	0	0	0	611
SUNDAY	7	522	44	9	2	0	0	0	0	0	0	0	0	0	584
5 Day Total	7	3872	88	133	33	3	8	0	0	14	1	0	0	0	4159
5 Day Pct		93	2	3	1										
7 Day Total	17	4950	173	152	36	3	8	0	0	14	1	0	0	0	5354
7 Day Pct		92	3	3	1										

Volume



Class Volumes



Count Number 8264

Ref : MART

Lat/Long : S34 16 34.4 / E150 34 41.9

UBD 371 E-1

Street WELLERS ROAD, BARGO : From ELVY STREET to THE GREAT SOUTHERN ROAD : EAST BOUND

Location Site 9, on Railway Bridge, between Great Southern Road and Remembrance Driveway, ELP 90/48876

Carriageway

Start Date 10-FEB-12

Start Time 100

Duration 7 DAYS

Interval 1 HOUR

Weekly 50th Percentile Speed 55

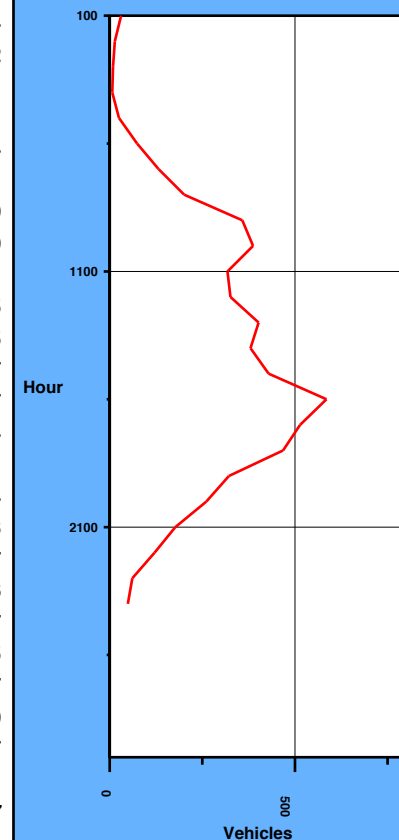
Weekly 85th Percentile Speed 63

Five Day AADT 873

Seven Day AADT 807

THE BODY OF THIS REPORT
SHOWS : SEVENDAY
TRAFFIC

Time	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total	Avg
Midnight - 1am	0	30	1	0	0	0	0	0	0	0	0	0	0	0	31	4
1am - 2am	0	14	0	0	0	0	0	0	0	0	0	0	0	0	14	2
2am - 3am	0	9	0	0	0	0	0	0	0	0	0	0	0	0	9	1
3am - 4am	0	4	0	0	0	0	0	0	0	0	3	0	0	0	7	1
4am - 5am	0	21	0	2	0	1	0	0	0	1	0	0	0	0	25	4
5am - 6am	0	70	3	0	0	0	0	1	0	0	0	0	0	0	74	11
6am - 7am	0	117	0	7	5	0	1	0	0	2	0	0	0	0	132	19
7am - 8am	0	182	3	7	7	0	2	0	0	0	0	0	0	0	201	29
8am - 9am	0	338	3	8	6	0	1	0	0	2	0	0	0	0	358	51
9am - 10am	1	353	18	12	3	0	0	0	0	0	0	0	0	0	387	55
10am - 11am	1	276	23	15	1	2	0	0	0	0	0	0	0	0	318	45
11am - Midday	1	291	19	12	1	1	1	0	0	0	0	0	0	0	326	47
Midday - 1pm	1	353	26	14	3	1	2	0	0	2	0	0	0	0	402	57
1pm - 2pm	1	329	21	19	3	0	2	0	0	5	0	0	0	0	380	54
2pm - 3pm	0	374	23	29	3	0	0	0	0	0	0	0	0	0	429	61
3pm - 4pm	1	535	17	31	1	0	0	0	0	0	0	0	0	0	585	84
4pm - 5pm	3	476	7	27	0	0	0	0	0	0	1	0	0	0	514	73
5pm - 6pm	3	439	9	17	0	0	0	0	0	0	0	0	0	0	468	67
6pm - 7pm	4	307	3	7	1	0	0	0	0	0	0	0	0	0	322	46
7pm - 8pm	0	255	1	2	1	0	0	0	0	2	0	0	0	0	261	37
8pm - 9pm	0	172	1	2	1	0	1	0	0	0	0	0	0	0	177	25
9pm - 10pm	0	120	0	1	0	0	0	0	0	0	0	0	0	0	121	17
10pm - 11pm	0	59	1	1	0	0	0	0	0	0	0	0	0	0	61	9
11pm - Midnight	0	49	0	0	0	0	0	0	0	0	0	0	0	0	49	7
Total	16	5173	179	213	36	5	10	1	0	14	4	0	0	0	5651	807
% of Total		92	3	4	1											



Count Number 8264

Ref : MART

Lat/Long : S34 16 34.4 / E150 34 41.9

UBD 371 E-1

Street WELLERS ROAD, BARGO : From ELVY STREET to THE GREAT SOUTHERN ROAD : EAST BOUND

Location Site 9, on Railway Bridge, between Great Southern Road and Remembrance Driveway, ELP 90/48876

Carriageway

Start Date 10-FEB-12

Start Time 100

Duration 7 DAYS

Interval 1 HOUR

Weekly 50th Percentile Speed 55

Weekly 85th Percentile Speed 63

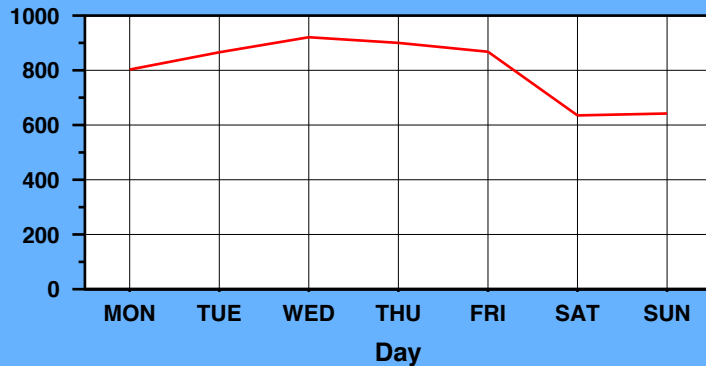
Five Day AADT 873

Seven Day AADT 807

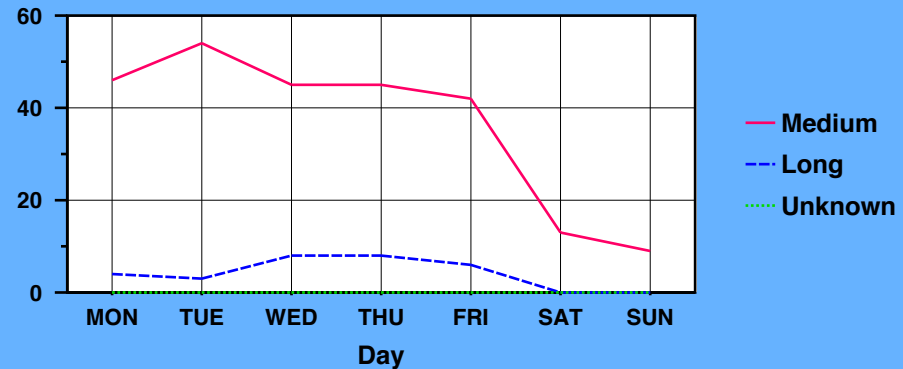
THE BODY OF THIS REPORT
SHOWS : SEVENDAY
TRAFFIC

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total
MONDAY	2	730	23	39	7	0	1	0	0	2	1	0	0	0	805
TUESDAY	0	799	10	44	10	0	1	0	0	2	0	0	0	0	866
WEDNESDAY	2	850	18	38	5	2	3	0	0	4	1	0	0	0	923
THURSDAY	3	825	22	36	9	0	2	1	0	3	2	0	0	0	903
FRIDAY	1	804	16	36	4	2	3	0	0	3	0	0	0	0	869
SATURDAY	3	581	41	12	0	1	0	0	0	0	0	0	0	0	638
SUNDAY	5	584	49	8	1	0	0	0	0	0	0	0	0	0	647
5 Day Total	8	4008	89	193	35	4	10	1	0	14	4	0	0	0	4366
5 Day Pct		92	2	4	1										
7 Day Total	16	5173	179	213	36	5	10	1	0	14	4	0	0	0	5651
7 Day Pct		92	3	4	1										

Volume



Class Volumes



Count Number 7114 Ref : TTP Lat/Long : S34 17 01.1 / E150 34 52.0 UBD 371 G-4
 Street IRONBARK ROAD, BARGO : From THE GREAT SOUTHERN ROAD to GOVERNMENT ROAD : EAST BOUND
 Location Between The Great Southern Road and Government Road, ELP 115 Carriageway

TOTAL COUNT MATRIX

Start Date 03-MAR-11
 Start Time 100
 Duration 7 DAYS
 Interval 1 HOUR

Weekly 50th Percentile Speed 47
 Weekly 85th Percentile Speed 56
 Five Day AADT 236
 Seven Day AADT 244

	MON 7TH	TUE 8TH	WED 9TH	THU 3RD	FRI 4TH	SAT 5TH	SUN 6TH	5 Day		7 Day	
								Total	Average	Total	Average
Midnight - 1am	1	0	1	1	5	1	2	8	2	11	2
1am - 2am	0	0	0	1	1	1	1	2	0	4	1
2am - 3am	1	0	0	0	1	1	1	2	0	4	1
3am - 4am	0	1	0	0	0	0	1	1	0	2	0
4am - 5am	0	0	1	0	1	0	2	2	0	4	1
5am - 6am	2	3	1	0	4	0	1	10	2	11	2
6am - 7am	2	1	3	4	3	2	1	13	3	16	2
7am - 8am	7	7	5	5	10	2	5	34	7	41	6
8am - 9am	17	6	9	10	10	6	15	52	10	73	10
9am - 10am	13	17	14	17	11	18	15	72	14	105	15
10am - 11am	20	16	21	11	13	16	19	81	16	116	17
11am - Midday	14	17	17	13	17	26	26	78	16	130	19
Midday - 1pm	22	13	11	17	13	27	32	76	15	135	19
1pm - 2pm	11	16	17	18	13	27	20	75	15	122	17
2pm - 3pm	22	18	15	14	14	29	37	83	17	149	21
3pm - 4pm	28	21	17	21	18	30	26	105	21	161	23
4pm - 5pm	29	26	24	22	28	14	15	129	26	158	23
5pm - 6pm	18	21	19	16	18	16	12	92	18	120	17
6pm - 7pm	14	23	16	20	18	7	11	91	18	109	16
7pm - 8pm	8	15	14	17	8	9	11	62	12	82	12
8pm - 9pm	7	7	8	14	11	15	4	47	9	66	9
9pm - 10pm	9	6	4	9	9	5	8	37	7	50	7
10pm - 11pm	3	2	3	2	7	5	3	17	3	25	4
11pm - Midnight	1	0	2	3	3	5	2	9	2	16	2
Total	249	236	222	235	236	262	270	1178	235	1710	244

Count Number 7114 Ref : TTP Lat/Long : S34 17 01.1 / E150 34 52.0 UBD 371 G-4
 Street IRONBARK ROAD, BARGO : From GOVERNMENT ROAD to THE GREAT SOUTHERN ROAD : WEST BOUND
 Location Between The Great Southern Road and Government Road, ELP 115 Carriageway

Start Date 03-MAR-11
 Start Time 100
 Duration 7 DAYS
 Interval 1 HOUR

Weekly 50th Percentile Speed 48
 Weekly 85th Percentile Speed 59
 Five Day AADT 241
 Seven Day AADT 247

TOTAL COUNT MATRIX

	MON 7TH	TUE 8TH	WED 9TH	THU 3RD	FRI 4TH	SAT 5TH	SUN 6TH	5 Day		7 Day	
								Total	Average	Total	Average
Midnight - 1am	0	0	0	1	1	3	3	2	0	8	1
1am - 2am	1	0	0	0	1	1	1	2	0	4	1
2am - 3am	0	0	0	0	0	0	1	0	0	1	0
3am - 4am	0	1	0	0	0	0	0	1	0	1	0
4am - 5am	2	4	1	3	2	0	2	12	2	14	2
5am - 6am	3	5	4	7	7	2	3	26	5	31	4
6am - 7am	13	9	14	19	13	3	3	68	14	74	11
7am - 8am	17	15	18	10	12	7	7	72	14	86	12
8am - 9am	25	22	21	23	22	14	8	113	23	135	19
9am - 10am	20	22	17	14	28	18	26	101	20	145	21
10am - 11am	16	12	16	13	13	24	23	70	14	117	17
11am - Midday	13	17	19	12	19	32	24	80	16	136	19
Midday - 1pm	14	11	11	15	6	24	31	57	11	112	16
1pm - 2pm	16	14	13	12	15	23	14	70	14	107	15
2pm - 3pm	24	15	20	24	13	15	35	96	19	146	21
3pm - 4pm	21	19	14	12	20	33	24	86	17	143	20
4pm - 5pm	23	21	14	22	15	18	19	100	20	137	20
5pm - 6pm	18	17	15	17	17	10	13	84	17	107	15
6pm - 7pm	11	12	10	17	9	9	11	59	12	79	11
7pm - 8pm	5	14	7	9	9	8	8	44	9	60	9
8pm - 9pm	10	6	8	11	7	7	4	42	8	53	8
9pm - 10pm	0	1	1	4	0	4	2	6	1	12	2
10pm - 11pm	1	2	0	2	2	3	0	7	1	10	1
11pm - Midnight	0	0	1	3	2	4	0	6	1	10	1
Total	258	239	224	250	233	262	262	1204	240	1728	246

Count Number 7114 Ref : TTP Lat/Long : S34 17 01.1 / E150 34 52.0 UBD 371 G-4
 Street IRONBARK ROAD, BARGO : From THE GREAT SOUTHERN ROAD to GOVERNMENT ROAD : EAST BOUND
 Location Between The Great Southern Road and Government Road, ELP 115 Carriageway

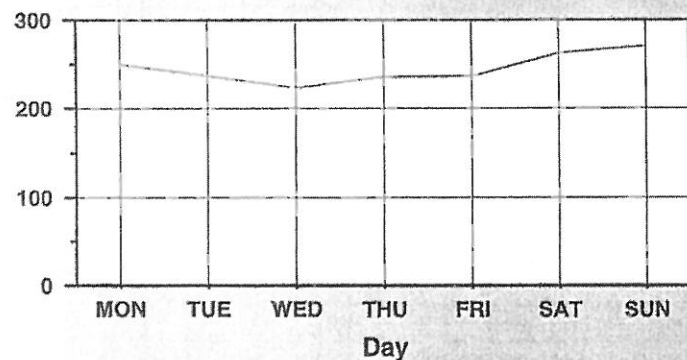
Start Date 03-MAR-11
 Start Time 100
 Duration 7 DAYS
 Interval 1 HOUR

Weekly 50th Percentile Speed 47
 Weekly 85th Percentile Speed 56
 Five Day AADT 236
 Seven Day AADT 244

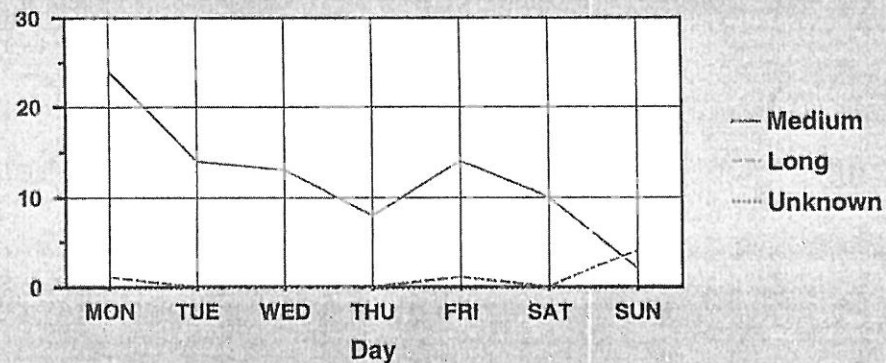
THE BODY OF THIS REPORT
 SHOWS : SEVENDAY
 TRAFFIC

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total
MONDAY	0	203	21	20	3	1	1	0	0	0	0	0	0	0	249
TUESDAY	0	204	18	13	1	0	0	0	0	0	0	0	0	0	236
WEDNESDAY	0	194	15	10	3	0	0	0	0	0	0	0	0	0	222
THURSDAY	0	206	21	8	0	0	0	0	0	0	0	0	0	0	235
FRIDAY	0	205	16	11	2	1	1	0	0	0	0	0	0	0	236
SATURDAY	0	215	37	10	0	0	0	0	0	0	0	0	0	0	262
SUNDAY	0	215	49	2	0	0	4	0	0	0	0	0	0	0	270
5 Day Total	0	1012	91	62	9	2	2	0	0	0	0	0	0	0	1178
5 Day Pct		86	8	5	1										
7 Day Total	0	1442	177	74	9	2	6	0	0	0	0	0	0	0	1710
7 Day Pct		84	10	4	1										

Volume



Class Volumes



Daily Classification Summary

Count Number 7114 Ref : TTP Lat/Long : S34 17 01.1 / E150 34 52.0 UBD 371 G-4
 Street IRONBARK ROAD, BARGO : From GOVERNMENT ROAD to THE GREAT SOUTHERN ROAD : WEST BOUND
 Location Between The Great Southern Road and Government Road, ELP 115 Carriageway

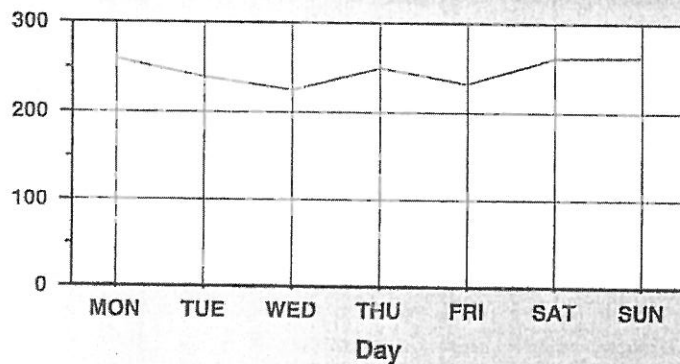
Start Date 03-MAR-11
 Start Time 100
 Duration 7 DAYS
 Interval 1 HOUR

Weekly 50th Percentile Speed 48
 Weekly 85th Percentile Speed 59
 Five Day AADT 241
 Seven Day AADT 247

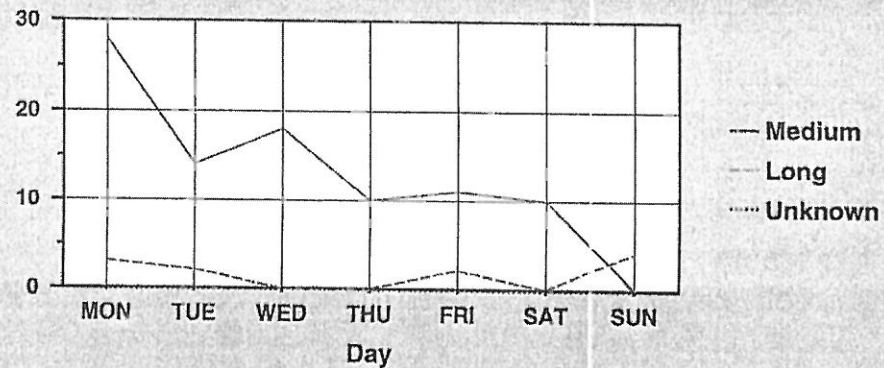
THE BODY OF THIS REPORT
 SHOWS : SEVENDAY
 TRAFFIC

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total
MONDAY	0	205	22	23	4	1	1	0	0	1	1	0	0	0	258
TUESDAY	1	202	20	13	1	0	0	1	0	1	0	0	0	0	239
WEDNESDAY	0	194	12	13	5	0	0	0	0	0	0	0	0	0	224
THURSDAY	1	216	23	10	0	0	0	0	0	0	0	0	0	0	250
FRIDAY	1	200	19	9	1	1	1	0	0	1	0	0	0	0	233
SATURDAY	1	211	40	10	0	0	0	0	0	0	0	0	0	0	262
SUNDAY	0	210	48	0	0	0	4	0	0	0	0	0	0	0	262
5 Day Total	3	1017	96	68	11	2	2	1	0	3	1	0	0	0	1204
5 Day Pct		84	8	6	1										
7 Day Total	4	1438	184	78	11	2	6	1	0	3	1	0	0	0	1728
7 Day Pct		83	11	5	1										

Volume



Class Volumes



Traffic Count Summary Report

Count Number 7115 Ref : TTP Lat/Long : S34°16'34.4" / E150°34'42.0" UBD 371 E-1
 Street WELLERS ROAD, BARGO : From ELVY STREET to THE GREAT SOUTHERN ROAD : EAST BOUND
 Location Between The Great Southern Road and Remembrance Driveway, ELP 90/48876 Carriageway

TOTAL COUNT MATRIX

Start Date 03-MAR-11
 Start Time 100
 Duration 7 DAYS
 Interval 1 HOUR

Weekly 50th Percentile Speed 55
 Weekly 85th Percentile Speed 64
 Five Day AADT 940
 Seven Day AADT 886

	MON 7TH	TUE 8TH	WED 9TH	THU 3RD	FRI 4TH	SAT 5TH	SUN 6TH	5 Day		7 Day	
								Total	Average	Total	Average
Midnight - 1am	1	6	8	5	7	9	9	27	5	45	6
1am - 2am	1	1	1	7	1	4	6	11	2	21	3
2am - 3am	2	0	2	0	1	2	5	5	1	12	2
3am - 4am	3	3	1	2	1	0	1	10	2	11	2
4am - 5am	7	4	3	5	4	0	2	23	5	25	4
5am - 6am	14	14	13	9	13	4	2	63	13	69	10
6am - 7am	29	31	28	35	27	16	13	150	30	179	26
7am - 8am	43	41	36	42	47	21	21	209	42	251	36
8am - 9am	65	68	63	69	63	35	31	328	66	394	56
9am - 10am	67	70	65	63	67	41	32	332	66	405	58
10am - 11am	58	60	59	54	56	69	59	287	57	415	59
11am - Midday	59	56	46	49	52	71	52	262	52	385	55
Midday - 1pm	64	56	49	53	56	67	57	278	56	402	57
1pm - 2pm	52	61	48	46	61	60	62	268	54	390	56
2pm - 3pm	72	66	67	79	76	59	75	360	72	494	71
3pm - 4pm	101	86	92	111	115	56	70	505	101	631	90
4pm - 5pm	107	66	89	82	83	66	54	427	85	547	78
5pm - 6pm	60	79	79	75	73	44	58	366	73	468	67
6pm - 7pm	47	59	67	45	67	41	32	285	57	358	51
7pm - 8pm	30	36	42	46	35	26	37	189	38	252	36
8pm - 9pm	20	26	36	31	29	43	19	142	28	204	29
9pm - 10pm	17	10	14	19	24	23	13	84	17	120	17
10pm - 11pm	7	6	10	8	16	19	3	47	9	69	10
11pm - Midnight	10	5	4	6	15	10	7	40	8	57	8
Total	936	910	922	941	989	786	720	4698	939	6204	886

Traffic Count Summary Report

Count Number 7115 Ref : TTP Lat/Long : S34 16 34.4 / E150 34 42.0 UBD 371 E-1
 Street WELLERS ROAD, BARGO : From THE GREAT SOUTHERN ROAD to ELVY STREET : WEST BOUND
 Location Between The Great Southern Road and Remembrance Driveway, ELP 90/48876 Carriageway

TOTAL COUNT MATRIX

Start Date 03-MAR-11
 Start Time 100
 Duration 7 DAYS
 Interval 1 HOUR

Weekly 50th Percentile Speed 54
 Weekly 85th Percentile Speed 61
 Five Day AADT 894
 Seven Day AADT 839

	MON 7TH	TUE 8TH	WED 9TH	THU 3RD	FRI 4TH	SAT 5TH	SUN 6TH	5 Day		7 Day	
								Total	Average	Total	Average
Midnight - 1am	3	2	2	1	0	11	10	8	2	29	4
1am - 2am	2	1	0	3	3	1	11	9	2	21	3
2am - 3am	1	0	2	2	1	0	7	6	1	13	2
3am - 4am	0	3	1	1	2	1	1	7	1	9	1
4am - 5am	5	6	2	3	2	0	5	18	4	23	3
5am - 6am	17	18	25	22	17	7	10	99	20	116	17
6am - 7am	50	38	51	50	54	22	16	243	49	281	40
7am - 8am	43	48	51	44	32	23	21	218	44	262	37
8am - 9am	73	62	65	62	64	44	31	326	65	401	57
9am - 10am	70	93	61	79	93	62	56	396	79	514	73
10am - 11am	57	49	45	62	54	53	63	267	53	383	55
11am - Midday	39	55	44	42	54	65	66	234	47	365	52
Midday - 1pm	55	28	44	46	44	55	51	217	43	323	46
1pm - 2pm	50	67	56	41	58	45	48	272	54	365	52
2pm - 3pm	71	54	53	76	73	42	66	327	65	435	62
3pm - 4pm	96	86	87	74	108	53	44	451	90	548	78
4pm - 5pm	84	71	55	80	69	52	46	359	72	457	65
5pm - 6pm	74	48	74	62	49	39	40	307	61	386	55
6pm - 7pm	44	48	63	51	55	30	25	261	52	316	45
7pm - 8pm	25	35	32	32	46	32	50	170	34	252	36
8pm - 9pm	25	19	28	25	25	20	19	122	24	161	23
9pm - 10pm	8	16	12	21	16	17	7	73	15	97	14
10pm - 11pm	8	11	13	14	15	15	7	61	12	83	12
11pm - Midnight	4	3	5	6	3	11	2	21	4	34	5
Total	904	861	871	899	937	700	702	4472	894	5874	839

Daily Classification Summary

Count Number 7115

Ref : TTP

Lat/Long : S34 16 34.4 / E150 34 42.0

UBD 371 E-1

Street

WELLERS ROAD, BARGO : From ELVY STREET to THE GREAT SOUTHERN ROAD : EAST BOUND

Location

Between The Great Southern Road and Remembrance Driveway, ELP 90/48876

Carriageway

Start Date 03-MAR-11

Start Time 100

Duration 7 DAYS

Interval 1 HOUR

Weekly 50th Percentile Speed

55

Weekly 85th Percentile Speed

64

Five Day AADT

940

Seven Day AADT

886

THE BODY OF THIS REPORT

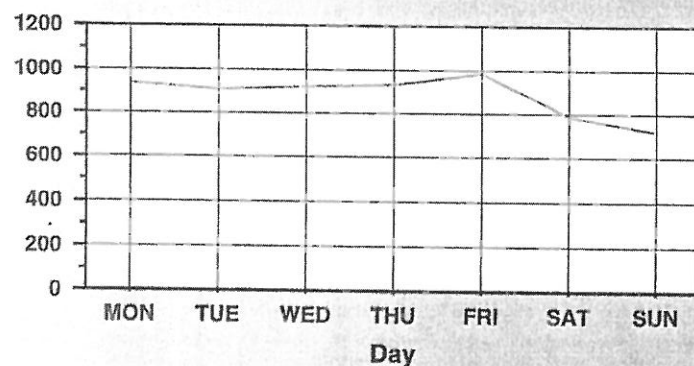
SHOWS :

SEVENDAY

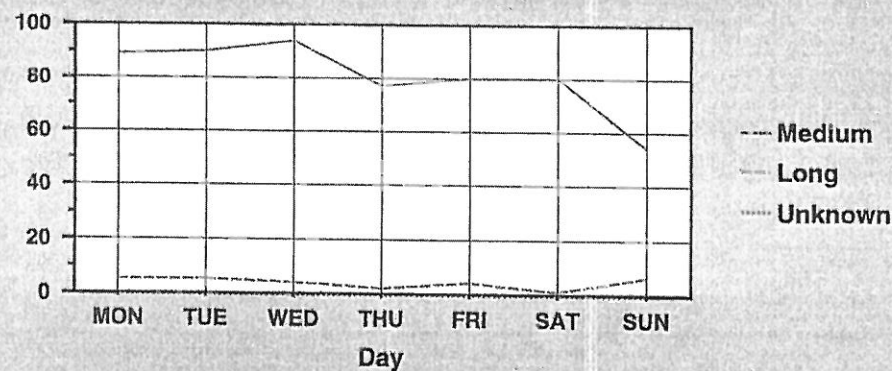
TRAFFIC

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total
MONDAY	2	807	33	48	38	3	1	0	1	3	0	0	0	0	936
TUESDAY	4	789	22	42	47	1	2	0	0	3	0	0	0	0	910
WEDNESDAY	1	806	17	44	49	1	2	0	1	0	1	0	0	0	922
THURSDAY	10	829	23	43	33	1	2	0	0	0	0	0	0	0	941
FRIDAY	5	873	27	39	39	2	2	0	0	2	0	0	0	0	989
SATURDAY	1	665	39	28	51	1	0	1	0	0	0	0	0	0	786
SUNDAY	3	609	48	11	43	0	6	0	0	0	0	0	0	0	720
5 Day Total	22	4104	122	216	206	8	9	0	2	8	1	0	0	0	4698
5 Day Pct		87	3	5	4										
7 Day Total	26	5378	209	255	300	9	15	1	2	8	1	0	0	0	6204
7 Day Pct		87	3	4	5										

Volume



Class Volumes



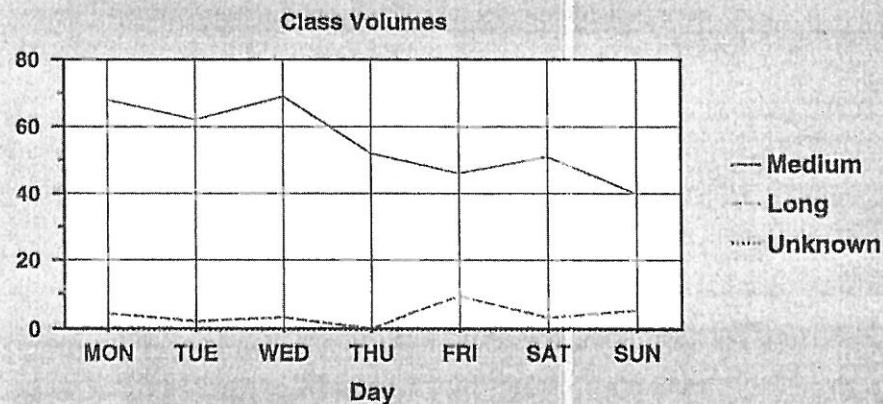
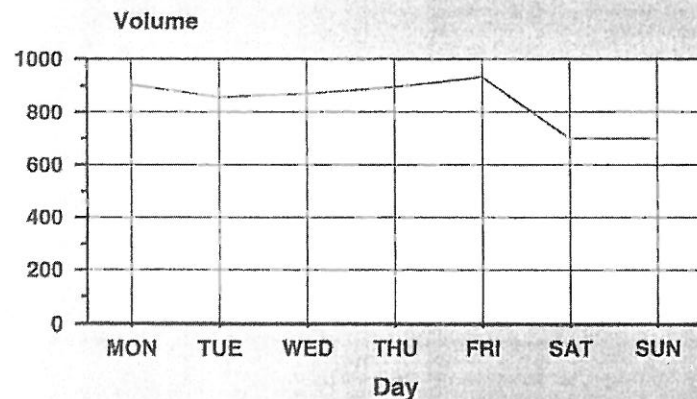
Count Number 7115 Ref : TTP Lat/Long : S34 16 34.4 / E150 34 42.0 UBD 371 E-1
 Street WELLERS ROAD, BARGO : From THE GREAT SOUTHERN ROAD to ELVY STREET : WEST BOUND
 Location Between The Great Southern Road and Remembrance Driveway, ELP 90/48876 Carriageway

Start Date 03-MAR-11
 Start Time 100
 Duration 7 DAYS
 Interval 1 HOUR

Weekly 50th Percentile Speed 54
 Weekly 85th Percentile Speed 61
 Five Day AADT 894
 Seven Day AADT 839

THE BODY OF THIS REPORT
 SHOWS : SEVENDAY
 TRAFFIC

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total
MONDAY	3	806	23	34	34	0	1	0	1	1	1	0	0	0	904
TUESDAY	6	768	23	28	33	1	1	0	0	1	0	0	0	0	861
WEDNESDAY	3	780	16	23	45	1	0	0	1	2	0	0	0	0	871
THURSDAY	6	820	21	32	19	1	0	0	0	0	0	0	0	0	899
FRIDAY	6	854	22	25	19	2	2	1	0	6	0	0	0	0	937
SATURDAY	2	608	36	23	27	1	1	0	0	2	0	0	0	0	700
SUNDAY	4	610	43	10	30	0	3	0	0	2	0	0	0	0	702
5 Day Total	24	4028	105	142	150	5	4	1	2	10	1	0	0	0	4472
5 Day Pct	1	90	2	3	3										
7 Day Total	30	5246	184	175	207	6	8	1	2	14	1	0	0	0	5874
7 Day Pct	1	89	3	3	4										



Count Number 7113 Ref : TTP Lat/Long : S34 17 37.4 / E150 34 57.7 UBD 371 G-9
 Street THE GREAT SOUTHERN ROAD, BARGO : From AVON DAM ROAD to WELLERS ROAD : NORTH BOUND
 Location Between Avon Dam Road and Bargo Road, ELP 575 Carriageway

TOTAL COUNT MATRIX

Start Date 03-MAR-11
 Start Time 100
 Duration 7 DAYS
 Interval 1 HOUR

Weekly 50th Percentile Speed 51
 Weekly 85th Percentile Speed 62
 Five Day AADT 1172
 Seven Day AADT 1092

	MON 7TH	TUE 8TH	WED 9TH	THU 3RD	FRI 4TH	SAT 5TH	SUN 6TH	5 Day		7 Day	
								Total	Average	Total	Average
Midnight - 1am	3	2	7	5	6	7	9	23	5	39	6
1am - 2am	0	3	1	1	2	3	6	7	1	16	2
2am - 3am	2	0	0	2	2	2	8	6	1	16	2
3am - 4am	0	2	1	2	2	2	2	7	1	11	2
4am - 5am	2	6	2	1	3	0	2	14	3	16	2
5am - 6am	12	10	12	10	15	5	6	59	12	70	10
6am - 7am	32	23	29	31	38	16	10	153	31	179	26
7am - 8am	47	35	48	15	39	22	18	184	37	224	32
8am - 9am	84	69	79	77	73	48	29	382	76	459	66
9am - 10am	84	97	99	101	105	63	46	486	97	595	85
10am - 11am	52	50	47	46	63	75	53	258	52	386	55
11am - Midday	55	54	61	55	63	80	61	288	58	429	61
Midday - 1pm	77	54	56	45	51	91	54	283	57	428	61
1pm - 2pm	72	39	60	54	76	79	56	301	60	436	62
2pm - 3pm	82	81	80	78	89	79	81	410	82	570	81
3pm - 4pm	140	139	135	151	159	62	61	724	145	847	121
4pm - 5pm	119	111	115	127	106	83	44	578	116	705	101
5pm - 6pm	104	102	97	110	89	71	62	502	100	635	91
6pm - 7pm	81	79	92	101	95	63	54	448	90	565	81
7pm - 8pm	49	55	71	64	59	54	37	298	60	389	56
8pm - 9pm	24	32	30	39	40	41	31	165	33	237	34
9pm - 10pm	17	31	17	45	32	18	15	142	28	175	25
10pm - 11pm	15	9	19	18	28	31	17	89	18	137	20
11pm - Midnight	6	7	12	10	19	14	9	54	11	77	11
Total	1159	1090	1170	1188	1254	1009	771	5861	1172	7641	1091

Count Number 7113 Ref : TTP Lat/Long : S34 17 37.4 / E150 34 57.7 UBD 371 G-9
 Street THE GREAT SOUTHERN ROAD, BARGO : From WELLERS ROAD to AVON DAM ROAD : SOUTH BOUND
 Location Between Avon Dam Road and Bargo Road, ELP 575 Carriageway

TOTAL COUNT MATRIX

Start Date 03-MAR-11
 Start Time 100
 Duration 7 DAYS
 Interval 1 HOUR

Weekly 50th Percentile Speed 53
 Weekly 85th Percentile Speed 65
 Five Day AADT 1220
 Seven Day AADT 1136

	MON 7TH	TUE 8TH	WED 9TH	THU 3RD	FRI 4TH	SAT 5TH	SUN 6TH	5 Day Total Average		7 Day Total Average	
Midnight - 1am	0	3	7	3	3	10	7	16	3	33	5
1am - 2am	2	1	2	1	1	5	7	7	1	19	3
2am - 3am	4	1	2	0	1	2	2	8	2	12	2
3am - 4am	5	6	3	5	6	2	0	25	5	27	4
4am - 5am	13	16	16	14	12	7	2	71	14	80	11
5am - 6am	41	43	40	42	40	14	7	206	41	227	32
6am - 7am	52	56	50	60	54	25	13	272	54	310	44
7am - 8am	90	83	74	46	81	26	24	374	75	424	61
8am - 9am	104	96	107	87	82	65	41	476	95	582	83
9am - 10am	130	107	125	137	145	69	61	644	129	774	111
10am - 11am	69	58	67	65	67	94	67	326	65	487	70
11am - Midday	55	51	60	47	62	85	50	275	55	410	59
Midday - 1pm	80	48	61	60	62	96	66	311	62	473	68
1pm - 2pm	57	66	51	50	64	76	52	288	58	416	59
2pm - 3pm	73	60	67	54	73	58	65	327	65	450	64
3pm - 4pm	150	118	138	164	153	56	65	723	145	844	121
4pm - 5pm	75	92	94	105	87	82	61	453	91	596	85
5pm - 6pm	72	77	68	98	76	82	65	391	78	538	77
6pm - 7pm	59	60	68	78	70	46	54	335	67	435	62
7pm - 8pm	41	41	47	49	54	35	45	232	46	312	45
8pm - 9pm	24	25	30	44	40	44	23	163	33	230	33
9pm - 10pm	16	21	11	20	21	37	14	89	18	140	20
10pm - 11pm	10	8	14	5	20	22	8	57	11	87	12
11pm - Midnight	3	3	5	10	11	13	3	32	6	48	7
Total	1225	1140	1207	1244	1285	1051	802	6101	1220	7954	1136

Count Number 7113 Ref : TTP Lat/Long : S34 17 37.4 / E150 34 57.7 UBD 371 G-9
 Street THE GREAT SOUTHERN ROAD, BARGO : From AVON DAM ROAD to WELLERS ROAD : NORTH BOUND
 Location Between Avon Dam Road and Bargo Road, ELP 575 Carriageway

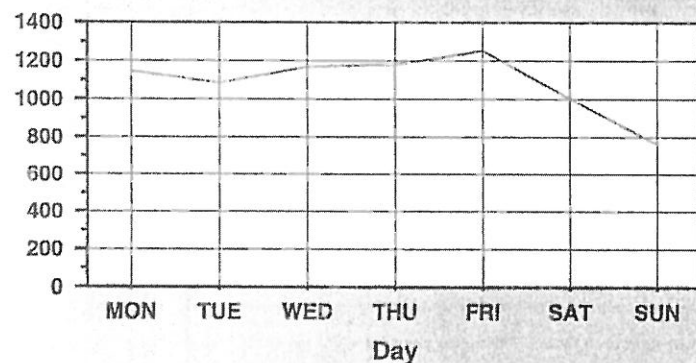
Start Date 03-MAR-11
 Start Time 100
 Duration 7 DAYS
 Interval 1 HOUR

Weekly 50th Percentile Speed 51
 Weekly 85th Percentile Speed 62
 Five Day AADT 1172
 Seven Day AADT 1092

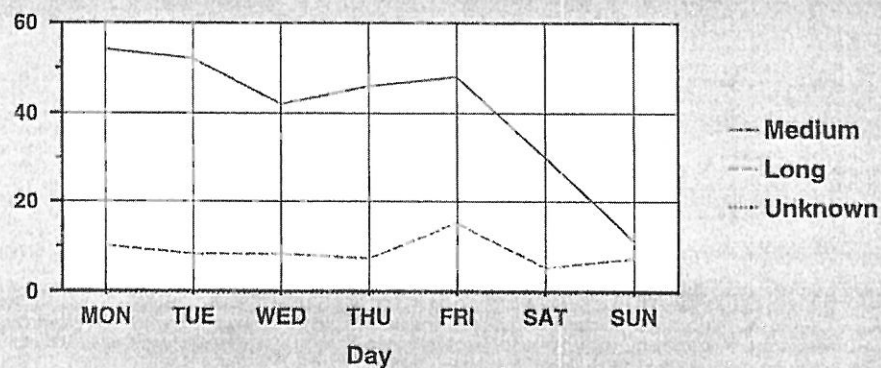
THE BODY OF THIS REPORT
 SHOWS : SEVENDAY
 TRAFFIC

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total
MONDAY	16	1058	21	41	8	5	1	3	0	4	2	0	0	0	1159
TUESDAY	9	1003	18	43	7	2	3	1	0	4	0	0	0	0	1090
WEDNESDAY	4	1094	22	35	4	3	2	1	0	4	1	0	0	0	1170
THURSDAY	10	1102	23	40	4	2	2	1	0	3	1	0	0	0	1188
FRIDAY	3	1171	17	42	6	0	2	3	0	7	3	0	0	0	1254
SATURDAY	7	945	22	26	3	1	1	2	0	2	0	0	0	0	1009
SUNDAY	9	706	38	8	3	0	2	3	1	0	1	0	0	0	771
5 Day Total	42	5428	101	201	29	12	10	9	0	22	7	0	0	0	5861
5 Day Pct	1	93	2	3											
7 Day Total	58	7079	161	235	35	13	13	14	1	24	8	0	0	0	7641
7 Day Pct	1	93	2	3											

Volume



Class Volumes



Daily Classification Summary

Count Number 7113 Ref : TTP Lat/Long : S34 17 37.4 / E150 34 57.7 UBD 371 G-9
 Street THE GREAT SOUTHERN ROAD, BARGO : From WELLERS ROAD to AVON DAM ROAD : SOUTH BOUND
 Location Between Avon Dam Road and Bargo Road, ELP 575 Carriageway

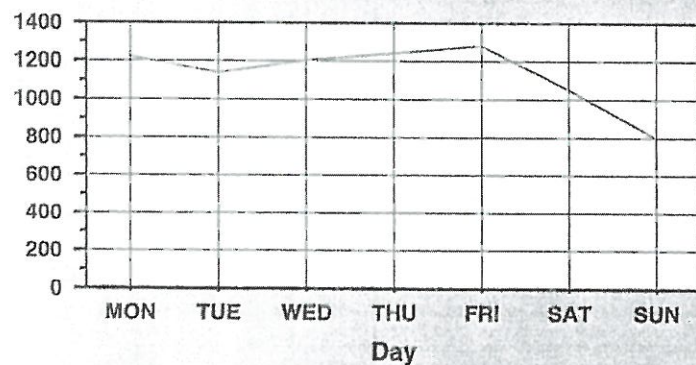
Start Date 03-MAR-11
 Start Time 100
 Duration 7 DAYS
 Interval 1 HOUR

Weekly 50th Percentile Speed 53
 Weekly 85th Percentile Speed 65
 Five Day AADT 1220
 Seven Day AADT 1136

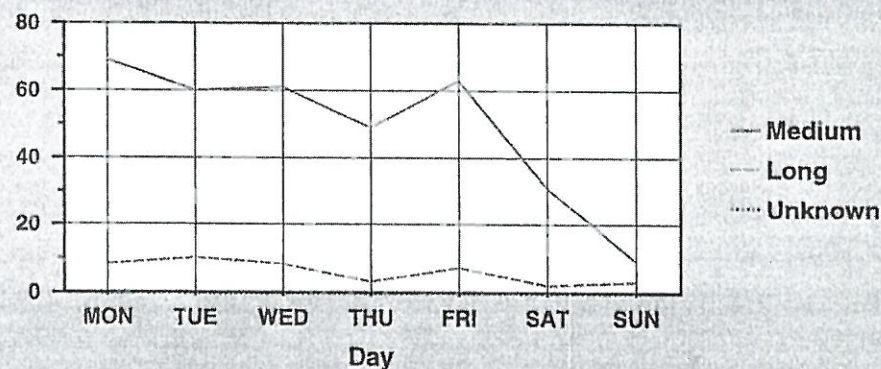
THE BODY OF THIS REPORT
 SHOWS : SEVENDAY
 TRAFFIC

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total
MONDAY	7	1111	30	54	10	5	2	0	1	3	2	0	0	0	1225
TUESDAY	3	1047	20	55	3	2	3	1	1	5	0	0	0	0	1140
WEDNESDAY	5	1108	25	53	7	1	3	0	2	2	1	0	0	0	1207
THURSDAY	7	1157	28	45	4	0	0	1	0	2	0	0	0	0	1244
FRIDAY	7	1180	28	55	8	0	1	0	0	4	2	0	0	0	1285
SATURDAY	2	983	33	29	2	0	1	1	0	0	0	0	0	0	1051
SUNDAY	5	747	38	6	2	1	2	1	0	0	0	0	0	0	802
5 Day Total	29	5603	131	262	32	8	9	2	4	16	5	0	0	0	6101
5 Day Pct		92	2	4	1										
7 Day Total	36	7333	202	297	36	9	12	4	4	16	5	0	0	0	7954
7 Day Pct		92	3	4											

Volume



Class Volumes



Count Number 9145 Ref : MART Lat/Long : S34 16 48.3 / E150 34 43.4 UBD 371 E-2
 Street REMEMBRANCE DRIVE, TAHMOOR : Between BARGO RIVER ROAD & WELLERS ROAD (bidirectional) :
 Location South of Wellers Road, on road sign. Carriageway

Start Date 09-FEB-13
 Start Time 100
 Duration 7 DAYS
 Interval 1 HOUR

Weekly 50th Percentile Speed 73
 Weekly 85th Percentile Speed 79
 Five Day AADT 6178
 Seven Day AADT 5777

TOTAL COUNT MATRIX

	MON 11TH	TUE 12TH	WED 13TH	THU 14TH	FRI 15TH	SAT 9TH	SUN 10TH	5 Day		7 Day	
								Total	Average	Total	Average
Midnight - 1am	22	51	45	57	60	46	51	235	47	332	47
1am - 2am	12	21	13	10	16	18	22	72	14	112	16
2am - 3am	8	9	16	17	16	7	22	66	13	95	14
3am - 4am	25	30	25	32	32	17	12	144	29	173	25
4am - 5am	47	56	60	40	44	32	20	247	49	299	43
5am - 6am	139	135	139	151	126	70	36	690	138	796	114
6am - 7am	306	308	309	282	254	112	62	1459	292	1633	233
7am - 8am	370	370	397	348	380	168	110	1865	373	2143	306
8am - 9am	411	441	455	477	426	312	197	2210	442	2719	388
9am - 10am	393	390	369	381	423	410	291	1956	391	2657	380
10am - 11am	349	341	373	339	386	433	405	1788	358	2626	375
11am - Midday	337	351	345	361	389	465	411	1783	357	2659	380
Midday - 1pm	345	305	393	357	356	490	385	1756	351	2631	376
1pm - 2pm	282	346	336	366	379	375	373	1709	342	2457	351
2pm - 3pm	444	494	440	490	506	340	348	2374	475	3062	437
3pm - 4pm	500	519	468	511	539	344	344	2537	507	3225	461
4pm - 5pm	538	551	565	573	499	328	330	2726	545	3384	483
5pm - 6pm	467	491	510	481	466	355	303	2415	483	3073	439
6pm - 7pm	328	345	389	414	368	264	231	1844	369	2339	334
7pm - 8pm	164	189	224	257	212	172	162	1046	209	1380	197
8pm - 9pm	115	155	171	187	191	139	105	819	164	1063	152
9pm - 10pm	104	107	141	148	136	106	81	636	127	823	118
10pm - 11pm	45	59	83	59	66	96	64	312	62	472	67
11pm - Midnight	37	42	36	50	38	54	28	203	41	285	41
Total	5788	6106	6302	6388	6308	5153	4393	30892	6178	40438	5776

Count Number 9145 Ref : MART Lat/Long : S34 16 48.3 / E150 34 43.4 UBD 371 E-2
 Street REMEMBRANCE DRIVE, TAHMOOR : From BARGO RIVER ROAD to WELLERS ROAD : NORTH BOUND
 Location South of Wellers Road, on road sign. Carriageway

Start Date 09-FEB-13
 Start Time 100
 Duration 7 DAYS
 Interval 1 HOUR

Weekly 50th Percentile Speed 75
 Weekly 85th Percentile Speed 84
 Five Day AADT 3122
 Seven Day AADT 2930

TOTAL COUNT MATRIX

	MON 11TH	TUE 12TH	WED 13TH	THU 14TH	FRI 15TH	SAT 9TH	SUN 10TH	5 Day Total Average		7 Day Total Average	
Midnight - 1am	15	13	8	9	17	22	27	62	12	111	16
1am - 2am	5	10	6	8	8	9	10	37	7	56	8
2am - 3am	4	4	8	8	4	3	12	28	6	43	6
3am - 4am	8	13	7	13	10	10	5	51	10	66	9
4am - 5am	16	15	23	13	15	10	7	82	16	99	14
5am - 6am	67	60	55	66	49	28	10	297	59	335	48
6am - 7am	162	162	171	150	139	51	31	784	157	866	124
7am - 8am	188	187	202	171	189	68	47	937	187	1052	150
8am - 9am	208	200	224	236	218	173	94	1086	217	1353	193
9am - 10am	194	186	186	190	204	192	157	960	192	1309	187
10am - 11am	173	176	181	165	184	212	187	879	176	1278	183
11am - Midday	163	170	165	165	208	225	177	871	174	1273	182
Midday - 1pm	178	145	194	181	175	225	197	873	175	1295	185
1pm - 2pm	148	179	192	179	201	179	185	899	180	1263	180
2pm - 3pm	246	278	239	260	281	184	201	1304	261	1689	241
3pm - 4pm	256	272	257	256	267	200	200	1308	262	1708	244
4pm - 5pm	272	286	273	286	251	208	193	1368	274	1769	253
5pm - 6pm	253	261	268	270	245	195	155	1297	259	1647	235
6pm - 7pm	165	177	195	212	195	138	137	944	189	1219	174
7pm - 8pm	81	88	100	131	98	86	74	498	100	658	94
8pm - 9pm	57	75	88	87	96	77	51	403	81	531	76
9pm - 10pm	56	58	90	83	68	49	48	355	71	452	65
10pm - 11pm	29	40	56	39	35	51	45	199	40	295	42
11pm - Midnight	12	16	12	24	24	37	16	88	18	141	20
Total	2956	3071	3200	3202	3181	2632	2266	15610	3122	20508	2929

Count Number 9145

Ref : MART

Lat/Long : S34 16 48.3 / E150 34 43.4

UBD 371 E-2

Street REMEMBRANCE DRIVE, TAHMOOR : From BARGO RIVER ROAD to WELLERS ROAD : NORTH BOUND

Location South of Wellers Road, on road sign.

Carriageway

Start Date 09-FEB-13

Start Time 100

Duration 7 DAYS

Interval 1 HOUR

Weekly 50th Percentile Speed 75

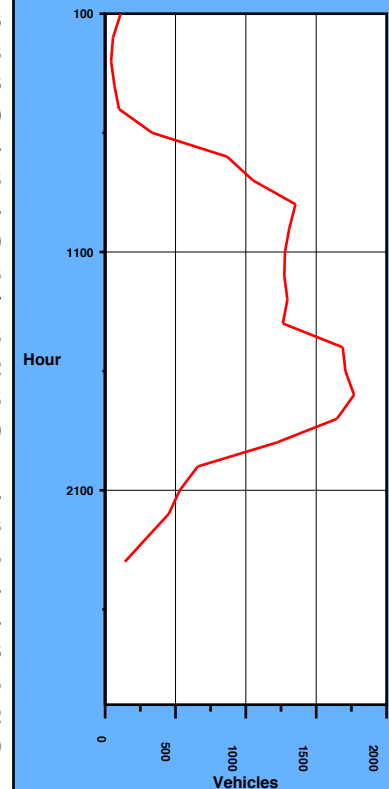
Weekly 85th Percentile Speed 84

Five Day AADT 3122

Seven Day AADT 2930

THE BODY OF THIS REPORT
SHOWS : SEVENDAY
TRAFFIC

Time	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total	Avg
Midnight - 1am	0	102	0	2	4	0	0	0	0	3	0	0	0	0	111	16
1am - 2am	0	48	0	0	2	0	0	0	0	6	0	0	0	0	56	8
2am - 3am	0	30	2	3	0	0	0	0	0	7	1	0	0	0	43	6
3am - 4am	1	46	0	4	5	0	0	0	1	7	2	0	0	0	66	9
4am - 5am	0	86	1	1	2	0	0	0	0	7	2	0	0	0	99	14
5am - 6am	7	287	2	20	7	0	0	1	0	7	4	0	0	0	335	48
6am - 7am	6	763	9	40	17	1	4	1	5	18	2	0	0	0	866	124
7am - 8am	6	921	13	66	19	3	4	3	1	15	1	0	0	0	1052	150
8am - 9am	12	1216	13	71	17	5	1	0	2	12	4	0	0	0	1353	193
9am - 10am	10	1171	20	61	16	3	4	0	1	20	3	0	0	0	1309	187
10am - 11am	11	1150	26	48	15	2	5	2	0	17	2	0	0	0	1278	183
11am - Midday	32	1122	23	49	16	5	4	1	1	17	3	0	0	0	1273	182
Midday - 1pm	12	1171	22	43	19	2	5	2	1	16	2	0	0	0	1295	185
1pm - 2pm	26	1136	23	35	15	2	7	3	2	13	1	0	0	0	1263	180
2pm - 3pm	18	1514	20	80	23	3	4	3	5	15	4	0	0	0	1689	241
3pm - 4pm	18	1547	30	67	18	0	6	6	2	14	0	0	0	0	1708	244
4pm - 5pm	26	1586	30	83	19	2	5	3	6	8	1	0	0	0	1769	253
5pm - 6pm	10	1566	16	30	5	0	6	3	1	7	3	0	0	0	1647	235
6pm - 7pm	9	1131	19	39	8	0	4	2	1	6	0	0	0	0	1219	174
7pm - 8pm	5	617	5	11	6	1	4	0	1	7	1	0	0	0	658	94
8pm - 9pm	3	500	6	7	7	0	0	3	1	4	0	0	0	0	531	76
9pm - 10pm	1	429	2	8	3	1	0	0	2	6	0	0	0	0	452	65
10pm - 11pm	2	275	2	9	3	0	0	0	0	4	0	0	0	0	295	42
11pm - Midnight	0	129	0	5	1	1	1	1	1	2	0	0	0	0	141	20
Total	215	18543	284	782	247	31	64	34	34	238	36	0	0	0	20508	2930
% of Total	1	90	1	4	1					1						



Count Number 9145 Ref : MART Lat/Long : S34 16 48.3 / E150 34 43.4 UBD 371 E-2
 Street REMEMBRANCE DRIVE, TAHMOOR : From WELLERS ROAD to BARGO RIVER ROAD : SOUTH BOUND
 Location South of Wellers Road, on road sign. Carriageway

Start Date 09-FEB-13
 Start Time 100
 Duration 7 DAYS
 Interval 1 HOUR

Weekly 50th Percentile Speed 70
 Weekly 85th Percentile Speed 79
 Five Day AADT 3056
 Seven Day AADT 2847

TOTAL COUNT MATRIX

	MON 11TH	TUE 12TH	WED 13TH	THU 14TH	FRI 15TH	SAT 9TH	SUN 10TH	5 Day		7 Day	
								Total	Average	Total	Average
Midnight - 1am	7	38	37	48	43	24	24	173	35	221	32
1am - 2am	7	11	7	2	8	9	12	35	7	56	8
2am - 3am	4	5	8	9	12	4	10	38	8	52	7
3am - 4am	17	17	18	19	22	7	7	93	19	107	15
4am - 5am	31	41	37	27	29	22	13	165	33	200	29
5am - 6am	72	75	84	85	77	42	26	393	79	461	66
6am - 7am	144	146	138	132	115	61	31	675	135	767	110
7am - 8am	182	183	195	177	191	100	63	928	186	1091	156
8am - 9am	203	241	231	241	208	139	103	1124	225	1366	195
9am - 10am	199	204	183	191	219	218	134	996	199	1348	193
10am - 11am	176	165	192	174	202	221	218	909	182	1348	193
11am - Midday	174	181	180	196	181	240	234	912	182	1386	198
Midday - 1pm	167	160	199	176	181	265	188	883	177	1336	191
1pm - 2pm	134	167	144	187	178	196	188	810	162	1194	171
2pm - 3pm	198	216	201	230	225	156	147	1070	214	1373	196
3pm - 4pm	244	247	211	255	272	144	144	1229	246	1517	217
4pm - 5pm	266	265	292	287	248	120	137	1358	272	1615	231
5pm - 6pm	214	230	242	211	221	160	148	1118	224	1426	204
6pm - 7pm	163	168	194	202	173	126	94	900	180	1120	160
7pm - 8pm	83	101	124	126	114	86	88	548	110	722	103
8pm - 9pm	58	80	83	100	95	62	54	416	83	532	76
9pm - 10pm	48	49	51	65	68	57	33	281	56	371	53
10pm - 11pm	16	19	27	20	31	45	19	113	23	177	25
11pm - Midnight	25	26	24	26	14	17	12	115	23	144	21
Total	2832	3035	3102	3186	3127	2521	2127	15282	3056	19930	2847

Count Number 9145

Ref : MART

Lat/Long : S34 16 48.3 / E150 34 43.4

UBD 371 E-2

Street REMEMBRANCE DRIVE, TAHMOOR : From WELLERS ROAD to BARGO RIVER ROAD : SOUTH BOUND

Location South of Wellers Road, on road sign.

Carriageway

Start Date 09-FEB-13

Start Time 100

Duration 7 DAYS

Interval 1 HOUR

Weekly 50th Percentile Speed 70

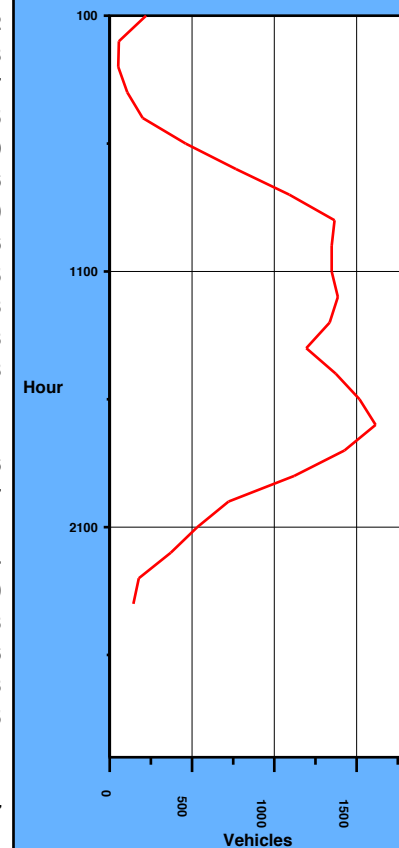
Weekly 85th Percentile Speed 79

Five Day AADT 3056

Seven Day AADT 2847

THE BODY OF THIS REPORT
SHOWS : SEVENDAY
TRAFFIC

Time	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total	Avg
Midnight - 1am	0	210	1	7	1	0	0	0	0	2	0	0	0	0	221	32
1am - 2am	0	42	0	7	1	0	1	0	3	2	0	0	0	0	56	8
2am - 3am	0	35	0	5	3	0	1	0	0	6	2	0	0	0	52	7
3am - 4am	0	67	2	10	8	0	1	1	3	12	3	0	0	0	107	15
4am - 5am	0	152	3	13	8	5	0	1	2	9	7	0	0	0	200	29
5am - 6am	2	372	4	35	16	9	4	0	3	13	3	0	0	0	461	66
6am - 7am	2	591	25	67	35	5	12	1	6	21	2	0	0	0	767	110
7am - 8am	4	924	30	71	26	2	5	2	3	19	5	0	0	0	1091	156
8am - 9am	14	1210	25	61	24	1	3	3	5	18	2	0	0	0	1366	195
9am - 10am	28	1188	20	71	10	2	11	1	2	13	2	0	0	0	1348	193
10am - 11am	27	1180	24	67	20	5	2	0	3	16	4	0	0	0	1348	193
11am - Midday	33	1241	30	52	12	1	2	0	2	11	2	0	0	0	1386	198
Midday - 1pm	8	1205	30	52	12	5	6	0	1	14	3	0	0	0	1336	191
1pm - 2pm	9	1074	27	48	12	6	1	0	2	14	1	0	0	0	1194	171
2pm - 3pm	9	1264	21	49	13	0	3	0	1	12	1	0	0	0	1373	196
3pm - 4pm	1	1417	27	51	6	0	5	3	1	4	2	0	0	0	1517	217
4pm - 5pm	7	1510	16	58	7	1	2	1	3	8	2	0	0	0	1615	231
5pm - 6pm	6	1333	15	40	9	2	2	2	3	12	2	0	0	0	1426	204
6pm - 7pm	2	1059	13	24	5	1	1	0	1	11	3	0	0	0	1120	160
7pm - 8pm	8	671	5	16	7	1	1	0	1	10	2	0	0	0	722	103
8pm - 9pm	0	511	4	9	1	0	0	0	3	3	1	0	0	0	532	76
9pm - 10pm	2	340	2	7	5	0	0	1	0	14	0	0	0	0	371	53
10pm - 11pm	0	164	2	6	1	1	0	0	0	3	0	0	0	0	177	25
11pm - Midnight	0	129	2	2	2	1	0	0	0	8	0	0	0	0	144	21
Total	162	17889	328	828	244	48	63	16	48	255	49	0	0	0	19930	2847
% of Total	1	90	2	4	1					1						



Count Number 9143 Ref : MART Lat/Long : S34 16 34.6 / E150 34 41.2 UBD 371 E-1
 Street WELLERS ROAD, BARGO : Between THE GREAT SOUTHERN ROAD & ELVY STREET (bidirectional) :
 Location East of Railway Bridge, between Great Southern Road and Remembrance Driveway on Speed Sign Carriageway

Start Date 09-FEB-13
 Start Time 100
 Duration 7 DAYS
 Interval 1 HOUR

Weekly 50th Percentile Speed 53
 Weekly 85th Percentile Speed 60
 Five Day AADT 1760
 Seven Day AADT 1613

TOTAL COUNT MATRIX

	MON 11TH	TUE 12TH	WED 13TH	THU 14TH	FRI 15TH	SAT 9TH	SUN 10TH	5 Day Total Average		7 Day Total Average	
Midnight - 1am	3	4	4	7	7	13	22	25	5	60	9
1am - 2am	1	1	5	2	2	6	15	11	2	32	5
2am - 3am	1	2	2	1	4	3	3	10	2	16	2
3am - 4am	6	7	5	5	1	1	7	24	5	32	5
4am - 5am	8	19	7	12	10	4	4	56	11	64	9
5am - 6am	30	20	32	27	33	11	3	142	28	156	22
6am - 7am	78	73	82	78	57	18	11	368	74	397	57
7am - 8am	91	99	84	86	84	29	17	444	89	490	70
8am - 9am	127	149	134	130	118	56	41	658	132	755	108
9am - 10am	142	157	133	131	157	111	81	720	144	912	130
10am - 11am	101	100	91	82	89	112	88	463	93	663	95
11am - Midday	94	87	97	77	94	116	102	449	90	667	95
Midday - 1pm	105	91	101	84	101	103	122	482	96	707	101
1pm - 2pm	77	92	81	93	108	96	93	451	90	640	91
2pm - 3pm	116	142	125	127	139	106	77	649	130	832	119
3pm - 4pm	196	180	168	173	191	110	103	908	182	1121	160
4pm - 5pm	160	144	159	169	151	96	83	783	157	962	137
5pm - 6pm	139	131	135	155	121	97	80	681	136	858	123
6pm - 7pm	94	102	126	134	109	76	74	565	113	715	102
7pm - 8pm	65	67	67	76	78	68	44	353	71	465	66
8pm - 9pm	40	39	46	54	52	49	36	231	46	316	45
9pm - 10pm	18	27	25	40	36	26	21	146	29	193	28
10pm - 11pm	15	14	22	25	34	23	11	110	22	144	21
11pm - Midnight	13	9	16	17	16	18	6	71	14	95	14
Total	1720	1756	1747	1785	1792	1348	1144	8800	1760	11292	1613

Count Number 9143 Ref : MART Lat/Long : S34 16 34.6 / E150 34 41.2 UBD 371 E-1
 Street WELLERS ROAD, BARGO : From THE GREAT SOUTHERN ROAD to ELVY STREET : WEST BOUND
 Location East of Railway Bridge, between Great Southern Road and Remembrance Driveway on Speed Sign Carriageway

Start Date 09-FEB-13
 Start Time 100
 Duration 7 DAYS
 Interval 1 HOUR

Weekly 50th Percentile Speed 53
 Weekly 85th Percentile Speed 59
 Five Day AADT 857
 Seven Day AADT 782

TOTAL COUNT MATRIX

	MON 11TH	TUE 12TH	WED 13TH	THU 14TH	FRI 15TH	SAT 9TH	SUN 10TH	5 Day Total Average		7 Day Total Average	
Midnight - 1am	2	1	0	5	3	6	12	11	2	29	4
1am - 2am	0	1	4	1	2	2	8	8	2	18	3
2am - 3am	0	2	2	1	2	1	2	7	1	10	1
3am - 4am	2	2	4	4	1	1	3	13	3	17	2
4am - 5am	3	9	3	5	4	2	2	24	5	28	4
5am - 6am	15	12	18	15	15	5	2	75	15	82	12
6am - 7am	51	47	47	49	41	11	6	235	47	252	36
7am - 8am	44	39	43	41	37	13	9	204	41	226	32
8am - 9am	57	77	63	70	54	33	24	321	64	378	54
9am - 10am	76	94	74	77	88	62	40	409	82	511	73
10am - 11am	54	44	32	40	49	46	37	219	44	302	43
11am - Midday	46	49	46	43	41	49	51	225	45	325	46
Midday - 1pm	46	34	50	38	38	54	57	206	41	317	45
1pm - 2pm	38	49	33	39	52	42	53	211	42	306	44
2pm - 3pm	55	66	61	62	61	39	38	305	61	382	55
3pm - 4pm	98	97	74	86	85	62	53	440	88	555	79
4pm - 5pm	79	68	75	71	68	38	35	361	72	434	62
5pm - 6pm	62	52	62	78	65	41	33	319	64	393	56
6pm - 7pm	53	55	58	75	37	38	37	278	56	353	50
7pm - 8pm	32	30	29	33	36	34	24	160	32	218	31
8pm - 9pm	15	20	15	22	27	23	18	99	20	140	20
9pm - 10pm	9	12	13	22	15	13	7	71	14	91	13
10pm - 11pm	11	9	13	13	17	13	4	63	13	80	11
11pm - Midnight	1	2	4	7	6	9	0	20	4	29	4
Total	849	871	823	897	844	637	555	4284	856	5476	782

Count Number 9143

Ref : MART

Lat/Long : S34 16 34.6 / E150 34 41.2

UBD 371 E-1

Street WELLERS ROAD, BARGO : From THE GREAT SOUTHERN ROAD to ELVY STREET : WEST BOUND

Location East of Railway Bridge, between Great Southern Road and Remembrance Driveway on Speed Sign

Carriageway

Start Date 09-FEB-13

Start Time 100

Duration 7 DAYS

Interval 1 HOUR

Weekly 50th Percentile Speed 53

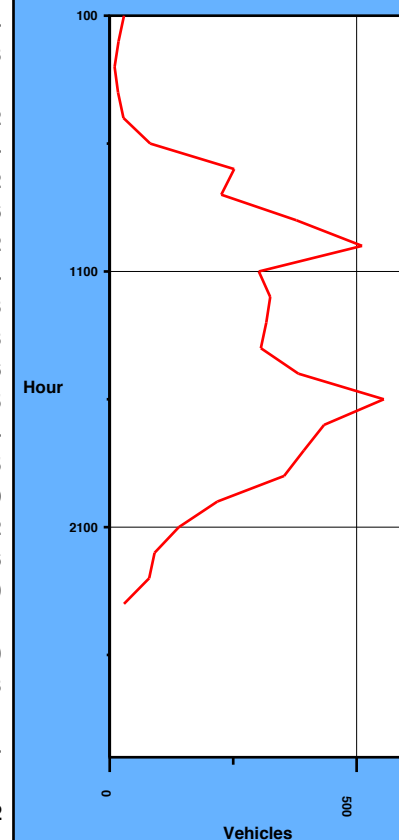
Weekly 85th Percentile Speed 59

Five Day AADT 857

Seven Day AADT 782

THE BODY OF THIS REPORT
SHOWS : SEVENDAY
TRAFFIC

Time	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total	Avg
Midnight - 1am	0	28	1	0	0	0	0	0	0	0	0	0	0	0	29	4
1am - 2am	0	18	0	0	0	0	0	0	0	0	0	0	0	0	18	3
2am - 3am	0	10	0	0	0	0	0	0	0	0	0	0	0	0	10	1
3am - 4am	0	17	0	0	0	0	0	0	0	0	0	0	0	0	17	2
4am - 5am	0	27	0	1	0	0	0	0	0	0	0	0	0	0	28	4
5am - 6am	0	78	1	2	0	0	0	0	0	1	0	0	0	0	82	12
6am - 7am	2	240	2	8	0	0	0	0	0	0	0	0	0	0	252	36
7am - 8am	0	210	1	13	1	0	1	0	0	0	0	0	0	0	226	32
8am - 9am	1	336	7	28	4	0	1	0	0	1	0	0	0	0	378	54
9am - 10am	1	466	15	20	7	0	1	0	0	1	0	0	0	0	511	73
10am - 11am	0	263	18	13	7	1	0	0	0	0	0	0	0	0	302	43
11am - Midday	1	278	18	19	5	2	2	0	0	0	0	0	0	0	325	46
Midday - 1pm	0	281	17	16	3	0	0	0	0	0	0	0	0	0	317	45
1pm - 2pm	0	281	13	12	0	0	0	0	0	0	0	0	0	0	306	44
2pm - 3pm	0	344	19	10	6	1	1	0	1	0	0	0	0	0	382	55
3pm - 4pm	0	508	22	20	1	1	0	1	1	1	0	0	0	0	555	79
4pm - 5pm	3	391	12	26	1	0	0	0	0	1	0	0	0	0	434	62
5pm - 6pm	0	369	8	13	1	0	0	1	0	1	0	0	0	0	393	56
6pm - 7pm	0	336	7	7	1	0	1	0	0	1	0	0	0	0	353	50
7pm - 8pm	0	207	0	11	0	0	0	0	0	0	0	0	0	0	218	31
8pm - 9pm	0	136	1	3	0	0	0	0	0	0	0	0	0	0	140	20
9pm - 10pm	0	88	0	1	1	0	0	0	0	1	0	0	0	0	91	13
10pm - 11pm	0	80	0	0	0	0	0	0	0	0	0	0	0	0	80	11
11pm - Midnight	0	27	1	1	0	0	0	0	0	0	0	0	0	0	29	4
Total	8	5019	163	224	38	5	7	2	2	8	0	0	0	0	5476	782
% of Total		92	3	4	1											



Count Number 9143 Ref : MART Lat/Long : S34 16 34.6 / E150 34 41.2 UBD 371 E-1
 Street WELLERS ROAD, BARGO : From ELVY STREET to THE GREAT SOUTHERN ROAD : EAST BOUND
 Location East of Railway Bridge, between Great Southern Road and Remembrance Driveway on Speed Sign Carriageway

Start Date 09-FEB-13
 Start Time 100
 Duration 7 DAYS
 Interval 1 HOUR

Weekly 50th Percentile Speed 54
 Weekly 85th Percentile Speed 61
 Five Day AADT 903
 Seven Day AADT 831

TOTAL COUNT MATRIX

	MON 11TH	TUE 12TH	WED 13TH	THU 14TH	FRI 15TH	SAT 9TH	SUN 10TH	5 Day Total Average		7 Day Total Average	
Midnight - 1am	1	3	4	2	4	7	10	14	3	31	4
1am - 2am	1	0	1	1	0	4	7	3	1	14	2
2am - 3am	1	0	0	0	2	2	1	3	1	6	1
3am - 4am	4	5	1	1	0	0	4	11	2	15	2
4am - 5am	5	10	4	7	6	2	2	32	6	36	5
5am - 6am	15	8	14	12	18	6	1	67	13	74	11
6am - 7am	27	26	35	29	16	7	5	133	27	145	21
7am - 8am	47	60	41	45	47	16	8	240	48	264	38
8am - 9am	70	72	71	60	64	23	17	337	67	377	54
9am - 10am	66	63	59	54	69	49	41	311	62	401	57
10am - 11am	47	56	59	42	40	66	51	244	49	361	52
11am - Midday	48	38	51	34	53	67	51	224	45	342	49
Midday - 1pm	59	57	51	46	63	49	65	276	55	390	56
1pm - 2pm	39	43	48	54	56	54	40	240	48	334	48
2pm - 3pm	61	76	64	65	78	67	39	344	69	450	64
3pm - 4pm	98	83	94	87	106	48	50	468	94	566	81
4pm - 5pm	81	76	84	98	83	58	48	422	84	528	75
5pm - 6pm	77	79	73	77	56	56	47	362	72	465	66
6pm - 7pm	41	47	68	59	72	38	37	287	57	362	52
7pm - 8pm	33	37	38	43	42	34	20	193	39	247	35
8pm - 9pm	25	19	31	32	25	26	18	132	26	176	25
9pm - 10pm	9	15	12	18	21	13	14	75	15	102	15
10pm - 11pm	4	5	9	12	17	10	7	47	9	64	9
11pm - Midnight	12	7	12	10	10	9	6	51	10	66	9
Total	871	885	924	888	948	711	589	4516	903	5816	830

Count Number 9143

Ref : MART

Lat/Long : S34 16 34.6 / E150 34 41.2

UBD 371 E-1

Street WELLERS ROAD, BARGO : From ELVY STREET to THE GREAT SOUTHERN ROAD : EAST BOUND

Location East of Railway Bridge, between Great Southern Road and Remembrance Driveway on Speed Sign

Carriageway

Start Date 09-FEB-13

Start Time 100

Duration 7 DAYS

Interval 1 HOUR

Weekly 50th Percentile Speed 54

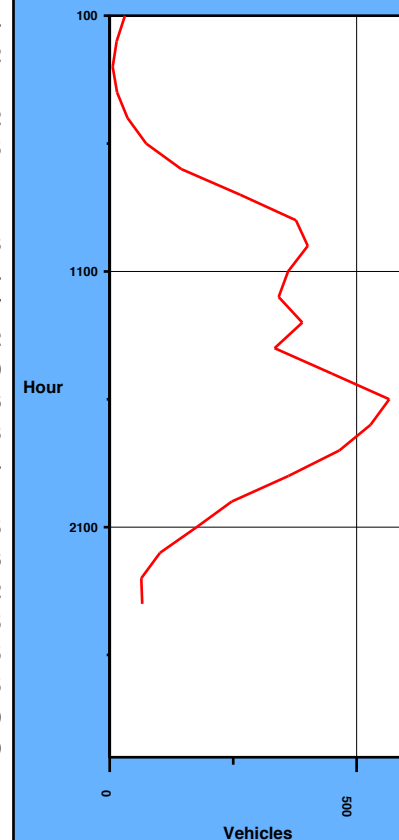
Weekly 85th Percentile Speed 61

Five Day AADT 903

Seven Day AADT 831

THE BODY OF THIS REPORT
SHOWS : SEVENDAY
TRAFFIC

Time	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total	Avg
Midnight - 1am	0	31	0	0	0	0	0	0	0	0	0	0	0	0	31	4
1am - 2am	0	14	0	0	0	0	0	0	0	0	0	0	0	0	14	2
2am - 3am	0	6	0	0	0	0	0	0	0	0	0	0	0	0	6	1
3am - 4am	0	15	0	0	0	0	0	0	0	0	0	0	0	0	15	2
4am - 5am	0	33	0	0	0	3	0	0	0	0	0	0	0	0	36	5
5am - 6am	0	71	2	0	0	0	0	0	0	1	0	0	0	0	74	11
6am - 7am	1	131	0	10	1	0	0	0	0	2	0	0	0	0	145	21
7am - 8am	0	238	8	14	4	0	0	0	0	0	0	0	0	0	264	38
8am - 9am	0	330	17	24	3	0	1	0	0	1	1	0	0	0	377	54
9am - 10am	0	367	17	11	3	0	2	0	0	1	0	0	0	0	401	57
10am - 11am	1	309	23	20	5	0	3	0	0	0	0	0	0	0	361	52
11am - Midday	4	296	20	17	2	1	1	1	0	0	0	0	0	0	342	49
Midday - 1pm	1	340	27	19	2	0	0	0	0	1	0	0	0	0	390	56
1pm - 2pm	1	281	21	23	2	0	1	0	0	4	1	0	0	0	334	48
2pm - 3pm	1	409	24	13	2	0	1	0	0	0	0	0	0	0	450	64
3pm - 4pm	1	521	16	24	1	0	1	1	0	1	0	0	0	0	566	81
4pm - 5pm	2	486	5	33	1	0	0	1	0	0	0	0	0	0	528	75
5pm - 6pm	2	445	2	13	1	0	1	1	0	0	0	0	0	0	465	66
6pm - 7pm	2	336	9	13	1	0	1	0	0	0	0	0	0	0	362	52
7pm - 8pm	0	243	1	2	1	0	0	0	0	0	0	0	0	0	247	35
8pm - 9pm	0	169	1	4	2	0	0	0	0	0	0	0	0	0	176	25
9pm - 10pm	0	97	1	4	0	0	0	0	0	0	0	0	0	0	102	15
10pm - 11pm	0	62	0	1	0	0	0	0	0	1	0	0	0	0	64	9
11pm - Midnight	0	64	0	1	1	0	0	0	0	0	0	0	0	0	66	9
Total	16	5294	194	246	32	4	12	4	0	12	2	0	0	0	5816	831
% of Total		91	3	4	1											



Count Number 9146 Ref : MART Lat/Long : S34 16 30.2 / E150 34 34.1 UBD 371 E-1
 Street REMEMBRANCE DRIVE, TAHMOOR : Between BARGO RIVER ROAD & WELLERS ROAD (bidirectional) :
 Location North of Wellers Road, on Armco Railing Carriageway

Start Date 09-FEB-13
 Start Time 100
 Duration 7 DAYS
 Interval 1 HOUR

Weekly 50th Percentile Speed 75
 Weekly 85th Percentile Speed 82
 Five Day AADT 5682
 Seven Day AADT 5503

TOTAL COUNT MATRIX

	MON 11TH	TUE 12TH	WED 13TH	THU 14TH	FRI 15TH	SAT 9TH	SUN 10TH	5 Day Total Average		7 Day Total Average	
Midnight - 1am	26	47	43	54	46	55	60	216	43	331	47
1am - 2am	10	21	17	10	18	26	35	76	15	137	20
2am - 3am	8	9	14	16	12	9	23	59	12	91	13
3am - 4am	26	27	26	25	27	20	16	131	26	167	24
4am - 5am	45	64	57	46	38	32	19	250	50	301	43
5am - 6am	153	150	146	149	116	74	31	714	143	819	117
6am - 7am	360	334	364	298	247	128	69	1603	321	1800	257
7am - 8am	416	358	414	344	340	179	97	1872	374	2148	307
8am - 9am	512	452	480	431	397	346	193	2272	454	2811	402
9am - 10am	430	396	379	331	374	460	303	1910	382	2673	382
10am - 11am	353	328	342	283	306	478	358	1612	322	2448	350
11am - Midday	328	331	304	285	330	539	412	1578	316	2529	361
Midday - 1pm	342	297	356	261	269	528	385	1525	305	2438	348
1pm - 2pm	249	315	296	258	316	376	365	1434	287	2175	311
2pm - 3pm	503	455	387	347	429	377	349	2121	424	2847	407
3pm - 4pm	490	450	396	363	407	381	370	2106	421	2857	408
4pm - 5pm	550	477	428	392	359	344	328	2206	441	2878	411
5pm - 6pm	508	422	402	417	371	361	288	2120	424	2769	396
6pm - 7pm	327	328	318	344	303	277	257	1620	324	2154	308
7pm - 8pm	184	194	205	218	182	193	203	983	197	1379	197
8pm - 9pm	129	173	157	159	180	144	135	798	160	1077	154
9pm - 10pm	123	113	135	134	129	125	87	634	127	846	121
10pm - 11pm	54	73	83	68	71	105	64	349	70	518	74
11pm - Midnight	43	46	40	49	43	74	32	221	44	327	47
Total	6169	5860	5789	5282	5310	5631	4479	28410	5682	38520	5502

Count Number 9146 Ref : MART Lat/Long : S34 16 30.2 / E150 34 34.1 UBD 371 E-1
 Street REMEMBRANCE DRIVE, TAHMOOR : From BARGO RIVER ROAD to WELLERS ROAD : NORTH BOUND
 Location North of Wellers Road, on Armco Railing Carriageway

Start Date 09-FEB-13
 Start Time 100
 Duration 7 DAYS
 Interval 1 HOUR

Weekly 50th Percentile Speed 80
 Weekly 85th Percentile Speed 89
 Five Day AADT 4007
 Seven Day AADT 3733

TOTAL COUNT MATRIX

	MON 11TH	TUE 12TH	WED 13TH	THU 14TH	FRI 15TH	SAT 9TH	SUN 10TH	5 Day		7 Day	
								Total	Average	Total	Average
Midnight - 1am	18	12	9	14	18	24	32	71	14	127	18
1am - 2am	4	11	9	8	10	14	17	42	8	73	10
2am - 3am	4	6	9	8	6	3	14	33	7	50	7
3am - 4am	11	14	12	16	13	13	8	66	13	87	12
4am - 5am	19	28	30	25	21	12	8	123	25	143	20
5am - 6am	85	88	83	89	75	36	13	420	84	469	67
6am - 7am	238	236	248	223	203	66	45	1148	230	1259	180
7am - 8am	258	242	275	234	242	87	57	1251	250	1395	199
8am - 9am	304	301	302	342	308	220	122	1557	311	1899	271
9am - 10am	261	273	267	259	295	265	219	1355	271	1839	263
10am - 11am	230	214	217	219	239	273	224	1119	224	1616	231
11am - Midday	209	220	205	217	251	277	243	1102	220	1622	232
Midday - 1pm	224	185	244	216	209	276	242	1078	216	1596	228
1pm - 2pm	154	218	227	222	256	219	247	1077	215	1543	220
2pm - 3pm	320	347	298	319	348	216	235	1632	326	2083	298
3pm - 4pm	323	335	312	311	330	251	238	1611	322	2100	300
4pm - 5pm	336	341	331	346	303	231	225	1657	331	2113	302
5pm - 6pm	308	300	323	349	309	233	196	1589	318	2018	288
6pm - 7pm	201	225	250	284	239	180	166	1199	240	1545	221
7pm - 8pm	106	123	137	165	132	116	95	663	133	874	125
8pm - 9pm	62	93	100	99	120	83	70	474	95	627	90
9pm - 10pm	67	69	100	96	82	60	53	414	83	527	75
10pm - 11pm	40	51	66	49	43	64	47	249	50	360	51
11pm - Midnight	13	20	15	29	28	48	16	105	21	169	24
Total	3795	3952	4069	4139	4080	3267	2832	20035	4007	26134	3733

Count Number 9146

Ref : MART

Lat/Long : S34 16 30.2 / E150 34 34.1

UBD 371 E-1

Street REMEMBRANCE DRIVE, TAHMOOR : From BARGO RIVER ROAD to WELLERS ROAD : NORTH BOUND

Location North of Wellers Road, on Armco Railing

Carriageway

Start Date 09-FEB-13

Start Time 100

Duration 7 DAYS

Interval 1 HOUR

Weekly 50th Percentile Speed 80

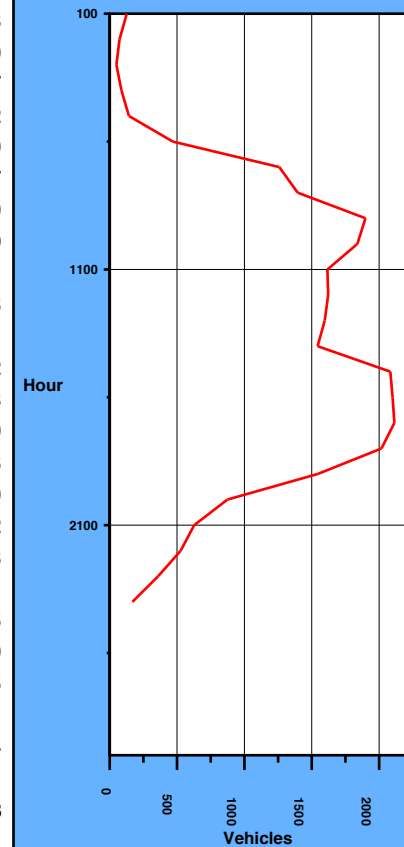
Weekly 85th Percentile Speed 89

Five Day AADT 4007

Seven Day AADT 3733

THE BODY OF THIS REPORT
SHOWS : SEVENDAY
TRAFFIC

Time	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total	Avg
Midnight - 1am	0	117	0	3	3	0	1	0	1	2	0	0	0	0	127	18
1am - 2am	2	63	0	0	0	0	0	0	3	5	0	0	0	0	73	10
2am - 3am	0	37	2	2	0	1	0	0	0	7	1	0	0	0	50	7
3am - 4am	1	67	0	4	5	0	0	0	2	5	3	0	0	0	87	12
4am - 5am	0	129	1	2	1	0	0	0	0	8	2	0	0	0	143	20
5am - 6am	6	418	5	22	4	1	0	0	0	10	3	0	0	0	469	67
6am - 7am	7	1137	14	60	13	3	1	2	2	16	4	0	0	0	1259	180
7am - 8am	4	1264	17	66	13	6	3	5	2	14	1	0	0	0	1395	199
8am - 9am	9	1730	23	86	19	7	2	0	2	17	4	0	0	0	1899	271
9am - 10am	11	1658	41	79	17	3	0	4	2	20	4	0	0	0	1839	263
10am - 11am	11	1446	50	59	23	4	4	0	2	15	2	0	0	0	1616	231
11am - Midday	29	1439	43	61	19	3	5	0	1	17	5	0	0	0	1622	232
Midday - 1pm	16	1434	37	63	19	4	5	0	2	15	1	0	0	0	1596	228
1pm - 2pm	26	1390	42	44	16	0	5	3	4	12	1	0	0	0	1543	220
2pm - 3pm	11	1882	39	92	20	5	6	6	5	14	3	0	0	0	2083	298
3pm - 4pm	12	1910	49	78	18	1	5	5	6	16	0	0	0	0	2100	300
4pm - 5pm	21	1913	46	97	12	2	8	4	4	5	1	0	0	0	2113	302
5pm - 6pm	6	1918	29	38	8	0	6	1	2	7	3	0	0	0	2018	288
6pm - 7pm	7	1462	19	39	6	1	6	1	1	3	0	0	0	0	1545	221
7pm - 8pm	3	832	8	16	4	1	3	1	1	4	1	0	0	0	874	125
8pm - 9pm	1	598	8	8	6	0	1	0	3	2	0	0	0	0	627	90
9pm - 10pm	0	505	3	5	4	1	1	0	3	5	0	0	0	0	527	75
10pm - 11pm	1	341	2	10	2	0	0	0	2	2	0	0	0	0	360	51
11pm - Midnight	0	157	1	3	2	0	2	1	2	1	0	0	0	0	169	24
Total	184	23847	479	937	234	43	64	33	52	222	39	0	0	0	26134	3733
% of Total	1	91	2	4	1					1						



Count Number 9146 Ref : MART Lat/Long : S34 16 30.2 / E150 34 34.1 UBD 371 E-1
 Street REMEMBRANCE DRIVE, TAHMOOR : From WELLERS ROAD to BARGO RIVER ROAD : SOUTH BOUND
 Location North of Wellers Road, on Armco Railing Carriageway

Start Date 09-FEB-13
 Start Time 100
 Duration 7 DAYS
 Interval 1 HOUR

Weekly 50th Percentile Speed 74
 Weekly 85th Percentile Speed 82
 Five Day AADT 1675
 Seven Day AADT 1769

TOTAL COUNT MATRIX

	MON 11TH	TUE 12TH	WED 13TH	THU 14TH	FRI 15TH	SAT 9TH	SUN 10TH	5 Day Total Average		7 Day Total Average	
Midnight - 1am	8	35	34	40	28	31	28	145	29	204	29
1am - 2am	6	10	8	2	8	12	18	34	7	64	9
2am - 3am	4	3	5	8	6	6	9	26	5	41	6
3am - 4am	15	13	14	9	14	7	8	65	13	80	11
4am - 5am	26	36	27	21	17	20	11	127	25	158	23
5am - 6am	68	62	63	60	41	38	18	294	59	350	50
6am - 7am	122	98	116	75	44	62	24	455	91	541	77
7am - 8am	158	116	139	110	98	92	40	621	124	753	108
8am - 9am	208	151	178	89	89	126	71	715	143	912	130
9am - 10am	169	123	112	72	79	195	84	555	111	834	119
10am - 11am	123	114	125	64	67	205	134	493	99	832	119
11am - Midday	119	111	99	68	79	262	169	476	95	907	130
Midday - 1pm	118	112	112	45	60	252	143	447	89	842	120
1pm - 2pm	95	97	69	36	60	157	118	357	71	632	90
2pm - 3pm	183	108	89	28	81	161	114	489	98	764	109
3pm - 4pm	167	115	84	52	77	130	132	495	99	757	108
4pm - 5pm	214	136	97	46	56	113	103	549	110	765	109
5pm - 6pm	200	122	79	68	62	128	92	531	106	751	107
6pm - 7pm	126	103	68	60	64	97	91	421	84	609	87
7pm - 8pm	78	71	68	53	50	77	108	320	64	505	72
8pm - 9pm	67	80	57	60	60	61	65	324	65	450	64
9pm - 10pm	56	44	35	38	47	65	34	220	44	319	46
10pm - 11pm	14	22	17	19	28	41	17	100	20	158	23
11pm - Midnight	30	26	25	20	15	26	16	116	23	158	23
Total	2374	1908	1720	1143	1230	2364	1647	8375	1675	12386	1769

Count Number 9146

Ref : MART

Lat/Long : S34 16 30.2 / E150 34 34.1

UBD 371 E-1

Street REMEMBRANCE DRIVE, TAHMOOR : From WELLERS ROAD to BARGO RIVER ROAD : SOUTH BOUND

Location North of Wellers Road, on Armco Railing

Carriageway

Start Date 09-FEB-13

Start Time 100

Duration 7 DAYS

Interval 1 HOUR

Weekly 50th Percentile Speed 74

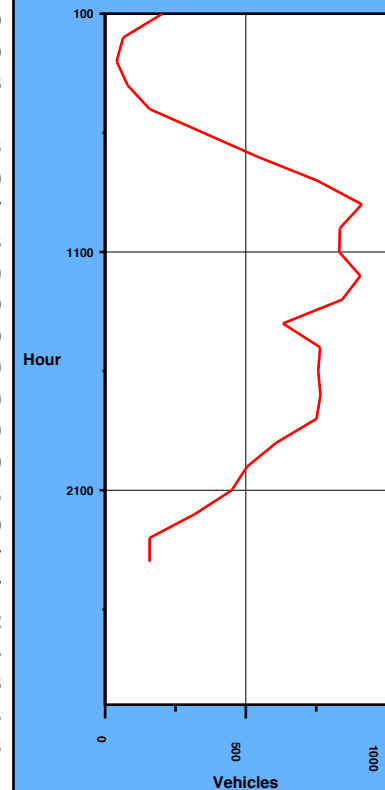
Weekly 85th Percentile Speed 82

Five Day AADT 1675

Seven Day AADT 1769

THE BODY OF THIS REPORT
SHOWS : SEVENDAY
TRAFFIC

Time	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total	Avg
Midnight - 1am	0	194	1	7	1	0	0	0	0	1	0	0	0	0	204	29
1am - 2am	1	50	1	7	0	0	1	0	3	1	0	0	0	0	64	9
2am - 3am	0	25	0	5	4	0	2	0	1	2	2	0	0	0	41	6
3am - 4am	0	50	1	6	5	1	1	0	3	12	1	0	0	0	80	11
4am - 5am	2	116	2	10	7	7	0	1	3	8	2	0	0	0	158	23
5am - 6am	1	272	3	35	13	8	4	0	4	9	1	0	0	0	350	50
6am - 7am	3	380	14	69	31	5	8	3	9	17	2	0	0	0	541	77
7am - 8am	8	593	20	71	31	1	2	1	5	18	3	0	0	0	753	108
8am - 9am	1	762	20	81	19	1	7	2	3	14	2	0	0	0	912	130
9am - 10am	3	710	10	75	15	1	3	1	3	12	1	0	0	0	834	119
10am - 11am	1	712	20	50	19	5	3	1	2	16	3	0	0	0	832	119
11am - Midday	7	800	21	46	13	1	0	2	3	11	3	0	0	0	907	130
Midday - 1pm	2	734	15	58	15	4	2	0	2	8	2	0	0	0	842	120
1pm - 2pm	0	537	14	44	14	2	2	2	2	14	1	0	0	0	632	90
2pm - 3pm	1	682	15	42	10	0	0	1	0	12	1	0	0	0	764	109
3pm - 4pm	1	680	10	49	9	0	0	2	1	4	1	0	0	0	757	108
4pm - 5pm	6	685	11	43	6	3	0	1	1	6	3	0	0	0	765	109
5pm - 6pm	5	682	6	30	9	3	2	0	2	10	2	0	0	0	751	107
6pm - 7pm	1	555	7	25	9	1	0	0	1	7	3	0	0	0	609	87
7pm - 8pm	1	473	3	10	5	1	0	2	0	9	1	0	0	0	505	72
8pm - 9pm	0	435	2	6	1	0	0	0	3	3	0	0	0	0	450	64
9pm - 10pm	0	297	1	5	4	2	0	0	1	9	0	0	0	0	319	46
10pm - 11pm	1	150	0	2	2	0	0	0	0	3	0	0	0	0	158	23
11pm - Midnight	0	144	1	1	4	1	0	0	0	7	0	0	0	0	158	23
Total	45	10718	198	777	246	47	37	19	52	213	34	0	0	0	12386	1769
% of Total		87	2	6	2					2						



Count Number 9144 Ref : MART Lat/Long : S34 16 36.1 / E150 34 32.9 UBD 371 D-1
 Street WELLERS ROAD, BARGO : Between THE GREAT SOUTHERN ROAD & ELVY STREET (bidirectional) :
 Location West of Remembrance Drive intersection, before Hogans Drive, On speed sign Carriageway

Start Date 09-FEB-13
 Start Time 100
 Duration 7 DAYS
 Interval 1 HOUR

Weekly 50th Percentile Speed 48
 Weekly 85th Percentile Speed 58
 Five Day AADT 1361
 Seven Day AADT 1284

TOTAL COUNT MATRIX

	MON 11TH	TUE 12TH	WED 13TH	THU 14TH	FRI 15TH	SAT 9TH	SUN 10TH	5 Day Total Average		7 Day Total Average	
Midnight - 1am	1	3	3	2	5	13	18	14	3	45	6
1am - 2am	0	1	1	1	1	10	9	4	1	23	3
2am - 3am	1	1	1	2	5	3	2	10	2	15	2
3am - 4am	5	6	4	4	5	2	1	24	5	27	4
4am - 5am	8	13	17	14	7	2	4	59	12	65	9
5am - 6am	20	28	28	22	31	14	4	129	26	147	21
6am - 7am	52	70	58	55	43	26	23	278	56	327	47
7am - 8am	86	99	90	82	91	45	25	448	90	518	74
8am - 9am	115	106	93	111	114	73	38	539	108	650	93
9am - 10am	80	88	78	95	92	75	70	433	87	578	83
10am - 11am	59	52	57	68	75	94	91	311	62	496	71
11am - Midday	71	68	63	65	47	109	91	314	63	514	73
Midday - 1pm	67	63	54	61	50	100	77	295	59	472	67
1pm - 2pm	54	63	69	58	61	63	67	305	61	435	62
2pm - 3pm	89	93	77	88	87	78	73	434	87	585	84
3pm - 4pm	113	105	103	108	130	69	80	559	112	708	101
4pm - 5pm	121	122	142	142	132	70	73	659	132	802	115
5pm - 6pm	131	147	132	132	130	97	90	672	134	859	123
6pm - 7pm	76	108	102	127	108	84	63	521	104	668	95
7pm - 8pm	60	64	79	67	60	54	41	330	66	425	61
8pm - 9pm	28	48	45	50	53	29	31	224	45	284	41
9pm - 10pm	22	27	40	28	27	25	22	144	29	191	27
10pm - 11pm	8	9	16	17	22	20	10	72	14	102	15
11pm - Midnight	1	6	4	7	8	23	5	26	5	54	8
Total	1268	1390	1356	1406	1384	1178	1008	6804	1360	8990	1284

Count Number 9144 Ref : MART Lat/Long : S34 16 36.1 / E150 34 32.9 UBD 371 D-1
 Street WELLERS ROAD, BARGO : From THE GREAT SOUTHERN ROAD to ELVY STREET : WEST BOUND
 Location West of Remembrance Drive intersection, before Hogans Drive, On speed sign Carriageway

Start Date 09-FEB-13
 Start Time 100
 Duration 7 DAYS
 Interval 1 HOUR

Weekly 50th Percentile Speed 48
 Weekly 85th Percentile Speed 57
 Five Day AADT 708
 Seven Day AADT 670

TOTAL COUNT MATRIX

	MON 11TH	TUE 12TH	WED 13TH	THU 14TH	FRI 15TH	SAT 9TH	SUN 10TH	5 Day Total Average		7 Day Total Average	
Midnight - 1am	1	2	1	2	4	9	14	10	2	33	5
1am - 2am	0	1	1	1	1	4	5	4	1	13	2
2am - 3am	0	0	0	1	1	2	1	2	0	5	1
3am - 4am	0	0	1	0	0	0	1	1	0	2	0
4am - 5am	0	0	3	0	0	0	1	3	1	4	1
5am - 6am	3	3	4	4	5	2	1	19	4	22	3
6am - 7am	8	13	8	6	6	9	4	41	8	54	8
7am - 8am	14	31	21	21	25	14	6	112	22	132	19
8am - 9am	39	34	38	32	38	23	15	181	36	219	31
9am - 10am	43	48	30	49	39	31	23	209	42	263	38
10am - 11am	30	24	23	28	33	45	47	138	28	230	33
11am - Midday	42	36	38	36	24	59	48	176	35	283	40
Midday - 1pm	39	27	26	35	31	57	43	158	32	258	37
1pm - 2pm	29	39	36	34	35	34	37	173	35	244	35
2pm - 3pm	43	45	47	53	43	48	43	231	46	322	46
3pm - 4pm	75	68	61	73	82	40	52	359	72	451	64
4pm - 5pm	75	76	90	86	84	42	44	411	82	497	71
5pm - 6pm	92	104	88	83	83	50	43	450	90	543	78
6pm - 7pm	57	69	63	75	66	46	45	330	66	421	60
7pm - 8pm	37	39	49	44	40	32	31	209	42	272	39
8pm - 9pm	23	37	27	34	36	23	16	157	31	196	28
9pm - 10pm	15	17	30	21	17	16	9	100	20	125	18
10pm - 11pm	4	5	10	12	18	12	5	49	10	66	9
11pm - Midnight	1	3	3	5	5	13	2	17	3	32	5
Total	670	721	698	735	716	611	536	3540	708	4687	669

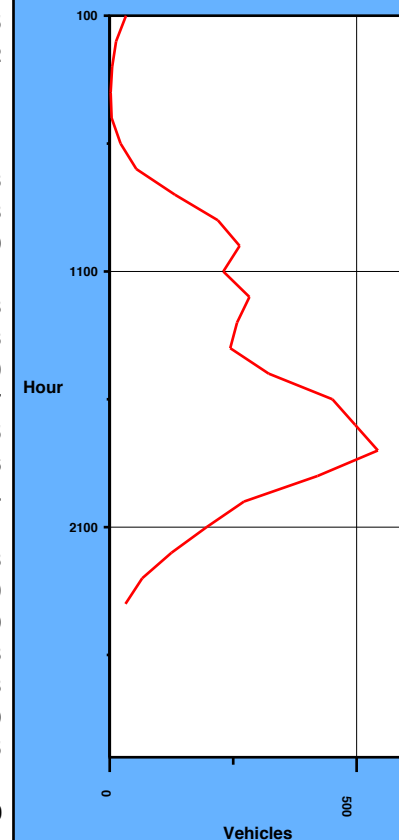
Count Number 9144 Ref : MART Lat/Long : S34 16 36.1 / E150 34 32.9 UBD 371 D-1
 Street WELLERS ROAD, BARGO : From THE GREAT SOUTHERN ROAD to ELVY STREET : WEST BOUND
 Location West of Remembrance Drive intersection, before Hogans Drive, On speed sign Carriageway

Start Date 09-FEB-13
 Start Time 100
 Duration 7 DAYS
 Interval 1 HOUR

Weekly 50th Percentile Speed 48
 Weekly 85th Percentile Speed 57
 Five Day AADT 708
 Seven Day AADT 670

THE BODY OF THIS REPORT
 SHOWS : SEVENDAY
 TRAFFIC

Time	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total	Avg
Midnight - 1am	0	31	1	1	0	0	0	0	0	0	0	0	0	0	33	5
1am - 2am	0	13	0	0	0	0	0	0	0	0	0	0	0	0	13	2
2am - 3am	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5	1
3am - 4am	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	
4am - 5am	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4	1
5am - 6am	0	22	0	0	0	0	0	0	0	0	0	0	0	0	22	3
6am - 7am	0	51	0	2	0	0	0	1	0	0	0	0	0	0	54	8
7am - 8am	0	103	3	19	4	0	1	1	0	1	0	0	0	0	132	19
8am - 9am	1	192	4	18	3	0	0	0	0	1	0	0	0	0	219	31
9am - 10am	3	242	6	8	3	0	1	0	0	0	0	0	0	0	263	38
10am - 11am	0	210	5	10	4	0	0	0	0	1	0	0	0	0	230	33
11am - Midday	1	258	7	11	5	0	0	1	0	0	0	0	0	0	283	40
Midday - 1pm	1	243	7	7	0	0	0	0	0	0	0	0	0	0	258	37
1pm - 2pm	3	229	4	5	1	0	0	0	0	2	0	0	0	0	244	35
2pm - 3pm	3	300	8	7	3	0	0	0	0	0	1	0	0	0	322	46
3pm - 4pm	1	423	7	15	1	0	0	2	0	1	1	0	0	0	451	64
4pm - 5pm	2	454	13	19	5	0	0	0	0	2	2	0	0	0	497	71
5pm - 6pm	1	523	6	11	0	1	0	0	1	0	0	0	0	0	543	78
6pm - 7pm	0	404	6	5	1	0	3	0	0	1	1	0	0	0	421	60
7pm - 8pm	0	269	0	1	0	1	0	0	0	1	0	0	0	0	272	39
8pm - 9pm	1	189	2	2	1	0	0	0	1	0	0	0	0	0	196	28
9pm - 10pm	0	125	0	0	0	0	0	0	0	0	0	0	0	0	125	18
10pm - 11pm	0	65	0	1	0	0	0	0	0	0	0	0	0	0	66	9
11pm - Midnight	0	31	1	0	0	0	0	0	0	0	0	0	0	0	32	5
Total	17	4388	80	142	31	2	5	5	2	10	5	0	0	0	4687	670
% of Total		94	2	3	1											



Count Number 9144 Ref : MART Lat/Long : S34 16 36.1 / E150 34 32.9 UBD 371 D-1
 Street WELLERS ROAD, BARGO : From ELVY STREET to THE GREAT SOUTHERN ROAD : EAST BOUND
 Location West of Remembrance Drive intersection, before Hogans Drive, On speed sign Carriageway

Start Date 09-FEB-13
 Start Time 100
 Duration 7 DAYS
 Interval 1 HOUR

Weekly 50th Percentile Speed 49
 Weekly 85th Percentile Speed 59
 Five Day AADT 653
 Seven Day AADT 615

TOTAL COUNT MATRIX

	MON 11TH	TUE 12TH	WED 13TH	THU 14TH	FRI 15TH	SAT 9TH	SUN 10TH	5 Day Total Average		7 Day Total Average	
Midnight - 1am	0	1	2	0	1	4	4	4	1	12	2
1am - 2am	0	0	0	0	0	6	4	0	0	10	1
2am - 3am	1	1	1	1	4	1	1	8	2	10	1
3am - 4am	5	6	3	4	5	2	0	23	5	25	4
4am - 5am	8	13	14	14	7	2	3	56	11	61	9
5am - 6am	17	25	24	18	26	12	3	110	22	125	18
6am - 7am	44	57	50	49	37	17	19	237	47	273	39
7am - 8am	72	68	69	61	66	31	19	336	67	386	55
8am - 9am	76	72	55	79	76	50	23	358	72	431	62
9am - 10am	37	40	48	46	53	44	47	224	45	315	45
10am - 11am	29	28	34	40	42	49	44	173	35	266	38
11am - Midday	29	32	25	29	23	50	43	138	28	231	33
Midday - 1pm	28	36	28	26	19	43	34	137	27	214	31
1pm - 2pm	25	24	33	24	26	29	30	132	26	191	27
2pm - 3pm	46	48	30	35	44	30	30	203	41	263	38
3pm - 4pm	38	37	42	35	48	29	28	200	40	257	37
4pm - 5pm	46	46	52	56	48	28	29	248	50	305	44
5pm - 6pm	39	43	44	49	47	47	47	222	44	316	45
6pm - 7pm	19	39	39	52	42	38	18	191	38	247	35
7pm - 8pm	23	25	30	23	20	22	10	121	24	153	22
8pm - 9pm	5	11	18	16	17	6	15	67	13	88	13
9pm - 10pm	7	10	10	7	10	9	13	44	9	66	9
10pm - 11pm	4	4	6	5	4	8	5	23	5	36	5
11pm - Midnight	0	3	1	2	3	10	3	9	2	22	3
Total	598	669	658	671	668	567	472	3264	652	4303	614

Count Number 9144

Ref : MART

Lat/Long : S34 16 36.1 / E150 34 32.9

UBD 371 D-1

Street WELLERS ROAD, BARGO : From ELVY STREET to THE GREAT SOUTHERN ROAD : EAST BOUND

Location West of Remembrance Drive intersection, before Hogans Drive, On speed sign

Carriageway

Start Date 09-FEB-13

Start Time 100

Duration 7 DAYS

Interval 1 HOUR

Weekly 50th Percentile Speed 49

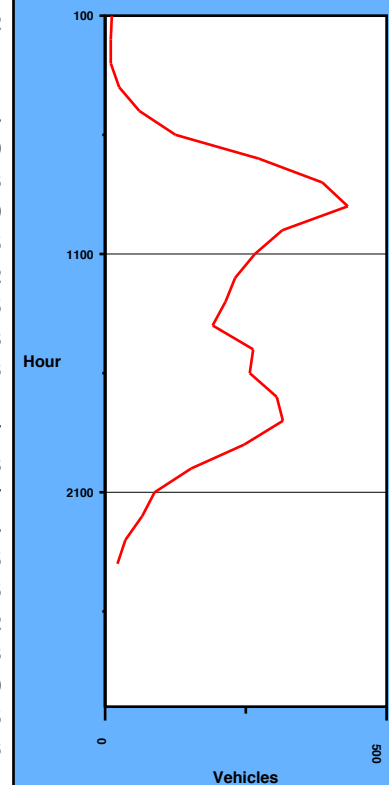
Weekly 85th Percentile Speed 59

Five Day AADT 653

Seven Day AADT 615

THE BODY OF THIS REPORT
SHOWS : SEVENDAY
TRAFFIC

Time	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total	Avg
Midnight - 1am	0	11	0	1	0	0	0	0	0	0	0	0	0	0	12	2
1am - 2am	3	7	0	0	0	0	0	0	0	0	0	0	0	0	10	1
2am - 3am	0	9	0	0	1	0	0	0	0	0	0	0	0	0	10	1
3am - 4am	0	17	1	0	4	0	0	1	1	1	0	0	0	0	25	4
4am - 5am	0	54	0	1	0	0	0	0	0	2	4	0	0	0	61	9
5am - 6am	0	117	2	0	0	0	0	0	0	5	1	0	0	0	125	18
6am - 7am	2	254	1	15	0	0	0	0	1	0	0	0	0	0	273	39
7am - 8am	0	357	10	14	1	0	1	0	0	1	2	0	0	0	386	55
8am - 9am	3	413	4	7	2	0	1	0	0	1	0	0	0	0	431	62
9am - 10am	3	292	8	10	1	0	1	0	0	0	0	0	0	0	315	45
10am - 11am	2	239	8	11	6	0	0	0	0	0	0	0	0	0	266	38
11am - Midday	0	215	7	7	1	0	0	0	0	0	1	0	0	0	231	33
Midday - 1pm	1	194	6	11	1	0	0	0	0	1	0	0	0	0	214	31
1pm - 2pm	0	173	5	9	0	0	0	0	0	4	0	0	0	0	191	27
2pm - 3pm	1	241	5	12	3	0	1	0	0	0	0	0	0	0	263	38
3pm - 4pm	1	231	6	12	4	0	0	1	0	2	0	0	0	0	257	37
4pm - 5pm	0	285	6	14	0	0	0	0	0	0	0	0	0	0	305	44
5pm - 6pm	1	303	7	5	0	0	0	0	0	0	0	0	0	0	316	45
6pm - 7pm	0	240	3	2	1	0	1	0	0	0	0	0	0	0	247	35
7pm - 8pm	0	150	0	1	1	1	0	0	0	0	0	0	0	0	153	22
8pm - 9pm	1	83	0	0	3	0	0	0	0	1	0	0	0	0	88	13
9pm - 10pm	1	64	0	0	0	0	0	0	0	1	0	0	0	0	66	9
10pm - 11pm	0	34	0	2	0	0	0	0	0	0	0	0	0	0	36	5
11pm - Midnight	0	22	0	0	0	0	0	0	0	0	0	0	0	0	22	3
Total	19	4005	79	134	29	1	5	2	2	19	8	0	0	0	4303	615
% of Total		93	2	3	1											



11 **Attachment D – TRACKS Assessment**



Wollondilly Transportation Model

Residential Rezoning, 95 Great
Southern Road, Bargo

Report

September 2015

Wollondilly Transportation Model

Residential Rezoning, 95 Great
Southern Road, Bargo

Report

Quality Assurance Statement

Prepared by:

Liqi Chen

Transportation Planner



Reviewed by:

David Hunter

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Approved for Issue by:

David Hunter

Senior Principal Transportation
Engineer



Status: Final report

Date: 14 September 2015

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1. Executive Summary

TDG has been commissioned to provide the traffic network assessment for the proposed 95 Great Southern Road residential rezoning in Bargo, Wollondilly. The objective of this report is to analyse the impact of this housing development on the surrounding traffic network should the land be rezoned, and provide recommendations for future improvements should any be required.

The 2011 Wollondilly TRACKS Transportation Model has been used to create the base models for this analysis and has been recently updated using the latest Wollondilly Shire Council (WSC) land use projections. Base models have been created for 2011 and the two future years of 2026 and 2036, analysing morning and evening peaks only.

In order to meet validation requirements for the assessment of traffic volumes and network performance within the study area, a local validation has been conducted based on the traffic counts provided by Martens & Associates. In addition, the land use associated with the adjacent Waste Transfer Station has been included into both base model and future models, and checked against estimated traffic generation and distribution.

The TRACKS analysis of the proposed housing development at 95 Great Southern Road indicates that there is no appreciable difference in Level of Service conditions, with or without the development, when it reaches full operation for 2026 and 2036. Therefore, no new intersection or link improvements appear to be required as result of the 95 Great Southern Road residential development.

2. Introduction

This document should be read in conjunction with “Wollondilly Shire Council Futures Network Deficiency Assessment” which was prepared by TDG in February 2015. This report documents the development of land use included in the proposed Great Southern Road residential rezoning and model outputs for 2011, 2026 and 2036, and includes analysis of predicted traffic congestion levels and locations.

Section 3 contains an explanation of the base model form and how the road network, zone system and available data were obtained and what local area validation network changes were implemented.

Section 4 includes a description of the changes made to the base networks for each of the future years.

Section 5 gives the details of the land use used for the future year models, with a table showing future land use development locations and number of lots and a summary of land use.

Section 6 provides Level of Service (LOS) plots for AM Peak and PM Peak periods for all future years and highlights the LOS issues arising in these future year models.

Section 7 provides volume and change of volume plots for the immediate area of the development. These show the expected changes in volumes throughout the area as a result of the 222 household development.

3. Base Model

3.1 2011 Model

Section 3 of the “Wollondilly Shire Council Futures Network Deficiency Assessment” provides details of the model form, road network and zone system of the overall Wollondilly Transportation Model.

For this study, the base year model is 2011, which has been recently updated with the latest land use data. As part of this assessment, the 2011 base network has been amended with the following changes:

- The original zone 63, which represents a large proportion of household and jobs in the immediate area of the development, has been connected onto both Wattle Street and Great Southern Road;
- A spare zone 184 has been used to represent the Waste Transfer Station and is connected to Anthony Road;
- A spare zone 185 has been used to represent the housing development at 95 Great Southern Road and is connected to both an Anthony Road extension and Hawthorne Road.

There are no additional changes made to the model network outside study area as local link type and intersection controls were fully represented by the base model networks.

3.2 Summary of Local Area Model Validation

Validation of the model demonstrates that the output traffic volumes from the model approximate what occurs in reality.

Comprehensive validation reporting is included in the report “Wollondilly Model Update 2006, Interim Transportation Model Update” for the entire model. The model as a whole was successfully validated to the levels required by the current RMS Modelling Guidelines for overall link validation and is fully capable of assessing any demand on it of a strategic nature. As with any model, local validation checks are recommended for the application of the model to a local infrastructure project. Accordingly validation checks were carried out in the vicinity of the proposed housing development.

In this assessment road link survey counts, provided by Martens & Associates, have been used to assist with improving 2011 base model validation in the immediate area of the development. The majority of these counts were undertaken on 10th Feb 2012 with a seven day average provided. The network assessment revealed that validated model flows along Remembrance Driveway were consistently higher than the provided survey counts. An assessment of the surrounding counts used in the full model validation appears to show that the 2011 base model in fact reproduces surrounding traffic volumes, especially along Remembrance Driveway, well. It is therefore believed that the February 2012 seven day average counts may not be representative of average conditions along this section of Remembrance Driveway during a typical working week.

Consequently, the February 2012 counts were used as a guide for flow distribution along Remembrance Driveway but not as absolute validation counts. Counts provided along roads adjacent to the development site were also used as a guide in reproducing local flow.

4. Land Use

For this assessment, zone 184 has been used to represent the Waste Transfer Station and was incorporated into the base models from 2011 onwards. Trip generation data for the Waste Transfer Station, provided by Martens & Associates, was used to help prime the 2011 base model with job inputs. The base 2011 TRACKS model created 24 and 21 vehicle trips to and from Waste Transfer Station in the morning and evening peak hours respectively. The number of jobs used for the Waste Transfer Station was expanded from 2011 to 2026/2036 based on the growth of total households in the model to reflect the possible increase in use.

Section 3 of the “Wollondilly Shire Council Futures Network Deficiency Assessment” details land use included in the 2011 and future year base models. These future land uses already included preliminary estimates of the proposed Great Southern Road development in the area.

In order to model the impacts of the development, all future year base models had the preliminary 95 Great Southern Road development removed from zones within the surrounding area. This enabled the creation of future year base models without the housing development in place. The Martens & Associates lot estimate of 222 for the development was included in a separate zone (zone 185) in future year option networks. See Table 1 for details of additional land use used in the future year models.

Zone	Base and Future Year Land Use – Household and Total Jobs					
	2011 HH	2011 Jobs	2026 HH	2026 Jobs	2036 HH	2036 Jobs
184	0	39	0	53	0	60
185	0	0	222	0	222	0

Table 1: Future Land Use Development in the Development Area

It was assumed that the 222 lots of the Great Southern Road development would be fully implemented by 2026. The TRACKS modelling indicated that 198 and 187 vehicle trips would be produced to and from the development in the morning and evening peaks respectively. Whilst this is not exactly the same as the generation assumed by Martens & Associates, it was very close and considered satisfactory for this level of network assessment.

The TRACKS distribution process does not impose fixed directional splits on the generation. Instead, it uses validated land use attraction equations to determine the directionality of the trips to and from the development. The TRACKS process estimated the in/out directional split to be 40/60 in the AM Peak and 55/45 in the PM Peak.

5. Network Deficiency Analysis

5.1 Levels of Service Criteria

Level of Service is a quantitative measure of the way in which a network is operating, given the traffic demands that are placed on it. It is a concept developed by American engineers, and has been generally internationally adopted.

This study focuses on LOS D, E, and F with particular attention paid to LOS E and F. The LOS boundaries are described in Table 2, which provides a description of:

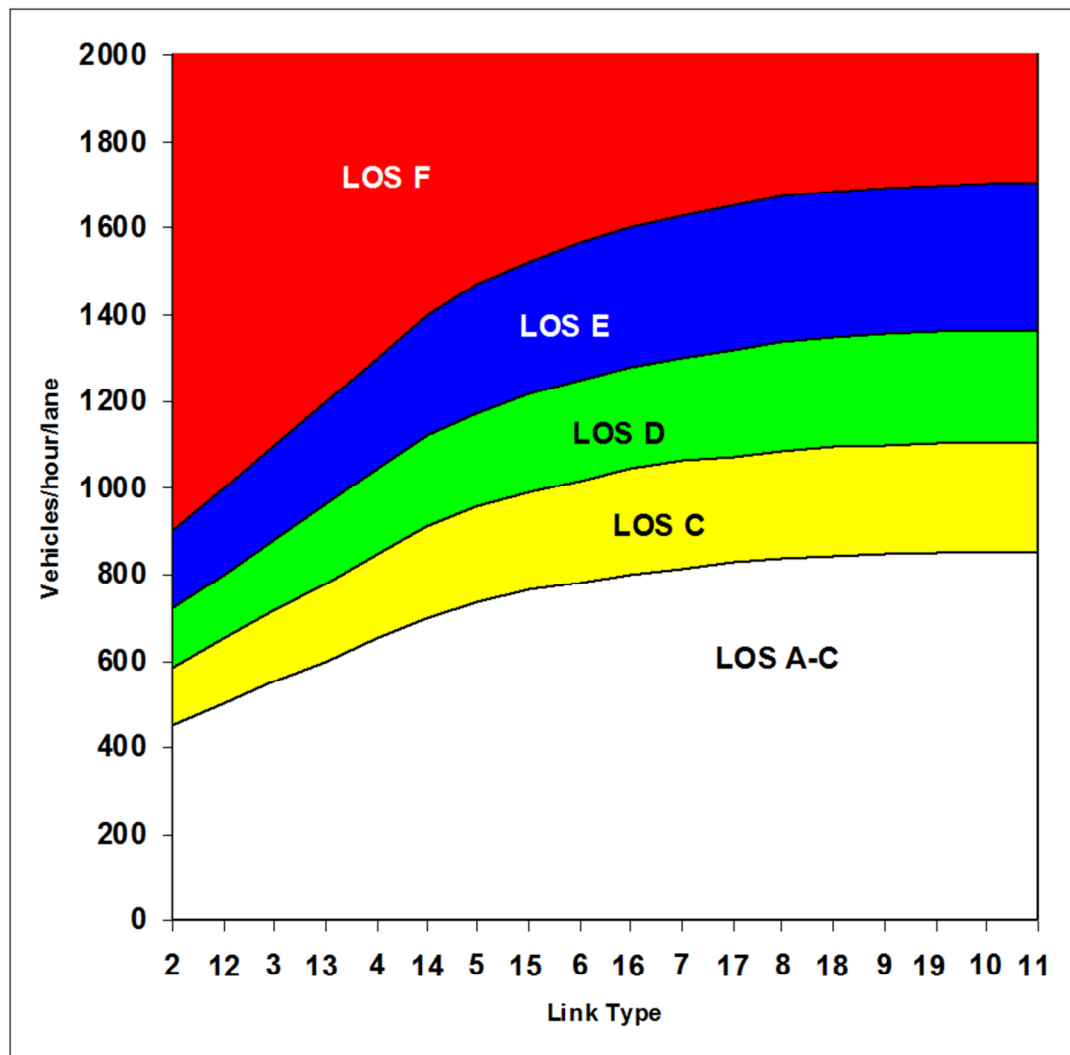
- LOS definitions describing the type of conditions a driver faces under each level;
- Link LOS boundaries that describe the performance of traffic moving along a section of road and a function of traffic volume and link free flow speed; and
- Intersection LOS boundaries which are based on two different criteria: Worst Approach based delay for priority controlled intersections; and weighted average delay for signalised intersections and roundabouts.

Figure 1 shows how link LOS varies depending on the link free flow speed. It shows that the higher the vehicle volume and the lower the free flow speed the worse the LOS becomes.

The present day level of service provides a measure by which future network performance and deficiencies can be assessed given knowledge and experience of current conditions.

LOS	AustRoads Description	Wollondilly Transportation Study LOS Criteria		
		Link (vehicles per hour)	Intersection (average delay/veh)	
			Priority	Signal/Rotary
LOS F	Forced flow. The amount of traffic approaching a point exceeds that which can pass it. Flow break-downs occur, and queuing and delays occur.	In excess of 900-1700 depending on link type	50 sec	80 sec
LOS E	Traffic volumes are at or close to <i>capacity and there is virtually no freedom</i> to select desired speed and to manoeuvre within the traffic stream. Flow is unstable <i>and minor disturbances within the traffic stream will cause break-downs in operation.</i>	In excess of 720-1360 depending on link type	35 sec	55 sec
LOS D	Approaching unstable flow <i>where all drivers are severely restricted</i> in their freedom to select desired speed and to manoeuvre within the traffic stream. The general level of <i>comfort and convenience</i> is poor and small increases in traffic flow will cause operational problems.	Between 585-1105 depending on link type	25 sec	35 sec
LOS C	Stable flow but most drivers <i>are restricted</i> to some extent in their freedom to select their desired speed and to manoeuvre within the traffic stream. The general level of <i>comfort and convenience</i> has declined noticeably.	Between 450-850 depending on link type	15 sec	20 sec
LOS B	Stable flow where drivers <i>still have reasonable freedom</i> to select their desired speed and to manoeuvre within the traffic stream. The general level of comfort and convenience is less than LOS A.	Not Applicable	Not Applicable	
LOS A	Free flow in which drivers are <i>virtually unaffected</i> by the presence of others in the traffic stream. Freedom to select desired speeds and to manoeuvre within the traffic stream is extremely high and the general level of <i>comfort and convenience</i> is excellent.			

Table 2: Definitions of LOS



	LOS BAND (VEH/HR)																	
LINK TYPE	2	12	3	13	4	14	5	15	6	16	7	17	8	18	9	19	10	11
FREE SPEED (km/hr)	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	110
LOS C	450	500	550	600	650	650	734	760	782	800	814	825	835	841	846	849	850	850
LOS D	585	650	715	780	845	910	954	988	1016	1040	1058	1073	1085	1093	1100	1104	1105	1105
LOS E	720	800	880	960	1040	1120	1174	1216	1250	1280	1302	1320	1335	1346	1354	1358	1360	1360
LOS F	900	1000	1100	1200	1300	1400	1467	1520	1563	1600	1627	1650	1669	1682	1692	1698	1700	1700

5.2 Level of Service Results

Plots of the study area Level of Service (LOS) for 2011 AM and PM Peak are shown in Figures 2 and 3 respectively. LOS plots for 2026 and 2036 AM and PM peaks, both with and without the Great Southern Road residential development, are included in Figure 4 through to Figure 11 respectively. The LOS plots show the surrounding Bargo area.

It appears that there is little difference in LOS conditions with or without the development when it reaches full operation in 2026 and 2036. The model indicates that some sections of Remembrance Driveway will trigger LOS C during the 2036 Evening Peak but this is not considered significant and is still better than the desired minimum LOS for the Wollondilly network. The new intersection of Anthony Road extension and Remembrance Dr operates satisfactorily with or without the development.

6. Model Summary Volumes

Directional volumes plots for the 2011 AM Peak and PM Peak periods are included in Figure 12 and 13 respectively.

Directional volume plots are also provided for future years 2026 and 2036 for each peak period both with and without the development. Each peak period is followed by a volume difference plot which highlights the change in traffic flows between the base model and the development option.

The proposed residential development results in an increase in travel demand for both Remembrance Driveway and Hume Highway. However there is no evidence that those increases result in deterioration of the existing level of service of the road network. Future year volume and volume differences plots are provided in Figure 14 through Figure 25.

7. References

“Wollondilly Shire Council Futures Network Deficiency Assessment”, for Wollondilly Shire Council by TDG, 19 February 2015.

“Wollondilly Model Update 2006, Interim Transportation Model Update”, for Wollondilly Shire Council by TDG, 21 October 2014.

Traffic count data for 10-16 February 2012, 3-9 March 2011 and 8-14 February 2013 by CFE Technologies.

