CONTRACT REPORT

Bicycle Crash Prediction Model - Data Collection

Project No: 006575

by Hanford Cheung, Francis Lin

for Department of Transport and Main Roads
Bicycle Crash Prediction Model - Data Collection

for Department of Transport and Main Roads

Reviewed

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Quality Manager

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006575
September 2013
# BICYCLE CRASH PREDICTION MODEL - DATA COLLECTION

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Hanford Cheung, Francis Lin
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**Comments**

September 2013
SUMMARY

This report describes the data collection and coding processes undertaken for obtaining, modifying and collating the data to enable the development of the Queensland modification factors for the existing bicycle crash prediction models developed by Beca Infrastructure Limited (Beca).

It is concluded that:

- The availability of bicycle count data is not consistent amongst TMR regions.
- Local authorities treat their bicycle counting programs differently.
- Amongst the various data sources, Gold Coast City Council is the only jurisdiction that consistently applied Austroads classifications for its counting program.
- Most of the TMR counting locations do not coincide with major cycle routes.
- There is no consistent approach for presenting vehicular and traffic data in Queensland.
- Availability of as-constructed drawings is limited.
- Some data sources require high-level approval and signing of non-disclosure agreements before being release for use.
- A partnership agreement between TMR and local authorities is necessary to encourage sharing of data and allowing data to be made available without restrictions.

It is recommended that TMR should consider:

- standardising the data collection practices among of regions
- undertaking future counts using the ARX classification
- allocating funding to enable data to be collected consistently on an ongoing basis
- undertaking a review of the available infrastructure data and whether business needs are being met
- exploring the feasibility of collaborating further with local authorities in areas of traffic and infrastructure data sharing.
CONTENTS

1 INTRODUCTION ................................................................................................................................. 1

2 DATA REQUIREMENT .......................................................................................................................... 2
  2.1 Signalised Intersection Model ........................................................................................................ 2
  2.2 Mid-Block Model ............................................................................................................................ 2
  2.3 Roundabout Model ......................................................................................................................... 3

3 DATA SOURCES AND CODING PROCESSES ........................................................................... 5
  3.1 Data for all models ........................................................................................................................... 5
    3.1.1 Crash data .................................................................................................................................. 5
    3.1.2 Traffic count data ..................................................................................................................... 5
    3.1.3 Infrastructure data ................................................................................................................... 5
  3.2 Addressing data gaps ....................................................................................................................... 5
  3.3 Site selection .................................................................................................................................. 6
    3.3.1 Site Selection Criteria .............................................................................................................. 6
    3.3.2 Signalised Intersection Model ................................................................................................. 6
    3.3.3 Mid-Block Model .................................................................................................................... 7
    3.3.4 Roundabout Model .................................................................................................................. 9

4 LESSONS LEARNT ........................................................................................................................... 10
  4.1 Availability of bicycle count ........................................................................................................... 10
  4.2 Format of count data ....................................................................................................................... 10
  4.3 Counting program and consistency ............................................................................................... 10
  4.4 Availability of infrastructure data .................................................................................................. 11
  4.5 Collaboration with local authorities ............................................................................................. 11

5 CONCLUSIONS AND RECOMMENDATIONS ........................................................................ 12

REFERENCES ........................................................................................................................................ 13

APPENDIX A NEW ZEALAND CRASH CODING .............................................................................. 14
APPENDIX B TRAFFIC DATA LISTING .......................................................................................... 15
APPENDIX C INTERSECTION LAYOUT CODING ........................................................................... 33
APPENDIX D INTERSECTION FEATURES CODING ......................................................................... 34
1 INTRODUCTION

During the data collection process, it was determined that there may be difficulties in obtaining sufficient data for building crash prediction models from scratch. Hence it was agreed to develop Queensland modification factors for existing bicycle crash prediction models.

This report describes the data collection and coding processes undertaken for obtaining, modifying and collating the data to enable the development of the Queensland modification factors for the existing bicycle crash prediction models developed by Beca Infrastructure Limited (Beca).
2 DATA REQUIREMENTS

This section presents data requirements for the Beca cycling models.

2.1 Signalised Intersection Model

The signalised intersection model developed by Beca for Austroads has a number of models and sub-models (Austroads 2011):

- right turn against crashes
- right angle crashes
- same direction crashes
- left turn side swipe crashes – cyclists straight through
- left turn versus straight crashes – cyclists straight through
- other crash types.

The following data requirements were identified:

- number of intersection approaches
- type of elemental cycle treatments at each leg of the intersection, i.e. transition, approach, storage, through departure
- lane widths for through cycle lane and right turn cycle lane
- lane widths for through traffic lane, kerbside lane and right turn lane
- type of kerbside lane
- number of lanes for through lanes and right turn lanes
- depth of advanced cycle lane/bike box, intersection depth
- type of lane layout
- total approach width
- cycle movement counts, including weather conditions, volume of cycles (does not have to be full time count) for each movement, percent of cycles ridden by school age children or teenagers – adjustments required for non-continuous count data
- individual crash reports, as crashes had to be coded to New Zealand collision types for the model (using Queensland police descriptions).

2.2 Mid-block Model

There are three cyclist-related mid-block models (Turner et al. 2009a):

- cyclist v motor vehicle, mid-block turning crashes
- cyclist v motor vehicle, non-turning crashes
- cyclist v motor vehicle, mid-block crashes.

The following data requirements were identified:

- parking
- parking utilisation (not turnover)
- operating speed (mean vehicle speed in km/h)
- cycle and traffic lane widths
- type of kerbside lane
- number of through lanes, total vehicle through lane widths
- flush or painted median
- length of mid-block section
- number and type of accesses/driveways (conflict points)
- individual crash reports, as crashes had to be coded to New Zealand collision types (using Queensland police descriptions).

2.3 Roundabout Model

There are two cyclist roundabout models (Turner et al. 2009b):
- model for crashes where the motorist is entering the roundabout versus circulating cyclist
- other cyclist model (the crash types that are included in the dataset involving both cyclists and motor vehicle but exclude crashes where the cyclist is circulating and the motor vehicle is entering)

The following data requirements were identified:
- vehicle counts, including
  - entering volume for each approach
  - circulating flow perpendicular to the entering flow
  - approach flow (sum of entering and exiting flows for each approach)
- cyclist counts
- intersection layout, including
  - road markings
  - diameter
  - superelevation direction of circulating lanes (inward or outward)
  - direction of the gradient of approaches
  - location of lighting
  - pedestrian and cycle facilities provided
  - surrounding land use
  - features that obstruct visibility
- visibility, including
  - visibility from the limit line to vehicles turning right or travelling through the roundabout from their right
  - visibility from 10 m back from the limit line to vehicles turning right or travelling through the roundabout from their right
  - visibility from 40 m back from the limit line to vehicles turning right or travelling through the roundabout from their right
- speed, including
  - average free mean speed of entering vehicles travelling through the roundabout at the limit line
  - average free mean speed of circulating vehicles travelling through the roundabout as they pass each approach (adjacent to splitter island)
  - standard deviation of free speeds of entering vehicles at the limit line
  - standard deviation of free speeds of circulating vehicles as they pass the approach being modelled
- geometric data, including
  - average diameter of central island
  - difference between the maximum and minimum diameter
  - entry path radius
  - exist path radius
  - circulating path radius
  - total width of approach traffic lanes
  - distance to the upstream approach
- individual crash reports, as crashes had to be coded to New Zealand collision types (using Queensland police descriptions).
3 DATA SOURCES AND CODING PROCESSES

Attempts were made to obtain bicycle and vehicle count and infrastructure data from various sources, including:

- Gold Coast City Council
- Sunshine Coast Regional Council
- Department of Transport and Main Roads (TMR).

3.1 Data for All Models

3.1.1 Crash Data

The bicycle crash data was supplied to ARRB by TMR in two formats:

- the crash listing with crash ID, AGD66 co-ordinates in comma separated values format (CSV)
- police crash reports in portable document format (PDF).

The data included all bicycle crash data recorded in Queensland from 1 January 1992 to 30 June 2010, comprising 16,403 bicycle crashes. The crash data was mapped enabling the identification of crashes at a site.

Each of the police crash reports was reviewed and coded as per the New Zealand crash coding form (Appendix A).

3.1.2 Traffic Count Data

Count data were requested from various jurisdictions. It was found that high-level approval was required in order to get access to some jurisdictions’ data. Due to the time constraint, data from these jurisdictions were not used.

Traffic count data were supplied by Gold Coast City Council and Sunshine Coast Regional Council. Additional data were obtained from the TMR traffic census on its 13 19 40 website. The full listings of counts with cycle data obtained are provided in Appendix B.

3.1.3 Infrastructure Data

Infrastructure data was supplied by TMR for the state-controlled road network. These included lane widths, shoulder widths, intersections and speed limits. Further information regarding roundabout geometry was also obtained from TMR.

The information was considered to be useful, but supplementary data were also collected using Google Earth and local authorities.

3.2 Addressing Data Gaps

The following techniques were used to address data gaps:

- using data from a combination of data sources
- obtaining measurements from Google Earth and council aerial photography websites
- using a nearby site to approximate traffic profiles
• site visits to assess operating speed.

3.3 Site Selection

3.3.1 Site Selection Criteria

As the objective of the project was to develop Queensland modification factors for the existing models, the following were considered when selecting the sites:

• data availability – if the data could not be made available by 15 May 2013, the site was excluded
• site suitability – sites with zero or low cycle counts (<10 a day) were not selected due to concerns regarding skewing of the outcome
• compatibility with existing models – sites significantly different to the base models were not selected
• cycle crash history – there were sites with cycle counts and vehicle counts, but no crashes; only a small number of these were included in the model due to concerns regarding skewing of the outcome
• construction projects – sites that were affected by capital works from 2005 – 2010 were excluded.

3.3.2 Signalised Intersection Model

The following sites were selected based on data availability and suitability:

• Musgrave Road / Kumbari Road
• Guineas Creek Road / K.P McGrath Drive
• Markeri Street / Rio Vista Boulevard
• Sunshine Boulevard / Oceanic Drive
• Wardoo Street / Benowa Road
• Ashmore Road / Racecourse Drive
• Benowa Road / Heeb Street
• Musgrave Avenue / Turpin Road
• Mooloolaba Esplanade / Venning Street
• Nicklin Way / Lake Kawana Road
• Caloundra Road / Pierce Avenue
• Alexandra Road / Okinja Road
• Nicklin Way / Point Cartwright Road
• Elkhorn Road / Riverview Road / Ferny Road (coded, but excluded from the modelling as an outlier)
• Maroochydore Road / Evans Road (coded, but excluded from the modelling as an outlier).

The signalised intersection model required the coding of the following data in accordance with Appendix C and Appendix D:

• number of intersecting legs
cycle treatment at the site
form of transition
approach type
storage design
through and departure treatments
through cycle lane width
kerbside lane width
type of kerbside lane
number of through lanes
total through lane width
right turn cycle lane
number of right turn lanes
depth of advanced cycle lane/bicycle box
intersection depth
lane layout type
total approach width
crash coding
vehicle count by movement
cycle count by movement
special features, including
— shared right turn lane
— shared left turn lane
— shared lanes
— transition treatments
— approach treatments
— storage treatments
— painted/coloured cycle lane/facilities
— protected right turn
— right turn at opposite side of the road.

Additional information was collected using Google Earth and local authorities’ aerial photo systems.

### 3.3.3 Mid-block Model

The following sites were selected based on data availability and suitability:

- Main Road, Maroochydore
- McKenzie Bridge
- Nicklin Way, Wurtulla
- Alexandra Parade
- Bayview Street, Runaway Bay
- Christine Avenue, Burleigh Waters
- 16 Johnston Street, Southport
- 103 Johnston Street, Southport
- 130 Johnston Street, Southport
- Kumbari Avenue
- Main Beach Parade site 1, Main Beach
- Main Beach Parade site 2, Main Beach
- Main Beach Parade site 3, Main Beach

The mid-block model required the coding of the following data:
- motor vehicle count and bicycle count
- directional operating speed
- number of residential accesses
- number of education accesses
- number of commercial accesses
- number of industrial accesses
- number of side streets
- parking utilisation classified into
  - 0 – 25%
  - 25% – 50%
  - 50% – 75%
  - 75% – 100%
- median type
  - centreline
  - flush/painted
  - solid
- cycle facility
- cycle width
- lane width
- cycle intersection crashes
- cycle mid-block crashes.

The data were collated and summarised in a spreadsheet for use in the modelling.
The relatively small sample size is due to the lack of suitable sites as most of the TMR mid-block counting locations do not have cycle counts. In most situations, a combination of council supplied cycle count data and TMR vehicle count data were used.

3.3.4 **Roundabout Model**

The following sites were selected based on data availability and suitability:

- Hammel Street / James Street/ Milne Street/ Lehmans Road
- Sandgate Road / Toombul Road
- Bracken Ridge Road / Gateway Mwy Off Ramp / Barfoot Street
- Laidley Plainland Road/ Donaldson Road, Plainland
- Birkdale Road / Main Road
- Tallebudgera Connection Road / Guineas Creek Road
- Pacific Highway / Elysium Road Interchange, Carrara - western roundabout
- Pacific Highway / Elysium Road Interchange, Carrara - eastern roundabout
- Pacific Highway / Nielsens Road Interchange, Nerang - eastern roundabout
- Pacific Motorway on and off ramps / Days Road/ Abraham Road
- Labrador Carrara Road / Cotlew Street
- Hope Island Road / Lae Drive / Pine Ridge Road
- Nerang Southport Road / Bailey Crescent / Hinde Street.

The roundabout model required the coding of the following data:

- entering flow (motor vehicles) at each approach
- entering flow (bicycles) at each approach
- circulating flow (motor vehicles) at each approach
- circulating flow (bicycles) at each approach
- vehicle entering versus circulating cyclist crashes at each approach
- other cyclist crashes at each approach.

These features were collated and summarised in a spreadsheet. At most sites, the circulation flows at each approach were worked out using the movement count, which was a time-consuming process.

However, at sites with count information that included circulation flows, random checks were undertaken for accuracy and reliability. This inconsistency in formatting increased the effort in coding the data for use in the modelling process.

The geometric features of the roundabouts were collected, but not utilised in the modelling process, as a simpler model was used.
4 LESSONS LEARNT

During the data collection process, a number of issues were identified, including:

- availability of bicycle counts
- format of count data
- counting program and consistency
- availability of infrastructure data
- collaboration with local authorities.

4.1 Availability of Bicycle Counts

The availability of bicycle counts is inconsistent even amongst TMR districts. For example, the following districts appeared to have different policies for cycle counts:

- North Coast Region does not have cycle counts at intersections and coverage count sites.
- Approximately 50% of the South Coast Region intersection counts have cycle counts, even though most locations have zero cycle or very low cycle counts.
- Approximately 34% of the Metropolitan Region intersection counts have cycle counts, even though most locations have zero cycle or very low cycle counts.

It appears that the collection of cycle data on the state roads network is not done consistently; a consistent approach may enable TMR to have a better understanding of cycling activities on the network.

The local authorities also treat bicycle counts quite differently. For example, Gold Coast City Council started counting bicycles as part of its traffic counting program from 2012 (as ARX classification class 1a). In contrast, Sunshine Coast Regional Council treats its bicycle counting program separately to its vehicle counting program.

Some collaborative efforts may be required to enable sharing of information in a consistent manner.

4.2 Format of Count Data

The count data obtained are generally in MS Excel spreadsheets. However, the format for intersections can vary significantly. The TMR data sets were not consistent among of regions; differing practices include intersection movement numbering conventions, table structures and classification of vehicles by type.

The data from local authorities also have different structures, likely to be the result of different classification systems used. Amongst the various data sources, Gold Coast City Council is the only jurisdiction that consistently follows the Austroads classifications for its counting program.

There would be merit if counts were classified using the ARX classification.

4.3 Counting Program and Consistency

The traffic census in TMR regions does not appear to follow a set program, i.e. counting the same locations each year or counting different locations at set intervals. An overview document outlining
the availability of data, the counting program and the dates of counts would be helpful to users of the data.

Most of the TMR counting locations do not appear to coincide with major cycle routes, which means collaboration with local authorities to concentrate data collection efforts to optimise available resources may be necessary.

4.4 Availability of Infrastructure Data

The availability of as-constructed drawings appeared to be limited. This is not ideal from an asset management perspective. The state roads infrastructure data at intersections also require significant efforts in interpretation. The data also lack movement details and treatment information.

4.5 Collaboration with Local Authorities

Collaboration with local authorities is necessary for TMR and other practitioners to develop a better understanding of cycle demands in Queensland. The streamlining and standardisation of data collection processes are likely to lower data collection costs for future projects of a similar nature.

It was unforeseen that the release of data from some local authorities would require high-level approval and signing of non-disclosure agreements. Due to the time constraints, these data sources were not pursued.

It is considered that a partnership agreement between TMR and the local authorities is necessary to encourage sharing of data and allowing data to be made available without restrictions. The unrestricted availability of data is likely to encourage innovation and enhance existing practices through transfer of knowledge to benefit all road users.
5 CONCLUSIONS AND RECOMMENDATIONS

It is concluded that:

- The availability of bicycle count data is not consistent amongst TMR regions.
- Local authorities treat their bicycle counting programs differently.
- Amongst the various data sources, Gold Coast City Council is the only jurisdiction that consistently applied Austroads classifications for its counting program.
- Most of the TMR counting locations do not coincide with major cycle routes.
- There is no consistent approach for presenting vehicular and traffic data in Queensland.
- Availability of as-constructed drawings is limited.
- Some data sources require high-level approval and signing of non-disclosure agreements before being release for use.
- A partnership agreement between TMR and local authorities is necessary to encourage sharing of data and allowing data to be made available without restrictions.

It is recommended that TMR should consider:

- standardising the data collection practices among of regions
- undertaking future counts using the ARX classification
- allocating funding to enable data to be collected consistently on an ongoing basis
- undertaking a review of the available infrastructure data and whether business needs are being met
- exploring the feasibility of collaborating further with local authorities in areas of traffic and infrastructure data sharing.
REFERENCES

Austroads 2011, Effectiveness and Selection of Treatments for Cyclists at Signalised Intersections, Austroads, Sydney, NSW.


# APPENDIX A  NEW ZEALAND CRASH CODING

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* = Movement applies for left and right hand bends, curves or turns

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Figure A 1: New Zealand vehicle movement coding sheet
Bicycle Crash Prediction Model - Data Collection

APPENDIX B TRAFFIC DATA LISTING

B.1 Sunshine Coast 2011 Data

The Sunshine Coast data consist of cycle counts only.

- Site 1 AM - TAFE entrance & Cooroy Noosa Rd & St Andrews Dr.xlsx
- Site 2 AM - Sidon St & Poinciana Ave.xlsx
- Site 3 AM - Memorial Ave.xlsx
- Site 3 PM - Memorial Ave.xlsx
- Site 4 AM - Gympie Tce & Eumundi Noosa Rd.xlsx
- Site 4 PM - Gympie Tce & Eumundi Noosa Rd.xlsx
- Site 4 Sat - Gympie Tce & Eumundi Noosa Rd.xlsx
- Site 5 AM - Wayba Rd & Reef St.xlsx
- Site 6 AM - Eumundi Noosa Rd & Goodchap St.xlsx
- Site 7 AM - Noosa Pde.xlsx
- Site 8 AM - Noosa Dr.xlsx
- Site 8 PM - Noosa Dr.xlsx
- Site 8 Sat - Noosa Dr.xlsx
- Site 9 AM - Honeysuckle La & David Low Way & Cooyar St.xlsx
- Site 10 AM - Ben Lexen Dr & Heathland Dr.xlsx
- Site 11 AM - Eumundi Noosa Rd_Beckmans Rd.xlsx
- Site 12 AM - Reef St & Eenie Creek Rd.xlsx
- Site 12 Sat - Reef St & Eenie Creek Rd.xlsx
- Site 13 AM - Eenie Creek Dr_Langura St.xlsx
- Site 14 AM - Hill St_David Low Way_Heathland Dr_Edward St.xlsx
- Site 14 Sat - Hill St_David Low Way_Heathland Dr_Edward St.xlsx
- Site 18 AM - Heron St_David Low Way.xlsx
- Site 19 AM - Havana St East_David Low Way.xlsx
- Site 19 Sat - Havana St East_David Low Way.xlsx
- Site 20 AM - Yandina Coolum Rd_South Coolum Rd.xlsx
- Site 21 AM - David Low Way_Beach Rd.xlsx
- Site 21 PM - David Low Way_Beach Rd.xlsx
- Site 21 Sat - David Low Way_Beach Rd.xlsx
- Site 23 AM - David Low Way_Tanah St East_Tanah St West.xlsx
- Site 23 Sat - David Low Way_Tanah St East_Tanah St West.xlsx
- Site 24 AM - William St_Howard St.xlsx
- Site 24 PM - William St_Howard St.xlsx
- Site 25 AM - Park Rd_Lamington Tce_Arunnell Ave_Currie St.xlsx
- Site 26 AM - Mudjimba Beach Rd_Mudjimba Esp.xlsx
- Site 26 PM - Mudjimba Beach Rd_Mudjimba Esp.xlsx
- Site 26 Sat - Mudjimba Beach Rd_Mudjimba Esp.xlsx
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- Site 34 AM - Sunshine Mwy bikeway_Maroochydore Rd.xlsx
- Site 35 AM - The Esplanade_First Ave_Duporth Ave.xlsx
- Site 35 PM - The Esplanade_First Ave_Duporth Ave.xlsx
- Site 36 AM - Maroochy Rd_Wises Rd.xlsx
- Site 37 AM - Sugar Rd_Wises Rd.xlsx
- Site 38 PM - Alexandra Pde_Okinja Rd.xlsx
- Site 39 Sat - Alexandra Pde_Okinja Rd.xlsx
- Site 39 AM - Mooloolaba Esp_Venning St.xlsx
- Site 39 PM - Mooloolaba Esp_Venning St.xlsx
- Site 39 Sat - Mooloolaba Esp_Venning St.xlsx
- Site 41 AM - Mons Rd_Owen Creek Rd.xlsx
- Site 42 AM - Dixon Rd_Karawatha Dr_Ballinger Rd.xlsx
- Site 43 AM - Sippy Downs Dr_University Way.xlsx
- Site 44 AM - Stringybark Rd_Sippy DownsDr.xlsx
- Site 45 AM - Motorway pathway_Claymore rd_Sippy Downs Dr_Dixon Rd.xlsx
- Site 46 AM - Pathway end_Lady Musgrave Dr.xlsx
- Site 46 PM - Pathway end_Lady Musgrave Dr.xlsx
- Site 47 AM - Prelude Dr_Karawatha Dr_Lady Musgrave Dr.xlsx
- Site 48 AM - Seriata Way_Bundilla Bvd_Karawatha Dr.xlsx
- Site 49 AM - Brisbane Rd_River Esp.xlsx
- Site 50 AM - McKenzie Bridge.xlsx
- Site 50 Sat - McKenzie Bridge.xlsx
- Site 51 AM - Kawana Island Bvd_Kawana Way.xlsx
- Site 52 AM - Nicklin Way_Palkana Dr_Kawana Island Bvd.xlsx
- Site 53 AM - Oceanic Dr_Palkana Dr.xlsx
- Site 53 PM - Oceanic Dr_Palkana Dr.xlsx
- Site 53 Sat - Oceanic Dr_Palkana Dr.xlsx
- Site 54 AM - Creekside Bvd_Corbould Way_Kawana Way.xlsx
- Site 55 AM - Main Dr_Sportsman Pde.xlsx
- Site 56 AM - Lake Kawana Bvd_Nicklin Way.xlsx
- Site 56 Sat - Lake Kawana Bvd_Nicklin Way.xlsx
- Site 57 AM - Nicklin Way.xlsx
- Site 57 Sat - Nicklin Way.xlsx
- Site 58 AM - Coongarra Esp_Bareki St.xlsx
- Site 58 PM - Coongarra Esp_Bareki St.xlsx
- Site 59 AM - Parklands Bvd_Caloundra Rd_Peirce Ave.xlsx
- Site 60 AM - Meridan Way_Parklands Bvd.xlsx
- Site 61 AM - Cooroy St_Beerburrum St.xlsx
- Site 62 AM - Elizabeth St_Buccleugh St.xlsx
- Site 62 PM - Elizabeth St_Buccleugh St.xlsx
- Site 63 AM - Queen St_Sugar Bag Rd_Golf Club Access_Path to South.xlsx
- Site 64_1 AM - Bowman Rd_First Ave_Park Pl.xlsx
- Site 64_1 Sat - Bowman Rd_First Ave_Park Pl.xlsx
- Site 64_2 AM - Bowman Rd_Bulcock St.xlsx
- Site 64_2 Sat - Bowman Rd_Bulcock St.xlsx
- Site 65 AM - Dingle Ave.xlsx
- Site 65 PM - Dingle Ave.xlsx
- Site 65 Sat - Dingle Ave.xlsx
- Site 66 AM - Esplanade Golden Beach_Wills Ave.xlsx
- Site 66 PM - Esplanade Golden Beach_Wills Ave.xlsx
- Site 67 AM - Henderson St_Hill St_Pacific Ave.xlsx
- Site 67 PM - Henderson St_Hill St_Pacific Ave.xlsx
- Site 67 Sat - Henderson St_Hill St_Pacific Ave.xlsx
- Site 68 AM - David Low Way_Peregian Esp_Lowry St.xlsx
- Site 68 PM - David Low Way_Peregian Esp_Lowry St.xlsx
- Site 68 Sat - David Low Way_Peregian Esp_Lowry St.xlsx
- Site 69 AM - Alexandra Pde.xlsx
- Site 69 PM - Alexandra Pde.xlsx
- Site 69 Sat - Alexandra Pde.xlsx
- Site 70 AM - Nicklin Way_Point Cartwright Dr.xlsx
- Site 70 Sat - Nicklin Way_Point Cartwright Dr.xlsx

**B.2 Sunshine Coast 2012 Data**

The Sunshine Coast data consist of cycle counts only.

- Q819 Site 20 Sat - Yandina Coolum Rd_South Coolum Rd.xlsx
- Q819 Site 21 AM - David Low Way_Beach Rd.xlsx
- Q819 Site 21 PM - David Low Way_Beach Rd.xlsx
- Q819 Site 21 Sat - David Low Way_Beach Rd.xlsx
- Q819 Site 24 AM - William St_Howard St.xlsx
- Q819 Site 24 PM - William St_Howard St.xlsx
- Q819 Site 24 Sat - William St_Howard St.xlsx
- Q819 Site 38 AM - Alexandria Pde_Okinja Rd.xlsx
- Q819 Site 38 PM - Alexandria Pde_Okinja Rd.xlsx
- Q819 Site 38 Sat - Alexandria Pde_Okinja Rd.xlsx
- Q819 Site 39 AM - Mooloolaba Esp_Venning St.xlsx
- Q819 Site 39 PM - Mooloolaba Esp_Venning St.xlsx
- Q819 Site 39 Sat - Mooloolaba Esp_Venning St.xlsx
- Q819 Site 41 AM - Mons Rd_Owen Creek Rd.xlsx
- Q819 Site 41 PM - Mons Rd_Owen Creek Rd.xlsx
- Q819 Site 41 Sat - Mons Rd_Owen Creek Rd.xlsx
- Q819 Site 45 AM - Motorway pathway_Claymore rd_Sippy Downs Dr_Dixon Rd.xlsx
- Q819 Site 45 PM - Motorway pathway_Claymore rd_Sippy Downs Dr_Dixon Rd.xlsx
- Q819 Site 45 Sat - Motorway pathway_Claymore rd_Sippy Downs Dr_Dixon Rd.xlsx
- Q819 Site 47 AM - Prelude Dr_Karawatha Dr_Lady Musgrave Dr.xlsx
- Q819 Site 47 PM - Prelude Dr_Karawatha Dr_Lady Musgrave Dr.xlsx
- Q819 Site 47 Sat - Prelude Dr_Karawatha Dr_Lady Musgrave Dr.xlsx
- Q819 Site 50 AM - McKenzie Bridge.xlsx
- Q819 Site 50 PM - McKenzie Bridge.xlsx
- Q819 Site 50 Sat - McKenzie Bridge.xlsx
- Q819 Site 54 AM - Creekside Bvd_Corbould Way_Kawana Way.xlsx
- Q819 Site 54 PM - Creekside Bvd_Corbould Way_Kawana Way.xlsx
- Q819 Site 54 Sat - Creekside Bvd_Corbould Way_Kawana Way.xlsx
- Q819 Site 56 AM - Lake Kawana Bvd_Nicklin Way.xlsx
- Q819 Site 56 PM - Lake Kawana Bvd_Nicklin Way.xlsx
- Q819 Site 56 Sat - Lake Kawana Bvd_Nicklin Way.xlsx
- Q819 Site 57 AM - Nicklin Way.xlsx
- Q819 Site 57 PM - Nicklin Way.xlsx
- Q819 Site 57 Sat - Nicklin Way.xlsx
- Q819 Site 74 AM - David Low Way_Springfield Av.xlsx
- Q819 Site 74 PM - David Low Way_Springfield Av.xlsx
- Q819 Site 74 Sat - David Low Way_Springfield Av.xlsx
- Q819 Site 77 AM - Yandina Coolum Rd_Yungar St_Central Av.xlsx
- Q819 Site 77 PM - Yandina Coolum Rd_Yungar St_Central Av.xlsx
- Q819 Site 77 Sat - Yandina Coolum Rd_Yungar St_Central Av.xlsx
- Q819 Site 78 AM - Havana Rd West.xlsx
- Q819 Site 78 PM - Havana Rd West.xlsx
- Q819 Site 78 Sat - Havana Rd West.xlsx
- Q819 Site 3 AM - Memorial Ave.xlsx
- Q819 Site 3 PM - Memorial Ave.xlsx
- Q819 Site 3 Sat - Memorial Ave.xlsx
- Q819 Site 19 AM - Havana St East_David Low Way.xlsx
- Q819 Site 19 PM - Havana St East_David Low Way.xlsx
- Q819 Site 19 Sat - Havana St East_David Low Way.xlsx
- Q819 Site 20 AM - Yandina Coolum Rd_South Coolum Rd.xlsx
- Q819 Site 20 PM - Yandina Coolum Rd_South Coolum Rd.xlsx
- Site 8 AM - Noosa Dr.xlsx
- Site 8 PM - Noosa Dr.xlsx
- Site 8 Sat - Noosa Dr.xlsx
- Site 12 AM - Reef St & Eenie Creek Rd.xlsx
- Site 12 PM - Reef St & Eenie Creek Rd.xlsx
- Site 12 Sat - Reef St & Eenie Creek Rd.xlsx
- Site 23 AM - David Low Way_Tanah St East_Tanah St West.xlsx
- Site 23 PM - David Low Way_Tanah St East_Tanah St West.xlsx
- Site 23 Sat - David Low Way_Tanah St East_Tanah St West.xlsx
- Site 26 AM - Mudjimba Beach Rd_Mudjimba Esp.xlsx
- Site 26 PM - Mudjimba Beach Rd_Mudjimba Esp.xlsx
- Site 26 Sat - Mudjimba Beach Rd_Mudjimba Esp.xlsx
- Site 27 AM - David Low Way_Ocean Dr_David Low Way.xlsx
- Site 27 PM - David Low Way_Ocean Dr_David Low Way.xlsx
- Site 27 Sat - David Low Way_Ocean Dr_David Low Way.xlsx
- Site 32 AM - Main Rd.xlsx
- Site 32 PM - Main Rd.xlsx
- Site 32 Sat - Main Rd.xlsx
- Site 59 AM - Parklands Bvd_Caloundra Rd_Peirce Ave.xlsx
- Site 59 PM - Parklands Bvd_Caloundra Rd_Peirce Ave.xlsx
- Site 59 Sat - Parklands Bvd_Caloundra Rd_Peirce Ave.xlsx
- Site 60 AM - Meridan Way_Parklands Bvd.xlsx
- Site 60 PM - Meridan Way_Parklands Bvd.xlsx
- Site 60 Sat - Meridan Way_Parklands Bvd.xlsx
- Site 64 AM - Bowman Rd_First Ave_Park Pl.xlsx
- Site 64 PM - Bowman Rd_First Ave_Park Pl.xlsx
- Site 64 Sat - Bowman Rd_First Ave_Park Pl.xlsx
- Site 65 AM - Dingle Ave.xlsx
- Site 65 PM - Dingle Ave.xlsx
- Site 65 Sat - Dingle Ave.xlsx
- Site 70 AM - Nicklin Way_Point Cartwright Dr.xlsx
- Site 70 PM - Nicklin Way_Point Cartwright Dr.xlsx
- Site 70 Sat - Nicklin Way_Point Cartwright Dr.xlsx
- Site 80 AM - Perwillowin Rd_Windsor Rd.xlsx
- Site 80 PM - Perwillowin Rd_Windsor Rd.xlsx
- Site 80 Sat - Perwillowin Rd_Windsor Rd.xlsx
- Site 29 AM - Petrie Creek Rd_David Low Way.xlsx
- Site 29 PM - Petrie Creek Rd_David Low Way.xlsx
- Site 29 Sat - Petrie Creek Rd_David Low Way.xlsx
- Site 31 AM - Sunshine Mwy Bikeway.xlsx
- Site 31 PM - Sunshine Mwy Bikeway.xlsx
- Site 31 Sat - Sunshine Mwy Bikeway.xlsx
- Site 33 AM - Sunshine Mwy bikeway_Maroochydore Rd.xlsx
- Site 33 PM - Sunshine Mwy bikeway_Maroochydore Rd.xlsx
- Site 33 Sat - Sunshine Mwy bikeway_Maroochydore Rd.xlsx
- Site 34 AM - Sunshine Mwy bikeway_Maroochydore Rd.xlsx
- Site 34 PM - Sunshine Mwy bikeway_Maroochydore Rd.xlsx
- Site 34 Sat - Sunshine Mwy bikeway_Maroochydore Rd.xlsx
- Site 35 AM - The Esplanade_First Ave_Duporth Ave.xlsx
- Site 35 PM - The Esplanade_First Ave_Duporth Ave.xlsx
- Site 35 Sat - The Esplanade_First Ave_Duporth Ave.xlsx
- Site 36 AM - Maroochy Rd_Wises Rd.xlsx
Bicycle Crash Prediction Model - Data Collection

- Site 36 PM - Maroochy Rd_Wises Rd.xlsx
- Site 36 Sat - Maroochy Rd_Wises Rd.xlsx
- Site 49 AM - Brisbane Rd_River Esp.xlsx
- Site 49 PM - Brisbane Rd_River Esp.xlsx
- Site 49 Sat - Brisbane Rd_River Esp.xlsx
- Site 62 AM - Elizabeth St_Buccleugh St.xlsx
- Site 62 PM - Elizabeth St_Buccleugh St.xlsx
- Site 62 Sat - Elizabeth St_Buccleugh St.xlsx
- Site 69 AM - Alexandra Pde.xlsx
- Site 69 PM - Alexandra Pde.xlsx
- Site 69 Sat - Alexandra Pde.xlsx
- Site 71 AM - Maud St_Trinder Av_Sugar Rd_Dalton Dr.xlsx
- Site 71 PM - Maud St_Trinder Av_Sugar Rd_Dalton Dr.xlsx
- Site 71 Sat - Maud St_Trinder Av_Sugar Rd_Dalton Dr.xlsx
- Site 72 AM - Duporth Av_Ball St.xlsx
- Site 72 PM - Duporth Av_Ball St.xlsx
- Site 72 Sat - Duporth Av_Ball St.xlsx
- Site 73 AM - Maroochydore Rd_Evans St_Broadmeadows Rd.xlsx
- Site 73 PM - Maroochydore Rd_Evans St_Broadmeadows Rd.xlsx
- Site 73 Sat - Maroochydore Rd_Evans St_Broadmeadows Rd.xlsx
- Site 75 AM - Cinnamon Av_Banksia Av_School Rd.xlsx
- Site 75 PM - Cinnamon Av_Banksia Av_School Rd.xlsx
- Site 75 Sat - Cinnamon Av_Banksia Av_School Rd.xlsx
- Site 76 AM - Yarrock St_South Coolum Rd.xlsx
- Site 76 PM - Yarrock St_South Coolum Rd.xlsx
- Site 76 Sat - Yarrock St_South Coolum Rd.xlsx
- Site 79 AM - Landborough Rd_pinelands Dr.xlsx
- Site 79 PM - Old Landborough Rd_pinelands Dr.xlsx
- Site 79 Sat - Landborough Rd_pinelands Dr.xlsx

B.3 Gold Coast Data

The Gold Coast data consist of vehicle and cycle counts; most locations only had vehicle counts; cycle counting started in 2012.

- 2007 Musgrave Avenue Southport (at Kumbari Ave).pdf
- 2007 Tahiti Avenue Palm Beach.pdf
- 2008 Boyd Street Tugun.XLS
- 2008 Guineas Creek Road Elanora.XLS
- 2008 Turpin Road Labrador.XLS
- 2008 West Burleigh Road Burleigh Heads (at Tabilban Street).XLS
- 2009 Guineas Creek Road Elanora.XLS
- 2009 Musgrave Avenue Labrador (Botanical Dr to Kumbari Ave).XLS
- 2010 Coolangatta Road Coolangatta.XLS
- 2010 Dunkeith Avenue Benowa.pdf
- 2010 Dutton Street Coolangatta.XLS
- 2010 Musgrave Street Coolangatta.XLS
- 2010 Tahiti Avenue Palm Beach.pdf
- 2011 Central Street Labrador (at Turpin Road).XLS
- 2011 Marine Parade BIGGERA WATERS.xls
- 2011 Markeri Street MERMAID WATERS.xls
- 2011 Reserve Road Upper Coomera (at Abraham Road).xlsx
- 2012 Bayview St Upper Coomera (at Abraham Road).xlsx
- 2012 Christine Ave BURleigh WATERS (near 148).xlsx
- 2012 Elkhorn Avenue Surfers Paradise (at Thomas Ferny & Riverview).xlsx
- 2012 Garfield Tce SURFERS PARADISE.xls
- 2012 Guineas Creek Rd Elanora (at K. P. McGrath Dr).xlsx
- 2012 Hedges Ave MERMAID BEACH (Alexandra Ave to Peerless Ave).xls
- 2012 Hedges Ave MERMAID BEACH (Arthur St to Seashell Ave).xls
- 2012 Hedges Ave Mermaid Beach (nr #3).xls
- 2012 Hedges Ave MERMAID BEACH (nr 255).xlsx
- 2012 Markeri St Mermaid Waters (at Rio Vista Bvd).xlsx
- 2012 Musgrave Street COOLANGATTA (at Pacific Pde).xlsx
- 2012 Old Burleigh Rd SURFERS PARADISE (Fern St to Wharf Rd).xlsx
- 2012 Pacific Pde BILINGA.xls
- 2012 Queen Street Southport (Ward St to Mal Burke St).xlsx
- 2012 Sunshine Bvd Mermaid Waters (at Oceanic Dr).xlsx
- 2012 Tahiti Avenue Palm Beach (at Laguna Ave).xlsx
- 2012 The Esplanade PARADISE POINT (Donald Ave & Muscovey Ave).xlsx
- 2012 The Esplanade PARADISE POINT (Nankeen Ave & Abalone Ave).xlsx
- 2012 The Esplanade SURFERS PARADISE (Elkhorn Ave to Cavill Ave).xlsx
- 2012 The Esplanade SURFERS PARADISE (Higman St to Ocean Ave).xlsx
- 2012 Thomas Dr SURFERS PARADISE (eastern bridge to Stanhill Dr).xlsx
- 2012 Wardoo St Southport (at Benowa Rd).xlsx
Bicycle Crash Prediction Model - Data Collection

- 2013 Ashmore Road Bundall (at Racecourse Drive).xlsx
- 2013 Benowa Road Ashmore (at Heeb Street).xlsx
- 2013 Johnston Street SOUTHPORT (near 103).xls
- 2013 Johnston Street SOUTHPORT (near 136).xls
- 2013 Johnston Street SOUTHPORT (near 16).xls
- 2013 Kumbari Avenue SOUTHPORT (Johnston Street to Woomera Cres).xls
- 2013 Main Beach Parade MAIN BEACH (Cable St to Ferny Ave).xlsx
- 2013 Main Beach Parade MAIN BEACH (Tedder Ave to Cunningham Ave).xls
- 2013 Main Beach Parade MAIN BEACH (Woodroffe Ave to Breaker St).xls
- 2013 Musgrave Avenue Southport (at Turpin Road).xlsx

B.4 13 19 40 Metropolitan Region Data
The following list consists of count sites with cycle counts only and includes locations with low cycle volume.

- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2008_109_1940FW.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2008_109_1961TD.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2009_109_1668FW.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2009_109_1958TD.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2009_109_1962FW.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2009_109_1963FW.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2009_109_7324-1 Redland Bay Rd & Colburn Avenue VICTORIA POINT.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2009_109_7324-2 Redland Bay Rd & Doublejump Rd VICTORIA POINT.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2009_109_7324-3A Redland Bay Rd & Giles Rd VICTORIA POINT.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2009_109_7324-3B Gordon Rd & Giles Rd VICTORIA POINT-RSC road.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2009_109_7324-4 Redland Bay Rd & German Church Rd VICTORIA POINT.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2009_18A_461FW.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2009_18A_7369 Warrego Hwy & Shaw Rd HATTON VALE.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2009_18A_7475 Warrego Hwy & Moroney Rd COLLEGE VIEW.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2009_18A_752TD.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2009_18A_7644-2 Crowley Vale Rd & Lake Clarendon Rd CROWLEY VALE.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2009_211_1343TD.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2009_211_1346FW.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2009_314_182TD.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2009_314_371FW.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2009_314_515TD.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2009_314_706FW.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2009_314_847TD.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2009_U18A_3407FWM.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2009_U18A_3407FWO.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2009_U18A_3412FWM.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2009_U18A_3412FWO.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2009_U18A_7359-7 Sumners Rd & Dandenong Rd SUMNER.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2009_U18A_7359-8 Sumners Rd & Spine St SUMNER.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2009_U18A_7656-3 Bullockhead St & Jijaws St SUMNER.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2009_U19_844FW.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2009_U88_170FW.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection
  Counts_2009_U94_179FW.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection
  Counts_2009_U94_3435TD.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection
  Counts_2009_U95_183TD.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection
  Counts_2009_U95_184FW.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection
  Counts_2009_U95_611TD.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection
  Counts_2009_U95_SamfordRdBrereStGaythorneRd11June2009.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection
  Counts_2009_U98_CombinedMoretonBayRdOldClevelandRd06Oct09.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection
  Counts_2009_U98_TollettStOldClevelandRd06Oct09 V2.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection
  Counts_2009_U98_WrightStOldClevelandRd06Oct09.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection
  Counts_2010_1082_3474TD.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection
  Counts_2010_1102_1661FW.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection
  Counts_2010_111_1450TD.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection
  Counts_2010_112_1661FW.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection
  Counts_2010_112_1667TD.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection
  Counts_2010_112_1619FW.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection
  Counts_2010_18A_1248TD.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection
  Counts_2010_18A_1558FW.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection
  Counts_2010_18A_1735TD.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection
  Counts_2010_18A_19A12TD.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection
  Counts_2010_18A_Harm_Dr_Lake_Clarendon_Rd.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection
  Counts_2010_18A_461_2FW.xls
- Bicycle Crash Prediction Model - Data Collection

- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_18A_521_1FW.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_18A_521_2FW.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_18A_752TD.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_301_1842TD.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_301_1844FW.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_301_1861FW.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_301_Briggs_Rd_and_Parrott_St.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_302_1687_FW.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_3042_1104FW.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_3042_1687FW_2.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_3042_717FW.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_311_481TD.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_311_560FW.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_311_565TD.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_311_Laidley_Plainland_Cunningham_Ave_FW.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_311_Laidley_Plainland_Gehrke_ST_FW.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_314_630FW.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_403_266FW.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_900_266FW.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_900_504FW.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_902_3478FW.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_904_1604FW.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_904_1611FW.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_904_1613FW.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_904_1614TD.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_904_1615TD.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_904_3342TD.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_904_3388FW.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_905_1661FW.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_910_Centenary_Hwy_And_South_Deebing_Creek_Rd_YAMANTO_FW.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_U13C_1046FW.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_U13C_68FW.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_U13C_729TD.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_U14_1038TD.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_U14_1047TD.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_U14_1048TD.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_U14_1054TD.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_U14_735TD.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_U14_736TD.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_U14_738TD.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_U14_740TD.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_U14_741TD.xls

- 27 - September 2013
- Traffic Census Data_Metro Data_2_TrafficCounts_3_IntersectionCounts_2010_U14_742TD.xls
- Traffic Census Data_Metro Data_2_TrafficCounts_3_IntersectionCounts_2010_U14_743TD.xls
- Traffic Census Data_Metro Data_2_TrafficCounts_3_IntersectionCounts_2010_U14_744TD.xls
- Traffic Census Data_Metro Data_2_TrafficCounts_3_IntersectionCounts_2010_U14_745TD.xls
- Traffic Census Data_Metro Data_2_TrafficCounts_3_IntersectionCounts_2010_U14_746TD.xls
- Traffic Census Data_Metro Data_2_TrafficCounts_3_IntersectionCounts_2010_U14_748TD.xls
- Traffic Census Data_Metro Data_2_TrafficCounts_3_IntersectionCounts_2010_U14_749TD.xls
- Traffic Census Data_Metro Data_2_TrafficCounts_3_IntersectionCounts_2010_U14_750TD.xls
- Traffic Census Data_Metro Data_2_TrafficCounts_3_IntersectionCounts_2010_U14_76FW.xls
- Traffic Census Data_Metro Data_2_TrafficCounts_3_IntersectionCounts_2010_U14_77TD.xls
- Traffic Census Data_Metro Data_2_TrafficCounts_3_IntersectionCounts_2010_U14_80FW.xls
- Traffic Census Data_Metro Data_2_TrafficCounts_3_IntersectionCounts_2010_U14_81TD.xls
- Traffic Census Data_Metro Data_2_TrafficCounts_3_IntersectionCounts_2010_U14_826TD.xls
- Traffic Census Data_Metro Data_2_TrafficCounts_3_IntersectionCounts_2010_U14_827TD.xls
- Traffic Census Data_Metro Data_2_TrafficCounts_3_IntersectionCounts_2010_U14_828TD.xls
- Traffic Census Data_Metro Data_2_TrafficCounts_3_IntersectionCounts_2010_U14_82FW.xls
- Traffic Census Data_Metro Data_2_TrafficCounts_3_IntersectionCounts_2010_U14_83FW.xls
- Traffic Census Data_Metro Data_2_TrafficCounts_3_IntersectionCounts_2010_U14_86FW.xls
- Traffic Census Data_Metro Data_2_TrafficCounts_3_IntersectionCounts_2010_U14_88FW.xls
- Traffic Census Data_Metro Data_2_TrafficCounts_3_IntersectionCounts_2010_U14_89FW.xls
- Traffic Census Data_Metro Data_2_TrafficCounts_3_IntersectionCounts_2010_U14_92FW.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_U15_1416FW.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_U18B_99FW.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_U19_127FW.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_U19_46FW.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_U19_52TD.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_U19_868FW.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_U19_874TD.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_U20_1526FW.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_U20_1528FW.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_U20_1709FW.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_U20_1725FW.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_U20_1727TD.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_U20_1728TD.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_U88_161_1TD.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_U88_168FW.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_U88_170FW.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_U88_52TD.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_U88_53TD.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_U90_1709FW.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_U91_1475FW.xls
- Traffic Census Data_Metro Data_2_Traffic Counts_3_Intersection Counts_2010_U91_1709FW.xls
Bicycle Crash Prediction Model - Data Collection

B.5 13 19 40 South Coast Region Data

The following list consists of count sites with cycle counts only and includes locations with low cycle volume.

- Traffic Census Data_SCHD Data_Intersection Counts_2008_1003_1003_Jacobs Well Rd & Rotary Park Rd.xls
- Traffic Census Data_SCHD Data_Intersection Counts_2008_1003_1003_Jacobs Well Rd & Quarry Rd.xls
- Traffic Census Data_SCHD Data_Intersection Counts_2008_1003_1003_Jacobs Well Rd & Quinns Hill Rd.xls
- Traffic Census Data_SCHD Data_Intersection Counts_2008_1003_1003_Jacobs Well Rd & Woolshed Rd.xls
- Traffic Census Data_SCHD Data_Intersection Counts_2008_1003_1003_Jacobs Well Rd & Yellowood Rd.xls
- Traffic Census Data_SCHD Data_Intersection Counts_2008_105_105_Nerang-Broadbeach Rd & Alabaster Dr.xls
- Traffic Census Data_SCHD Data_Intersection Counts_2008_105_105_Nerang Broadbeach & Garden Grove.xls
- Traffic Census Data_SCHD Data_Intersection Counts_2008_105_105_Nerang-Broadbeach & Nielsens.xls
- Traffic Census Data_SCHD Data_Intersection Counts_2008_105_105_Nerang-Broadbeach Rd & Lawrence Dr.xls
- Traffic Census Data_SCHD Data_Intersection Counts_2008_105_105_Nerang-Broadbeach Road & Boulton Road.xls
- Traffic Census Data_SCHD Data_Intersection Counts_2008_105_105_Nerang-Broadbeach Road & Chisholm Road - Lakeview Drive.xls
- Traffic Census Data_SCHD Data_Intersection Counts_2008_114_114 Siganto Dr - Dreamworld PKY & HopelIsland Rd.xls
- Traffic Census Data_SCHD Data_Intersection Counts_2008_118_11B_Gold Coast Hwy & Stewart Rd.xls
- Traffic Census Data_SCHD Data_Intersection Counts_2008_11B_11B_Gold Coast Hwy & U-Turn for Stewart Road.xls
- Traffic Census Data_SCHD Data_Intersection Counts_2008_11B_11B_Gold Coast Hwy & Stewart Rd.xls
- Traffic Census Data_SCHD Data_Intersection Counts_2008_12A_12A HopelIsland Rd & Pacific MWY Exit 57.xls
- Traffic Census Data_SCHD Data_Intersection Counts_2008_12A_208 City Rd Roundabout & 12A Pacific Motorway ramps.xls
- Traffic Census Data_SCHD Data_Intersection Counts_2008_202_202_Beaudesert Nerang Rd & Beechmont Rd.xls
- Traffic Census Data_SCHD Data_Intersection Counts_2008_202_202_Beaudesert Nerang Rd & Cemetery Rd.xls
- Traffic Census Data_SCHD Data_Intersection Counts_2008_203_203 Beaudesert Beenleigh Rd & Leach Rd.xls
- Traffic Census Data_SCHD Data_Intersection Counts_2008_206_206 Old Pacific HWY & HopelIsland Rd.xls
- Traffic Census Data_SCHD Data_Intersection Counts_2008_207_207 Waterford Tamborine Rd & PlunkettRd.xls
- Traffic Census Data_SCHD Data_Intersection Counts_2009_101_101_Smith Street Connection Road & Kumbari Av.xls
- Traffic Census Data_SCHD Data_Intersection Counts_2009_101_101_Smith Street Connection Road & Parklands Dr.xls
- Traffic Census Data_SCHD Data_Intersection Counts_2009_101_101_Smith Street Connection Road & Scarborough St.xls
- Traffic Census Data_SCHD Data_Intersection Counts_2009_101_101_Smith Street Connection Road & Southport-Burleigh Rd Aug.xls
- Traffic Census Data_SCHD Data_Intersection Counts_2009_101_101_Smith Street Connection Road & Southport-Burleigh Road Mar.xls
- Traffic Census Data_SCHD Data_Intersection Counts_2009_105_105_Nerang-Broadbeach Road & Manchester Road.xls
- Traffic Census Data_SCHD Data_Intersection Counts_2009_106_106_Southport-Nerang Road, Waverley St & Garden St.xls
- Traffic Census Data_SCHD Data_Intersection Counts_2009_114_114_Hope Island Road & Anaheim Dr.xls
- Traffic Census Data_SCHD Data_Intersection Counts_2009_114_114_Hope Island Road & River Links Bvd.xls
- Traffic Census Data_SCHD Data_Intersection Counts_2009_204_204_Brisbane-Beenleigh Road & Gardiner Rd.xls
- Traffic Census Data_SCHD Data_Intersection Counts_2009_204_204_Brisbane-Beenleigh Road & Harburg Dr.xls
- Traffic Census Data_SCHD Data_Intersection Counts_2009_204_204_Brisbane-Beenleigh Road & Holmview Rd.xls
- Traffic Census Data_SCHD Data_Intersection Counts_2009_204_204_Brisbane-Beenleigh Road & Teys Rd.xls
- Traffic Census Data_SCHD Data_Intersection Counts_2009_204_204_Brisbane-Beenleigh Road, Castile Cr & Fletcher Rd.xls
- Traffic Census Data_SCHD Data_Intersection Counts_2009_204_204_Brisbane-Beenleigh Road, Spanns Rd & Sunrise St.xls
APPENDIX C  INTERSECTION LAYOUT CODING

Figure C 2: Intersection layout coding sheet
## APPENDIX D  INTERSECTION FEATURES CODING

<table>
<thead>
<tr>
<th>On/Neat Train/Train System</th>
<th>Y</th>
<th>Yes</th>
<th>N</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Treatments</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Lane Width</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>THR Cycle Lane</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kerbside Lane</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Type of Kerbside Lane</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Standard</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Bus lane</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Ave THR Lane Width</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>RT cycle lane</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>No right turn cycle lane</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Ave RT Lane Width</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Approach Width</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Ped Treatment              |   |     |   |    |
| **Ped Phase**              |   |     |   |    |
| 1                          | Yes |
| 2                          | No  |
| **Left Turn Phase**        |   |     |   |    |
| 0                          | No left turn phase |
| 1                          | Standard |
| 2                          | Early start for ped |
| 3                          | Fully controlled |
| 4                          | Free left Turn |
| **Right Turn Phase**       |   |     |   |    |
| 1                          | Standard |
| 2                          | Right Turn Hold |

| Lane Layout Type           |   |     |   |    |
| 1                          |   |     |   |    |
| 2                          |   |     |   |    |
| 3                          |   |     |   |    |
| 4                          |   |     |   |    |
| 5                          |   |     |   |    |
| 6                          |   |     |   |    |
| 7                          |   |     |   |    |
| 8                          |   |     |   |    |

**Figure D 3:** Intersection features coding sheet