

Traffic estimate data

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INTRODUCTION

This overview document is intended to provide high level support and direction to better understand the criticality of robust traffic estimate data and how to maintain this dataset.

Any relevant current industry guidance and case studies have been referenced, where they provide more detailed assistance.

WHAT IS TRAFFIC ESTIMATE DATA?

Traffic estimate data is an estimate of the level of demand on the road network, built up from an estimate of Average Annual Daily Traffic (AADT) for each carriageway section of the road network. This includes both traffic volume and loading (classification/traffic mix). It is an interpretation of traffic count data for maintenance, management and design purposes.

It is necessary to estimate the level of traffic demand on a network as:

- It is not practical, affordable, or necessary to count every carriageway section on a road network
- Actual count data is representative of the period (commonly seven days) the data was collected (ADT)
- The recorded traffic volume count (ADT) may require adjustment to account for seasonal variations etc. to determine the AADT estimate

WHY IS THIS DATA IMPORTANT TO ME?

Traffic estimate data is a key input into several asset management and decision making processes. Road Assessment and Maintenance Management (RAMM) stores traffic estimate records for each carriageway section on a network, with the most recent record flagged as 'latest' for use in a range of asset management and decision making processes.

Without good traffic data it is very difficult to reliably plan asset and maintenance management activities to achieve a desired outcome.

WHERE IS THIS DATA USED?

Traffic estimate data is a key data input into our asset management and decision making processes. Traffic estimate data recorded in RAMM is summarised into other tables including the carriage way and treatment length tables.

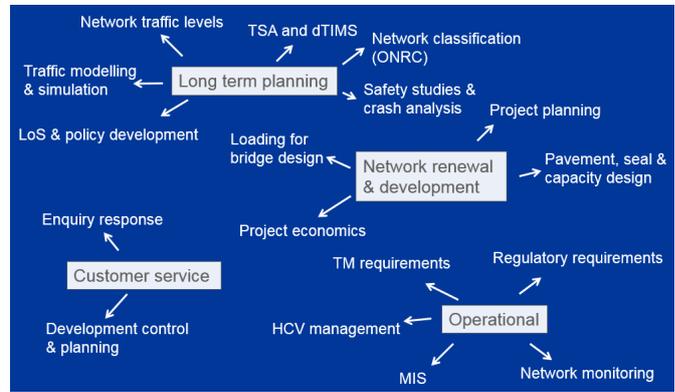
KEY POINTS

Traffic Estimate Data is:

- ✓ An estimation of the Average Annual Daily Traffic (AADT) volume and loading on a defined section of road
- ✓ An interpretation of traffic count data for maintenance, management and design purposes
- ✓ A major factor in the initial network ONRC categorisation
- ✓ Needed for the effective and efficient management of the network
- ✓ A key input into forward works programme development
- ✓ To be maintained and updated frequently including both volume and mix

Traffic estimate data is the base data for defining the level of traffic activity on the road network both in terms of volume and loading.

The adjacent figure highlights some key areas and aspects where traffic estimate data is used. These core tables are commonly the basis on which a roading network is maintained and management efficiently and effectively.



WHAT IS THE CONSEQUENCE OF POOR TRAFFIC ESTIMATE DATA?

There are significant issues associated with poor traffic estimate data. Some examples include:

- Sub optimal funding decisions
- Poor understanding of renewals need and forward works programme development
- Lack of understanding around policy/guideline consequences
- Poor customer service
- Poor asset performance analysis and reporting
- Incorrect allocation of asset life cycles
- Incorrect traffic management levels
- Poor asset risk management
- Inappropriate resurfacing or rehabilitation designs
- Poor understanding of traffic patterns (i.e. growth)

HOW TO MAINTAIN TRAFFIC ESTIMATE DATA

Timing

Traffic estimate data should be maintained either following the completion of counting activity, or periodically to align with your business and decision making processes. Adjacent is a minimum frequency of updates recommended by ONRC category. You may however need to update estimates more frequently if your network is going through a notable change in demand.

ONRC Categories	Minimum Frequency
High Volume to Arterial	Annual
Primary and Secondary Collectors	Every three years
Access including Low Volume	Every five years

How

Both AADT volume and loading (classification/traffic mix) estimation need to be included in an estimate update process. AADT estimation should consider growth, with loading considering the 'environment' (e.g. industrial, commercial). A structured traffic count programme should provide the base data for updating the non-counted portion of the network.

It is recommended when estimating the traffic loading you split your network into similar loading categories. These should consider the ONRC as well as separately identifying sections of the network with 'non-typical' levels of traffic loading (e.g. industrial, commercial, CBDs, dairy, quarries/landfills etc.)

There are several ways to update your estimate data from manual to automated. The most appropriate for your network will depend on several factors including size of network, frequency of updates, resources etc.

CONCLUSION

Complete, accurate and timely traffic estimate data is a critical component in our network and asset management processes. Poor quality data can significantly impact our ability to plan and manage our activities to achieve a targeted outcome.

REFERENCES

- RIMS Guideline for Traffic Counting

REG is a collaborative project between Local Government and the NZ Transport Agency.

For more information, please contact:

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