

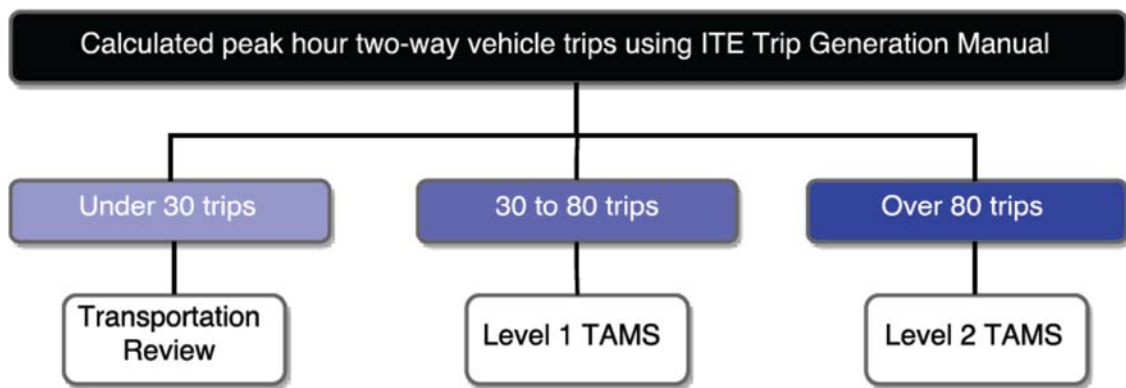
Town of View Royal

Transportation Report Terms of Reference Guidelines

This document is intended to assist developers and the Town of View Royal establish appropriate Transportation Report scope for development projects.

The Terms of Reference herewith include recommended study components for three report types, as well as notes for required study components.

The three report types shown below are based on net additional peak (typically weekday PM peak hour) vehicle trip generation estimates as determined by the Institute of Transportation Engineering's (ITE) Trip Generation Manual.



Transportation Review

A Transportation Review is a brief summary of a development's transportation context, anticipated vehicle trips generated by the development and discussion regarding vehicle and bicycle parking Bylaw compliance.

Transportation Assessment and Management Study (TAMS) Level One and Two

A TAMS assesses the impact of a proposed development on the adjacent transportation network. It includes a multi-modal evaluation of site design, on-site circulation, access, proposed parking supplies and makes recommendations to mitigate and manage development impact.

A Level 1 TAMS is intended for mid-sized developments, while a Level 2 TAMS offers a more robust study scope for larger developments.

TAMS are similar to a Transportation Impact Study (TIS) and a Transportation Impact Assessment (TIA).

Disclaimer

These Transportation Report Terms of Reference Guidelines are intended to assist developers and the Town of View Royal staff select a study scope. All development projects are unique with various factors that may alter study requirements. Scope for transportation studies should be determined on an individual basis dependent on a Town of View Royal development plan review.

STUDY COMPONENTS

STUDY COMPONENT	NOTE REF.	TRANSPORTATION REVIEW	LEVEL 1 TAMS	LEVEL 2 TAMS
Development, Transportation Context	1	Brief review	Multi-modal review, include site plan.	
Trip Calculation	2	Present site's net two-way vehicle trip change.	Net two-way vehicle trips plus illustration of new trip distribution and assignment.	
Data Collection	3	Not typically required.	Intersections with over 30 additional new vehicle trips per peak hour, limited to first downstream intersection.	
Future Vehicle Volume Forecasting	4	Not typically required.	Reference background growth rate.	Reference background growth rate, add other specific anticipated developments. Consider sensitivity analysis using alternate growth rates.
Vehicle Capacity Analysis	5	Not typically required.	Vehicle LOS, V/C, queue lengths.	Vehicle LOS, V/C, queue lengths. Include site access(s).
Vehicle Capacity Analysis Scenarios	6	Not typically required.	Existing, Opening Day.	Existing, Opening Day, Background plus 10 years, Opening Day plus 10 years.
Vehicle Capacity Analysis Time Periods	7	Not typically required.	Weekday PM, plus Saturday mid-day if development has commercial component.	Weekday AM, PM and also Saturday mid-day if development has commercial component.
Signal Warrants	8	Not typically required.	Include TAC warrants when unsignalized intersection exceeds performance thresholds or when traffic signal introduction is considered.	
Access	9	Brief review with location and turn movements.	Geometric review and sight line analysis of site access(es) where applicable.	
Site Design	10	Not typically required.	AutoTURN analysis of on-site vehicle circulation.	Multi-modal on-site circulation analysis including vehicle AutoTURN analysis.
Loading	11	Not typically required.	Brief review, AutoTURN where applicable.	AutoTURN analysis of loading design vehicles.
Multi-mode Analysis	12	Not typically required.	Evaluate pedestrian and bicycle network connections and continuity.	
Vehicle Parking	13	Brief supply and bylaw requirement review.	Review of forecasted demand and proposed allotment between user groups.	Thorough review of forecasted demand and proposed allotment between user groups. Shared parking discussion where applicable.
Bicycle Parking	14	Brief supply and bylaw requirement review.	Review development supply, bylaw requirements and access to the bicycle parking, electric outlets. Describe scooter parking if applicable.	
Transportation Demand Management	15	Brief review of proposed TDM measures.	Detailed review of TDM options specific for development.	Detailed review of TDM options specific for development plus an assessment of anticipated impact to parking and traffic.
Conclusions and Recommendations	16	Summarize key findings and recommendations.		
Executive Summary	17	Not typically required.		Recommended.

Further details regarding each study component are provided in the following “Report Component Notes” section.

REPORT COMPONENT NOTES

1. *Development and Transportation Context*

Present a site plan, address and the location of the development in relation to the surrounding, pedestrian, cycling and road networks. Include relevant governing policies and plans.

2. *Trip Calculation*

First choice for calculating trip generation is first principal data or comparable local data. If no site or local data is available then use Institute of Transportation Engineer (ITE) Trip Generation Manual to estimate two-way vehicle site trips or calculate by person trips and apply mode split data.

Vehicle trips can be discounted for mixed land use internal trips where applicable according to ITE Trip Generation Manual.

3. *Data Collection*

Traffic counts targeting the peak hour should be two to three hours in length depending on available reference datasets. Counts should take place during typical conditions (no special events or alterations to typical traffic patterns).

Weekday data ideally collected on a Tuesday, Wednesday or Thursday. Saturday peak hour typically occurs between 11AM and 3PM, review of available local area datasets required to establish count timeframe.

4. *Future Vehicle Volume Forecasting*

Previous traffic volume datasets may be used to determine growth rates required for future volume forecasting. Township may indicate a preferred growth rate or if possible the report may calculate a background scenario using anticipated or approved nearby projects.

5. *Vehicle Capacity Analysis*

Vehicle trips should be assigned to the study area with consideration of pass-by and/ or diverted link trips.

Operations of study area intersections and access points should be assessed using the methods outlined in the Highway Capacity Manual (HCM), using Synchro software. Traffic operations should be assessed using the performance measures of Level of Service (LOS) and Volume-to-Capacity (V/C) ratio, as well as queue lengths where applicable. V/C ratios greater than 0.95 and LOS E or F's for individual movements should be used as a general threshold for mitigation.

6. *Vehicle Capacity Analysis Scenarios*

Level One TAMS: Existing, Opening Day (with development or 'Total').

Level Two TAMS: Existing, Opening Day (Background and Total), Opening Day plus 10 years (Background and Total). Depending on the determined background growth rate an Opening Day Background scenario may not be required.

7. *Vehicle Capacity Analysis Time Periods*

Reference available datasets when establishing peak periods of adjacent road traffic. Residential developments should examine Weekday PM for Level One TAMS. Weekday AM and PM periods are often required for Level Two TAMS. Saturday peak hour period should also be examined for commercial developments, potentially in lieu of the Weekday AM period.

8. Signal Warrants

If a traffic signal is considered at an unsignalized intersection, for example due to operations exceeding performance thresholds, Transportation Association of Canada (TAC) warrants should be exercised. If the development is within 800m of a Ministry jurisdiction Highway then the Ministry's traffic signal warrants may also be required.

9. Access

Driveway access should be located on the minor frontage roadway. Ideally driveway access points should be consolidated. Where applicable, sightlines should be reviewed as per TAC's *Geometric Design Guide for Canadian Roads* manual.

10. Site Design

Review multi-modal internal site circulation, including access for mobility impaired. AutoTURN analysis for parkade design may be required.

11. Loading

Review garbage and recycling collection routes, maneuvering should be on-site. Commercial developments often require loading analysis using the specific anticipated design vehicle. Loading analysis should also consider short term loading for packages being delivered to office or residential developments.

12. Multi-mode Analysis

Review cycling and pedestrian connectivity to external networks, including access for mobility impaired. Review site's proximity to transit.

13. Vehicle Parking

If parking supply is not in compliance with Town of View Royal Zoning Bylaw Section 5 then a separate Parking Variance Report is required, or the parking variance analysis could be presented as a section within the provided Transportation Report.

14. Bicycle and/or Scooter Parking

If provided bicycle parking is not in compliance with Bylaw then a variance report is required. Analysis for a bicycle space variance should be within the Transportation Review or TAMS. Long term bicycle parking should be on ground level or on the first level of parkade near entry. Short term bicycle parking should be in visible location near main building entry.

Scooter or mobility aid parking may be required for senior housing developments.

15. Transportation Demand Management

Transportation Demand Management (TDM) initiatives seek to reduce single occupant vehicle use by promoting other forms of transportation such as cycling, transit use, walking and car pooling.

16. Conclusions and Recommendations

All reports should present a clear list of key conclusions and recommendations.

17. Executive Summary

An executive summary should summarize the report and its findings without introducing new material.