CHAPTER 3 –TRAFFIC ANALYSIS

Chapter Organization

3.1 Introduction .................................................................................................................. 1
3.2 Trip Generation & Distribution Letter Guidelines ......................................................... 1
  3.2.1 Applicability ........................................................................................................ 1
  3.2.2 Minimum Elements ............................................................................................ 2
3.3 Traffic Impact Analysis .............................................................................................. 3
  3.3.1 Applicability ........................................................................................................ 3
  3.3.2 Scope ................................................................................................................... 3
  3.3.3 Methodology ......................................................................................................... 3
  3.3.4 TIA Report Minimum Elements ......................................................................... 4
  3.3.4.1 Title Page ........................................................................................................ 4
  3.3.4.2 Introduction and Summary ............................................................................. 4
  3.3.4.3 Proposed Development .................................................................................. 5
  3.3.4.4 Summary of Existing Conditions ................................................................... 5
  3.3.4.5 Background Projects ...................................................................................... 6
  3.3.4.6 Analysis Scenarios .......................................................................................... 6
  3.3.4.7 Other Analyses ................................................................................................ 6
  3.3.4.8 Findings ............................................................................................................ 7
  3.3.4.9 Appendices ....................................................................................................... 7
3.4 Meetings ....................................................................................................................... 7
3.1 INTRODUCTION

This chapter describes the contents of the trip generation and distribution letter and traffic impact analysis (TIA) submittals. The TIA is a comprehensive report containing all of the technical information and analysis necessary to evaluate a proposed new development or redevelopment project for compliance with level of service (LOS) standards. The City will not sign off on a project until transportation concurrency has been determined.

All projects except those exempt as set forth in the City of Spokane Valley Municipal Code (SVMC), Title 22.20.020 are subject to concurrency review.

3.2 TRIP GENERATION & DISTRIBUTION LETTER GUIDELINES

All projects which generate 10 or more new peak-hour vehicular trips shall submit a trip generation and distribution letter. The letter shall be based on the latest edition of the Institute of Transportation Engineers (ITE) Trip Generation Manual and developed by an Engineer.

If a project is subject to State Environmental Policy Act (SEPA) review, the trip generation and distribution letter shall be submitted for review at the time of the SEPA application.

The letter is required to be approved by the City prior to submittal of a traffic impact analysis report.

3.2.1 APPLICABILITY

a. A trip generation and distribution letter is required for most projects. However, the following projects are typically under the peak-hour threshold and may not be required to prepare a trip generation and distribution letter:

   i. Residential short plats;
   ii. Drive-through coffee stands with no indoor seating;
   iii. Multi-family projects with nine (9) units or less;
   iv. Changes of use from residential to commercial with no new buildings or building additions;
   v. Office projects of less than 2,500 sf (ITE land uses 700-799); and,
   vi. Industrial projects of less than 9,000 sf (ITE land uses 100-199).

b. For projects expected to generate less than 10 peak-hour vehicular trips the project applicant is required to submit a letter with the following information for all proposed development phases for the property:

   i. Brief project description;
   ii. Number of expected employees;
   iii. Hours of business; and,
iv. The expected number of vehicular trips (customers and employees) to the business during the AM and PM peak hours.

3.2.2 MINIMUM ELEMENTS

The trip generation and distribution letter for projects generating 10 or more peak-hour trips shall include the following elements:

a. Project description, including proposed use;
b. Site plan with vicinity map;
c. Building size noted in square feet;
d. Zoning of the property;
e. Proposed and existing access points, site circulation, queuing lengths and parking locations;
f. Project phasing and expected opening year;
g. An estimate of trip generation for the typical weekday, AM peak-hour, and PM peak-hour conditions. Supporting calculations and data sources shall be shown. Any adjustments for transit use, pass-by trips, and/or diverted trips shall be clearly stated;
h. A comparison of the trip generation between the previous and the proposed site use for projects involving a change of use. If the comparison shows a net increase in trip generation, the project will be subject to the TIA requirements of a new development;
i. A preliminary distribution pattern for traffic on the adjacent street network, shown in a graphical format; and,
j. The engineering seal signed and dated by the Engineer who prepared the letter.
3.3 TRAFFIC IMPACT ANALYSIS (TIA)

3.3.1 APPLICABILITY

A TIA is required for the following situations:

a. Projects adding 20 or more peak-hour trips to an intersection of arterial streets, as defined in Chapter 4 of the City’s Comprehensive Plan, within a one-mile radius of the project site as shown by the trip generation and distribution letter; or,

b. Projects impacting local access intersections, alleys, or driveways located within an area with a current traffic problem as identified by the City or previous traffic study, such as a high-accident location, poor roadway alignment or capacity deficiency.

3.3.2 SCOPE

The scope of the TIA shall be developed by a professional engineer licensed in the State of Washington. Prior to submittal of the TIA, the City and other impacted jurisdictions/agencies shall approve the scope of the TIA. The scope of the TIA shall conform to the following:

a. The study area shall include any intersections of arterial streets within a one-mile radius of the site that would experience an increase of at least 20 vehicle trips during a peak hour. Some intersections may be excluded if analyzed within the past year and are shown to operate at LOS C or better. All site access points shall be analyzed. Additional arterial intersections outside of the one mile radius and intersections of local streets may also be required at the discretion of the City;

b. A PM peak hour LOS analysis shall be conducted for all study area intersections. An LOS analysis of the AM peak hour, Saturday afternoon, or other time period may be required at the discretion of the City; and,

c. Additional analysis may be required by other reviewing agencies.

The LOS shall meet or exceed the thresholds set forth in the City of Spokane Valley Comprehensive Plan – Chapter 4: Capital Facilities, Table 4.3 Spokane Valley Level of Service Standards.

3.3.3 METHODOLOGY

The analysis shall be done using the following methodology:

a. Background growth rate – The background growth rate may be based on historical growth data and/or the Spokane Regional Transportation Council (SRTC) Regional Travel Demand Model, as approved by the City. This rate is to be applied to existing turning movement volumes prior to the addition of background project traffic or site generated traffic volumes. The minimal growth rate of 1.1 percent is required. Under no circumstances shall the growth rate be less than 1.1 percent;
b. The LOS shall be determined in accordance with the methods reported in the latest edition of the *Highway Capacity Manual* (HCM);

c. Use of the two-stage gap acceptance methodology for unsignalized intersections is subject to City approval;

d. Other analysis tools may be utilized with City approval if HCM methodology cannot accurately model an intersection;

e. Trip generation data shall be based on the latest edition of the *ITE Trip Generation Manual*. Trip generation data from studies of similar facilities may be substituted as approved by the City; and,

f. Turning movement counts shall be recorded less than one year prior to submitting a traffic study. Counts less than two years old may be used if no significant development projects or changes to the transportation network have occurred. Counts should be taken on a Tuesday, Wednesday, or Thursday representing a typical travel day. Counts should not be taken during a week which contains a holiday. Projects near schools may be required to collect turning movement counts during the school year.

### 3.3.4 TIA REPORT MINIMUM ELEMENTS

The TIA report shall include the following, at a minimum:

#### 3.3.4.1 Title Page

The TIA shall include a title page with the following elements:

a. Name of project;

b. City project number/permit number;

c. Applicant’s name and address;

d. Engineer’s name, address and phone number;

e. Date of study preparation; and,

f. The engineering seal, signed and dated by the professional engineer licensed in the State of Washington who prepared the report.

#### 3.3.4.2 Introduction and Summary

a. Purpose of report and study objectives;

b. Executive summary;

c. Proposed development description;

d. Location and study area;

e. Findings; and,

f. Recommendations and mitigation.
3.3.4.3 Proposed Development

The TIA shall include the following information for the proposed development:

a. Project description;
b. Location and vicinity map;
c. Site plan with building size (square feet);
d. Proposed zoning;
e. Land use;
f. Access points, site circulation, queuing lengths, and parking locations;
g. An estimate of trip generation for the typical weekday, AM peak-hour, and PM peak-hour conditions. Any adjustments for transit use, pass-by trips, and/or diverted trips shall be clearly stated;
h. A distribution pattern for traffic on the adjacent street network, shown in a graphical format; and,
i. Project phasing and timing.

3.3.4.4 Summary of Existing Conditions

The TIA shall provide a summary of existing conditions for the study area that includes the following:

a. Transportation network description, including functional classification, bike/pedestrian facilities and transit routes;
b. Existing zoning;
c. Existing traffic volumes including percent heavy vehicles;
d. Accident history – past 3 years;
e. Posted speed limits (and if known the 85 percentile speed determined from a speed study);
f. Length of existing turn pockets at signalized intersections; and,
g. Location of the following:
   i. On-street parking,
   ii. Bus stops,
   iii. Private and public schools in the area, and,
   iv. Hospitals, police and fire stations in the area.
3.3.4.5 Background Projects

Background project traffic includes the following:

a. Traffic from newly constructed projects;
b. Projects for which traffic impacts have been tentatively reserved;
c. Projects for which a Concurrency Certificate has been awarded;
d. Non-project, general background traffic increases; and,
e. Vested traffic for vacant buildings that are undergoing redevelopment.

The TIA shall provide the following information for background projects, as identified by the City:

f. Project descriptions;
g. Vicinity map;
h. Trip generation;
i. Trip distribution; and,
j. Planned transportation improvements (private development and City).

3.3.4.6 Analysis Scenarios

The TIA shall include the following analysis scenarios:

a. Existing conditions;
b. Build-out year without project;
c. Build-out year with project;
d. Build-out + 5 analysis if project is expected to proceed in phases, take more than 6 years to complete, or if the study intersection is included on the City’s 6-Year TIP; and,
e. Build-out Year + 20 analysis if the project mitigation involves installation or modification to an intersection controlled with a traffic signal or roundabout. Forecast volumes shall be estimated using the SRTC Regional Travel Demand Model.

3.3.4.7 Other Analyses

Other analyses may be required as requested by the City, including but not limited to:

a. Sight distance;
b. Queue lengths at signalized intersections;
c. Queue lengths at driveways and drive-up windows;
d. Noise;
3.3.4.8 Findings

The following shall be addressed in the findings section:

a. Traffic impacts;
b. Compliance with level of service standards;
c. Proposed project improvements; and,
d. Recommendations and mitigation.

3.3.4.9 Appendices

The following information shall be included in appendices:

a. Definitions;
b. Trip generation sources;
c. Passer-by and origin-destination studies;
d. Volume and turning movement count sheets;
e. Level of service calculations;
f. Synchro report printouts (electronic submittal may be required);
g. Warrant analysis calculations; and,
h. References.

3.4 MEETINGS

A public meeting(s) may be required for any residential project generating over 100 PM peak-hour trips, commercial projects generating over 100 PM peak-hour trips impacting a residential area, or for other projects at the discretion of the City. The intent of the public meeting is to let the public know about the proposed project and to allow for public input to determine the scope of the TIA. Notice of date, time, place and purpose of the public meeting(s) shall be provided by the following means:

a. One publication in Spokane Valley’s official newspaper at least 15 days prior to the meeting;
b. A mailing to adjacent residents, property owners, neighborhood groups, jurisdictions, and/or organizations within a 400-foot radius of the project boundaries, not less than 15 days prior to the public meeting; and,
c. A sign shall be erected, on the subject property fronting and adjacent to the most heavily traveled public street, at least 15 days prior to the meetings. The sign shall be at least 4 feet in width and 4 feet in height and shall have letters 3 inches in size. The sign shall be easily read by the traveling public from the right-of-way. This sign shall announce the date, time and place of the traffic meetings and provide a brief description of the project.

Proper notification and all associated costs shall be the responsibility of the Applicant. Notification shall be considered satisfied upon receipt of an affidavit provided by the Applicant to the City stating the above requirements have been completed.