



Research Notes

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Best Practices for Traffic Impact Studies

Traffic Impact Studies (TISs) are used by the Oregon Department of Transportation (ODOT) and staff of other transportation agencies to forecast future system effects from proposed development projects and to predict the useful life of a transportation project against a future expected land use scenario. When impacts are not accurately projected through the traffic analysis process, the best decisions may not be made. Poor decisions can result in traffic congestion, safety issues, or unnecessary improvements.

TIS analysis requires consideration of a number of key variables used to project future operations after a proposed improvement is implemented. Examples of variables include forecasted trip generation, trip distribution, future traffic conditions, and capacity and performance of roadway improvements. The assumptions made about key variables may affect the implementation of land use and transportation plans, positively or negatively.

Credible and accurate TISs are important for community development and livability. TISs with either overly conservative or aggressive estimates can create problems. For individual projects, overly conservative TISs may result in wasted resources for improvements that are not needed. The cumulative effect of overly conservative TISs may be perceived as an agency antigrowth bias to

the development community. The other extreme occurs when assumptions made about the basic variables allow the applicant (also referred to as the developer) to underestimate projected impacts from development, or over-assume available capacity. Outcomes from this situation can include unanticipated congestion and safety problems, inappropriate or “throwaway” mitigation, and a “chasing the last trip” phenomenon, meaning the traffic effects of approved and built projects become the burden of future development.

In the case of a modernization project, a 20-year design life volume may be reached much sooner



A ‘Big Box’ retail store can have major impacts on traffic.

than the projected 20 years, with the result that system improvements are consumed at an accelerated rate. An accurate TIS that represents the applicant’s intentions provides all parties with the proper information to make quality decisions.

The goals of this research project were to examine decisions being

made from traffic impact studies and to develop a set of best practices to supplement existing guidelines for developing and reviewing traffic impact studies. The research project selected and analyzed 12 case studies to compare post development traffic conditions to the traffic impact study forecasts of post implementation traffic conditions. Best practices were identified for the following areas:

- Land use code selection and application;

- Pass-by trip reduction assumptions;
- Seasonal variations;
- Evaluation of other modes;
- Analysis software;
- Regional demand model verse growth rates;
- Future year analysis; and
- Safety.
- Provide a recommended best practice for preparers and reviewers, particularly to improve the accuracy of trip generation prediction of proposed development; and
- Promote increased understanding of key issues to consider in TISs within the context of operating and maintaining a safe transportation system.

The recommended best practices in the project report are intended to be used in the scoping process, the development of TISs, and the review of TISs. The intended purpose of the report document is to accomplish the following:

- Ensure that critical transportation and development issues are considered in the scoping process and addressed in TISs rather than simply estimating future travel demand and presuming the system can absorb the incremental consumption of capacity;

Technical Advisory Committee members on this project included the following people:

Tom Boyatt, Mark Joerger, Doug Norval, ODOT
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To request a copy of the report “Best Practices for Traffic Impact Studies” by Jay McRae, Loren Bloomberg, and Darren Muldoon, contact the ODOT Research Unit by phone, or view the report on the Research Unit web page listed below



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