

UTC Project Information	
Project Title	MPC 485 – Development of a Model to Assess the Feasibility of Transit-Oriented Development (TOD) Projects
University	Colorado State University
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Project Duration	October 1, 2013 to July 31, 2018
Brief Description of Research Project	<p>After the Second World War, America saw a decline in ridership on transit systems which eventually resulted in the dismantling and abandonment of many rail systems. The primary mode of public transportation shifted from transit to buses, which used the same streets and competed with the same congestion as automobiles. For this reason, bus systems also started to fail when people realized that if they have to wait in the traffic, they might as well do it in their own automobile, which provides higher flexibility of timing and route (Ditmar, Belzer and Autler, 2004). This shift, in effect, resulted in more congestion.</p> <p>To counter the problem of congestion resulting from modern urbanization, the society developed the idea of Transit-Oriented Development (TOD). TOD (or similar concepts like transit village, transit-friendly design, and transit-supportive development) is a type of development designed in a fashion that encourages the use of public transit and the creation of pedestrian-friendly environments (TCRP, 2002). TOD results in an urban land use in which residents live within walking distance of a transit station. TODs also require providing access for job centers, educational centers, retail stores, and cultural facilities close to the transit station</p>

	<p>(Arrington and Cervero, 2008). It is believed that when people have their residences and offices near the transit route, they are more likely to ride (Arrington and Cervero, 2008; Nasri and Zhang, 2014).</p> <p>Many factors have made the TOD more favorable to be implemented than ever before. The increase in population share of singles and single-parent families, childless couples, ‘empty-nesters’, and the influence of immigrants who come from societies that are transit-friendly have created an ideal consumer market for transit-oriented development (Calthorpe, 1993). Even though circumstances look feasible for TOD, there are factors that need to be investigated and understood before developing new TOD projects in different scenarios. For example, building codes, standards for building heights, density limits, and development rules that work against station-area development might result in the failure of TOD. Some other factors such as location liabilities might impact the feasibility of TOD; as ridership/development might look attractive on paper, but private developers might not be as excited as the ones who wrote the TOD proposal. Against common perception, research by Zhang (2005) has shown that mixed-land use and high density might be insignificant factors in success of a TOD project based on a case study of Atlanta Metropolitan area. This challenges the common perception of factors, which were taken at face value and mostly left unquestioned.</p> <p>Given all of these, there is a need to perform an in-depth analysis of the parameters that result in the success of a TOD project and develop a model to guide the decision-makers in determining as to whether to move forward with a TOD project or not.</p> <p>Research Objectives</p> <ol style="list-style-type: none"> 1. Investigate the parameters that result in the success of a TOD project. 2. Develop an objective model based on the identified parameters which can be used by the decision-makers to perform comprehensive feasibility analysis in determining to move forward with a TOD project or not.
<p>Describe Implementation of Research Outcomes (or why not implemented)</p> <p>Place Any Photos Here</p>	<p>This framework is flexible for transit agencies to add or delete factors and identify the importance/weight for each factor based on their unique objectives stemming from their own TOD planning priorities and localized purposes. The implementation examples of this framework showed differences in results when it comes to assigning weights of importance to TOD decision-making success factors for an urban and rural transit agency. Since TOD decisions represent a large and irreversible commitment of resources, rigorous and structured evaluation of success factors and alternatives as presented herein provides great benefit to decision makers.</p>
<p>Impacts/Benefits of Implementation (actual, not anticipated)</p>	<p>TOD is an important issue that is likely to attract interest of researchers and transit professionals in the future. With many developing countries showing interest in the implementation of TOD projects, TOD concept will continue to develop unique research questions and applications and TOD will play a significant role in the field of transportation research for many years to come. Given this, this study is original and timely in</p>

	providing the transit agencies with a practical and ready to implement decision support framework they can use when choosing a TOD site to develop/build.
Web Links <ul style="list-style-type: none">• Reports• Project Website	http://www.ugpti.org/resources/reports/details.php?id=884