

Preface

Making the Land Use, Transportation, Air Quality Connection (LUTRAQ) is a national demonstration project to develop methodologies for creating alternative suburban land use patterns and design standards, and for evaluating their impacts on:

- automobile dependency,
- mobility,
- air quality,
- energy consumption, and
- green house gas emissions.

Using the proposed Western Bypass freeway around the Portland, Oregon metropolitan region as a case study, LUTRAQ has (1) identified alternative land use development patterns that reduce travel demand and increase the use of alternative travel modes, and (2) developed transportation modeling procedures that forecast the travel behavior associated with these alternative land use patterns.

The LUTRAQ project contains six tasks:

Task A. Analyze Current Model Limitations

The project team (1) identified the international state-of-the-art of integrated land use/transportation modeling, (2) determined current modeling practices in U.S. metropolitan areas, and (3) evaluated the modeling system in place for the LUTRAQ study area.

Task B. Analyze the Base Case

The project team established current land use and transportation opportunities and constraints in the study area.

Task C. Develop the LUTRAQ Alternative

The project team established two alternatives to freeway construction, each containing three primary elements: (1) alterations in land uses, densities, and development designs; (2) expansions in transit facilities and services, and selected existing collector/arterial systems; and (3) changes in non-land use policies, including those related to transportation demand management.

Task D. Modify the Models

The project team improved the modeling system in the study area to ensure accurate measurement of the alternatives developed in Task C.

Task E. Test the Alternatives

Using the modeling improvements from Task D, the project team analyzed a no-action alternative, the freeway alternative, and the two LUTRAQ alternatives for their effects on transportation, air quality, energy consumption, and green house gas emissions. *This document is the final report for Task E.*

Task F. Implement the LUTRAQ Alternative

The project team developed a series of design guidelines, zoning provisions, and economic incentives as ways of implementing the elements of the LUTRAQ alternatives.

Work products from the LUTRAQ project include a separate volume devoted to each task, plus a final report and a technical appendix.

Vol.	Date	Title	Authors
1	Oct. 1991	Modeling Practices	Cambridge Systematics The Hague Consulting Group
2	Oct. 1991	Existing Conditions	Cambridge Systematics Calthorpe Associates
3	Oct. 1992	The LUTRAQ Alternative	Calthorpe Associates Cambridge Systematics Parsons Brinckerhoff
3A	Sept. 1992	Market Research	Market Perspectives Hebert/Smolkin Associates
4	Nov. 1992 <i>Revised</i> May 1996	Model Modifications	Cambridge Systematics S.H. Putman and Associates Parsons Brinckerhoff
4A	Dec. 1993	The Pedestrian Environment	Parsons Brinckerhoff
4B	May 1994	Building Orientation	Parsons Brinckerhoff
5	May 1996	Analysis of Alternatives	Cambridge Systematics Parsons Brinckerhoff
6	Oct. 1995	Implementation	Calthorpe Associates ECONorthwest Blayney Dyett Public Financial Management Parsons Brinckerhoff
7	—	Final Report	ECONorthwest Cambridge Systematics Calthorpe Associates Parsons Brinckerhoff
8	—	Technical Appendix	ECONorthwest Cambridge Systematics Calthorpe Associates Parsons Brinckerhoff
—	Aug. 1993	Site Design & Travel Behavior A Bibliography	Rebecca Ocken