



TRANSPORTATION REGIONAL ECONOMIC DEVELOPMENT

# TRED

THEODORE ROOSEVELT EXPRESSWAY

## EXECUTIVE BRIEFING # 1

Prepared by:

HDR | HLB Decision Economics Inc.

March 23, 2006

# Agenda

- ◆ Introductions
- ◆ Study Team
- ◆ Objectives of the Study
- ◆ Transportation and Economic Development, an Overview
- ◆ Our Approach
- ◆ Stakeholders Engagement
- ◆ Accounting for Uncertainty
- ◆ Q&A



## About HDR

HDR is one of the world's leading architectural, engineering and consulting (A/E/C) firms, excelling in complex projects. Established in 1917 in Omaha, Nebraska, HDR now employs more than 4,500 professionals in over 100 locations across the U.S., bringing together in-house multidisciplinary teams of architects, engineers, consultants, planners, and Construction managers.



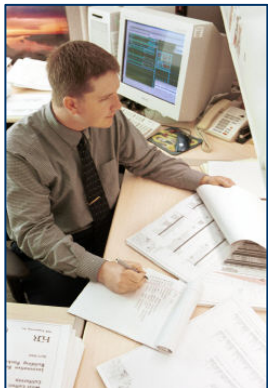
As an integrated firm, HDR provides a total spectrum of services for our clients. Our staff professionals represent hundreds of disciplines and partner on blended teams nationwide to provide solutions beyond the scope of traditional A/E/C firms.



HDR's operating philosophy is to be an expertise-driven national firm that delivers tailored solutions through a strong local presence. HDR's ability to draw upon companywide resources and expertise is a great strength in meeting and exceeding our clients' expectations.

## *About HDR/HLB Decision Economics*

HDR/HLB Decision Economics is a full-service economics and financial consulting firm offering a wide range of research, decision, implementation, and related consulting services in transportation, infrastructure, and policy analysis projects. In continuous operation since 1975, HDR/HLB has built an enviable reputation for technical excellence and supportive client-oriented service. Our staff of economists, statisticians, financial analysts, modelers, planners, and engineers bring a practical approach to each assignment, accompanied by state-of-the-art techniques and processes.



HDR/HLB has authored the Risk Analysis Process<sup>®</sup> (RAP): a unique approach to eliciting, assessing, and mitigating risks. RAP is now being used by numerous agencies and corporations throughout the United States and Canada. RAP is the sole risk analysis tool retained by the Department of Homeland Security for the assessment of all investment projects under the \$10 billion 10-year US VISIT program.

## *Objectives of the Study*

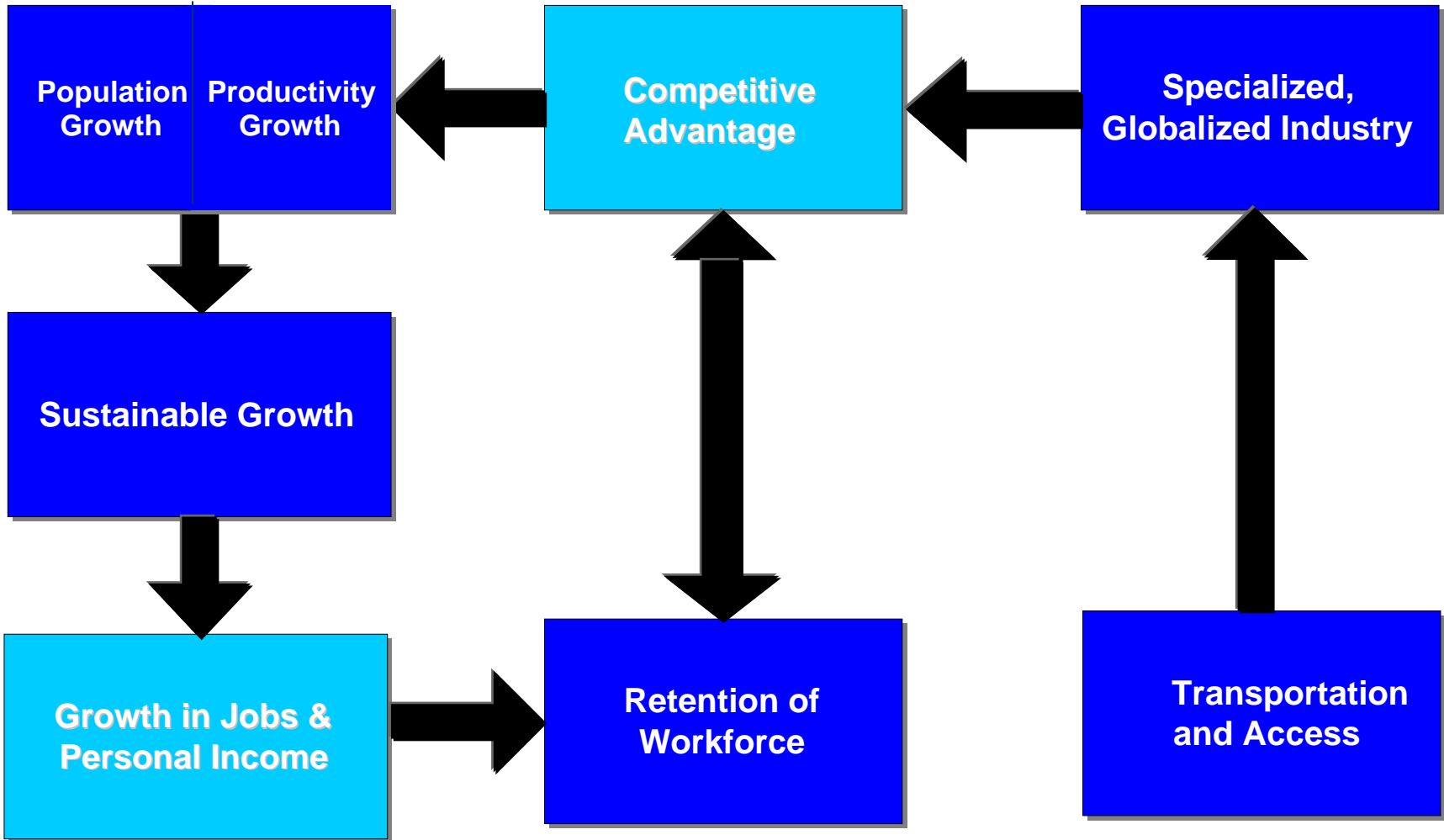
### ◆ Primary Objective:

- Identify what economic, or regulatory, or operational changes would result in traffic and safety conditions that would warrant building a 4-lane on the Theodore Roosevelt Expressway in Montana.

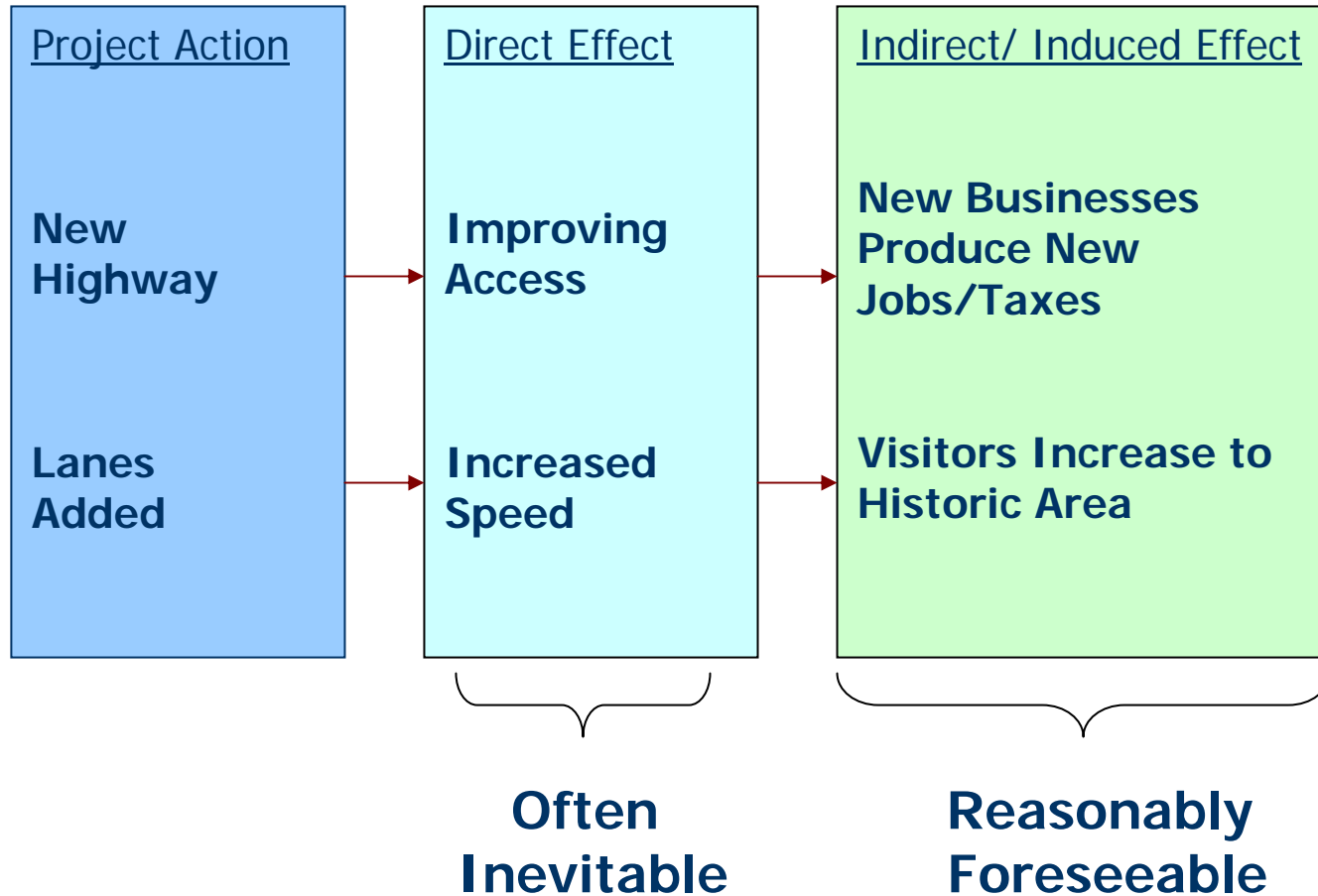
### ◆ Secondary Objectives:

- Assess existing regional economic conditions and development opportunities;
- Develop traffic growth forecast and freight volume projections under existing development plans and regional economic opportunities;
- Develop traffic growth forecast and freight volume projections with induced economic development and travel demand;
- Conduct sensitivity analysis and risk analysis to facilitate consensus building; and
- Engage local stakeholders and the general public.

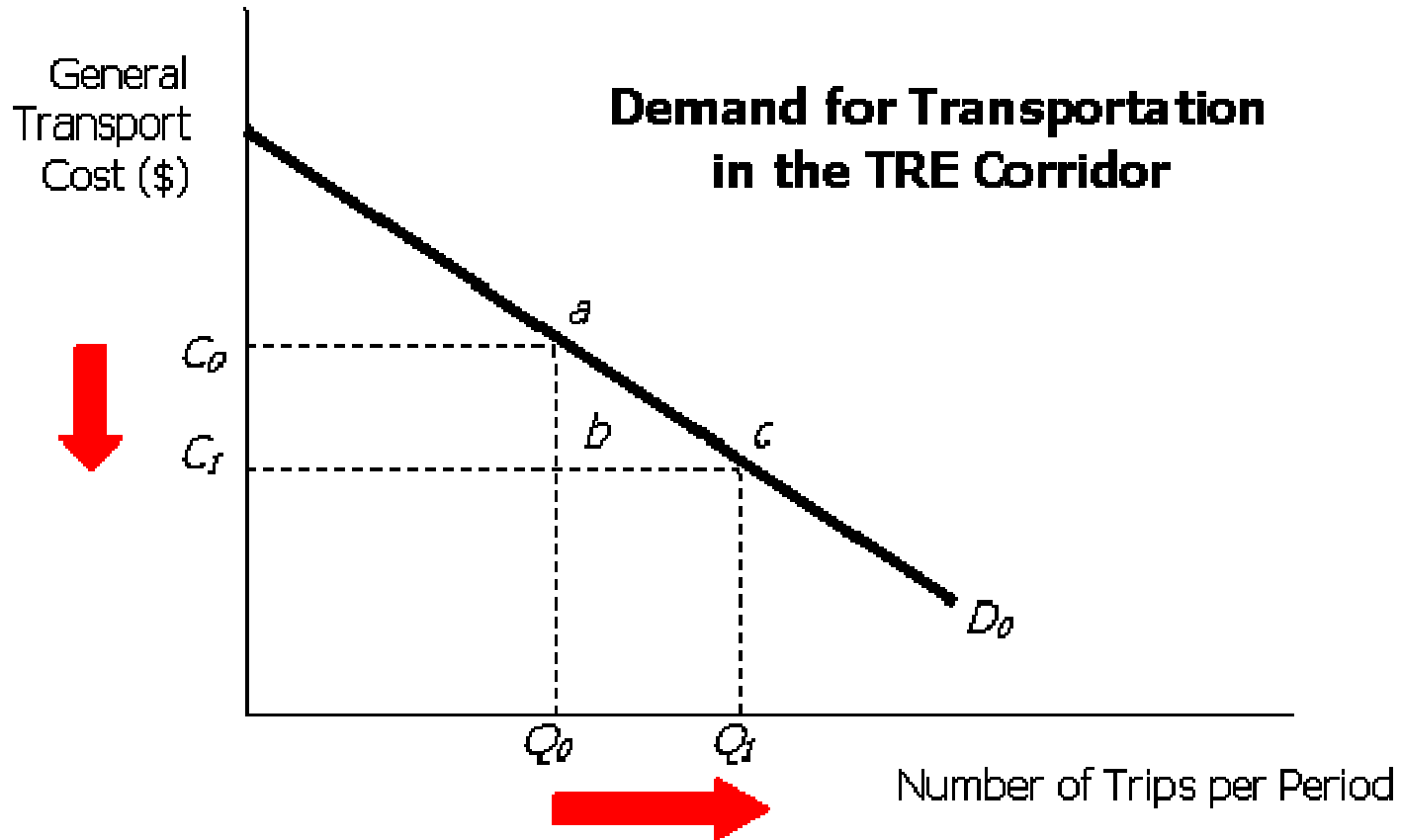
# *Transportation and Economic Development*



# Potential Impacts



## *Demand for Transportation*





## *Economic Development Opportunities*

### ◆ Agriculture

- Loading facilities
- Dairy farms
- Crop diversification
- Organic products
- Bio-diesel and ethanol

### ◆ Energy

- Oil and gas exploration
- Oil refinery
- Wind energy
- Coal facility

### ◆ Tourism

- Dinosaur trail
- Montana cowboy hall of fame
- National and state parks



*Transportation  
Improvements*



## *Our Approach*

### ◆ Information Review

- Review of regional, state and local socioeconomic trends and projections, regional economic studies and industry profiles.

### ◆ Collection of Survey Data and Interviews

- Site visits: corridor and study area, major production and distribution centers, population and employment centers, principal tourist attractions, etc.
- Interviews with local and regional developers and planners, representatives from the grain, oil and tourism industries, business owners, freight forwarders and carriers, etc.
- Mail and/or telephone surveys.

### ◆ Assessment of Existing Economic Conditions

- Overview of the region, population trends, employment and other socio-economic characteristics, regional economic activity by sector, freight movements and traffic conditions

### ◆ Assessment of Economic Opportunities

- Review of existing development plans, opportunities and contingencies by economic sector

## *Our Approach, Continued*

### ◆ Development of Traffic and Freight Volume Projection Model

- Calibrated under two scenarios for US2: upgraded two-lane configuration (baseline) and four-lane configuration
- Output: volume of freight diverted from other routes and corridors, volume of freight diverted from other modes, and net growth in national and international freight movements

### ◆ Sensitivity Analysis

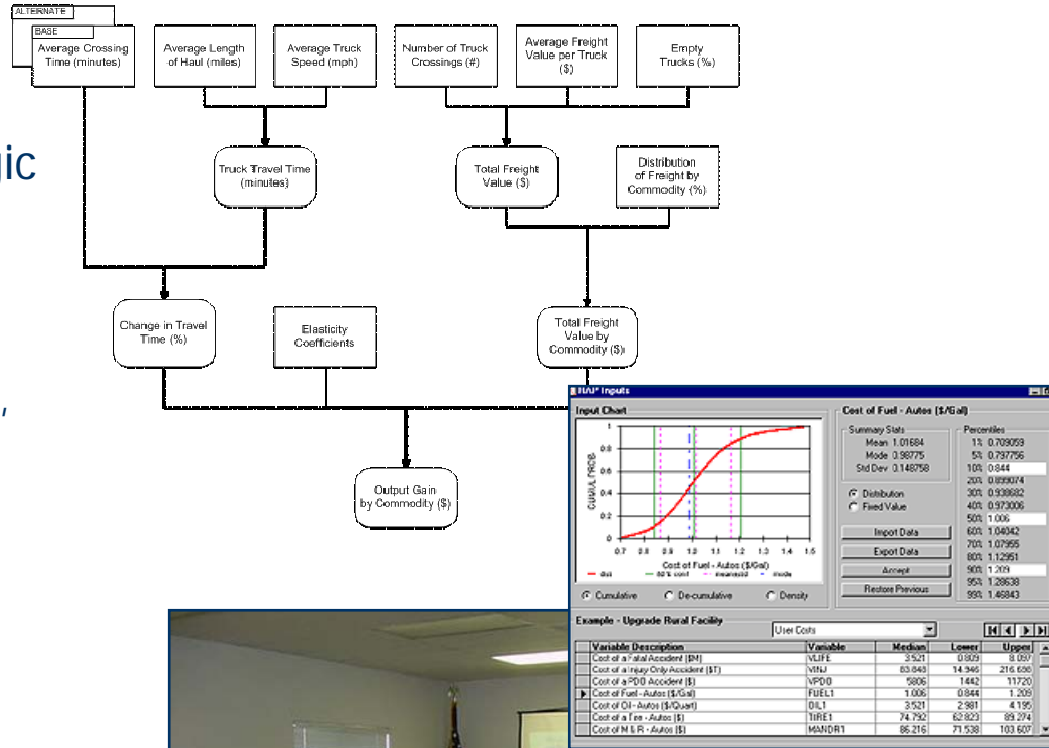
- Test the impact on traffic growth and freight volume projections of changes in truck size and weight regulation within Montana and along the TRE in the study area, in truck hours of operation for trucks entering the US at the Port of Raymond; in rail-related operations (including the consolidation of grain shipments into shuttle facilities); in crude oil exploration costs; and others.

### ◆ Risk Analysis

- Use Monte Carlo simulation techniques to derive probability distributions for US 2 total traffic, truck traffic, and LOS forecasts.
- Evaluate the probability that future traffic will be high enough to justify a 4-lane configuration.

### ◆ Conclusions and Recommendations

# Accounting for Uncertainty: Risk Analysis Sessions



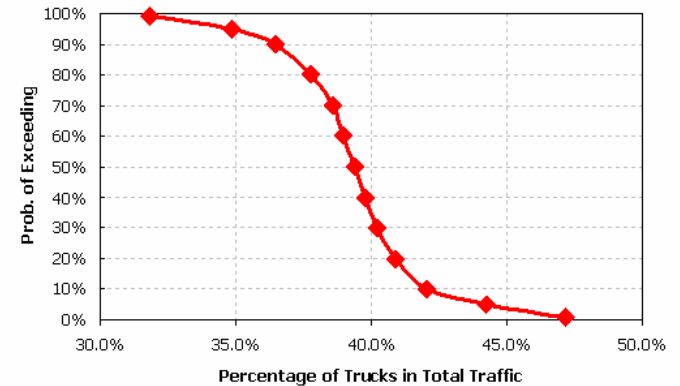
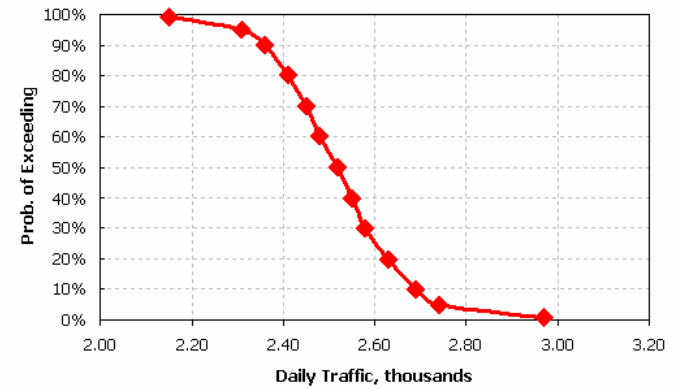
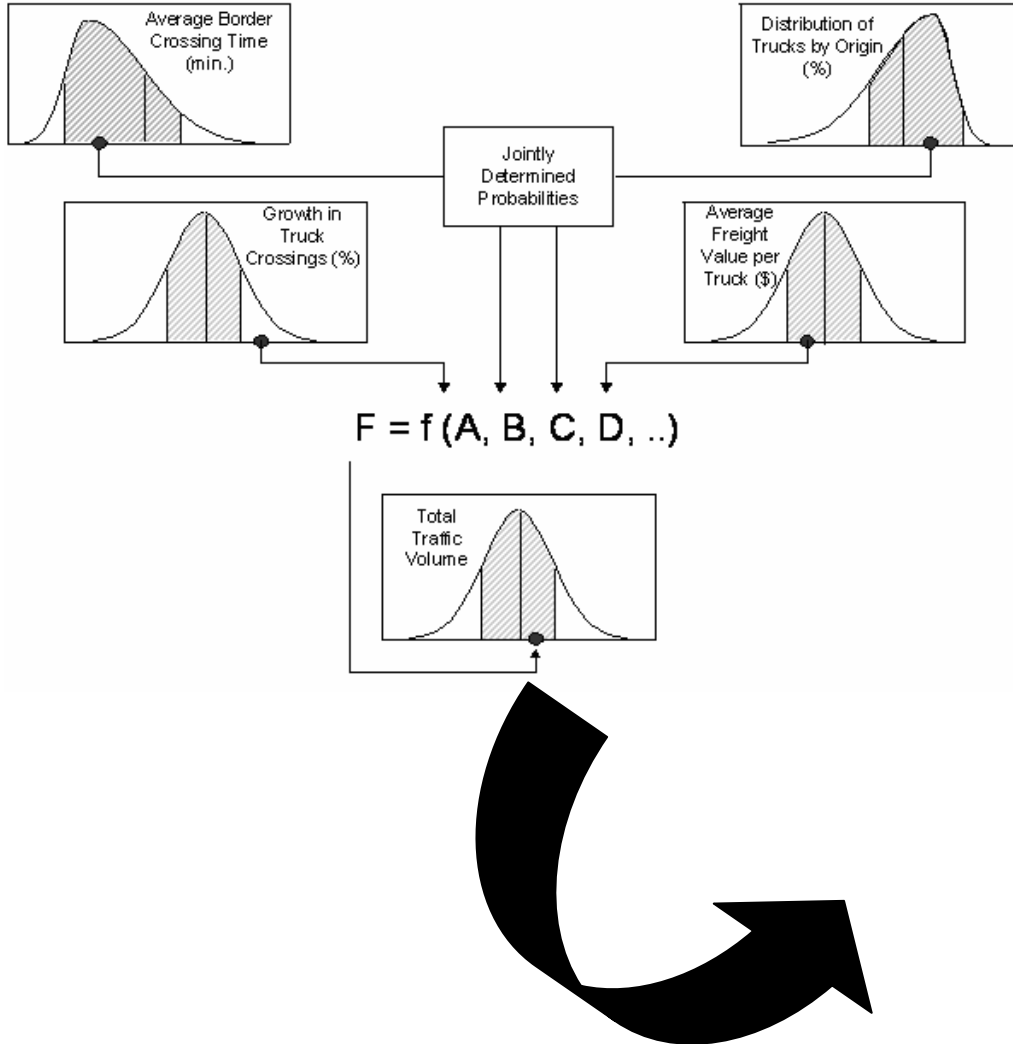
◆ Review all structure and logic models and forecasting assumptions with a panel consisting of:

- Local experts (land use, transportation, socio-economics, demographics, etc.);
- Transportation Planners;
- Land owners and developers;
- Economists; and
- Others.

◆ Revise logic and parameter assumptions through the session, designed to facilitate consensus.



# Accounting for Uncertainty: Risk Analysis Outcomes

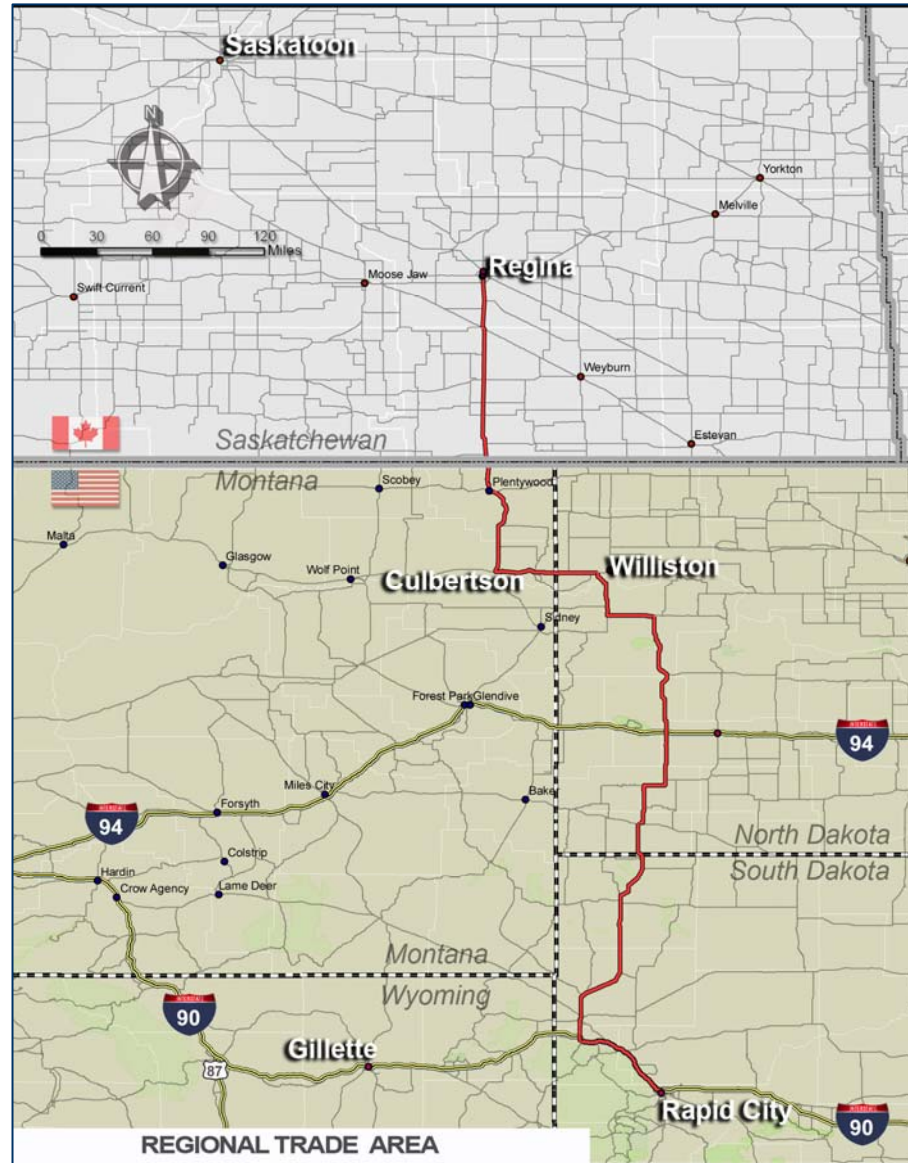


# The Study Area, Level 1

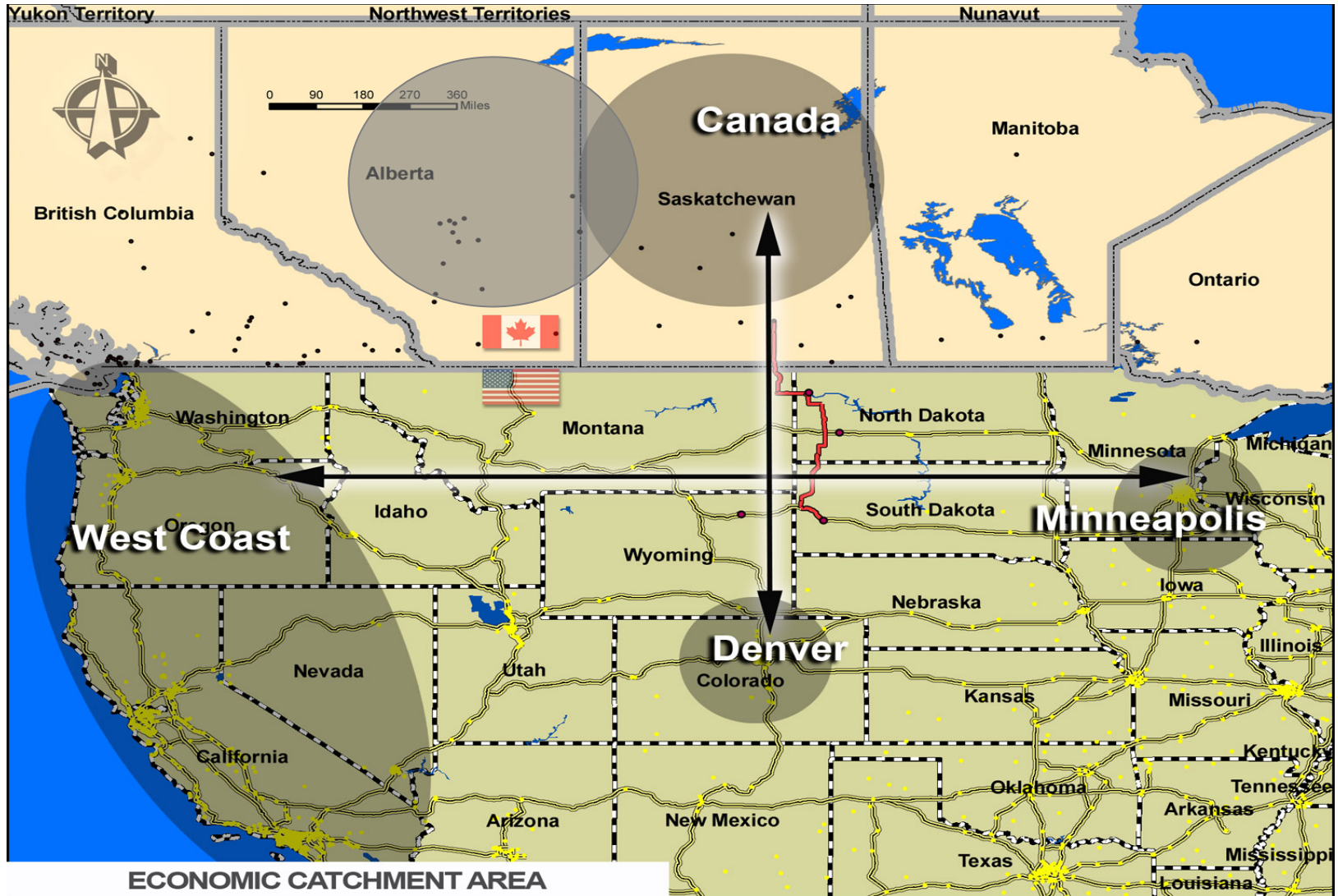




# The Study Area, Level 2



# The Study Area, Level 3





## *Outreach Efforts*

- ◆ **Three public involvement “open house” meetings:**
  - Study objectives and initial assessment of existing regional economic conditions and opportunities
  - Economic analysis outcomes
  - Conclusions and recommendations
  
- ◆ **Two stakeholder workshops (risk analysis sessions):**
  - Model development and economic analysis
  - Study findings, conclusions and recommendations
  
- ◆ **Two executive briefings:**
  - Study objectives, methodology and work plan
  - Study findings, conclusions and recommendations

# Project Schedule

TASKS	PROJECT DURATION								
	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9
	Feb-06	Mar-06	Apr-06	May-06	Jun-06	Jul-06	Aug-06	Sep-06	Oct-06
<b>Task 1 – Assessment of Existing Regional Economic Conditions and Opportunities</b>									
1.1 Project Initiation, Initial Data Collection and Information Review <i>Annotated Bibliography / Technical Memorandum</i>	■	■							
1.2 Study Kick-off Meetings <i>Executive Briefing Outline</i>	■	◆							
1.3 Collection of Survey Data and Interviews <i>Data Collection Plan / Dataset and Documentation</i>	■	■	■	■					
1.4 Assessment of Existing Economic Conditions: Data Analysis and Reporting <i>Working Paper #1</i>			■	■	■				
1.5 Assessment of Economic Opportunities: Data Analysis and Reporting <i>Working Paper #2</i>			■	■	■	■			
1.6 Public Involvement Meeting, "Open House" <i>Support Material</i>					■	■	■		
<b>Task 2 – Economic Analysis</b>									
2.1 Model Development <i>Working Paper #3</i>			■	■	■	■	■		
2.2 Traffic Growth Forecasts and Freight Volume Projections under Existing Development Plans and Regional Economic				■	■	■	■		
2.3 Traffic Growth Forecasts and Freight Volume Projections with Induced Economic Development and Travel Demand <i>Working Paper #4</i>					■	■	■		
2.4 Stakeholder Workshop <i>Reference Book and Work Book</i>						■	■	■	
2.5 Sensitivity Analysis and Risk Analysis <i>Working Paper #5</i>						■	■	■	
2.6 Economic Analysis Public Involvement "Open House". <i>Support Material</i>						■	■	■	
<b>Task 3 – Conclusions and Recommendations</b>									
3.1 Reporting <i>Draft Final Reports</i>					■	■	■	■	■
3.2 Stakeholder Workshop <i>Work Book</i>							■	■	■
3.3 Executive Briefing <i>Executive Briefing Outline</i>								■	■
3.4 Public Involvement Meeting, "Open House" <i>Support Material</i>							■	■	■
3.5 Revisions and Distribution <i>Final Reports</i>								■	■

Legend:  
 ■ Task Duration  
 ◆ Deliverable or Milestone

- Expected completion date: **October 2006**
- Assessment of existing conditions: **February – June**
- Model development: **April – July**
- Sensitivity analysis and risk analysis: **July – August**
- Conclusions and recommendations: **October**
- Public involvement meetings: **Late June, Mid-August and Early October**
- Stakeholder workshop: **Early August and Late September**

*Questions?*



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