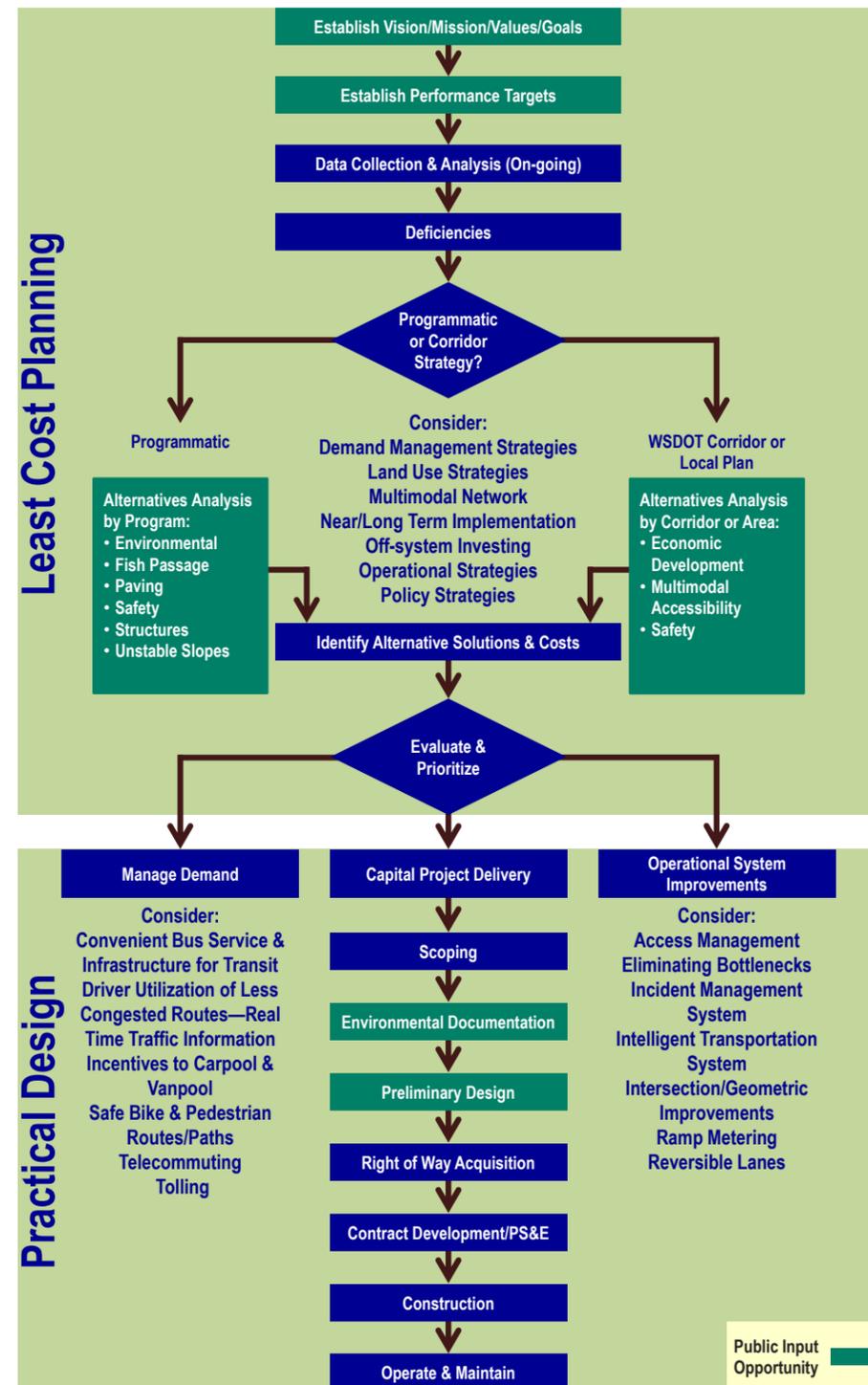


## Practical Solutions How a Collaborative Transportation Solution is Implemented



## Moving Washington Forward: Practical Solutions

Transportation infrastructure investment decisions have wide-ranging implications for the long-term sustainability of our community, economy, and environment. The systems built over the last half a century have fueled strong economic growth, but those systems are in urgent need of repair and maintenance. Looking into the future, by 2030 Washington state's population forecasts indicates Washington will grow by over one million people. This will place more pressure on the already overburdened transportation system. The past approach to transportation system investment is no longer affordable or sustainable. Least cost planning and practical design are two important reforms WSDOT is undertaking to make more sustainable transportation investment decisions.

### Least Cost Planning

#### What is least cost planning?

Least cost planning is an approach to making planning decisions that considers a variety of conceptual solutions to achieve the desired system performance targets for the least cost. Central to least cost planning is a process that engages the public, applies methods to evaluate planning options, and how to select options.

#### Why is collaboration the essence of least cost planning in establishing visions and goals early in the planning process?

A key step early in the planning process is to set vision and goals that reflect a community's values and stakeholders agree to support. It is the first opportunity for public stakeholders to provide their input. In order to facilitate collaboration, a review and reflection of local and regional planning goals are also considered. At the system wide level, a broad range of transportation, community, and environmental goals are studied. At a corridor level, the key decision is determined by the goals approved in the system planning process but are tailored to reflect unique characteristics of the corridor under study. This in turn informs the purpose and need for projects in environmental review.

#### How do you reflect least cost planning principles when establishing performance targets and evaluation criteria?

A performance target is the desired level of performance the community wants to achieve. Under least cost planning, establishing performance targets relies upon a good understanding of what is important to the community and has a realistic chance of achievement. It also involves the selection of performance indicators. At system level, for example, performance targets can include:

- Community development (sense of place, safety, and public health)
- Economic (economic revitalization and development)
- Environmental sustainability (air quality, open space, greenhouse gas emissions)
- Equity (affordable housing and mixed-income communities)
- Land use and growth management (compact, mixed-use development)
- Transportation (walkability, accessibility, and transportation choices)

At corridor level, performance indicators are essentially evaluation criteria used to gauge the performance of various alternatives under consideration.

### Least Cost Planning

Least cost planning is an approach to making planning decisions that considers a variety of conceptual solutions to achieve the desired system performance targets for the least cost.

WSDOT is initiating renewed focus on least cost planning in May 2014.

Using least cost planning will help ensure the best use of limited transportation funds.

## How do you identify transportation deficiencies and needs?

Selected performance targets identify transportation deficiencies or needs and gauge success at achieving the desired outcomes. At the system level, the identified deficiencies or needs is a list of specific corridors, facilities, and areas that are deficient and need improvement. Least cost planning serves as a basis for a review of problems and opportunities addressed in corridor planning, program development, and environmental processes.

## Are there improvement strategies and alternatives available?

At the system level, strategies by programs, such as maintenance, safety, operation, fish passage and wildlife habitat, mobility, and access address the deficiencies identified. Key factors considered in developing system strategies under least cost planning include:

- Stakeholder input
- System effects and resiliency
- Linkage to land use
- Broad implications such as public health, global climate, and economic development
- Consistency/coordination with regional and local plans
- Near-term/long-term implementation

In some cases, after addressing programmatic issues at the system level, considering corridor level strategies that focus on the following types of deficiencies is appropriate:

- Safety
- Operation efficiency
- Mobility and economic development
- First and last mile community and business access
- Multimodal and travel options
- Intermodal connections

## How do you evaluate and select least cost, the maximum return option, or mixed options?

This is the key step in the least cost planning process in which stakeholders engage in evaluating the social, environmental, and economic costs and benefits of the strategies and alternatives identified in the prior step. It involves employing least cost methodology systemically and transparently to identify strategies or alternatives that provide the best value for money to support investment decisions. Under least cost planning, factors (direct and indirect costs) considered in evaluating alternatives should include, at a minimum:

- Costs and benefits of any policy changes that are part of the strategy or alternative
- Costs of potential environmental damage
- Costs of collisions and traffic generated or reduced
- Time and cost barriers and consequences for all modes and user groups
- Population groups who bear the costs and who accrue the benefits
- Energy efficiency and air emissions
- Distinctions between long, medium, and short-term impacts
- Community characteristics (context sensitive)



## Practical Design

The outcome of least cost planning is a recommended set of multimodal strategies that are cost effective and still meet the goals and objectives set early in the planning process. Recommended capital investment concepts carry forward to the project development stage.

### What is practical design?

Practical design is an approach to making project decisions that focuses on the need for the project and looks for the lowest cost solutions. It engages local stakeholders at the earliest stages of defining scope to ensure their input is included at the right stage of project design.

### What is different about practical design?

With practical design, decision-making focuses on maximum benefit to the system, rather than maximum benefit to the project. Focusing on the specific project need minimizes the scope of work for each project. The goal is to allow more needs to be addressed system wide by reducing spending on lesser priority items on each project.

### Why use practical design?

Technology and society are evolving and changing the needs and demands on the transportation system. Practical design encourages efficient, effective, and sustainable transportation decisions that can achieve:

- Maximum results within limited funding
- Tailored solutions for the project's purpose and need
- Phased solutions that address more critical and current needs
- Design guidance that transitions from a rigid structure to a more flexible framework
- Freedom to innovate

### What are the principles of practical design?

Practical design is an important component in implementing WSDOT's strategic plan:

- Innovation and solutions are encouraged
- No compromises to safety
- Community engagement is important to making decisions
- Collaboration ensures a wide array of perspectives

By using practical design, project decisions will build the most efficient solutions for the state's transportation needs.

### Do you want to learn more about least cost planning and practical design?

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## Practical Design

Practical design is an approach to making project decisions that focuses on the need for the project and looks for the lowest cost solutions.

WSDOT formally kicked-off its practical design effort in November 2013.

Looking at what other DOT's experience, WSDOT is expecting savings of up to 15% on selected projects.

