WSDOT: Practical Solutions

Nancy Boyd, P.E., L.E.G.
Director, Engineering Policy and Innovation

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We’ve (all) come a long way, baby

• The interstate system is, pretty much, done
• National design guidance has improved consistency
• Vastly improved safety
• At WSDOT, we are completing the largest capital delivery program in our history
Themes/Trends

- Autonomous Vehicles
- Connected Vehicles
- Intelligent Transportation Systems
- Millennials
What’s next?

• Aging infrastructure
• More problems than $$ to fix
What to do about it?

• Transforming our approach to finding practical transportation solutions
• The goal: fix more problems, system wide
Implications

• Policy
• Guidance/direction
• Training
• FHWA’s performance-based practical design initiative
Implementation challenges/opportunities

• WSDOT Project Development Training program has been decimated
• New/emerging tools for design/safety analysis
• Planning/political process, habits
• Evolving environmental considerations
• Constant push for regulatory reform
What have we done?

• Define practical solutions (how big?)
• Policy
• Guidance
• Training
What we are doing

• Support decisions that will focus on the need for the project
• Move from a standards-based to performance-based designs
• Empower agency staff to make decisions
• Provide tools that support decision making
• Support our staff through training and development
WSDOT’s Practical Solutions

Least Cost Planning       Practical Design
How WSDOT defines Practical Solutions

• Performance Based vs. Standards Based
• Focus on need and least cost solution
• Results geared to benefit the Transportation System
• Emphasis on Community Engagement
• Interdisciplinary and collaborative decision making
• Design based on context → land use and transportation
• Data driven strategies
Key Elements of Least Cost Planning

**Set goals and performance targets** - *What do we want to accomplish?*

**Identify strengths and challenges** – *In what ways are we achieving our goals? What obstacles are keeping us from getting there?*

**Develop options** - *What action is needed to maintain what is working well? What strategies are available to address the problems?*

**Evaluate and prioritize** - *Which strategies will most effectively achieve our goals given our limitations and strengths?*
Practical Solutions:
What it is vs. What it is not

What it is

• Focuses on project purpose and need
• Engages local stakeholders at the earliest stages of defining scope to ensure their input is included

What it is not

• Does not compromise safety
• Is not a "new tool" or "new method"
• Not an excuse to usurp environmental process
Focus areas

- Major WSDOT Design Manual changes
- Multimodal, demand management, operational, and off-system strategies
- Incremental solutions (as opposed to all-in-one projects)
- CSS, implemented more fully

Road Diet Images Credit: League of American Bicyclists
Practical Solutions is integrated with Connecting Washington implementation efforts

**Practical Solutions Committee formed in September 2015**

- Composed of WSDOT leadership team, programs, modes, regions; FHWA
  - Multidisciplinary review of every Connecting Washington Project
  - Identifying best practices for statewide implementation
- Forum for learning and sharing how we will deliver at the lowest cost
- Encourages innovation and creativity in design approach
- Savings achieved now will fund future preservation and capital projects
Secretary’s Practical Solutions Committee

- Developing Need Statement
- Alternatives analysis/NEPA
- Project Definition
- Design
- PS&E
- Contract Ad & Award
The Importance of Context in Roadway Design
Land Use and Transportation Planning Linkage: The Seabrook Example
Progression of Development

50 MPH

40 MPH

35 MPH

Proposed 25 MPH
Fixing more problems, sooner

Slater Road
Compact Roundabouts
Next Steps

• WSDOT Design Manual – big changes in 2015, 2016

• Priority training needs
  – Practical solutions/project development process training
  – Multimodal design training
  – Highway Safety Manual Implementation
  – Later… LCP and multi-strategy cost estimating
Results

- Transportation new revenue package
- Allows for $16 billion in new construction
- Improves port access
- Adds capacity
- Improves east/west trade corridors
- Helps reliability of ferry system
- Helps trucks and trains move safely and quickly through new freight grade-crossings
Future: Savings are re-invested

• Practical design savings will be reported on annually.
• Savings will be set aside to fund emergent future transportation needs.
• Starting in 2024, money’s from the savings may be appropriated equally to fund improvements or preservation projects.
Lessons Learned

• Political support for practical solutions to transportation infrastructure.
• Cookie cutter approach to project design is obsolete.
• Collaboration improves the quality of project’s effect on the multimodal transportation system.
• Small fixes can make big differences.
• Learning/sharing/trust
Thank You

Nancy Boyd, P.E., L.E.G
Director, Engineering Policy and Innovation
boydn@wsdot.wa.gov
360.705.7252

Practical Solutions
- Performance-Based designs
- Maximizing safety system-wide
- Encouraging innovation
- Cost-effective solutions

Resources

- WSDOT’s Gray Notebook
- WSDOT Before and After Folio
- Performance Measurement Folio
- Moving Washington Forward: Practical Solutions
- WSDOT Design Policy Site
- WSDOT Community Design
- FHWA’s Performance-Based Practical Design
- FHWA’s Context Sensitive Solutions
- The Innovative DOT: A Handbook of Policy and Practice
- Highway Safety Manual