SCOH Update
May 6, 2008

Accelerating solutions for highway safety, renewal, reliability, and capacity
Funding

- Nearly half of the projected $150 million has been appropriated so far
- Annual amount depends on appropriations process
- Technical corrections bill ...
Expert Task Groups

• 40+ formed to date

• Two types:
  – RFP/proposal review
  – Expert assistance to TCCs

• Approximately 400 people have served
  – More than half from state DOTs
Current Projects

• 32 under contract;
  9 Safety         13 Renewal
  5 Reliability    5 Capacity

• This represents half of currently planned projects and commits a third of the research funds

• 161 contractors (primes and subs)
  – US academic: 12 primes, 36 subs
  – US private: 20 primes, 80 subs
  – US public: 3 subs
  – International (all sectors): 10 subs
2008 Projects

- 6 RFPs released 3/11, due 4/22
- 10 additional projects for 2008:
  - 6 RFPs to be released 7/29, due 9/9
  - 4 projects handled differently: 2-stage process or extension of current contract
- 2008 projects come to $48 million and represent 43% of total research funds
- By the end of 2008, 80% of the work will be under way.
Highlights—Safety

• Finalize sample design: driver and vehicles factors (S05)

• Selection of sites for field study (S07)
  – Urban, rural, suburban
  – Weather, topography, design factors
  – Other data sources
  – Qualified contractors

• Rodeo to test roadside/roadway data collection capabilities (S03/S04)
Renewal

• Forthcoming results:
  – Approaches for mitigating impacts of utility relocation (R15)
  – Evaluation, ranking, and classification of bridge components that minimize or eliminate problems with durability and structural performance (R19A)

• Refined research plans:
  – Locating underground utilities (R01)
  – Non-destructive testing (R06)

• Stayed tuned for demo projects in later years
Travel Time Reliability

• Project L06 (PB Consult)
  – Workshop on Institutional Barriers to Non-Recurring Congestion Management Strategies

• Project L03 (Cambridge Systematics)
  – Potential Operations Performance Measures and Mitigation Strategies for Evaluation

• L01 (Midwest Research Institute)
  – Identification of Case Studies of Successful Integration of N-RC Operations Business Processes
Implementation Report

• Due to Congress in February 2009
• Describe implementable products, customers, barriers, etc.
• Recommend implementation methods, mechanisms, structure
• Estimate required resources
• Requires separate committee
• New position just advertised
Capacity Research Program
Collaborative Decision-making Framework

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To develop approaches and tools for systematically integrating environmental, economic, and community requirements into the analysis, planning, and design of new highway capacity.
Underlying Principles Of SHRP 2 Capacity Research

• By taking a systems approach to collaborative decision making, we can deliver better projects and reduce the risk of delays and the associated cost increases

• The collaborative decision-making framework will systematically incorporate principles in ISTEA, TEA-21, and SAFETEA-LU

• Successful practices will be easier to replicate

• Framework focuses on decision points; each state reaches those points in its own way

• Ensure that the right people are at the table at the right time with the right information
The Capacity Research Program

• 17 Projects
• $18 million
• Four Themes/Products
  – Collaborative Decision Making Framework
  – Surface Environmental Protection
  – Modeling partnership
  – Economic Impacts
The Collaborative Decision-Making Framework

- 9 Projects, $7.825 mil
  - Collaborative Framework and Integration (C01&C07)
  - Systems-based Performance measures (C02)
  - Community visioning and impacts (C08)
  - Greenhouses gases (C09)
  - Effect of PPPs on decision-making and planning (C12)
  - Full Fiscal Impact of Highways (C13)
  - Multi-Agency Change Management (C14)
  - Trucks and Freight (C15)

- This is a re-casting of the way decisions are reached. Revolutionary in its implications.
- Will ultimately have a searchable, web presence
- Audience: DOTs, Transportation Commissions, MPOs, Public.
Framework Description

• Framework Definition
  – Series of key decision points properly sequenced and detailed to support collaborative decisions for capacity projects

• Key decision points:
  – Steps in the decision making process where general work activities require approval from higher levels of authority or where consensus needs to be reached among many decision makers before the project can advance
Description: Core Processes

Subprocesses (examples)

- Air Quality Conformity
- Financial Constraint

Influencing Processes (examples)

- Conservation Planning

Key decision points take place along this process
Streamlining

- There are many key decision points as shown in the next slide. They are being identified through a series of 6 workshops with State DOT, MPO, and federal representatives.

- Opportunities to speed up the process will be identified: early and effective consultation, doing KDPs in parallel when possible, not redoing steps, and handing off information from one step to the other.

- SHRP 2 must work within current laws and regulations.
Design Goals

• Establish tiered decision making approach to capacity improvements which encourages binding decisions at the earliest possible point even when these decisions are only partial or qualified due to timing or level of information available to support them.

• Establish a decision making approach which is built on early and on-going involvement of formal decision makers and individuals in positions of authority who have the potential to veto or significantly impact the timely and cost effective delivery of transportation improvements.

• Establish a decision making approach which identifies participant roles and responsibilities including the scope and extent of decision making responsibility at each key decision point.

• Establish collaborative decision making practices.
Design Goals

- Encourage a decision making approach which evaluates transportation needs within broader **community and natural contexts**.
- Integrate **land planning and development** policy.
- Integrate **capital improvement** planning.
- **Address sustainability** issues to the greatest extent possible.
- Integrate protection and enhancement of the **human and natural environment**.
- Support **community goals and visions**.
Surface Environmental Protection

- Ecological Integration of Conservation, Highway Planning, and Environmental Permitting: $1.5 million (C06A&B)
  - Wetlands
  - Endangered Species
  - Habitats
  - Water Quality
  - Multi-purpose credits system

- Audience -- DOTS, Resource Agencies, Public, NGOs,
Advanced Modeling and Networks Partnership

• 3 Projects $5.5 mil
• Partnerships with an MPO or State to Operationalize and test an advanced demand model with a time-sensitive network
• Embed SHRP 2 products C04 on behavioral response to congestion and pricing and C05 on sustainable throughput increases that can be achieved with corridor management
• Audience – modelers, analysts, decision makers
Economic Impacts of Transportation Investments

- C03 - 50 + case studies in a typology and case-based reasoning framework. Web-based analytical product
- C11 - Integrate case-based and analytical approaches
- Audience – non- economists, decision makers
Opportunities for State Participation

- C01 – Workshops (now) and Table top exercises (fall)
- C02 – FYI, Performance measures framework out this spring
- C03 – Suggestions for economic impact case studies: now
- C05 – Need good arterial flow data: now
Questions?