Bow-Concord I-93
Transportation Planning Study

Project Overview Presentation

New Hampshire DOT

Agenda

1. Introductions/Committee Overview
2. Selection of Chairperson
3. Project Overview & History
4. Project Development Process
5. Study Methodology
6. Public Participation Process Overview
7. Proposed Project Schedule
8. Discussion
9. Public Comments
10. Next Meeting

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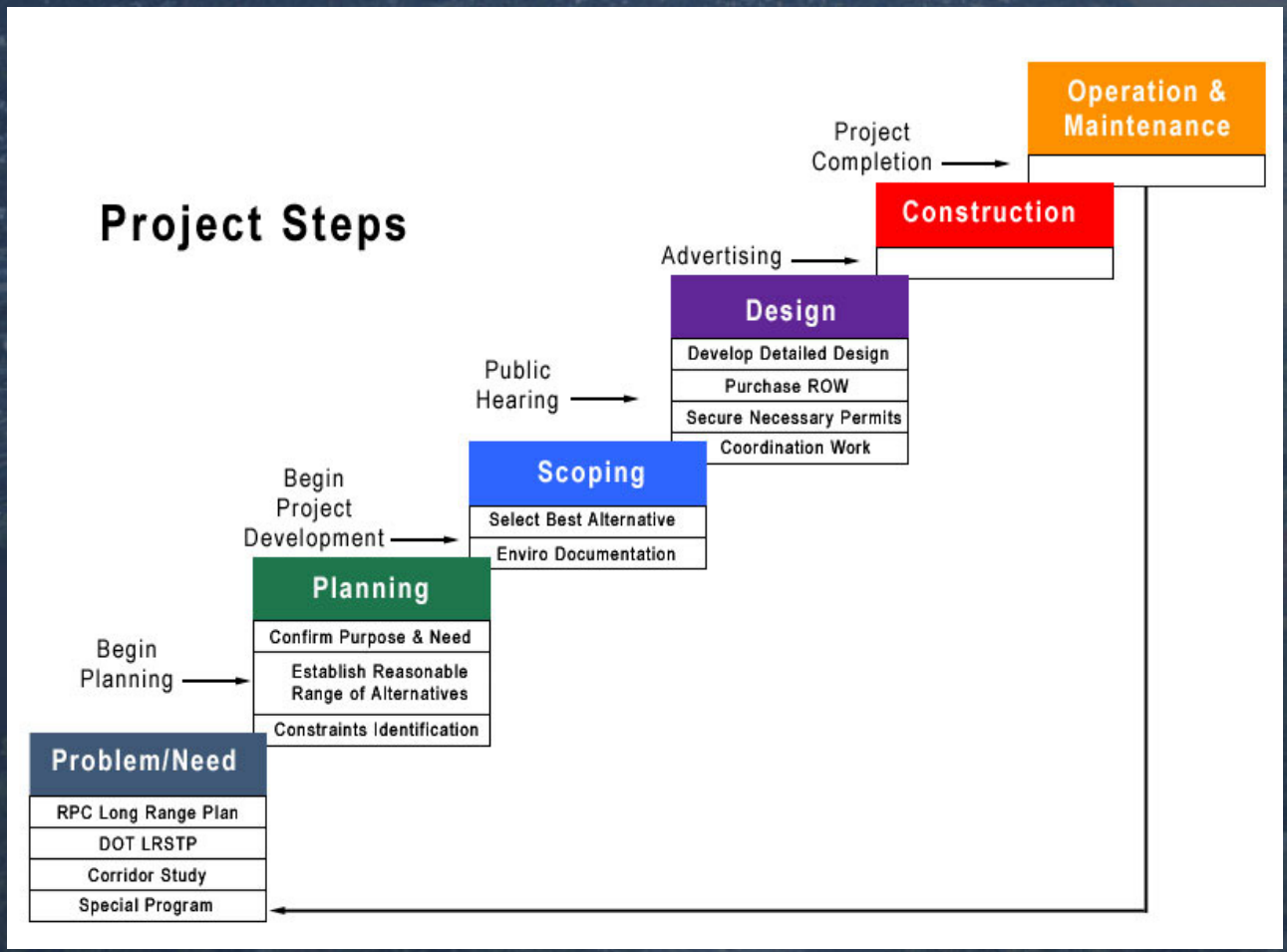
Project Overview/History

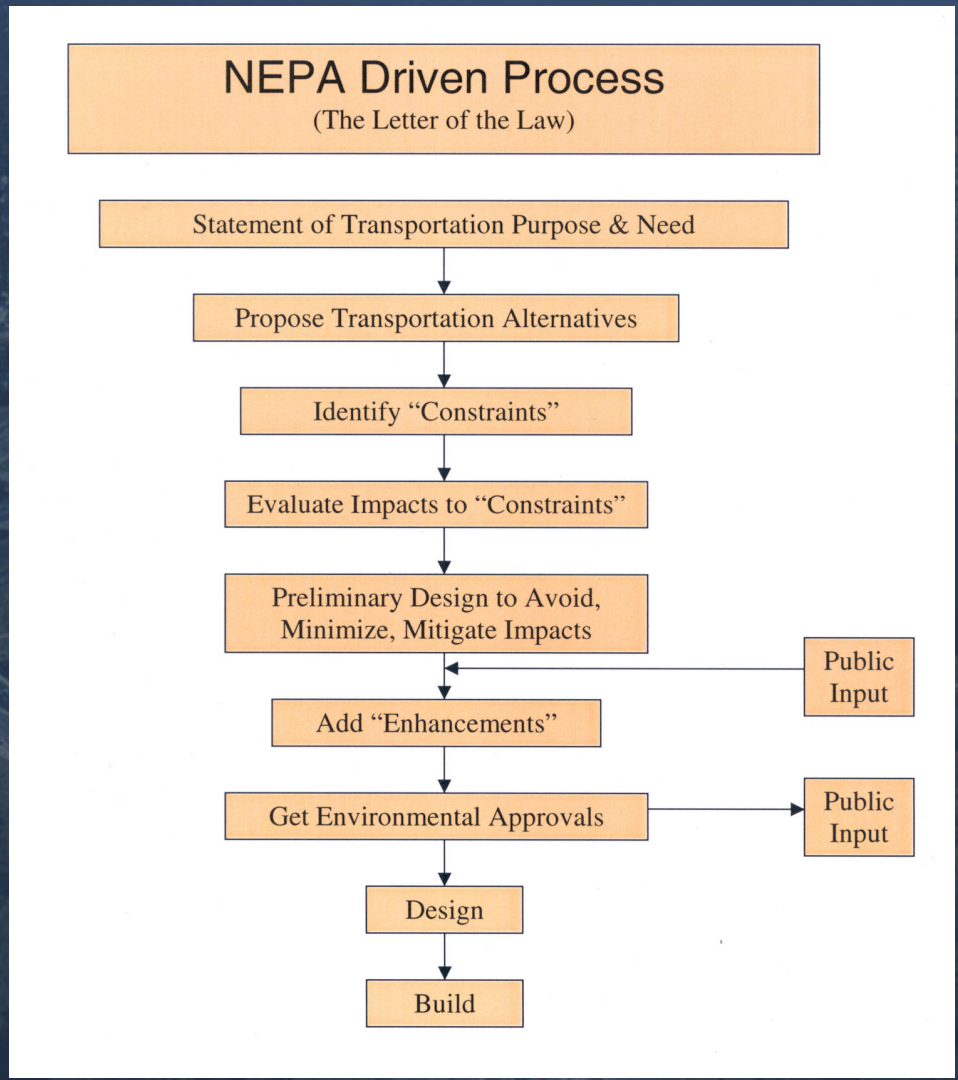
1992 I-93 Feasibility Study

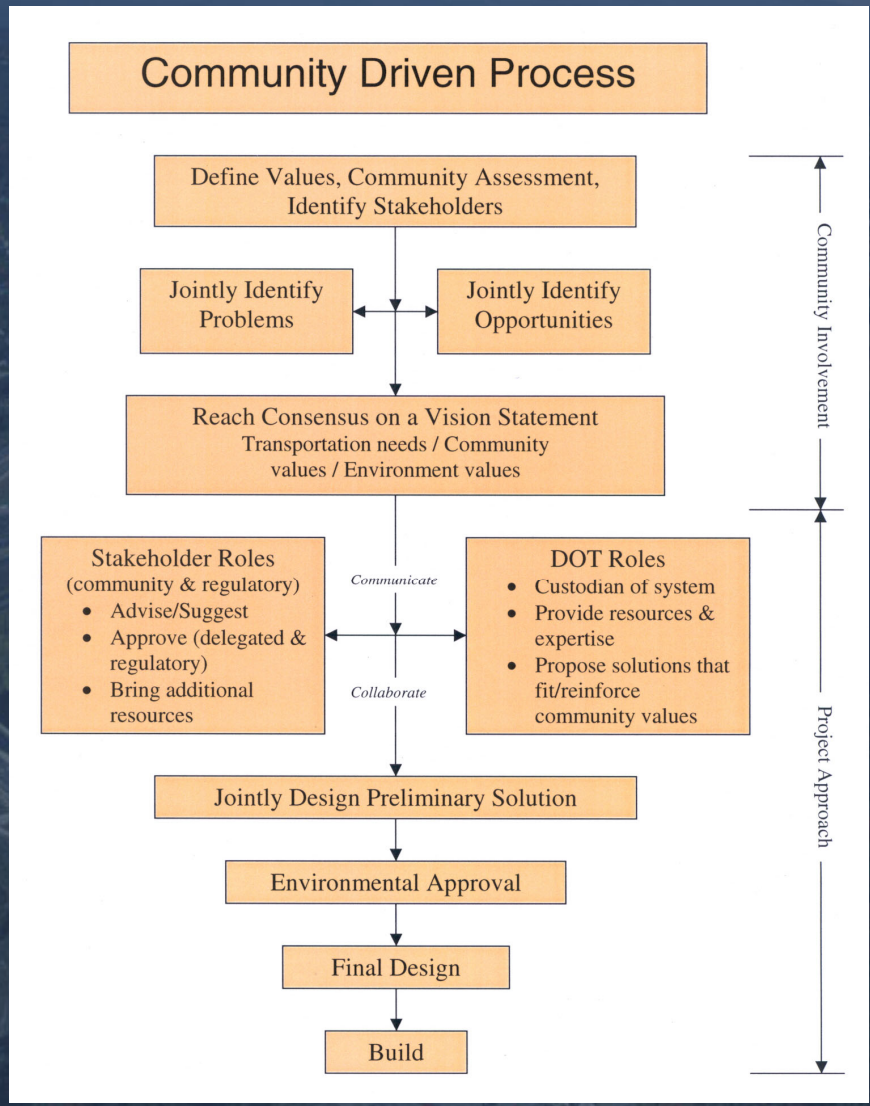
Exit 13 Improvements

2020 Vision for Concord

Project Development Process




NEPA Driven Process
(The Letter of the Law)
Statement of Transportation Purpose & Need
Propose Transportation Alternatives
Identify "Constraints"
Evaluate Impacts to "Constraints"
Preliminary Design to Avoid, Minimize, Mitigate Impacts
Public Input
Add "Enhancements"
Get Environmental Approvals
Public Input
Design
Build


Community Driven Process
Define Values, Community Assessment, Identify Stakeholders
Jointly Identify Problems
Jointly Identify Opportunities
Reach Consensus on a Vision Statement
Transportation needs / Community values / Environment values
Stakeholder Roles
(community & regulatory)
Advise/Suggest
Approve (delegated & regulatory)
Bring additional resources
Communicate
Collaborate
DOT Roles
Custodian of system
Provide resources & expertise
Propose solutions that fit/reinforce community values
Jointly Design Preliminary Solution
Environmental Approval
Final Design
Build
Community Involvement
Project Approach

Project Team

CATF
Town of Bow
City of Concord
Town of Pembroke
Concord 2020
Central NH Regional Planning Commission

NHDOT
Owner
Don Lyford-Project Manager
Ansel Sanborn- Administrator
Transportation Planning

Technical Review Committee
NHDOT
Town of Bow
City of Concord
Town of Pembroke
Central NH Regional Planning
FHWA
Resource Agencies

McFarland-Johnson, Inc.
Rick Woidt, PE-Public Participation
Gene McCarthy, PE-Engineering/System Planning
Jed Merrow, Environmental

Transystems
John Reed
Railroad Considerations

RSG
Steve Lawe
Transportation Modeling

Saucier & Flynn
Bill Flynn
Design Visualizations & Perspectives

AER
Russ Tibeault
Economic Considerations

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Transportation Considerations

I-93 Widen to Six Lanes
I-93 Westward Alignment Shift
Grade Reversal of Exit 14
Reconfiguration of Exits 14 & 15
Possible Connection from I-89 to 106
Exit 2 1/2 on I-393
Exit 16 1/2 on I-93
Exit South of I-89
Commuter Rail Preservation
Pedestrian & Bicycle Access
Merrimack River Access
Visual Aesthetics

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Study Methodology

Engineering/System Planning

- Data Collection/Base Plans
- Transportation Modeling
- Traffic Analysis
- Alternatives Development

Transportation Modeling

Updated CNHRPC Transportation Model

- Expand the model geographic boundaries
  - 12 Towns
  - 240 TAZ's (214 internal & 26 external)
- Add year 2000 data
  - Housing data from 2000 census
  - Employment data from State of NH
  - Updated roadway network from CNHRPC
  - Vehicle count data for year 2000 calibration
- Converted from vehicle to person based
  - Estimate person trips rather than vehicle trips
  - Use a mode split module to estimate transit & vehicles

Transportation Modeling

Model Process

Estimate trip characteristics using:
- Census journey to work data
- Available trip diary survey data
- NH statewide stated preference & household survey

Calibrate model and calculate accuracy
- Compare vehicle results to count data
- FHWA standards (0.88 correlation coefficient)

Transportation Modeling

Model Overview:

- Base model is 3rd Friday in July, 2000
- AM, PM, Off-Peak hours of analysis
- Auto, Shared Ride, Bus, Rail, Walk/Bike

Model Definition: 4-step approach

- Step 1: Person Trip Generation
- Step 2: Person Distribution
- Step 3: Mode Choice
- Step 4: Vehicle Assignment

Transportation Modeling

Model Operation – What To Expect

Example: auto volumes on a road increased due to a major roadway investment. WHY?

- Did land use change? (land use)
- Was there induced demand – released suppressed demand (trip generation)
- Did people change their trip ends – go somewhere different (trip distribution)
- Did they use more automobiles (mode choice)
- Did people change their routing changes (assignment)

Transportation Modeling

Model Operation – What To Expect

Primary, secondary, tertiary impacts
- Increased congestion may cause route changes
- Decreased congestion may increase trip lengths

Importance of policy decision making
- What is our goal?
- How should we use these interesting dynamics to meet our goal?

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Transportation Modeling

Using the Model for the Bow-to-Concord Study

- Establish a baseline condition (year 2000)
- Define purpose and need
- Develop a set of scenarios. For each scenario:
  - What land use impacts will result
  - Code and run the transportation scenario
  - Extract the roadway and intersection results
  - Account for model error (base model vs count)
- Perform LOS and other analyses

Transportation Modeling

Using the Model for the Bow-to-Concord Study

The transportation model is a tool
- Test scenarios
- Spend time to ensure that results are understood
- Retain a high level of thought-to-run ratio
- Make sure the assumptions are clearly stated

Inform "mental model"
- We have a notion of how travel patterns work
- Inform and alter your mental model

Gain a group understanding of system
- Learning from the model and others participating

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Study Methodology

Traffic Analysis

- I-93
- Ramps
- Weaving Sections
- Traffic Needs Study

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Study Methodology

- Environmental
  - Data Collection
  - Resource Identification
  - Agency Coordination
  - Potential Resource Impacts
  - Screening of Alternatives

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Study Methodology

Phase A Completion & Documentation

- Purpose and Need Statement
- Range of Reasonable Alternatives
- Summary/Classification Report

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Public Participation Process

- Citizen's Advisory Task Force (6)
- Technical Review Committee
- Community Meetings/Forums
- Project Newsletter
- Project Website
- Project Design Center

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Public Participation Process

Collaborative Public Participation

- City of Concord Master Plan
- Town of Bow Master Plan
- Town of Pembroke Master Plan
- City of Concord Opportunity Corridor

Master Plan Process Goals

Ensure community buy-in on Master Plan through meaningful public participation in the planning process

Provide opportunities for participation in which the public can easily see how input will be incorporated into the Master Plan

Integrate Master Plan process with other current planning efforts (e.g., I-93)

- City of Concord Master Plan
- Town of Bow Master Plan
- Town of Pembroke Master Plan
- City of Concord Opportunity Corridor

Project Approach & Design

Standing and Special Committees

- 5 existing committees + 2 special committees
- Asked to complete specific tasks with modest deliverables

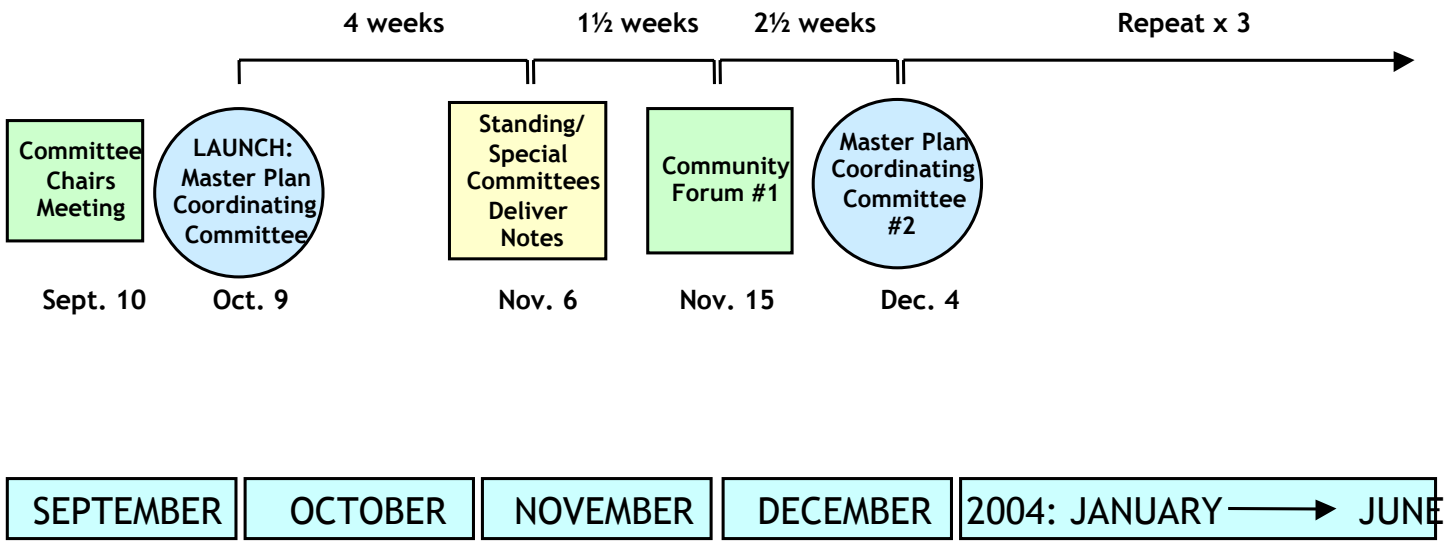
Master Plan Coordinating Committee

- All members of Standing and Special Committees
- "Backbone" of the planning process
- Strategies and ideas coordinated and conflicts resolved

Community Forums

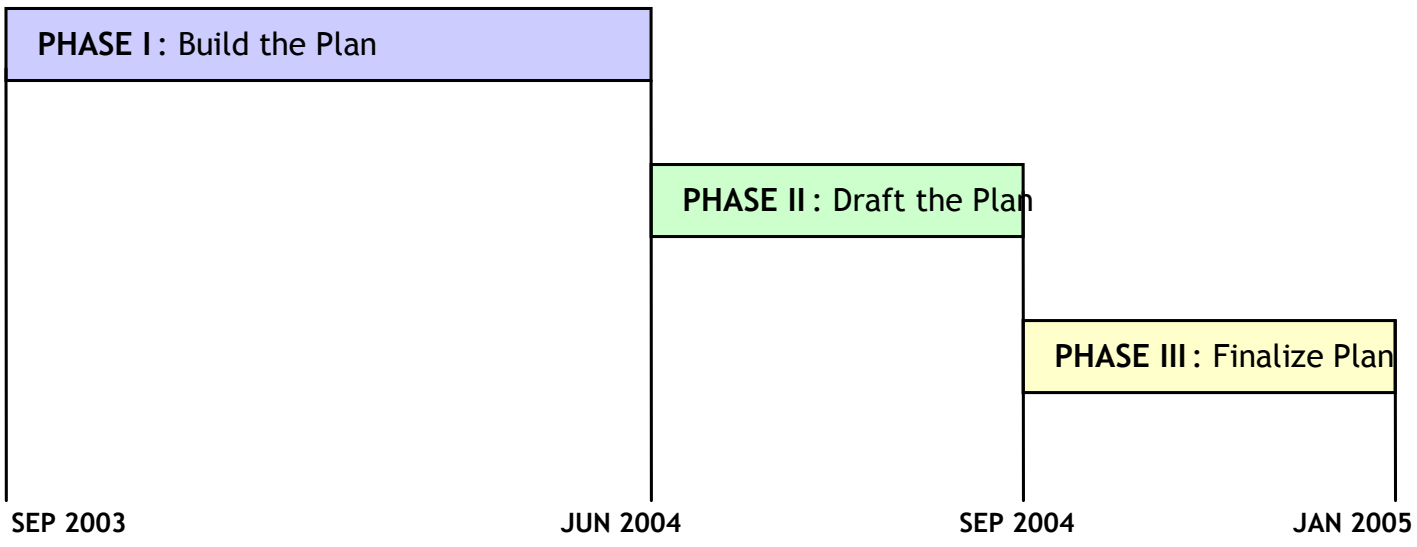
- Informal "tradeshow" event
- Community members are able to view the work of the committees, share ideas and provide feedback

Project Approach & Design



Project Approach & Design

Key Phases



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Proposed Project Schedule

Notice To Proceed	February 2003
Data Collection	Spring 2003
Base Plans	Spring/Summer 2003
Base Year 2000 Traffic Model	Spring/Summer 2003
Design Year 2030 Traffic Model	Fall/Winter 2003/2004
Alternatives Development	Winter/Spring 2003/2004
Traffic Needs Study	Spring/Summer 2004
Summary/Classification Report	Fall 2004