Project Development Process

89th Annual Purdue Road School
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Brought to you by:

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Agenda

- Problem Definition/Historical Background
- Planning
- Project Proposals
- Programming
- Environmental Engineering Assessment
- Design
- Right of Way
- Construction
- Other Divisions/Districts

Problem Definition/Historical Background

- General understanding that change is needed
- Focman
- Research
- Scheduling system
- Project development process
- Communication
- Improvements needed
- Other state DOT’s

Problem Definition/Historical Background cont.

- Findings
  - 78 percent feel that they have a good understanding of their division’s process
  - 46 percent say they have a good understanding of project development
  - 67 percent do not understand how changes affect other divisions
  - 65 percent acknowledged that a better understanding of the project development process would improve their work
  - 98 percent feel that communication is critical
  - 12 percent feel that there is good communication across divisions

Problem Definition/Historical Background cont.

- Action Items
  - SPMS
  - Project Development Process
  - Project Management
  - Streamlined Environmental Process
  - Design Manual
  - Public Involvement Procedures/CAC
Problem Definition/Historical Background

Legacy Project Development Process
- Planning
- District, et al.
- Programming
- Scoping
- Environmental
- Design
- Land Acquisition
- Construction

How is a need identified?
- Planning
  - INDOT’s Long Range Plan
  - Management Systems (i.e. Modeling)
  - Pavement/Bridge/Safety/Congestion
  - Districts
  - Other

Transportation Planning
- **Statewide** Planning
  - INDOT 2000 – 2025 Long Range Plan
  - Indiana Statewide Transportation Improvement Program (INSTIP)
- **Metropolitan** Planning Organization (MPO)
  - 20-year Transportation Plans
  - 3-year Transportation Improvement Programs (TIPs)

20-year Transportation Plans
- **Statewide and Metropolitan**
  - Longer term vision updated every 3-5 years
  - Identifies facilities (roadways, transit, inter-modal)
  - Coordinated with modes and transportation providers (MPOs, transit agencies, ...)
  - Air Quality Conformity & CMS
  - Financially constrained
  - Economic and environmental goals
  - Includes Public Involvement

3-year Improvement Programs
- **INSTIP and TIPs**
  - Prioritize projects by year over 3 year period and updated every 2 years
  - Consistent with and a part of the plan
  - Conform with State Implementation Plan (SIP)
  - Financially constrained
  - Describes projects design concept and scope
  - Air Quality Conformity

Planning, cont.
- For more information:
  - Steve Smith, INDOT Long Range Planning Manager
    - (317) 232-232-5646 or ssmith@indot.state.in.us
  - Round Table Discussion: INDOT Long-Range Plan and Program
    - Wednesday from 10:15 a.m. to 11:45 a.m.
Project Proposals

What is a project?

- Preservation vs. expansion
- Examples of proposed projects:
  - EA Corridor Studies/EIS/Tier 1
  - Pavement preservation
  - Resurfacing
  - Signals
  - Enhancements
  - Local projects
  - Added travel lanes
  - Safety

- Long-Range Plan identifies expansion and major improvement projects.
- Management Systems (a.k.a., modeling) identifies pavement preservation, bridge preservation, and safety projects. Also confirms expansion projects.
- Districts identify resurfacing, etc., projects.
- Others could be anything from elected officials, MPOs, citizens, organizations, etc., identifying a need or enhancement, etc.

Environmental Streamlining

ONE decision-making process that is efficient, inclusive, and structured that resolves issues as early as possible and results in high-quality transportation decisions and NEPA documents

EA/Corridor Study vs. EIS

- INDOT/MPO Funding Commitment
- Clarity from INDOT and MPO 20-year Transportation Plans
- Congressionally Mandated Feasibility Study
- New Transit Start

Planning in Context of EA/Corridor Study (Option 2)

1. Early Coordination Letter
2. P&N Agency Meeting
3. Preliminary Alternatives Analysis and Screening Agency Meeting
4. EA/Corridor Study
5. NOI
6. DEIS
7. Preferred Alternative and Mitigation Agency Meeting
8. FEIS/ROD
9. Final Design

Corridor Planning Studies/EA

- US 231 I-70 to I-65
- SR 37 Noblesville to Marion
- US 36 Danville
- SR 9 Greenfield
- SR 101 I-74 to Markland Dam
- SR 62 Lloyd Expressway Upgrade
Programming Procedural Steps (PDP)

- Call for Projects
- Program Management Group(s) Review and Internal/External Coordination
- Project/Program Selection
- Issue Programming Guidance
- Develop Project Schedules, Timelines and Budgets
- On-Going Program/Project Management

Call for Projects
- Annual (fall/winter) or Year-Around Program
- Categories of Call
  - State Projects
  - Group III, Group IV, Bridges, Etc.
  - Group I and Group II
- Early Coordination Events
  - Districts & Local Governments Meetings (Aug-Sept)
  - Annual District Planning Meetings (Sept-Oct)

Program Management Group(s) Review and internal/external coordination
- Select, Semi-open Committees
- Winter/Spring (if annual process)
- Project Evaluation
- Program Management

Program Management Group(s) Review and internal/external coordination
- MPOs
- Districts
- Other INDOT Divisions
- Cities, Towns, Counties
- Adjacent States
- Other Stakeholders

Program Management Groups (PMGs)
- Pavement Preservation
  - Preventive Maintenance (a.k.a., Partial 3R)
  - Interstate, Non-I NHS, Non-NHS
- Pavement Rehabilitation/Reconstruction
  - Interstate, Non-I NHS, Non-NHS
- Expansion
  - Added Travel Lanes
  - New Road Construction
  - Major Improvements
  - TCM, TDM, TSM or Intersection Improvements

PMGs (continued)
- Safety
  - Intersection Improvements
- Sight Distance Correction
- Roadside Safety Improvement
- Guardrail & Pavement Markers
- Railroad Crossing Safety Improvements
- ITS
- Studies & Reports (Only)
- Enhancement
PMGs (continued)
- Non-INDOT State Facilities
- IN Dept of Nat Resources Facilities
- State Prisons
- State Institutions of Higher Education
- IDNR-County Cooperative Access Facilities
- Forest Lands Highways
- FHWA Forest Roads
- Bridge Preservation
  - Small Structures

PMGs (continued)
- Roadside Improvements
  - Landscaping and Context Sensitive Solutions
- Drainage
- Noise Abatement
- Local Federal-Aid
  - Group III
  - Group IV
  - Local Bridges

PMGs (continued)
- Multi-modal
  - Rail
  - Aviation
  - Transit
- C2
  - Special Oversight
  - CMAQ
  - Innovative Contracting

PMGs (continued)
- Federal-Aid Project Eligibility (State & Local)
- Project Categorization (State PMG, Local Grp)
- Project Advancement History (Local only)
- Affects on/to State Highway (State & Local)
- Critical Sub-Element of Project (State & Local)
- Cost Estimate (State & Local)
- Benefit vs. AADT, etc. (State & Local)
- Jurisdiction Project Density (State & Local)

PMGs (continued)
- Local, Regional, State-wide Project Support (State & Local)
- Executive Priority (State & Local)
- Project Priority (State & Local)
- District Comments (State & Local)
- Long-Range or Community Plan Coverage (State & Local)
- Local Sharing Arrangement (Local)
- Project Phasing or Staging (State & Local)

PMGs (continued)
- Economic Development (State & Local)
- Project Proposal Clarity (State & Local)
- Project’s Program-wide Relative Cost (State & Local)
- State and/or Local Match-$ Availability (State & Local)
- Current Project Development Status (State & Local)
- Safety Issues
Programming Procedural Steps (PDP)

- Agency-wide Programming Issues - Historical
  - Incorrect Project Cost Estimates
  - Over-Programming
  - Lack of Project Purpose & Need, or Intent
  - Contiguous Projects’ Scheduling Non-sync.
  - On-going Project Status (P, A, H, S, E, etc.)
  - Over-Prioritization and Priority Conflicts
  - Timeliness of Project Need

Programming Procedural Steps (PDP)

- Agency-wide Programming Issues - Historical (cont.)
  - Project Timelines Inaccurate
  - Project Funding Status (?)
  - Project-Support Data Collection Efforts Delay
  - Public Support/Awareness
  - Project Duplication
  - Constructability and other Segmental Issues

Programming Procedural Steps (PDP)

- Issue Programming Guidance
  - Future Implementation
  - Project’s Purpose & Need
  - Administrative Data
  - Scheduling Information
    - Target Year of Work
    - Design Year (< 25 Years?)
    - Project Location

Programming Procedural Steps (PDP)

- Issue Programming Guidance (cont.)
  - Intent of Work (inclusive & exclusive)
    - Pavement, & Shoulders
    - Bridges
    - Roadside (drainage, landscaping, fences, etc.)
    - Safety
    - Etc.
  - Relative Costs vs. Relative Benefits

Programming Procedural Steps (PDP)

- Develop Project SPMS Data Sheet(s)
  - Work Schedules & Triggers
  - Project Timelines
  - Project Budgets

Programming Procedural Steps (PDP)

- On-Going Program/Project Management
  - Annual Program Review (Summer)
  - Conducted by PMGs Using Their Categories
  - Validation of Local Federal-Aid Program on an Annual Basis
    - Face-to-Face Meetings
    - Road School
    - District Meeting
    - Any Other Opportunity w/Local Meeting
    - Local Governments (& Consultants), INDOT, etc.
Programming
- Program Management Groups (PMGs)
- Selection Criteria
- Programming Guidance and Project Creep
- Schedules/Timelines
- Context Sensitive Solutions/Design
  - Under Development at Programming Level
  - Very Complex Business-Rule Issue
  - Details TBD

Which came first?
- Solution
- Purpose and Need
  - Purpose = Goals
  - Need = Problems
- Phraseology
  - Solution

Environmental & Scoping
- Chicken or the egg
- Joint Document
- DMP continued

Uniform Processing Options
- Categorical Exclusion (CE)
- Environmental Assessment (EA)
- Environmental Impact Statement (EIS)

Early Project Development Activities
- Planning, surveys, studies, coordination, public involvement --- > Purpose and Need

Environmental Assessment

Categorical Exclusion
- CEQ - actions which do not individually or cumulatively have a significant effect on the human environment
- FHWA - actions which meet the CEQ definition and, based on past experience with similar actions, do not involve significant environmental impacts
- Neither an EA nor an EIS is required
Environmental Assessment

A document ... ... that is prepared for an action where the significance of the social, economic, and environmental impacts are not clearly established

23 CFR 771.115(c)
40 CFR 1508.3

EA / FONSI Process

- Environmental Studies / Coordination and Preparation of EA
- EA Approved (Division)
- Notice of Availability
- Public Hearing
- EIS Required?
- Yes
- No
- 15 day min.
- Public Hearing
- 10 day min.
- Notice of Availability

23 CFR 771.119(d) - (h)

FHWA/INDOT EA Procedures

- Established 8/12/2002
- Project Coordination Team
- Community Advisory Committee (CAC)
- Coordination Points
- Standardize Format

EA Suggested Format

- Cover Sheet
- Purpose and Need
- Alternatives Considered
- Impacts
- Mitigation
- Comments and Coordination
- Appendices (if any)
- Section 4(f) Evaluation (if any)
- Other compliance information

TA 6640.8A

FONSI

Finding Of No Significant Impact
- A document which briefly presents why an action does not have a significant impact
- It must include and reference the environmental assessment

CEO Q&A #37A
40 CFR 1508.13

Early Project Development Activities

Planning, surveys, studies, coordination, Public involvement --> Purpose and Need

Categorical Exclusion

Environmental Assessment

DEIS
FEIS
ROD

FONSI
DEIS Process

Consultant prepares DEIS with INDOT and FHWA assistance
Consultant circulates document
EPA for notice in the F.R. with FHWA letter
FHWA HQ & MRC with FHWA memo
Other Agencies for comment
Make available for public review and comment (15 days before hearing)

Consultant prepares DEIS with INDOT and FHWA assistance
Consultant circulates document
EPA for notice in the F.R. with FHWA letter
FHWA HQ & MRC with FHWA memo
Other Agencies for comment
Make available for public review and comment (15 days before hearing)

45 day minimum comment period from F.R. notice

Indiana’s Streamlined EIS Procedures – Basic elements
- Basic Elements
  - Project Coordination Team
  - One decision-making process
  - Agency review deadlines (TEA-21 § 1309)
- Seek agency and public input at key points (NOI/Early Coordination, P&N, Alternatives Screening, DEIS, Preferred Alternative/Mitigation)
- Interagency meetings (30-days into 60-day review)
- EA/Corridor Study vs. EIS

Indiana EIS Procedures
Option 1 - EIS
1. NOI/Early Coordination
2. P&N Agency Meeting
3. Preliminary Alternatives Analysis and Screening Agency Meeting
4. DEIS
5. Preferred Alternative and Mitigation Agency Meeting
6. FEIS/ROD
7. Final Design

Indiana EIS Procedures
Option 2 – EA/Planning Study
1. Early Coordination Letter
2. P&N Agency Meeting
3. Preliminary Alternatives Analysis and Screening Agency Meeting
4. EA/Corridor Study
5. NOI
6. DEIS
7. Preferred Alternative and Mitigation Agency Meeting
8. FEIS/ROD
9. Final Design

Finish EA/Corridor Study
- Submitting Alternative screening report to INDOT
  - Recommend a project “Concept & Scope” to include in MPO 20-year Transportation Plan (if applicable) and INDOT’s Production Schedule
  - Identify projects of independent utility (if applicable)
- Finish NEPA Evaluation by either:
  - Completing EA
  - Start EIS with NOI (NO NEED TO REDO PURPOSE & NEED AND ALTERNATIVES SCREENING!!!)

Purpose And Need
- Importance
- Range of alternatives
- Basic elements
- Use in decisionmaking

40 CFR 1502.13
TA-6640.0A page 13
Purpose And Need
- Transportation demand
- Safety
- Legislative
- Economic development or planned growth
- Modal interrelationships
- System linkage
- Condition of existing facility
- Inclusion in transportation

Alternatives development
What the regulations require
- Describe how preliminary alternatives were developed and basis for elimination
- Describe how reasonable alternatives were selected
- Clearly describe all reasonable alternatives
  - Comparable level of detail
  - Include discussion of "NO BUILD"
  - Discuss TSM alternative(s) where applicable
  - Be prepared to defend logical termini, …

Range of Alternatives
- No-action or no-build
- TSM alternatives
- Transit (urban areas)
- Build Alternatives
  - representative number
  - improvement of existing
  - new location

Importance of Screening
- Evaluation of Alternatives
- Effective Screening is Critical to a Successful Project
- Stated Methodology is Essential
- Interagency Review and Public Input are Valuable

Screening Prerequisites
- Defined Project Study Area
- Defined Project Termini
- Purpose and Need Statement
  - Established Performance Measures
  - Preliminary Alternatives

Level 1 Screening
EIS Format

- Cover Sheet *
- Summary *
- Table of Contents *
- Purpose and Need
- Alternatives
- Affected Environment
- Environmental Consequences
- List of Preparers *
- EIS Distribution *
- Comments and Coordination
- Index *
- Appendices

Summary

- Description of proposed action
- Other actions and proposals in the area
- Reasonable alternatives
- Major environmental impacts
- Areas of controversy
- Unresolved issues if any
- Other federal actions (404 permit, 106 agreement, etc.)

Environmental Consequences

**Impacts and mitigation** of alternatives

- Relocation
- Noise, air, water
- Land use
- Wildlife
- Economic
- Social
- Section 4(f)
- Historic properties
- Construction related
- Wetlands, floodplains
- Farmlands

* May be discussed as a separate section

Final EIS Options

- Traditional
- Condensed
- Abbreviated

Record of Decision

**Format and Content**

- Incorporate by reference and cross reference FEIS
- Decision - identify selected alternative
- Alternatives considered
  - Discuss values considered and basis of decision
  - Identify "environmentally preferred" alternative(s)
- Section 4(f) - summarize basis of approval
- Measures to minimize harm - describe mitigation
- Monitoring or enforcement program included
- Comments on FEIS - substantive comments and responses

FEIS Process

\[\text{DEIS Process} \rightarrow \text{Pre-FEIS prepared} \rightarrow \text{Legal Sufficiency Review} \rightarrow \text{HQ Prior concurrence (if applicable)} \rightarrow \text{Division Administrator approves and document circulated} \rightarrow \text{Make available for public review} \rightarrow \text{Other agencies for comment} \rightarrow \text{DEIS commentors} \rightarrow \text{EPA for notice in the F.R.} \rightarrow \text{30 day minimum from F.R. notice} \rightarrow \text{Receive Comments} \rightarrow \text{Prepare ROD} \rightarrow \text{Record of Decision} \]
Approval of ROD

- No sooner than -
  - 30 days after Federal Register notice (FEIS)
  - 90 days after Federal Register notice (DEIS)
- No further project approvals may be given until ROD is approved

Environmental Trivia

- How many active EIS’s is INDOT and FHWA working on?
- On the average, how many EA’s are completed in one year?
- What is an AI?

Environmental Section

- For more information:
  - Janice Osadzuck, Division Chief, INDOT Environment, Engineering & Planning
    - (317) 232-5468 or josadzuck@indot.state.in.us
  - Jim Juricic, Manager, INDOT Environmental Section
    - (317) 232-5305 or jjuricic@indot.state.in.us
- EIS Process
  - Wednesday from 3:15 p.m. to 4:45 p.m.

Engineering Assessment

- What is an Engineer’s Report?
  - It documents the outline of the proposed scope of work for improvements. It describes the project at a preliminary level and will guide the ongoing environmental and succeeding design phases.
- What is in an Engineer’s Report?
  - Title Page
  - Purpose of Report
  - Project Location

Engineering Assessment, cont.

- Project Purpose & Need
- Existing Conditions
- Traffic Data and Capacity Analysis
- Crash Data
- Project Alternatives & Recommendations
- Survey Requirements
- Maintenance of Traffic
- Estimated Cost

Engineering Assessment, cont.

- Environmental Assessment
- Meetings and Coordination
- Final Check Items
- Scope of Work Changes
- Attachments
  - Maps, aerials, cross sections, etc.
  - Data reports (volumes, inventories, bridges)
Engineering Assessment, cont.

For more information:
- Brad Steckler, INDOT, Eng. Assessment Manager
  - (317) 232-5137 or bsteckler@indot.state.in.us

Engineering Assessment Process: Keys to a Solid Engineer's Report
Wednesday from 1:30 p.m. to 3:00 p.m.

Design

- Grade Review and/or Hydraulic Review Plans
- Structure Size & Type Plans (Bridge only)
- Preliminary Field Check Plans
- Design/Public Hearing Plans
- Prelim Plans for Final Approval (PPFA) Plans
- Design Approval Stage
- Final Field Check (Road Only if necessary)
- Check Prints
- Final Tracings

Design

- Grade Review and/or Hydraulic Review Plans
  - Establish Basic Centerline Alignment
  - Scour Review

Design

- Preliminary Field Check Plans
  - Conduct Initial Utility Coordination Review
  - Conduct Initial Preliminary Landscape Review
  - (? Future CSS-D Considerations)
  - Prepare Draft Design Summary Report
  - Conduct Preliminary Fish & Wildlife Review
  - (Confirm Committed Mitigation Measures!)
  - Initialize Design Exception Request(s) - Road

Design

- Structure Size & Type Plans (Bridge only)
  - Establish and Document Basic Bridge Parameters
  - Conduct Initial District Traffic Review
  - Accomplish Preliminary Railroad Coordination
  - Initialize Design Exception Request(s) - Bridge

Design

- Design/Public Hearing Plans
  - Hold Design/Public Hearing
  - Prepare 2nd Draft of Design Summary Report
  - Access Rule 5 Process Involvement
  - Prepare CWA, Sec 404 Permit Application
  - Prepare CWA, Sec 401 Permit Application
  - Prepare Additional Permits (as required)
Design

- Prelim Plans for Final Approval (PPFA) Plans
  - Design Approval Stage
  - Prepare Final Geotechnical (Soils) Report
  - Conduct Foundation Review (Bridges Only)
  - Accomplish Final Pavement Design
  - Obtain Approval of Final Design Summary Report

Design

- Final Field Check (Road Only if necessary)
  - Review Plans in Field for Last-minute Changes and Updates
  - Confirm Design Features

Design

- Check Prints
  - Prepare Final Special Provisions
  - Incorporate Standard Drawings
  - Conduct Final Landscaping Review
  - Lay Out Final Plans

Design

- Final Tracings
  - Submit Final Reproducible Plans to Records Unit
  - Submit Necessary Plans Supporting Documents to Records Unit

Design

- Grade Review and/or Hydraulic Review Plans
- Structure Size & Type Plans (Bridge only)
- Preliminary Field Check Plans
- Design/Public Hearing Plans
- Prelim Plans for Final Approval (PPFA) Plans
  - Design Approval Stage
- Final Field Check (Road Only if necessary)
- Check Prints
- Final Tracings

Design Trivia

- Who is the only person that can approve an design exception at INDOT?
- How many design exceptions are approved in a year?
- How many design approvals were issued in 2002?
Design, cont.

- For more information:
  - Phelps Klika, INDOT Design Division Chief
    - (317) 232-5338 or pklika@indot.state.in.us

Right of Way

- Minimize right of way? Best solution?
- Early coordination
- Apparent existing right of way line
- Access issues
- Protective Buying/Advanced Acquisition
- Hardship Buying
- Wetlands

Right of Way Process

- Abstracting
- Right of Way Engineering
- Appraising
- Buying
- Condemnations
- Relocations
- Property Management

Right of Way Trivia

- How many parcels does INDOT's Land Acquisition clear in one year?

Right of Way, cont.

- For more information:
  - Kevan McClure, INDOT Land Acquisition Division Chief
    - (317) 232-5000 or kmcllure@indot.state.in.us
  - For local projects:
    - Virginia Smith, INDOT State & Local Contracts, Land Acquisition Division
      - (317) 232-5014 or vsmith@indot.state.in.us

Construction

- Develops engineering standards and specifications
- Prepare contract documents and administers the lettings
- Early phase coordination
- Constructability
- Cost/change
- Type of project
Contracts & Construction Trivia

- In 2002, how many contracts did INDOT award?

Other Divisions/Districts

- Public Involvement/CAC
- Budget & Fiscal Management
- Districts
- Communications

Questions/Comments

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- Chris Baynes
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