This paper reports on Phase II of an NCHRP study and identifies best practices based on eight case studies which examine the permitting process as it specifically relates to design-build delivery projects where major federal permits had been required. The best practices identified in this study can help state transportation agencies be better equipped to work with regulatory agencies and the design-build contractor teams to ensure the acquisition of all required permits. State transportation agencies can effectively plan for potential implications and/or probable modification requirements associated with preparing and obtaining environmental permits in advance of the design-build process.

### Summary

This paper was prepared based on NCHRP Task 25-25(25) research performed under subcontract to Cambridge Systematics.

### Design-Build Contractors

A major benefit of design-build is the ability of DOTs and contractors to get permits in a shorter time frame than traditional contracting. This benefit is due to the ability to integrate design and construction. The study examined eight design-build projects to identify best practices associated with obtaining federal permits.

### Regulatory Agencies

Approval of permits based on a lesser level of design provides increased flexibility for contractors.

### WHY PHASE II?

A Study of the Modification and Amendments of Environmental Permits for Design-Build Projects. NCHRP, August, 2007

### BACKGROUND

#### Phase I: Design-Build Environmental Compliance Process and Level of Detail: Eight Case Studies. NCHRP, January, 2005

**Objectives:**
1. To examine the design-build delivery approach and the practices utilized by State DOTs in the preparation of permits; and
2. To determine the level of detail in advance of selecting a design-build contractor.

**Findings:**
- DOTs take different approaches depending on the degree of impact and the associated with each project; and
- Level of detail prepared for permit applications generally ranges between 155 and 300.

#### Environmental Permitting Process Scenarios in Design-Build

- DOEs that acquire permits and the design-build contractor is responsible for modifications and compliance.
- DOEs that acquire permits and the design-build contractor is responsible for modifications.
- DOEs that acquire permits and the design-build contractor is responsible for obtaining and complying with permits.

### DESIGN-BUILD BEST PRACTICES DECISION TREE

**NCHRP** - Preliminary Engineering Phase - Design Build Phase

**WHY PHASE II?**

A Study of the Modification and Amendments of Environmental Permits for Design-Build Projects. NCHRP, August, 2007

**Objective:** To assist State DOTs in better understanding the relationship between preparing and obtaining environmental permits in advance of the design-build process, the impact on number or magnitude of modifications/amendments required during design-build, and the benefits/repercussions of such practices.

### Case Study Selection:

- 8 total projects, most of which were studied in Phase I
- 6 projects where State DOT acquired permits prior to award of design-build contract
- 8 projects where design-build contractor acquired permits after award of contract

### Permits Examined:

- Section 404 of the Clean Water Act: Design-Fee Permit
- Section 401 of the Clean Water Act: Water Quality Certification
- Section 316 for Desert groundwater basins: Bridge Permit

### Surveys:

State DOTs, design-build contractor teams, state/federal permitting agencies, and other participants in applicable were surveyed on the following:

- Working Relationships and Communication
- Initial Permitting Responsibility and Compliance
- Permit Modifications and Amendment Responsibility
- Effective Practices and Recommendations

### PROJECT PARTICIPANTS’ RECOMMENDED PRACTICES

#### State DOTs

- State DOTs should generally acquire initial permits prior to the design-build contract.
- Regulatory agencies and state/regional governing bodies should be informed of the design-build project delivery method.
- Continuing strong relationships with permitting agencies is essential.

#### Design-Build Contractors

- Contractors should have an easy access to permitting agencies, and
- Contractors should have an easy access to permit modification/approval agency.
- Contractors should have ongoing, continuous coordination with regulatory agencies;
- Contractors should have ongoing, continuous coordination with regulatory agencies;
- Contractors should have ongoing, continuous coordination with regulatory agencies.

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### Major Federal Permitting Process for Design-Build Projects

[Diagram of the major federal permitting process for design-build projects, illustrating the role of permits and relationships between agencies and contractors.]