I. Call to Order..............................................................................................................Chair Carol Murray, NH

II. Subcommittee Updates
   A. Bridges and Structures.................................................................................Mal Kerley, VA
   B. Construction ..........................................................................................Len Sanderson, NC
   C. Design .................................................................................. Carolann Wicks, DE (new)
   D. Materials..............................................................................................Grant Levi, ND
   E. Right-of-Way and Utilities......................................................................Len Hill, ID
   F. Task Force on Context Sensitive Solutions........................................ Neil Pedersen, MD

III. Summary of Activities of Other Committees
   A. Standing Committee on the Environment..................................................TBD
   B. Standing Committee on Planning............................................................TBD

IV. Discussion Items
   A. Domestic Scan on ROW and Utilities.......................................................TBD
   B. Location of CSS within AASHTO ..................................................Neil Pedersen, MD

V. Old Business ......................................................................................................Jim McDonnell, AASHTO
   A. Proposed Workshop on Project Delivery Delays
   B. Consistency of Titles for AASHTO Publications

VI. New Business ..................................................................................................Carol Murray, NH

VII. Review of Action Items ..................................................................................Carol Murray, NH

VIII. Adjourn

Attachments:
- Executive Summary, Report from the Domestic Scan on ROW and Utilities
- Notes from Project Delivery Council Meeting, May 2006
NCHRP 20-68, Domestic Scan Pilot Program

Best Practices in Right-of-Way Acquisition and Utility Relocation

executive summary

preparation for

National Cooperative Highway Research Program

preparation by

Cambridge Systematics, Inc.

with

James Ware

September 29, 2006
Background

The transportation system is intricately linked to the economic viability of the country, both in terms of the need for personal and business travel as well as the demand for services and goods delivery. Population growth and population redistribution, coupled with increased traffic demands, continue to place added pressure on the transportation community to promptly and efficiently place in service new and/or modified highway and intermodal facilities.

Development of new highways and reconstruction of deficient older facilities have required increasingly lengthy timeframes associated with planning, environmental activities, design, right-of-way and utility relocation or modification and construction. In response, the past few years have seen an unparalleled examination of the transportation project development process, as transportation agencies work to address critical transportation needs and practice fiscal responsibility while respecting community and environmental interests. Right-of-way and utility relocation activities are areas that have especially been targeted for examination, since completion of the right-of-way function is the last stage before construction commences and there is often a perception that the right-of-way stage is delaying advertising and construction of the project.

As a result of this recent focus, transportation agencies have been developing and testing new tools and innovative solutions to accelerate the right-of-way acquisition and utility relocation processes while continuing to be observant of requirements for environmental protection, reduction of impact to communities, personal property rights, design safety considerations, utility adjustments, and cost effective construction to reduce maintenance costs and extend the design life of projects.

The purpose of this domestic scan project is to identify, review, document, and disseminate innovative practices by transportation agencies throughout the United States in the field of right-of-way acquisition and utility relocation. The scan is one of two pilot domestic scans sponsored by the American Association of State Highway and Transportation Officials (AASHTO) and funded through NCHRP Project 20-68, the U.S. Domestic Scan Pilot Program. The Federal Highway Administration’s (FHWA) Office of Real Estate Services also contributed funding to this scan.

Scan Tour Group.
Photo courtesy Bill Lohr, FHWA Minnesota Division
To conduct the scan, a group of 15 transportation professionals visited departments of transportation (DOTs) over the course of a week with three leading state agencies:

- The Florida DOT’s District 5 Office in central Florida;
- The Texas DOT’s Texas Turnpike Project Office in Austin; and
- The Minnesota DOT in Minneapolis-St. Paul.

Scan participants included nine state DOT staff from right-of-way and utilities offices, four FHWA staff, and two consultants who facilitated the scan. Frank and open discussions were held in each state regarding best and innovative practices, lessons learned, and how processes would be modified for future projects.

The major findings of the scan are highlighted below and described in more detail in the scan’s final report.

### Key Findings

The scan team found that while each state visited has experienced considerable success in improving their right-of-way acquisition and utility relocation processes, there is no single “silver bullet” that can be applied throughout the country. Instead, a range of tools and techniques exist that may be applied in different statutory, political, cultural, and geographic contexts. The team did find, however, that all three states shared common traits, including:

- A commitment to creating a supportive institutional environment;
- A focus on process;
- Investment in technical tools; and
- A willingness to make use of other incentives and techniques as appropriate.

### Supportive Institutional Environment

First and foremost, the team found that a supportive institutional environment was common to all of the states and agencies visited, and was in fact critical for achieving innovations and process improvements. Characteristics of a supportive environment include:

- **A team approach.** The right-of-way and utilities staff the scan came in contact with in all three states demonstrated a sense of pride and a team feel to their tasks. A team approach encourages staff and consultants to collectively take ownership of the project and navigate around problems. This team approach was supported by a formal

---

“Success breeds success.” – Tom Casper, Florida DOT
process in Florida defining how different disciplines, including right-of-way, utilities, design, construction, and environmental, would work together.

- **Upper management support.** In each state, upper management provided the authority along with the responsibility and financial resources to accomplish the assigned tasks. Management support was critical to creating a “can-do” attitude where team members were committed to reaching a common goal.

- **Willingness to innovate and take risks.** Right-of-way and utilities staff in all three states were given the freedom to try new techniques and develop new processes outside the norm, rather than adhering to established procedures and practices.

- **Provision of adequate resources.** Each state demonstrated a commitment to providing the resources, including highly qualified staff, advanced technical tools, and financial resources, required to conduct and continuously improve their right-of-way acquisition and utility relocation processes. These agencies have realized that up-front investment in resources can pay dividends in the long-run through reduced project costs and delays.

- **Commitment to monitor and improve performance.** Each state has developed tools and procedures to track and monitor the status of actions and make adjustments as necessary. Measures such as meeting critical acquisition deadlines and achieving success in negotiations provide important feedback to staff and help to identify areas where improvements are needed. Postproject evaluation can identify ways to improve the process for its next application.

**Focus on Process**

A clear, well-defined, yet flexible process is critical to keeping project development, including right-of-way acquisition and utility relocation, on track. A number of process characteristics and innovations were demonstrated in the states visited.

- **Cross-disciplinary approach.** All states made explicit efforts to have different disciplines, including design/engineering, right-of-way, utilities, environmental, and construction, work together beginning with the earliest stage of project development. This approach helps to identify and address critical issues early in the design process rather than creating delays or increased expenses when they are discovered later. It also creates a team atmosphere in which everyone feels responsible for making the project a success.

“**You have to drink the coffee, eat the cookies, sit down with people and get them to respond to how the taking will affect them.**”

– Mike Stensberg, Minnesota DOT

“**What gets measured, gets done.**”

– George Lovett, Florida DOT
• **Early involvement of stakeholders.** Similarly, each agency made efforts to involve external stakeholders as early as practical, including local communities, utilities, business owners, impacted property owners, and resource agencies. Early involvement alerts stakeholders to the need for the project and its potential impacts, helps establish trust, and helps the DOT identify design solutions to minimize impacts.

• **Explicit, written procedures.** Florida DOT in particular noted the importance of having well-defined written procedures in place; for example, to specify the timing, participation, and agenda of team meetings. Minnesota DOT has established a formalized agreement with utilities describing how coordination will take place. Written procedures and documentation also are important for capturing institutional knowledge before mass retirements of an aging workforce, a concern of many agencies.

• **Incentives to maintain staff continuity.** Especially for complex and high-visibility projects, it is helpful to have the same individuals follow the project process from beginning to end. Texas established incentives and disincentives with its consultant team to retain key project managers for the life of the Texas Turnpike SH 130 project.

• **Delegated decision-making authority.** Decision-making occurs more quickly if it is made at the lowest-level possible. States noted that avoiding the need to run routine decisions through a hierarchical chain of command was a key to keeping acquisition and relocation activities on schedule.

• **Conflict resolution.** Similarly, conflicts (whether internal or with outside partners) are most efficiently addressed at the lowest-level possible. Development of an “escalation ladder” to elevate disagreements and disharmony can be extremely effective in resolving disputes. A related technique is the “white paper” in which each party outlines the problem and their proposed solution. Staff who had tried this approach noted that simply explaining the perceived conflict in writing went a long way towards resolving it.

• **Colocation of major participants.** State agency staff, the design build consultant, right-of-way staff, and an FHWA representative with decision-making authority, has proven to be effective in fostering communication and reducing time delays.

• **Focus on schedule adherence.** Florida DOT District 5 staff noted that they set and maintain strict schedules. If delays occur in one stage of the process, other members of the team work to make up the delays. The agency also has established dates beyond which design changes must be justified and approved by a committee.

• **Design-build.** If permitted by state law, design-build can be an extremely effective tool for accelerating project development and completion. The design-build contract may be structured to include right-of-way acquisition, saving time by allowing construction to commence before all acquisitions are complete.

### Technical Tools

Technical tools are important to supporting an effective process. Each state demonstrated a comprehensive set of technical tools to support functions such as project management,
property and utilities management, and providing information to the public. Some examples of these tools include:

- **Property management systems.** GIS-based tools to track the status of individual properties, including a color coded mapping system such as used in Texas and Minnesota, can be an effective way to easily ascertain the status of individual parcel acquisitions.

- **Document and information management systems.** Effective pursuit of innovative processes requires agency “investment” in terms of personnel, document management systems, equipment, electronic monitoring and training. Document management systems become more critical as knowledgeable employees leave, taking the institutional history with them.

- **Electronic field data entry.** Electronic data management systems require investment of resources but can save time in the long-run. This is especially true with the use of a single entry concept so that once original data is entered in the field it can be seamlessly transferred to the states electronic data system.

- **Visualization and animation technology** can illustrate existing and proposed highway development in relation to buildings, property lines, and access impacts on adjacent property. This has proven to be a very effective tool for public involvement and for presentation to property owners.

- **Web sites** that provide information to stakeholders and the public – such as on-line mapping systems showing impacted properties, and placement of utility permit applications and state maps on official website to facilitate utility relocation.
Other Techniques

A variety of other techniques are available, some of which may be applied in any state and others which may be applicable to specific contexts.

- **Incentive acquisition and relocation payments** were effectively used in Florida to accelerate right-of-way clearance. Even where so-called incentive payments cannot be used, offering the Highest Supportable Value (HSV) to the property owner – rather than a minimum value – can expedite the acquisition process.

- **Advance acquisition payments** have been used in Minnesota, through a fund established by the State, to assist local governments in making property acquisitions from willing sellers years in advance of the project.

- **Utility reimbursements.** This technique may be appropriate and effective in some situations to facilitate active cooperation with utilities. For example, Florida uses this technique to expedite relocations in small and economically depressed communities, for which paying relocation costs would be a hardship.

- **Design mitigation strategies.** Property takings and utility relocation impacts often can be mitigated or avoided altogether through creative design strategies. Design-build contractors should be encouraged to seek innovative solutions to avoid takings and utility impacts. Systems can be established to share costs savings with the contractor.

- **Employment of subsurface utility engineering (SUE)** early in the design process can identify potential utility conflicts and help address them either through project design or utility relocation strategies.

- **Value engineering** is a concept that can be applied to reduce costs as well as expedite project development. For example, Minnesota and Florida apply value engineering techniques in a preparcel meeting with design, right-of-way, and survey staff to assess the necessity of various design features.

*State Highway 130 under construction in Austin, Texas. Photo courtesy TxDOT*
Benefits

The most significant benefits of improved RW acquisition and utility relocation processes have included shorter project delivery time and/or lower costs. In Florida and Texas, benefits have been clearly demonstrated through projects that are being delivered on-time and under budget. In Texas, in particular, the agency has been able to move the large-scale and high-profile SH 130 project rapidly (from letting of the design-build contract in 2002 to completion of initial segments in 2006), responding to political pressures.

In some cases, direct cost savings have resulted – for example, through MnDOT’s “value engineering” activities that have reduced property impacts and utility relocation requirements. In other cases, procedures may appear to increase direct acquisition and relocation costs – for example, higher incentive payments to property owners – but can result in lower costs in the long-run due to shorter project development schedules, lower court fees, avoiding possibility of high eminent domain awards, etc. In design-build situations where the contractor is responsible for property acquisition, the contractor often has a direct financial incentive to meet or beat deadlines, and may be willing to acquire some critical properties at higher values in order to reduce acquisition delays.

Agencies anecdotally report other benefits as well. For example, all three states reported that early involvement of stakeholders, especially property owners and utilities, has led to less animosity and better relationships with these stakeholders and with the public in general. Internally, staff have enjoyed the challenge of developing and implementing innovative practices and appreciate the team working environment.

Barriers to Innovation

An important aspect of the scan visits was not only to explore successful processes and tools, but also to identify barriers to innovation, and ways in which those barriers might be overcome. In many cases, barriers can be addressed through agency actions such as advocating for legislative changes, changing agency policies, or implementing other internal strategies. Some examples of barriers include:

- State laws prohibiting alternative methods, such as lack of authority to pursue design-build;
- Lack of a champion to promote exploration of different methods of accomplishing the goal;
- Institutional inertia, where staff prefer to stick with the “tried and true” approach – related to a high-level of risk avoidance, and therefore an unwillingness to experiment or innovate;

“We are ahead of critical path and are continuing to stay that way.” – Don Toner, Texas DOT
Failure to do a risk-reward analysis. For example, if a 100-year title report takes a lot of time and carries high-cost perhaps an abbreviated title report for low-value properties could be justified to save time and money; and

Lack of resources including adequate personnel, appropriate databases, equipment, and training.

Some barriers may be beyond the control of any individual person or agency. There are many others, though, that may be surmountable. For example, state DOT officials can propose and advocate for legislative changes, such as providing design-build authority, or allowing the use of incentive payments. Strong leadership, good management, and support from the highest-levels of the agency can help overcome institutional inertia.

## Implementing the Scan’s Findings

Both the scan participants and staff at the three host agencies noted that they found the scan to be extremely valuable in learning about successful practices. In addition to disseminating findings through this summary and final report, scan participants are actively working to adopt innovative practices and lessons learned from the scan within their own agencies, as well as communicate findings and lessons learned from the scan to their peers at professional meetings and conferences. A follow-up evaluation will examine to the extent to which scan participants have been successful in introducing these practices within their own agencies.

## Acknowledgments

The participants in this scan included: Susan Lauffer (Scan Co-Chair) Director, FHWA Office of Real Estate Services; John Campbell (Scan Co-Chair) Director, Right-of-way Division, Texas DOT; Richard Allen, Rights-of-way Administrator, Connecticut DOT; John Ewald, Staff Attorney, Right-of-way Division, Texas DOT; Raymond Lorello, Utility & ROW Program Manager, Ohio DOT; George Lovett, District General Counsel & ROW Manager, Florida DOT District 5; Donald Nelson, Director of Environmental & Engineering Programs, Washington State DOT; Bimla Rhinehart, Chief, Division of ROW & Land Surveys, California Department of Transportation; John Sherman, Lands Management Administrator, Wyoming DOT; Kevin Stout, Assistant Chief, Right-of-way, Oklahoma DOT; Donald Jackson, Value Engineer & Utility Program Coordinator, FHWA Office of Infrastructure; James Cheatham, Division Administrator, FHWA Pennsylvania Division; Daniel Mathis, Division Administrator, FHWA Washington Division; James Ware (Subject Matter Expert), Consultant; and Christopher Porter (Scan Manager), Senior Associate, Cambridge Systematics, Inc.
Scan participants gratefully acknowledge the support of George Lovett (Florida DOT District 5), Donald Toner (Right-of-way Administrator, Texas DOT Austin District), Marilyn Remer (Utilities Coordinator, Minnesota DOT), and their staff and colleagues for coordinating meetings and visits in each host state.
Committee Updates
Note: Work plans for all SCOH subcommittees are included in the SCOH agenda and materials.

Subcommittee on Bridges and Structures, Mal Kerley, VA
- Annual Meeting coming up in Snowbird, Utah, May 21-26
- The Technical Committee for Seismic Design (T-3) is finishing up work on the new seismic LRFD design specifications.
- The subcommittee also recently held a workshop to update the strategic research plan to meet the changing needs in bridge engineering.
- Full implementation of the LRFD design specifications is scheduled for 2007, so federal projects after that date would have to use these specs. The committee is continuing to support and oversee the implementation of the LRFD through its LRFD Oversight Committee.

Subcommittee on Construction, Len Sanderson, NC
- Update of the Guide Specifications for Highway Construction will be balloted by the subcommittee this summer, so an update should be coming to SCOH for ballot shortly thereafter.
- Another publication that’s currently on the web, the Primer on Contracting for 21st Century, which provides information on innovative contracting techniques, is also being updated.
- Some issues that the subcommittee is looking into include the following:
  - Lump sum contracts are increasing, but where is the unit cost information coming from to develop cost estimates? The subcommittee will do a survey on best practices related to this issue
  - Antitrust issues are a concern, so the subcommittee will do a survey on debarred contractors
  - The subcommittee wants to develop practices for certifying/prequalifying construction staff in work zones
  - Finally, the subcommittee has concerns related to the application and interpretation of Federal DBE rules. As mentioned at the full SCOH meeting, they have proposed to create a work group of 2-to-3 representatives from each of the following groups:
    - Subcommittee on Construction
    - Subcommittee on Civil Rights
    - FHWA
    - Contracting industry
  - The goal is to train contractors on the rules and their application, as well as to provide some uniformity and consistency across the country.

Subcommittee on Design, Bob Walters, AR
- June 13-16, 2006, in Orlando
- Continuing to explore opportunities to meet with other groups on cross-cutting issues
Finalizing an effort to resolve inconsistencies on clear zone in various design guides (Green Book, Roadside Design Guide, and Bike Guide) as they are updated

Activities of Design’s various technical committees include:
- New guidance on cost estimating coming this year (final estimates) and within 2 years (estimating from cradle to grave)
- New design-build guidance coming soon on RFQs/RFPs
- Update Guide for Managing Consultants coming soon
- Updated Chapter 6 of the Roadside Design Guide (on median barriers) will be voted on at the full SCOH meeting and will be published this year.

Subcommittee on Materials, Grant Levi, ND
- 26th edition of the Materials Manual will be out this summer
- Currently, there is a federal Notice of Proposed Rule Making on pipes that the committee is working to develop a response to.

Subcommittee on Right of Way and Utilities, Len Hill, ID
- Annual meeting was recently held in Baltimore
  - Among the topics discussed was accelerating project delivery and the role ROW and utility issues play. Len will send out additional information on subsurface utility engineering after the meeting.
  - A proposal they want to forward is to ROW and utilities out of the environmental process. They anticipate coordinating with legislative liaisons at the federal level and others, as part of the slow down with these tasks is that they have to wait for environmental compliance.
- From an international scan conducted in 2000, 13 experimental projects were tested in various states. One project included providing incentives to expedite the acquisition and/or relocation process (for example, on a Virginia bridge project, incentives were provided to relocate people within 15 or 30 days). FHWA has started to OK these new processes.
- Proposed domestic scan was funded on ROW/utility issues and will be conducted this summer
- Other topics of interest include: assistance with relocation payments from AASHTOWare, electronic appraisals, and geospatial technology
- It was noted that an NCHRP project on mitigating delays in construction is due to be completed at the end of year. This project includes utility issues.

Task Force on Context Sensitive Solutions
- The task force was initially set up after the 1998 “Thinking Beyond the Pavement” conference.
- Current activities include a major focus on a national workshop on CSS, to be held September 6-8, 2006, in Baltimore, Maryland
  - The workshop is geared primarily toward State DOT and FHWA folks (75% of attendees), and 300 people are expected.
  - A letter was sent out to DOT CEOs last week encouraging them to send multi-disciplinary teams to this conference
  - The organizers are minimizing presentations and maximizing discussion sessions on items such as lessons learned and mainstreaming CSS
Proposed action plans will be developed by attendees to take back to their DOTs
Follow-up meeting will be held with various AASHTO committee chairs to talk about where AASHTO goes from here with CSS
Peer exchanges are also being discussed between states to help spread the word about CSS and provide practical guidance on how to implement it

Standing Committee on Environment
Has been working with FHWA on SAFETEA-LU implementation
- SCOE was pleased with many of the provisions that were included in the bill
- Many of the issues are cross-cutting with planning (SCOP), so the two committees are working together frequently
- The Center for Environmental Excellence hosted a successful workshop on SAFETEA-LU Implementation with SCOE/SCOP/FHWA to discuss issues/concerns

- Upcoming joint meeting with SCOP in La Jolla, CA, June 12-15
- Activities of the Center for Environmental Excellence include:
  - Currently finishing up an AASHTO/ACEC/FHWA joint effort focused on improving the quality of environmental documents. A report will be sent out for balloting in the next few months covering the topics of legal sufficiency and the quality and clarity of environmental documents. A second document on training will be posted on the web.
  - New concise guides/toolkits on specific environmental topics are also being released soon. These guides will provide step-by-step information, as well as resources for further information. There will be a series of these guides released over the next few years.
  - A comprehensive environmental database is being developed on the Center’s website, including summaries of research reports and a prioritized list of research needs. This site will provide a strategic foundation for TRB, FHWA, and State DOT research programs in the environmental area.

Standing Committee on Planning (handout)
- Upcoming joint meeting with SCOE in La Jolla, CA, June 12-15
- Four subcommittees report to the Standing Committee on Planning:
  - Capacity Building
  - Data – for transportation analysis
  - Asset Management – active committee, national conference held last November, also participated in an international scan
  - Research – recommends the slate of NCHRP projects from SCOP
- Research products from NCHRP Project 8-36 (which controls SCOP’s discretionary research funding) are located on the SCOP web site
- SCOP is also working on SAFETEA-LU Implementation issues in conjunction with SCOE
  - Workshops were held last fall and this spring
  - NPRM from FHWA on planning requirements anticipated soon

Continuation of Metric Publications, Mal Kerley, VA
Subcommittee on Bridges and Structures has proposed the discontinuation of its metric publications, since most states have converted back to US Customary units.

A resolution has been proposed to the full SCOH membership.

Members of the Council were in agreement with the rationale, but had concerns about the implication of sales to other countries that use the metric system.

The resolution will be modified to include an investigation by AASHTO staff into the potential ramifications of this decision on international publications sales.

Proposed Task Group on Bridge Wave Loadings, Mal Kerley, VA (handout)

- Proposal to establish an AASHTO/FHWA task force on bridge wave loadings
- Hot topic since recent heavy hurricane seasons
- Group to include representatives from:
  - Subcommittee on Design (Tech Committee on Hydraulics and Hydrology),
  - Subcommittee on Bridges and Structures,
  - FHWA, and
  - coastal and geotechnical engineers.
- Goals of the group include:
  - Review research
  - Draft problem statement for NCHRP
  - Develop guidance for bridge design that accounts for wave loadings, a screening process to determine vulnerability
- Will request approval from SCOH for the establishment of this joint task force

Consistency of Titles for AASHTO Publications, Jim McDonnell, AASHTO (handout)

- Issue: AASHTO’s current publication naming system is confusing and inconsistent
  - Each committee names its own publications
  - There are currently over 40 combinations of “basic” titles, including specs, guide specs, standard specs, manuals, guide manuals, guides, guidelines, etc.
- Report from NCHRP to investigate the implications of changing the names (both for more consistency and from a legal standpoint) is now complete
- The report included a draft system for categorizing and naming AASHTO publications more consistently
- These ideas will be taken to the various subcommittee meetings for discussion this summer, and a formal proposal will be drafted for consideration at the Annual Meeting

Proposed Workshop on Project Delivery Delays, Jim McDonnell, AASHTO

- No action has been taken on two ideas that were proposed at the last Council meeting:
  - Workshop on environmental issues and delay
  - Workshop on right-of-way and utilities issues and project delay
- The Council is still interested in these items and will pursue them with assistance from AASHTO, FHWA, and NCHRP
- A domestic scan on project delivery issues is slated for this summer, so output from this activity could inform the development of one or both proposed workshops