NCHRP 20-84
Improved Right-of-Way Procedures and Business Practices

Cesar Quiroga
Texas Transportation Institute
Texas A&M University System
Research Objectives

• Develop improved right-of-way procedures and business practices for the project development and delivery process
  – Compare a reference right-of-way business model in compliance with the Uniform Act (as codified in 42 USC 4601 et seq.) and an improved model based on an objective analysis of key business process elements

• Develop best practices for property management
Research Tasks

Phase I:
1. Review Project Development and Delivery Practices
2. Analyze Existing Right-of-Way Development and Delivery
3. Prepare Phase I Interim Report

Phase II:
4. Analyze Key Project Development and Delivery Activities
5. Develop Integrated Right-of-Way and Project Development and Delivery Model
6. Develop Best Practices for Property Management
7. Prepare and Conduct Peer Exchange
8. Develop Training Materials
### Key Milestones

<table>
<thead>
<tr>
<th>Item</th>
<th>Original</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial research need statement</td>
<td>2008-2009</td>
</tr>
<tr>
<td>Request for proposals</td>
<td>11/2009</td>
</tr>
<tr>
<td>Authorization to begin Phase I</td>
<td>06/2010</td>
</tr>
<tr>
<td>Plan and conduct survey</td>
<td>11/2010</td>
</tr>
<tr>
<td>Submit Phase I report</td>
<td>12/2010</td>
</tr>
<tr>
<td>Conduct panel meeting</td>
<td>01/2011</td>
</tr>
<tr>
<td>Authorization to begin Phase II</td>
<td>02/2011</td>
</tr>
<tr>
<td>Finalize integrated PDP model</td>
<td>01/2012</td>
</tr>
<tr>
<td>Conduct peer exchange</td>
<td>10/2011</td>
</tr>
<tr>
<td>Submit draft final report</td>
<td>03/2012</td>
</tr>
<tr>
<td>NCHRP review and approval</td>
<td>05/2012</td>
</tr>
<tr>
<td>Submit final report</td>
<td>06/2012</td>
</tr>
</tbody>
</table>
Research Team

NCHRP 20-84 Panel

John Garner (Chair) – Former FDOT
John Campbell – TxDOT
Gerald Gallinger
John Michael Jones – MSHA
Lyle McMillan – UDOT
James Thiel – WisDOT
Kenneth Towcimak – Consultant
Mark Weaver – Caltrans
Kathy Facer – FHWA Liaison
Kimberly Fisher – TRB Liaison
James McDaniel – TRB Liaison
David Reynaud – NCHRP Staff

Researchers

Cesar Quiroga (PI) – TTI
Stuart Anderson – TTI
Edgar Kraus – TTI
Paul Krugler – TTI
John Overman – TTI
Lisa Harrison – Pinnacle
Alex Souder – Pinnacle
Aaron Adkins – Pinnacle
Robert Cooney – eVision
Robert Neblett – J. Walker
Brad Anderson – J. Walker
Phase I Activities

• Review practices on state project development and delivery workflow processes
• Analyze a typical right-of-way development and delivery model in compliance with the Uniform Act (without constraints from regulations)
• Conduct online survey and interviews
Information Gathered

• State DOT organization chart: 45 states
• Right-of-way division org. chart: 8 states
• PDP manual (or equivalent): 37 states
• PDP diagram: 35 states
• Right-of-way process diagram: 16 states
• Right-of-way manual: 42 states
• Utility manual: 32 states
## Typical PDP – Level 1 Diagram

<table>
<thead>
<tr>
<th>Planning and Programming</th>
<th>Preliminary Design</th>
<th>Detailed Design</th>
<th>Letting</th>
<th>Construction</th>
<th>Post Constrn.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scoping, Selection, Financing, Sched.</td>
<td>Alternative Analysis and Preliminary Plans</td>
<td>Secure federal, state, and local agreements</td>
<td>Environmental Approval</td>
<td>Environmental Re-evaluation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Environmental Process</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Right-of-Way Map Development</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Preliminary Utility Conflict Analysis</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Preliminary input to planning and programming</td>
<td></td>
<td>Property Acquisition and Relocation Assistance</td>
<td>Right-of-Way Authorization</td>
<td>Property Management</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Utility Conflict Analysis, Permits, Relocation, and Reimbursement</td>
<td>Design and PS&amp;E Assembly 30% 60% 90%</td>
<td>Letting</td>
<td>Construction</td>
</tr>
</tbody>
</table>
Typical PDP – Level 2 Diagram

<table>
<thead>
<tr>
<th>Planning and Programming</th>
<th>Preliminary Design</th>
<th>Detailed Design</th>
<th>Letting</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify project priority</td>
<td>Conduct preliminary design</td>
<td>Perform right-of-way research</td>
<td>Prepare PS&amp;E</td>
<td>Perform site selection and coordination</td>
</tr>
<tr>
<td>Identify project location</td>
<td>Conduct preliminary design</td>
<td>Conduct utility investigations</td>
<td>Obtain environmental permits</td>
<td>Perform right-of-way research</td>
</tr>
<tr>
<td>Identify project site</td>
<td>Conduct preliminary design</td>
<td>Prepare utility certification</td>
<td>Obtain project financing</td>
<td>Perform site selection and coordination</td>
</tr>
<tr>
<td>Identify project phasing</td>
<td>Conduct preliminary design</td>
<td>Perform design coordination</td>
<td>Issue relocation payments</td>
<td>Perform site selection and coordination</td>
</tr>
<tr>
<td>Identify project alignment</td>
<td>Conduct preliminary design</td>
<td>Conduct final design and construction</td>
<td>Monitor project progress</td>
<td>Perform site selection and coordination</td>
</tr>
<tr>
<td>Identify project schedule</td>
<td>Conduct preliminary design</td>
<td>Conduct design analysis</td>
<td>Obtain project financing</td>
<td>Perform site selection and coordination</td>
</tr>
<tr>
<td>Identify project environmental impact</td>
<td>Conduct preliminary design</td>
<td>Conduct design review</td>
<td>Obtain project financing</td>
<td>Perform site selection and coordination</td>
</tr>
<tr>
<td>Identify project budget</td>
<td>Conduct preliminary design</td>
<td>Conduct design review</td>
<td>Obtain project financing</td>
<td>Perform site selection and coordination</td>
</tr>
</tbody>
</table>

Notes:
- Property management activities are arranged for presentation purposes only. They do not indicate specific duration or an ordered sequence.
- Property management activities are normally included in the property management function at state DOTs.
Notes:

- The Design Documentation Package (DDP) is started by WSDOT during scoping/pre-RFP design. The design-builder completes the DDP as the project proceeds.
- The design-builder shall refer to the RFP for specific review and approval processes. The RFP will specify procedures for design submittals, including notifications to WSDOT and the time allowed for reviews.
- WSDOT will review design submittals for conformance with requirements of the contract.
Project Duration (GAO Report)

- Planning: 4-5 years
- Preliminary design and environmental review: 1-5 years
- Final design and right-of-way acquisition: 2-3 years
- Construction: 2-6 years
- Total: 9-19 years
Project Duration (AASHTO Report)

- Planning: 2-3 years
- Environmental process: 4-6 years
- Detailed design: 2-3 years
- Right-of-way acquisition and utility relocation: 1-2 years
- Construction: 2-3 years
- Total: 10-15 years
## Project Duration (Florida DOT)

<table>
<thead>
<tr>
<th>Process</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appraisal</td>
<td>6-10 months</td>
</tr>
<tr>
<td>Negotiation</td>
<td>6-8 months</td>
</tr>
<tr>
<td>Relocation</td>
<td>0-9 months</td>
</tr>
<tr>
<td>Order of Taking</td>
<td>1-4 months</td>
</tr>
<tr>
<td>Property Management</td>
<td>0-2+ years</td>
</tr>
<tr>
<td>Condemnation</td>
<td></td>
</tr>
<tr>
<td>Construction Begins</td>
<td></td>
</tr>
</tbody>
</table>
Project Duration (Minnesota DOT)

- 100% Construction Limits
- Titles
- R/W Base Map from Surveys
- Field Titles
- R/W Package
- ACOTs attorneys condition of title
- Plats and Descriptions
- Contracts for Fee Appraisers
- Appraisals (Fee)
- D.P. Offers by Mail (Direct Purchase)
- Condemnation
- Request for Authorization from FHWA/PIF/T&P (Public interest finding letter)
- Project Letting Date
Project Duration (NC DOT)
Project Duration (Texas DOT)

- ROW release to possession: 18 months
  - Standard deviation/range: 16/69 months
- Initial appraisal to possession: 11 months
  - Standard deviation/range: 13/59 months
- Factors:
  - Total number of parcels in a project
  - District right-of-way staff size
  - Project complexity
Phase I Activities

• Review practices on state project development and delivery workflow processes

• Analyze a typical right-of-way development and delivery model in compliance with the Uniform Act (without constraints from regulations)

• Conduct online survey and interviews
ROW Process According to the Uniform Act (USC 4601 et seq)

• Analyze each URA provision
  – Subchapter I (General Provisions)
  – Subchapter II (Uniform Relocation Assistance)
  – Subchapter III (Uniform Real Property Acquisition Policy)

• Map each provision to the PDP
  – Functional areas and interdependencies
ROW Process – Level 3 Diagram
In lieu of the payment authorized under §4622(a) according to criteria apply procedure to U.S. DOT ($1,000 - received.

- Right-of-way map and other related documents have been prepared.
- Environmental document has been prepared

§24.102(c)(2)(i), §24.108, §710.505(a)

Activity: Unit of work. Types of activities include tasks and sub-processes.

- Exclusive gateway: When splitting, only one branch anticipated low fair
- Not anticipated or donations.

below for other permanent displacement

§4651(2)

Develop appraisal of the fair market value of the property. Disregard decrease or increase to uneconomic remnants (i.e., §24.301(a)

§4651(3)

(2) Actual direct losses of tangible personal property (not to be
removed building, structure, or other improvement at
§4653

Conduct

§24.102(l)

Acquisition by Condemnation Proceedings

§24.102(m)

for reasonable title

Includes:

- Not successful settlement

§24.205(e)

Agency can

§24.102(m) §24.102(j) §24.102(l)

Conduct

§4653

Pay reasonable

§24.205(c)(2)(iii)

Inverse

proceedings

engineering fees to owner (if court

§24.102(k)

Conditional event if owner finds it necessary to institute legal proceedings to prove the fact of the taking of the real property.

Owner sues agency

§24102(f)

Owner sues agency

§4651(8)

Inverse condemnation proceedings

§24.107

§4654(a), §4654(b)

Pay reasonable attorney, appraisal, and engineering fees to owner if court

renders a judgment for the plaintiff

Establish just Compensation
Phase I Activities

• Review practices on state project development and delivery workflow processes

• Analyze a typical right-of-way development and delivery model in compliance with the Uniform Act (without constraints from regulations)

• Conduct online survey and interviews
Survey and Interviews

- Survey participants:
  - AASHTO subcommittees
  - TRB Committee on ED and Land Use
  - IRWA committees
  - Consultants

- 104 participants from 38 state DOTs
- 24 consultants from 13 states
- 17 interviews representing 6 state DOTs
Major Property Acquisition Issues

Changes to parcels to acquire due to late changes during the design phase

Not involving ROW staff during design

Not involving ROW staff during planning and programming

Not involving ROW staff during preliminary/conceptual design

Entities advising property owners not to negotiate to obtain more money during condemnation

Difficulty to hire and retain staff with adequate ROW acquisition experience

Not involving ROW staff during environmental process

Not involving ROW staff during utility coordination and relocation

State laws/regulations in ROW acquisition process beyond those required by Uniform Act

Lack of public-sector ROW experience among consultant staff used for the project

ROW staff turnover
Other Property Acquisition Issues

- Project funding uncertainty, including delays in passing state budget.
- Inadequate timeframe to accomplish the work.
- LPAs frequently do not have the required skills or knowledge to follow regulations mainly because of inexperience and understaffing.
- Poor quality of right-of-way maps.
- Arbitrary number of appraisals assigned to one appraiser.
- Required contract review process and central office approval causing months to get appraisals assigned to contract appraisers.
- Inadequate time to present written offer to property owners before condemnation.
Outsourcing ROW Functions

- Appraisals
- Rapport with property owners
- Experience with LPAs
- Work load
- Costs
Performance Measures

• Lead-time too short to enable effective interaction with property owners and other stakeholders effectively and fairly
• Need for a tool to measure quality of work compared to the cost of delivery in a compressed project development environment
• Productivity index that considers factors such as resources, services, quality, and time
• Impact of staff turnover, budget, and training effectiveness
• Fairness of using performance measures on overworked right-of-way agents
Major Property Management Issues

- Difficult-to-use database or information system documenting ROW assets
- Illegal/un-authorized ROW encroachments
- Difficulty in tracking and monitoring the use of property/ROW assets
- Difficult-to-track permit applications (e.g., driveway, utilities, etc.)
- Difficulty in tracking the disposal of surplus right-of-way interests
Research Tasks

**Phase I:**
1. Review Project Development and Delivery Practices
2. Analyze Existing Right-of-Way Development and Delivery
3. Prepare Phase I Interim Report

**Phase II:**
4. Analyze Key Project Development and Delivery Activities
5. Develop Integrated Right-of-Way and Project Development and Delivery Model
6. Develop Best Practices for Property Management
7. Prepare and Conduct Peer Exchange
8. Develop Training Materials
Questions?

• For additional information:
  – Cesar Quiroga
  – Email: c-quiroga@tamu.edu
  – Phone: 210-979-9411