

RAIL-DOT INSTITUTIONAL MITIGATION STRATEGIES

A SHRP2 PROJECT



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Four Research Focus Areas



Safety: safer driving through knowledge of driver, roadway, vehicle factors in crashes, near crashes, ordinary driving



Renewal: rapid, minimum disruption highway renewal producing long-lasting facilities



Reliability: more reliable travel times through management of non-recurring events



Capacity: new highways that meet environmental, community, economic needs

SHRP 2 Website – www.trb.org/shrp2

SHRP2
STRATEGIC HIGHWAY RESEARCH PROGRAM

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Safety
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Reliability
Capacity

Strategic Highway Research Program
SHRP 2

Accelerating solutions for highway safety, renewal, reliability, and capacity

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Did you know?
A utility strike occurs in the U.S. almost every minute.
Read more in SHRP 2 Report [S2-R01-RW: Encouraging Innovation in Locating and Characterizing Underground Utilities.](#)

Associated Press/Nick Ut

New Web Resource: Performance Measures to Evaluate Highway Capacity Projects
Posted February 25, 2010

Transportation
Environmental
Economic
Community
Cost

Performance Measurement Framework for Highway Capacity Decision Making

A [web-based library of performance measures](#), emphasizing environmental and community measures, developed through SHRP 2 Capacity project C02 is now available on line. A companion to final report C02: [Performance Measurement Framework for Highway Capacity Decision Making](#), this SHRP 2 product links performance measures to key decision points in the transportation project planning process. The performance measures library is included in the newly released website: [Transportation for Communities—Advancing Projects through Partnerships \(TCAPP\)](#) at: transportationforcommunities.com. TCAPP is the framework that will eventually house all products of Capacity research.

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PRESENTATION OUTLINE

- Problem statement
- Project objective
- Railroad perspective
- State perspective
- Best practices
- Findings
- Recommendations



PROBLEM STATEMENT

- Interface with railroads complicates highway projects
- Issues arise of safety, train operations, highway project scope
- RRs are private, for profit
- They can't afford delay
- RR's have little flexibility



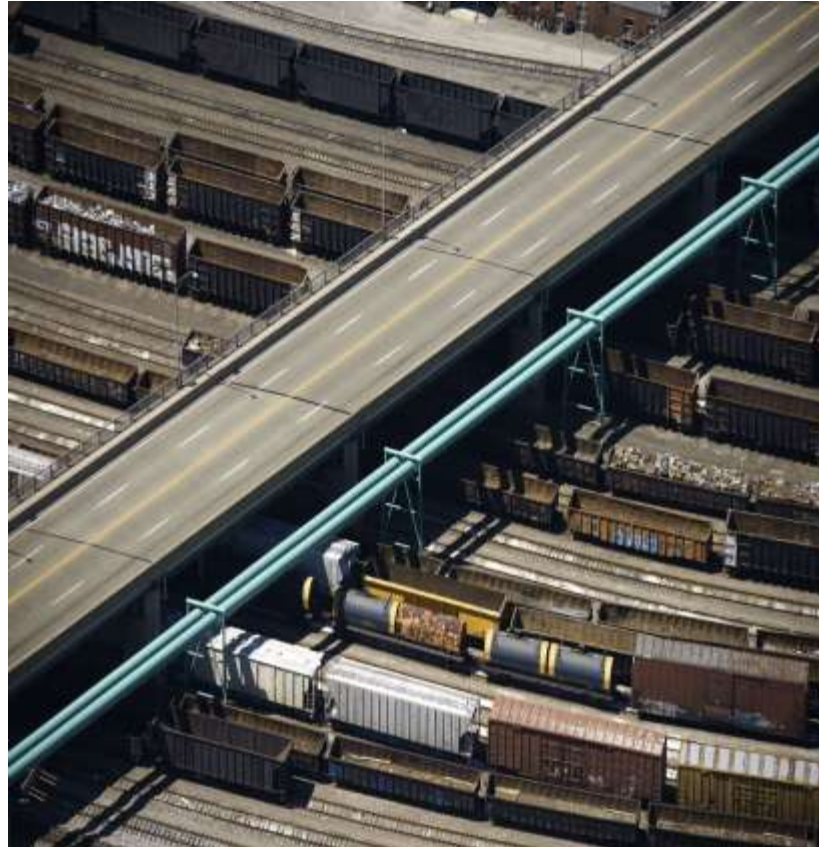
PROJECT OBJECTIVES

- Identify strategies and relationships to benefit both highway agencies and railroads
- Seek partnering techniques
- Develop model agreements
- Identify and overcome barriers to successful agreements



The Research Process

- Advisory panel of states, RRs, federal officials;
- Interviewed all Class I RRs;
- Surveyed all states
- Interviewed 10 states
- Interviewed engineering firms
- Reviewed manuals, agreements, standards



RAILROAD PERSPECTIVE

- Are private companies, obligated to shareholders
 - Challenged to meet their cost of capital
 - Responsible to shareholders
 - Must provide return on investment to attract shareholders
- Highway projects do not benefit them
- Are in expansion mode, must preserve rights of way
- Accidents are catastrophic
- Liability is infinite
- Train delay is intolerable



FUTURE TRENDS/MOVEMENTS

- US DOT Freight Analysis predicts an 88% increase in rail freight between 2002- 2035
- Railroads will require additional capacity and right-of-way
- Seek to optimize capacity through technology (Positive Train Control)
- Partnering with public agencies on major corridors
- Preserving maximum capacity on existing corridors



TYPICAL PROJECT COORDINATION

- Grade separations
 - Overhead
 - Undergrade
- Rail/highway grade crossings
 - Surface
 - Protection (AFLS&G)
- Utility crossings
 - Power lines
 - Water and sewer mains



LIABILITY AND REAL ESTATE

- RR protective liability insurance often contentious
 - Freight lines-\$2M-\$6M
 - Passenger trains- \$5-\$10M (79 to 150 mph)
- Railroads expect to be compensated at market rates
- Property in a railroad's operating envelop can rarely be taken under eminent domain
- Railroads can have the advantage in negotiations



RRs ACKNOWLEDGE PROBLEMS

- None of the railroads interviewed denied they sometimes cause delays
 - Some operating divisions may have more than 800 projects at one time
 - RRs were downsized
 - Public projects don't make money
 - RR units pre-occupied with customers, daily pressures of operations



RRs: WHY DELAYS OCCUR

- Designs impinge on ROW, operating envelop
- Early coordination lacking
- Delays in authorizing RR reviews, compensation
- Failure to anticipate construction issues
- Non-standard agreements
- Insurance limits lacking



STATES PERSPECTIVE

STATES: WHY DELAYS OCCUR

- Railroads appear inflexible;
- Lack of communication and trust
- Delays and differences in details of plans and agreements
- Delays in coordination and feedback
 - Scheduling issues
 - No pre-design meetings
- Short staffed,
 - RR
 - DOTs have staff turnover & related loss of knowledge



COST CONSTRAINTS

- Costs
 - As public agencies, DOTs are very sensitive to ROW costs
 - Flagging costs can be high
 - RR property difficult to appraise
 - States can't low bid work on RR property
 - DOTs and RRs often disagree on property value or cost of RR delay
- Reviews
 - Despite paying for engineering reviews, states can't control review timing



ALL PARTIES AGREE

- Railroads, DOTs and engineering firms, all identified common problems
 - Lack of early coordination
 - Failure to understand railroad requirements
 - Infrequent communication
 - Non-standard agreements
 - Overworked RR staffs



KEYS TO SUCCESS

- Single point of contact
 - Government agency and railroad
 - Internal partnering
- Use experienced staff
- Obtain and use RR design manuals
 - Railroads often have different design criteria
- Allow sufficient time for reviews and agreements
- Network, develop trust and have open communications
 - Annual Design and Construction Conferences
 - Develop a respectful relationship
- Regular scheduled meetings
 - Monthly
 - Quarterly
 - Annual
- Realistic schedules
- Expect to compensate the railroads for review and coordination costs



FINDINGS

- Few metrics exists;
- The railroad traffic is expected to increase;
- There is no tolerance for delays;
- The projects involving railroads and road will increase;
- Safety will continue to be a priority for both sides;
- Both sides agree on common problems and best practices;



FINDINGS- CONTINUED

- Project reviews need to be streamlined and expedited;
- Both recommend standard agreements
- Both agree on use of best practices:
 - Early formal coordination;
 - Both want constant communication;
 - Desire central points of contact;
 - Want experienced counterparts
 - Don't use term 'partnering' but both embrace its concepts



REPORT PROVIDES

- Overview of the Partnering process
- Draft Partnering agreement
- Suggested metrics
- On-going consultation process to review results
- Model project agreements
- List of model best practices



PARTNERING

- Report describes the cooperative Partnering process such as used in contracting or with resource agencies;
- Partnering is an understanding and is non-binding; a way we agree to treat each other;
- They spell out each party's expectations of the other;
- Allow both sides to test the understanding and agree if the test provides the expected results.

PARTNERING AGREEMENT ELEMENTS

AGREE TO

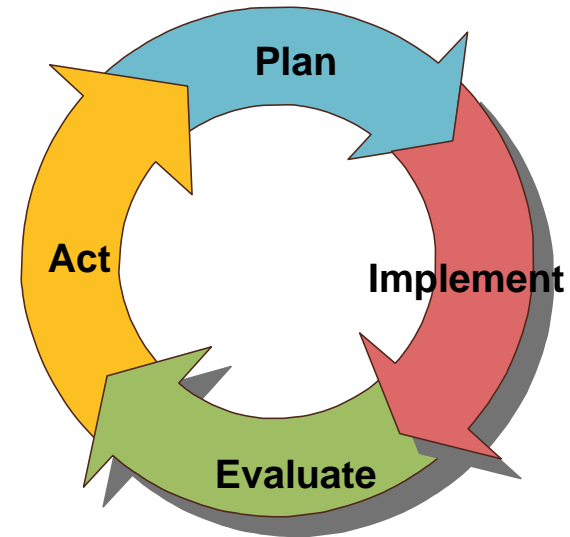
- recognize the goals and constraints of the other party
- a preferred time line for typical projects
- confer regularly and address missed milestones
- escalate issues for resolution
- gather metrics on performance
- continuously analyze and improve the process
- reference controlling engineering diagrams
- annual list of projects
- insurance
- safety training



RECOMMENDATIONS

Adopt a framework for “continuous improvement”

- Treat as a Partnering exercise
- Negotiate and develop State/RR MOA/MOU to guide review process
- Develop and use draft model agreements and streamlined permitting processes,
- Continue dialogue and share/adopt best practices and
- Participate in efforts through their individual professional organizations to perpetuate best practices and
- Create a Central Repository/Knowledge base



VALUE ADDED FROM THE REPORT

- Identification of common problems
- Identification of a path to measure and manage typical problems
- List of best practices
- ‘Out of the box’ series of templates to address typical problems



REPORT AVAILABILITY

- “Identifying Railroad-Highway Agency Institutional Mitigation Strategies”
- Should be published in July
- Includes implementable best practices
- Lengthy Appendices with model agreements

THANK YOU

- To today's participants
- To the project Advisory Panel
- To the railroads who made their staffs and agreements available to us
- To the highway agencies who participated in the survey
- To the DOTs who shared best practices
- To Monica Starnes, Program Manager
- Jerry DiMaggio, SHRP 2, TRB and NAS

QUESTIONS



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