

RAIL-DOT INSTITUTIONAL MITIGATION STRATEGIES

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SHRP2

STRATEGIC HIGHWAY RESEARCH PROGRAM

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



TRANSPORTATION RESEARCH BOARD
OF THE NATIONAL ACADEMIES





SHRP 2

- Authorized in SAFETEA-LU
- \$170 million, 7 years
- First research contracts signed 2/07
- Administered by TRB under MOU with FHWA and AASHTO
- 3-tiered stakeholder governance: 400-500 volunteers serving on 40-50 committees/panels

Providing Outstanding Customer Service For The 21st Century



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

Home
Safety
Renewal
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

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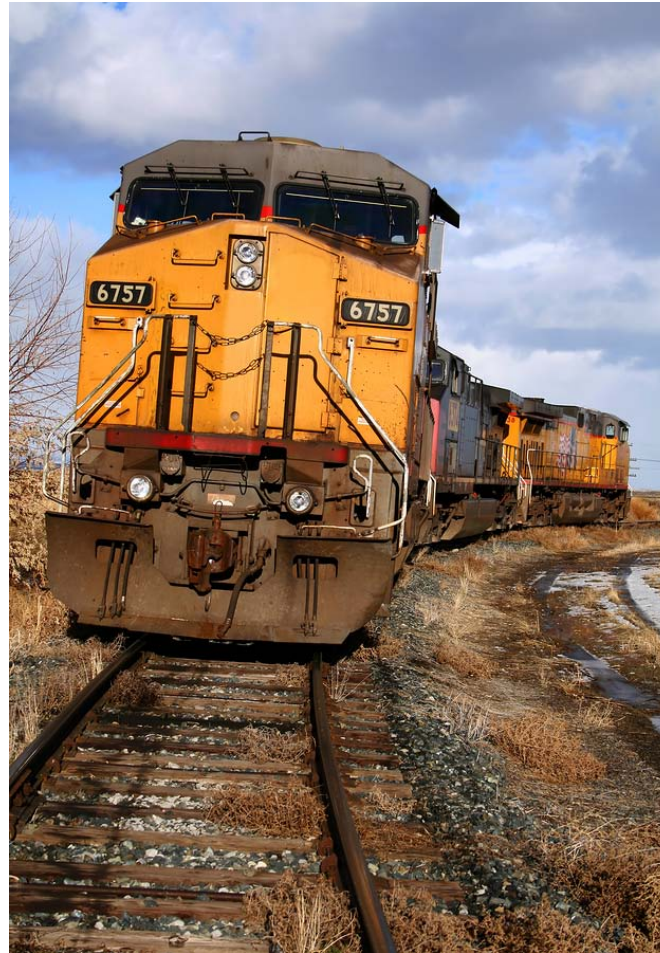
New Web Resource: Performance Measures to Evaluate Highway Capacity Projects
Posted February 25, 2010

Transportation
Environmental
Economic
Community
Cost

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.

Presentation Outline

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



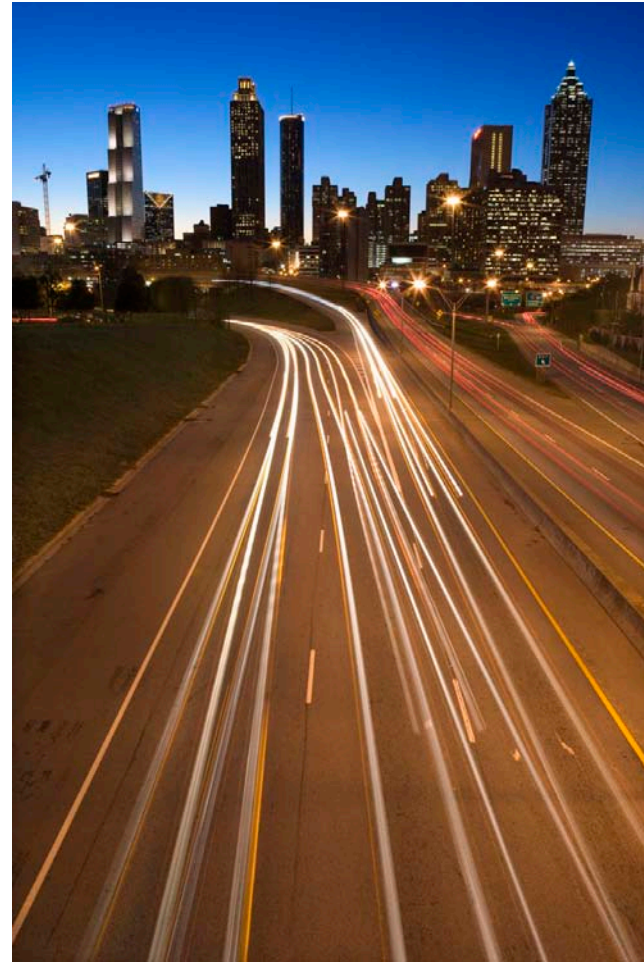
Problem Statement

- 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



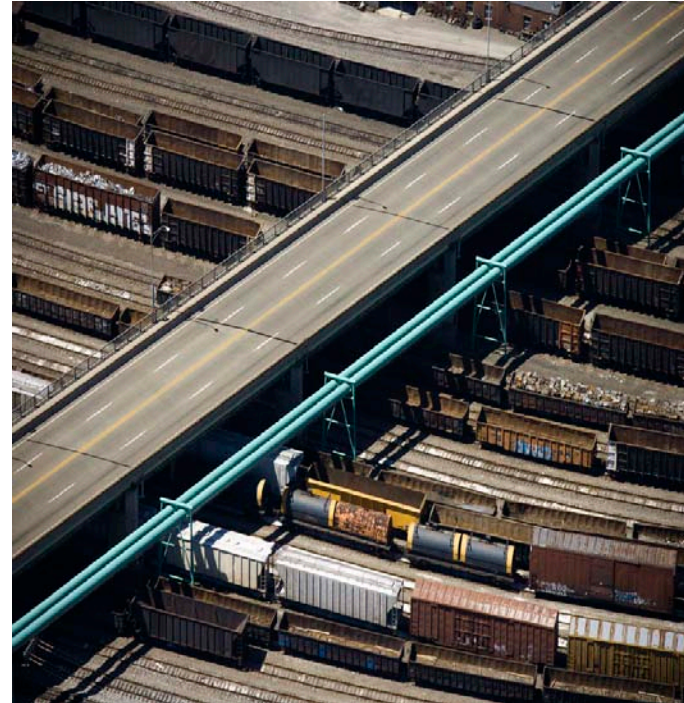
Project Objectives

- 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 Problem

- Complex negotiations
- Busy railroads
- Slow reviews
- Expensive solutions
- Contentious negotiations



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 Background

- 559 Railroads in US
 - 7 are Class 1
 - 33 regional carriers
 - 519 local or short-line railroads
- 90% rail revenue generated is from Class 1 carriers



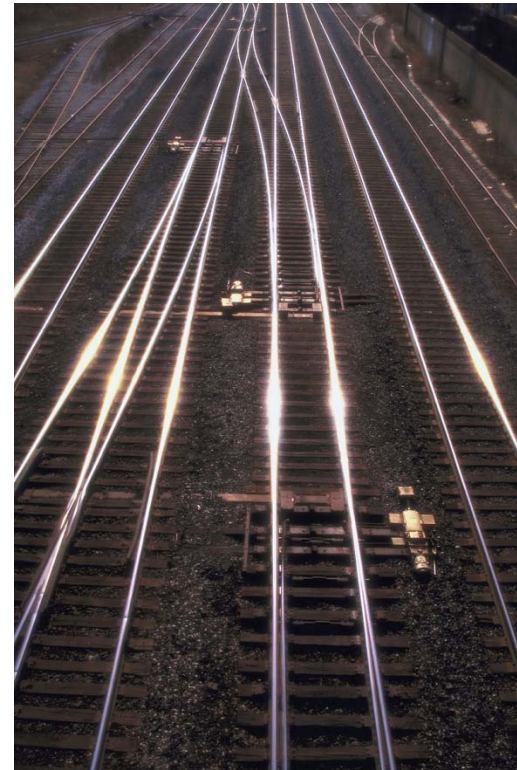
Railroad Perspective

- Are private companies, obligated to 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



Railroad Perspective-Ownership

- Railroads are publically traded companies, except for Amtrak
- Challenged to meet their cost of capital
- Responsible to shareholders
- Must provide return on investment to attract shareholders



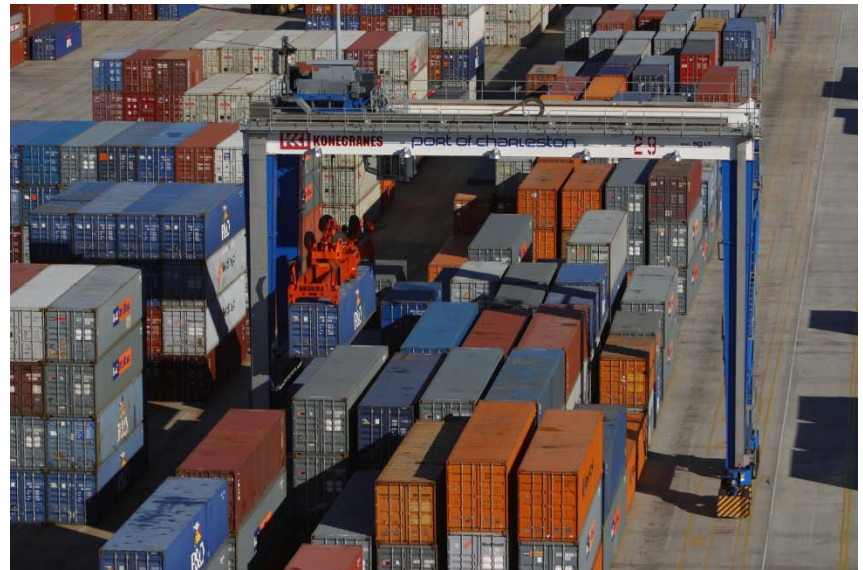
Future Demand for Rail Freight

- Carry 40% of all tons miles in US
- US DOT Freight Analysis predicts an 88% increase in rail freight between 2002-2035
- Intermodal shipments are the largest single revenue source



Trends/Movements

- Railroads will require additional capacity and right-of-way
- Seek to optimize capacity through technology (Positive Train Control)
- Partner with public agencies on major corridors
- Preserve 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

- RR protective liability insurance often contentious
 - Freight lines
 - \$2 million per incident
 - \$6 million aggregate
 - Passenger trains
 - \$5 million per incident
 - \$10 million aggregate
 - 79 to 150 mph



Real Estate Acquisition

- 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



Railroad Cooperation

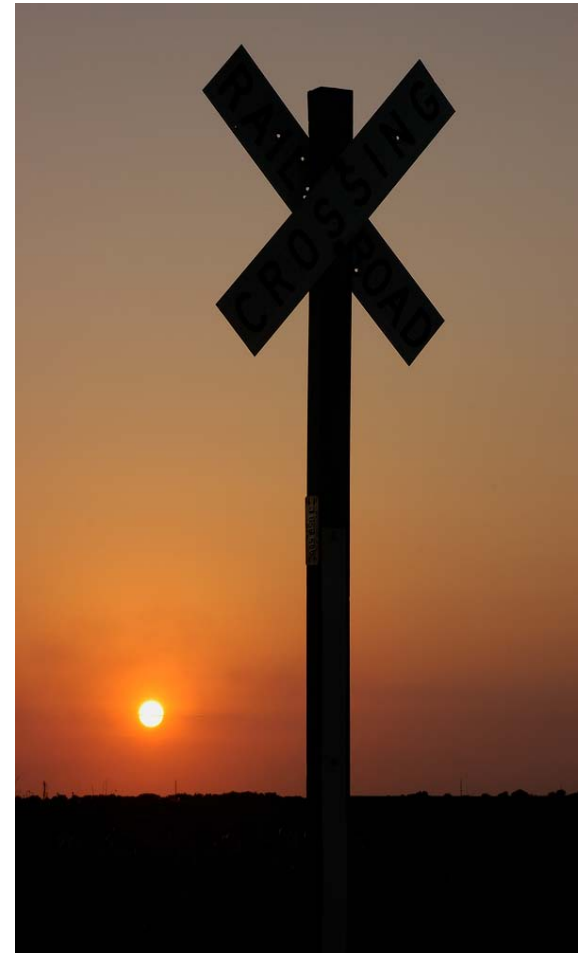
- Railroads want to be good corporate citizens, but highway departments need to understand the railroads' concerns:
 - Safety - is paramount, “safety first”
 - Liability
 - Capacity
 - Interruptions to freight movements
- Risk adverse



STATES PERSPECTIVE

States: Why Delays Occur

- Railroads appear inflexible;
- No pre-design meetings
- Railroads are short staffed,
- DOTs have staff turnover & related loss of knowledge



State Perspective on Delays

- Lack of communication and trust
- Delays and differences in details of plans and agreements
- Delays in coordination and feedback
- Scheduling issues



State Cost Constraints

- As public agencies, DOTs are very sensitive to ROW costs
- RR property difficult to appraise
- DOTs and RRs often disagree on property value or cost of RR delay



States Object to Related RR Costs

- Flagging costs can be high
- States can't low bid work on RR property
- RR force account agreements create monopoly pricing issues
- Despite paying for engineering reviews, states can't control review timing



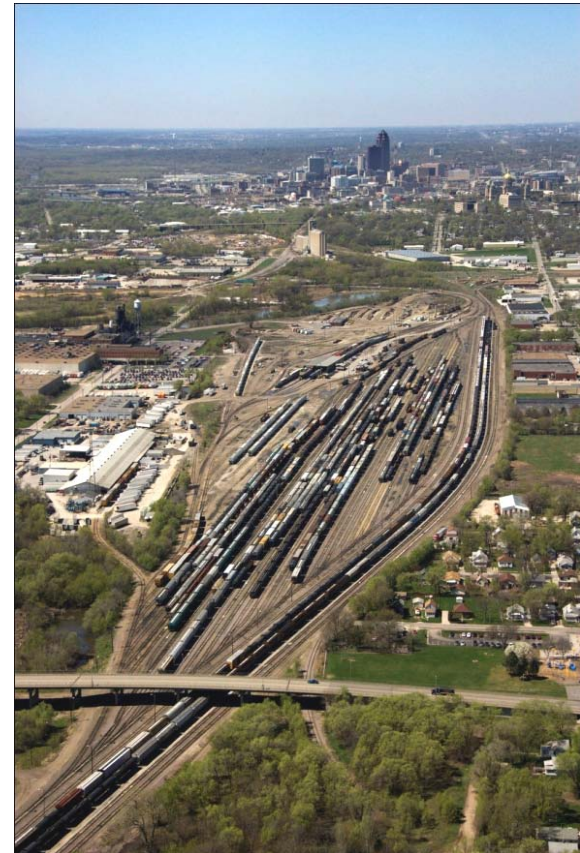
All Parties Agree

- 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



Coordination Keys to Success

- Single point of contact
 - Government agency and railroad
- Regular scheduled meetings
 - Monthly
 - Quarterly
 - Annual
- Open communication
- Realistic schedules



Key to Success

- Early coordination
- Use experienced staff and consultants
- Obtain and use design manuals
 - Railroads often have different design criteria
- Use standard agreements
- Expect to compensate the railroads for review and coordination costs
- Allow sufficient time for reviews and agreements
- Develop a respectful relationship



Findings

- Few metrics exist;
- 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 agreements are non-binding; a way we agree to treat each other
- They spell out each party's expectations of the other

Partnering Agreement Elements

- Agree to recognize the goals and constraints of the other party
- Agree to a preferred time line for typical projects
- Agree to confer regularly
- Agree to gather metrics on performance
- Agree to continuously analyze and improve the process

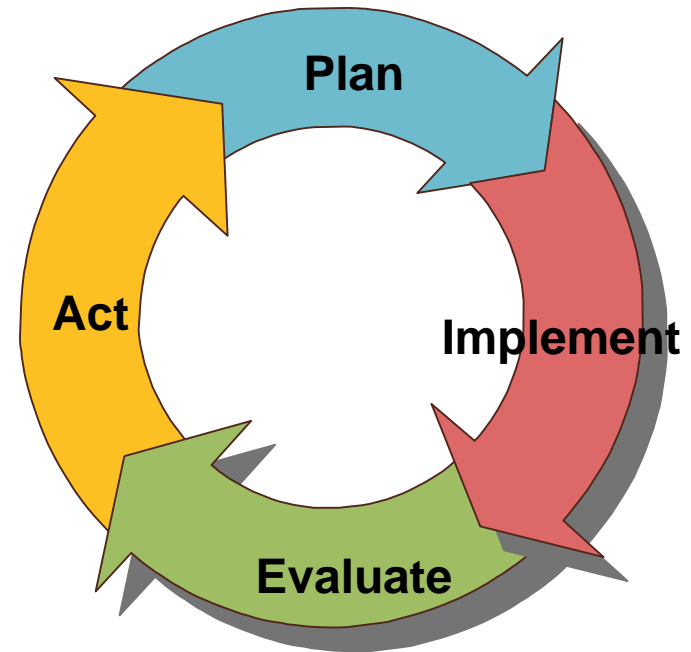


Suggested Metrics

- Identify typical time frames for reviews
- Provide RR with a year's expected list of projects so RR can anticipate work load
- 30 days to acknowledge receipt of correspondence
- 60 days for project reviews
- 30 days to respond to comments
- Track performance of submittals and reviews

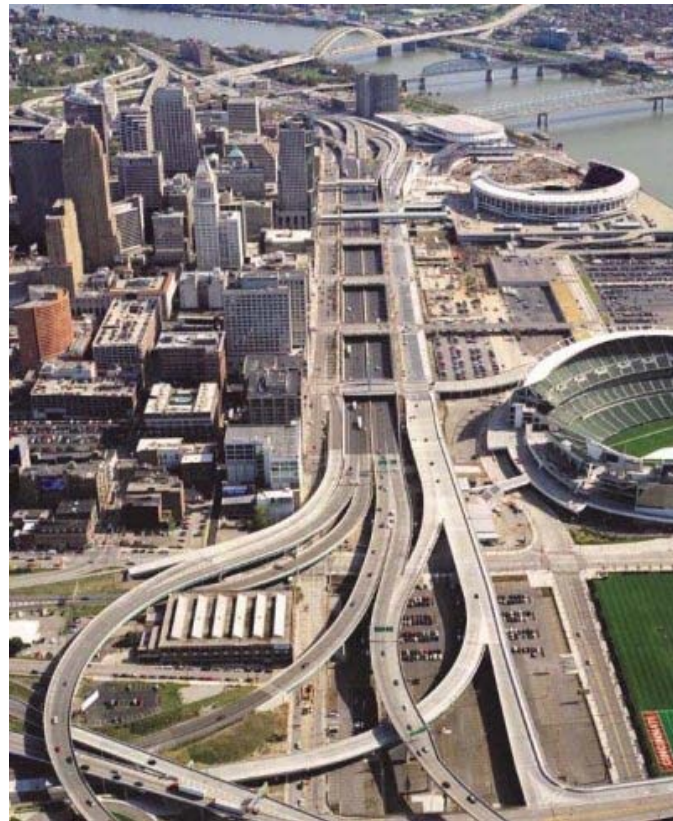
On-going Consultation Cycle

- Agree upon review milestones and time frames
- Track milestones
- Use escalation procedures
- Conduct regular review meetings
- Use annual meetings to review, update the process
- Create a central records repository



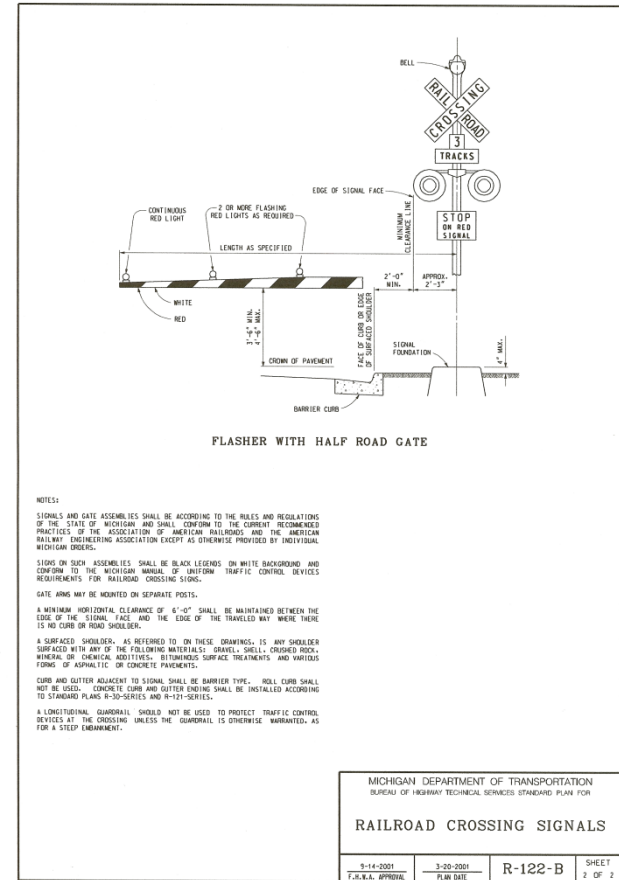
Master Agreement Provisions

- Agree to cooperate
- Agree to reimburse
- Agree to annual lists of projects
- Agree to milestones
- Agree to confer when milestones missed
- Agree on insurance



Master Agreement Provisions

- Include agreed-upon rights of entry
- Include agreed-upon safety training
- Include provisions for updating agreement
- Reference controlling engineering drawings, standards



Recommendations

- Treat as a Partnering exercise
- Negotiate and develop State/RR MOA/MOU to guide review process
- Adopt a framework for “continuous improvement”
- Adopt best practices



Recommendations- continued

- Develop and use draft model agreements and streamlined permitting processes,
- Participate in efforts through their individual professional organizations to
 - continue dialogue and share best practices;
 - Perpetuate model agreements and best practices



Value Added From the Report

- Identification of common problems
- Identification of a path to measure and manage typical problems
- ‘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 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

Questions?