

SHRP2 Helps Railroads and DOTs to Work Together with Railroad-DOT Mitigation Strategies (R16)



Every day, state departments of transportation (DOTs) and railroads work together on infrastructure projects. After all, thousands of highway projects—either those reconstructing existing roadways or building new ones—intersect with railroad crossings. These types of projects can often add an extra layer of preconstruction reviews for safety, engineering, and operational impacts, increasing the time and potentially adding costs to complete.

By using the tools, strategies, and innovations developed through Railroad-DOT Mitigation Strategies (also referred to as R16) as a product from the second Strategic Highway Research Program (SHRP2), public agencies and railroads can identify and circumvent sources of conflict and develop agreements, sample contracts, training materials, and standardized best practices. The tools reflect both railroad and public agency perspectives, processes, budgets, funding, and best practices.

By improving coordination and collaboration, DOTs and railroads all benefit. Frequent interactions build stronger relationships and each entity develops a greater understanding of each other's requirements through the project delivery process, allowing the work to be done faster and with fewer headaches.

In the end, use of the R16 strategies saves time, money, and lives by accomplishing the following:

- Expedited project delivery
- Better management of limited resources
- Stronger communication, cooperation, and collaboration
- Streamlined processes
- Transparency
- Improved engineering quality and safety

“The insights and findings from R16 are woven throughout UDOT’s Railroad Manual of Instruction and training materials,” said Carlos Braceras, director of the Utah Department of Transportation. “By utilizing these nationally identified strategies such as early coordination, standard designs, and approved agreements, UDOT has seen improvements in railroad coordination performance and outcomes during highway project delivery.”

Using a Collaborative Approach

This product uses a collaborative approach and identifies strategies in seven areas to improve performance. They include strategies to:

- Improve coordination
- Improve the project delivery process
- Streamline the process of reviewing and signing agreements
- Improve railroad flagging coordination
- Improve grade crossing safety and funding of crossing projects
- Improve training and knowledge transfer
- Improve administration processes

All Railroad-DOT Mitigation Strategies fall into three different categories:

- Best practices and streamlined processes, which focus on the processes that provide institutional arrangements and innovative partnering methods that ensure collaboration occurs between the DOTs and railroads. These help to facilitate the building of mutually beneficial relationships and promote collaboration and coordination between both parties.
- Standard (or master) agreements, which help reduce time and costs associated with delays by providing programmatic templates for the interaction between both organizations. These templates save time because they contain legal provisions agreed to and required by both DOTs and railroads for expediting projects.
- Partnering techniques, which develop positive relationships in both railroads and DOTs.

Currently, 16 states are engaged in implementing R16 as part of the SHRP2 Implementation Assistance Program (IAP), sponsored by the Federal Highway Administration (FHWA) and the American Association of State Highway and Transportation Officials (AASHTO).



“Utilizing the strategies outlined in R16, we have been able to cut railroad agreement processing from more than 16 weeks to as little as four to six weeks,” said Robert Travis, branch manager for rail highway safety at Texas Department of Transportation.” In collaborating with our railroad partners, we have also been able to ‘think outside the box’ and eliminate the need for agreements on simple maintenance work, and only use a notification letter. That kind of time savings is invaluable to us and the railroads and allows both parties to focus their limited time on larger construction and reconstruction projects.”

Every Day Counts—Working to Do More with Less

Railroad-DOT Mitigation Strategies is not just a SHRP2 product—it is also an Every Day Counts (EDC) initiative. EDC, another collaborative effort between FHWA and AASHTO, was created in 2009 to speed up the overall delivery of highway projects and to address the challenges presented by limited budgets.

The state-based model identifies and rapidly deploys proven but underutilized innovations to cut the project delivery process, increase safety, reduce congestion, and improve environmental sustainability. As part of EDC, several states are using R16 to achieve these goals.

Strategies from the Railroad Perspective

While public agencies are benefitting from this increased collaboration and communication with railroads to expedite their highway projects, railroads are also experiencing positive results from working more closely with DOTs. Knowing what challenges DOTs are facing allows railroads to better manage their own projects and responses. Deepening that mutual understanding and streamlining processes saves time and money for both public agencies and railroads.

“BNSF values the partnership and opportunity to work with the DOTs on building mitigation strategies and increasing the collaboration between the two organizations,” said Kamalah Young, public projects manager for BNSF. “The exchange of ideas and project management practices has led to better understanding of challenges both stakeholders face in managing grade crossing projects safely and efficiently.”

“We at CSX aim to be consistent with our state DOT partners in order to benefit all of us, and best practices and strategies outlined in R16 have proven to help us do that,” said Troy Creasy, project manager II at CSX.

An Innovation Library Offers Best Practices for All States and Railroads

AASHTO has developed an Innovation Library for the Railroad-DOT Mitigation Strategies product that houses agreements, manuals, and other documents developed by state DOTs and rail agencies. The following hyperlink will take you to the Innovation Library:

http://shrp2.transportation.org/Pages/R16_InnovationLibrary.aspx. This page contains the agreements (including master, right-of-way, and construction and maintenance agreements), manuals and handbooks, training materials, charter documents, and other helpful documents that assist public agencies and railroads identify and avoid major sources of conflict. Users of the library can search by state or railroad (the owners of each document) or by type of document.

“North Carolina has benefitted immensely from the mitigation strategies and sharing of ideas,” said Jahmal Pullen, engineering coordination and safety manager at North Carolina Department of Transportation. “We’ve achieved great success in building some very important master agreements templates that save us time and money.”

Bringing Together DOTs and Railroads—Community of Interest

Moving Forward with Lessons Learned

The Community of Interest (COI) is an integral part of R16. It brings together representatives from transportation agencies, railroads, associations, AASHTO, FHWA, and the Federal Railroad

Administration to discuss efforts to improve coordination and communication between state departments of transportation and railroads.

COI members serve as advocates and subject matter experts while identifying and sharing best practices that can be used by other railroads and transportation agencies. They also offer advice on how more states and railroads can use these strategies, identify and share innovations with peers, and test innovative practices and agreements included in the Innovation Library.

Through peer exchanges and webinars, the COI shares those best practices, lessons learned, challenges, accomplishments, model agreements, and processes used between railroads and highway agencies nationwide.

“The R16 Community of Interest has been a great resource for Pennsylvania Department of Transportation. Hearing what other states and railroads are doing has been very beneficial to PennDOT, as we learn what has worked and apply those successes in our own state as often as possible,” said Daniel Leonard, grade crossing engineer at PennDOT. “Additionally, we enjoy the opportunity to share our own successes with others so they may benefit from what we have learned.”

Case Studies Provide More In-Depth Information

Now that several states have had the opportunity to learn from and grow through the use of R16, AASHTO and FHWA are developing a series of case studies that will provide additional information on different processes that will be beneficial to both public agencies and railroads. Look for those upcoming case studies on the AASHTO and FHWA SHRP2 websites.

How to Get Involved

To learn more about Railroad-DOT Mitigation Strategies (R16) and all its resources, contact:

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Stay up-to-date on R16 and other product news by visiting www.fhwa.dot.gov/goshrp2 or <http://shrp2.transportation.org>, where you can access the Innovation Library, view presentations, learn more about the COI, or sign up to join the SHRP2 list.