



# Formulating a Strategy for Securing High-Speed Rail in the United States

Brian Michael Jenkins, Chris Kozub, Bruce R. Butterworth, Renee Haider and Jean-François Clair

MTI Project I026

March 2013

SJSU Research Center  
210 N. Fourth St., 4th Fl.  
San José, CA 95112

Tel // 408.924.7560  
Fax // 408.924.7565

transweb.sjsu.edu

## Board of Trustees

### Founder

Secretary Norman Y. Mineta

### Honorary Co-Chairs

Congressman Bill Shuster  
Congressman Nick Rahall

### Chair

Steve Heminger

### Vice Chair

Stephanie L. Pinson

### Executive Director

Rod Diridon, Sr.

Thomas E. Barron  
Joseph Boardman  
Donald H. Camph  
Anne P. Canby  
Grace Crunican  
Julie Cunningham  
William Dorey  
Malcolm Dougherty  
Mortimer Downey  
Nuria I. Fernandez  
Rose Guilbault  
Ed Hamberger  
John Horsley  
Will Kempton  
Jean-Pierre Loubinoux  
Michael Melaniphy  
William Millar  
Norman Y. Mineta  
Dean David Steele  
Paul A. Toliver  
Michael S. Townes  
Bud Wright  
Edward Wytkind

Thirteen high-speed rail (HSR) projects are in the planning stages or have begun construction in the United

*“The right time to initiate a discussion on High-Speed Rail in the United States is now.”*

States. With terrorists worldwide determined to attack trains, how should HSR systems be protected? This is the right time to initiate a discussion, as new HSR systems are being designed and built. This research project addresses several questions, such as:

- What threats drive HSR security concerns?
- What can we learn from the terrorist attacks on HSR systems abroad?
- Does HSR merit more security or different security measures than other types of passenger rail?
- What can we learn from security measures already in place at HSR systems in Europe and Japan?
- What do accidents involving HSR systems tell us about the consequences of potential attacks?
- Should HSR passengers go through separate security screening?
- Would increased security for HSR offer a net security benefit?

## Study Methods

The approach is empirical. The authors analyzed data on all attacks against HSR targets recorded in the MTI Database of Terrorist and Serious Criminal Attacks against Public Surface Transportation. Because very few HSR attacks have occurred, the researchers also analyzed HSR accident data to identify patterns in event types and outcomes — particularly casualties, damage, and service disruption — in order to identify the outcomes that would be attractive to a potential attacker. In addition, the researchers examined security strategies and measures at existing HSR systems abroad.

## Findings

- Terrorists seeking significant body counts target crowded subways and commuter trains and stations, which offer crowds of people in confined environments. Terrorists attacking HSR would most likely seek spectacular crashes and casualties through derailments.
- Since HSR will be connected to non-HSR systems — and in many rail systems, it is envisioned to function as high-speed commuter transit — separate, more stringent security regimes for HSR should be the exception.
- HSR operators in Europe and Japan favor the full integration of HSR with non-HSR,

which increases passenger convenience; they do not favor separate HSR security regimes, which would cause additional security delays.

- Any special security measures adopted for HSR trains should provide a net security benefit, not merely displace the risk to non-HSR trains and passengers.
- Security measures should focus on the station rather than on a particular component of transportation in the station.
- Random screening for both HSR and non-HSR passengers is used increasingly and appears generally acceptable.
- The apparent propensity of terrorists to attack the rails of HSR lines suggests that rail security measures should be given close attention.

### Policy Recommendations

The objective of the research project was not to dictate security regimes but rather to identify the lessons learned from terrorist attacks, accidents, and security measures in place, and from these, to distill the principles of a HSR strategy, which is outlined in the final report.



**The Aftermath of the Wenzhou Collision**

### About the Authors

Brian Michael Jenkins is Director of the National Transportation Security Center at the Mineta Transportation Institute. Bruce R. Butterworth, Renee Haider, and Chris Kozub are research associates at MTI. Jean-François Clair is a former senior official in the French security service.

### To Learn More

For more details about the study, download the full report at [transweb.sjsu.edu/project/I026.html](https://transweb.sjsu.edu/project/I026.html)