Enhanced Laboratory Environment

STANDARDS TESTING
M-202/M-203 certification

AREMA TESTING
Chapter 30 Tie Testing

ASTM TESTING
ASTM D3950/D3953

PROTOTYPE TESTING
Tools, wheel bearing generators, fuel tank crush tests
One vision. Four tracks. Unlimited potential.

High Speed Loop
- 5.8 miles
- Class 6 track
- 110 mph tangent
- 65-69 mph curves
- 6-in. superelevation
- 2° 41 ft. to 3°

Curving Performance Track
- 2.15 mi.
- Curves of 3, 4, 5, 7.5, 10, & 12 degrees
- 34 mph

Suspension Resonance Track
- Siding to HSL
- 3.4 miles
- 75 mph through perturbed test zones
- Pitch & bounce, twist & roll, yaw & sway

FAST Loop
- 3.3 mi. (2.8 mi. main loop)
- Self-contained
- Two loops:
  - Mainline outer loop
  - Mainline with bypass

Available late summer 2023
M-976 testing, Curving & hunting testing
Security & Emergency Response Training

• More than 76,000 trained since 1985. Enhanced curriculum and a newly re-designed training ground delivers an unmatched student experience

• Re-imagined experience includes:
  – Expanded classroom space, improved student shelters, and enhanced highway, rail, and intermodal lay-down yards
  – Immersive, realistic, full-scale training scenarios featuring 85 of today’s rail, highway and intermodal transportation vessels
Unlocking Momentum
Industry Research

Safety
Reliability
Efficiency
Build Exemplary Teams & Facilities
Empower Science-Based Solutions
Program Design & Approval Process
FAST Loop

The industry’s infrastructure and mechanical test bed
Expected to be operational in late summer
Over 20 experiments planned for 2023

Additional Testing & Activities:
- Baseline Ballast Characteristics
- High Performance Wheel testing
- Alternative Broken Rail Detection testing (onboard)
- Rail Head Repair Welding
- Proprietary rail tests
- Proprietary tie tests
- Proprietary friction control tests
- Proprietary wireless monitoring tests

Facility for Accelerated Service Testing

MAIN OPERATING LOOP
2.8 miles

ACCESS LEAD TRACK
Fuel Savings with Freight Rail

Railroad Fuel Efficiency
(revenue ton-miles per gallon)

And Getting Better…
• Better locomotives
• Lighter, higher capacity freight cars
• Technology
  – Monitoring systems
  – Reduce idling
  – Trip planning software
• Training
• Reduce aerodynamic drag

Source: AAR