IDOT Chicago - St. Louis High Speed Rail Program Management

Lessons Learned

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Agenda

» Program Description
» Construction Status
» Program Benefits
» Lessons Learned
Program Description
National High-Speed and Intercity Rail Vision

High-Speed Intercity Passenger Rail Program

Summary of Investments

LEGEND

- Corridor Name
- Source: www.fra.dot.gov

Information is current as of October 26, 2010

Source: www.fra.dot.gov
Missouri HSIPR Projects

» 2009: $31 million from ARRA:
  - second rail bridge over the Osage River
  - Kirkwood crossover
  - safety improvements at highway/rail crossings (west of Sedalia)
  - preliminary engineering on six future projects

» Terminal Railroad Track Improvements

» Highway/Rail Crossing
  - Hazard Elimination

» State Rail Plan

» New Trainsets
  - (Four-state application)

» St. Louis Merchants Bridge Replacement (Upgrade)
Kansas HSIPR Projects

» 2010: Amtrak evaluation of new passenger service over freight lines
  – Extension of existing service from OKC/Ft. Worth to Newton to connect with existing Amtrak service
  – New service between Ft. Worth and Kansas City

  – Operations/schedules
  – Ridership and revenue forecasts
  – Estimation of public benefits
  – Financial statements

» DOTs and PB are gathered in Topeka as we speak for working session
Illinois: Why the Chicago to St. Louis Corridor?

- HSR development on the corridor since 1980’s
- Previously completed studies (2004 ROD)
- Sizeable ridership at intermediate stations
Historic Ridership and Reliability

OVERVIEW: CHICAGO TO ST. LOUIS PROGRAM

![Graph showing historical ridership and on-time percentage](image-url)

- Ridership (Thousands)
- On-Time Percentage


- Ridership: 100, 100, 100, 100, 100, 100, 100, 100, 100, 100
- On-Time Percentage: 10%, 20%, 30%, 40%, 50%, 60%, 70%, 80%, 90%, 100%

Visit [www.idothsr.org](http://www.idothsr.org) and [www.connectthemidwest.com](http://www.connectthemidwest.com) for more information.
## Initial Program Budget: $1.2 Billion

- **Track & Structures**: $558 million
- **Real Estate**: $15 million
- **Stations**: $40 million
- **Rolling Stock / Equipment**: $211 million
- **Signaling & Communications**: $153 million
- **Miscellaneous**: $50 million
  (Grade Crossing Approaches, Bridges, Fencing, etc)
- **Professional Services**: $175 million
  (Program Management, Environmental / Design, Construction Oversight)

**Total**: $1,202 million

**Additional Supplemental (under negotiation)**: $248 million
Key Program Milestones

2010 - 2012
» Track reconstruction and upgrades

2011
» Procurement process begins for new high-speed rail locomotives and cars

2012
» Operation of trains at higher speeds between Dwight and Pontiac

2017
» Anticipated project completion
Who’s Involved?

Project Partners
- Illinois Department of Transportation (IDOT)
- Federal Railroad Administration (FRA)
- Union Pacific Railroad (UPRR)
- UPRR Contractors/Consultants
- Amtrak: Service Provider
- Illinois Commerce Commission (ICC)
- Stakeholders

Project Management Consultant (PMC)
- Parsons Brinckerhoff (PB)

Additional Consultants
Construction
Construction Coordination

» UP responsible for track/signal/bridge delivery
  - Six weeks from 2010 agreement to construction
» PMC field team focus on oversight and verification
» Invoicing meeting FRA requirements a critical task
» IDOT will contract stations, equipment, etc
Construction Overview

- One of the first construction projects in the HSIPR Program
- In 2010 upgraded 76.5 miles of existing main line track
- Continued in 2011 upgrading 114.4 miles of existing main line track
Track Renewal Train (TRT)

- Installs up to 6,500 ties in a 11-12 hour workday (1-2 miles per day)
  - Amtrak Bused Around TRT
  - Increased Production up to 40%

- Related turnout, crossing, structures, ditching work
Interim Grade Crossing Improvements

Before

» 2010 – 69 Road Crossings
» 2011 – 89 Road Crossings
New Construction

» Remaining 2011 Plan
  - Replacement of Culverts on Existing Main Line
  - Odell Siding Reconstruction

» 2012 – 2014
  - Complete TRT work in 2012
  - Signal / Crossing Upgrades
  - Reconstruct Existing Sidings
  - Construct 32 Miles 2nd ML
  - Reconstruct interlockers
Overall Program Benefits
Benefits

» Safety

- Enhanced grade crossing warning: four quadrant gates and pedestrian gates (subject to federal and state approvals)
- Implementation of cab signaling on limited segment, and PTC
» Economic and Community

- New or restored stations
- Improved transportation connections at stations
- Business opportunities for rail and station construction, train operation and maintenance
- Improve the movement of people, goods, and services
Economic and Community

- Creation of approximately 6,000 jobs*
- 80,000 new tourists will visit Chicago each year*
- Over the first ten years, tourists will spend $320 million*
- State and local tax revenues will increase by $120 million*

*Source: Metropolitan Planning Council
New Passenger Cars and Locomotives

- Purchase of six new high-speed train sets
- New state-of-art coach and business class seating
- Premium onboard amenities: Wi-Fi, variable message signs, food/beverage service and automated announcements
**Environmental**

- Improves air quality and energy efficiency
- Reduces greenhouse gases
- Reduces Illinois’s demand for oil
Benefits (continued)

Service Reliability and Time Savings

- Existing five daily round trips will include three high-speed round trips
- On-time performance of at least 80%
- Estimated one way travel time of approximately 4 ½ hours
Lessons Learned
Start Early on Agreements

» Involved IDOT, UP, FRA, Amtrak
» Initial focus was IDOT/UP; relationships are key
» Outline/big picture approach was successful
» Groundbreaking nature of agreements meant numerous obstacles
The players:

» UP and UP contractors
» IDOT, Program Manager (PMC), and additional support consultants
» Local agencies

Generally:

» IDOT deals with PE (parties agree scope/budget)
» UP completes design
LESSONS LEARNED

Environmental Clearance is Critical

- UP handles permits
- IDOT handles NEPA documents (CE, EA, EIS)
- FRA requires full NEPA compliance to enter final design
Grade Crossing Upgrades Require Teamwork

» Extensive and thorough crossing diagnostics
» Four-quad gates at all crossings
» Extensive private/farm crossing improvements
» Funding challenges to address all desired improvements
Special Features Required for 110mph Running

- 20-mile test segment planned for 2012 supported by cab signal installation
- PTC by 2015 delivered by UP
- Curve/spiral designs selected for high ride quality while accommodating balanced condition for freight at 60 mph
- FRA Class 6 standards
For additional information:

- Visit www.idothsr.org for specific information and to comment on the Illinois High-Speed Rail project.

- Visit www.connectthemidwest.com for Midwest High-Speed Rail information.

- Project Hotline 1-855-IDOT-HSR (436-8477).
Questions?
2011 Pull Ahead Work

» Q Tower to Wann No. 1 Main Line
  - Approximately 18 Mi.
  - 20,185 Concrete Ties
  - 79,284 L.F. Rail
  - 337 Cars of Ballast
  - 11 Road Crossings
Program is Comprised of Multiple Projects (FRA Contributions Indicated)
Track Upgrades

- 2010 Upgrades – 76.5 Mi.
  - 201,116 Concrete Ties
  - 753,252 L.F. Rail
  - 3,900 Cars of Ballast

- 2011 Upgrades – 95.6 Mi.
  - 245,450 Concrete Ties
  - 981,792 L.F. Rail
  - 5,800 Cars of Ballast
Why Not Faster?

Jog, Run, Sprint Philosophy

Jog
60-80 mph

Run
90-125 mph

Sprint
150-220 mph

www.idothsr.org  www.connectt