Incident in Rockview Missouri

Collision, Collapse and Construction

DENNIS HECKMAN
State Bridge Engineer
Missouri Department of Transportation
April 23, 2015
Route M Over Two Railroads

- 5 Span Bridge
- 367 feet long
- Spans of 62’ – 62’ – 124’ – 58’ – 58’
- Built in 1989 (25 years old)
- Rockview, MO
A4376 05-23-02
looking E from S approach
When

- 2:30 AM, Saturday morning – May 25, 2013
- Memorial Day weekend
One Train t-boned Another Train & the Bridge Collapsed.

A4376 Scott Co. Rte. M
South Profile
Bent #2
Four people injured but no fatalities!
Emergency Response

- 3:00 a.m. - Call by St. Louis EOC to Superintendent of Cape Girardeau Area Maintenance.
- A crew with barricades and channelizers were on site by 4:30 a.m. to set up a temporary road closure.
- 4:35 a.m. – All MoDOT officials were notified.
The detour
The detour
Debris Removal and Demolition

- Railroad had an on-call contractor available for debris removal.
- MoDOT needed the bridge removed, but so did the railroad.
- Both had to wait for NTSB approval.
- District Bridge Engineer arrived on site at 11:00 a.m. to evaluate the bridge.
Debris Removal and Demolition

- NTSB agreed that debris removal could start.
- District Bridge Engineer talked to State Bridge Engineer and both concurred there was nothing worth saving.
- Early afternoon permission given to contractor to remove entire structure.
- No contract and no charge to MoDOT.
The Cleanup

- May 26, 2013 at 6:00 PM…

- What was left of the bridge, rail and debris.

- Just 24 hours later.
A4376 Scott Co. Rte. M Bridge clean-up
In the meantime …

- State Bridge Engineer began the process to design a new bridge.
- On-Call Consultant (Burns & McDonnell) contacted at home on Sunday to design bridge.
- Scope of services worked out by MoDOT Bridge Division.
What needs?

- Surveying of the location. MoDOT survey crew mapped the location and worked with railroads to acquire track elevations and locations.
- Railroad working to get rail service back up.
- Elevation of new bridge dependent on a new track diamond elevation.
- More tracks?
Details, details, details

- Time table for setting girders (two tracks at 50 trains a day).
- Completion date (Labor Day).
- Staging area for construction and railroad access. (R/W and negotiations with railroads).
- Execution of railroad access agreements (normally an 18-month process – completed in 4 weeks).
Moving forward

- Director awards contract as emergency contract.
- Contractor (Goodwin Brothers) begins ordering materials, develops schedule and mobilizing for construction.
- July Commission meeting – Missouri Highways & Transportation Commission confirms award.
- Construction begins.
Award of construction contract

- Weekly conference calls to address bridge design.
- Design began May 27.
- Bridge plans ready for review by June 19.
- Design reviews by MoDOT completed in one day.
- Design ready for accelerated letting June 28.
Construction excavation

Bent 2
Setting girders
Pouring the deck
New bridge opened to traffic, August 30, 2013

- 3 months after the incident.

**Approximate cost:**
- Just under $3,000,000
- Included:
  - Emergency response
  - Setting up detour
  - Bridge design
  - Bridge construction
- All reimbursed by the railroad.
Lessons learned

- Have relationships with consultants ahead of time.
- Have after-hours contact information for the on-call consultants.
Questions?

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