



CTA Responds to 7/11/06 Derailment

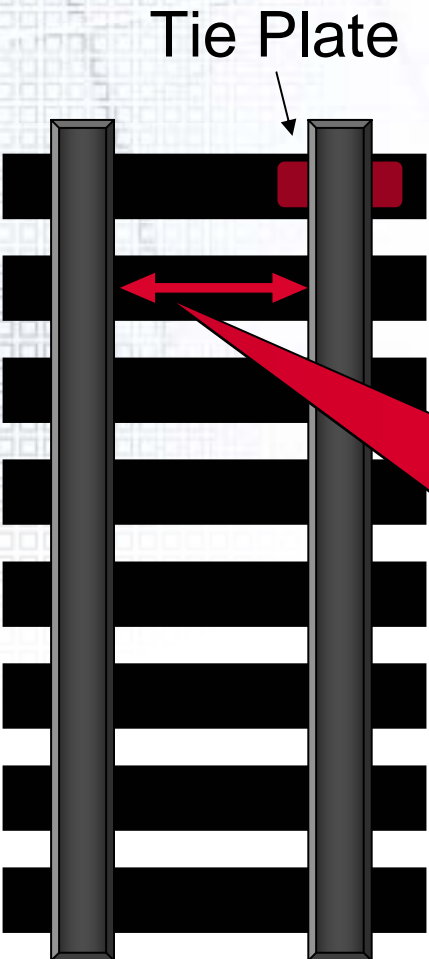
Chicago Transit Authority



Blue Line Derailment

July 11, 2006: Northbound Blue Line train derailed between Clark/Lake station and Grand Station

Cause: deteriorated ties plates, which resulted in a condition known as “wide gage”



WIDE GAGE:

The distance between the rails is greater than the required distance for the appropriate track speed.



Derailment Investigations

Several investigations occurred looking for direct cause and contributing factors

- **National Transportation Safety Board Factual Report**
- **CTA's Office of Inspector General**
- **CTA Safety Team**

Immediate Proactive Plan Acted On



Change To Address Problems

Three areas:

- 1. Infrastructure Renewal/Investment**
- 2. Work Structure/Staffing**
- 3. Technology Change**





Infrastructure Renewal/Investment

Subway Signage Replaced

- **Track marker location, directional and emergency exit signs installed in Dearborn and State Street subways**





Infrastructure Renewal/Investment

Improve Ventilation

- **Fan near accident site currently being reconstructed**
- **Fan use procedures developed for Control Center**





Infrastructure Renewal/Investment

Replace Deteriorated Track - Current

- **Contractors installed 5,231 new concrete half ties in the Dearborn Subway**
14,000+ ft. of slow zones
- **Contractors installing 12,500 concrete half ties in the State Street Subway. Work complete by end of 2007**
8,400+ ft. of slow zones
- **Contractor replacing ties on the Brown Line in the Clark Junction Corridor**
2,500+ ft. of slow zones





Infrastructure Renewal/Investment

Replace Deteriorated Track - Current

- Contractor working on grade crossing renewals on the Brown and Yellow lines

5,582+ ft. of slow zones

- CTA forces replacing ties between Clark Junction and Lawrence

6,645 ft. of slow zones





Infrastructure Renewal/Investment

Replace Deteriorated Track - Pending

- Finalizing contract to replace 100,000+ ft. of ties and rail on the O'Hare Branch

87,000+ ft. of slow zones

- Finalizing contract to replace all rail, ties and footwalk in the Loop

556 ft. of slow zones

- Finalizing contract to replace ties on the Brown Line between Western and Addison

4,800+ ft. of slow zones





Infrastructure Renewal/Investment

Replace Deteriorated Track - Future

- **Advertised contract to replace all remaining wooden ties with concrete in the State Street Subway**

remaining 17,000 ft. of slow zones

- **Awaiting proposal to replace ties**

- **between Paulina and Southport**

2,062 ft. of slow zones

- **between Belmont and Armitage**

5,244 ft. of slow zones

- **between Belmont and Southport**

5,432 ft. of slow zones





Infrastructure Renewal/Investment

Repair Other Subway Issues

- **All subway lighting replaced in Dearborn and State Street subways. Kimball subway completed by end of the year.**
- **Continue to clean debris from Dearborn and State Street subways**
- **Continue to grout known leaks in Dearborn and State Street subways**
- **Subway evacuation maps and telephone directory updated**





Work Structure/ Staffing Changes



Work Structure & Staffing Changes

Separate Track Inspection and Maintenance Functions

- **Reorganized in August**
- **Increased functions by 42 positions**
 - **Increased supervision from 1 to 3 positions**
 - **42 positions dedicated to track inspections with 3 foremen overseeing work**
 - **64 positions dedicated to track maintenance with 6 foremen overseeing work**





Work Structure & Staffing Changes

Separate Track Inspection and Maintenance Functions

- All revenue track 10+ years are inspected twice every 7 days
- Inspection areas are reviewed quarterly and adjusted based on productivity
- Safety Department conducts monthly audits to ensure accuracy and quality
- All track inspectors complete inspection refresher training annually





Work Structure & Staffing Changes

Accountability checks are needed to ensure trackmen are working efficiently

- **Trackmen must badge in/out at stations when beginning and completing their work. Quarterly audits are conducted.**
- **Trackmen must call onto the right-of-way via radio when entering/exiting the system. Records are kept by the Control Center and are audited quarterly.**





Technology Change



Technology Changes

Handheld technology attached to a centralized database should be used

- **30 handheld units have been purchased with maintenance of way software to conduct inspection and maintenance activities**
- **Inspections began using these units on August 31, 2007**





Technology Changes

Handheld technology attached to a centralized database should be used

- **Handheld units are GPS enabled to ensure that defects are being identified and logged at their specific location**
- **Units contain defects currently identified so inspectors only have to verify the condition of the defect and add new defects**





Technology Changes

Implement Train tracking system so Control Center can locate trains

- **Tracking has been installed and activated on the State, Dan Ryan and O'Hare Subways**
- **Tracking has also been installed on the Red, Green, Purple, Brown, Pink, Yellow, Orange lines and the Loop**





Technology Changes

Train tracking system

- **Tracking activated:**
 - **Blue Line between Jefferson Park and O'Hare**
 - **Congress Branch between Forest Park and Western Station by end of September**
- **Remaining Blue Line locations to be on line by end of the year 2009 as part of signal project currently under way**





Technology Changes

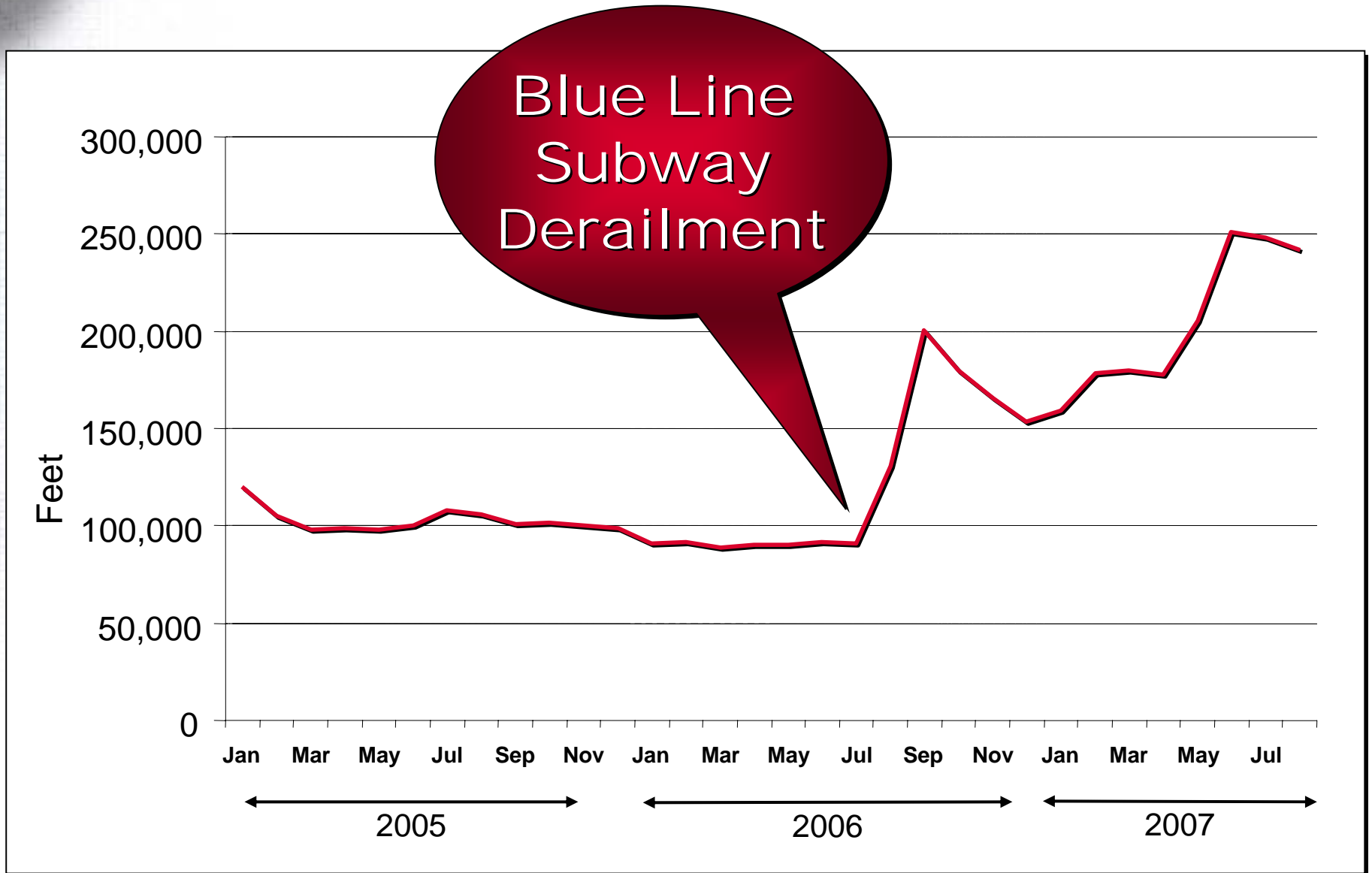
Testing programs

- **In 2006, the entire system was tested for strength and track geometry and all major defects were repaired.**
- **Advertising for contract to conduct annual testing.**
- **Board considering a contract for annual ultra sonic testing.**



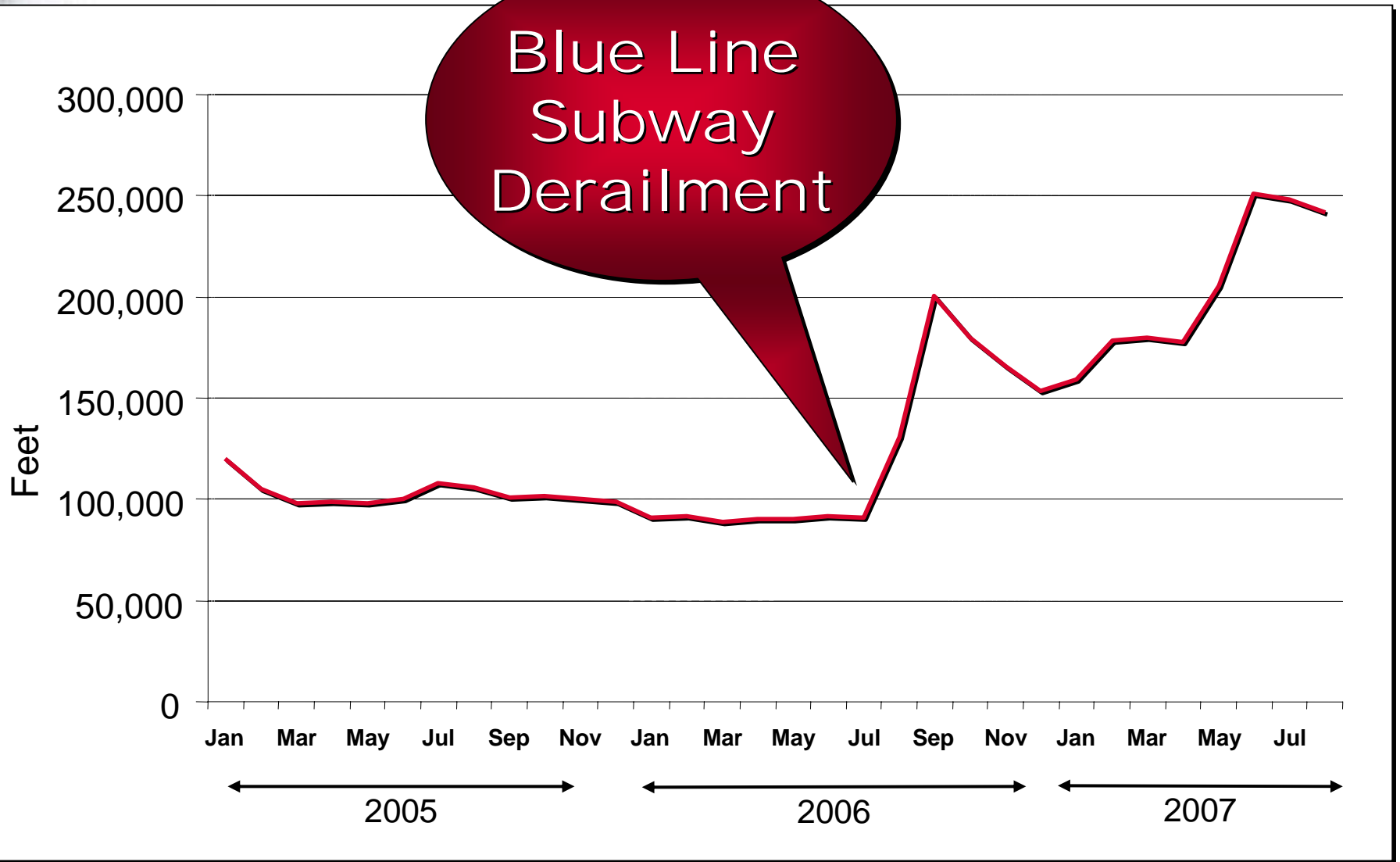


Slow Zones: 2005 - 2007 YTD





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Safety Add



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