



**NTSB** National Transportation Safety Board

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*Office of Railroad, Pipeline &  
Hazardous Materials Investigations*

## **Smoke and Ventilation Issues**

Nancy B. McAtee

Office of Research and  
Engineering

# Smoke and Ventilation

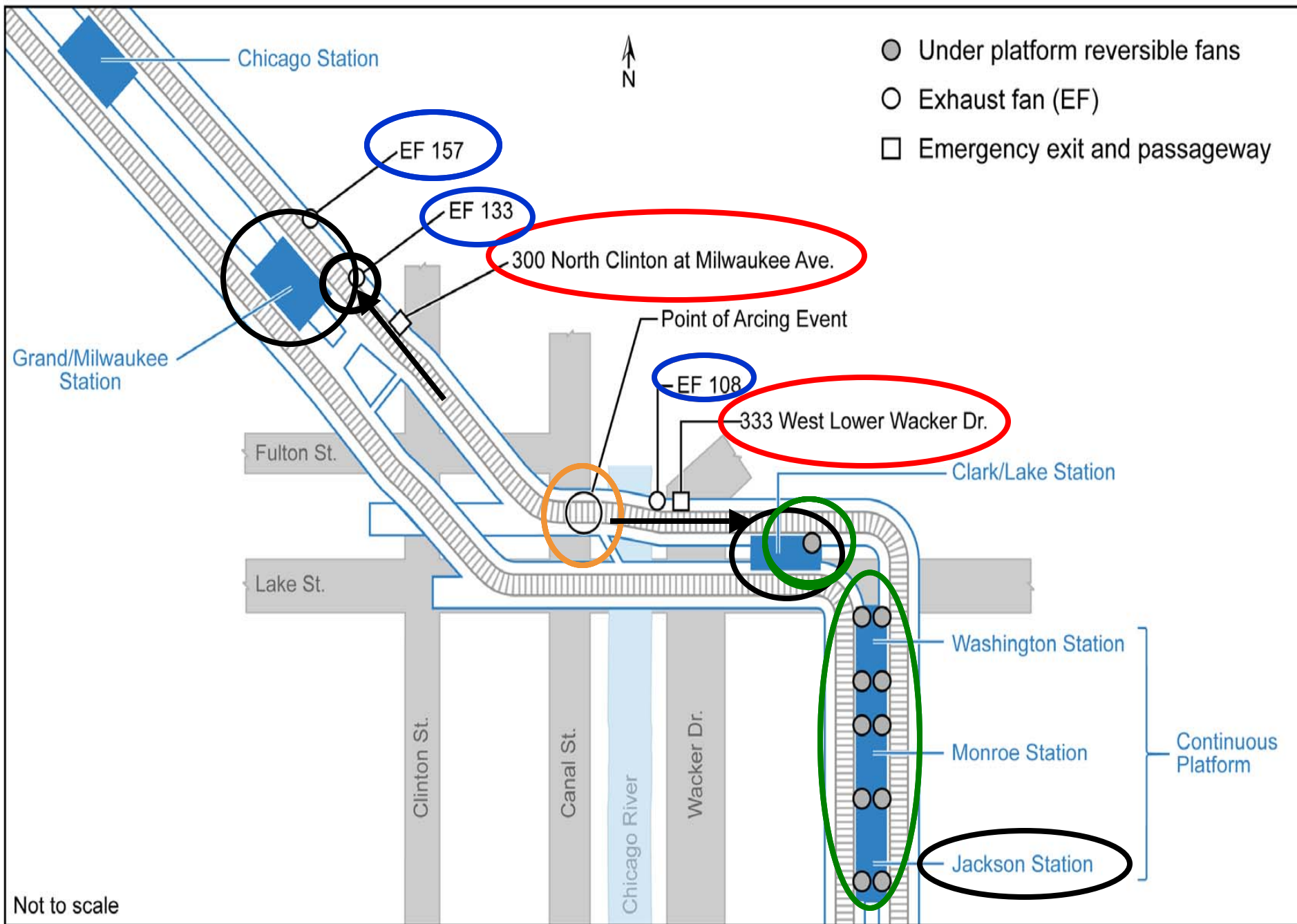
- Overview of ventilation system
- Timeline
- Safety issues

# Ventilation Operations

- Normal ventilation
- Emergency ventilation
  - Vent shaft fans
  - Station/platform fans
- Fans controlled from control center or locally

# Ventilation Operations

- CTA confirms incident location before activating fans
- Fan 108 removed but not replaced



# Ventilation Operations

- Initial response
  - All fans in exhaust
    - Fan 133
    - Clark/Lake
    - Continuous platform
- Revised response
  - Reversible fans switched to supply
    - Fans Clark/Lake
    - Continuous platform

# Issues

- Not all CTA fans reversible
  - Fan 133 - exhaust only
  - Worked against station fans
  - Drew smoke in direction of evacuation
- One fan missing
  - Fan 108 not present at time of accident
  - If present, smoke in area of accident removed more efficiently



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