Left Turn Gates

Pilot Project and Future Expansion

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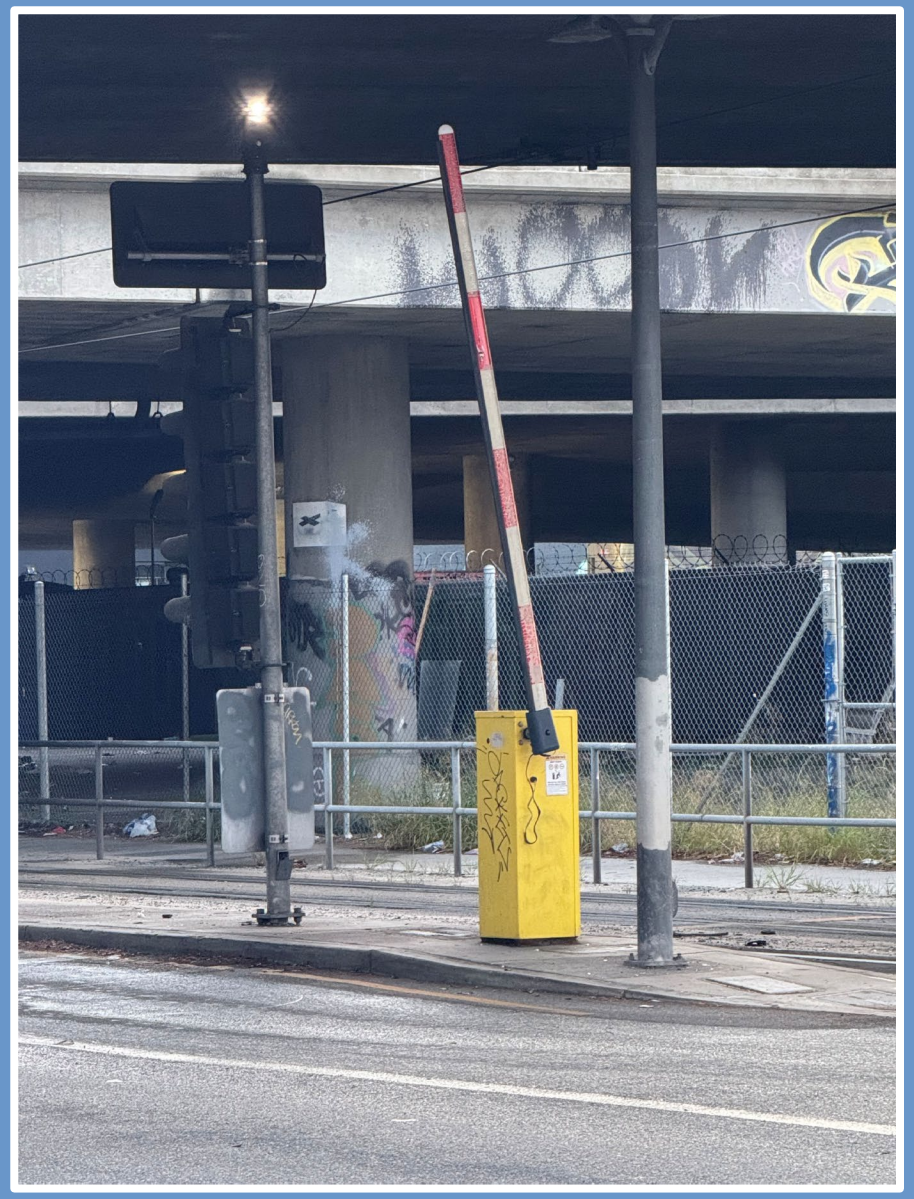

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The Problem



Los Angeles County Metropolitan Transportation Agency (LA Metro) estimates that **70 percent** of all light rail incidents on their system are caused by vehicles turning left in front of trains on street-running segments.

Common Factors Behind Collisions

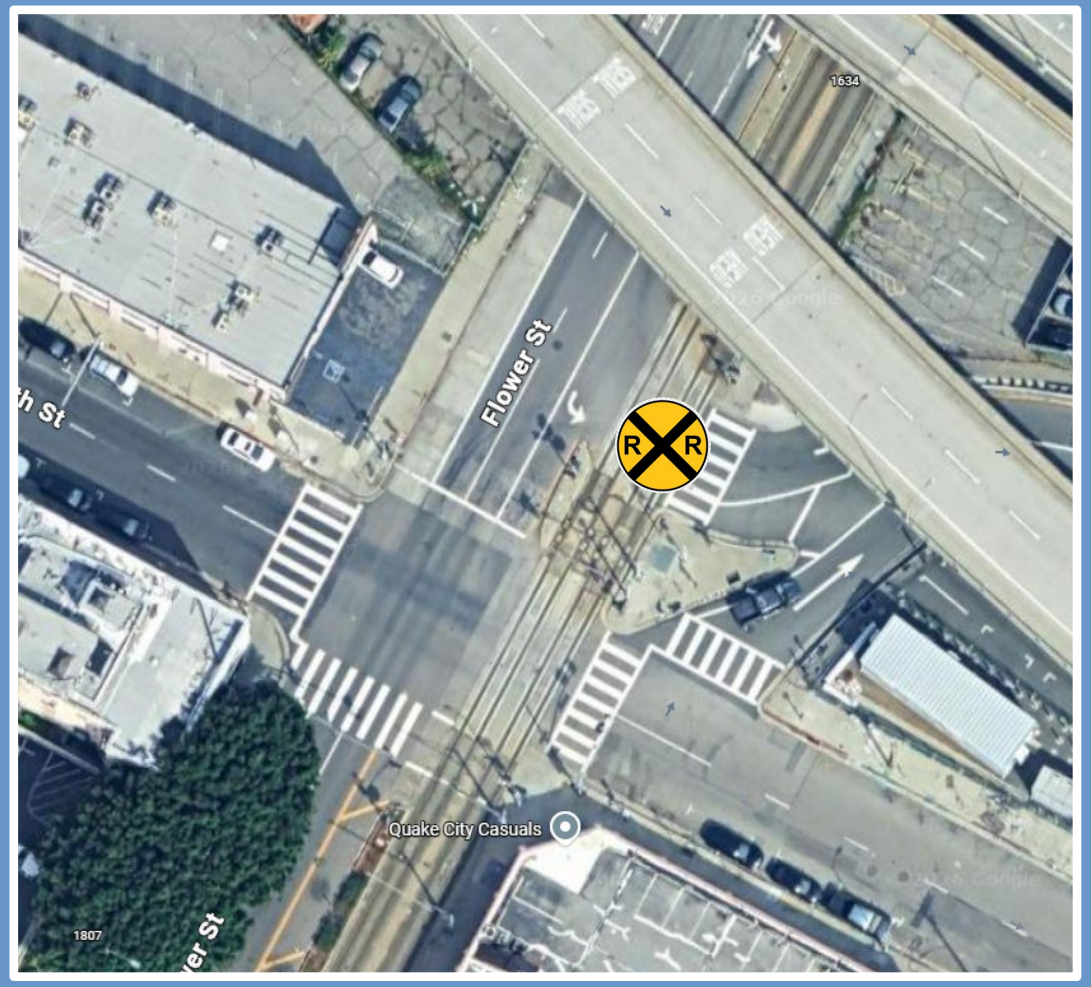
- Incidents are typically caused by motorists violating traffic signals
- Collisions usually occur with trains approach from behind the motorist – "over the shoulder" collisions
- Frequent Second train events
  - Makes active train coming signs less effective or possibly contributory
- "Follow the leader" incidents

What about existing solutions?

- Medians are too narrow for standard railroad gates
- Most locations already have traffic signals
- Most include passive and active signage

Pilot Location – Flower Street at 18th Street

- This crossing is a freeway on-ramp - all traffic is from vehicles turning left from southbound Flower St to the freeway.
- There were 12 incidents from 2012 to 2017.
- Pilot was started in October of 2017, and there has only been one incident since the gate was installed(2024).



Operation of Left Turn Gates

- The left turn gate is part of the traffic signal system and operates together with left turn indications on every cycle, helping to enforce proper behavior.
- The gate descends approximately 2 seconds after the left turn indication turns red and ascends around 2 seconds before the left turn arrow turns green.
- Loop detectors are installed to prevent gates from coming down on a vehicle.
- Gates are designed to fail in the upright position.
- Gates have 8 hours of backup battery power.

Gate Operation at Pilot Location



Gate Operation at Pilot Location



Future Implementation

- LA Metro has received approval for experimentation projects on two new light rail lines
  - 6 intersections on the K Line (left turn gates will be installed later this year)
  - 16 intersections on the future East San Fernando Valley Line

Questions?





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