Tow Truck Response Strategy Evaluation

Portland, OR

TSM&O Category: Incident Management

Problem: Roadway incidents are estimated to contribute to 25 percent of total congestion.

- Incidents reduce freeway capacity (see table)
- Non-recurrent congestion cannot be mitigated by capacity improvements
- Incidents decrease travel time reliability

Solution: Reduce the time it takes to remove vehicles after an incident has occurred.

Project Description: A comparative evaluation of three different towing strategies on the I-5/I-405 loop in downtown Portland. The three strategies are:

- Typical: Tow trucks are dispatched after on-site verification from ODOT Incident Response
- Staged: Tow trucks standing by at a strategic location are dispatched by Incident Response
- Instant: Tow trucks are dispatched by the TMOC after an incident is reported.

Results:

- Staged and instant dispatch strategies reduced tow truck arrival times.
- Instant dispatch was 50 times cheaper than staged dispatch
- Incident management staff recommended dispatching tow trucks as soon as an incident was determined to have operational or safety impacts

Cost: An instant dispatch towing strategy is a low-cost solution to reducing the effects of incident-related congestion. Dispatching tow trucks before verification risks tow cancellation fees, but the value in decreasing incident-related delay far exceeds the additional cost expenditures.

What’s in it for me?

- A one-minute reduction in clearing a primary crash reduces the likelihood of a secondary crash by 2.8 percent and improves travel time in the affected area by four minutes
- Improved traffic incident management can reduce average incident duration by about 25%

Quote: “Implementing the instant dispatch system has increased capacity on our most congested corridor by decreasing towing response times 30 percent at an annual cost of under $2,000.”

- Dennis Mitchell, ODOT Regional Traffic Engineer

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