



# Project NEON Active Traffic Management (ATM)







# ATM Applications

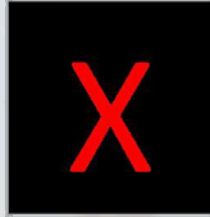




# Lane Control Sign Displays



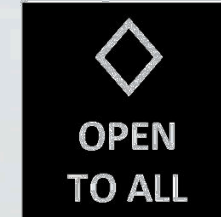
Lane open



Lane closed



HOV restriction



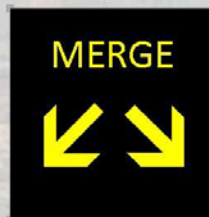
HOV restriction



Merge left



Merge right



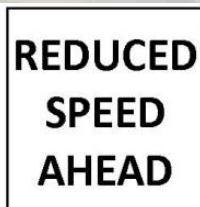
Merge left or right



Queue warning display



Current speed limit



Reduced speed ahead



Road closed ahead



Dynamic merge display







# Project Neon ATM Full Size DMS







[nevadadot.com](http://nevadadot.com)



# ATM Supports NDOT Goals

Goal	Objective
Safe	Reduce Crashes
	Reduce Incident Duration
	Support Work Zone Management
Reliable	Improve Throughput
	Reduce Congestion
	Improve Travel Time
	Improve Traveler Information





# ATM Statistics

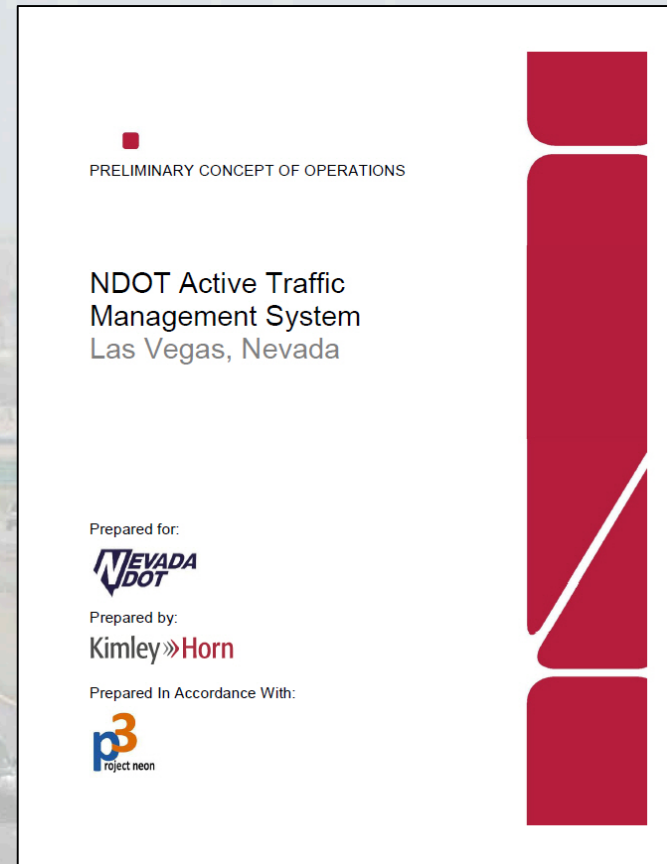
- FHWA European Scanning Tour
  - Throughput during congested periods: 3 to 7% increase
  - Primary crashes: 3 to 30% decrease
  - Secondary crashes: 40 to 50% decrease
- M25 in UK (VSL and DLA)
  - Number of shockwaves during AM rush hour: reduction from 7 to 5 (typical)
  - Property damage crashes: 30% decrease
  - Injury crashes: 10% decrease
- San Diego ATM
  - ATM resulted in an estimated B/C ratio of 9.7:1
  - Construction zone stops : 45% decrease
  - Aggressive driving maneuvers through construction zone: 80% decrease
  - Overall crash rate: 20% reduction
  - Serious crash rate : 46% reduction
  - 90% compliance with signs without the need for enforcement





# Concept of Operations

- Goals and objectives
- ATM Applications Overview
- System Overview and Operational Needs
- Concepts of the Proposed System
- Operational Scenarios
- Roles and Responsibilities





Photo/Graphic Credit: Wes Rand,  
Las Vegas Review-Journal



# Neon ATM Elements

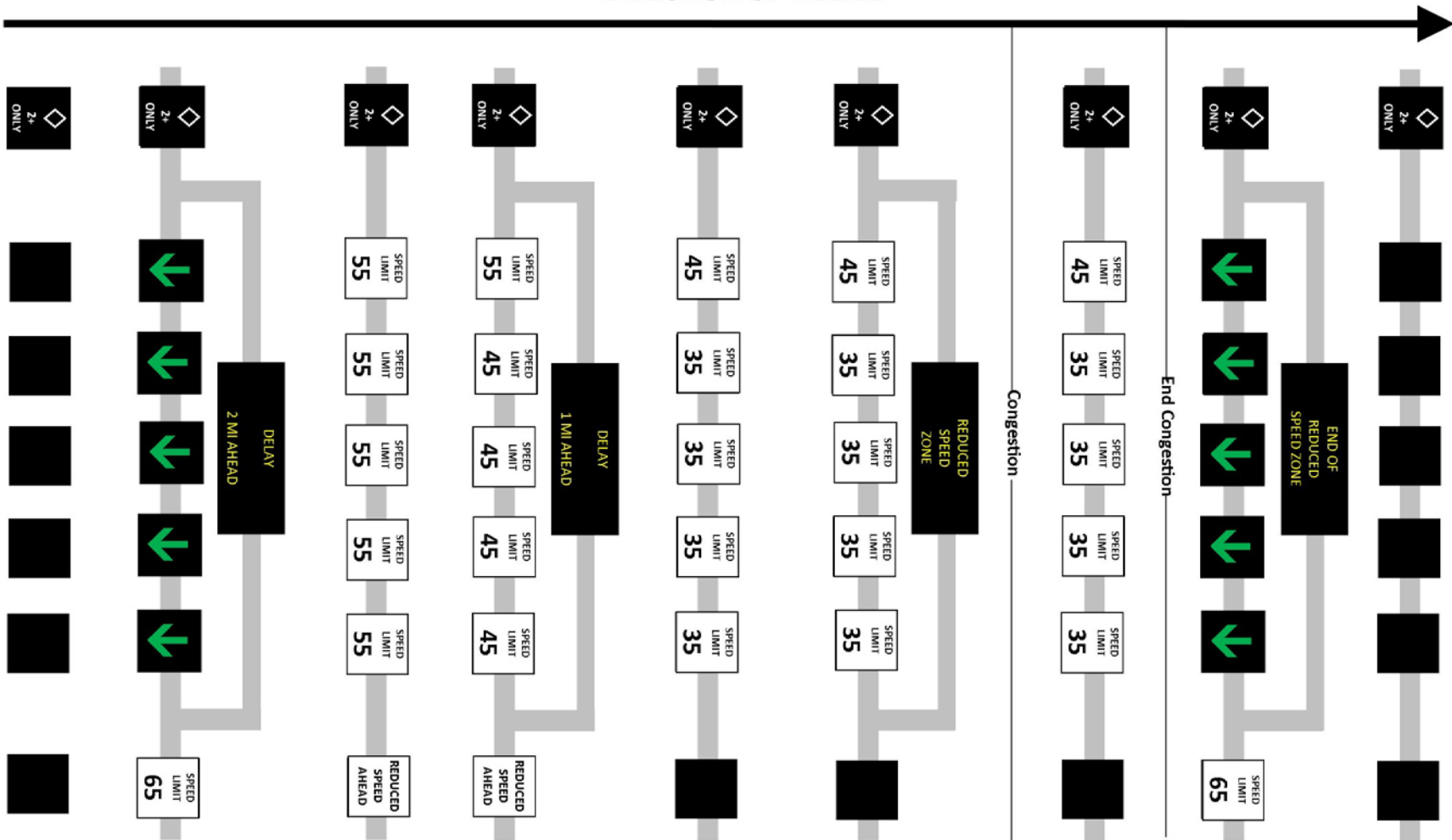
- ATM Gantries
  - Electronic Displays
    - Speed Limits
    - Lane Control
    - Messages
- Flow Detectors
  - Traffic Monitoring
- CCTV (Cameras)
  - Traffic Monitoring
  - Display Monitoring





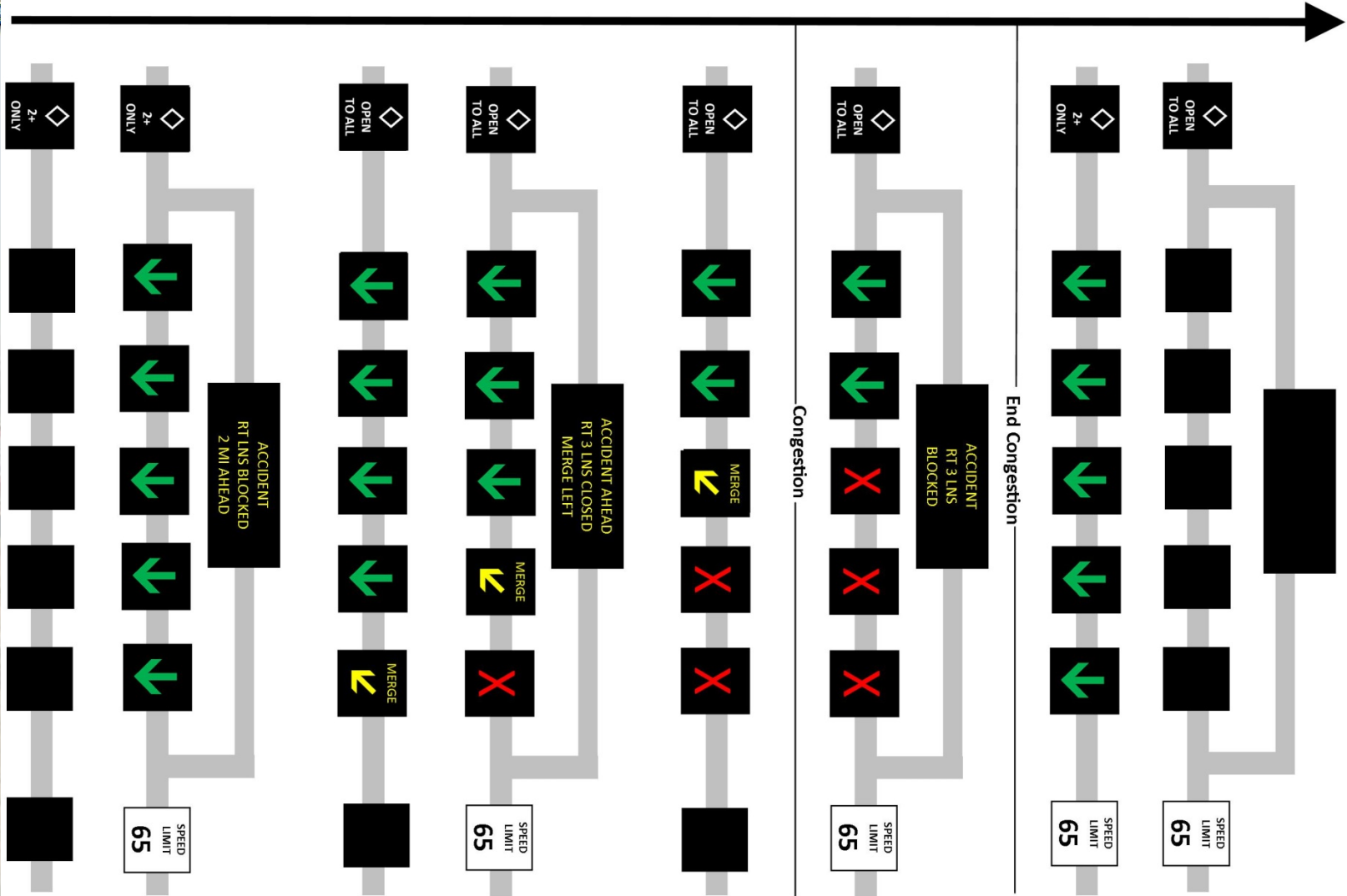


## DIRECTION OF TRAVEL





# DIRECTION OF TRAVEL







# Statewide Applicability

- Weather-related situations
  - Snow and ice covered roads
  - Low visibility
- Freight-related situations
  - Vehicle restrictions or prohibitions
- Congestion
  - High volume roadways
  - Special events





# Questions ?