



## HOV Degradation



## Managed Lanes Defined

- An exclusive or preferential use lane that uses various operational and design strategies in order to continuously achieve an optimal condition.
- Strategies include:
  - Eligibility
  - Access
  - Pricing
  - Or some combination of these



# Exempt Vehicles in HOV Lanes

- Tolled vehicles (HOT lanes)
- Zero Emission vehicles
- Plug-in hybrid-electric vehicles
- Dedicated Compressed Natural gas (CNG) vehicles





## Degradation Defined

- Federal performance metric that applies to HOV lanes used by exempt vehicles and HOT lanes
- Speed < 45 mph 3 times a month = degraded
- We break degradation down into three categories depending on how often it occurs
  - <50% of the time – slightly degraded
  - 50% -74% of the time – very degraded
  - 75% or more – extremely degraded

CALIFORNIA DEPARTMENT OF TRANSPORTATION  
2018 CALIFORNIA HIGH-OCCUPANCY VEHICLE FACILITIES  
DEGRADATION REPORT AND ACTION PLAN



Prepared by



California Department of transportation  
Division of Traffic Operations  
Office of Mobility Programs

Submitted to

Federal Highway Administration  
California Division

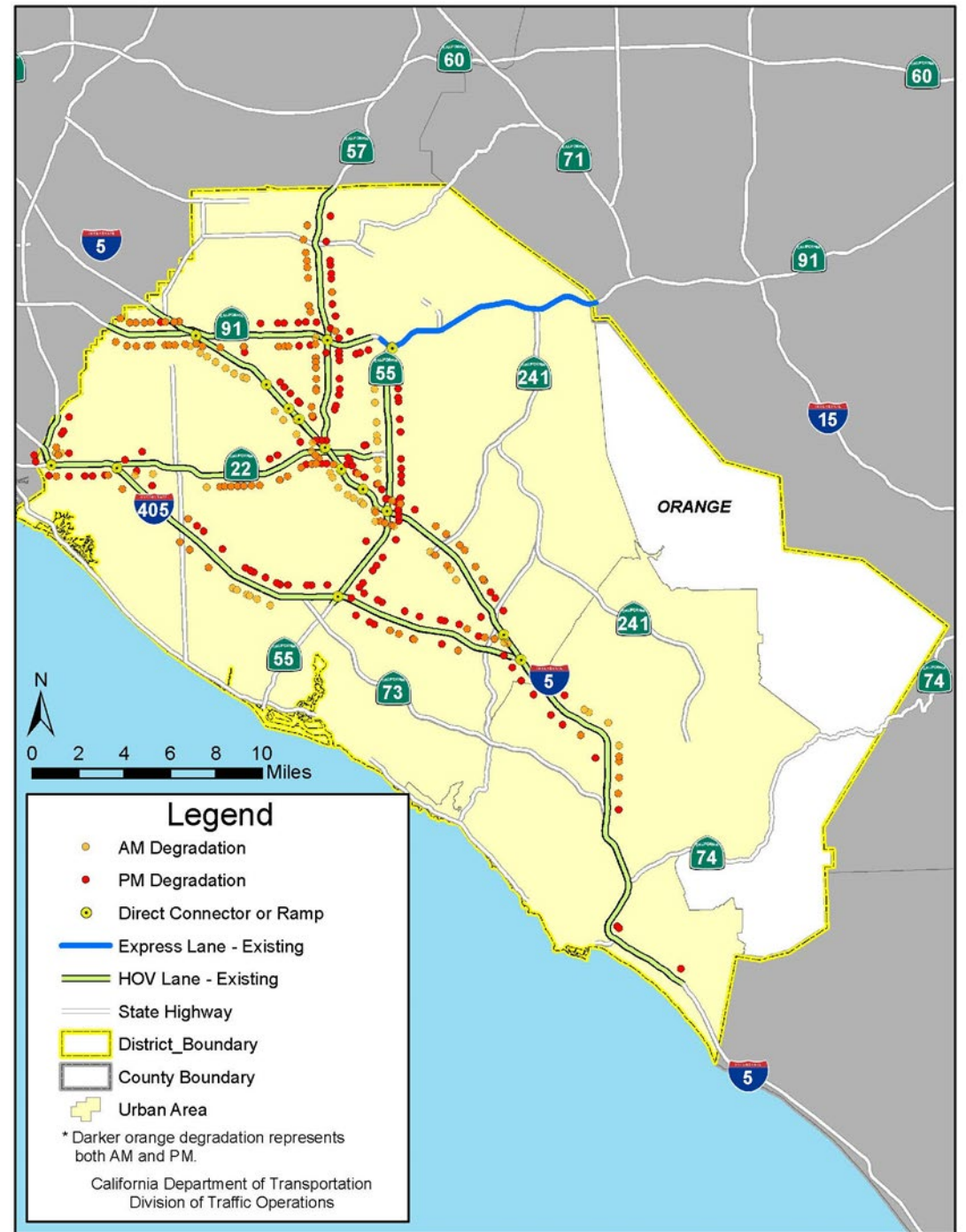
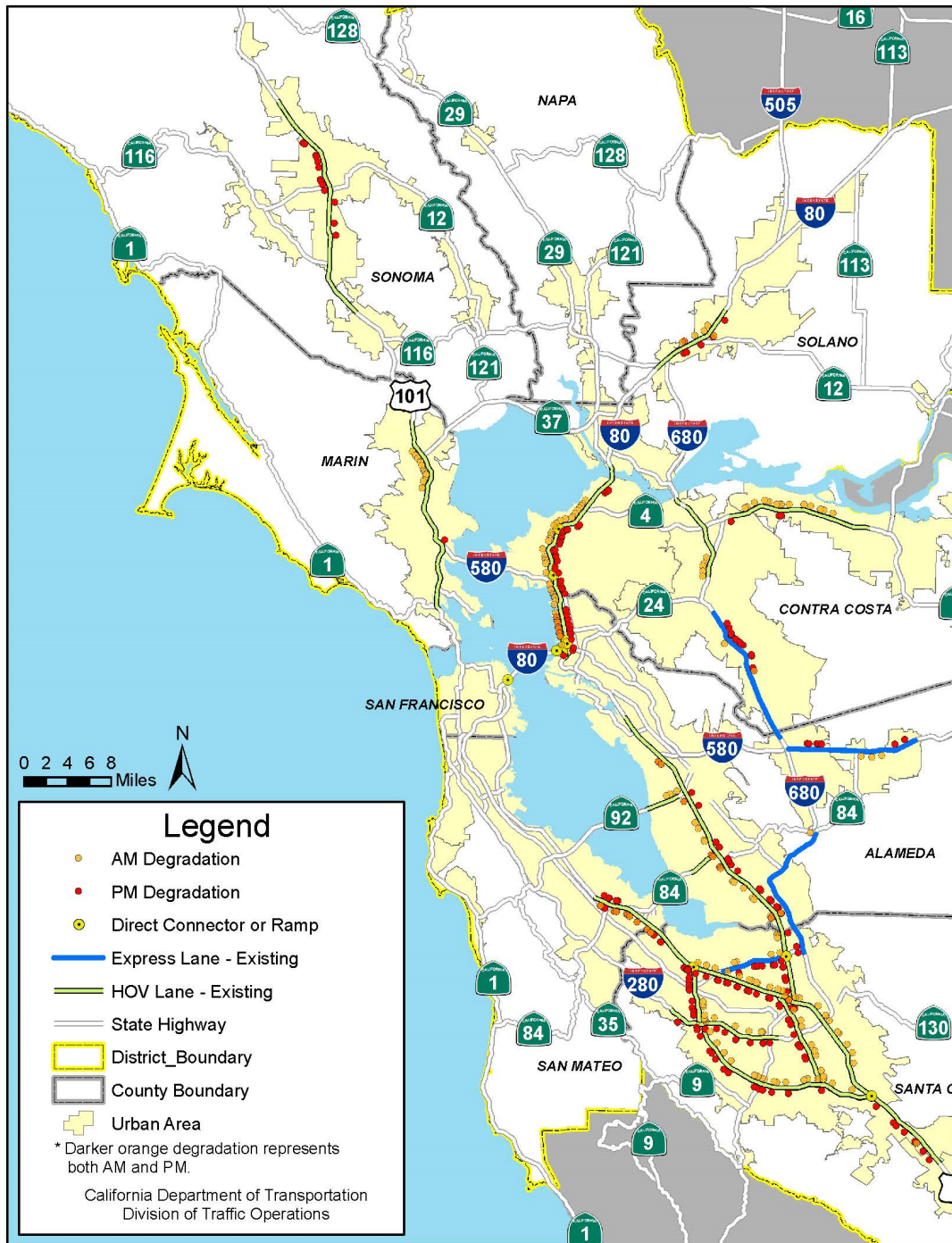
September 2020





## Degradation Defined (Cont'd)

- States must develop plans to improve performance on degraded lanes within 180 days of identification
- We must work this plan in order to avoid sanctions. These could include withholding payment of federal funds and withholding approval of projects
- We are always analyzing HOV performance, regardless of the federal requirement





## Causes of Degradation



- Demand exceeding capacity
- Bottlenecks in HOV and general purpose lanes
- Merging to and from HOV lanes
- Congestion in general purpose lanes
- HOV violators



## Impacts of Degradation

- Degraded lanes are not reliable and do not provide a travel time savings
  - Less incentive for users to carpool, vanpool, or use transit
  - Carpools may disband, resulting in an increase in single occupant vehicles
- Lanes that do not provide an incentive above traveling alone in a general purpose lane are not performing as originally intended by the State
  - Millions of State and local transportation dollars have been invested in HOV lanes – this investment needs to be protected



## Potential Actions to Address Degradation



- Increasing the occupancy requirement for HOV lanes
- Conversion of HOV lanes to HOT lanes
  - Could also include adding a second HOV lane or increasing occupancy requirements
  - Pricing manages demand on the lanes, addresses impacts of occupancy changes, and covers O&M costs
- Adding a second HOV lane



## Potential Actions to Address Degradation

- Implementing ramp metering
- Capital or operational improvements to HOV or GP lanes (weave lanes/auxiliary lanes)
- Increased enforcement by CHP

