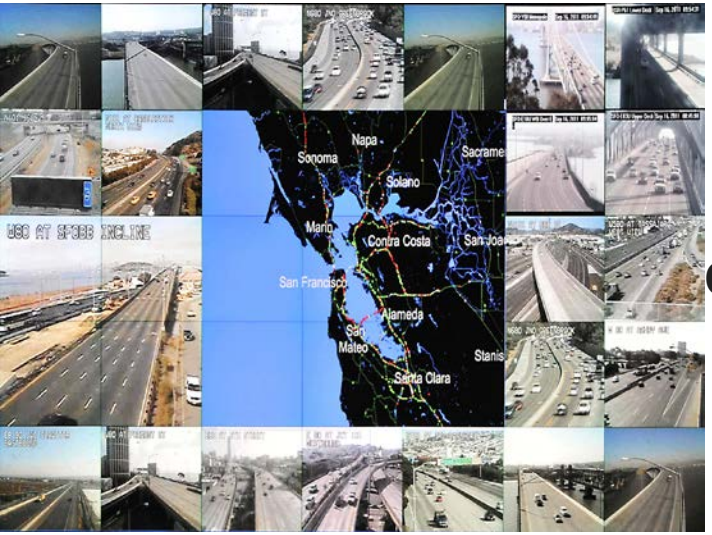
ITS California
Department of Transportation's Perspective on Integrated Corridor Management
Caltrans – Past – Present – Future



Presented by:
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Division of Traffic Operations
California Department of Transportation (Caltrans)

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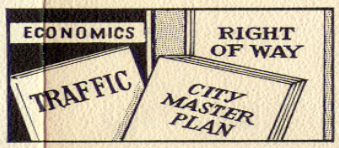
Sacramento, CA

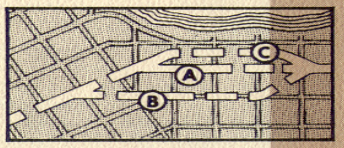

PROBLEM

Freeway Planning Steps-

1. Advance consultation with local government. Study local master plans.

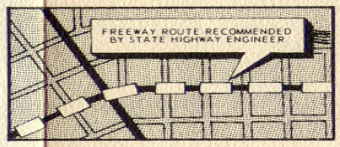


2. Careful studies to get engineering, traffic, right of way and economic data.



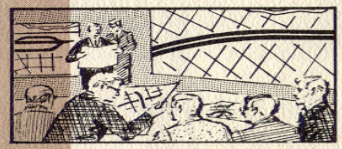
3. Possible alternate routes laid out and analyzed.

4. Facts presented at public hearings. Public views expressed. Added study follows.



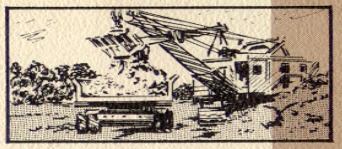
5. Studies completed. Route recommended to Highway Commission.

6. Public hearing if felt advisable by local government or Highway Commission.

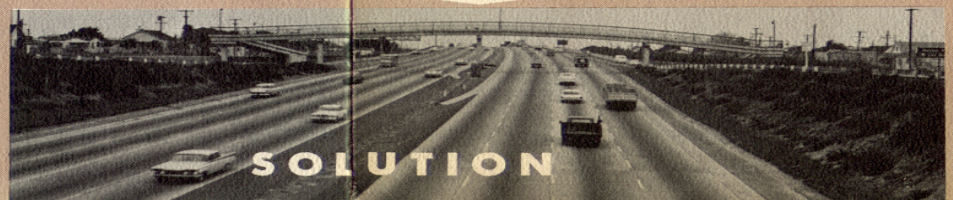


7. Commission considers all data, including public views, then adopts route.

8. Freeway agreement with local government spelling out street adjustments.



9. Design completed. Commission budgets right of way and construction funds.



CALIFORNIA'S FREEWAY PLANNING TEAM

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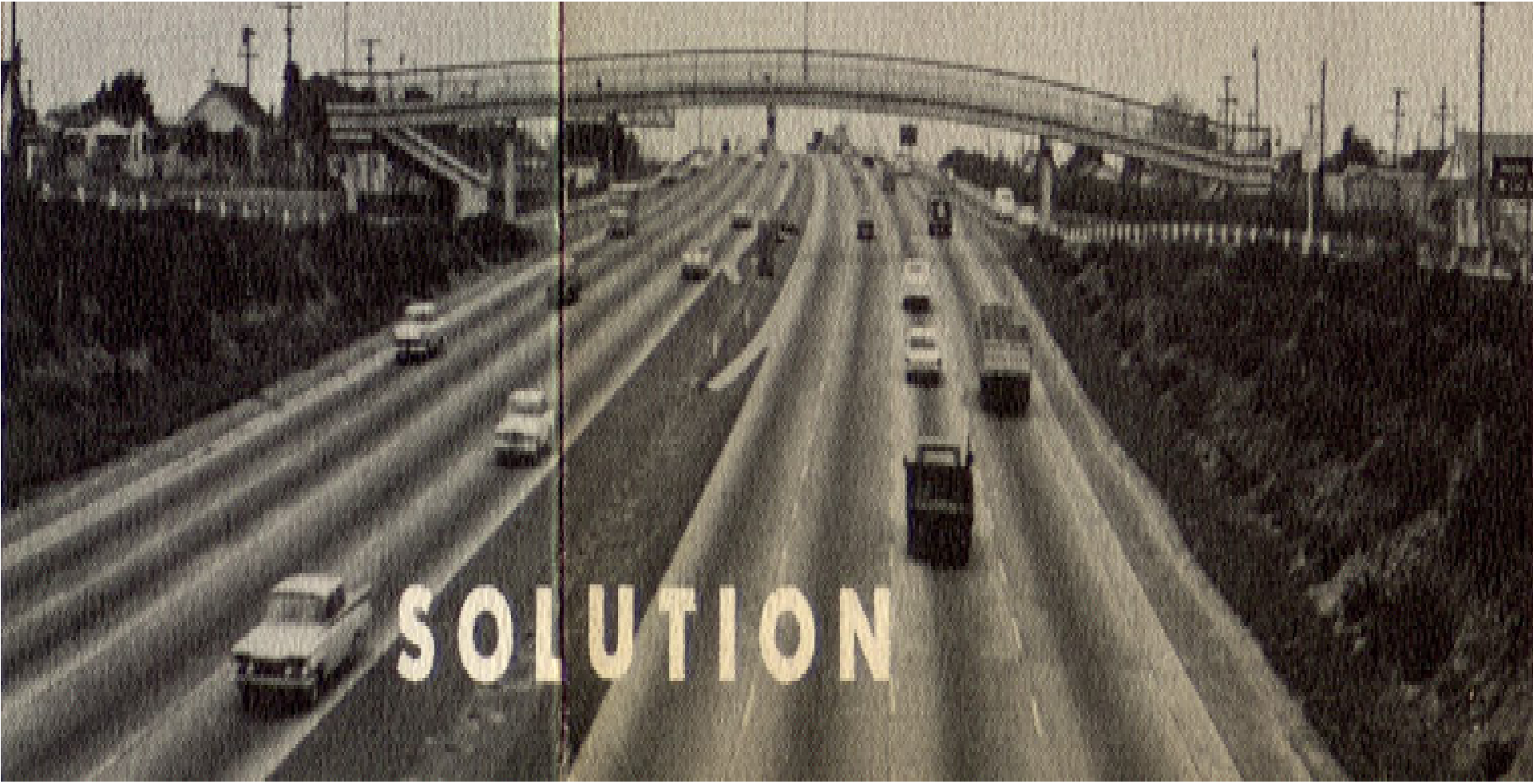
SOLUTION

Intelligent Transportation Systems & TSM Make Mobility

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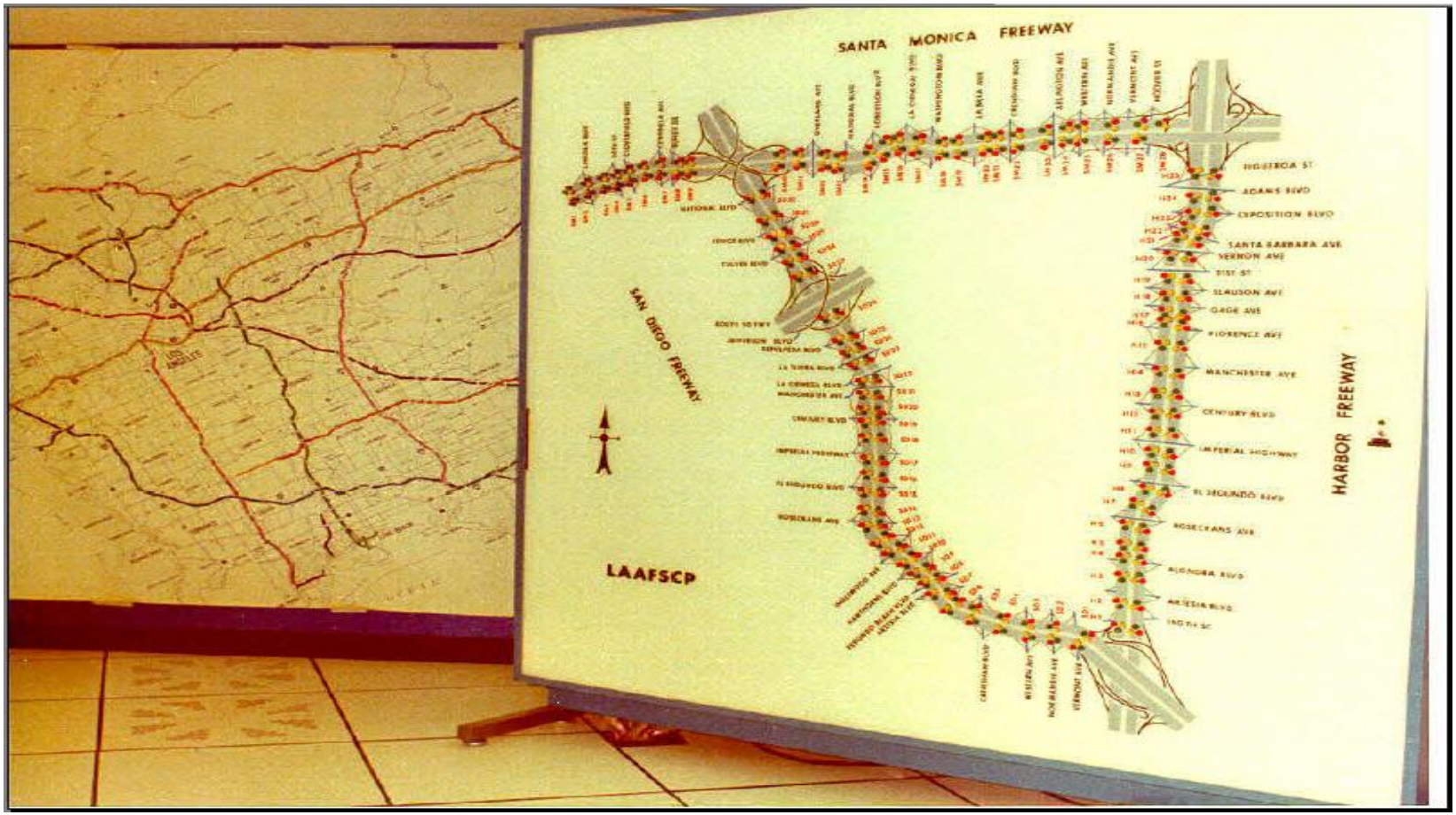
Caltrans 1st TMC Interactive ITS Information Board - 1971



Tools & Resources
Traffic Management Centers (TMC's)

Caltrans/District 12 used state-of-the-art "Go Green" technology in its new Transportation Management Center, which is intended to tame Orange County's burgeoning traffic volume.

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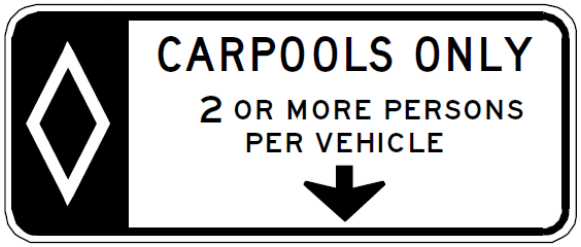
System Management Strategies



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Express Lanes

New I-680 HOT Lanes not only move more people than mixed flow lanes, but will expand into a larger high occupancy toll lane network in the San Francisco Bay Area.

- **Offer drivers a reliable mobility choice**
- **Value Pricing controls demand**
- **Provide consistent facilities**
- **Bay Area Network approved to begin development**
- **New policies and standards to simplify development**

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Traveler Information

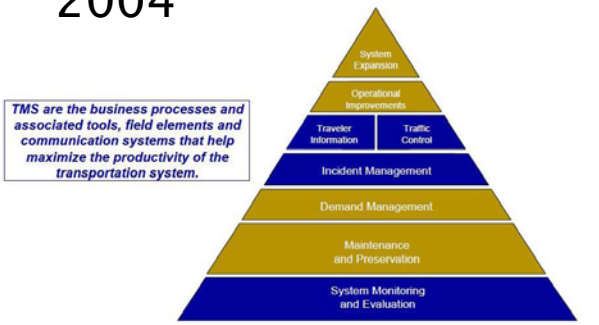
- **511 phone and web access**
- **Commercial Wholesale Web Portal**
- **Changeable Message Signs (CMS)**
- **Strong state / regional partnership**

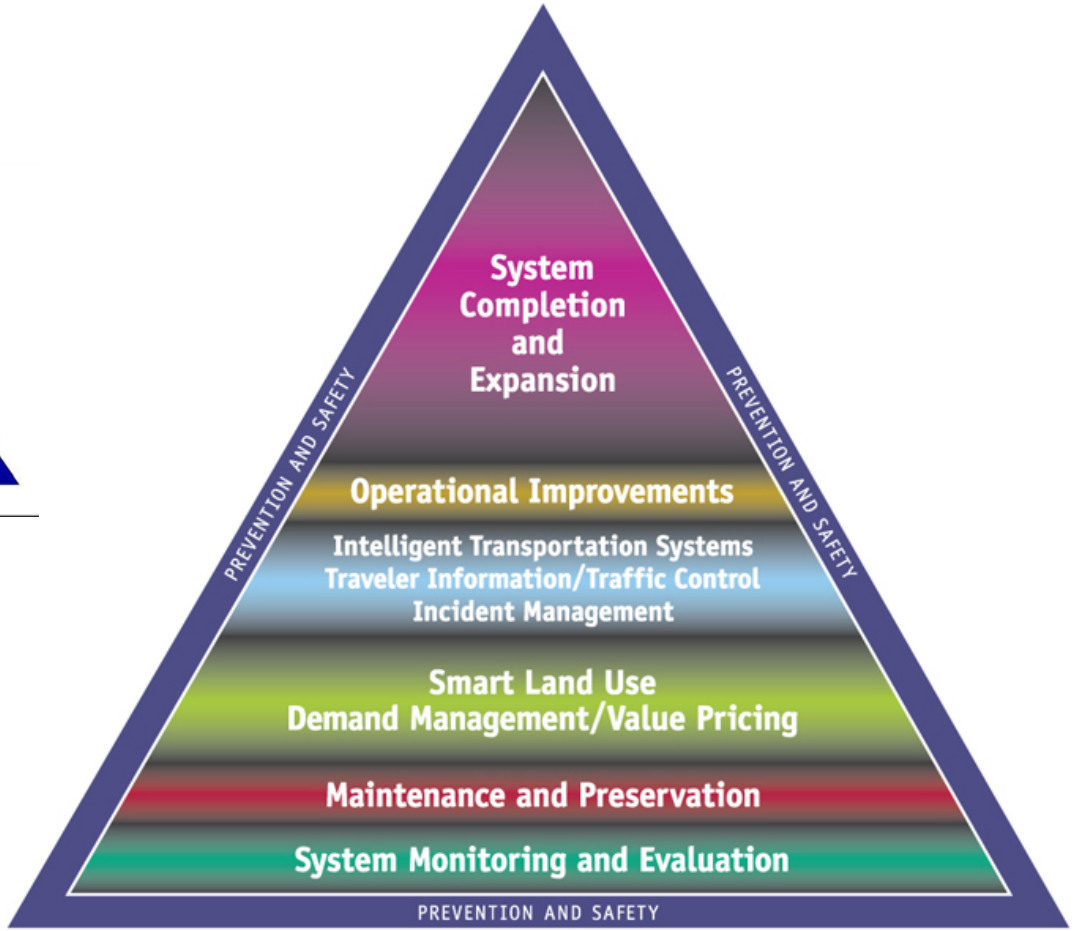
Ramp Meter Controls

- **Delay reduction of 30 – 40% in CA**
- **Caltrans Ramp Metering Policy**
- **Caltrans has 60% of all ramp meters in US**
- **Plans to install another 1,715 ramp meters over the next 10 years.**

Mobility Pyramid 2006-present

2004





Transportation Investments have more impact if built upon this foundation

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California's Data Challenges

- The lack of reliable data is a major issue
- Investing in data production and acquisition
  - Developing and deploying new tools
    - Increase current detection infrastructure
    - Alternative data detection
    - Mobile data source collection, storage and usage
    - Understanding, purchasing, and using 3rd party data
- Investing in more efficient traffic modeling tools

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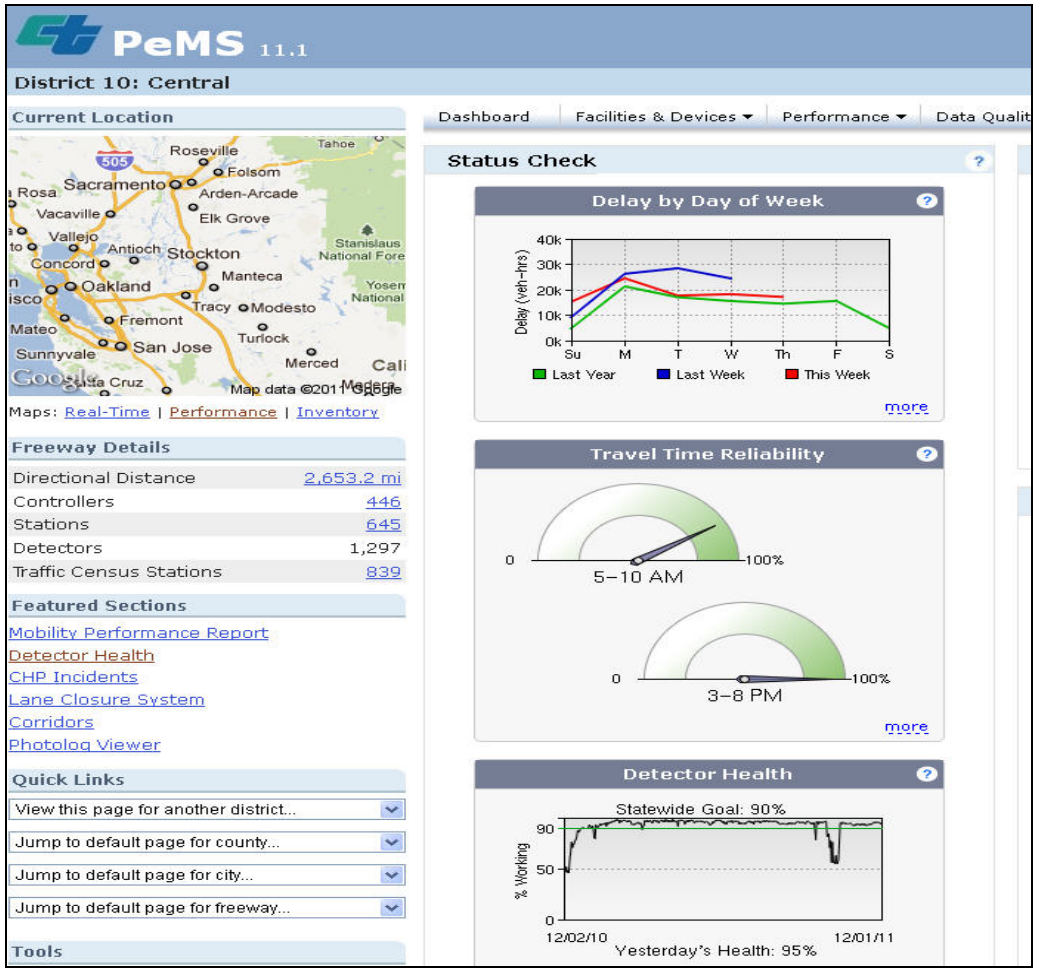
Performance Measurement System (PeMS)



- State/ District/ Region/ City
- Real Time
- Archival Data (1998-2012)
- Dashboards
- Lane Closures
- Incidents
- Weigh-In-Motion Data
- Vehicle Classification Data
- Roadway Inventory
- Web Accessible
- Google© Map Enabled

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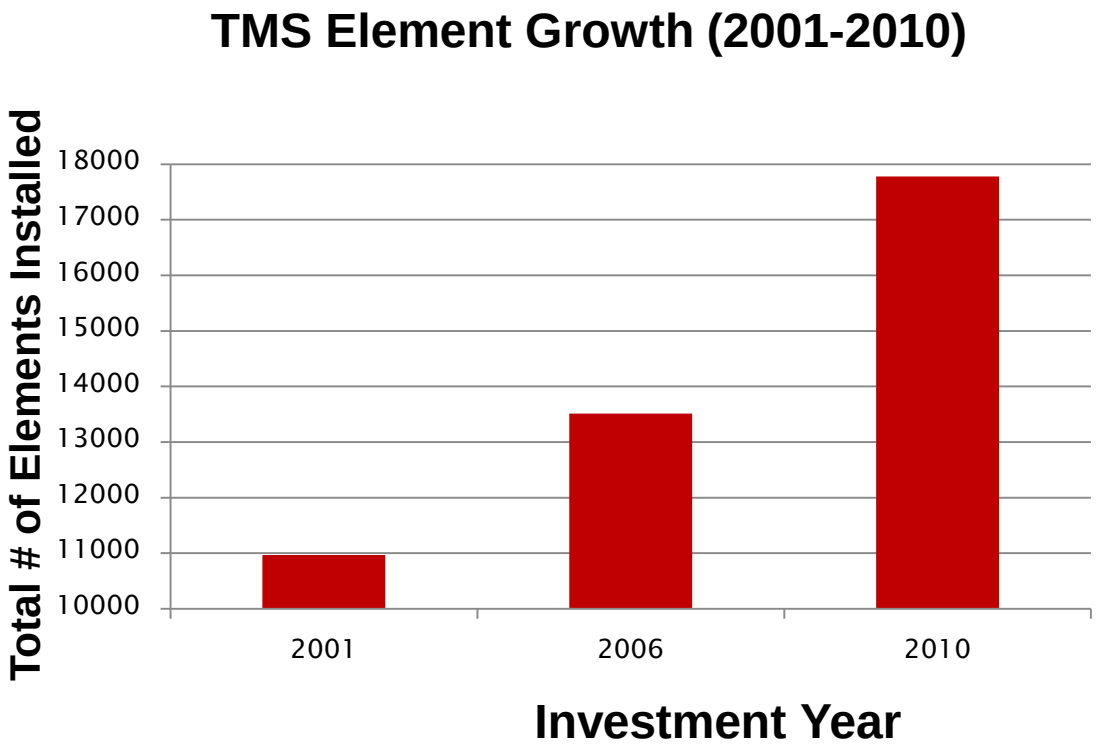
Current ITS Investment Challenge

- **Invested approximately $4-6 Billion in last ten years**
- **Reaching end of ten year design life**
- **Only 40% funding available for life-cycle replacement over next ten year**



Caltrans' 5 Goals of System Management

- Create a system management culture.
- Performance-based framework for all TMS work activities and funding prioritization.
- Establish a well-maintained and high-performing TMS infrastructure that supports real-time traffic management.
- Cooperatively develop and implement real-time (active) traffic management to optimize flow, safety and aid regions and the State to meet greenhouse gas reduction (GHG) targets from transportation.
- Renew consensus on and adhere to critical statewide standards.

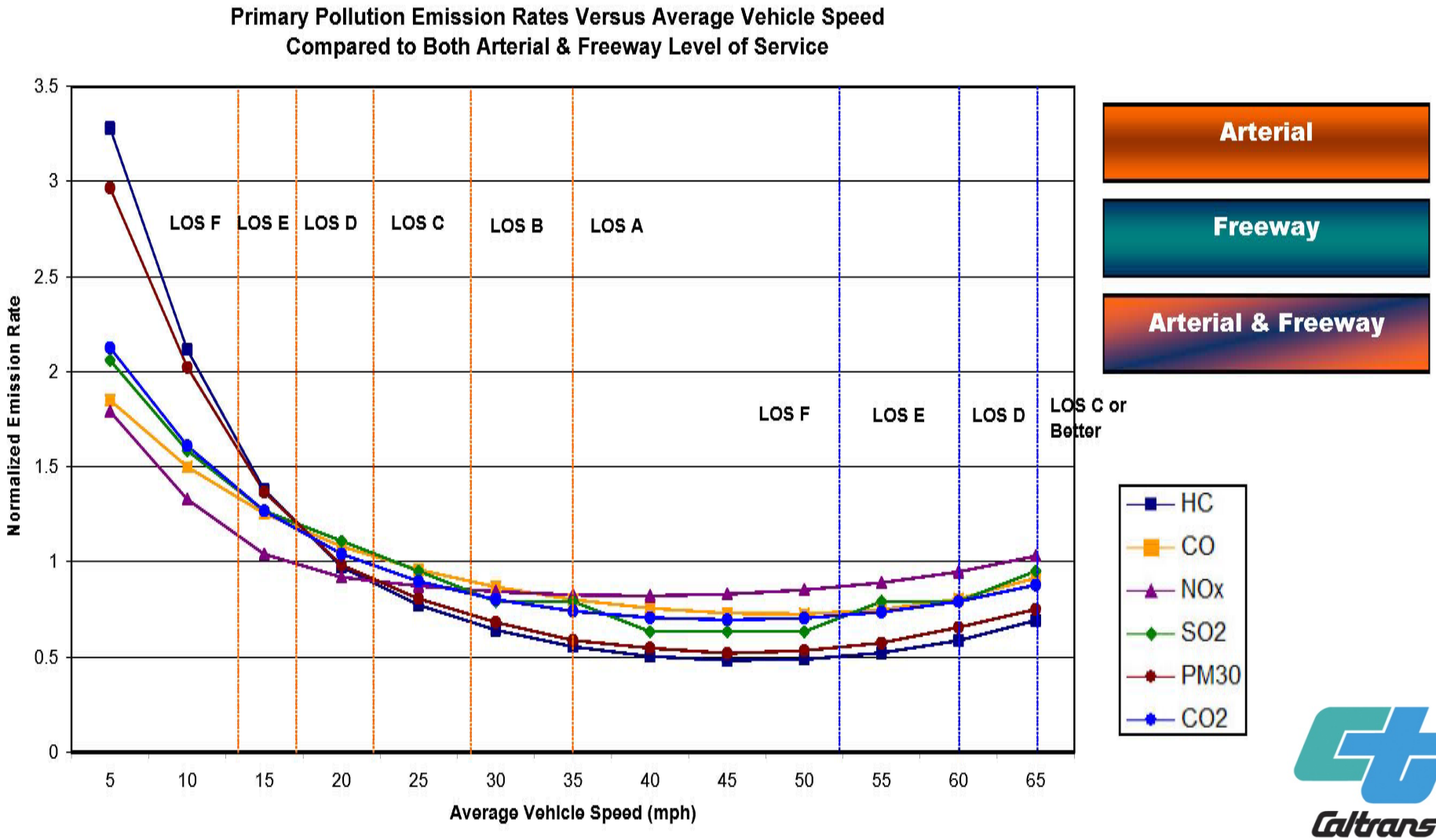
Investing in the Future

- **Coordinated signal timing,**
- **Corridor Adaptive Ramp meters**
- **Adaptive Traffic Signals**
- **Traveler Information**

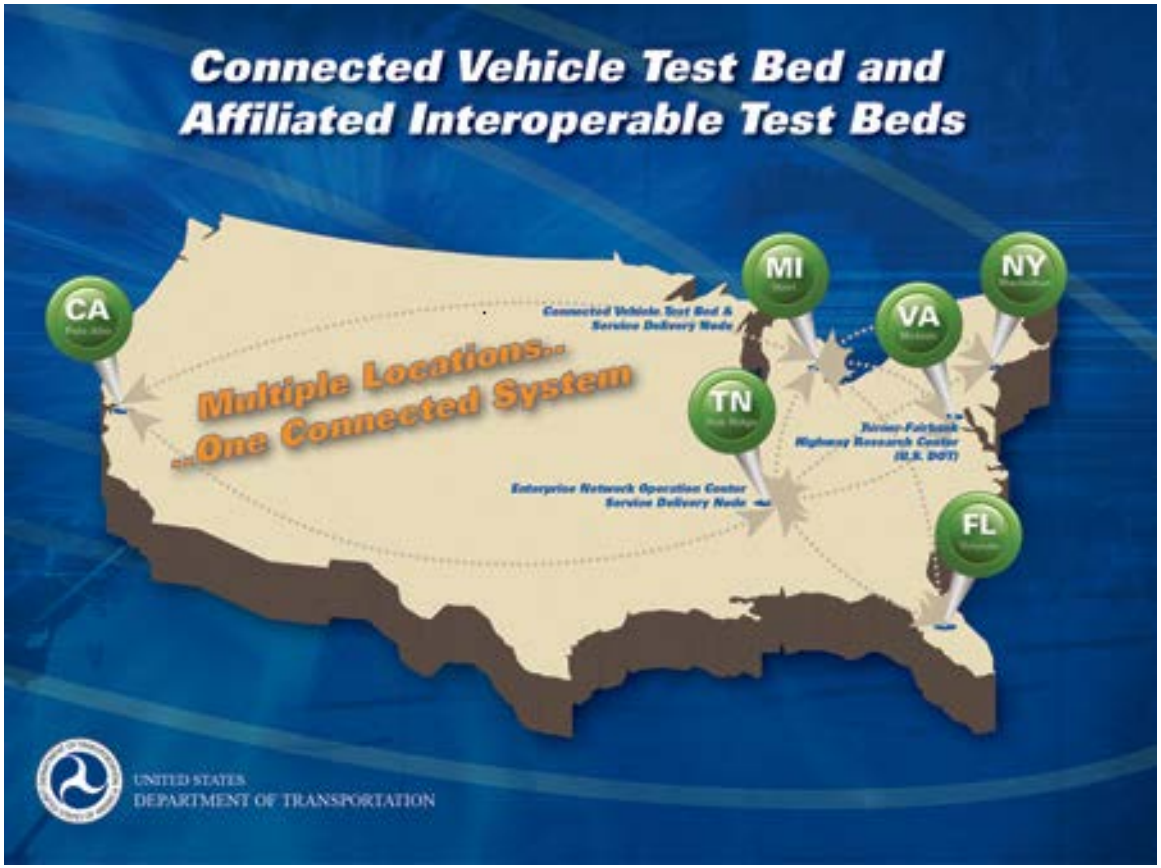
MAP-21

- Performance Goals:
  - **Congestion Reduction –** Significantly reduce congestion on the NHS
  - **System Reliability –** Improve the Efficiency of the surface system
  - **Environmental Sustainability** – Enhance system performance while protecting and enhancing the environment

Multi-objective Example: Emissions Reduction and Congestion Relief



Connected Vehicles



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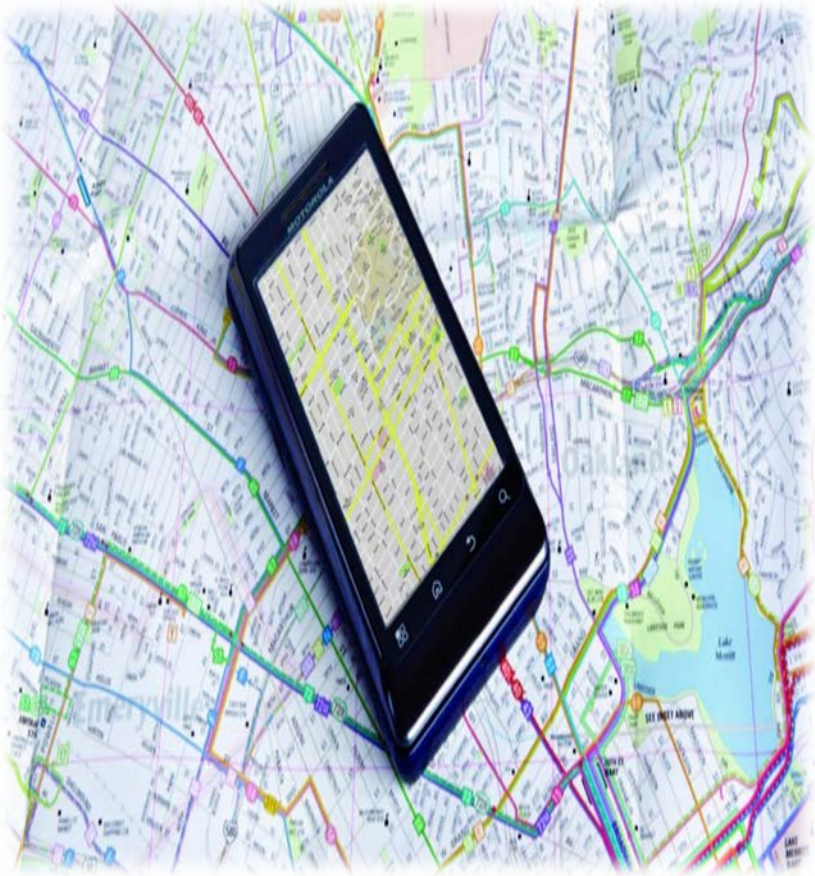
California Connected Corridors

- **Make full use of existing transportation infrastructure**
- **Maximize corridor performance (safety, mobility, reliability)**
- **Fully implement real-time management (play books)**
- **Enhance regional , local and private sector partnerships**



CALIFORNIA PATH

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Management Current and Future State

Contact Information

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