I-210 Connected Corridor Presentation

to

County Of Los Angeles Department Of Public Works

Sept 17, 2013

Investing in the Future

Highlight taken from Caltrans 2013 Transportation Management Business Plan

- Coordinated Signal Timing
- Corridor Adaptive Ramp Meters & Traffic Signals
- Traveler Information
- **Active Corridor Management**
  - Active Corridor Management will enable Caltrans and its Partners to address both transportation demand and supply issues to maximize system performance
  - Benefit cost ratios for new freeway construction is often less than 2:1 while ITS system management projects achieve 8:1or better cost benefit ratios.
  - We can't build our way out of congestion, but we can attempt to manage what we have better. Active Corridor Management gives all Partners more bang for the buck

What can a I-210 ICM Project Achieve?

- **Will allow individual transportation systems within the corridor, regardless of size, to be operated and be managed as unified corridor network.**
- **An overall vision of what the I-210 CC project will achieve is yet to be determined as all Partners need to be consulted for input to determine their individual priorities and needs, with the goal of improving mobility and maximizing system efficiency within the corridor.**

Facts

- **<u>Current Partners Identified (but are not limited to):</u> Caltrans, LA Metro, PATH, LA County, Pasadena, Arcadia, Monrovia, Duarte, Irwindale, Azusa, Glendora, San Dimas, and La Verne.**
- **The Corridor will extend from SR-134 to SR-57, approximately 20 miles in length.**
- **Due to the magnitude of the project their has been some discussion on breaking the project out into two segments. The first phase will consist of the segment between SR-134 and I-605, and the second phase will consist of the segment between I-605 and SR-57. This is subject to change as all Partners still need to be consulted**

Teams

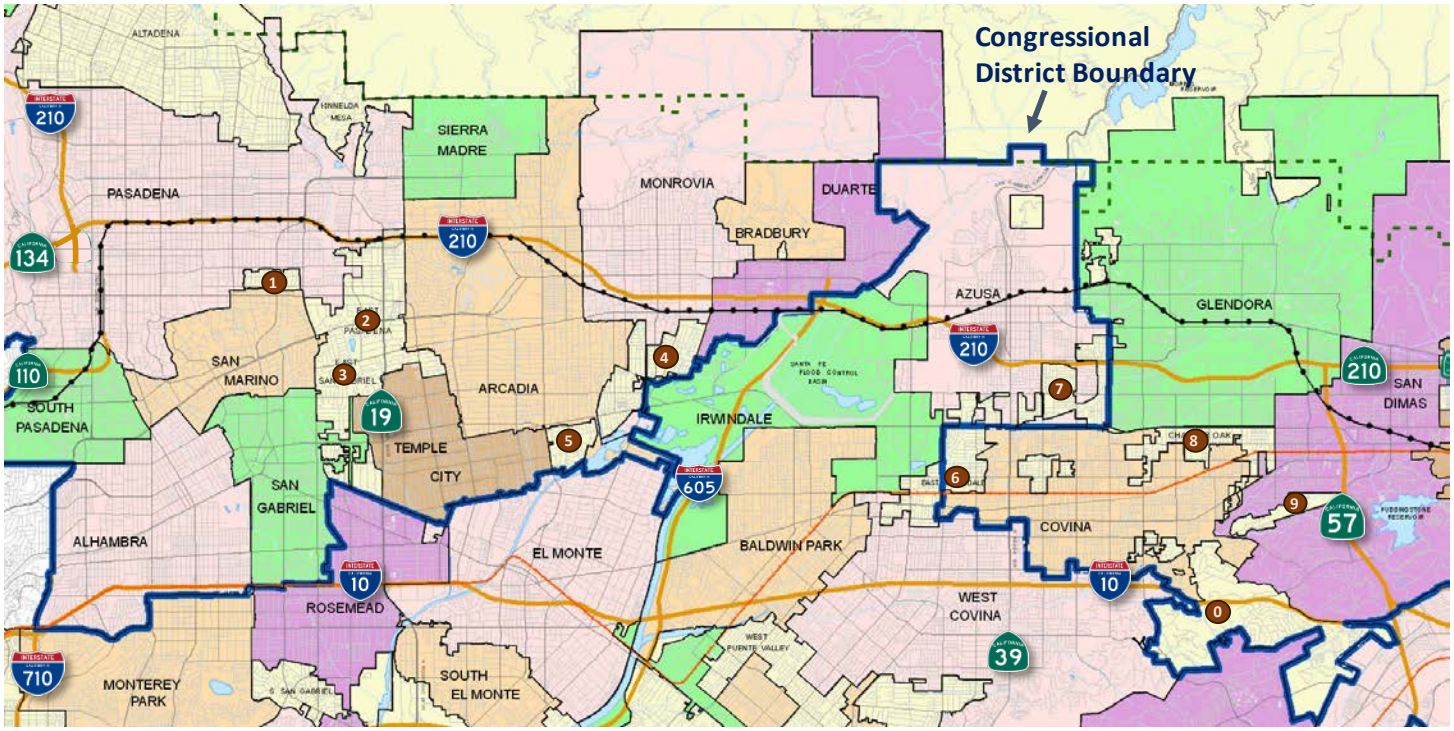
- **Three teams have been formed to get the ball rolling! Participation from all the Partners is essential and encouraged. Team participation is open to all**
  - Outreach Team (Metro, PATH, CT)
  - Metrics Team (Metro, PATH, CT)
  - Data Collection Team (Metro, PATH, CT)

Caltrans Funding

- **Effective data collection, and being able to collect the data from all the right places is essential in analyzing and evaluating the performance of the corridor.**

  SHOPP funds may have been identified to augment ITS elements within the Corridor. District 7's ITS staff is in the process of preparing a comprehensive list of those elements to submit to HQ next week so that we can capture funding to make the improvements.

Cities within the I-210 CC



Pasadena (137,122)
El Monte (116,249)
West Covina (106,870)
Alhambra (85,961)
Baldwin Park (75,940)
Arcadia (56,769)
Rosemead (54,154)

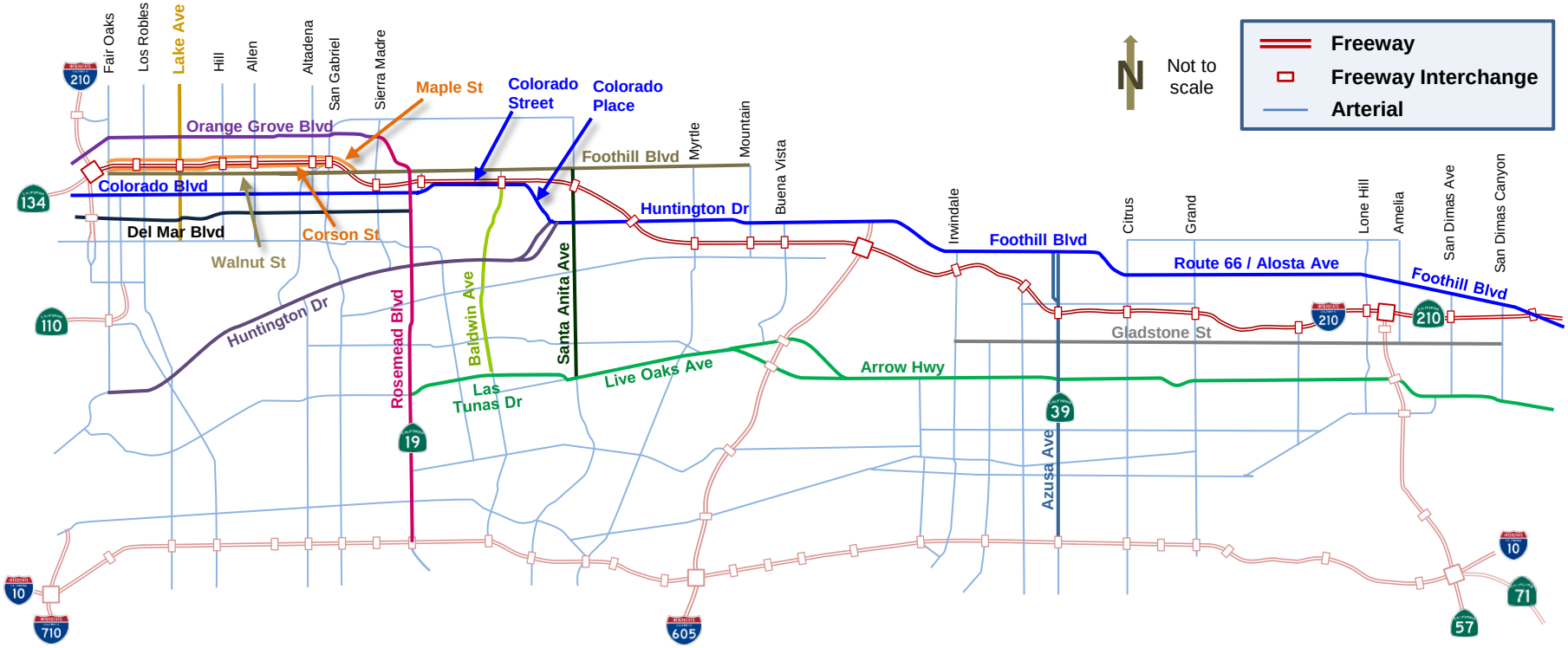
Covina (50,954)
Glendora (50,435)
Azusa (46,678)
San Gabriel (40,005)
Monrovia (36,857)
Temple City (35,816)
San Dimas (35,064)

South Pasadena (25,806)
Duarte (21,486)
San Marino (13,241)
Sierra Madre (10,996)
Irwindale (1,472)
Bradbury (1,268)

Unincorporated LA County Areas

1. *San Pasqual (2,082)*
2. *East Pasadena (6,144)*
3. *East San Gabriel (14,874)*
4. *Mayflower Village (11,649)*
5. *North El Monte (3,723)*
6. *Vincent (15,922)*
7. *Citrus (11,964)*
8. *Charter Oak (9,310)*
9. *West San Dimas (309)*
0. *Ramona (4,053)*

Supporting Arterials



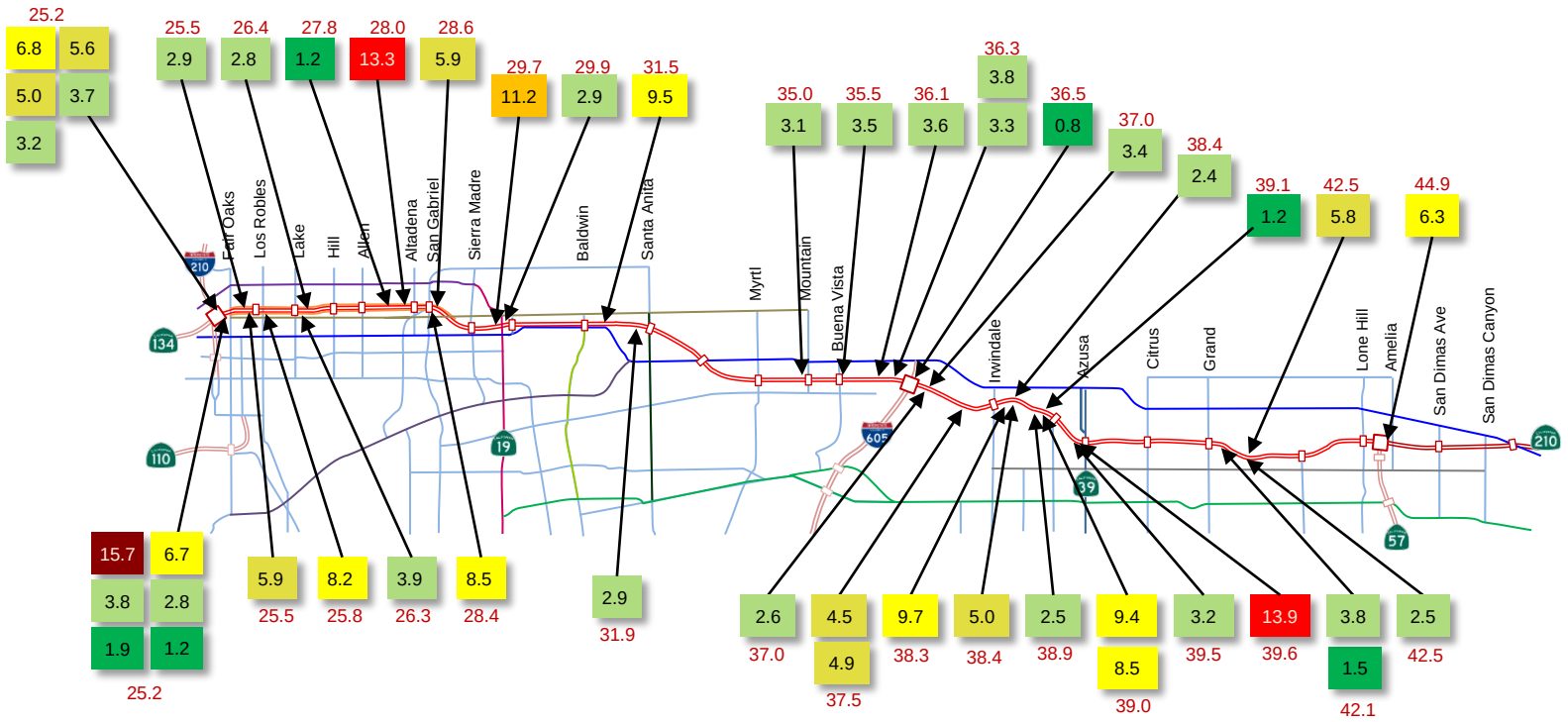
Role Of Caltrans District 7 Traffic Management Team

Incidents play a major role in the Corridor and need to be managed with input of all the Partners

- **Traffic Management Team (TMT) consists of a group of Caltrans Engineers and Technicians responding to major incidents. The TMT works in concert with the TMC, Caltrans Maintenance forces and CHP at the incident scene in hopes of clearing the incident as soon as possible.**
- **TMT responds to complicated incidents or events that may have a lengthy and/or significant impact on Los Angeles and Ventura County freeway traffic**
  - Incidents blocking 2 or more lanes for 2 or more hours
  - Fatalities
  - Haz Mat Events
  - Brush Fires & Police Activity
  - Special Events (Major Concerts, Rose Bowl and Coliseum Games, etc.)

Incidents Involving a Traffic Management Team (TMT) Response

- Duration (hours) of incidents responded to by Caltrans District 7 Traffic Management Team, 2009-2012



General Corridor Information

- **Corridor geometry**
  - Linear corridor (east-west alignment).
  - Several parallel arterials in close proximity of I-210.
  - I-10 running parallel to I-210, 4 to 5 miles to the south.
  - Several possibilities for crossover between I-210 and I-10
    - I-605 and SR-57 freeways
    - SR-19 (Rosemead) and SR-39 (Azusa) arterials
  - One-way frontage streets on each side of I-210 within Pasadena

General Corridor Information

- **Highly directional traffic control needs**
  - AM peak → Westbound
  - PM peak → Eastbound

- **Need to manage time-specific/event traffic patterns**
  - Higher congestion levels on Friday afternoon due to weekend traffic
  - Traffic associated with events at the Rose Bowl stadium & Santa Anita racetrack
  - Events associated with Caltech, Cal Poly Pomona and other colleges
- **Average truck traffic disruptions**
  - Trucks only represent 3-5% of traffic → Typical of many urban freeways.

General Corridor Information

- **Traffic sensing infrastructure**

  - Very good PeMS coverage of freeway mainline, HOV lanes, and ramps
  - Many intersections within Pasadena already equipped with traffic sensors
  - SMART test deployment site along Orange Grove Blvd in Pasadena
    - System collecting event-based high resolution traffic data from multiple intersections and generating real time arterial performance measures, such as intersection queue length and arterial travel time

General Corridor Information

- **Freeway traffic control**
  - All I-210 ramps metered, including interchanges with I-605 and SR-57
  - SWARM test corridor → A good ramp metering infrastructure is already in place.
  - HOV lane along entire length of I-210 in both directions.

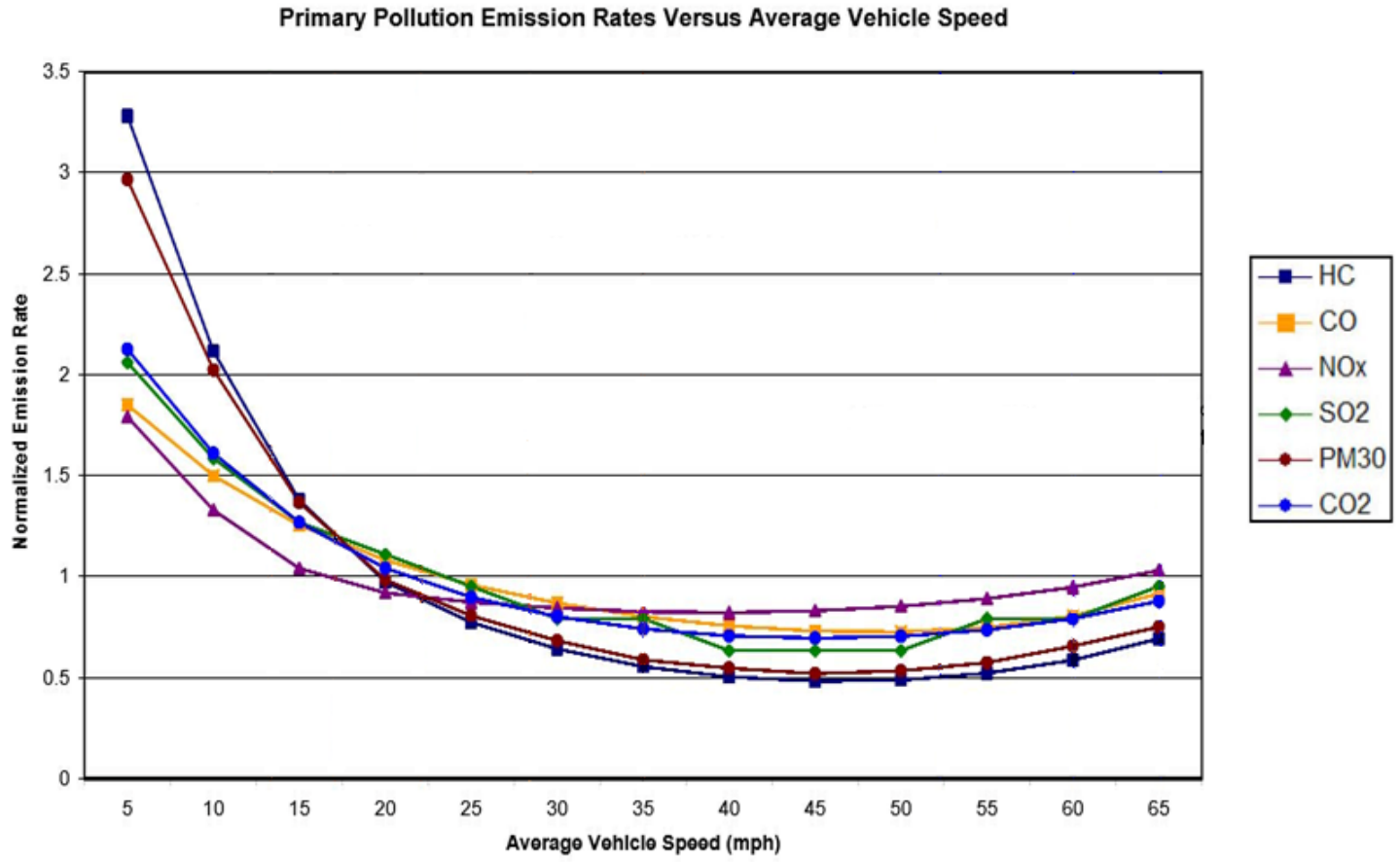
- **Arterial traffic control**
  - Traffic-responsive system exist along some arterials of interest in Pasadena and Arcadia
  - Los Angeles County (IEN Network)
  - Local TMC in Pasadena

General Corridor Information

- **Transit coverage**
  - Metro Gold Line along I-210
    - Direct connection with downtown Los Angeles
    - Current terminus at the Pasadena/Arcadia boundary, but to be extended to Glendora by 2015 and further west subsequently
    - Stations typically within ½ mile of the freeway
  - Metro Silver line along I-10
    - Terminus in El Monte, just west of I-605
    - Direct connection with downtown Los Angeles
  - Several express buses running along I-10 and I-210
    - Additional transit connections with downtown Los Angeles
  - Several park-and-ride facilities within the corridor

Emissions Reduction and Congestion Relief Graph

Improved speeds through the Corridor will reduce amount of green house gas emissions, this helps to meets the State's objective of enhancing the livability, sustainability, and economic performance of California



Areas of Concern

- **Freeway and arterial congestion levels**

  - High level of congestion along I-210 may limit ICM benefits during peak hour
  - Some intersections along local street networks already operating near capacity, constraining potential traffic management solutions during peak hour

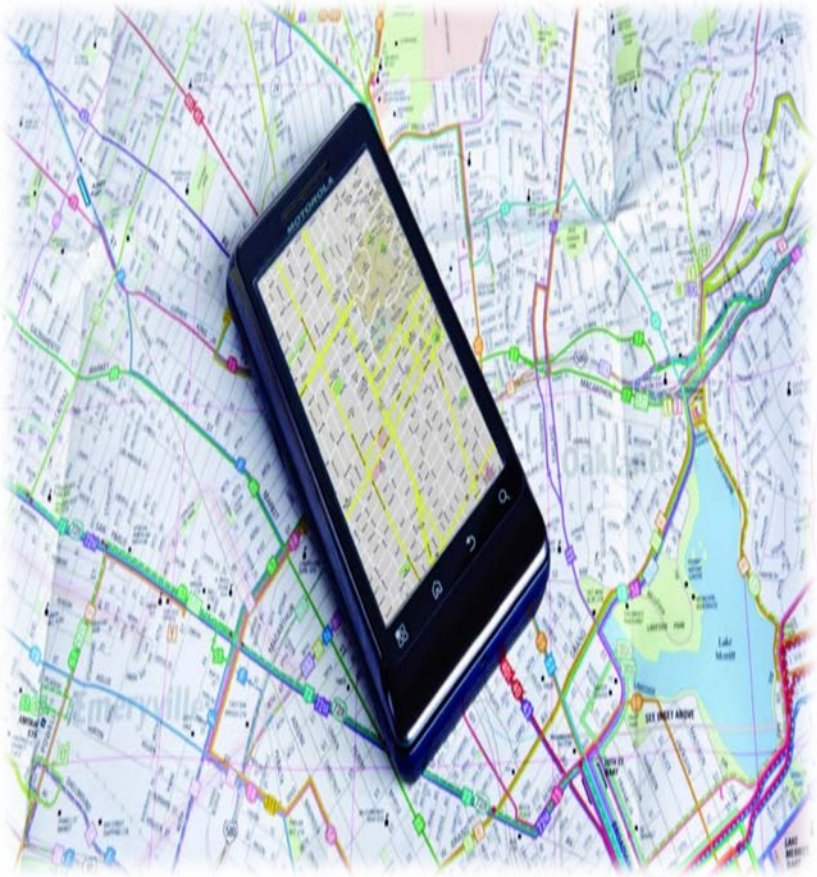
- **Traffic signal infrastructure**
  - Limited information on traffic signal control equipment for most cities along the corridor (*Data Committee will explore*)

- **Parking availability**
  - High occupancy (> 80%) at many park-and-ride facilities

Summary: I-210 Connected Corridor

What can be accomplished by the Partners?

- Make better use of existing transportation infrastructures by working together
- Maximize corridor performance (safety, mobility, reliability, quality of life)
- Fully implement real-time traffic management. Transition from “reactive” to “proactive/predictive”
- Develop trust, and enhance regional, local, and private sector partnerships



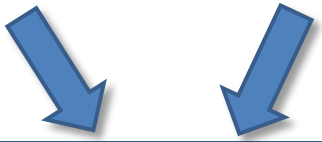
Essential Next Steps

- **To do list:**
  - Identify vision, goals and objectives
  - Define corridor boundaries
  - Identify Partners
  - Begin to develop strong working relationships amongst all partners
  - Develop work plan
  - Inventory existing systems
  - Identify user needs
  - Develop strategies
  - Produce Con Ops plan
  - High-level system architecture
  - System Engineering & Integration
  - Identify risks
  - Define success
  - Select performance measures
  - Measure performance
  - Continue to foster trust and cooperative relationships amongst all partners

- **Stakeholder Involvement**
  - ICM Message
  - Outreach process
  - Agency contacts/leaders
  - User needs workshops
  - Develop MOU's

- **Risk Mitigation Plan**

- **Additional Funding Needs/Opportunities**



- **I-210 Connected Corridor Pilot Project**