

**Gateway Cities  
Traffic Signal Synchronization and  
Bus Speed Improvement Project  
I-5/Telegraph Road Corridor  
August 19, 2000**



# Presentation Agenda

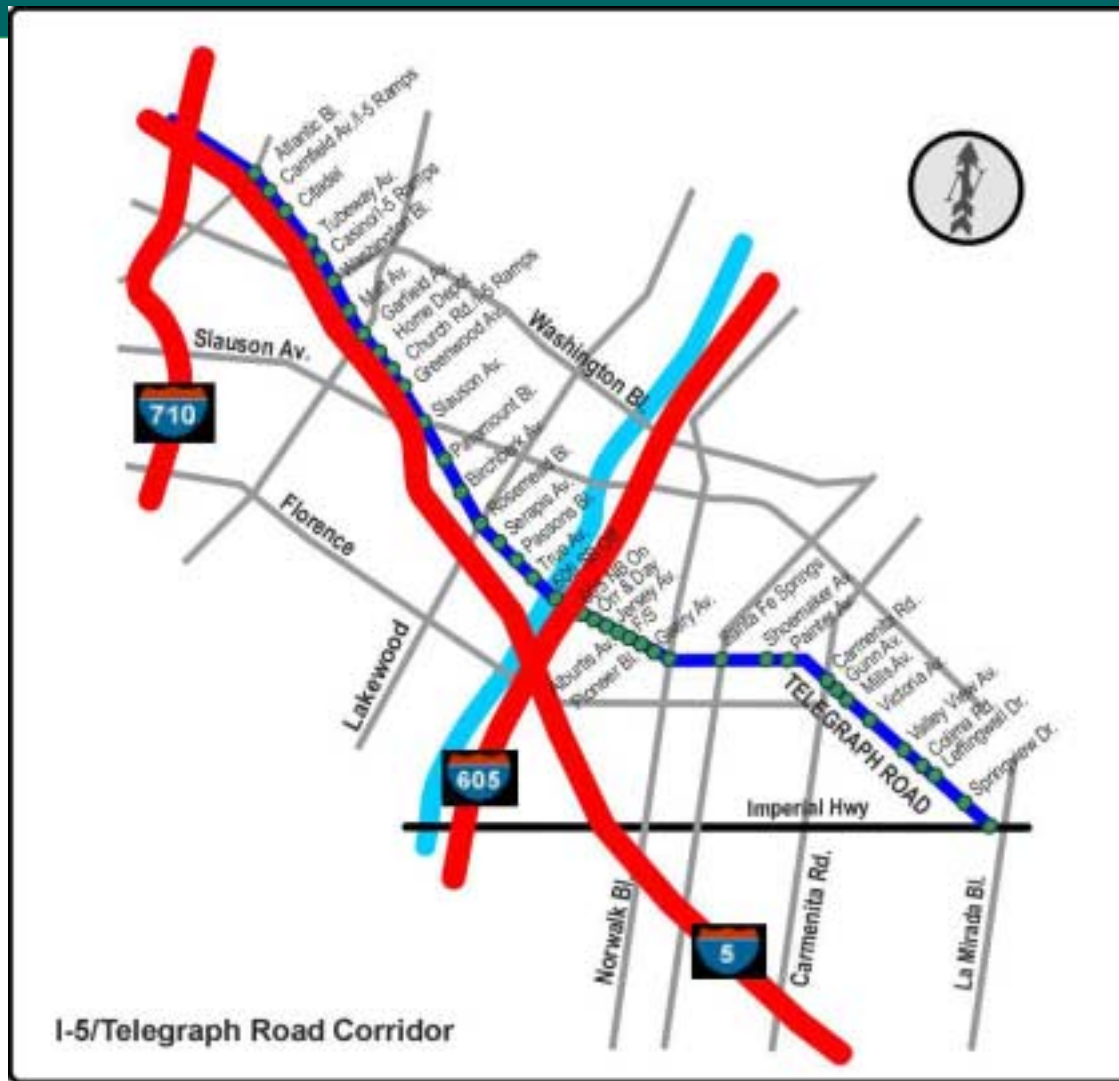
1. Relationship with I105 Corridor Project
2. Key Issues
3. Project Scope
4. Equipment Upgrades
5. Future Operations



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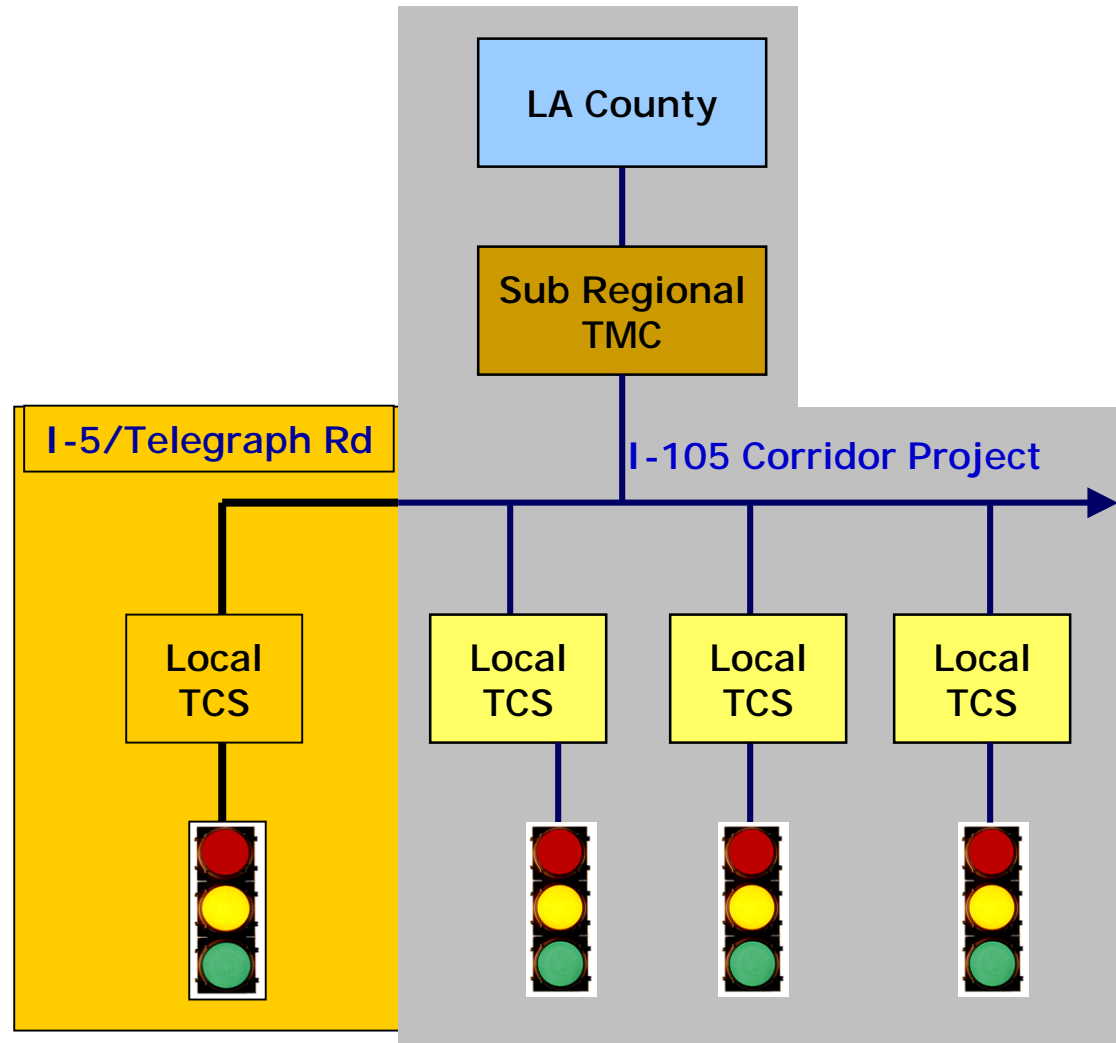




I-5/Telegraph Road Corridor



# Concurrent Projects

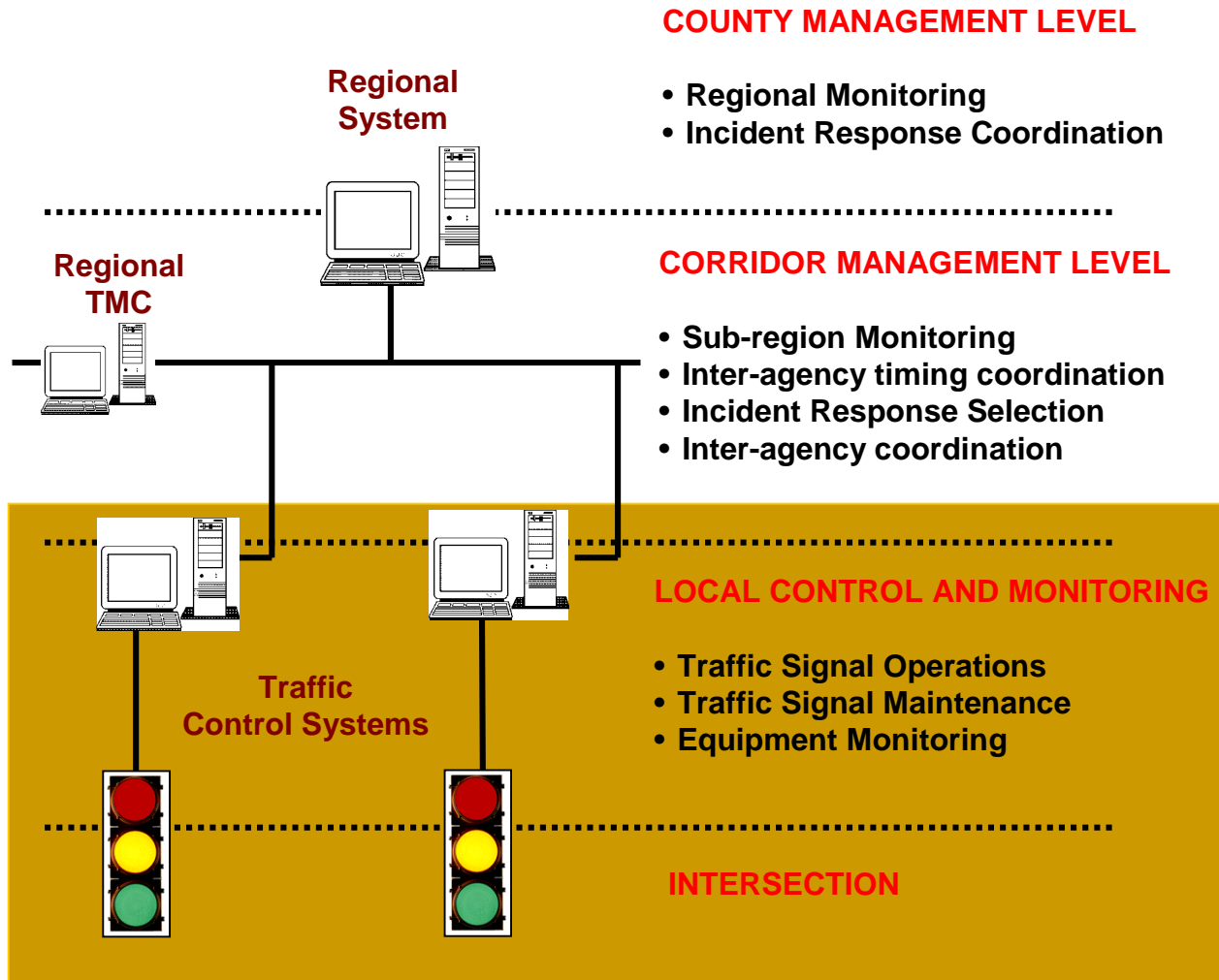


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# County Architecture Functions



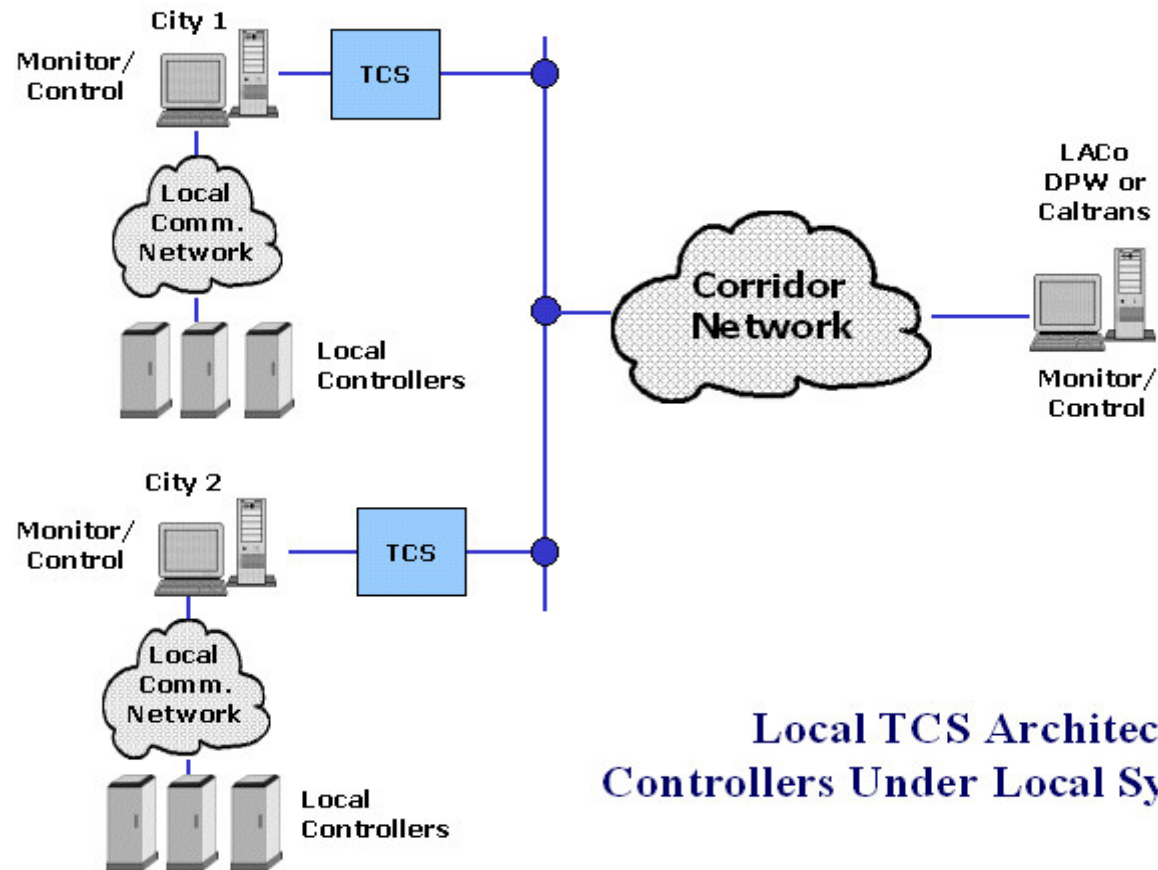
# Project Issues

- Advanced Traffic Management System
  - Relationship between Telegraph Road and other signals
  - Accommodating local agency requirements
  - Accommodating shared operational responsibilities
- Communications System
  - Local Interconnect
  - The Sub-Regional Network
  - Video
  - National Standards
- System Integration
  - Corridor
  - Regional





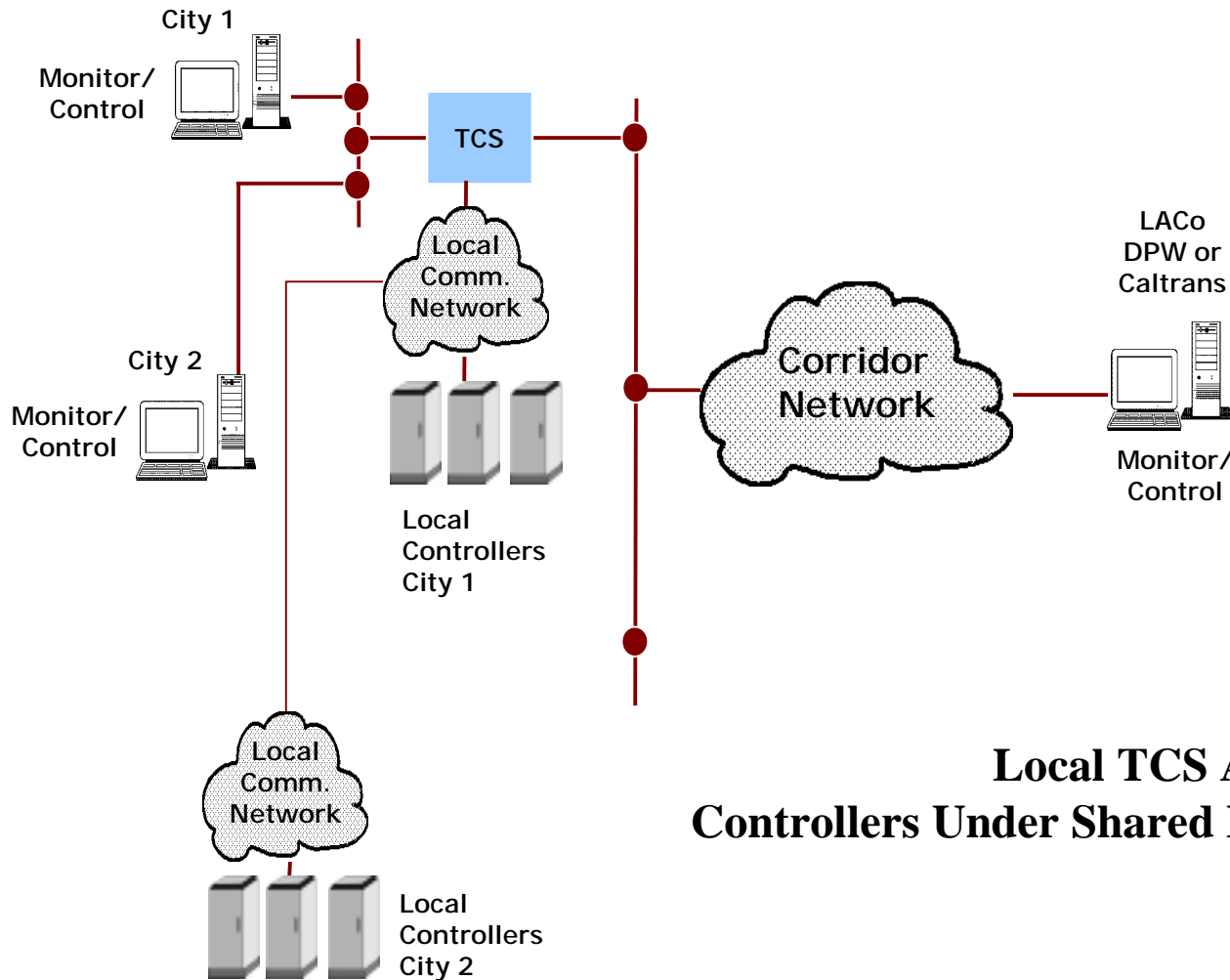
# Concept of Local TCS Architecture (1)



**Local TCS Architectures  
Controllers Under Local System**



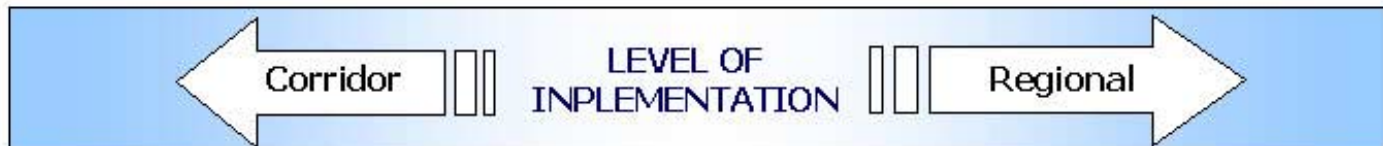
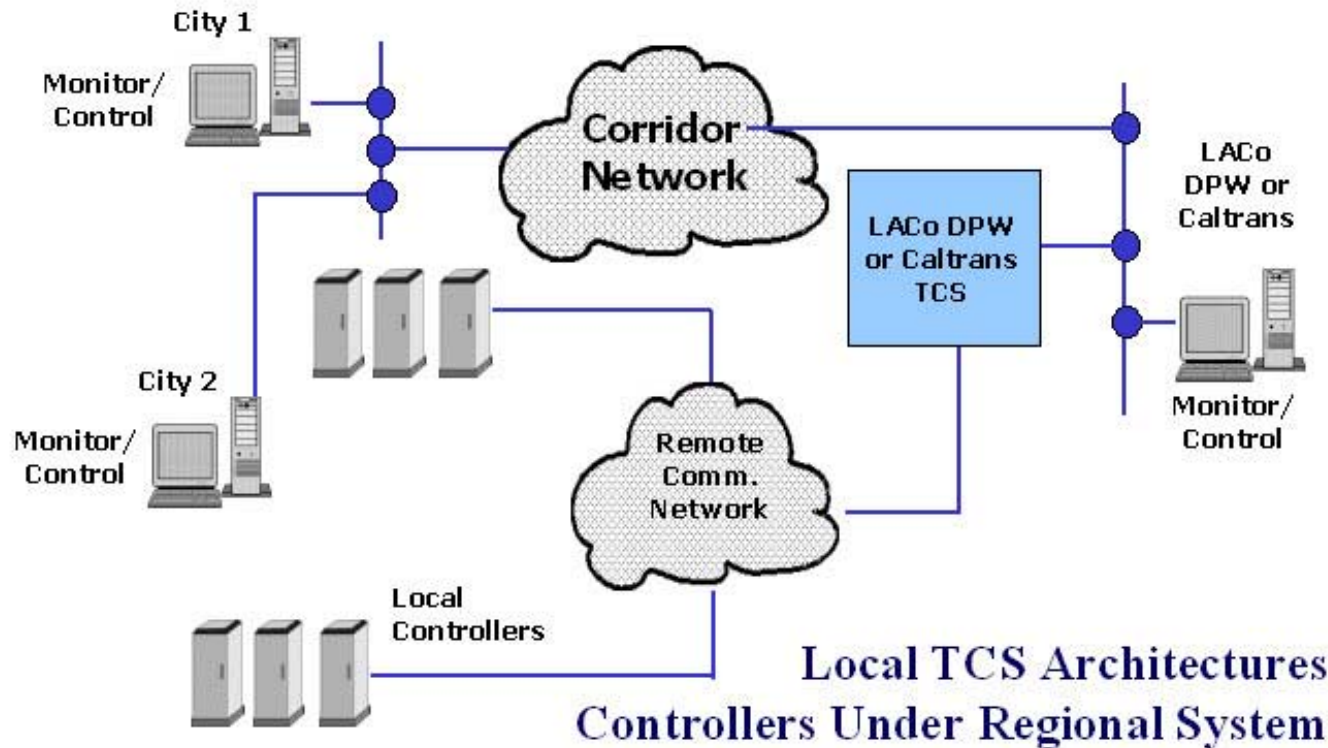
# Concept of Local TCS Architecture (2)



## Local TCS Architectures Controllers Under Shared Local System



# Concept of Local TCS Architecture (3)

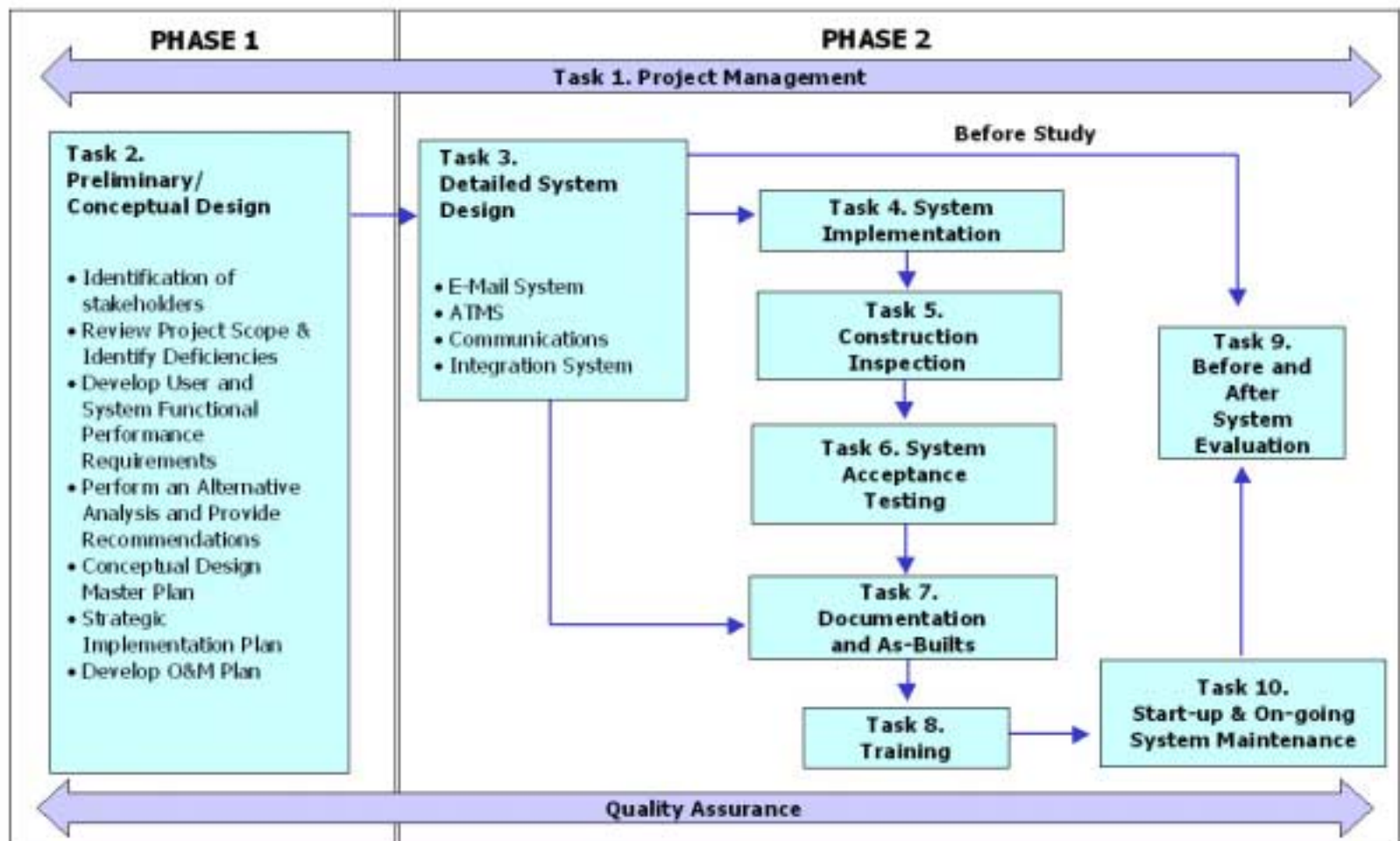


# Presentation Agenda

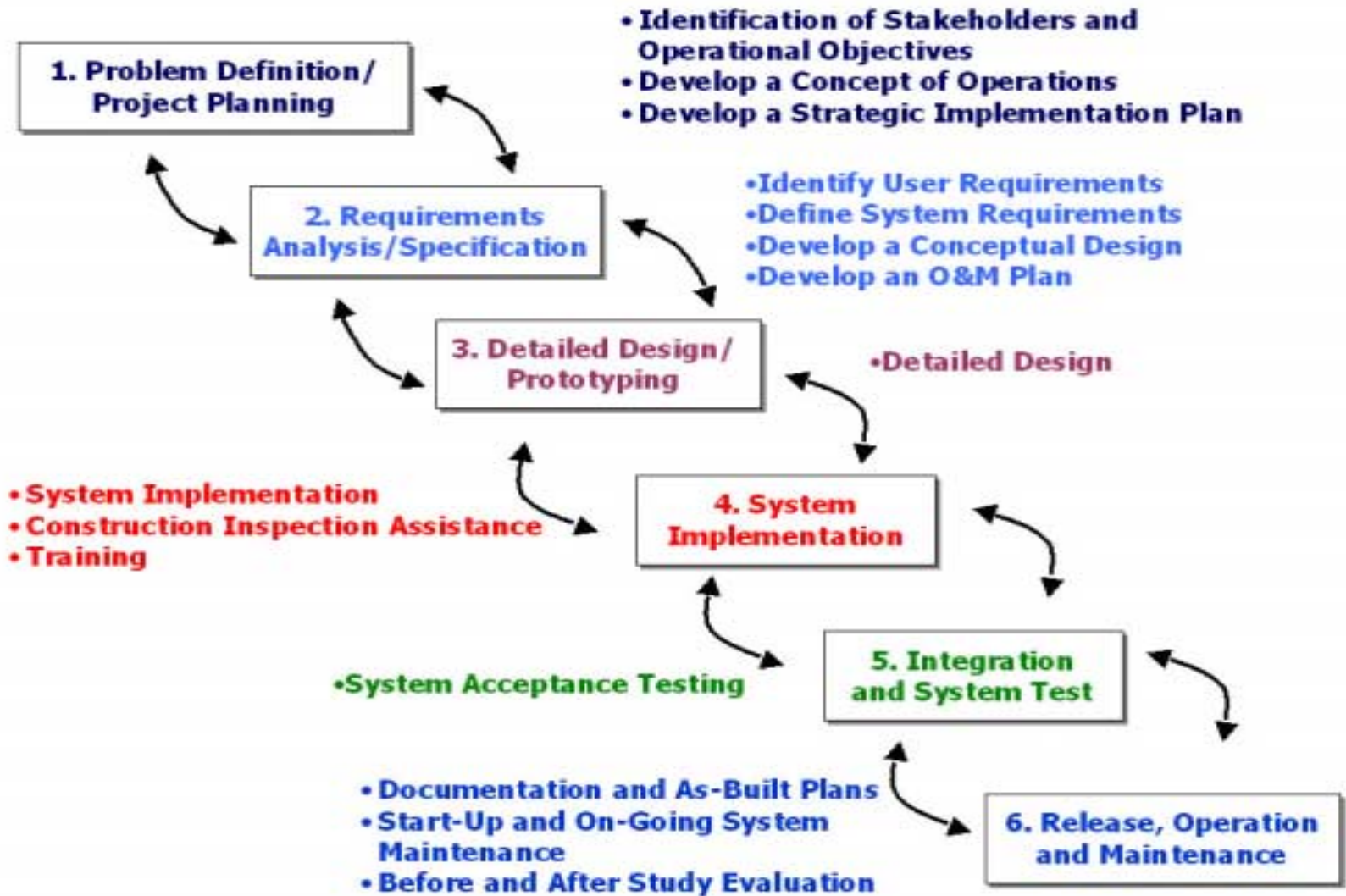
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# Work Flow Plan



# System Engineering Approach & Project Tasks

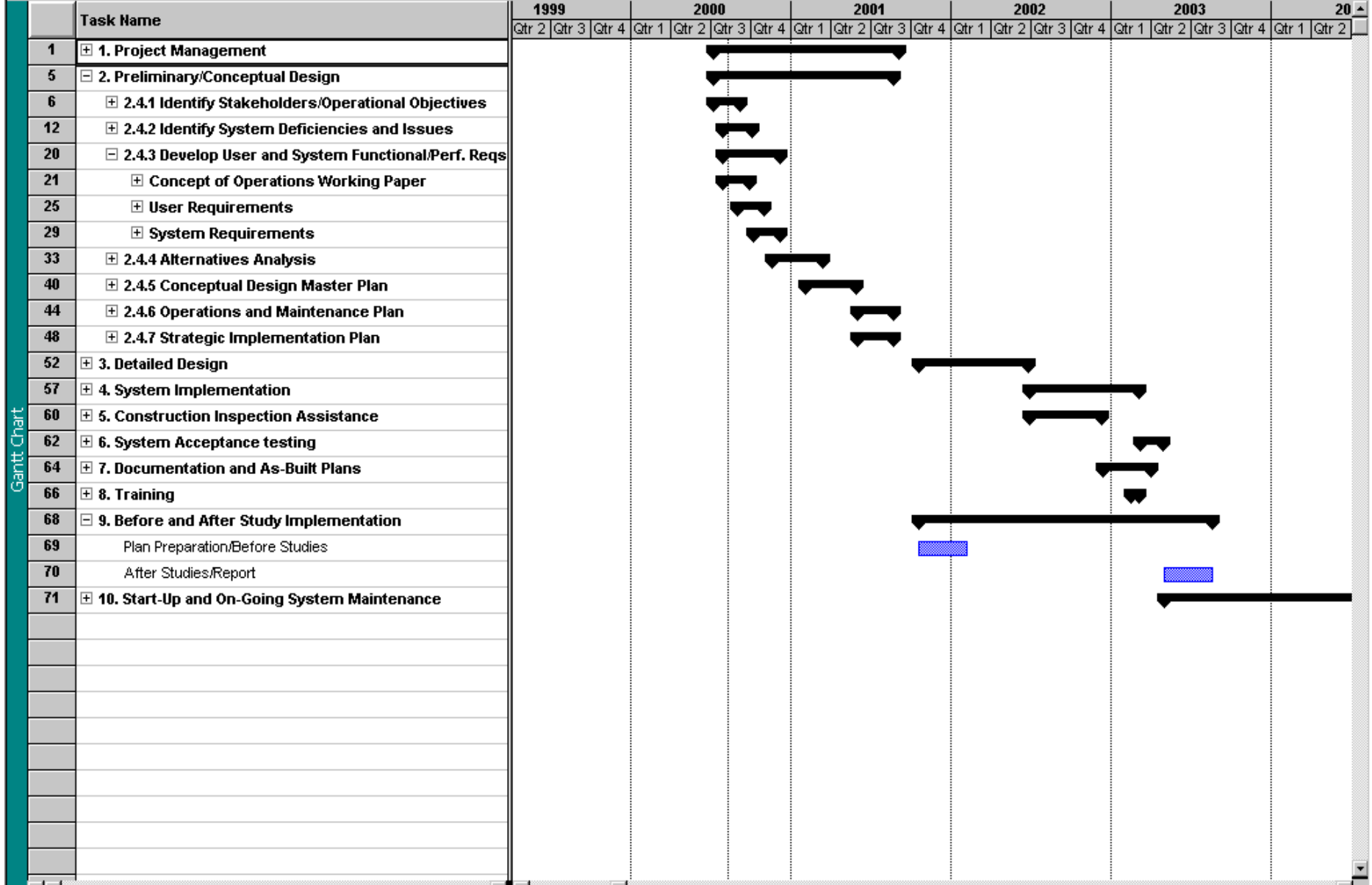


# Inputs From Relevant Projects

Project Task	SGV Pilot	I-105 Corridor	IMAJINE	South Bay	LA/Ventura ATIS
Identify Stakeholders/Operational Objectives	√	√	√		√
Identify System Deficiencies/Issues		√	√		√
Functional Performance Requirements	√	√	√	√	√
Alternatives Analysis		√		√	
Conceptual Design Master Plan		√	√		√
O&M Plan	√	√	√	√	√
Strategic Implementation Plan		√	√		



1. Project Management






# Project Web Site

Untitled Document - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address C:\Alan's Stuff\Projects\I-5-Telegraph Road\Web Site\Home pagev1.htm

## I-5/Telegraph Road Corridor Project





The map displays the I-5/Telegraph Road Corridor with project areas highlighted in red and blue. Key roads shown include Station Av., Folsom, Lakewood, Imperial Hwy, and Telegraph Road. Highway shields for 910, 905, and 5 are visible. A north arrow is present in the upper right of the map area.

I-5/Telegraph Road Corridor

Gateway Cities  
Traffic Signal Synchronization and  
Bus speed Improvement Project

**Agencies**  
**Background**  
**Concepts**  
**Contacts**  
**Links**  
**Meetings**  
**Reports**  
**Schedule**  
**Status**  
**Home**

Last Updated:  
8/8/00



# Project Web Site

<http://www.gardnersys.com/i5telegraphrd/>



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# Upgrade Examples

The project will fund upgrades needed to ensure that the project requirements are met:

- signal coordination
- interagency operation
- data collection
- regional integration
- use of standards

- Controller
  - NEMA
  - 170

- Detection
  - Loop
  - Video

- Traffic Control System
  - Supply and Installation
  - Modifications

- Communications
  - New plant
  - Leased costs (10 years)



# Signal Controller Upgrade Options (examples)

## 170 (existing)

- 170 (HC11 Board)
- 170 with 470i Board
- 170 ATC (Engine Board upgrade)
- 2070
- (Future) Advanced Transportation Controller (not defined)

## NEMA

- Same supplier; new equipment
- New Supplier
- 2070
- (Future) Advanced Transportation Controller (not defined)



# Interconnect Upgrade Options (examples)

- Hardwire
  - Copper to replace leased lines
  - Copper replacement
- Fiber Optic
- Wireless
  - Spread Spectrum
  - Microwave
  - Leased services
    - Metricom
    - AT&T CDPD



# TCS Upgrade Options (examples)

## Supply and Installation of New Central System

- Non existing
- Cannot provide data collection
- Cannot be integrated into regional system
- Cannot support standards

## Modification of Existing Systems

- To provide data collection capability
- To support Inter-agency coordination



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# Impact on Operations

- The project will likely provide equipment and systems that will change the way that the agency carries out current tasks
- Future operations will involve tasks that are not part of the agencies' current operations
- System management tasks are likely to be required



# Future Operations

## System Operations

Signal Timing

Inter-agency Coordination

Special Event Management

Incident Response

## System Management

Equipment Monitoring

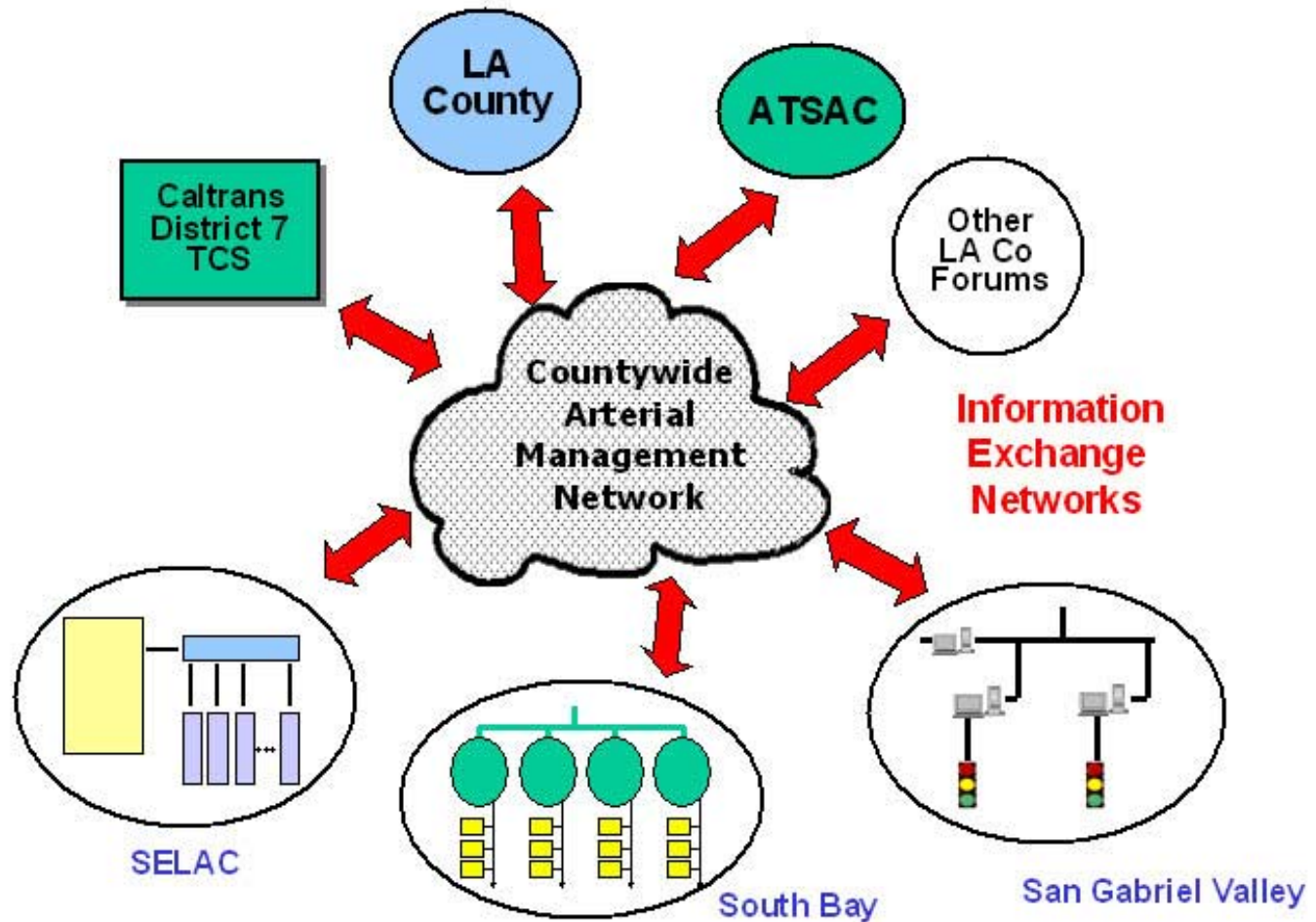
Back-ups

Upgrades



**Gardner Transportation Systems Inc**  
— A Siemens company

# Concept of Integration - Arterial



# Concept of Integration - Regional

