Alameda Smart City Master Plan

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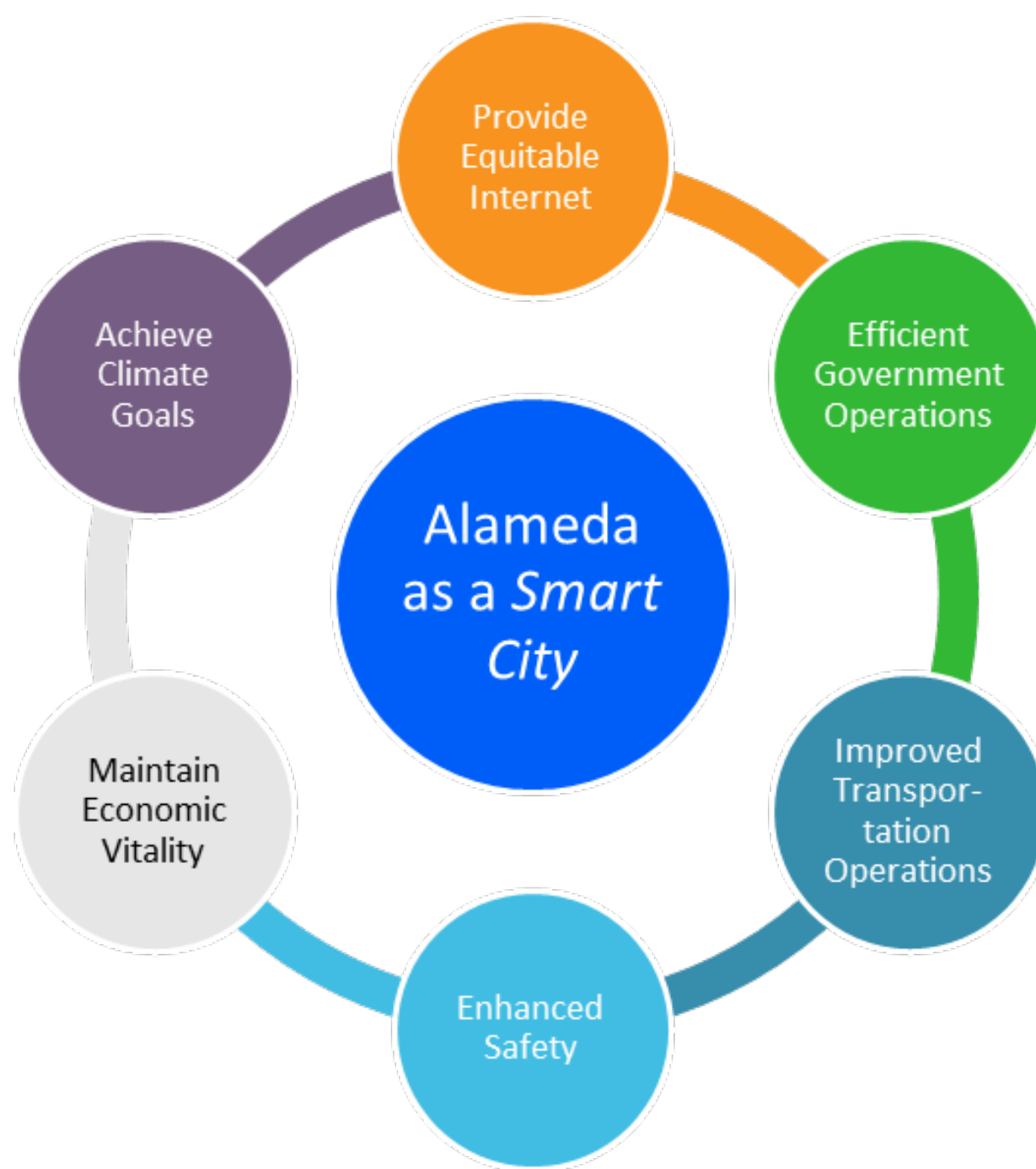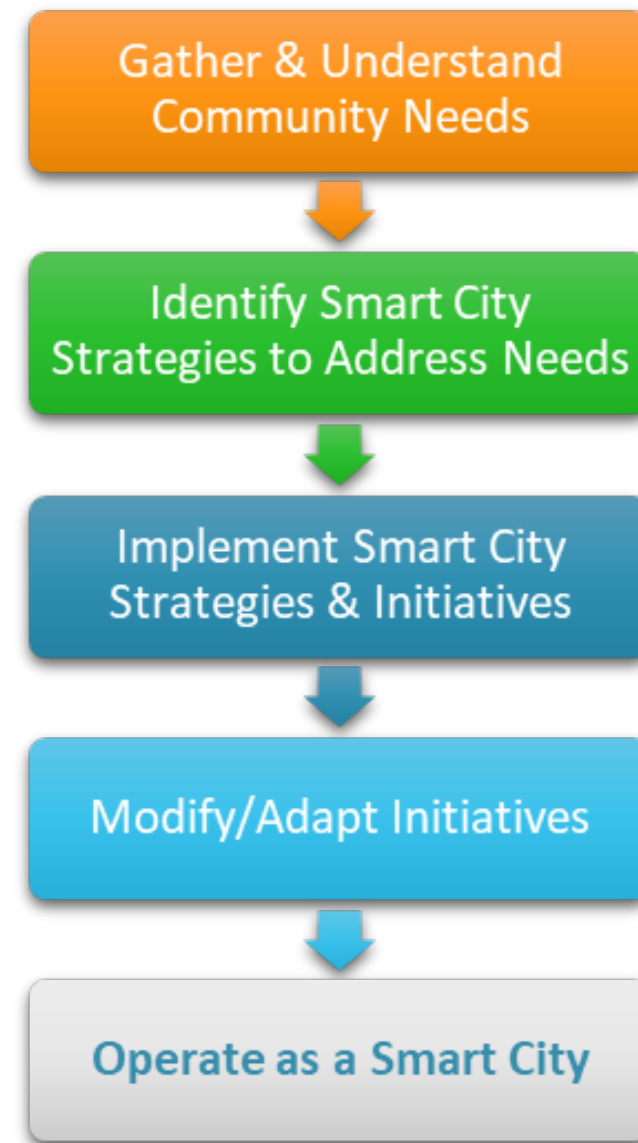
Smart City Plan Vision

Guide City on how to use new technology to improve community members' lives.

Smart City Objectives

What's been done

- ## Existing Conditions Assessment
  - Establishes a baseline of City's assets

- ## Needs Assessment and Recommendations
  - Meet with and understand needs of various project stakeholders
  - Identify gaps in City's existing assets where needs are not met
  - Recommend improvements to address unmet needs

- ## Presented Recommendations to City Council, Transportation Commission and Key Stakeholders

- ## Smart City Master Plan

Gather & Understand Community Needs

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Identify Smart City Strategies to Address Needs

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Implement Smart City Strategies & Initiatives

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Modify/Adapt Initiatives

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Operate as a Smart City

Needs Identification Focus Groups

- AC Transit
- Alameda Municipal Power
- Alameda Unified School District
- Business Groups
- Economic Development
- Equity Priority Communities
- Information Technology
- Public Safety
- Public Works
- Recreation & Parks
- Transportation Planning

Summary of Recommendations

No	Recommendation	Timeframe	Approx. Cost
1	Build-Out City Communications Network	Short- to Long-Term (< 3-8+ years)	$32M
2	Deploy Public Wireless Networks (Wi-Fi)	Short- to Long-Term (< 3-8+ years)	$4.6M
🚫3	Deploy Citywide Emergency Vehicle Preemption	Short-Term (< 3 years)	$3M
🚫4	Deploy Transit Signal Priority	Short-Term (< 3 years)	$3M (combine with #3)
5	Partner with Internet Service Providers (ISPs)	Short-Term (< 3 years)	$100k
6	Develop Dig Once and Installation Standards Policies	Short-Term (< 3 years)	$100k
🚫7	Implement Centralized Transportation Management	Mid-Term (3-8 years)	$1.5M
8	Interconnect Emergency Operations Center and City Facilities	Mid- to Long-Term (3-8+ years)	$10M (combine with #1)
🚫9	Implement Transportation Data Analytics	Mid- to Long-Term (3-8+ years)	$4.5M
🚫10	Deploy Traffic Monitoring Camera Network	Long-Term (8+ years)	$1M

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Summary of Projects (17 Projects)

Project ID	Project Name	Foundational	Dependencies
C1	Central City & EOC Communications Project	✓	None
C2	City Hall West Interconnection Project	✓	C1
C3	Encinal Avenue & Central Avenue Interconnect Project	✓	C1
C4	East End Communications Project	✓	C1
C5	North Island Communications Project	✓	C1
C6	South Shore Communications Project	✓	C1
C7	Bay Farm Communications Project	✓	C1, C6
W1	Central Public Wi-Fi		C1, C3, C5
W2	West End Public Wi-Fi		C1, C2, C5
W3	East End Public Wi-Fi		C1, C3, C4, C6
W4	Bay Farm Public Wi-Fi		C1, C3, C6, C7
T1	Citywide EVP/TSP Deployment		None
T2	Centralized Transportation Management		C1-C7
T3	Implement Transportation Analytics		C1-C7, T2
T4	Citywide CCTV Deployment		C1-C7
S1	Partner with ISPs		None
S2	Develop Dig Once & Installation Standard Policies	✓	None

Build Out City Communications Network

- Foundation for Smart City initiatives
- Required to support other initiatives
- Fiber optics and wireless solutions
- Interconnects City facilities and systems
- Resilient and redundant
- Reduce dependency on AMP infrastructure
- Regional interconnectivity
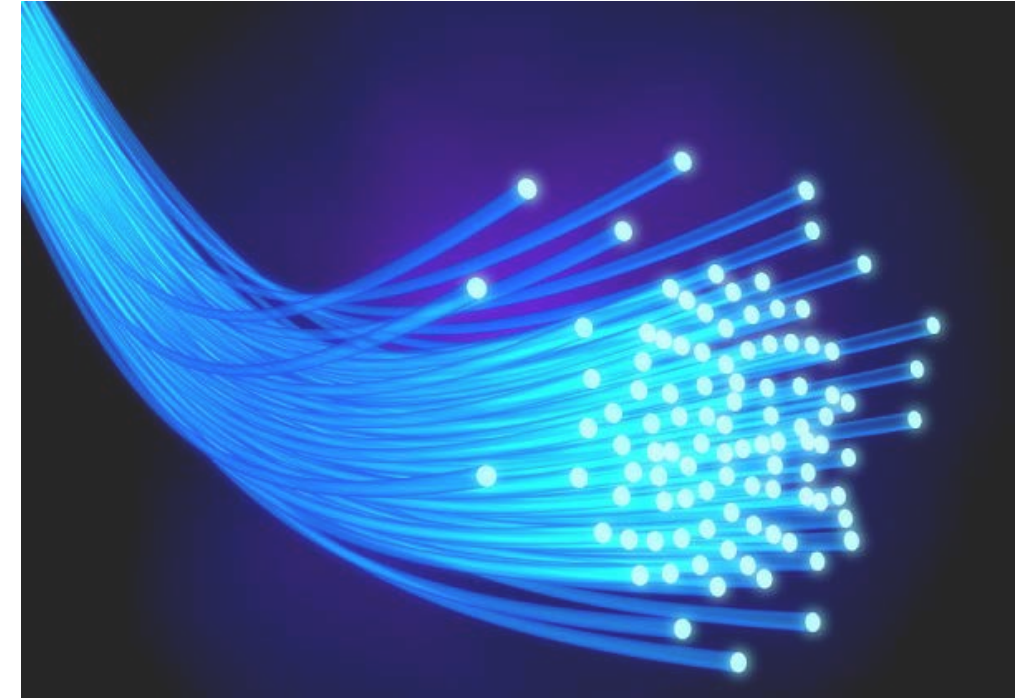
Build Out City Communications Network
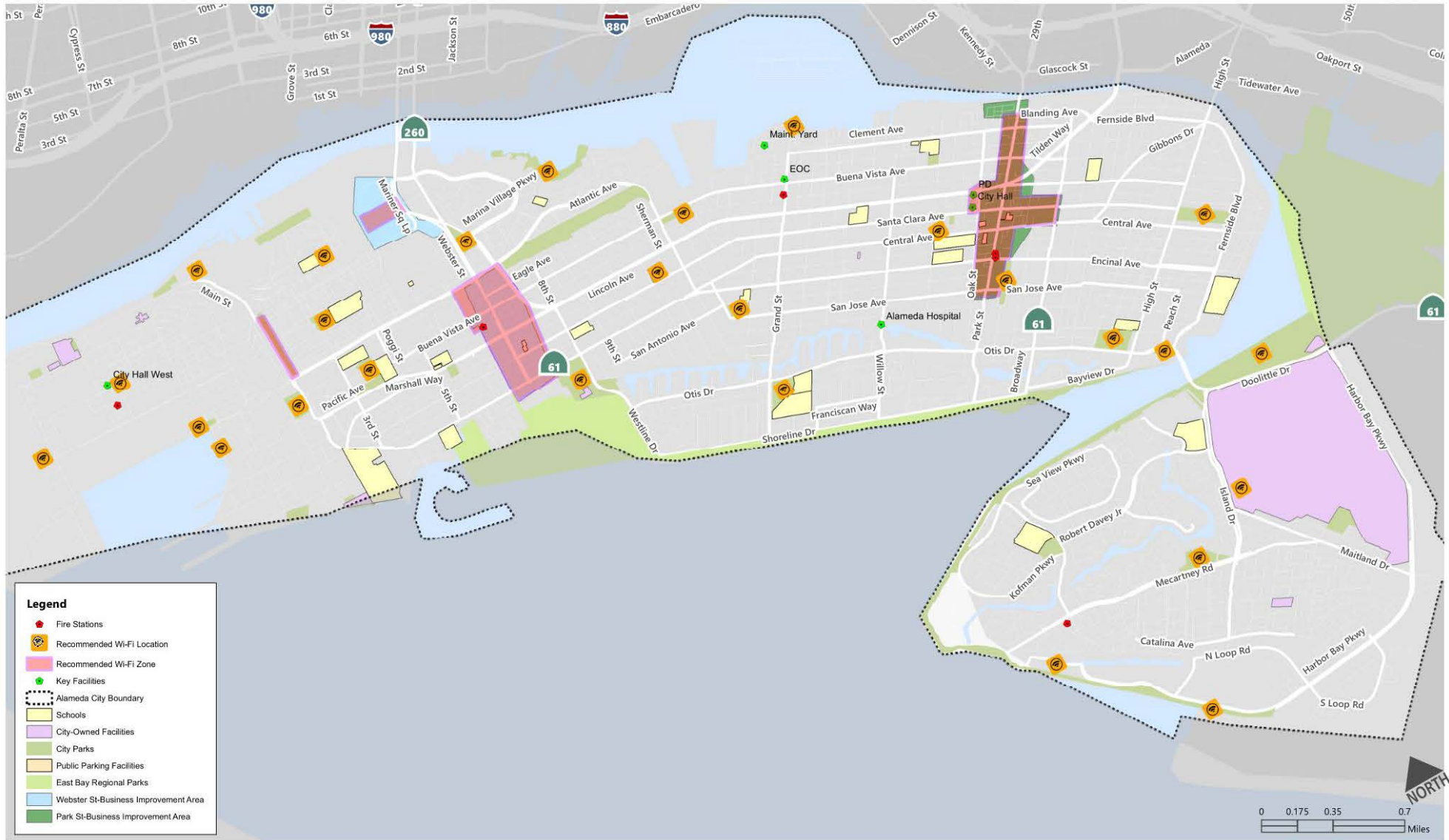
Divided into 7 Phases (C1 to C7)

2

Deploy Wi-Fi in Public Spaces

- Provide free internet access through public Wi-Fi facilities
- Enhance internet availability, decrease digital divide
- Will use existing commercial ISPs for internet service
- Attract business and commerce to key business districts
- Locations will be focused within the public right-of-way
  - Public buildings
  - Parks
  - Streets (such as at bus stops)
  - Commercial and business districts
  - Equity Priority neighborhoods

Deploy Public Wi-Fi

Legend
- ⬟ Fire Stations
- 🔶 Recommended Wi-Fi Location
- ⬛ Recommended Wi-Fi Zone
- 🟢 Key Facilities
- ▫️ Alameda City Boundary
- ⬜ Schools
- 🟪 City-Owned Facilities
- 🟩 City Parks
- 🟧 Public Parking Facilities
- 🟩 East Bay Regional Parks
- 🟦 Webster St-Business Improvement Area
- 🟩 Park St-Business Improvement Area

NORTH

0   0.175   0.35   0.7
Miles

Divided into 4 Phases (W1 to W4)
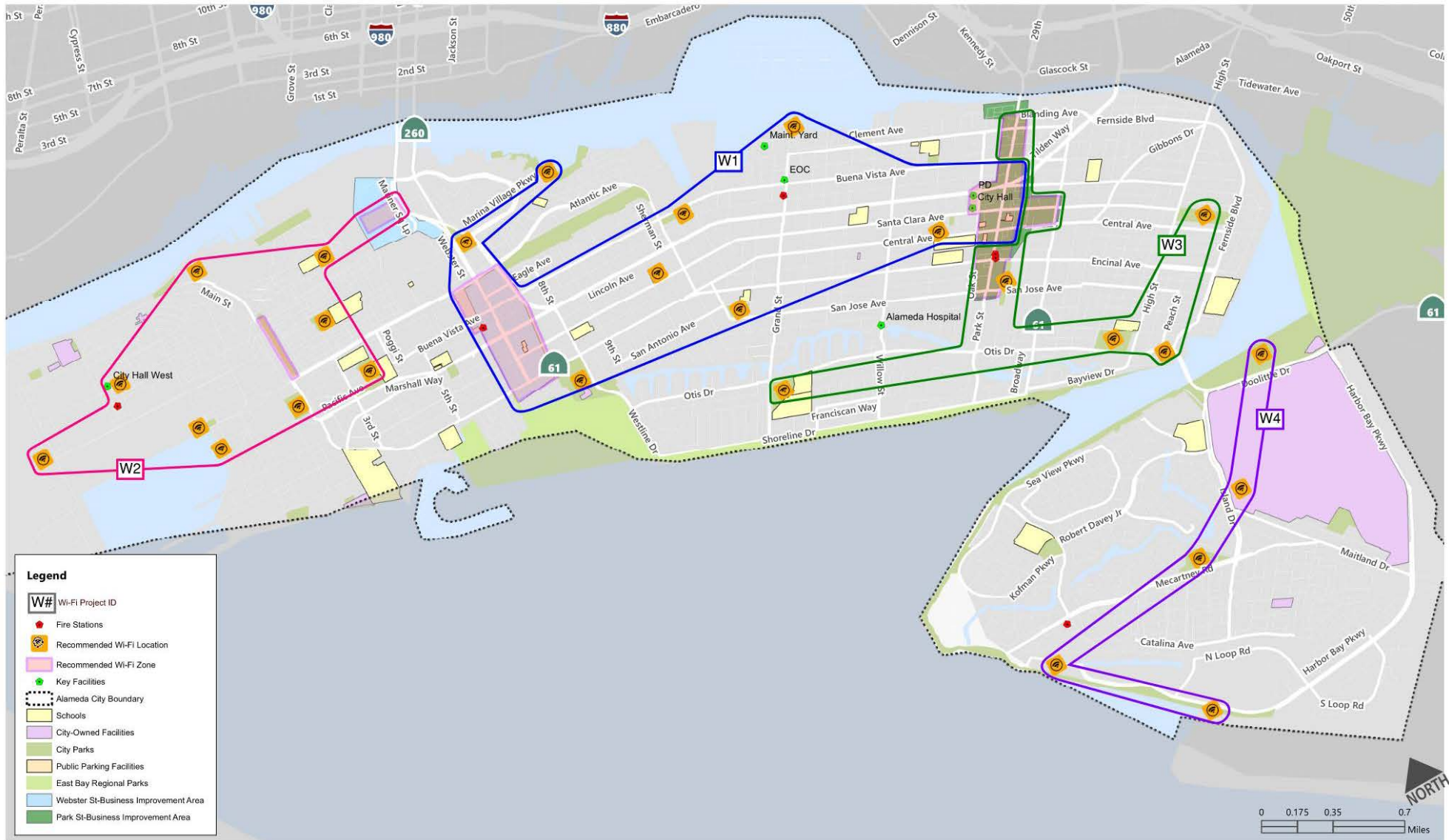
Deploy Citywide Emergency Vehicle Preemption

- Improve public safety
- Improve emergency response times

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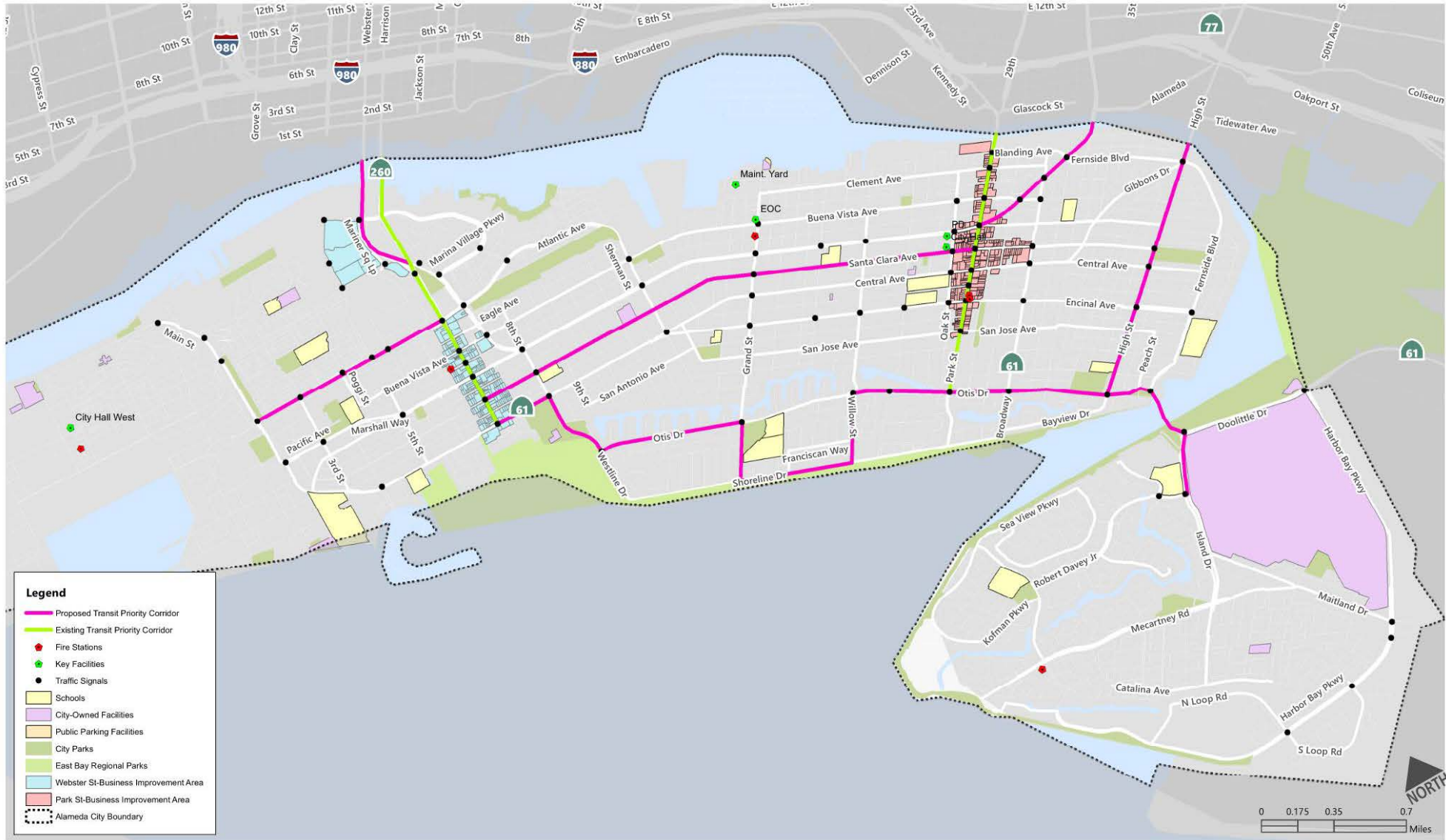
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Deploy Transit Signal Priority

- Reduce bus delay citywide

- Enhance transportation equity and options

- Enable AC Transit to improve service in Alameda

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Deploy Citywide Transit Signal Priority

Legend
- Proposed Transit Priority Corridor
- Existing Transit Priority Corridor
- Fire Stations
- Key Facilities
- Traffic Signals
- Schools
- City-Owned Facilities
- Public Parking Facilities
- City Parks
- East Bay Regional Parks
- Webster St-Business Improvement Area
- Park St-Business Improvement Area
- Alameda City Boundary

5 Partner with Internet Service Providers (ISPs)

- Enhance internet availability and bandwidth for all
- Lower internet costs on the island
- Mitigate predatory pricing tactics

Develop Dig Once & Installation Standards Policies

- Protect City's infrastructure

- Proactively build-out City's infrastructure needs

- Inform private developments of their responsibilities when building new developments on Alameda

- Improve joint trenching opportunities with utility companies

Implement Centralized Transportation Management

Recommendation 7

- Enable City's ability for real-time traffic management and incident response

- Provide a dashboard for signal performance measurement and management

- Assist with emergency response

- Reduce signal maintenance effort

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Interconnect EOC & City Facilities

- Establish a central location for City services management

- Enhance IT support and maintenance across City facilities

- Reduce dependency on AMP infrastructure

- Empower cyber security implementation

Recommendation 9

Implement Transportation Data Analytics

- Enable high-resolution data collection and abiding by the city's Data Privacy policies

- Support deployment of Signal Performance Measures (SPM)

- Bring current hardware up to current standards

- Improve planning, operations and management

- Reduce delay and carbon emissions

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# Deploy Traffic Monitoring Camera Network

- Improve real-time traffic management and incident response
- Enhance incident detection and emergency response
- Enable bridge monitoring for emergency route planning
- Locations are focused at:
  – Entry/exit points to Alameda
  – Commercial corridors

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Deploy Traffic Monitoring Camera Network
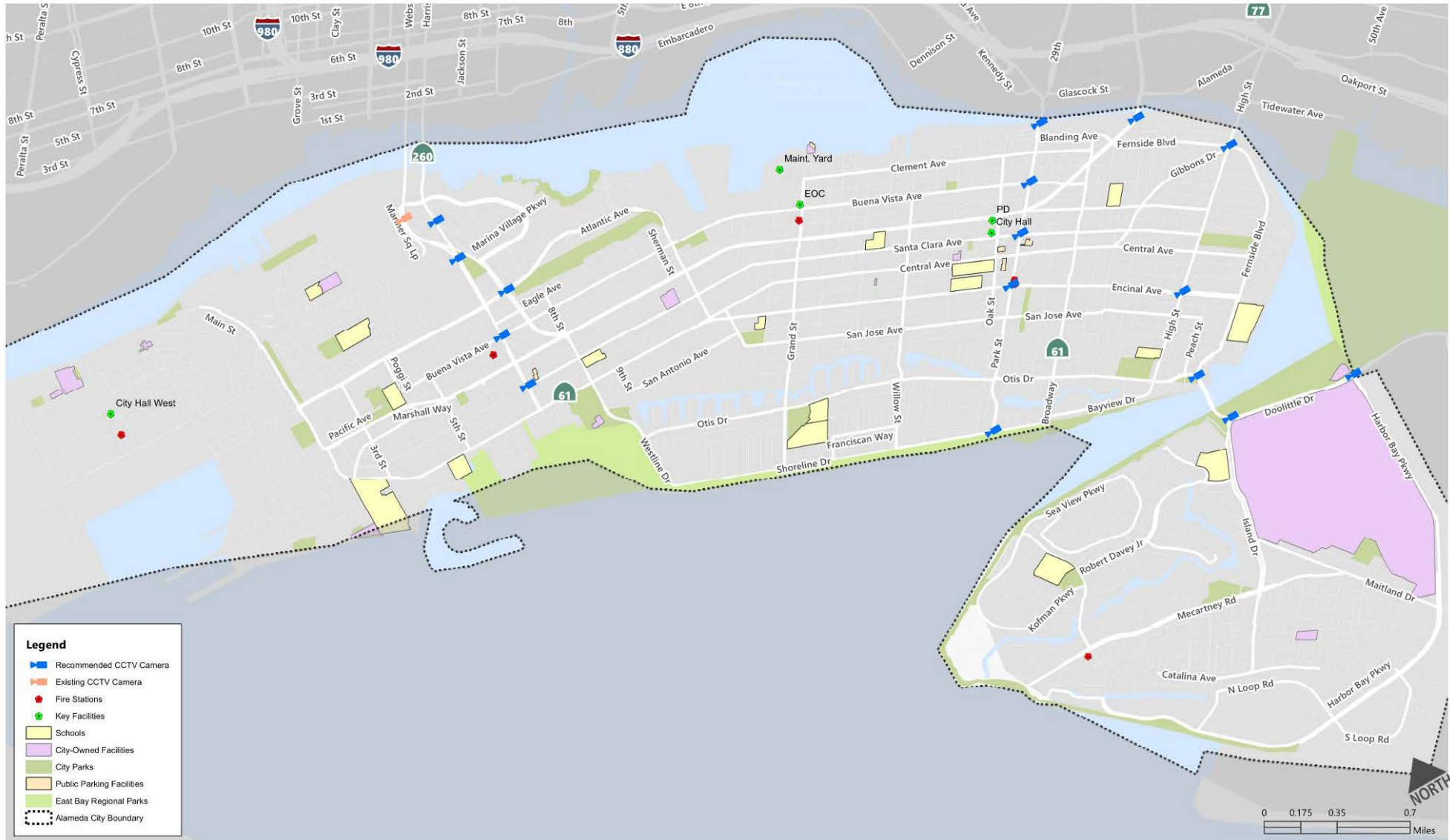
Potential Funding Sources

- Smart City Master Plan & Broadband proposed project for $6 million to be funded from the $28.68 million in American Rescue Plan Act (ARPA)
  - To build out a fiber network to improve connectivity across a core area of Alameda
  - To implement the recommendations including public Wi-Fi to business districts and equity priority community members
- Federal infrastructure bill
- State surplus monies
- Measure BB transportation sales tax monies through the Alameda County Transportation Commission
- Public-private partnerships

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