



2023 ANNUAL MEETING  
EXECUTIVE COMMITTEE  
POLICY SESSION

PRESENTED BY

ERIC C. SHEN, P.E., PTP, CPE

JANUARY 11, 2023

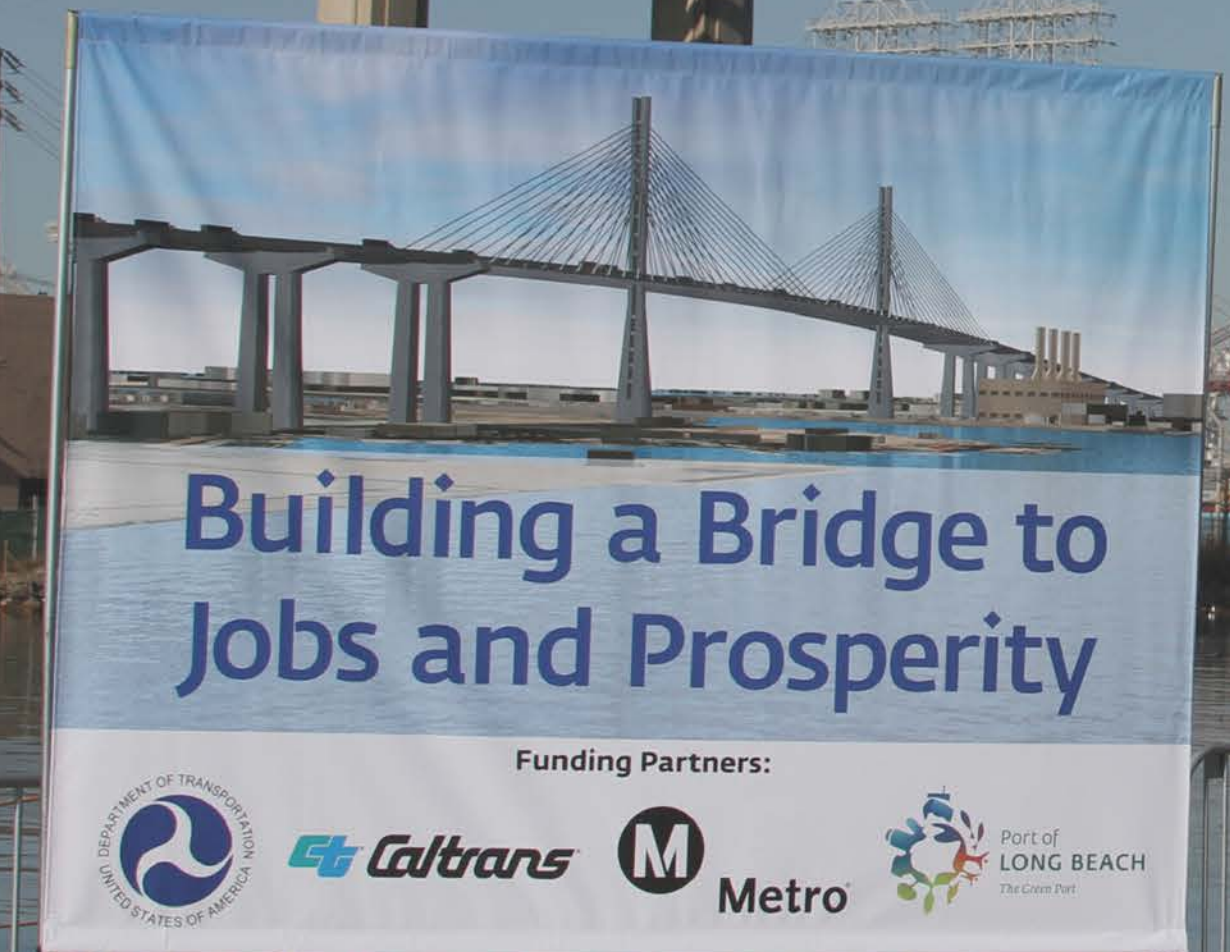
ADDITIONAL DETAILS PUBLISHED IN TR NEWS 290

# BRIDGING THE FUTURE

**CASE STUDY:  
THE NEW LONG BEACH  
BRIDGE PROJECT**

# OUTLINE

- Project Scope & Key Milestones
- Complexity Prior to Construction Phase
- Possible Breakpoints & Resolutions
- Critical Paths During Early Construction Phase
- Key Lessons Learned
- Recommendations
- Q&A



# Mega Projects, Mega Issues

Pre-Project Phase:  
*Environmental clearance, scope, mitigation, community acceptance*

Financing Options vs Delivery Methods:  
*"No free money", how and who will pay what?*

Cost Containment:  
*Fixed price, Best-value, Time-and-material?*

Workforce:  
*Recruitment, retention, compensations, etc.*

Funding:  
*"Color of money", "Strings attached", etc.*

Priorities:  
*Lead agency vs partnering agencies' objectives*

Unexpected:  
*Permits, 3rd-party utilities, ROW, local-preference, etc.*

Community Engagement:  
*How much is enough? Who speaks for the community?*

# ***PROJECT SCOPE OF THE NEW LONG BEACH BRIDGE***

- To replace the aging city-owned Gerald Desmond Bridge over federal waters
- To build an iconic cable-stay 100-year bridge to be owned by the State of California
- To minimize construction impact on port operations

Welcome to

# Foundations

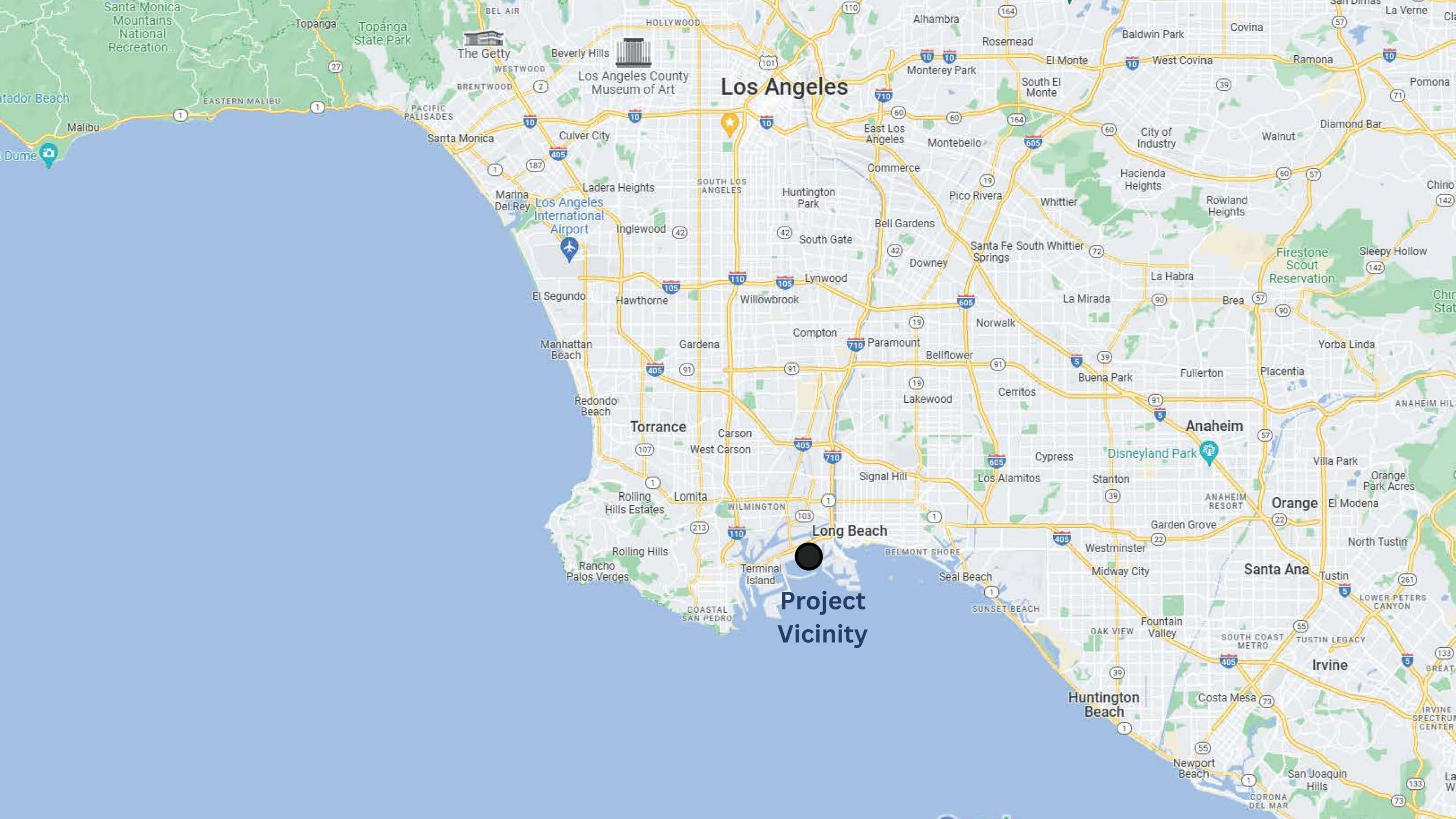
of our

# Future



Gerald Desmond Bridge  
Replacement Project

Caltrans • Metro • Port of Long Beach • US Department of Transportation



# Los Angeles

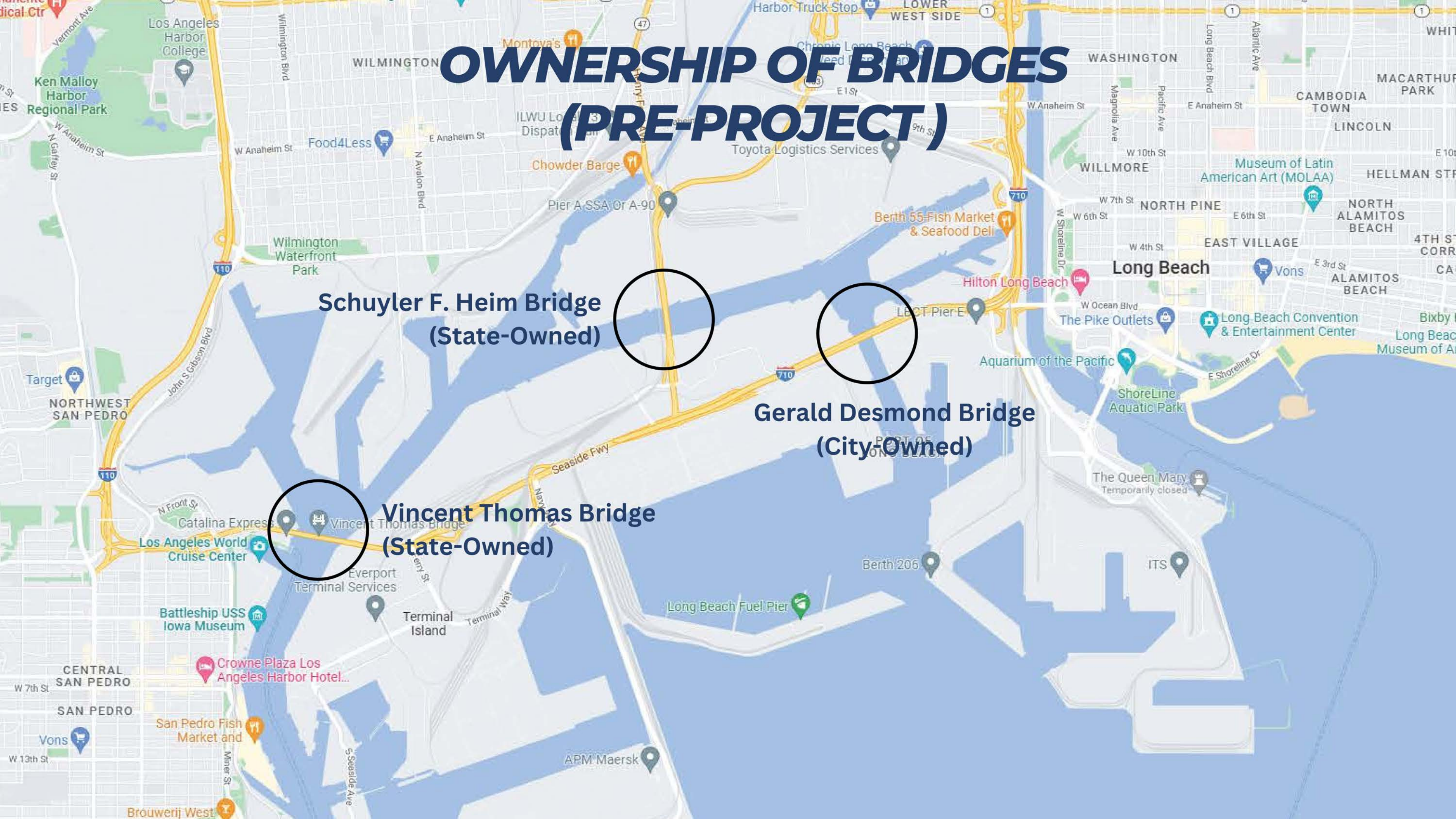
Project Vicinity

# OWNERSHIP OF BRIDGES (PRE-PROJECT)

Schuyler F. Heim Bridge  
(State-Owned)

Gerald Desmond Bridge  
(City-Owned)

Vincent Thomas Bridge  
(State-Owned)





*Photo by Eric Shen  
June 2014*

# ***KEY EVENTS & MILESTONES***

***(FINAL EIR/EIS-FUNDING, DB PROCUREMENT, FUNDING APPROVAL)***

2000-2010  
Pre-Project  
Development

**November 2010**

California Transportation  
Commission (CTC)  
approval of route  
adoption, funding, and  
D/B Method

**January 2013**

Official  
groundbreaking

**August 2010**

POLB adopted  
FINAL EIR  
Caltrans issued  
ROD

**July 2012**

POLB BOHC  
awarded \$725-mil  
contract to SFI

**October 2020**

New bridge opened  
to traffic

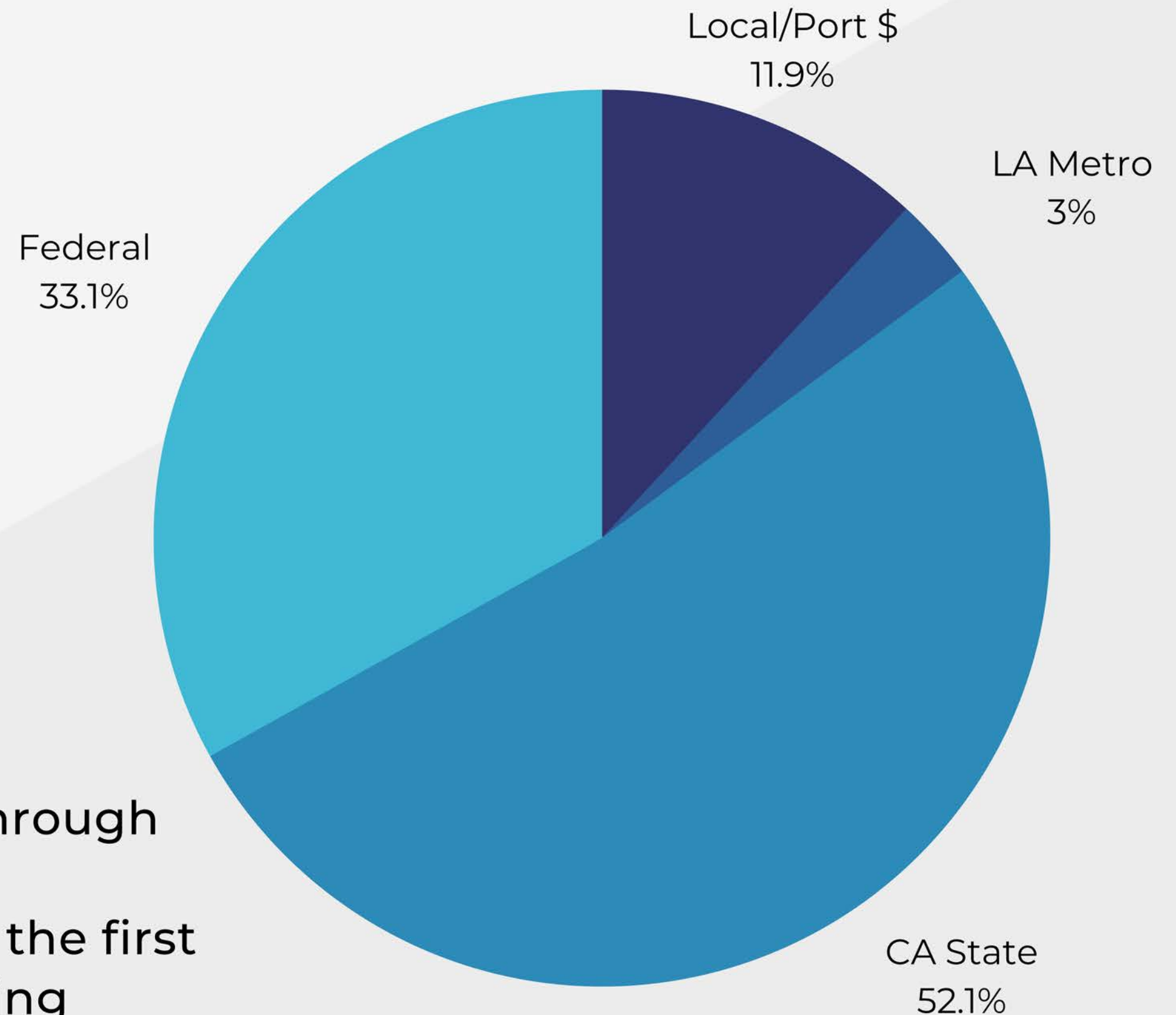


# **INITIAL FUNDING PLAN**

**(AS OF NOVEMBER 2011)**

## **\$960.20 MILLION**

- \$114.0M POLB/Local
  - \$500.0M State of California
  - \$317.6M Federal
  - \$28.6M LA Metro
- POLB agreed to fund all additional cost through completion
  - POLB agreed to pay Caltrans annually for the first 30 years of O&M expenses (actual cost being negotiated)



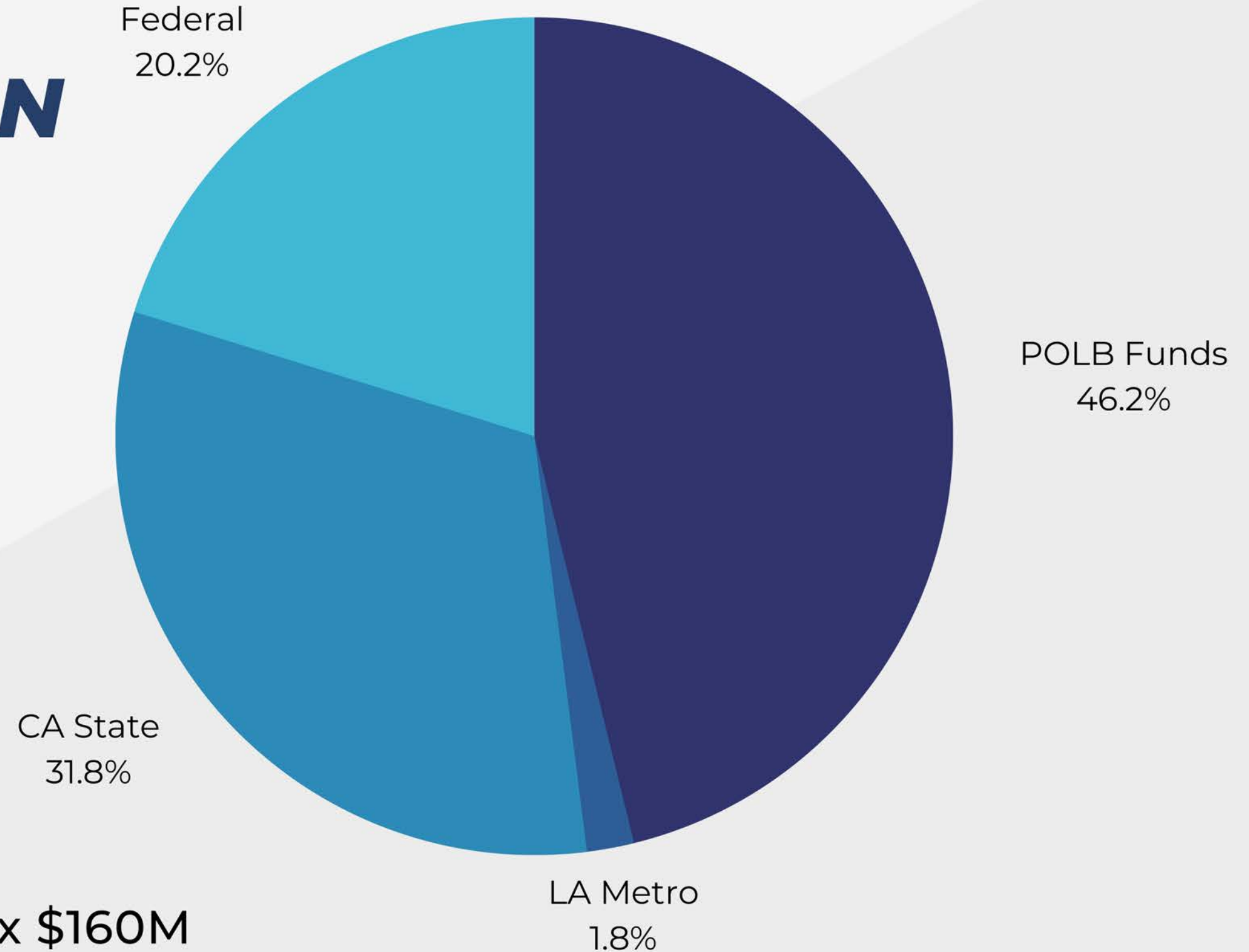
# **UPDATED FUNDING PLAN**

**(AS OF MID-2022)**

## **\$1.572 BILLION**

- \$725.8M POLB Funds
- \$500.0M State of California
- \$317.6M Federal
- \$28.6M LA Metro

Additionally, POLB will pay Caltrans appx \$160M in total over 30 years for the O&M expenses





## ***COMPLEXITY PRIOR TO CONSTRUCTION PHASE***

- Current vs. future bridge ownership
- Eligibility and funding sources
- Project delivery methods
- Local funding options
- Identify and allocate risks and associated costs



## ***MANY POSSIBLE BREAKPOINTS & RESOLUTIONS***

- Jurisdictional ownerships
- Long-term O&M costs
- D/B Delivery Method
- On-going negotiations on unresolved issues
- Procurements - "Local Hire Preference" vs "Project Labor Agreement"



## ***CRITICAL ISSUES DURING EARLY CONSTRUCTION PHASE***

- Switched from DBD to Design/Build
- Friction between Project Owner, Funding Partners, CM and Design-Builder
- Cost estimates vs cost overrun
- Schedule impact due to permits
- Community engagement



## ***KEY LESSONS LEARNED***

- Identify roles and responsibilities
- Manage certainty, constraints and risks
- Engage active Executive-Level Oversight
- Implement best practices
- Address cost escalation and develop remedies

*While there're no shortcuts in delivering mega projects, incremental improvements and commitment to partnership will make a big difference!*



## **RECOMMENDATIONS**

- Identify Project Champion and Sponsors
- Form a "TIGER TEAM"
- Decide delivery method early-on
- Be realistic about schedule and costs
- Engage permitting agencies, 3rd-party utility providers, etc.
- Assess and manage risks
- Incorporate stakeholders' Input

**Communications,  
Communications,  
Communications!**



**June 2002**

Google Earth

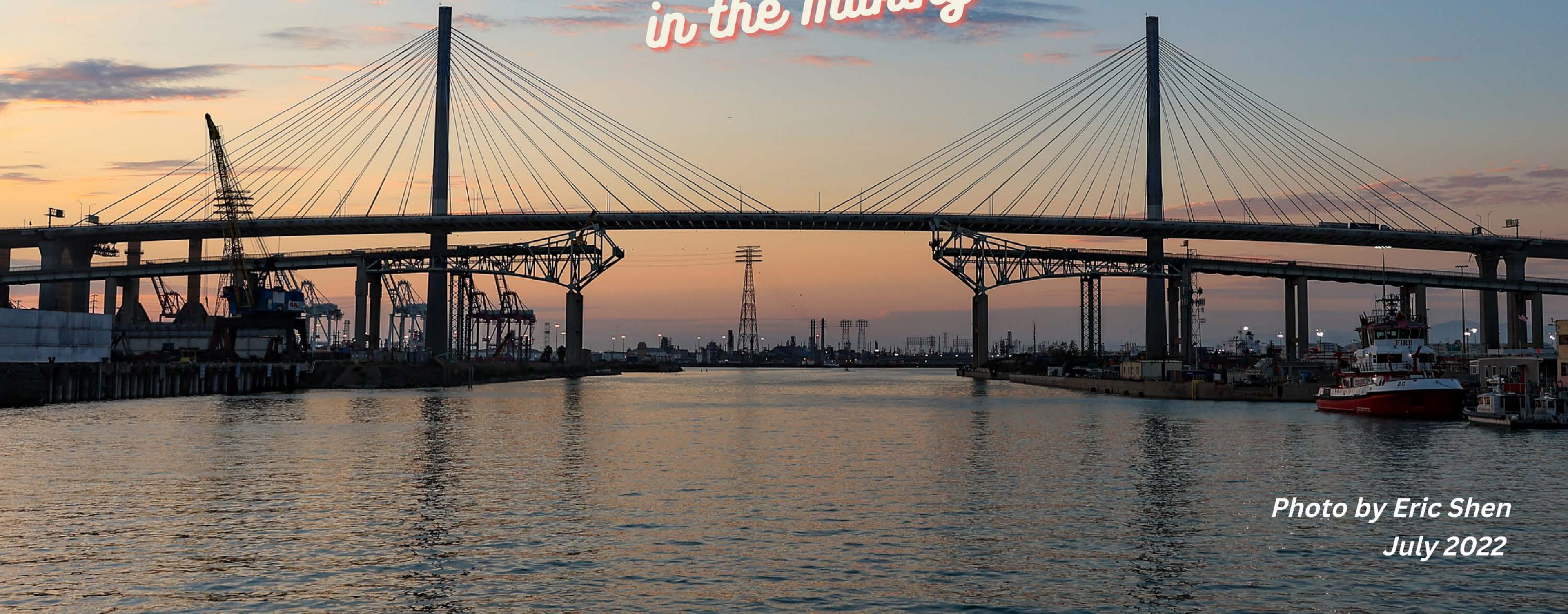
Image U.S. Geological Survey





**March 2022**

*20 years  
in the making*



*Photo by Eric Shen  
July 2022*

# ***ACKNOWLEDGEMENT***

**Lead Agency: The Port of Long Beach/City of Long Beach, CA**

## **Funding Agencies:**

- California State Transportation Agency (CalSTA)
- California State Department of Transportation (Caltrans)
- California Transportation Commission (CTC)
- Los Angeles Metro (Metro)
- Federal Highway Administration, U.S. Department of Transportation (USDOT)

## **Key Permitting Agencies:**

- US Army Corp of Engineers
- State of California Resource Agencies
- Los Angeles County

## **Advocacies**

- Southern California Trade Corridor Coalition
- Los Angeles County Bicycle Coalition
- Trade unions
- Community-based organizations

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