GERALD DESMOND BRIDGE

DEMOLITION PROJECT

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Joel Aguilar, PE, SE – Engineering Design Division
Wayne Smith, PE – Program Management Division
Brian R. Wilson, PE, SE, CCM – Construction Management Division
WORLD'S 9TH BUSIEST PORT COMPLEX

PORT OF LOS ANGELES

PORT OF LONG BEACH
15% of U.S. Imports Cross by Truck

GERALD DESMOND BRIDGE
FUNCTIONALLY OBSOLETE

Lane Patterns and Heavy Volume of Traffic
$1.5 BILLION BRIDGE REPLACEMENT TO EVERYWHERE
NEW BRIDGE FOR NEW ERA
MAIN SPAN CONSTRUCTION
40 of 80 CABLES INSTALLED
FINAL APPROACH POUR
Poly Roadway Surface
PORT ACCESS UNDERCROSSING
DESIGN AND PLANNING PHASE CHALLENGES
CHALLENGES IN PLANNING

- Federal Aid Impacts on Pre-Qualification
- Limited number of similar projects to reference
- Limited As-Builts
CHALLENGES IN DESIGN

- Limited access to bridge underside
- Restrictions on channel closure durations
- Terminal on South Side
- Limited horizontal clearance
- Oil field infrastructure conflicts coordination
CONSTRUCTION CONTRACT
SCHEDULE MILESTONES

100% Design Package Submittal: September 2019

Issue NTP: September 2020

Replacement Bridge Substantial Completion: June 2020

Advertisement Date: March 2020

Final Design Package Submittal: January 2020

September 2020
DESIGN PHASE CHALLENGES
Alternatives Considered
Stick By Stick
Lower Suspended Span

MAIN SPAN
CANTILEVER ARMS

Alternatives Considered

Panel by Panel using Barge Mounted Crane

Stick by Stick

Countless Considerations
20

ANCHOR ARMS

Alternatives Considered

Lower Entire Anchor Arm

Stick By Stick

ANCHOR ARMS
DESIGN ISSUES:
LACK OF AS-BUILTS
DEMOLITION ADJACENT TO ONE OF THE BUSIEST TERMINALS
ESTABLISHING CONSTRAINTS TO MAINTAIN OPERATIONS

MAINTAIN TRAFFIC

NEW GDB

HAZMAT

VESSEL TRAFFIC

ACCESS
Major bridge structure demolition with
Public Works contract
Prequalification and Federal Funding
Performance Specification
CONTRACT STRATEGY

- Pre-bid Outreach and Site Visits
- Dismantling Submittal Review
- Requirement
- Engineer and Independent Engineer
CONSTRUCTION PHASE RISKS AND CONCERNS

CONSTRUCTION PHASE RISKS

AND CONCERNS

CONSTRUCTION PHASE RISKS
ACCESS AND TRAFFIC RISKS (WEST END)

- Permanent and detour roads
- Pier S and T lanes
- Pacific rail line
- Emergency vehicle access
- Pacific rail line
- Pier S and T lanes
- Permanent and detour roads
Detour Roads:
- Middle Harbor north gate
- Pier D street detour
- Emergency vehicle access

ACCESS AND TRAFFIC RISKS (EAST END)
ACCESS AND TRAFFIC RISKS

• Horizontal distance as little as 12 feet
• Distance as little as 5' at bike path
• Proximity to new bridge

Extremely limited work space
• Limits access to work, size and types of equipment that can be used.
ACCESS AND TRAFFIC RISKS

- Water Traffic
- Small vessels
- Recreational users
- Large container vessels
- Emergency access

Risks vary per demolition method.
UTILITIES

- Active and abandoned oil wells
- Oil Facilities
- Other Utilities
- Protection
- Idling
- Abandoning
PORT TENANTS AND OTHER STAKEHOLDERS
SAFETY RISKS

• Engineering Concerns
• Sequencing of Demolition
• Load Reversals
• Design Disagreements
• Design Errors
• Design of Shoring or Members
• Overstress of Existing Members
• Oversite of Existing Shoring or Demolition
• Engineering Concerns
SAFETY RISKS

Existing conditions

- Lack of complete as-built
- Deterioration of existing members
SAFETY RISKS

FALLING HAZARDS

- General Risks and Protections
- Operations during dismantling
HAZMAT

- Unknowns
- Groundwater
- Regulatory requirements
- Lead based paint
RECYCLING AND DISPOSAL RISKS

STEEL

- Access to local recycling facilities
- Offsite areas for dismantling
- Transporting materials by barge (longshore considerations)

STEEL
CONCRETE

• On-Site Crushing
• Off-Site Disposal and Processing
• Availability and Capacity of POLB Rubble Site

Recycling and Disposal Risks

Concrete
Meeting Local, State, and Federal regulatory requirements

- Wildlife protection
- Disposal
- Hazmat
- Equipment

Meeting Local, State, and Federal regulatory requirements

ENVIRONMENTAL
CONSTRUCTION MANAGEMENT SERVICES PROCUREMENT SCHEDULE

- Advertise: Jan 2020
- Proposals Due: Mar 2020
- Interviews: April 2020
- Award: June 2020
- Execution: July 2020
- Construction NTP: Sep 2020
- Mar 2020
- Apr 2020
- Jun 2020
- Jul 2020
- Sep 2020
THANK YOU!
CONTACTS

Joel Aguilar, Design Mgr, (562) 283-7882, Joel.Aguilar@polb.com

Wayne Smith, Program Mgr, (562) 283-7378, Wayne.smith@polb.com

Brian Wilson, Construction Mgr, (562) 283-7264, Brian.wilson@polb.com

Darrin Lambrigger, Director CMD, (562) 283-7205, Darrin.Lambrigger@polb.com