

CIP 623 MUNICIPAL PIER STRUCTURAL INSPECTION AND EVALUATION, REPAIR, AND REQUEST FOR DIRECTION REGARDING POSSIBLE REPLACEMENT

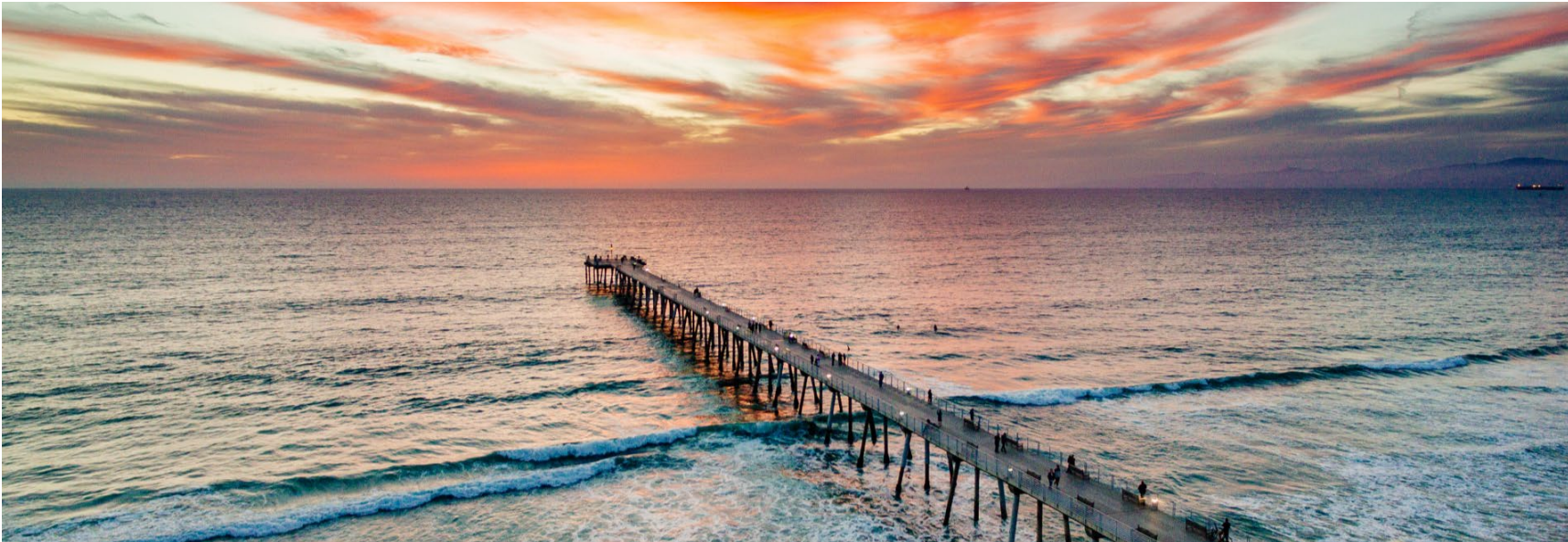


MARCH 24, 2026

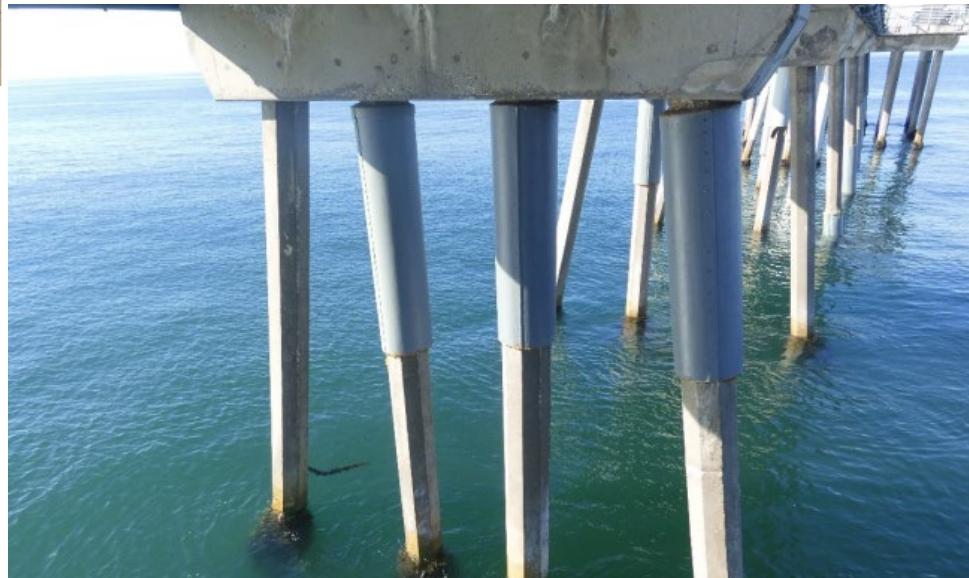
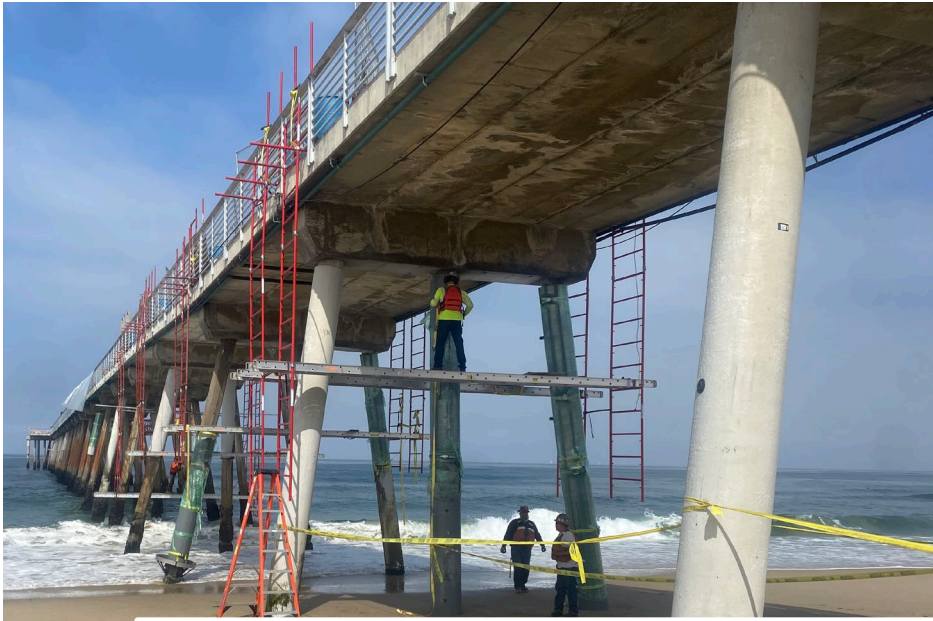
Background

Overview

- Comprehensive structural assessment complete
- Cost – benefits analysis to guide decision making
- Current design effort
- Recommendations



Background



- Pier Constructed in 1965
- Various repairs and renovations since – last major repair CIP 629 in 2023-2024 (\$3.1M) per 2017 inspection
- New inspection (CIP 623) initiated September 2024.

Background

2024 Inspections

- Above and below water, ambient vibration



Background

- May 13, 2025 CIP Study Session (preliminary update)
- \$6.7M in repairs needed over next 5 years.
 - Only \$3.7M available for FY 25-26.
 - Another \$3M needed in 3 to 5 years



Discussion

2026 Structural Assessment Findings

- Completed January 2026
- Detailed inspection observations, structural significance, repair and maintenance recommendations, and cost estimates for repairs.
- Construction repair programming to establish budgets and timelines to maintain and repair the Pier for the next 45 years through the end of the Pier's serviceable lifespan.



Discussion

2026 Structural Assessment Findings

- The **Pier is currently in poor to serious condition.**
- Load rating remains reduced to 5-ton versus 10-ton design.
- Reinspection and repairs will be required at least every 5 years.



Discussion

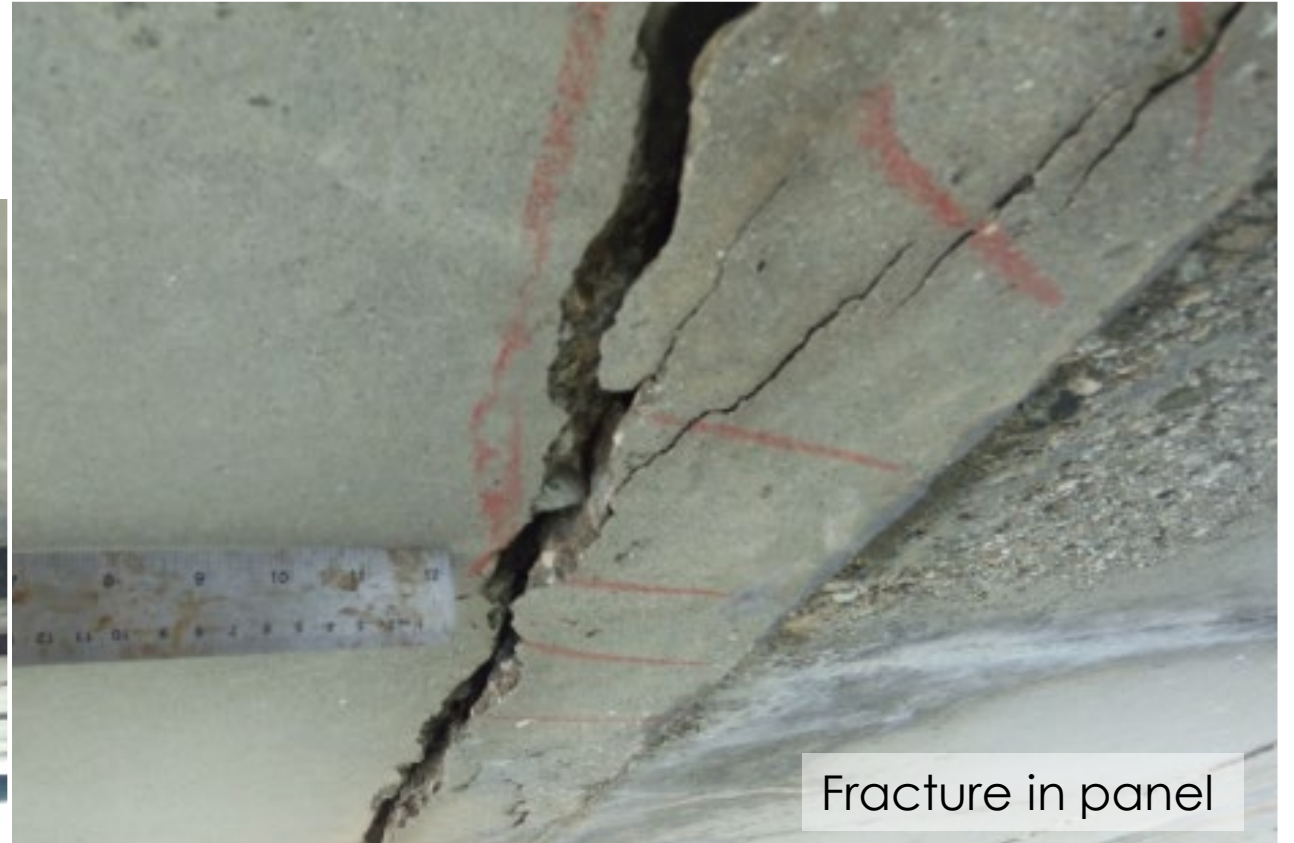
2026 Structural Assessment Findings



Discussion

2026 Structural Assessment Findings

Internal fracture, delamination, and vertical deflection in panel



Fracture in panel

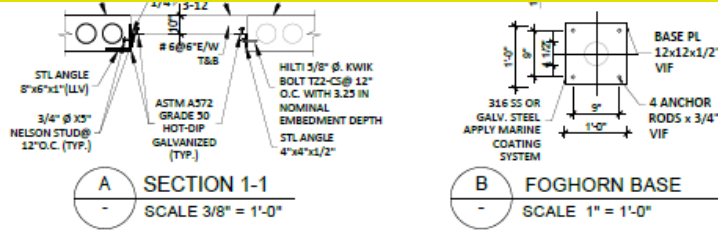
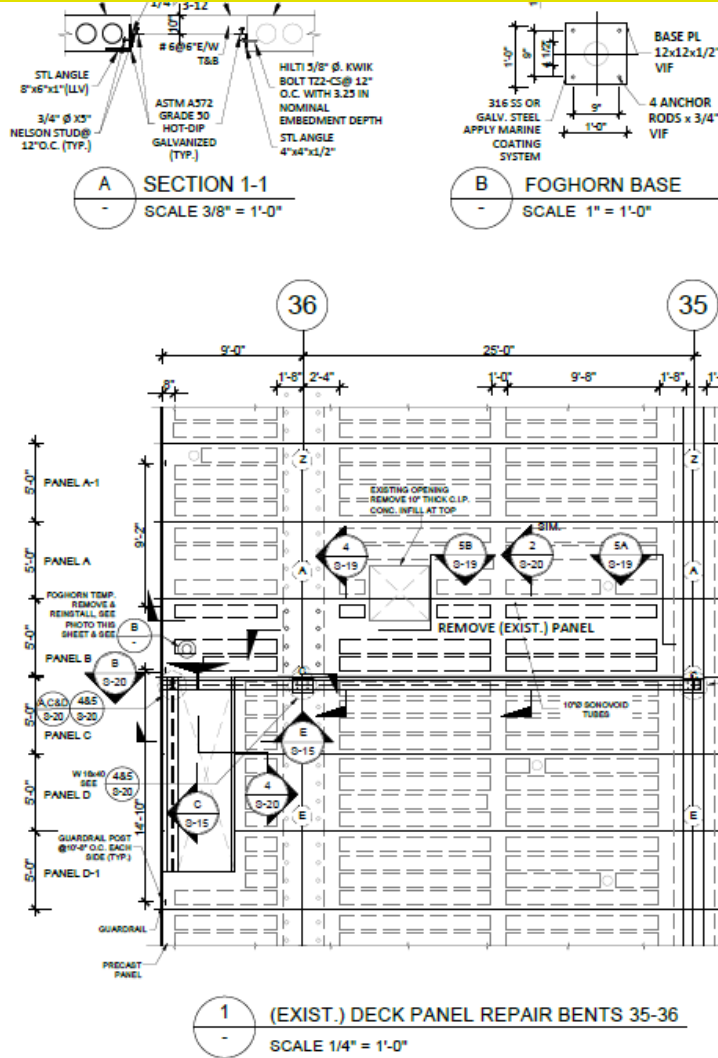
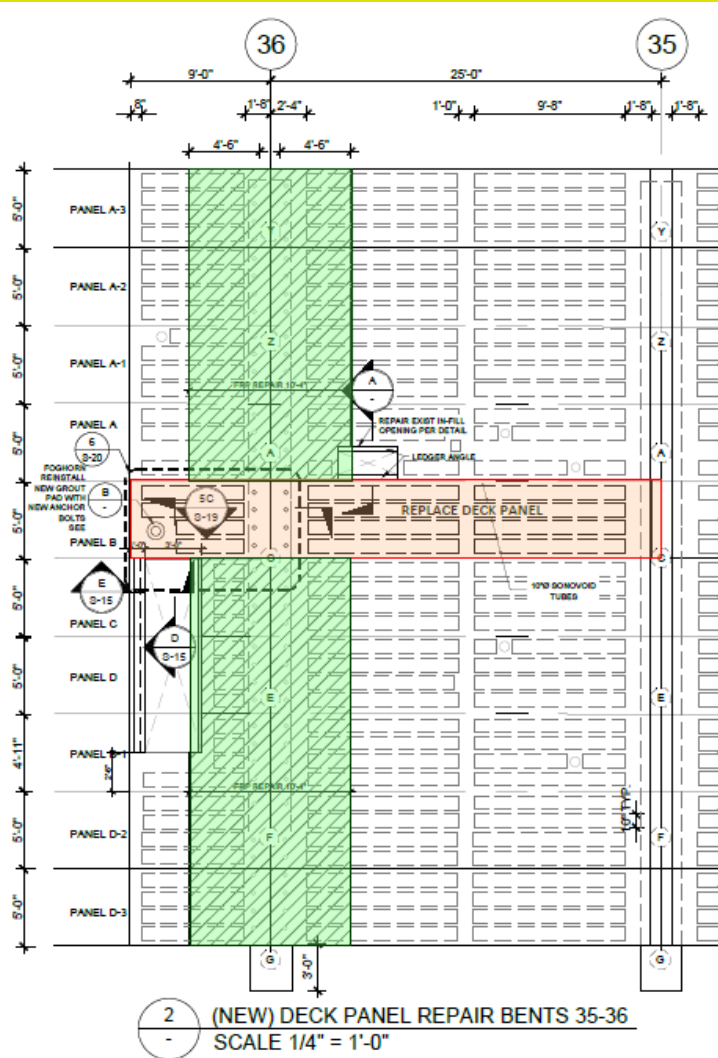
Discussion

2026 Structural Assessment Findings

1. Near-Term – High Priority (required repairs by 2026)

- Replace 4 concrete deck panels.
- Strengthening 14 deck panels.
- Crack injection & spall repair ~35% of deck panel soffits.
- Estimated Construction Cost: \$3.25M (2025 dollars); design and permitting is well underway as part of CIP 623.

Sample High Priority Repair/Replacement



- 1 GUARDRAIL POST BRACKET AT TOP OF REPAIR AREA- P.I.P. (TYP.)
 - 2 THE CONTRACTOR SHALL VERIFY ALL EXISTING STRUCTURAL DIMENSIONS RELATING TO THEIR WORK. THE CONTRACTOR SHALL LOCATE, CONFIRM, AND MARK CRACK REPAIR LENGTHS AND SPALL REPAIR AREAS FOR APPROVAL BY THE ENGINEER PRIOR TO BEGINNING CRACK AND SPALL REPAIRS.
 - 3 MISSING CLAMP FOR ELEC. LINE TO BE FIXED.
 - 4 W. P. SPLICE/PIPE LENGTH TO BE FIXED.
 - 5 (EXIST.) CRATER TO BE REPAIRED W/PMPCM
- LEGEND:
- WATER LINE P.I.P. (TYP.)
 - ELEC. LINE P.I.P. (TYP.)
 - EPOXY CRACK INJECTION REPAIR 0.02" WIDE x 3' LONGS, SEE 1/8-24
 - FRP LAMINATE REPAIR, SEE 1/8-28
 - SOFFIT SPALL REPAIR, SEE 2/8-27
 - DEEP OPEN SPALL REPAIR, SEE 1/8-27
 - PMPCM PATCH, SEE 1/8-26
 - REMOVE & REPLACE DECK PANEL, "IN KIND", SEE 182/8-12, 182/8-14, & 182/8-16
 - INSTALL 3/8" DIA. LOCITITE TYFO SCH ANCHORS (OR ENGINEER-APPROVED EQUAL), SPACED AT 6" O.C. WITH 6" SPALL WIDTH, 12" SPALL LENGTH, AND 4" EMBEDMENT (TYP.)
- N.C. NOT IN CONTRACT
V.I.F. VERIFY IN FIELD
P.I.P. PROTECT IN PLACE
AVG. AVERAGE
ELEC. ELECTRICAL
W.P. WATER PIPE
PMPCM POLYMER MODIFIED PORTLAND CEMENT MORTAR

PLANS PREPARED BY:

PROJECT NO. 20250045.00
SCALE: 1/4" = 1'-0"
DATE: 02/24/25
DRAWN BY: CHRISTOPHER BENJAMIN

JMC
CIVIL-STRUCTURAL ENGINEERING

2A (CORPORATE):
411 S. BALDWIN RD.,
STE. 301, SALT LAKE CITY, UT 84119
P = (801) 541-0990

ORANGE COUNTY:
6850 ANCHOR JRN. 528 260,
BREA, CA 92620
P = (714) 448-1882
WWW.JMC-S.COM

REVISIONS		
NO.	DESCRIPTION	DATE

DIG ALERT
811
Know what's below. Call before you dig.

Hb
PUBLIC WORKS
1215 VALLEY DRIVE
HERMOSA BEACH, CA 92644
(949) 318-0214

REVIEWED BY:
SENIOR ENGINEER: // DATE: //
REVIEWED BY: JOHN OSOULI, P.E. // DATE: //

REVIEWED BY: BRANDON ARAUJO, P.E. // DATE: //
APPROVED BY: SAAD MALIM, P.E. // DATE: //

CIP 623
MUNICIPAL PIER STRUCTURAL REPAIRS

STRUCTURAL PLAN 1
DECK PANEL REPAIR DETAILS
BENTS 35-36

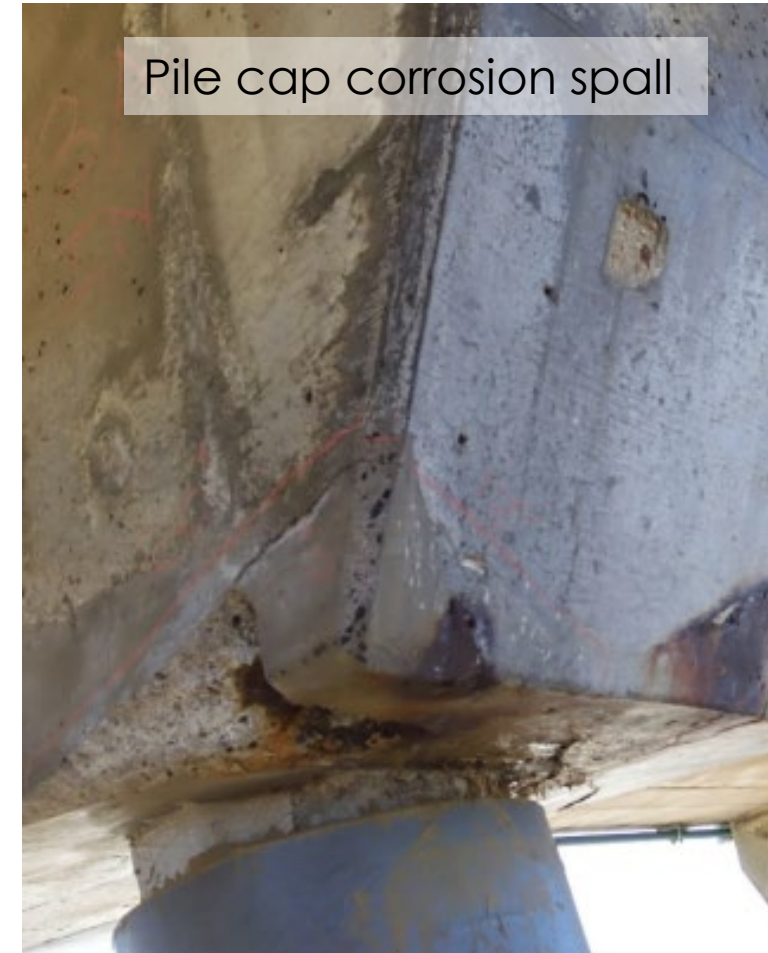
PLAN NO.
S-16
SHT. 16 OF 33

Discussion

2026 Structural Assessment Findings

2. Near-Term – Medium Priority (required repairs in 3-5 years)

- Concrete Pile Cap crack injection & spall repair ~80% of pile caps.
- Concrete Deck Panels crack injection & spall repair to ~45% of deck panel soffits and 90% of deck panel tops.
- Estimated Construction Cost: \$3.22M in 2025 dollars (or \$3.92M in 2030 dollars).



Discussion

2026 Structural Assessment Findings

3. Mid-Term (required repairs in 6 - 10 years)

- Concrete pile spall repairs & fiberglass jacket repairs to approximately 6 piles.
- Concrete pile caps spall repairs anticipated to be identified in future inspection efforts.
- Estimated Construction Cost: \$4.38M in 2025 dollars (or \$6.49M in 2035 dollars).



Discussion

2026 Structural Assessment Findings

4. Long-Term (required repair beyond 10 years)

- Additional repairs to pile repairs, pile cap repairs, and deck panels anticipated as **deterioration continues to accelerate**.
- The existing Pier facility is more than 60 years old and nearing the end of its service life.
- Concrete structures in marine environment typically require concrete corrosion repairs on 5-year cycles after they reach 50-years of age.
- **The volume and cost of these repairs accelerate until the end of the facility's useful life.**

Discussion

2026 Cost – Benefit Analysis

- Assist in identifying most cost-efficient timing for potential replacement with a new structure.
- Analysis compares significant capital outlay cost of a new facility with projected escalating cost of repairs as the Pier nears the end of its service life.
- Benefit of a new facility includes very low to no maintenance costs for the first ~15 to 20 years.



Discussion

2026 Cost – Benefit Analysis

Projected Repair Costs to Existing Pier (2025 – 2070)

Repair Year	Estimated Repair Cost	Cumulative Cost
2025-2027	\$3,511,000	\$3,511,000
2030	\$3,916,000	\$7,427,000
2035	\$6,490,000	\$13,917,000
2040	\$9,459,000	\$23,376,000
2045	\$12,641,000	\$36,017,000
2050	\$17,654,000	\$53,671,000
2055	\$23,706,000	\$77,377,000
2060	\$31,676,000	\$109,053,000
2065	\$43,512,000	\$152,565,000
2070	\$57,670,000	\$210,235,000

Notes:

1. 2025-2027 repair year is the current project under design (CIP 623)
2. Costs adjusted for inflation assuming 4% annual.



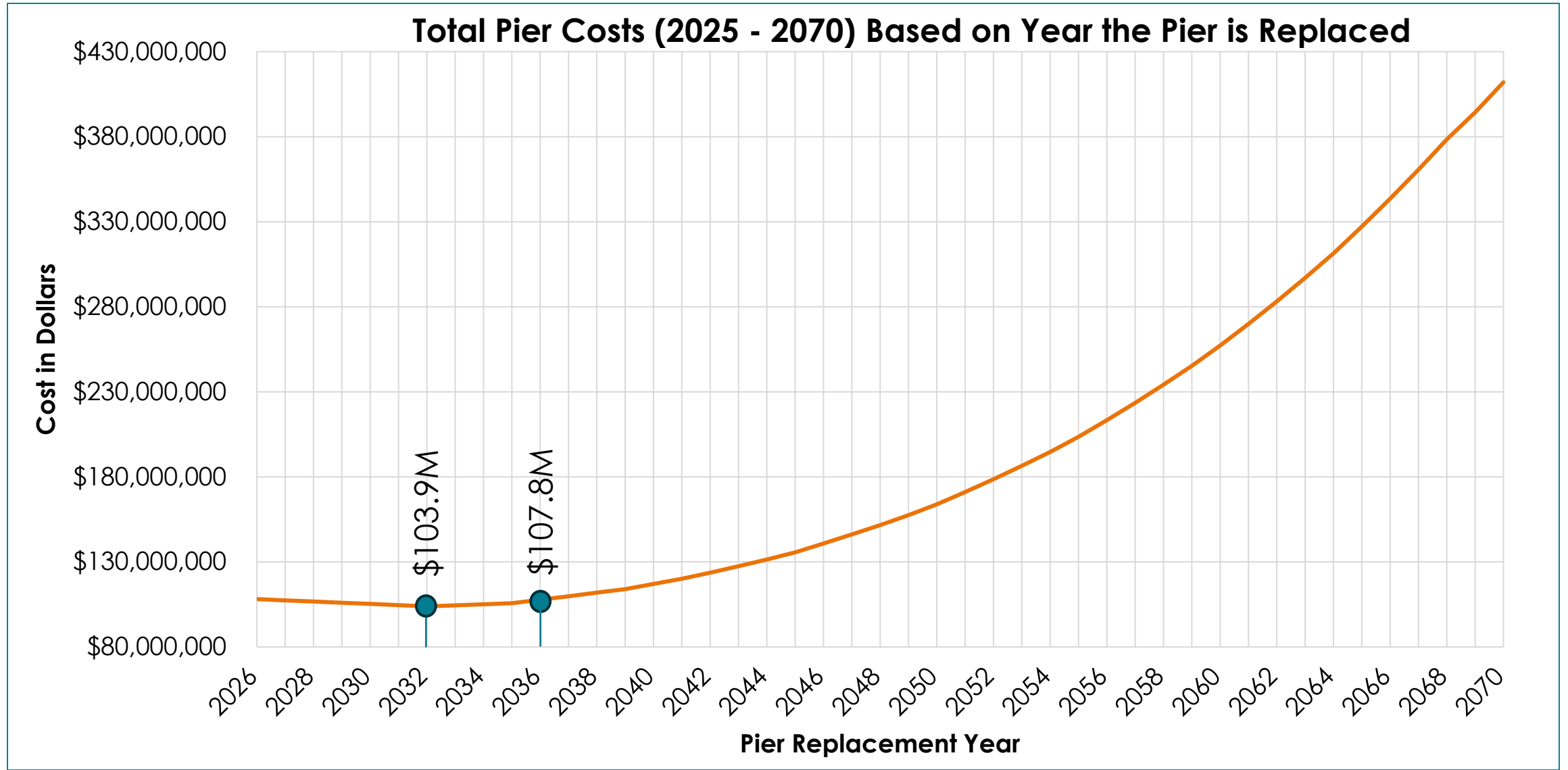
Discussion

2026 Cost – Benefit Analysis

- Cumulative projected cost of more than \$210M over the next 44 years to maintain the existing structure.
- Cost for a new replacement Pier is anticipated to be about \$44.5M (in 2025 dollars)
- Replacement would be a lengthy process: 6 to 8 years before construction could begin.

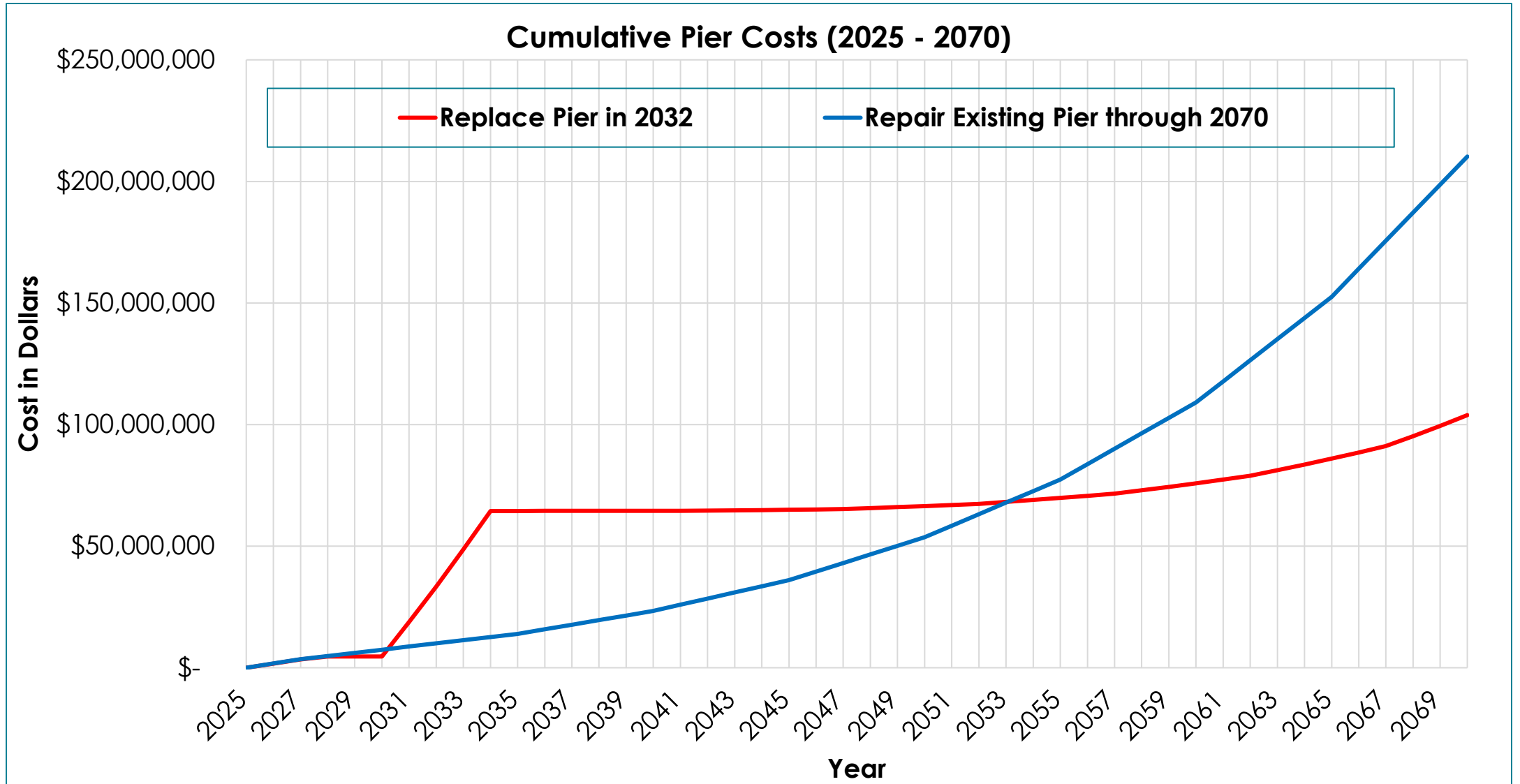
Discussion

2026 Cost – Benefit Analysis



Discussion

2026 Cost – Benefit Analysis



Discussion

2026 Structural Assessment Recommendations

- Cease further repairs to existing Pier after the 2027 project is complete.
- Replacement in 2032 would save the City \$107M by 2070.
- Planning and environmental review would need to begin by end of 2026 to start construction in 2032.
- Continued inspection and repair would be required if not replaced in 2032.
- Replacement costs begin to rise substantially after 2036.

Discussion

Current Project – CIP 623

- High priority improvements must be completed within 1 to 2 years.
- Final Design: 75% complete – approaching final
- Permitting:
 - Water Board and US Army Corps of Engineers – complete
 - Coastal Commission – pending
- Schedule: Target start of construction October 2026
- Funding: \$3.7M in FY 25-26 CIP – grant funding unavailable



Discussion

Current Project – CIP 623

Surfer's Walk of Fame Plaques

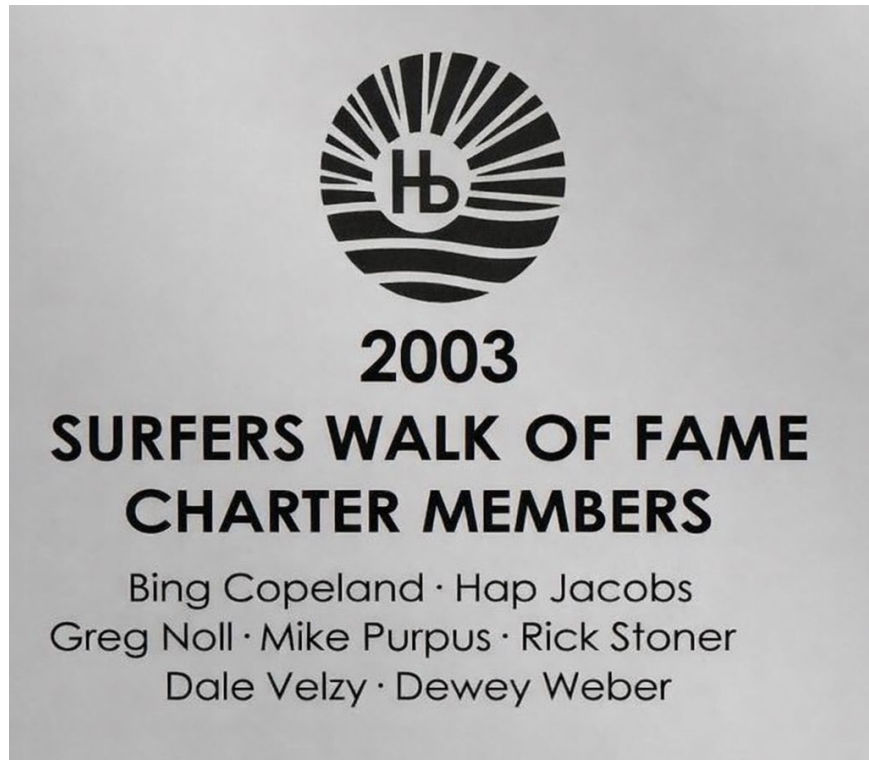
- 60 plaques honoring surfing legends inducted from 2003 - 2019
- Program on hold since 2020.
- Original installation damaged concrete panel
- Project will remove and fill with concrete.



Discussion

Current Project – CIP 623

- Surfer's Walk of Fame Plaques
- Recommendation to replace with railing mounted system.



***Sample plate layout
Stainless steel***



***Sample mounting
locations***

Discussion

Key Considerations

1. Completion of the current round of High Priority Repairs to the Pier as part of CIP 623.

Project must be completed within 1 to 2 years to avoid further weight restrictions, potential closure(s).

2. Replacement of Surfer's Walk of Fame plaques as part of CIP 623.

CIP 623 can replace plaques with low-cost option to allow program to continue. Other options would advance as a separate effort.

Discussion

Key Considerations

3. Consideration of replacement versus continued repair
 - Continue repairing the existing Pier will require funding increasingly costly repairs while deterioration accelerates.
 - Council direction on timing if/when to start planning and Environmental process (lengthy 6-8 years before start of construction.)
 - Optimal time to replace is 2032 saving the City over \$100M (required decision by end of 2026).
 - Deferring decision to replace in 2036 will require funding \$4M in FY 27-28 for repairs in 2030.



Recommendation

1. Determine that the high priority structural repairs and, removal, and replacement of the Surfer's Walk of Fame Plaques Project (Project) as part of CIP 623 is exempt from California Environmental Quality Act (CEQA) pursuant to Section 15301 (Existing Facilities);
2. Direct staff to file a Notice of Exemption within 5 business days;
3. Direct staff to complete the high priority repairs to the Municipal Pier ("Pier") as part of CIP Project 623;
4. Direct staff to replace the Surfer's Walk of Fame plaques with the railing-mounted option as part of CIP 623; and
5. Provide staff with direction on whether to begin the planning and environmental review process for a proposed replacement project.