



# Venetian Causeway

City of Miami Beach Historic Preservation Board

**HPB25-0681**

March 17th, 2026

PRESENTED BY

MIAMI-DADE COUNTY DEPARTMENT OF  
TRANSPORTATION AND PUBLIC WORKS (DTPW)

# Introduction

**Presenter:**

***Gabriel Delgado, P.E., Project Manager, Highway Bridge Engineering***

# Project Scope



- Replace Bridges 2 through 12 within the Causeway
- Bridges 2 through 9, 11 and 12 are fixed bridges
- Bridge 10 is movable
- Provide wider typical section meeting current criteria
- Design takes historic designation into account
- Raise bridge vertical alignments to improve resilience to coastal flooding

# Original Bridge History



**Aerial View of Venetian and County Causeways c. 1930.**

Credit: Helen Muir Florida Collection. Special Collections and Archives. Miami-Dade Public Library System.

- Original Causeway built in 1926 with an anticipated design life of 50 years.
- 12 bridges: 10 fixed span bridges and 2 bascule leaf span bridges
- The bridges are designated as historic landmarks by the City of Miami and City of Miami Beach
- Endured numerous hurricanes since constructed
- The bridges are moderately to severely deteriorated and have been repaired numerous times
- Due to new design codes, the bridges do not meet current design and safety requirements

# Existing Bridge Condition

Bridge No.	FDOT Bridge No.	2024 Sufficiency Rating	Deficiency
1	874459	53.9	NA
2	874460	31.5	Structurally Deficient
3	874461	29	Structurally Deficient
4	874463	30.3	Structurally Deficient
5	874465	29	Structurally Deficient
6	874466	31.5	Structurally Deficient
7	874471	29	Structurally Deficient
8	874472	29	Structurally Deficient
9	874473	29	Structurally Deficient
10	874474	25	Structurally Deficient
11	874477	14	Structurally Deficient
12	874481	25.1	Structurally Deficient

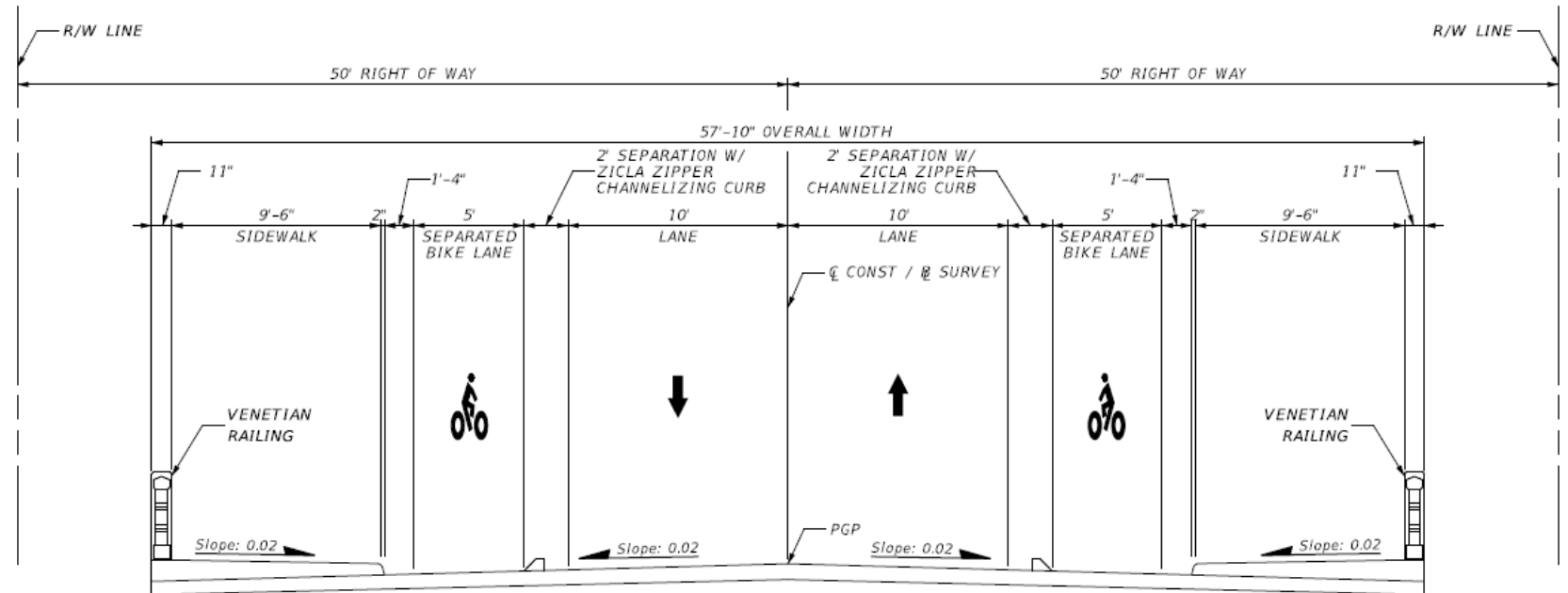
Sufficiency ratings from the 2024 FDOT Bridge Management System Inspection Reports

- All bridges have ratings below 50 except Bridge 1 (874459).
- Bridges 2-12 are Structurally Deficient (SD). Bridges are considered to be SD where:
  - significant load carrying elements are found to be in poor or worse condition due to deterioration and/or damage or,
  - the adequacy of the waterway opening provided by the bridge is determined to be extremely insufficient to the point of causing intolerable traffic interruptions



# New Typical Section

- In each direction of travel:
  - 9' sidewalks
  - 7' separated bike lanes
    - channelizing curb
  - 10' travel lanes
- Meet the latest safety and design criteria for pedestrians, bicyclists, and vehicles.
  - FDOT Florida Design Manual, January 2024



# Proposed Fixed Bridges

- The proposed bridges will mimic the arched beams, railings, and light poles of the existing bridge.
- Raised to meet current standards



# Proposed Movable Bridge

- Bridge 10:
  - Movable Span
  - Double Leaf Bascule Bridge
  - Will mimic the historical design for tender house
  - Raised to meet current standards



# Original Light Poles



Photo from the Historical Museum of Miami

# Existing Light Poles

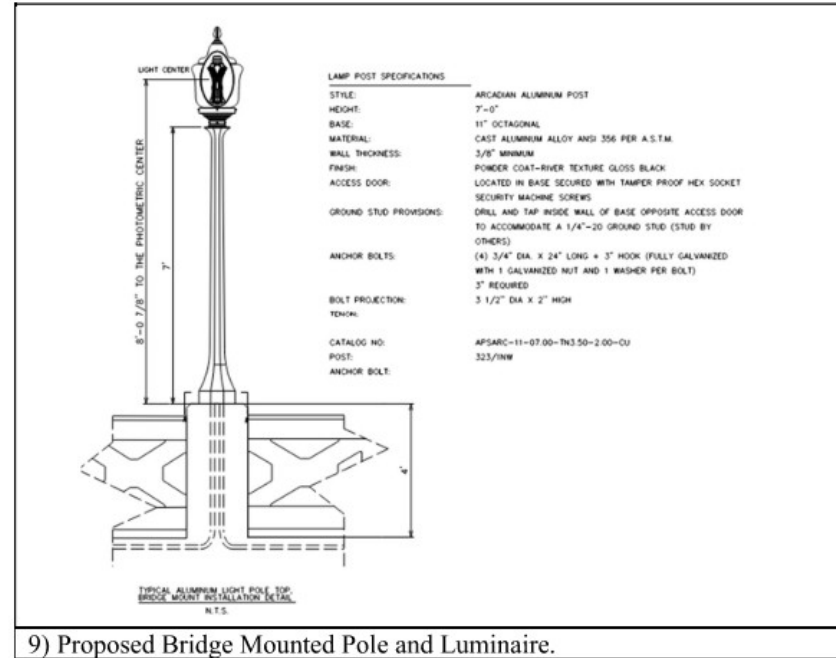
- The existing light poles and fixtures are a replicate of the historic light poles and were installed as part of the 1996 to 1999 rehabilitation.
- The light poles along the roadway are 13-ft. high and feature an acorn style head with a frosted clear polycarbonate material.



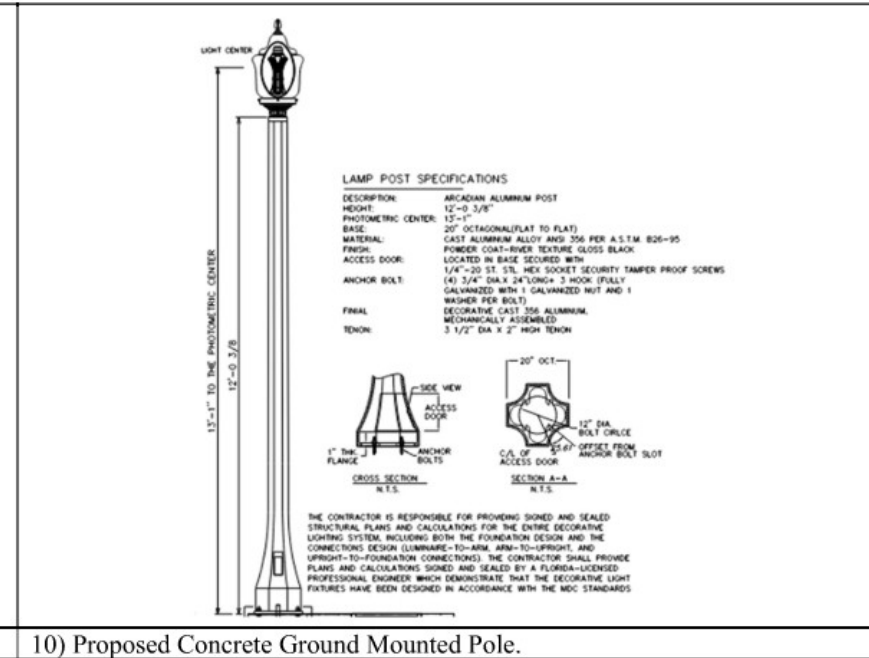
Existing Light Poles on Bridge 11

# Proposed Light Poles

- The proposed light poles will replace the current light poles and fixtures and will acknowledge the appearance of the original historic light fixtures and poles.



9) Proposed Bridge Mounted Pole and Luminaire.



10) Proposed Concrete Ground Mounted Pole.

# Original Railing



Historic Photo of Bridge 12 c. 1930s



Historic Photo of Railing c. 1930s

# Existing Railing

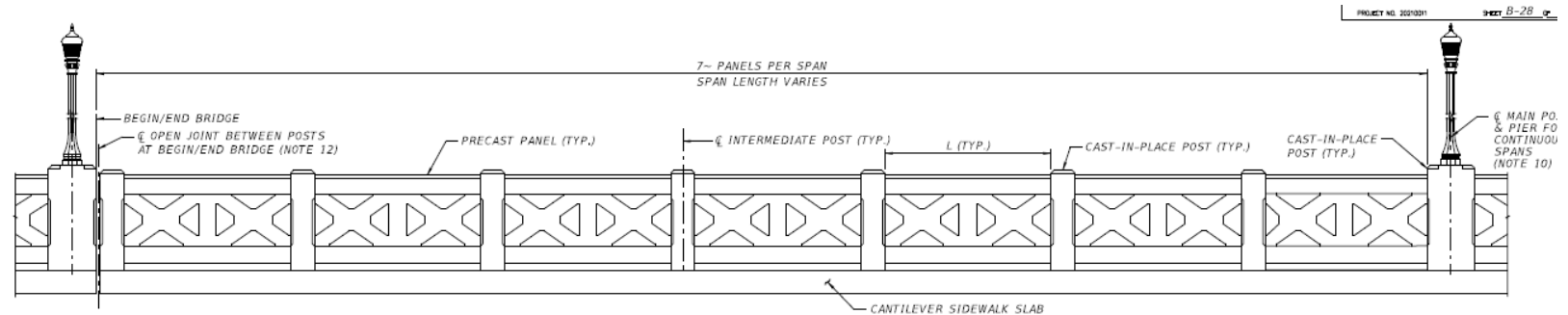
- During the 1996 to 1999 Rehabilitation Project, the original railings were replaced with heavier railings designed for vehicular impact consistent with the AASHTO requirements at the time, but not the geometric sphere requirements and the requirement for the posts to be setback behind the railing.
- The existing railings maintain the historic appearance of the causeway.



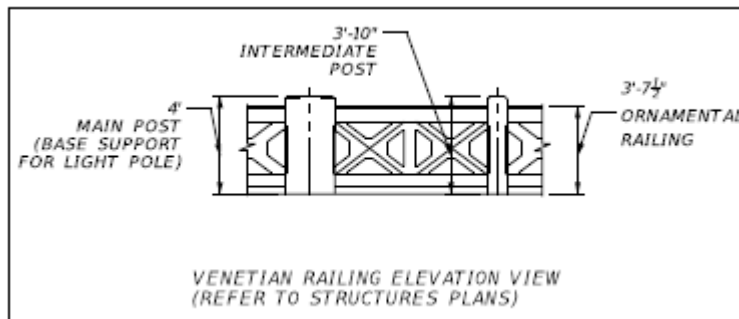
Railing on Bridge 9 from April 21, 2017

# Proposed Railing

- The proposed railings matches exactly the existing railings.
- The railing plans follow the same design that was used during the 1996 replacement.



T1 – Venetian Railing



# Secondary Aesthetics



- Other Elements
  - Tender House (new tender house has similar aesthetics)
  - Octagon Tower at Entry (not impacted by project)

# Summary of Public Meetings

- Public involvement was a key component of the Venetian Causeway PD&E Study, with multiple public meetings and workshops conducted throughout the process.
- Meetings are also being held during the design phase to continue to share project information with stakeholders and collect feedback from residents and business owners within the project area.
  - Venetian Way Condo Association Meeting – June 4, 2021
  - Public Involvement Meeting – April 18, 2023
  - Miami-Dade County’s Transportation Aesthetics Review Committee – December 17, 2025
  - Public Involvement Meeting – March 18, 2026

# Project Summary

- The new bridges honors the historic and residential character of the causeway by preserving key features of the existing bridges. The replacement bridge designs will reflect the original structures through:
  - Incorporating a low profile and appearance of the original structures.
  - Using arched beams with the same span configurations,
  - Geometrically designed concrete bridge railings that recognize the historic railing design,
  - Historically sensitive bridge lighting fixtures, and
  - Historically sensitive Bridge Tender House design for the New East Bascule Bridge (Bridge 10).



# Milestones & Timeline

- Upcoming Milestones:
  - Plans Complete: Summer 2026
- Utility and Permitting Coordination On-going.
- Target begin procurement date: Summer 2026
- Target construction start: Summer 2027
- Construction duration is estimated to be 60 months



# Questions?

- Email [DTPWOutreach@miamidade.gov](mailto:DTPWOutreach@miamidade.gov) to ask additional questions.
- **Project Website:** <https://www.miamidade.gov/global/transportation/public-works/venetian-causeway.page>