

Johns Pass Boardwalk Resiliency Improvements Public Meeting

Presented by Megan Wepfer

Agenda

- Staff Introduction
- FRDAP Grant discussion
- Terms/Definitions
- Background
- FY26 Inspection results
- FY26 repair pictures
- Denso structural system
- FRDAP Grant Scope
- Q&A



Florida Recreation Development Assistance Program (FRDAP)

A competitive program that provides grants for acquisition or development of land for public outdoor recreation use or to construct or renovate recreational trails.

- Key Program Specifications
  - Maximum Grant Request $200,000
  - Funded Projects must be completed within 3 years of receiving the grant
- Matching Fund
  - Projects over $150K require a 50% match required
- Permitting Project Category
  - Development/Renovation – Building or updating Facilities such as parks, pavilions, playgrounds, piers, and public Boardwalk.
- Grant Requirements- Public Meeting solely based on the project
- Project is included in the Capital Improvement Plan (CIP) for the City



Definitions

Ipe Decking- exceptionally dense, durable exotic hardwood sourced from South American trees, widely prized for outdoor building. With a life span of 50 to 75+ years. Class A fire rating (same as steel and concrete)

Bent- Structural framework that supports the wooden deck from underneath

Mean High Water Line (MHWL) – Average high tide line over a long period of time.

Marine Borer - Saltwater-dwelling invertebrate animals – including mollusks like shipworms and crustaceans like gribbles – that burrow into submerged wood for food and shelter

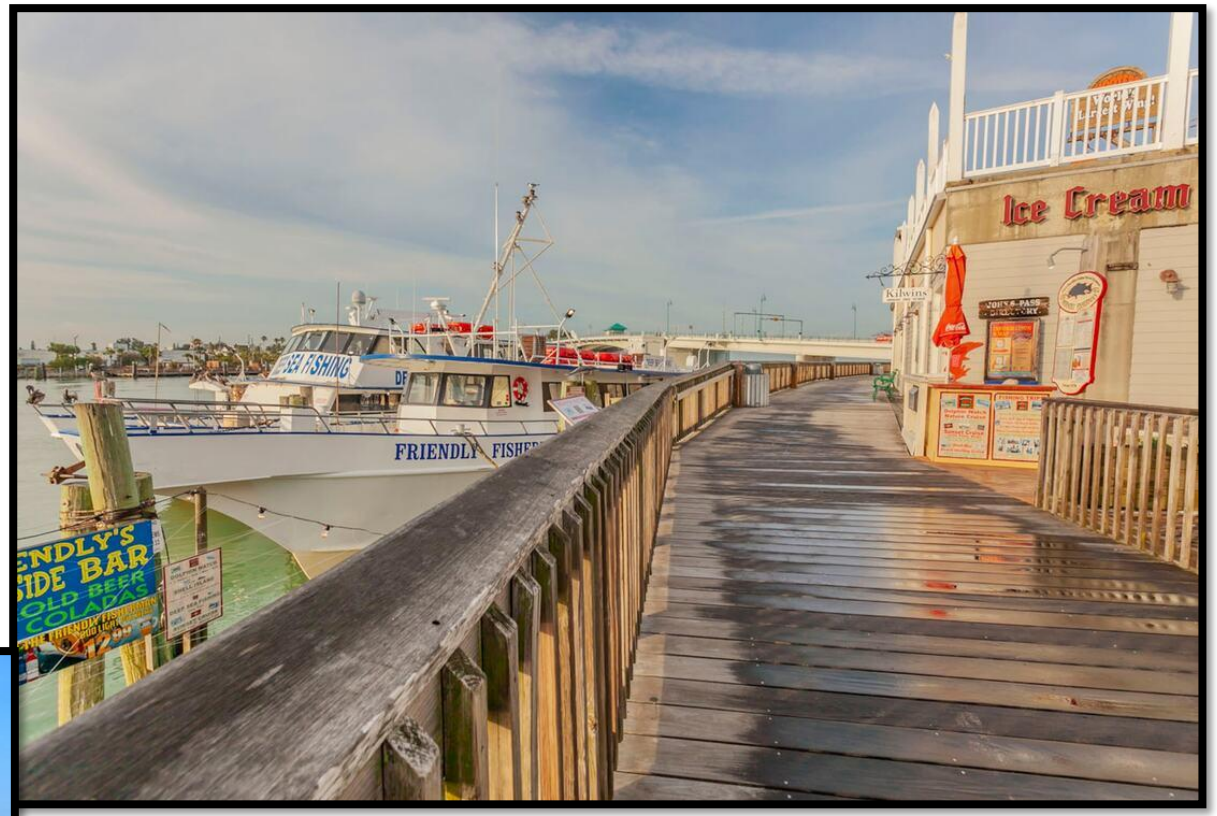
Biofouling- Unwanted buildup of living organisms

Splash Zone- The area of the piling directly between the low tide and high tide line (plus 2 feet above). Most destructive zone for timber



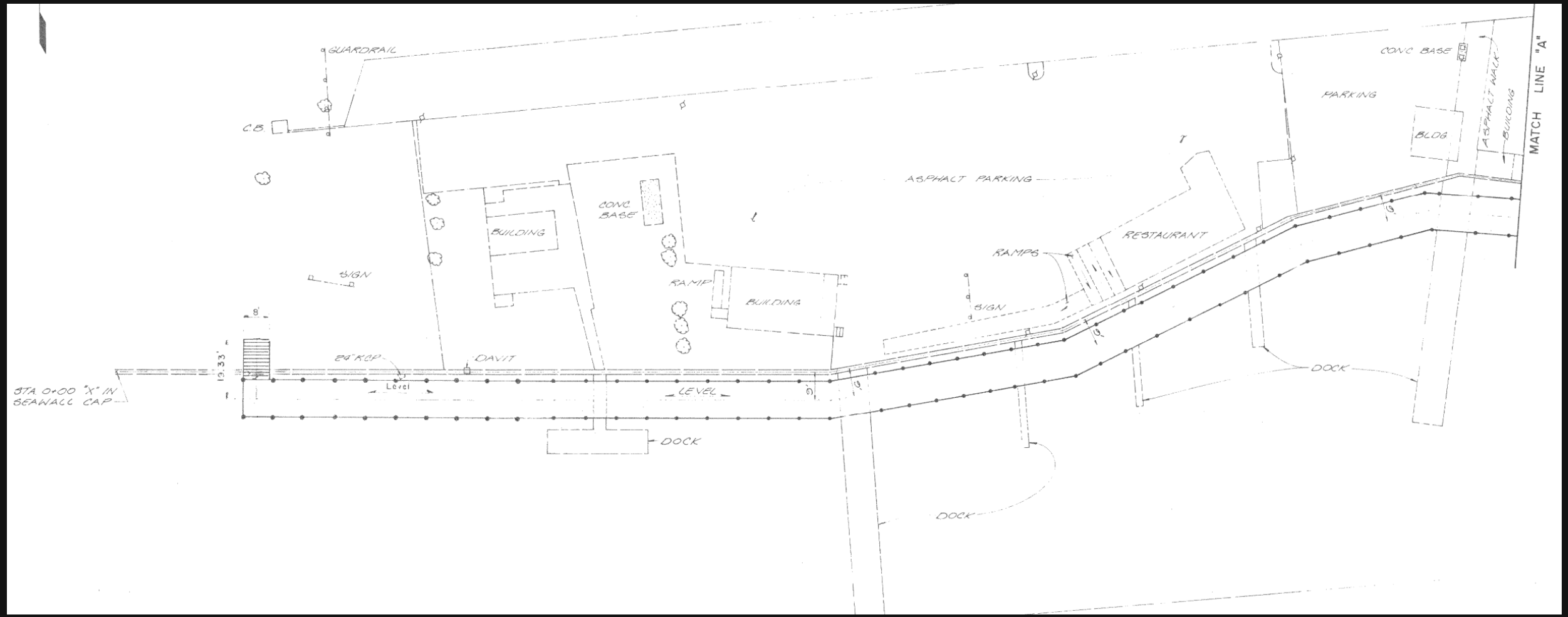
Background

- Built in the 1970's
- Approximately 950 LF long and 12 FT wide with Ipe decking
- Supported by 12" – 14" timber piles broken into 6 sections, A – F
- 192 total Pilings- approximately 30 unjacketed approximately 50 jackets installed below the MHWL

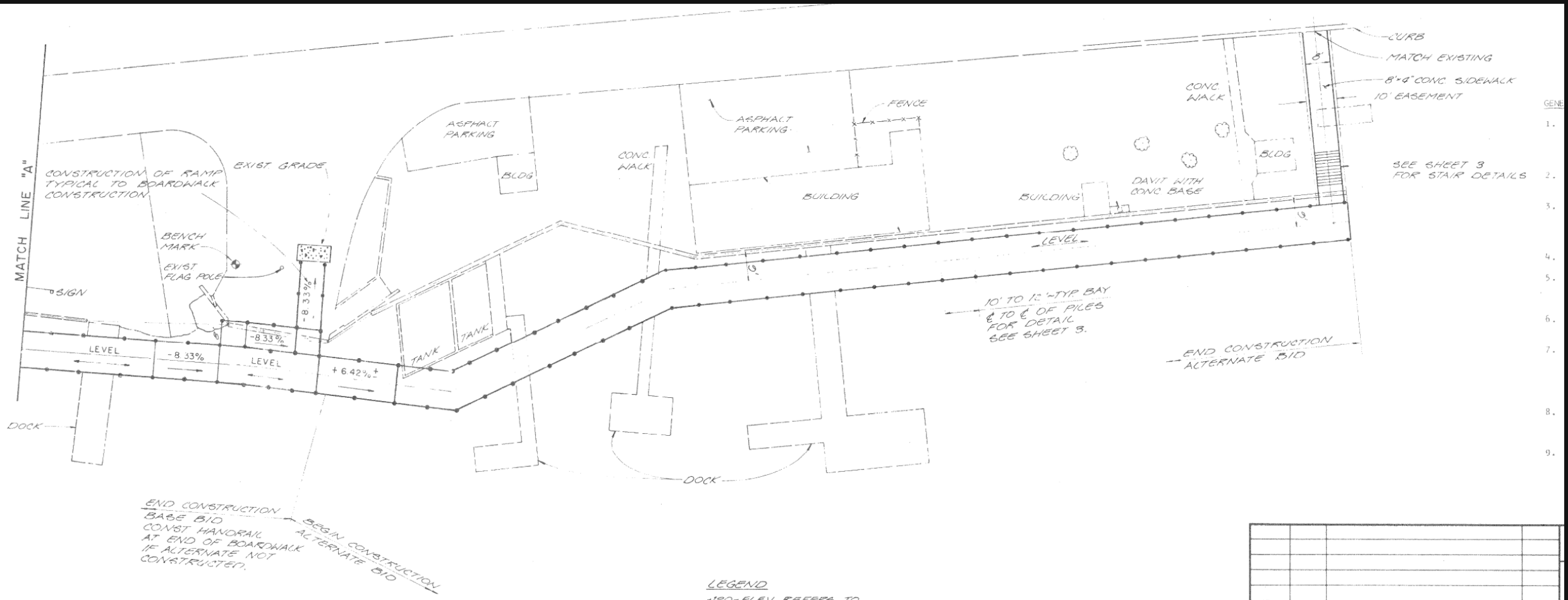




Boardwalk Plans West End



Boardwalk Plans East End



LEGEND

+12.0-ELEV. REFERS TO TOP OF DECK UNLESS OTHERWISE SHOWN.

• - INDICATES 12"Ø TIMBER PILE. TOP ELEVATION VARIES.

BENCH MARK
BRASS DISC WEST OF EXIST. FLAG POLE.
EL. 7.22

NO.	BY	REVISIONS	DATE
1	J.B.H.	RECORD DRAWINGS	5/80

GLACE & RADCLIFFE, INC.
CONSULTING ENGINEERS
ST. PETERSBURG & WINTER PARK, FLORIDA

NOV 2025 Inspection Executive Summary

EXECUTIVE SUMMARY

John's Pass Village Boardwalk consists of a fixed wooden boardwalk that is timber pile supported. GBI Diving conducted top-side, and substructure including underwater inspections of the facilities on November 8, 2025. The purpose of the inspections was to observe elements of the facility for defects, damage, or deterioration that may affect the capacity, functionality, or serviceability of the elements.

In general, the underwater elements at John's Pass Village Boardwalk were observed to be in **Fair** overall condition.

Below deck Substructure:

Deficiencies observed at the site include some low jacketed piles that were observed to stop below the high-water line or some that stopped above the high-water line but did not have a proper chamfer watershed for water to run off instead of pooling around the timber allowing for degradation of the timber at that junction over time. There were multiple locations of missing and/or damaged crossmembers and members, and areas where hardware was missing from dock substructure elements. All of the aforementioned crossmember and hardware deficiencies were as a result of the high water events from Hurricane Helene in Q4 of 2024. Also observed was minor to moderate marine borer activity on most of the unjacketed timber piles with some more severe than others and light to moderate biofouling on 100% of underwater elements inspected. The substructure of the John's Pass Village Boardwalk exhibited a **Fair** overall condition rating.

Topside Boardwalk:

The topside inspection was done by measuring out station locations starting at the west end of the boardwalk labeled as 0+00'. Deficiencies observed on the main topside boardwalk were limited to a few areas of adjoining railings that should be braced with a splice connection due to gapping as well as a retightening of all railing fasteners to the framing to ensure they are all securely tightened. The topside boardwalk elements exhibited an overall condition rating of **Satisfactory**.

.

Documentation of the inspection, including narratives and photographs are provided within this report. The figures have been developed from the client provided drawings, and observations made during this inspection. Significant structural configurations were verified for conformance with the available information by observations and measurements performed during the inspection. However, slight differences between the configurations shown within this report and the actual built conditions may exist.

Annual Inspection Results 11/8/2025

FIELD STRUCTURAL DATA

FACILITY / SECTION: John's Pass Village Boardwalk / Substructure A

START / END LOCATION: Piles 1 - 26 **INSPECTION DATE: November 08, 2025**

Section/Pile	Asset	Type	Condition Rating	Photo #	Description/Repair
A1 - A26	Boardwalk piles	Typical	Good	1	Typical conditions throughout section A include, sand bottom, no jackets, light biofouling right at mudline. No deficiencies except as noted below. The exposed area of these piles may submerge in changing tides and bank conditions since last year.
A1-A2	Cross Bracing	Missing	Poor		Missing both of the cross braces.
A-4	Timber Pile	Potential Secion Loss	Fair		6' section on SW face with exhibiting salt rot and section loss. Will need new hardware for X-brace if jacketed.
A-9	Timber Pile	Potential Secion Loss	Fair		Wood on pile seems to be exhibiting some tracheid separation with impending section loss likely at the top.
A-10	Timber Pile	New	Good	2	New pile, crossbracing and headers installed since Hurricane Helene. Abondoned temporary crutch bent needs to be removed.
A-20	Timber Pile	New	Good	3	New pile, crossbracing and headers installed since Hurricane Helene. Abondoned temporary crutch bent needs to be removed.
A-25 and A-26	Cross Bracing	Missing	Poor		Missing crossmembers

CONDITION RATING

Good	No visible damage or only minor damage observed. Minor deterioration but no overstressing observed.
Satisfactory	Limited minor to moderate defects or deterioration, but no overstressing is observed.
Fair	Primary structural elements are sound, but minor to moderate defects or deterioration is observed.
Poor	Advanced deterioration or overstressing observed on widespread portions of the structure, but capacity of structure is not significantly affected.
Serious	Advanced deterioration, overstressing or breakage may have significantly reduced capacity of primary elements.
Critical	Very advanced deterioration, overstressing or breakage has resulted in localized failure of primary elements.

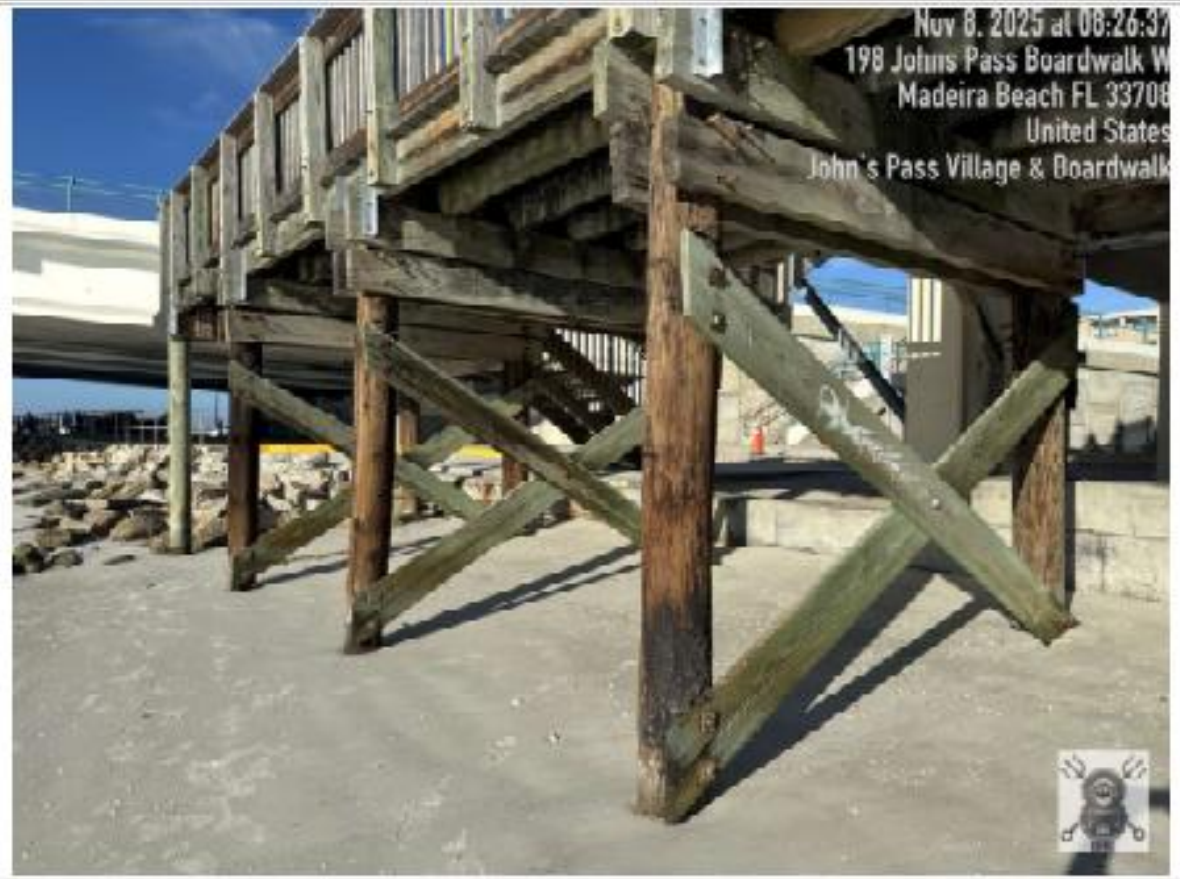


Photo 1	Typical overview of conditions in substructure section A. Some of the bottom material in this area lost from Helene has settled back in.



Photo 2	New pile and components installed at A-10. Temporary crutch bent has been disconnected but abandoned in place.

FIELD STRUCTURAL DATA

FACILITY / SECTION: John's Pass Village Boardwalk / Substructure B

START / END LOCATION: Piles 27 - 45 **INSPECTION DATE: November 08, 2025**

Section/Pile	Asset	Type	Condition Rating	Photo #	Description/Repair
B-30	Timber Pile	New	Good	4	New pile, crossbracing and headers installed since Hurricane Helene. Abondoned temporary crutch bent needs to be removed.
B-32 and B-36	Timber Pile	No Jacket	Fair	5	Signs of tracheid separation at top 3-4'
B-39 / B-40 B-41	Timber Pile	No Jacket	Fair		Moderate hard and soft biofouling, no noted deficiencies. 21" or less of exposed timber pile on these 3 piles. No Jackets.
B-42	Timber Pile	Jacket	Good		GBI Epoxy grout jacket installed. Good watershed at top, jacket extends 2' above the high water mark.
B-43	Timber Pile	Jacket	Satisfactory		Concrete Jacket in place with 4" annulus. Top of jacket is 6" below the high water mark. light to moderate hard biofouling from splash zone down.
B-44	Timber Pile	Jacket	Satisfactory		4" annulus concrete jacket, no chamfer watershed, light to moderate biofouling.
B-41 and B-43	Cross Bracing	Missing Elements	Fair		No cross bracing on either of these bents
B-44	Timber Pile	Jacket	Good		Concrete jacket, extends above high water line, moderate hard biofouling in splash zone
B-45	Timber Pile	Jacket	Good		Concrete jacket, extends above high water line, moderate hard biofouling in splash zone

CONDITION RATING

Good	No visible damage or only minor damage observed. Minor deterioration but no overstressing observed.
Satisfactory	Limited minor to moderate defects or deterioration, but no overstressing is observed.
Fair	Primary structural elements are sound, but minor to moderate defects or deterioration is observed.
Poor	Advanced deterioration or overstressing observed on widespread portions of the structure, but capacity of structure is not significantly affected.
Serious	Advanced deterioration, overstressing or breakage may have significantly reduced capacity of primary elements.
Critical	Very advanced deterioration, overstressing or breakage has resulted in localized failure of primary elements.



Photo 5	Pile with some signs of tracheid separation at the top.

FIELD STRUCTURAL DATA

FACILITY / SECTION: John's Pass Village Boardwalk / Substructure B

START / END LOCATION: Piles 47 - 55 **INSPECTION DATE:November 08, 2025**

Section/Pile	Asset	Type	Condition Rating	Photo #	Description/Repair
B-47	Timber Pile	Jacket	Good		Concrete Jacket, ends at high water line, moderate hard growth biofouling on jacket.
B-48	Timber Pile	Jacket	Good		Concrete Jacket, extends above high water line, moderate hard growth biofouling on jacket.
B-49	Timber Pile	Jacket	Good		Concrete Jacket, extends above high water line, moderate hard growth biofouling on jacket.
B-50	Timber Pile	Jacket	Satisfactory		Concrete jacket, ends below high water line, moderate hard growth biofouling present in splash zone.
B-51	Timber Pile	Jacket	Good		Concrete jacket, extends above high water line, moderate hard growth biofouling present in splash zone.
B-52	Timber Pile	Jacket	Satisfactory		Concrete jacket, ends below high water line, moderate hard growth biofouling present in splash zone.
B-53	Timber Pile	Jacket	Good		No noted deficiencies. Jacket extends above high water line, moderate hard growth biofouling present in splash zone.
B-54	Timber Pile	Jacket	Good		No noted deficiencies. Jacket extends above high water line, moderate hard growth biofouling present in splash zone.
B-55	Timber Pile	Jacket	Good		No noted deficiencies. Jacket extends above high water line, moderate hard growth biofouling present in splash zone.

CONDITION RATING

Good	No visible damage or only minor damage observed. Minor deterioration but no overstressing observed.
Satisfactory	Limited minor to moderate defects or deterioration, but no overstressing is observed.
Fair	Primary structural elements are sound, but minor to moderate defects or deterioration is observed.
Poor	Advanced deterioration or overstressing observed on widespread portions of the structure, but capacity of structure is not significantly affected.
Serious	Advanced deterioration, overstressing or breakage may have significantly reduced capacity of primary elements.
Critical	Very advanced deterioration, overstressing or breakage has resulted in localized failure of primary elements.

FIELD STRUCTURAL DATA

FACILITY / SECTION: John's Pass Village Boardwalk / Substructure B

START / END LOCATION: Piles 56 - 64 **INSPECTION DATE: November 08, 2025**

Section/Pile	Asset	Type	Condition Rating	Photo #	Description/Repair
B-56	Timber Pile	Jacket	Good		Concrete jacket, extends above high water line, moderate hard biofouling in splash zone. No deficiencies noted.
B-57	Timber Pile	No Jacket	Fair		12" diameter pile, 15% marine borer damage near mudline. 44" exposed timber from mudline to header board.
B-58	Timber Pile	Jacket	Good		Concrete jacket, extends above high water line, moderate to heavy hard biofouling in splash zone. No deficiencies noted.
B-59	Timber Pile	Jacket	Good		Concrete jacket, extends above high water line, moderate to heavy hard biofouling in splash zone. No deficiencies noted.
B-60	Timber Pile	Jacket	Satisfactory		Epoxy filled jacket, 1" annulus. Fill is down 1.25" from the top with no watershed. No other deficiencies noted, heavy hard growth on jacket in splash zone.
B-61	Timber Pile	Jacket	Good		Concrete jacket, extends above high water line, moderate to heavy hard biofouling in splash zone. No deficiencies noted.
B-62	Timber Pile	Jacket	Good		Concrete jacket, extends above high water line, moderate to heavy hard biofouling in splash zone. No deficiencies noted.
B-63	Timber Pile	Jacket	Good		Concrete jacket, extends above high water line, moderate hard biofouling in splash zone
B-64	Timber Pile	Jacket	Satisfactory		Concrete jacket, jacket ends at high water line, moderate hard biofouling in splash zone.

CONDITION RATING

Good	No visible damage or only minor damage observed. Minor deterioration but no overstressing observed.
Satisfactory	Limited minor to moderate defects or deterioration, but no overstressing is observed.
Fair	Primary structural elements are sound, but minor to moderate defects or deterioration is observed.
Poor	Advanced deterioration or overstressing observed on widespread portions of the structure, but capacity of structure is not significantly affected.
Serious	Advanced deterioration, overstressing or breakage may have significantly reduced capacity of primary elements.
Critical	Very advanced deterioration, overstressing or breakage has resulted in localized failure of primary elements.

FIELD STRUCTURAL DATA

FACILITY / SECTION: John's Pass Village Boardwalk / Substructure B

START / END LOCATION: Piles 56 - 66 **INSPECTION DATE: November 08, 2025**

Section/Pile	Asset	Type	Condition Rating	Photo #	Description/Repair
B-65	Timber Pile	Jacket	Good		Concrete jacket, extends above high water line, moderate hard biofouling in splash zone. No deficiencies noted.
B-66	Timber Pile	Jacket	Satisfactory		Concrete jacket, jacket ends at high water line, moderate hard biofouling in splash zone.
B27-65	Overview	Typical	Good	6	Typical condition of stainless hardware on cross bracing throughout section B was good. Most piles were submerged under some water at all tide levels, most piles in this area had some existing jacket repair.

CONDITION RATING

Good	No visible damage or only minor damage observed. Minor deterioration but no overstressing observed.
Satisfactory	Limited minor to moderate defects or deterioration, but no overstressing is observed.
Fair	Primary structural elements are sound, but minor to moderate defects or deterioration is observed.
Poor	Advanced deterioration or overstressing observed on widespread portions of the structure, but capacity of structure is not significantly affected.
Serious	Advanced deterioration, overstressing or breakage may have significantly reduced capacity of primary elements.
Critical	Very advanced deterioration, overstressing or breakage has resulted in localized failure of primary elements.



Photo 6	Typical overview of elements and condition of substructure section B.

FIELD STRUCTURAL DATA

FACILITY / SECTION: John's Pass Village Boardwalk / Substructure C

START / END LOCATION: Piles 67 - 75 **INSPECTION DATE: November 08, 2025**

Section/Pile	Asset	Type	Condition Rating	Photo #	Description/Repair
C-67	Timber Pile	Jacket	Good		Concrete jacket, extends above high water line, moderate hard biofouling in splash zone. No deficiencies noted.
C-68	Timber Pile	Jacket	Fair		Concrete jacket, stops 20" below high water line. 100% coverage of moderate to heavy hard biofouling in splash zone
C-69	Timber Pile	Jacket	Fair		Concrete jacket, stops 18" below high water line. 100% coverage of moderate to heavy hard biofouling in splash zone
C-70	Timber Pile	Jacket	Fair		Concrete jacket, stops 16" below high water line. 100% coverage of moderate to heavy hard biofouling in splash zone
C-71	Timber Pile	Jacket	Fair		Concrete jacket, stops 13" below high water line. 100% coverage of moderate to heavy hard biofouling in splash zone
C-72	Timber Pile	Jacket	Fair		Concrete jacket, stops 22" below high water line. 100% coverage of moderate to heavy hard biofouling in splash zone
C-73	Timber Pile	Jacket	Good		Concrete jacket, extends above high water line, moderate hard biofouling in splash zone. No deficiencies noted.
C-74	Timber Pile	Jacket	Good		Concrete jacket, extends above high water line, moderate hard biofouling in splash zone. No deficiencies noted.
C-75	Timber Pile Joist/ Cap	Jacket / Crack	Good		Concrete jacket, extends above high water line, moderate hard biofouling in splash zone. No deficiencies noted. 6' long crack observed in the joist board.

CONDITION RATING

Good	No visible damage or only minor damage observed. Minor deterioration but no overstressing observed.
Satisfactory	Limited minor to moderate defects or deterioration, but no overstressing is observed.
Fair	Primary structural elements are sound, but minor to moderate defects or deterioration is observed.
Poor	Advanced deterioration or overstressing observed on widespread portions of the structure, but capacity of structure is not significantly affected.
Serious	Advanced deterioration, overstressing or breakage may have significantly reduced capacity of primary elements.
Critical	Very advanced deterioration, overstressing or breakage has resulted in localized failure of primary elements.

FIELD STRUCTURAL DATA

FACILITY / SECTION: John's Pass Village Boardwalk / Substructure C

START / END LOCATION: Piles 76 - 84 **INSPECTION DATE: November 08, 2025**

Section/Pile	Asset	Type	Condition Rating	Photo #	Description/Repair
C-76	Timber Pile	Jacket	Good		Concrete jacket, extends above high water line, moderate hard biofouling in splash zone. No deficiencies noted.
C-77	Timber Pile	Jacket	Satisfactory		Epoxy jacket, extends above high water line, Fill is down approximately 2" with no watershed. moderate hard biofouling in splash zone. No deficiencies noted.
C-78	Timber Pile	Jacket	Fair		Concrete jacket, ends at high water line. 100% coverage of moderate to heavy hard biofouling in splash zone
C-79	Timber Pile	Jacket	Fair		Concrete jacket, ends at high water line. 100% coverage of moderate to heavy hard biofouling in splash zone
C-80	Timber Pile	Removed			Drawings show a pike at this location but they are incorrect. It is assumed it was removed during renovations to finger docks in this area long ago.
C-81	Timber Pile	Jacket	Fair		Concrete jacket, ends just below high water line. 100% coverage of moderate to heavy hard biofouling in splash zone
C-82	Timber Pile	Jacket	Good		Concrete jacket, ends just below high water line. 100% coverage of moderate to heavy hard biofouling in splash zone
C-83	Timber Pile	Jacket	Good		Concrete jacket, ends just below high water line. 100% coverage of moderate to heavy hard biofouling in splash zone. No observed deficiencies.
C-84	Timber Pile	Jacket	Good		GBI Epoxy grout jacket installed. Good watershed at top, jacket extends 2' above the high water mark.

CONDITION RATING

Good	No visible damage or only minor damage observed. Minor deterioration but no overstressing observed.
Satisfactory	Limited minor to moderate defects or deterioration, but no overstressing is observed.
Fair	Primary structural elements are sound, but minor to moderate defects or deterioration is observed.
Poor	Advanced deterioration or overstressing observed on widespread portions of the structure, but capacity of structure is not significantly affected.
Serious	Advanced deterioration, overstressing or breakage may have significantly reduced capacity of primary elements.
Critical	Very advanced deterioration, overstressing or breakage has resulted in localized failure of primary elements.

FIELD STRUCTURAL DATA

FACILITY / SECTION: John's Pass Village Boardwalk / Substructure C

START / END LOCATION: Piles 85 - 92 **INSPECTION DATE: November 08, 2025**

Section/Pile	Asset	Type	Condition Rating	Photo #	Description/Repair
C-85	Timber Pile	Jacket	Good		Concrete jacket, extends above high water line, moderate hard biofouling in splash zone. Watershed lower on one side due to placement of cross bracing. No deficiencies noted.
C-86	Timber Pile	Jacket	Good		GBI Epoxy grout jacket installed. Good watershed at top, jacket extends 2' above the high water mark.
C-87	Timber Pile	Jacket	Good		Concrete jacket, extends above high water line, moderate hard biofouling in splash zone. No deficiencies noted.
C-88	Timber Pile	Jacket	Fair		Concrete jacket, extends above high water line, moderate hard biofouling in splash zone. No deficiencies noted.
C-89	Timber Pile	Jacket	Fair		Epoxy jacket, extends above high water line, Fill is down approximately 1/2" with no watershed. moderate hard biofouling in splash zone. Crossbracing broken from this pile.
C-90	Timber Pile	Jacket	Fair		Epoxy jacket, extends above high water line, Fill is down approximately 1" with no watershed. moderate hard biofouling in splash zone. 10% section loss 2-3' above HWL.
C-91 / C-92 C-94 / C-95a	Crossbrace	Broken	Poor	7,8,9	The referenced bents all have broken crossmember bracing.
C-91	Timber Pile	Jacket	Fair		Epoxy jacket, extends above high water line, 1.5" annulus. no watershed. moderate hard biofouling in splash zone. Crossbracing broken from this pile.
C-92	Timber Pile	Jacket	Fair		Epoxy jacket, extends above high water line, no watershed. moderate hard biofouling in splash zone. Cross brace broken.

CONDITION RATING

Good	No visible damage or only minor damage observed. Minor deterioration but no overstressing observed.
Satisfactory	Limited minor to moderate defects or deterioration, but no overstressing is observed.
Fair	Primary structural elements are sound, but minor to moderate defects or deterioration is observed.
Poor	Advanced deterioration or overstressing observed on widespread portions of the structure, but capacity of structure is not significantly affected.
Serious	Advanced deterioration, overstressing or breakage may have significantly reduced capacity of primary elements.
Critical	Very advanced deterioration, overstressing or breakage has resulted in localized failure of primary elements.



Photo 7	Broken cross bracing in substructure section C

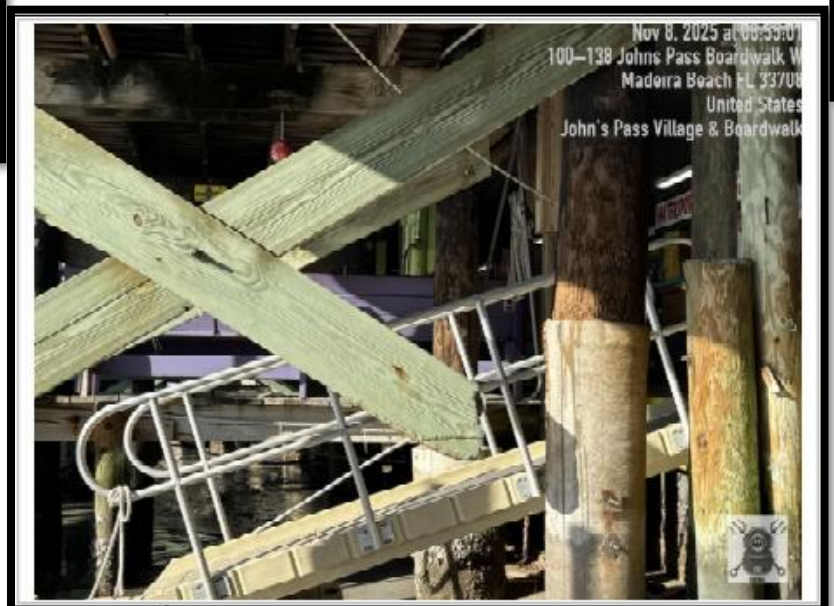


Photo 8	Broken cross bracing in substructure section C



Photo 9	Another bent with broken cross bracing in substructure section C

FIELD STRUCTURAL DATA

FACILITY / SECTION: John's Pass Village Boardwalk / Substructure C

START / END LOCATION: Piles 93 - 100 **INSPECTION DATE: November 08, 2025**

Section/Pile	Asset	Type	Condition Rating	Photo #	Description/Repair
C-93	Timber Pile	Jacket	Fair		Epoxy jacket, extends above high water line. moderate hard biofouling in splash zone. No deficiencies.
C-94	Timber Pile	Jacket	Fair		Epoxy jacket, extends above high water line, no watershed. moderate hard biofouling in splash zone. Cross brace broken. Jacket installed out of plumb, outboard side has 1.5", inboard side has .5" or less coverage of fill material.
C-95A	Timber Pile	Jacket	Fair		Concrete jacket, stops 18" below high water line. Heavy hard biofouling in splash zone
C-95	Timber Pile	Jacket	Fair		Concrete jacket, stops 12" below high water line. Heavy hard biofouling in splash zone
C-96	Timber Pile	Jacket	Good	10	GBI Epoxy grout jacket installed. Good watershed at top, jacket extends 2' above the high water mark.
C-97	Timber Pile	Jacket	Fair		Concrete jacket, stops 12" below high water line. Heavy hard biofouling in splash zone
C-98	Timber Pile	Jacket	Good	11	GBI Epoxy grout jacket installed. Good watershed at top, jacket extends 2' above the high water mark.
C-99	Timber Pile	Jacket	Good		Concrete jacket, ends at high water line. 100% coverage of moderate to heavy hard biofouling in splash zone. No deficiencies noted.
C-100	Timber Pile	Jacket	Fair		Concrete jacket, stops 5" below high water line. No watershed chamfer. 100% coverage of moderate to heavy hard biofouling in splash zone, no noted deficiencies.

CONDITION RATING

Good	No visible damage or only minor damage observed. Minor deterioration but no overstressing observed.
Satisfactory	Limited minor to moderate defects or deterioration, but no overstressing is observed.
Fair	Primary structural elements are sound, but minor to moderate defects or deterioration is observed.
Poor	Advanced deterioration or overstressing observed on widespread portions of the structure, but capacity of structure is not significantly affected.
Serious	Advanced deterioration, overstressing or breakage may have significantly reduced capacity of primary elements.
Critical	Very advanced deterioration, overstressing or breakage has resulted in localized failure of primary elements.



Photo 10	Piles previously repaired to proper elevation, annulus and chamfer.



Photo 11	Piles previously repaired to proper elevation, annulus and chamfer.

FIELD STRUCTURAL DATA

FACILITY / SECTION: John's Pass Village Boardwalk / Substructure C

START / END LOCATION: Piles 101 - 110 **INSPECTION DATE: November 08, 2025**

Section/Pile	Asset	Type	Condition Rating	Photo #	Description/Repair
C-101	Timber Pile	Jacket	Good		GBI Epoxy grout jacket installed. Good watershed at top, jacket extends 2' above the high water mark.
C-102	Timber Pile	Jacket	Fair		Concrete jacket, stops 18" below high water line. 100% coverage of moderate to heavy hard biofouling in splash zone
C-103	Timber Pile	Jacket	Good		Concrete jacket, stops 5" above high water line. 100% coverage of moderate to heavy hard biofouling in splash zone
C-104	Timber Pile	Jacket	Fair		Epoxy grout jacket. No watershed at top, jacket extends above the high water mark. Heavy hard biofouling in splash zone.
C-105	Timber Pile	Jacket	Fair		Concrete jacket, stops 20" below high water line. Some section loss opposite cross brace. 100% coverage of moderate to heavy hard biofouling in splash zone
C-106	Timber Pile	Jacket	Fair		Concrete jacket, stops 1" below high water line. 100% coverage of moderate to heavy hard biofouling in splash zone. Minor abrasive damage on the fiberglass jacket.
C-107	Timber Pile	Jacket	Good		GBI Epoxy grout jacket installed. Good watershed at top, jacket extends 2' above the high water mark.
C-108	Timber Pile	Jacket	Good		GBI Epoxy grout jacket installed. Good watershed at top, jacket extends 2' above the high water mark.
C-109 / C-110	Timber Pile	Jacket	Good		GBI Epoxy grout jacket installed. Good watershed at top, jacket extends 2' above the high water mark.

CONDITION RATING

Good	No visible damage or only minor damage observed. Minor deterioration but no overstressing observed.
Satisfactory	Limited minor to moderate defects or deterioration, but no overstressing is observed.
Fair	Primary structural elements are sound, but minor to moderate defects or deterioration is observed.
Poor	Advanced deterioration or overstressing observed on widespread portions of the structure, but capacity of structure is not significantly affected.
Serious	Advanced deterioration, overstressing or breakage may have significantly reduced capacity of primary elements.
Critical	Very advanced deterioration, overstressing or breakage has resulted in localized failure of primary elements.

FIELD STRUCTURAL DATA

FACILITY / SECTION: John's Pass Village Boardwalk / Substructure D

START / END LOCATION: Piles 111 - 117 **INSPECTION DATE: November 08, 2025**

Section/Pile	Asset	Type	Condition Rating	Photo #	Description/Repair
D-111	Timber Pile	Jacket	Good		GBI Epoxy grout jacket installed. Good watershed at top, jacket extends 2' above the high water mark.
D112	Timber Pile	Jacket	Good		GBI Epoxy grout jacket installed. Good watershed at top, jacket extends 2' above the high water mark.
D-113	Timber Pile	Jacket	Good		GBI Epoxy grout jacket installed. Good watershed at top, jacket extends 2' above the high water mark.
D-114	Timber Pile	Jacket	Good		GBI Epoxy grout jacket installed. Good watershed at top, jacket extends 2' above the high water mark.
D-115	Timber Pile	Jacket	Good		GBI Epoxy grout jacket installed. Good watershed at top, jacket extends 2' above the high water mark.
D-116	Timber Pile	Jacket	Good		GBI Epoxy grout jacket installed. Good watershed at top, jacket extends 2' above the high water mark.
D-117	Timber Pile	Jacket	Fair	12	Concrete jacket, stops 18" below high water line. 100% coverage of moderate to heavy hard biofouling in splash zone

CONDITION RATING

Good	No visible damage or only minor damage observed. Minor deterioration but no overstressing observed.
Satisfactory	Limited minor to moderate defects or deterioration, but no overstressing is observed.
Fair	Primary structural elements are sound, but minor to moderate defects or deterioration is observed.
Poor	Advanced deterioration or overstressing observed on widespread portions of the structure, but capacity of structure is not significantly affected.
Serious	Advanced deterioration, overstressing or breakage may have significantly reduced capacity of primary elements.
Critical	Very advanced deterioration, overstressing or breakage has resulted in localized failure of primary elements.



Photo 12	Jacket installed well below HWL, leaving the pile likely susceptible to damage from water or marine borer damage over time.

FIELD STRUCTURAL DATA

FACILITY / SECTION: John's Pass Village Boardwalk / Substructure D

START / END LOCATION: Piles 118 - 124 **INSPECTION DATE: November 08, 2025**

Section/Pile	Asset	Type	Condition Rating	Photo #	Description/Repair
D-118	Timber Pile	Jacket	Fair	13	Concrete jacket, stops 24" below high water line. 100% coverage of moderate to heavy hard biofouling in splash zone
D-119	Timber Pile	Jacket	Fair		Concrete jacket, stops 10" below high water line. 100% coverage of moderate to heavy hard biofouling in splash zone
D-120	Timber Pile	Jacket	Good		Concrete jacket, extends above high water line, moderate hard biofouling in splash zone. No deficiencies noted.
D-121	Timber Pile	Jacket	Fair		Concrete jacket, stops 6" below high water line. 100% coverage of moderate to heavy hard biofouling in splash zone
D-122	Timber Pile	Jacket	Fair		Concrete jacket, stops at high water line. 100% coverage of moderate to heavy hard biofouling in splash zone
D-123	Timber Pile	Jacket	Poor		Concrete jacket, installed out of plumb. 8" of coverage on one side, 2-2.5" coverage on the opposite side. Jacket stops at high water line. 100% coverage of moderate to heavy hard biofouling in splash zone
D-124	Timber Pile	Jacket	Fair		Concrete jacket, stops 6" below high water line. 100% coverage of moderate to heavy hard biofouling in splash zone
D-Section	Substructure	Overview	Typical	14	Overview photo of section D elements.

CONDITION RATING

Good	No visible damage or only minor damage observed. Minor deterioration but no overstressing observed.
Satisfactory	Limited minor to moderate defects or deterioration, but no overstressing is observed.
Fair	Primary structural elements are sound, but minor to moderate defects or deterioration is observed.
Poor	Advanced deterioration or overstressing observed on widespread portions of the structure, but capacity of structure is not significantly affected.
Serious	Advanced deterioration, overstressing or breakage may have significantly reduced capacity of primary elements.
Critical	Very advanced deterioration, overstressing or breakage has resulted in localized failure of primary elements.



Photo 13	Another jacket installed well below HWL, leaving the pile likely susceptible to damage from water or marine borer damage over time.



Photo 14	Overview photo of substructure section D - There is more bottom material in this area than in previous inspections.

FIELD STRUCTURAL DATA

FACILITY / SECTION: John's Pass Village Boardwalk / Substructure D

START / END LOCATION: Piles 125 - 139 **INSPECTION DATE: November 08, 2025**

Section/Pile	Asset	Type	Condition Rating	Photo #	Description/Repair
D-125	Timber Pile	Jacket	Fair		Concrete jacket, stops 20" below high water line. 100% coverage of moderate to heavy hard biofouling in splash zone
D-126	Timber Pile	Jacket	Fair		Epoxy grout jacket. No watershed at top, jacket extends above the high water mark. Heavy hard biofouling in splash zone.
D-127	Timber Pile	Jacket	Fair		Epoxy grout jacket. No watershed at top, jacket extends above the high water mark. Heavy hard biofouling in splash zone.
D-128	Timber Pile	Jacket	Fair		Epoxy jacket, installed out of plumb. Jacket touches pile on one side, minimal to no coverage in that area. Jacket extends above high water line. No watershed at top. 100% coverage of moderate to heavy hard biofouling in splash zone
D-129	Timber Pile	Jacket	Fair		Concrete jacket, stops 4" below high water line. 100% coverage of moderate to heavy hard biofouling in splash zone
D-130	Timber Pile	Jacket	Fair		Epoxy jacket, extends above high water line, no watershed. moderate hard biofouling in splash zone.
Piles 131-137	Timber Pile	Jacket	Good		All concrete jackets, extending above high water line, good watersheds, moderate hard biofouling in splash zone. No deficiencies noted.
D-138	Timber Pile	Jacket	Fair		Concrete jacket, stops at high water line. 100% coverage of moderate to heavy hard biofouling in splash zone
D-139	Timber Pile	Jacket	Good		Concrete jacket, extends above high water line, moderate hard biofouling in splash zone. No deficiencies noted.

CONDITION RATING

Good	No visible damage or only minor damage observed. Minor deterioration but no overstressing observed.
Satisfactory	Limited minor to moderate defects or deterioration, but no overstressing is observed.
Fair	Primary structural elements are sound, but minor to moderate defects or deterioration is observed.
Poor	Advanced deterioration or overstressing observed on widespread portions of the structure, but capacity of structure is not significantly affected.
Serious	Advanced deterioration, overstressing or breakage may have significantly reduced capacity of primary elements.
Critical	Very advanced deterioration, overstressing or breakage has resulted in localized failure of primary elements.

FIELD STRUCTURAL DATA

FACILITY / SECTION: John's Pass Village Boardwalk / Substructure D

START / END LOCATION: Piles 141 - 144 **INSPECTION DATE: November 08, 2025**

Section/Pile	Asset	Type	Condition Rating	Photo #	Description/Repair
D-141	Timber Pile	Jacket	Fair		Concrete jacket, stops 8" below high water line. 100% coverage of moderate to heavy hard biofouling in splash zone
D-142	Timber Pile	Jacket	Fair		Concrete jacket, stops 8" below high water line. 100% coverage of moderate to heavy hard biofouling in splash zone
D-143	Timber Pile	Jacket	Fair		Concrete jacket, stops 6" below high water line. 100% coverage of moderate to heavy hard biofouling in splash zone
D-144	Timber Pile	Jacket	Fair		Concrete jacket, stops 6" below high water line. 100% coverage of moderate to heavy hard biofouling in splash zone

CONDITION RATING

Good	No visible damage or only minor damage observed. Minor deterioration but no overstressing observed.
Satisfactory	Limited minor to moderate defects or deterioration, but no overstressing is observed.
Fair	Primary structural elements are sound, but minor to moderate defects or deterioration is observed.
Poor	Advanced deterioration or overstressing observed on widespread portions of the structure, but capacity of structure is not significantly affected.
Serious	Advanced deterioration, overstressing or breakage may have significantly reduced capacity of primary elements.
Critical	Very advanced deterioration, overstressing or breakage has resulted in localized failure of primary elements.

FIELD STRUCTURAL DATA

FACILITY / SECTION: John's Pass Village Boardwalk / Substructure E

START / END LOCATION: Piles 145 - 152 **INSPECTION DATE: November 08, 2025**

Section/Pile	Asset	Type	Condition Rating	Photo #	Description/Repair
E-145	Timber Pile	Jacket	Fair		Concrete jacket, stops 7" below high water line. No Watershed, 100% coverage of moderate to heavy hard biofouling in splash zone
E-146	Timber Pile	Jacket	Fair		Concrete jacket, stops 5" below high water line. 100% coverage of moderate to heavy hard biofouling in splash zone
E-147	Timber Pile	Jacket	Fair		Concrete jacket, stops 7" below high water line. 100% coverage of moderate to heavy hard biofouling in splash zone
E-148	Timber Pile	Jacket	Fair		Concrete jacket, stops 7" below high water line. 100% coverage of moderate to heavy hard biofouling in splash zone
E-149	Timber Pile	Jacket	Fair		Concrete jacket, extends above high water line only 6", moderate hard biofouling in splash zone. No deficiencies noted.
E-150	Timber Pile	Jacket	Fair		Concrete jacket, stops 7" below high water line. 100% coverage of moderate to heavy hard biofouling in splash zone
E-151	Timber Pile	No Jacket	Poor	15	No jacket, some hard growth, marine borer damage present. 32" exposed timber from mudline to header for jacket to be installed.
E-152	Timber Pile	Jacket	Fair		Concrete jacket, stops 14" below high water line. 100% coverage of moderate to heavy hard biofouling in splash zone

CONDITION RATING

Good	No visible damage or only minor damage observed. Minor deterioration but no overstressing observed.
Satisfactory	Limited minor to moderate defects or deterioration, but no overstressing is observed.
Fair	Primary structural elements are sound, but minor to moderate defects or deterioration is observed.
Poor	Advanced deterioration or overstressing observed on widespread portions of the structure, but capacity of structure is not significantly affected.
Serious	Advanced deterioration, overstressing or breakage may have significantly reduced capacity of primary elements.
Critical	Very advanced deterioration, overstressing or breakage has resulted in localized failure of primary elements.



Photo 15	Photo of hard biofouling and marine borer damage on unjacketed pile at E-151

FIELD STRUCTURAL DATA

FACILITY / SECTION: John's Pass Village Boardwalk / Substructure E

START / END LOCATION: Piles 153 - 161 **INSPECTION DATE: November 08, 2025**

Section/Pile	Asset	Type	Condition Rating	Photo #	Description/Repair
E-153	Timber Pile	No Jacket	Fair		No Jacket, 8"-12" rip rap on bottom at pile. 27" mudline to header for jacket install. 13" diameter. Moderate biofouling low, no deficiencies noted.
E-154	Timber Pile	No Jacket	Fair		No Jacket, 60" mudline to header for jacket install. Moderate biofouling low, minor marine borer damage noted. Pile has carpet hung around to protect from abrasion from jet ski rentals.
E-155	Timber Pile	No Jacket	Fair		No Jacket, 8"-12" rip rap on bottom at pile. 30" mudline to header for jacket install. Moderate biofouling low, with significant hourglassing noted.
E-156	Timber Pile	No Jacket	Fair	16	No Jacket, 5' exposed pile from mudline to 2' above high water line for jacket install. Moderate biofouling low. Pile has carpet hung around to protect from abrasion from jet skis.Hourglassing from marine borer damage observed.
E-157	Timber Pile	No Jacket	Fair		No Jacket, 8"-12" rip rap on bottom at pile. 24" mudline to header for jacket install. Moderate biofouling low, no deficiencies noted.
E-158	Timber Pile	Jacket	Fair		Concrete jacket, stops 7" below high water line. 100% coverage of moderate to heavy hard biofouling in splash zone
E-159	Timber Pile	No Jacket	Fair		No Jacket, 8"-12" rip rap on bottom at pile. Less than 24" mudline to header for jacket install. Pile is essentially buried in mud and rip rap, no deficiencies noted.
E-160	Timber Pile	No Jacket	Poor		No jacket,significant hourglassing at mudline from marine borer damage 3" into the outboard side. present yet. 32" exposed timber from mudline to header for jacket to be installed. Abondoned bolts need to be cut prior to jacket install.
E-161	Timber Pile	No Jacket	Fair		No Jacket, 8"-12" rip rap on bottom at pile. Less than 12" mudline to header for jacket install. Pile is essentially buried in mud and rip rap, no deficiencies noted.

CONDITION RATING

Good	No visible damage or only minor damage observed. Minor deterioration but no overstressing observed.
Satisfactory	Limited minor to moderate defects or deterioration, but no overstressing is observed.
Fair	Primary structural elements are sound, but minor to moderate defects or deterioration is observed.
Poor	Advanced deterioration or overstressing observed on widespread portions of the structure, but capacity of structure is not significantly affected.
Serious	Advanced deterioration, overstressing or breakage may have significantly reduced capacity of primary elements.
Critical	Very advanced deterioration, overstressing or breakage has resulted in localized failure of primary elements.



Photo 16	Unjacketed pile at E-156 exhibiting some marine borer damage at bottom.

FIELD STRUCTURAL DATA

FACILITY / SECTION: John's Pass Village Boardwalk / Substructure E

START / END LOCATION: Piles 162 - 170 **INSPECTION DATE:November 08, 2025**

Section/Pile	Asset	Type	Condition Rating	Photo #	Description/Repair
E-162	Timber Pile	No Jacket	Fair		No Jacket, rip rap on bottom at pile. 43" mudline to header for jacket install. Moderate biofouling and marine borer damage low, 10%section loss on outboard side and worse on inboard side at bottom noted.
E-163	Timber Pile	No Jacket	Fair		No Jacket, rip rap on bottom at pile. 32" mudline to header for jacket install. Typical biofouling in splash zone and minor marine borer damage noted.
E-164	Timber Pile	Jacket	Fair		Concrete jacket, stops 7" below high water line. heavy hard biofouling below water line.
E-165	Timber Pile	No Jacket	Fair		No Jacket. 51" mudline to header for jacket install. Typical biofouling in splash zone and minor marine borer damage noted.
E-166	Timber Pile	Jacket	Fair		Epoxy grout jacket. No watershed at top, fill material 1/2" down. Jacket extends above the high water mark. Heavy hard biofouling in splash zone.
E-167	Timber Pile	Jacket	Fair	17	No jacket, 33" exposed pile from mudline to header. Heavy hard biofouling at the bottom of the pile. No deficiencies noted.
E-168	Timber Pile	Jacket	Fair		Concrete jacket, stops 14" below high water line. 100% coverage of moderate to heavy hard biofouling in splash zone. No deficiencies noted.
E-169	Timber Pile	Jacket	Poor		Epoxy grout jacket. No watershed at top. Jacket extends above the high water mark. Heavy hard biofouling in splash zone.
E-170	Timber Pile Crossbrace	Jacket	Fair		Epoxy grout jacket. No watershed at top. Jacket extends above the high water mark. Heavy hard biofouling in splash zone. Minor wear and deterioration of crossbrace.

CONDITION RATING

Good	No visible damage or only minor damage observed. Minor deterioration but no overstressing observed.
Satisfactory	Limited minor to moderate defects or deterioration, but no overstressing is observed.
Fair	Primary structural elements are sound, but minor to moderate defects or deterioration is observed.
Poor	Advanced deterioration or overstressing observed on widespread portions of the structure, but capacity of structure is not significantly affected.
Serious	Advanced deterioration, overstressing or breakage may have significantly reduced capacity of primary elements.
Critical	Very advanced deterioration, overstressing or breakage has resulted in localized failure of primary elements.



Photo 17	Unjacketed pile exhibiting heavy hard biofouling at bottom.

FIELD STRUCTURAL DATA

FACILITY / SECTION: John's Pass Village Boardwalk / Substructure E

START / END LOCATION: Piles 171 - 177 **INSPECTION DATE: November 08, 2025**

Section/Pile	Asset	Type	Condition Rating	Photo #	Description/Repair
E-171	Timber Pile	Jacket	Fair		Epoxy grout jacket. No watershed at top, jacket extends above the high water mark. Heavy hard biofouling in splash zone. 2' long crack near the tongue and groove.
E-172	Timber Pile	Jacket	Fair		Concrete jacket, stops 2" below high water line. Tongue & Groove closure has some hard growth beginning to open it. 100% coverage of heavy hard biofouling in splash zone
E-173	Timber Pile	Jacket	Fair		Epoxy grout jacket. Watershed on one side at top, jacket extends above the high water mark. Heavy hard biofouling in splash zone.
E-174	Timber Pile	Jacket	Fair		Concrete jacket, stops 2" below high water line. Watershed is delaminating from the fill material of the jacket. 100% coverage of heavy hard biofouling in splash zone
E-175 original	Timber Pile	Jacket	Fair		Epoxy grout jacket. No watershed at top, jacket extends above the high water mark. Heavy hard biofouling in splash zone. This pile bent is low and disconnected to no longer support the dock and has been replaced with the next bent.
E-176 original	Timber Pile	Jacket	Fair		Epoxy grout jacket. No watershed at top, jacket ends 2" below the high water mark. Heavy hard biofouling in splash zone. This pile bent is low and disconnected to no longer support the dock and has been replaced with the next bent.
E-175 New	Timber Pile	No Jacket	Fair	FY26	No Jacket, 18"-24" Rip rap around pile. 4.5' exposed pile from mudline to 2' above high water line for jacket install. Minor marine borer damage at mudline noted.
E-176 New	Timber Pile	No Jacket	Poor	18 FY26	No Jacket. 5.5' exposed pile from mudline to 2' above high water line for jacket install. Heavy hourglassing from marine borer damage at mudline noted.
E-177	Timber Pile	No Jacket	Fair		No Jacket. Rip rap arpound pile. No deficiencies noted. Less that 24" of exposed timber pile in this area. Very little room for movement under the building here.

CONDITION RATING

Good	No visible damage or only minor damage observed. Minor deterioration but no overstressing observed.
Satisfactory	Limited minor to moderate defects or deterioration, but no overstressing is observed.
Fair	Primary structural elements are sound, but minor to moderate defects or deterioration is observed.
Poor	Advanced deterioration or overstressing observed on widespread portions of the structure, but capacity of structure is not significantly affected.
Serious	Advanced deterioration, overstressing or breakage may have significantly reduced capacity of primary elements.
Critical	Very advanced deterioration, overstressing or breakage has resulted in localized failure of primary elements.



Photo 18	Newer pile at E-176 that is hourglassing at bottom from marine borer activity. This pile is unjacketed and showed little to no damage at last inspection.

FIELD STRUCTURAL DATA

FACILITY / SECTION: John's Pass Village Boardwalk / Substructure E

START / END LOCATION: Piles 178 - 184 **INSPECTION DATE: November 08, 2025**

Section/Pile	Asset	Type	Condition Rating	Photo #	Description/Repair
E-178	Timber Pile	No Jacket	Fair		No Jacket. Rip rap around pile. No deficiencies noted. Less that 24" of exposed timber pile in this area. Very little room for movement under the building here.
E-179	Timber Pile	No Jacket	Fair	19 FY26	No Jacket. No deficiencies noted. 64" of exposed timber pile from mudline to header for jacket install. 100% covered in hard biofouling, old pile stubs near this pile. Some adjacent old hardware and pile stubs need cut for a jacket to be installed.
E-180	Timber Pile	No Jacket	Fair		No Jacket. Rip rap around pile. No deficiencies noted. Less that 24" of exposed timber pile in this area. Very little room for movement under the building here.
E-181	Timber Pile	No Jacket	Fair		No Jacket. Rip rap around pile. No deficiencies noted. Less that 24" of exposed timber pile in this area. Very little room for movement under the building here.
E-181 - 182	Joist/Cap	Crack	Fair		3' crack in cap joist board.
E-182	Timber Pile	No Jacket	Fair	FY26	No Jacket. No deficiencies noted. 72" of exposed timber pile from mudline to header for jacket install. 100% covered in hard biofouling, old pile stubs coming out of bottom near this pile. Marine borer damage observed.
E-183	Timber Pile	No Jacket	Fair	FY26	No Jacket. Rip rap around pile. 46" exposed timber from mudline to header for later jacket install. Minor marine borer damage at the bottom 12". Moderate biofouling.
E-184	Timber Pile	No Jacket	Fair	FY26	No Jacket, Pile at top is wrapped in HDPE pile wrap that goes 40" below the high water mark leaving the lower 1.5' of the pile exposed. 68" of timber from mudline to header for later jacket install. Minor marine borer damage at mudline noted.

CONDITION RATING

Good	No visible damage or only minor damage observed. Minor deterioration but no overstressing observed.
Satisfactory	Limited minor to moderate defects or deterioration, but no overstressing is observed.
Fair	Primary structural elements are sound, but minor to moderate defects or deterioration is observed.
Poor	Advanced deterioration or overstressing observed on widespread portions of the structure, but capacity of structure is not significantly affected.
Serious	Advanced deterioration, overstressing or breakage may have significantly reduced capacity of primary elements.
Critical	Very advanced deterioration, overstressing or breakage has resulted in localized failure of primary elements.

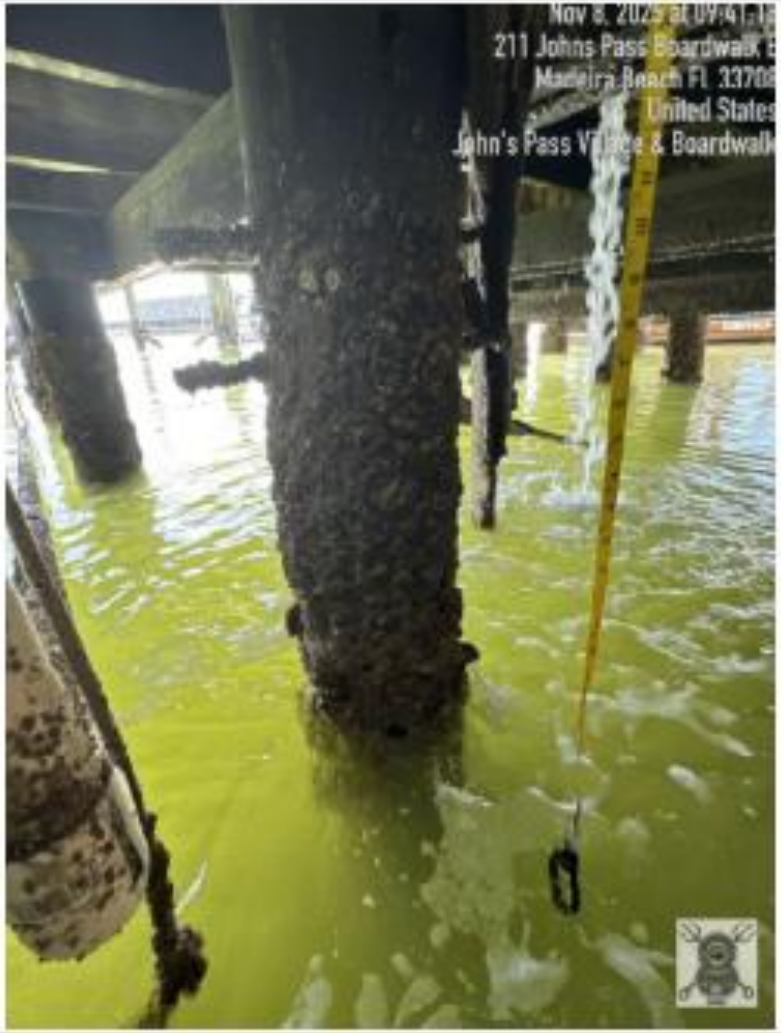


Photo 19	Unjacketed pile at E-179, exhibiting moderate biofouling and some evidence of marine borer activity.

FIELD STRUCTURAL DATA

FACILITY / SECTION: John's Pass Village Boardwalk / Substructure F

START / END LOCATION: Piles 185 - 192 **INSPECTION DATE: November 08, 2025**

Section/Pile	Asset	Type	Condition Rating	Photo #	Description/Repair
F-185	Timber Pile	No Jacket	Fair	20	No Jacket, large rip rap around pile on bottom. 60" of timber from mudline to header for later jacket install. Typical hardshell biofouling present below water. Minor marine borer damage throughout pile.
F-186	Timber Pile	No Jacket	Fair		No Jacket. 75" of timber from mudline to header for later jacket install. 100% coverage of light hardshell biofouling present below water.HDPE pile wrap in place but the lower 1.5' is not wrapped. Minor marine borer activity observed.
F-187	Timber Pile	No Jacket	Fair		No Jacket, large rip rap around pile on bottom. 62" of timber from mudline to header for later jacket install. Typical hardshell biofouling present below water. No deficiencies noted.
F-188	Timber Pile	No Jacket	Fair		No Jacket, Pile at top is wrapped in HDPE pile wrap that goes 44" below the high water mark leaving the lower 3' of the pile exposed. 89" of timber from mudline to header for later jacket install. Minor marine borers noted.
F-189	Timber Pile	No Jacket	Fair		No Jacket, Pile at top is wrapped in HDPE pile wrap that goes 56" below the high water mark leaving the lower 1.5' of the pile exposed. 72" of timber from mudline to header for later jacket install. Minor marine borer noted.
F-190	Timber Pile	No Jacket	Fair		No Jacket, Pile at top is wrapped in HDPE pile wrap that goes 60" below the high water mark leaving the lower 2' of the pile exposed. 96" of timber from mudline to header for later jacket install. Minor marine borers noted.
F-191	Timber Pile	No Jacket	Fair		No Jacket, Pile at top is wrapped in HDPE pile wrap that goes 56" below the high water mark leaving the lower 2' of the pile exposed. 92" of timber from mudline to bottom of crossbrace for later jacket install. Minor marine borers noted.
F-192	Timber Pile	No Jacket	Fair		No Jacket, Pile at top is wrapped in HDPE pile wrap that goes 56" below the high water mark leaving the lower 2' of the pile exposed. 108" of timber from mudline to bottom of crossbrace for later jacket install. Minor marine borers noted.

CONDITION RATING

Good	No visible damage or only minor damage observed. Minor deterioration but no overstressing observed.
Satisfactory	Limited minor to moderate defects or deterioration, but no overstressing is observed.
Fair	Primary structural elements are sound, but minor to moderate defects or deterioration is observed.
Poor	Advanced deterioration or overstressing observed on widespread portions of the structure, but capacity of structure is not significantly affected.
Serious	Advanced deterioration, overstressing or breakage may have significantly reduced capacity of primary elements.
Critical	Very advanced deterioration, overstressing or breakage has resulted in localized failure of primary elements.



Photo 20	Pile exhibiting marine borer damage throughout the pile.

FIELD STRUCTURAL DATA

FACILITY / SECTION: John's Pass Village Boardwalk / Topside Boardwalk Elements

START / END LOCATION: 0+00 - 9+50 **INSPECTION DATE: November 08, 2025**

Section/Pile	Asset	Type	Condition Rating	Photo #	Description/Repair
0+00-9+50	Boardwalk	Typical	Satisfactory	21	Entire topside boardwalk elements show normal weathering for a structure of it's age and use.
1+91	Guardrail	Loose / Gap	Satisfactory	22	A small gap is present and railing is loose at the point where two sections of guardrail meet.
2+90	Guardrail	warping	Satisfactory		Baluster at this location is bowed and will need replacing.
5+70	Guardrail	Loose / Gap	Satisfactory	23	A small gap is present and railing is loose at the point where two sections of guardrail meet.
9+48	Guardrail	Loose / Gap	Fair	24	A larger gap is present and railing is more loose in this section where two sections of guardrail meet.
0+00 - 9+50	Guardrail	Loose	Fair		Throught the boardwalk the outboard guradrail has some give and sway out when pressed. Hardware apprared in most places to be tight but may need to be checked and adjusted to confirm.

CONDITION RATING

Good	No visible damage or only minor damage observed. Minor deterioration but no overstressing observed.
Satisfactory	Limited minor to moderate defects or deterioration, but no overstressing is observed.
Fair	Primary structural elements are sound, but minor to moderate defects or deterioration is observed.
Poor	Advanced deterioration or overstressing observed on widespread portions of the structure, but capacity of structure is not significantly affected.
Serious	Advanced deterioration, overstressing or breakage may have significantly reduced capacity of primary elements.
Critical	Very advanced deterioration, overstressing or breakage has resulted in localized failure of primary elements.



Photo 21	Typical overview of weathered conditions of the topside boardwalk at John's Pass Village.

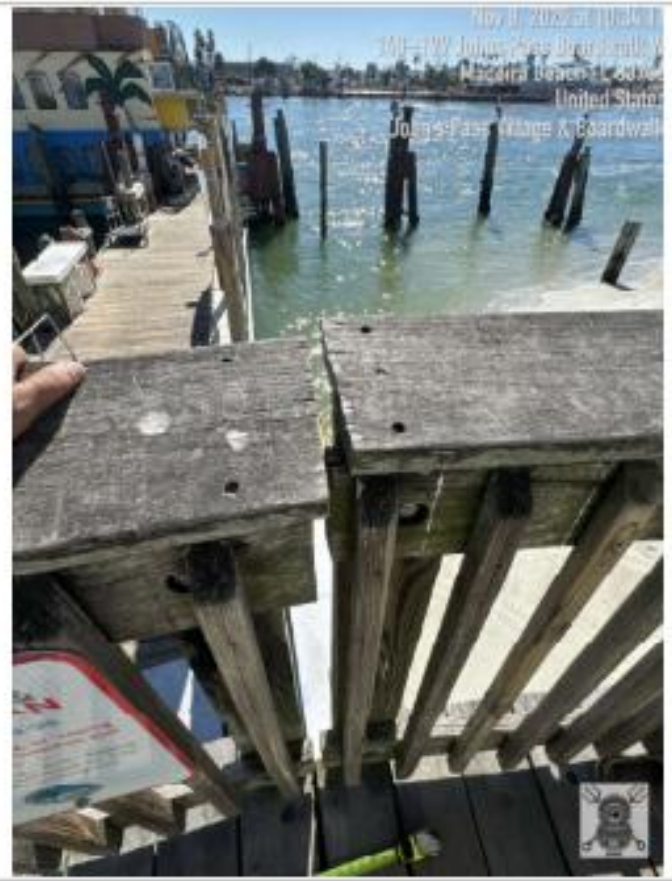


Photo 22	Gap at adjacent sections of guardrail at 1+91 of the boardwalk.



Photo 23	Gap at adjacent sections of guardrail at 5+70 of the boardwalk.

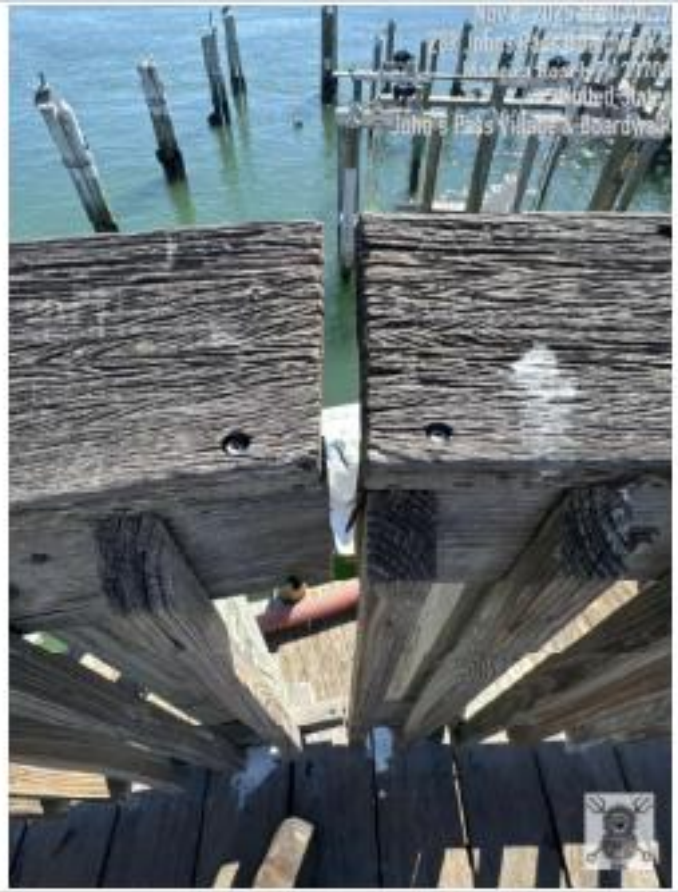
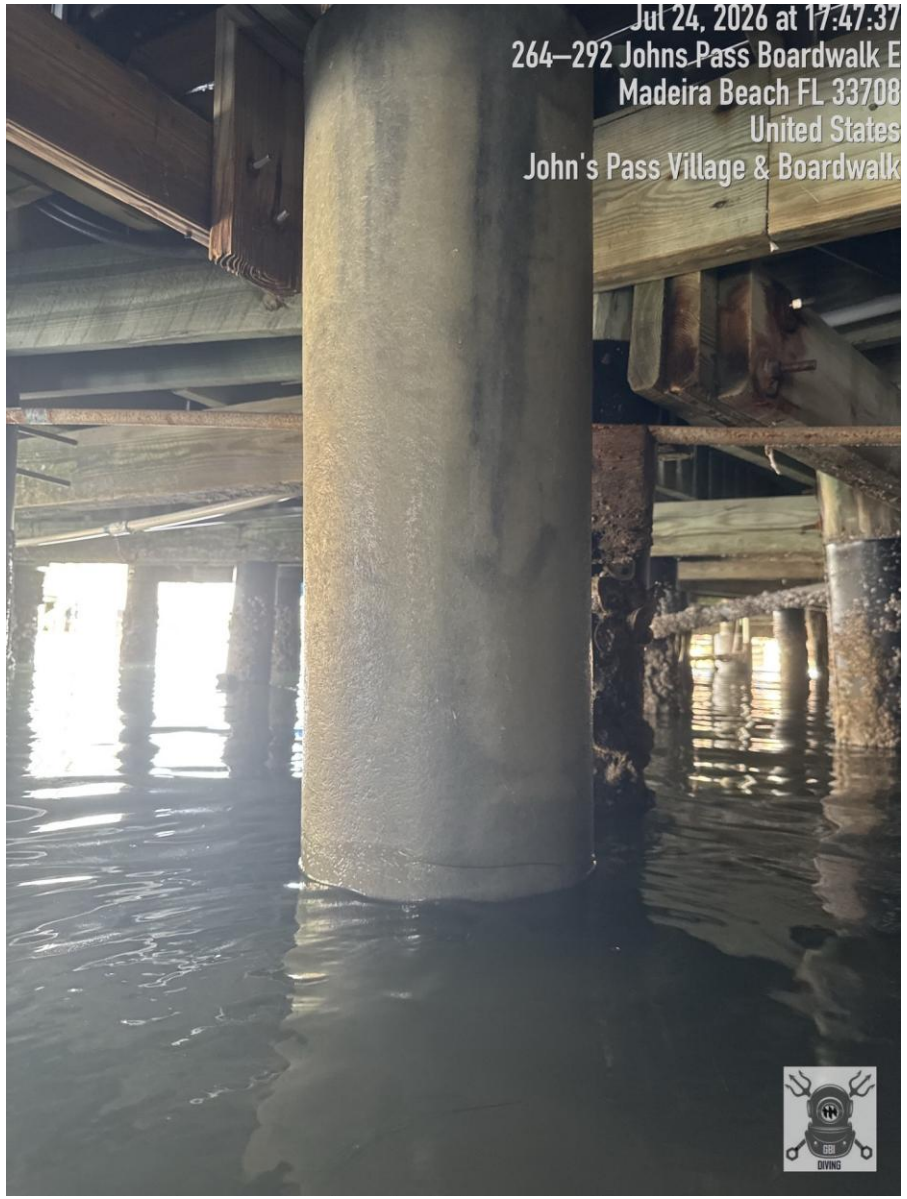
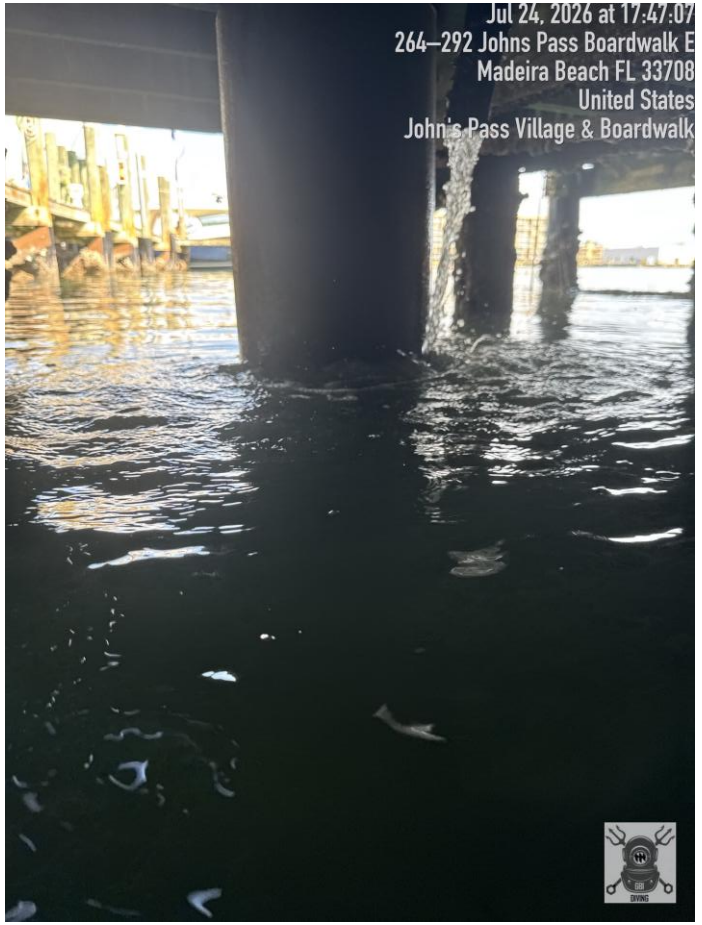


Photo 24	Larger gap with more movement at adjacent sections of guardrail at 9+48 of the boardwalk.

Post Denso Jacket installation







Series 400

Structural repair system that doubles the strength of the original timber pile

SeaShield Series 400 System is comprised of the SeaShield Fiber-Form Jacket, C-GRID® 450 and SeaShield 510 UW Grout or SeaShield 550 Epoxy Grout. The Series 400 is a revolutionary encapsulation system that not only protects timber piles from aggressive saltwater environments and marine borers, but also strengthens deteriorated piles with a durable, lightweight and non-corrosive reinforcement.

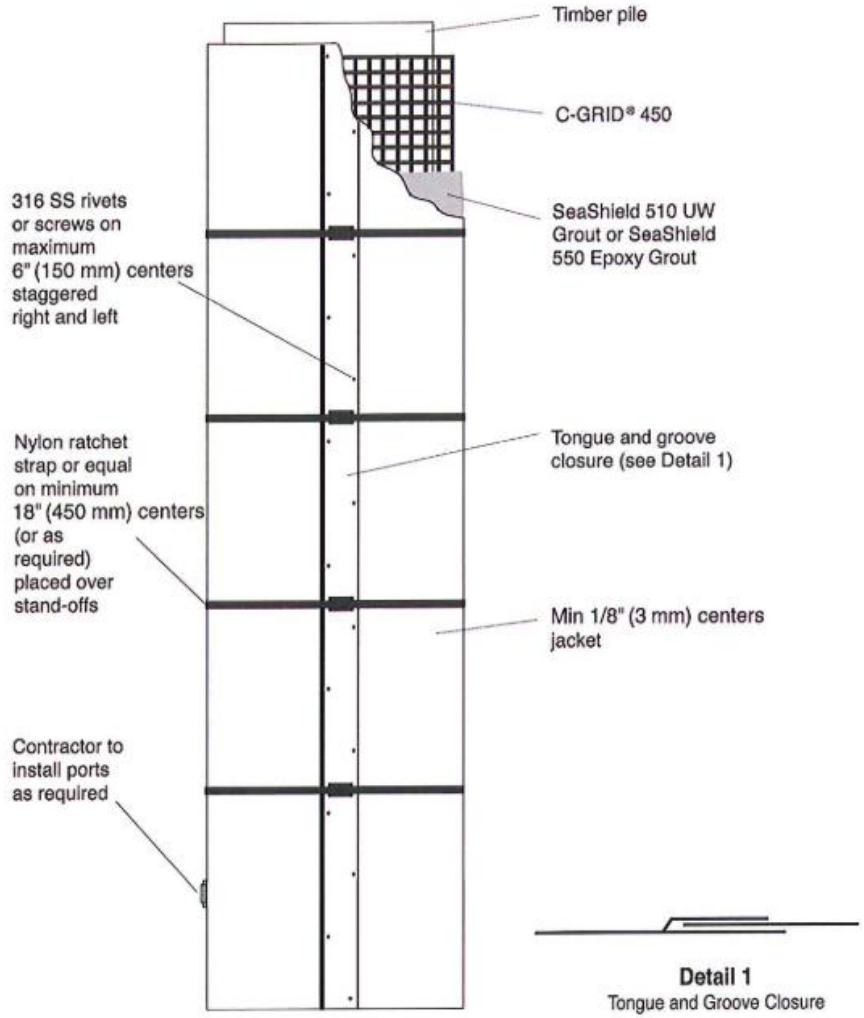
SeaShield Series 400 System

The SeaShield Series 400 System is comprised of a SeaShield Fiber-Form Jacket, C-GRID® 450, and either SeaShield 510 UW Grout or SeaShield 550 Epoxy Grout. The complete system doubles the strength of the original timber pile.

The C-GRID® 450 should be unrolled and cut using tin snips or other suitable method. The cut width of C-GRID® 450 is determined by including enough material to be imbedded within the grout and a 6" overlap along vertical seam. Locate the C-GRID® 450 between the elevations indicated in the specification and drawings. Then, the SeaShield Fiber-Form Jacket is installed around the pile and C-GRID® 450. A foam seal should be installed at the bottom of each jacket to prevent any grout from leaching out of the bottom of the jacket during installation. Once jacket is in place, inject grout approximate 6" to 12" into the bottom port and allow it to cure before pro ceeding with subsequent lifts. The injection process shoul be continuous, except when the injection hose is moved fr port to port.

For further information please refer to the technical data sheets for the SeaShield Fiber-Form Jacket, C-GRID® 450 and SeaShield 510 UW Grout or SeaShield 550 Epoxy Gro Complete details can be found on the SeaShield Series 40 Engineering Specifications.

C-GRID® 450 utilized by Denso North America in the SeaShield Serie 400 System is protected under the following US and European Paten 6,263.629; 5836,715; 6,123,879;6,454.889;6,632,309;0861353;1094

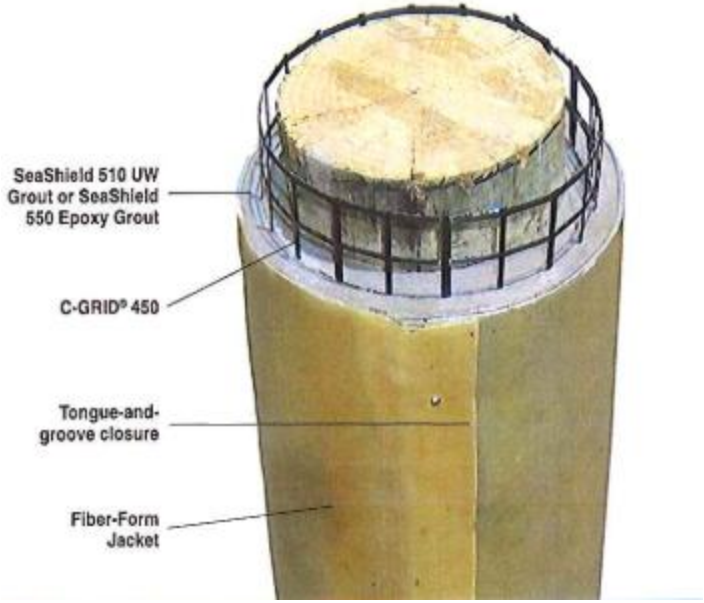


Elevation View

Sheet 1
(Not to Scale)

Denso 400





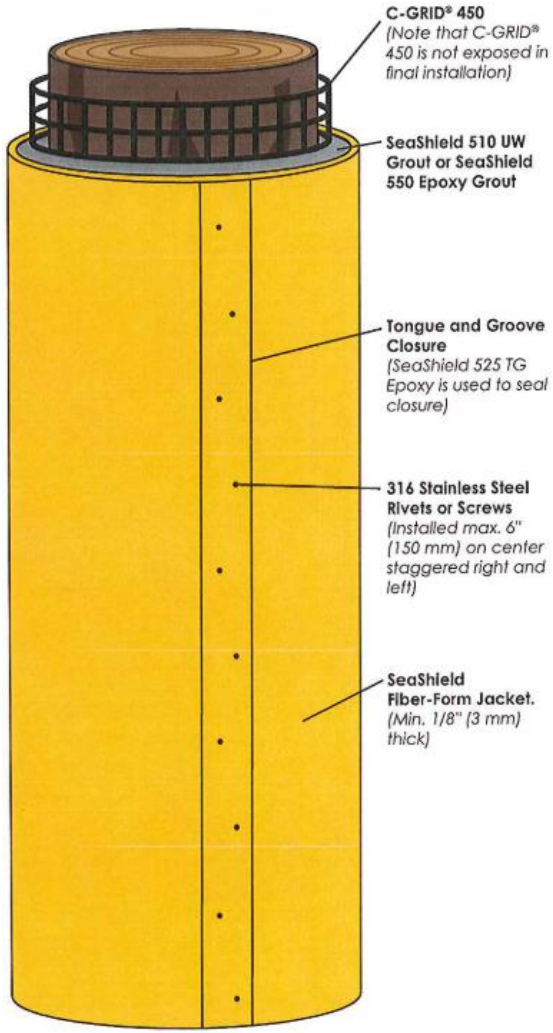
Minimum 2 feet above mean high water line

Minimum 1 foot below mud line

SeaShield Series 400

Structural repair system that doubles the strength of the original timber pile

A revolutionary encapsulation system that not only protects timber piles from aggressive saltwater environments and marine borers, but also strengthens deteriorated piles with a durable, lightweight and non-corrosive reinforcement.



FRDAP Scope of work

- Structurally wrap all unjacketed pilings





FRDAP Scope Boardwalk Lighting

- Convert 40 electrical pedestrian lights to solar





Questions & Answers

Megan Wepfer

Public Works Director

C: 727-543-8154

O: 727-391-9951 EXT 400

Mwepfer@madeirabeachfl.gov