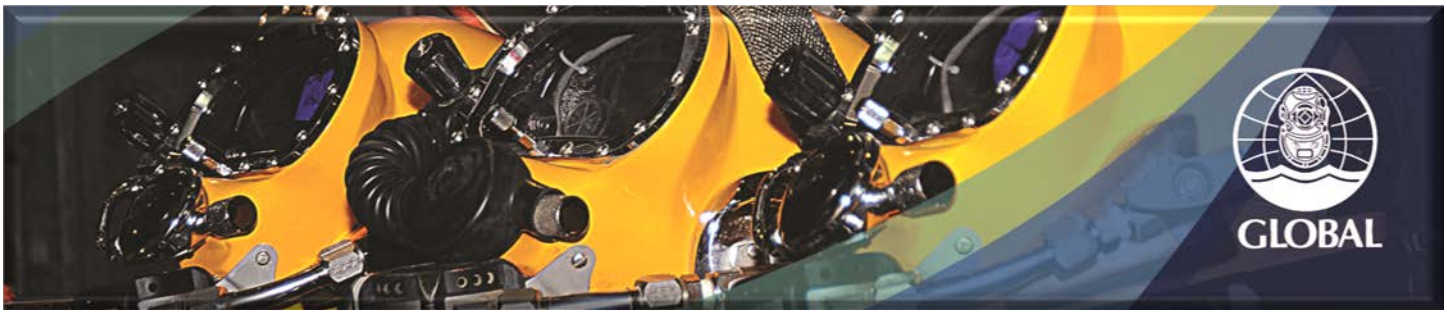
GLOBAL
a MER company

CONCRETE FLOAT BREAKWATER INSPECTION
CITY AND BOROUGH OF JUNEAU, HARBOR MAINTENANCE
Juneau, Alaska



Submitted To:

City & Borough of Juneau
Docks & Harbors
76 Egan Drive
Juneau, Alaska 99801
907-586-0398

Submitted By:
Global Diving & Salvage Inc.
5304 Eielson Street
Anchorage, AK 99518
907-563-9060

CONTENTS

1. INTRODUCTION 3

2. GENERAL FLOAT CONDITIONS 4

2.1 Work Location and Operating Conditions 4

2.2 General Float Conditions 5

1. INTRODUCTION

On September 27, 2023, Global Diving & Salvage mobilized a four-man dive team onboard the DSV "Ashley T", from our dock facility in Auke Bay, Alaska. A shallow air diving system with a digital underwater video recording system and specialized tooling were setup on the Ashley T to complete the scope of work as listed below. All work was completed by request per the current, Harbor Maintenance Term Contract.

SCOPE OF WORK

- Inspection of a concrete breakwater previously owned by the USCG, to support consideration of purchase by City of Juneau Docks and Harbors group.
    - Inspection was made in coordination with PND Engineers, Inc. who observed the video feed from the diver and directed the diver to examine certain areas of the float more closely.
- Provide a list of deficiencies noted, as well as the dive videos with audio in electronic format.

The inspection was considered a general assessment swim through. No non-destructive testing was performed during this inspection. The diver swam the perimeter of the float, paying particular attention to the chamfered edges, and where the mooring chain goes through the structure.

All diving activities were performed in accordance with the following regulations and industry guidance publications. Global personnel and their subcontractors follow the strictest requirement on the work site.

- Occupational Safety and Health Administration (OSHA) Construction Industry Standards, 29 CFR 1926
- Occupational Safety and Health Administration (OSHA) General Industry Standards, 29 CFR 1910
- Occupational Safety and Health Administration (OSHA) Commercial Diving Standards 29 CFR Part 1910, and Subpart T
- Occupational Safety and Health Administration (OSHA) Hazardous Waste Operations and Emergency Response, 29 CFR 1926.65 or 29 CFR 1910.120
- United States Coast Guard (USCG), 46 CFR 197, Subpart B
- ADCI (Association of Diving Contractors International), Industry Standards, 6th Edition

Prior to beginning diving operations, an onsite safety meeting was held to familiarize the crew with the scope of work and any hazards that may exist. The crew boat schedule for the day was noted along with potential weather hazards.

2. GENERAL FLOAT CONDITIONS

2.1 *Work Location and Operating Conditions*

The concrete breakwater is a marine structure that was moored at the time of inspection off Norway Point, located 1.66 miles from the Wayside Park Float. The 24 foot by 180-foot concrete breakwater was previously owned by the USCG and was installed in Ketchikan. The City of Juneau Docks and Harbors group is considering the purchase of the breakwater from a contractor.

Image 1 – Current location of concrete breakwater.

Weather conditions during the inspection were overcast with light veritable winds, and calm water in the area of the inspection. Due to the recent continuous rain, visibility was affected by a surface layer of fresh and saltwater 'brine' mix which produces a layer of water that is milky and fuzzy to see through, additionally run off from shore added to the suspended particulars, limiting visibility during the inspection to 1 to 3 feet of water.

2.2 *General Float Conditions*

The float appears to be in excellent condition, with no signs of damage. The perimeter has a 1" chamfered edge around the bottom of the structure. With the exception of light marine growth and typical rust staining, the breakwater is in "as-built" condition.

No discrepancies were found between the plans provided and the dive inspection.

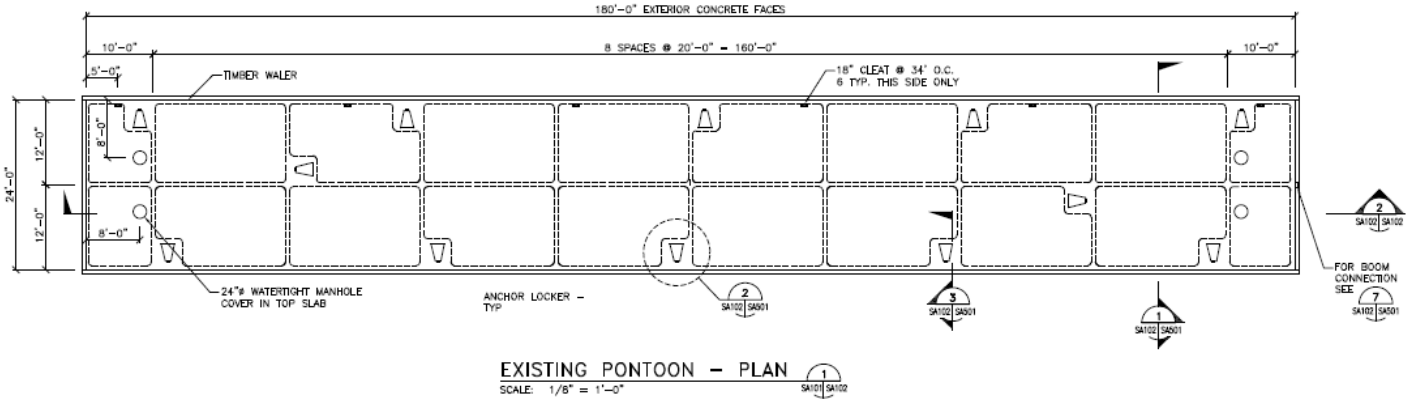


Figure 1 – Breakwater design.

Image 2 – Light marine growth with tubeworms throughout the surface.

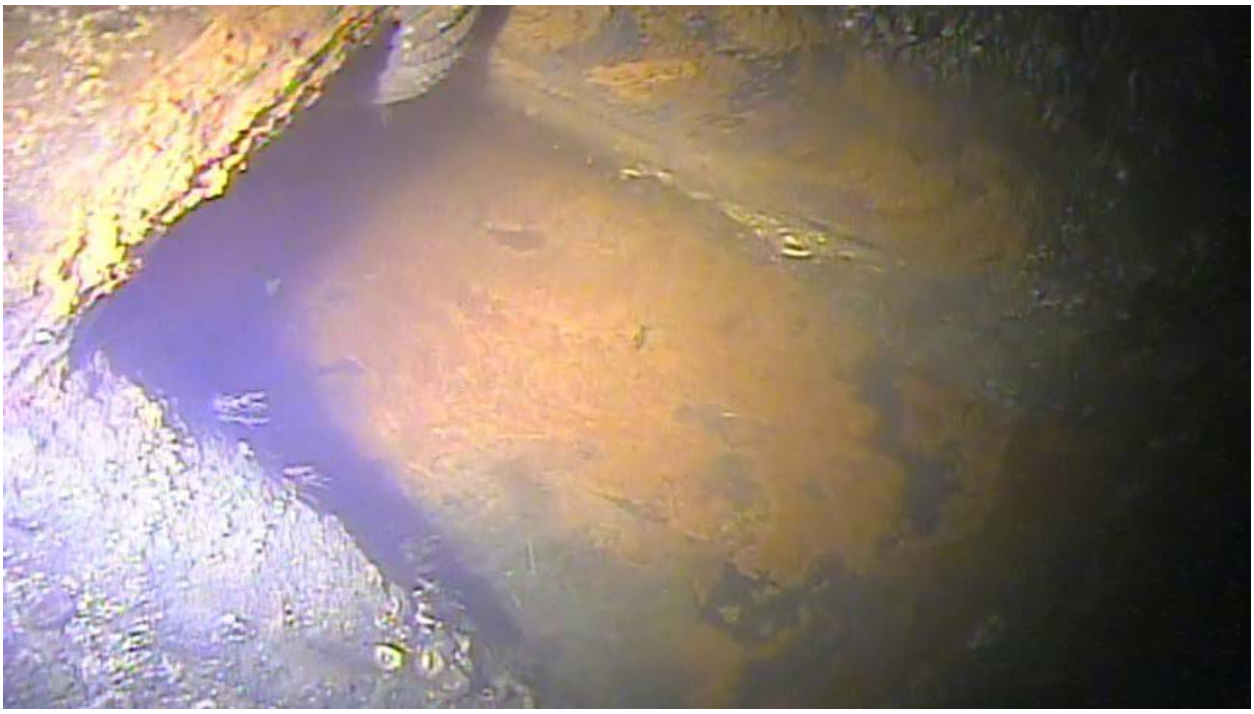


Image 3 – Typical chain houser, very good condition with no damage noted.