

Ms. Karen Olson
City Project Manager | City of Key West
201 William St.
Key West, FL 33040

via email to kolson@cityofkeywest-fl.gov

Status: Correspondence

June 22, 2026

Dear Karen,

Reference # P14286.102

RE: Proposal for Key West Bight Wahoo Pier Replacement Design & Permitting

In response to your email on 05/12/2026 regarding a task order for the design & permitting of the replacement of Wahoo Pier at the City Marina in Garrison Bight, W.F. Baird & Associates Ltd. (Baird) is pleased to submit this proposal to the City of Key West (City).

Project Understanding

As outlined in the abovementioned email, Baird understands that Wahoo Pier must be replaced within its existing footprint, and that the replacement project will include the following:

- Replacement approximately 626LF x 10 LF wide fixed dock with aluminum floating docks with ipe decking
- Replacement of an oversized gangway (6 or more feet in width with grate decking)
- Replacement of three (3) concrete floating docks (approximately 92', 128', and 188', or 408LF total) and finger piers with aluminum floating docks and finger piers with grate decking
- Replace the existing electrical wiring throughout the existing dock. Re-use of all existing land-based electrical service and distribution equipment, and downstream transformers, panels, double poles, and marine power pedestals located on docks.
- Provide all new sanitary sewer, fire suppression, and potable water systems waterward of the seawall
- Use pre-treated wood piles with pile wraps on mooring piles (all timber piles to be Chromated Copper Arsenate, 2.5 or legally allowed equivalent)
- Provide decorative access control gate to the west of the floating restaurant with access control system and CCTV capabilities

Baird understands that the City will require State and Federal permits through the Florida Department of Environmental Protection (FDEP) and the US Army Corps of Engineers (USACE) to replace Wahoo Pier. So long as the pier is replaced in its existing footprint and is not located within an aquatic preserve, the project should qualify for the following permits:

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Permitting Authority	Permit Type
Florida Department of Environmental Protection (FDEP)	Permit Exemption
US Army Corps of Engineers (USACE)	Nationwide Permit (NWP) 3- Maintenance or State Programmatic General Permit (SPGP)

Based on the above, Baird proposes to furnish the City with the following Scope of Services:

Scope

1. Surveying services

Baird will coordinate with Florida Keys Land Surveying (FKLS) to undertake a Specific Purpose Survey, including topographic and bathymetric data to illustrate current site conditions at the existing Wahoo Pier. It will include:

- Limited, site topography and the locations of existing site improvements, including but not limited to concrete, curbing, asphalt, above ground visible utilities, etc., of an approximate 20ft x 20ft area upland of the existing pier.
- Locating the edge of the existing seawall along North Roosevelt Blvd. (MHWL Line)
- Locating the existing pier.
- Locating the existing utility pods on the pier, no utilities hanging will be located.
- Locating the existing pier mooring pilings
- Bathymetric data immediately adjacent the existing pier as well as in the vicinity of each existing mooring piling off the pier and approximately 15 feet beyond the existing mooring pilings.
- Bathymetric data extending approximately 50 beyond the end of the existing pier.
- Horizontal coordinates will be referenced to grid north, based on the 2011 Adjustment of the North American Datum of 1983 (NAD 83/90), of the Florida State Plane Coordinate System (Transverse Mercator Projection), East Zone.
- Elevations will be in feet and based on the National Geodetic Vertical Datum of 1929 (NGVD 1929).

FKLS will send all final survey related deliverables will be digital only in AutoCAD 2022 format to Baird, and Baird will make this information available to the City. Baird will provide CAD & PDF documents to the City.;

2. Engineering Design for Permitting

Baird will then utilize the survey information along with necessary information provided by the City to undertake an engineering preliminary design which can be used for the permitting process. Steps to produce this engineering design for permitting purposes include:

- Reviewing all existing information
- Produce a Basis of Design report, including a coastal processes assessment to determine environmental factors which the pier structure will be subject to (wind and wave loads, approximating moored and berthed yacht and boat loads, tidal ranges, storm surges, etc.). The Basis of Design report will also discuss other constraints, such as existing permits and the current footprint of the

Wahoo Pier, and project area boundaries, as well as geotechnical information of the site conditions. Baird will also coordinate with Port & Marine Services for project design requirements.

- Producing a preliminary design of the pier, such as pile locations and dimensions
- Undertaking a structural design of the pier, such as determining materials, strengths, etc. This will include structural calculations for the dock system performed with the new proposed dock/pier materials.
- Producing technical drawings and exhibits needed for USACE and FDEP permits

Baird will coordinate with the client throughout this process to seek feedback as needed.

For ease of environmental permitting, costs, and construction, Baird intends to reuse the existing Wahoo pier's pile locations for the new replacement pier, including the interior pile guides.

3. Electrical Engineering

Baird will coordinate with Smith Engineering Consultants (SEC), Inc to undertake electrical engineering design services for the Wahoo Pier replacement. The electrical engineering scope will include:

- An initial site visit, review of project drawings and available record drawings.
- Electrical design for the relocation/re-installation of existing electrical systems throughout the existing docks to be replaced. The design anticipates the re-use of all existing land-based electrical services and distribution equipment, downstream transformers, panels, and marine power pedestals.
- Submission of 90% and 100% (final) plans and specifications for Baird and City review, and responding to comments of the 90% submittal as required.
- Preparing contract documents (plans and specifications), suitable for bidding, permitting, and construction in AutoCAD format.
- New wiring will endeavor to avoid the use of splice boxes where allowable by code (up to 270 degrees of turns).

4. SAV Survey and Benthic Assessment

Baird will coordinate with Pinnacle Ecological, Inc to conduct a Benthic assessment and coral resource survey for this project. Seagrasses, hardbottom, and coral resources have been reported to occur throughout the Florida Keys. The objective of the benthic assessment and coral resource survey will be to identify and quantify resources including, but not limited to, seagrass, rhizoidal macroalgae, stony corals, octocorals, and hardbottom occurring in vicinity of the proposed project, which could be impacted by the project's proposed marine construction activities. The survey area will include adequate coverage to identify and delineate resources occurring in the survey area and will also include a buffer area to document adjacent resources.

The survey will be conducted in two phases in accordance with recommendations by the NMFS (1999 and 2002). Observations by Pinnacle's scientists during Phase I survey activities will determine where seagrasses, hardbottom, and coral resources are present in the project area and Phase II survey activities will be implemented to quantify densities of those resource. All corals listed under the Endangered Species Act (ESA) will be identified and clearly mapped.

Phase I

The first phase will be a preliminary visual reconnaissance of the entire survey area to identify and delineate existing marine resources including submerged aquatic vegetation (SAV) including seagrasses and macroalgae, hardbottom, stony corals, octocorals, and other essential fish habitat (EFH). The proposed survey area has been identified in Figure 1. A team of scientific divers experienced at identifying benthic marine

resources under similar conditions will delineate the boundaries of benthic resources including SAV and hardbottom habitat by recording a georeferenced navigational target associated with the edge of each seagrass bed or hardbottom habitat observed. Benthic resources observed during the survey will be mapped and their locations will be plotted onto remote sensing data or aerial photography. Qualitative video and/or still photographic data will be collected for identification verification of SAV, hardbottom, corals, oysters, and other colonizing marine resources observed during the benthic resource survey. Phase I will provide a general overview of what resources are present in the survey area and where those resources occur to best implement avoidance and minimization in project planning and design.

Phase II

The second phase will be used to determine the general health, cover and densities of resources identified during Phase I of the survey. Scientists will estimate percent cover and frequency of occurrence for SAV using a combination of visual estimation and quantitative sampling methods. It will be important to understand the general densities and species richness for basic project planning. Percent cover of SAV will be determined using a visual estimation during a random swim through delineated habitats. Additionally, quantitative data will also be collected along modified belt transects distributed across seagrass beds and hardbottom habitats observed during Phase I. Belt transects will be conducted in situ by a scientific diver equipped with a 1.0-meter² (10.7-foot²) quadrat (1.0 meter x 1.0 meter [3.3 feet x 3.3 feet]). Data collected along the belt transects will describe percent cover and frequency of occurrence for SAV resources colonizing habitats in the survey area. In seagrass habitat identified during the survey, shoot density data will also be collected. At each quadrat location scientific divers will collect seagrass percent cover and note the presence of flowering and general health condition for each seagrass species observed. Seagrass percent cover will be determined using the Braun-Blanquet scale of abundance (Braun-Blanquet, 1932). A Braun-Blanquet score will be determined for each seagrass species, total seagrass, and macroalgae. Additional data collected at each quadrat may include seagrass frequency of occurrence and shoot density for seagrass resources.

In areas identified as hardbottom habitat, benthic coverage data will be collected along modified belt-transects using the quadrat based Benthic Ecological Assessment for Marginal Reefs (BEAMR) methodology (Lybolt and Baron, 2006). Data will be collected using 1.0-meter² quadrats positioned along the transect. BEAMR data collection will include maximum hardbottom relief, sediment depth, and percent cover of sessile benthos within each quadrat. Scientists will make visual estimates of the percent cover of all sessile benthos. Sessile benthos will be pooled into 21 major functional groups, including: sediment, bare hard substrate, rubble, macroalgae (fleshy and calcareous), turf algae, encrusting red algae, cyanobacteria, sponges, hydroids, octocorals, scleractinian corals, tunicates, bryozoans, sessile worms, anemones, zoanthids, bivalves, *Millepora* spp., wormrock, echinoderms, and barnacles. Each functional group will be given a percent cover value from 0-100%, and the total percent cover of all functional groups within a quadrat will add up to 100%.

ESA corals will be identified and their positions recorded during the preliminary visual reconnaissance. At each hardbottom sample site, a dedicated survey was conducted to identify and document ESA listed species. Colony dimensions and general conditions will be recorded for each ESA coral identified during the survey. Additional data that will be collected for each ESA coral will include: percent (%) live tissue, percent (%) recent mortality, stress indicators, visible health, and the presence of coral disease.

Other data collected during the benthic assessment and coral resource survey will include identification of biota observed during the survey including macroalgae, sponges, and fishes. Biota will be identified to lowest practical level in the field. Species of special concern also will be noted if observed during the benthic assessment and seagrass survey including manatee, sea turtles, and smalltooth sawfish.

5. FDEP and USACE Permitting

Baird will incorporate results from the previous steps (1 – 4) to prepare permitting application and forms for regulatory authorities such as the FDEP and USACE. Services here include:

- Permitting Applications and Forms, based on preliminary design drawings
 - Verification of Exemption application to the Florida Department of Environmental Protection (FDEP).
 - Nationwide Permit (NWP) 3- Maintenance or State Programmatic General Permit (SPGP) to the U.S. Army Corps of Engineers (USACE).
 - Provide USACE application package to NOAA Florida Keys National Marine Sanctuary (FKNMS) to facilitate their review.
- Permit Submission
 - Includes up to \$2,000 in permit application fees paid by Baird at the time of submittal.
- Permitting Coordination
 - Manage and track permit applications through agency review.
 - Respond to up to two (2) rounds of Requests for Information (RFIs) or meetings from each agency.
- Permitting Meetings

Assumptions

- Baird reserves the right to rely upon work products prepared by others. This includes, but is not limited to engineering drawings, calculations, surveys, geotechnical reports, environmental studies, or other work products.
- The City owns the bottom of the Garrison Bight outright, with no need for a submerged lands lease (SLL).
- The City will provide all necessary as-builts and cut-sheets for electrical system components and marine pedestals, and existing marine infrastructure
- The City will provide all existing geotechnical information in the vicinity of the project
- The existing pier's pile locations can be reused for permitting and construction purposes.
- All meetings will be undertaken online, including permitting meetings. Up to two (2) permitting meetings have been allowed for.
- Baird will pay application and permit fees up to two thousand dollars (\$2,000), to be reimbursed by the City at cost, in accordance with our Environmental Engineering Services agreement.
- The contractor will be responsible for obtaining a building permit through the City's Building Department.

Caveats, Exceptions, and Exclusions

The following items are excluded from this proposal but may be provided under separate authorization:

- City Building Department permitting (assumed to be the responsibility of the contractor)
- Submerged Lands Lease work
- Geotechnical investigations
- Detailed engineering design beyond the requirements of the permit application
- Services during construction
- Cultural resource assessments
- Mitigation or associated fees
- Coral relocation

- Project specifications
- Bid support
- Site visits/inspections, or other services during construction
- Separate consultations with other agencies typically handled by USACE.
- Additional permit fees beyond \$2,000.

Terms and Conditions

- Terms and conditions shall be accordance with our existing Environmental Services Agreement (RFQ 25-002, executed 4/28/2026).
- This proposal is offered on a Time and Materials basis.
- Please note that the costs provided below are budgetary estimates. Should additional funds be required, we will notify the City in advance of any additional effort required.

Costs

Table 1: Cost Breakdown

Scope Item	Cost
1. Survey Services	\$12,306
2. Engineering Design and Permitting	\$94,584
3. Electrical Engineering	\$12,676
4. SAV Survey and Benthic Assessment	\$35,136.06
5. FDEP & USACE Permitting	\$44,920
Total	\$199,622.06

Table 2: Cost Breakdown

Scope Item	Employee Category	Units/Hours	Unit/Hourly Rate	Cost	Task Cost
1. Survey Services					\$12,306
	Senior Professional III	4	\$294	\$1,176	
	(FKLS Below)				
	1-3 Man Total Station Conventional Field Crew (per day)	2	\$1,680	\$3,360	
	Water Work Including Boat (per day)	2	\$2,500	\$5,000	
	AutoCAD Drafting	18	\$150	\$2,700	
	Records Research	2	\$35	\$70	
2. Engineering Design for Permitting					\$94,584
	Principal	8	\$316	\$2,528	

Scope Item	Employee Category	Units/ Hours	Unit/Hourly Rate	Cost	Task Cost
	Senior Professional III	72	\$294	\$21,168	
	Senior Professional II	156	\$274	\$42,744	
	Staff Professional II	50	\$184	\$9,200	
	Staff Professional I	112	\$161	\$18,032	
	Support	8	\$114	\$912	
3. Electrical Engineering					\$12,676
	Senior Professional III	4	\$294	\$1,176	
	(SEC Below)				
	Principal	16	\$225	\$3,600	
	Engineer	16	\$190	\$3,040	
	Assistant Engineer	16	\$150	\$2,400	
	CADD Designer	12	\$105	\$1,260	
	Clerical	16	\$75	\$1,200	
4. SAV and Benthic Assessment					\$35,136.06
	Senior Professional III	4	\$294	\$1,176	
	(Pinnacle Below)				
	Principal Scientist/Manager	80	\$94.20	\$7,536	
	Senior Scientist	80	\$87.27	\$6,981.60	
	Scientist	80	\$81.53	\$6,522.40	
	Field Scientist	80	\$67.31	\$5,384.80	
	Geospatial Analyst	50	\$72.96	\$3,648	
	Scientific Diver	41.266	\$94.20	\$3,887.26	
5. FDEP & USACE Permitting					\$44,920
	Principal	24	\$316	\$7,584	
	Senior Professional III	72	\$294	\$21,168	
	Staff Professional I	88	\$161	\$14,168	
Permitting Application Expense Budget				\$2,000	
Total					\$199,622.06

We appreciate the opportunity to submit this proposal to the City of Key West, and we look forward to working with you.

Best regards,

A handwritten signature in blue ink, reading "David Frodsham".

David Frodsham, PE | Senior Civil/Coastal Engineer
Baird & Associates
E: dfrodsham@baird.com
M: 772-380-5491

CC: Gordon Thomson, PE