



THE CITY OF KEY WEST

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EXECUTIVE SUMMARY

TO: Patti McLauchlin, City Manager

CC: Todd Stoughton, Assistant City Manager
Christina Bervaldi, Finance Director

FROM: Kimberley Frazier, Project Manager
Kelly Crowe, Utilities Director

DATE: November 2, 2022

SUBJECT: Approving proposal from CH2M HILL, Engineers, Inc. under task order # 8-22 STM Engineering Services for the City of Key West Stormwater 10th Street and Harris Neighborhood Drainage Project.

Action Statement:

Authorize the City Manager to execute Task Order 8-22 STM from CH2M Hill, Engineers Inc.(CH2M) in the amount of \$278,861.82 for engineering services for the design of a tidal barrier, preliminary pump station sizing and associated improvements for the 10th and Harris Neighborhood Drainage Project and authorize any necessary budget transfers.

Background:

A design task order was issued to Perez Engineering per Resolution 21-013 to analyze drainage and design drainage improvements within the 10th and Harris neighborhood. The drainage design is substantially complete; however, a tidal barrier along Lake McKillip (adjacent to 10th Street) as identified in Resolution 21-013 was not part of Perez's design scope of work. The tidal barrier is an important infrastructure element that will help mitigate the effects of future sea level rise. Currently, king tides can flood portions of 10th Street along Lake McKillip. Sea level rise could exacerbate this flooding.

This first phase of design will only be addressing one side of the lake which is the largest stretch of low-lying area and most negatively affected. It is the intent of staff to address other smaller sections of the lake boundaries with additional sections of tidal barrier in future years. Staff will look for future grant funding opportunities to protect other immediate streets and provide better drainage performance.

City staff has received a task order proposal from CH2M to design the tidal barrier, *Key to the Caribbean - Average yearly temperature 77° F.*

MEMORANDUM

preliminarily size a pump station for future use and design associated roadway improvements within the project area. Staff selected CH2M as they are updating the current storm drainage master plan and were a team member in developing the City's Sea Level Rise (SLR) Design Policy. The design will follow the guidance set forth in the SLR Design Policy.

After Hurricane Irma in 2017, city staff applied for federal and state mandated grant programs for flood mitigation. This drainage project within Harris and 10th ranked high enough to be awarded Phase I Hazard Mitigation Grant Program (HMGP) funding for design. The HMGP program is administered by the Florida Division of Emergency Management (FDEM). A grant in the amount of \$669,950 (\$502,462.50 Federal funds with a City match of \$167,487.50) was awarded to the City of Key West and a funding agreement was entered into per Resolution 20-157.

Purpose and Justification:

The project concept is to install roughly 530 linear feet of tidal barrier along the 10th street side of Lake McKillip. We expect the tidal barrier to abate Lake McKillip tidal surface waters from intruding the street areas of 10th street. This would keep the new drainage system from being inundated with tidal surface waters, further improving drainage performance within the project area.

CH2M is the engineer for the City's 2012 and 2021 Stormwater Master Plan and update. Their staff has direct knowledge and experience with the city's topography, flood mapping and needs of the stormwater system. Due to their available staffing, city staff believe they are well equipped to provide a design that will meet our goals and work in tangent with the drainage system design by Perez Engineering. CH2M will be performing design under their General Engineering Services contract authorized per Resolution 17-207, extended for two-years per Resolution 20-142 and extended to December 31, 2022, per Resolution 22-171.

The Phase I design HMGP grant was awarded for \$669,950 with a 75% federal funding level. The design of the drainage system from Perez Engineering in the amount of \$445,410 leaves an available balance of \$224,540 for Phase I design costs. The remaining federal funds at a 75% funding rate will be \$168,405. The City's share will consist of the grant required 25% match of \$56,135 and an additional \$54,321.82 to fully fund the task order.

Strategic Plan:

Task order #8-22 STM is consistent with the Key West Forward Strategic Plan; Priority 2: Adaptation / Sea Level Rise, Goal 2: Critical Infrastructure Projects, Priority 4: Environmental Protection Goal 3: Near Shore Waters.

Options:

1. Approve the task order from CH2M HILL, Engineers, Inc. to provide design plans for a retaining wall system to detain tidal surface waters from inundating 10th Street area to provide more stormwater storage and divert stormwater through a treatment area before entering the lake.
2. Do not approve the task order from CH2M HILL, Engineers, Inc. to perform and continually experience roadway flooding along 10th street during each high tide and allow stormwater to stage up.

Financial Impact:

Federal funding for Phase 1 will remain unchanged at this time. FDEM has allocated their 75% share of federal funds in the amount of \$502,462.50 toward this project. The City of Key West is responsible for funding the remaining portion. A breakdown of current funding, the net change and adjusted cost sharing proportions are provided below.

Funding Source	Current Funding	Proposed Change	Total Share	Percent Share
Federal (Design)	\$502,462.50	\$0	\$502,462.50	69.4%
City of Key West	\$167,487.50	\$54,321.82	\$221,809.32	30.6%
Total	\$669,950.00	\$54,321.82	\$724,861.82	

Funds for Task Order 8-22 STM in the amount of \$278,861.82 will be utilized from account Utilities/Stormwater/Construction/Construction in Progress 402-3802-538-6500, Project ST38022102.

Recommendation:

Staff recommends Option #1 and authorizing the City Manager to execute Task Order 8-22 STM from CH2M HILL, Engineers, Inc. for the tidal barrier design associated with the 10th and Harris Drainage Project in the amount of \$278,861.82 and authorize any necessary budget transfers.