



COMMISSION MEMORANDUM

TO: Honorable Mayor and Members of the City Commission

FROM: Eric Carpenter, City Manager

DATE: September 11, 2024

TITLE: A RESOLUTION OF THE MAYOR AND CITY COMMISSION OF THE CITY OF MIAMI BEACH, FLORIDA, ACCEPTING THE RECOMMENDATION OF THE CITY MANAGER TO APPROVE THE MACARTHUR CAUSEWAY WATER MAIN UPSIZING PROJECT, AS A NEW TASK UNDER THE AGREEMENT PURSUANT TO REQUEST FOR QUALIFICATIONS (RFQ) 2022-122-ND, ENTERED INTO FOR ENGINEERING SERVICES FOR WATER AND WASTEWATER SYSTEM PROJECTS BETWEEN THE CITY AND HAZEN AND SAWYER, P.C.; AND AUTHORIZING THE TASK ORDER TO COMPLETE THE ENGINEERING AND CONSULTING SERVICES REQUIRED FOR THE REPLACEMENT OF APPROXIMATELY 9,200 LINEAR FEET OF AGING WATER MAIN INFRASTRUCTURE FROM THE MIAMI-DADE COUNTY WATER AND SEWER DEPARTMENT WATER METER ON WATSON ISLAND TO THE TERMINAL ISLE WATER BOOSTER STATION IN THE NOT TO EXCEED PROJECT AMOUNT OF \$926,078.00.

RECOMMENDATION

The Administration recommends approving the Resolution.

BACKGROUND/HISTORY

On March 18, 2020, the Mayor and City Commission (City Commission) accepted the recommendation of the Finance and Economic Resiliency Committee (FERC) at its February 28, 2020 meeting, accepting the Five-year Critical Needs Capital Plan for the City's water and wastewater system and to commence a rate study of the water and wastewater utility to determine financial capacity for the water and wastewater improvements, via Resolution 2020-31211.

On January 20, 2022 the City Commission approved Request For Qualifications (RFQ) 2022-122-ND, for engineering services for water and wastewater system projects.

On June 22, 2022, the City Commission approved, via Resolution No. 2022-32175, a request to enter into negotiations with Hazen and Sawyer, P.C., ("Hazen and Sawyer") the top ranked proposer and A&P Consulting Transportation Engineers Corp ("A & P Consulting"), the second ranked proposer (subsequently the contract was reassigned from A&P Consulting to CHA Consulting, Inc. ("CHA Consulting") on April 28, 2023 via City Commission approval), and to execute an agreement upon conclusion of successful negotiations with the Administration.

On February 8, 2023, the City and Hazen and Sawyer entered into an agreement for engineering services for water and wastewater system projects, having an initial term of three (3) years, with two (2) one-year renewal terms.

ANALYSIS

The MacArthur Causeway water main upsizing project is a priority water infrastructure project in Miami Beach. Its intent is to design the replacement of aging water infrastructure, to ensure safety and reliability of the City's water system, in accordance with the City of Miami Beach 2019 Water System Master Plan (Master Plan).

The existing water main is eighty-six years old, one of the oldest in the City, and one of five water supply interconnections with the Miami-Dade Water and Sewer Department. This water main supplies water to the Venetian Islands, Palm Island, Hibiscus Island, Star Island, and the Terminal Isle water booster station, which transmits water into South Beach. The objective of this project is to avoid the failure of one of the City's most critical sections of water infrastructure and improve water pressure for water services located upstream of the water booster, including the Venetian Island, Palm Island, and Hibiscus Island.

The City has conducted several citywide studies to identify improvements needed throughout the City's infrastructure. The Master Plan identified the need for the southern MacArthur Causeway 20-inch water main to be upsized to a new 30-inch water main and recommended that the project be implemented within the year 2020 – 2025 timeframe.

The Master Plan determined that most sections of the existing MacArthur Causeway 20-inch water main have a high consequence of failure (CoF), a composite score calculated for each water main segment based on the potential health and social consequences of pipeline failure, in consideration of the amount of flow, land use type, and proximity to major roads.

This same plan identified probability of failure (PoF) factors in all water main sections determined by remaining useful life. Most sections of the existing 20-inch MacArthur Causeway water main were classified as having a high PoF. The combination of a high PoF and CoF leads to the prioritization of this water main replacement project as part of the 5-Year Water and Sewer Critical Needs Plan.

Pursuant to RFQ 2022-122-ND, the City requested a proposal from Hazen and Sawyer for this project.

Hazen and Sawyer provided the City a proposal to conduct the preliminary data gathering/preparation, design drawings, specification development, permitting, and post-design support services under executed agreement No. 2022-122-01 for engineering services for water and wastewater system projects.

Under the proposal, this task order will; (1) conduct necessary preliminary data gathering, surveying, and initial engineering to verify utilities and confirm the accuracy of existing information to determine if additional information is needed; (2) prepare drawings and specifications for the installation of the proposed MacArthur Causeway water main, which includes all necessary information to accommodate the proposed civil improvements; (3)

develop the required permit application packages to obtain the permits/regulatory approvals/reviews of Florida Department of Health and Florida Department of Transportation; and (4) perform the post-design and construction support services of preparing a conformed set of drawings during the bidding process, attending a pre-bid meeting, responding to Requests for Information with necessary addenda during the bidding and construction process, reviewing shop drawings, and assisting with project close-out and final certification.

The basic services to be performed by Hazen and Sawyer are in accordance with the contract rate in the amount of \$811,448. Hazen and Sawyer is requesting approval to hire Langan Engineering & Environmental Services, Inc., an approved subconsultant, to perform geotechnical engineering services at a lump sum of \$24,000, and not per the contract hourly rates. Additionally, Hazen and Sawyer is requesting approval to hire Keith and Associates, Inc. to perform topographic survey services and subsurface utility engineering services at the amount of \$90,630. The total amount for design services is \$926,078.00. Public Works has reviewed and confirmed that the required ancillary services are fair and reasonable.

The Administration will be; (1) adding Keith and Associates, Inc. as a new subconsultant, pursuant to the authority established in Section 2.19 of the agreement; (2) approving Hazen and Sawyer's subconsultants Langan Engineering & Environmental Services, Inc., and Keith and Associates, Inc., pursuant to the authority established in Section 2-369 of the City Code for purchases below the formal bid threshold for construction-related services.

Once completed, this project will significantly improve the reliability of the City's water supply system, by replacing and upsizing the critical MacArthur Causeway water main, which is one of five interconnections with Miami-Dade County. This replacement project will improve the reliability of the City's infrastructure, ensure public health, and ensure public safety.

FISCAL IMPACT STATEMENT

Account Code: 418-0815-061357-29-418-561-00-00-00-28520

The total project budget for design services is \$926,078.00. This project will provide a cost estimate for the proposed infrastructure improvements throughout design. Construction is estimated to cost \$16 million - \$19 million.

This project is funded by the City's Five-Year Water and Sewer Critical Needs Capital Improvement Plan.

CONCLUSION

The approximate 9,200 linear feet of the 86-year-old MacArthur Causeway's 20-inch Water Main is a critical asset of the City's water infrastructure. It supplies water from the Miami-Dade County water meter at Watson Island to the water booster station at Terminal Isle, and subsequently to South Beach (for potable water consumption and for life safety

fire supply). Its replacement and upsizing is a high priority project as part of the adopted Water and Sewer Critical Needs from the 2019 Master Plan.

In order for the City to advance the replacement of the MacArthur Causeway's water main upsizing project, the Administration recommends that the Mayor and City Commission adopt the Resolution approving the Task Order with Hazen and Sawyer.

Applicable Area

South Beach

Is this a "Residents Right to Know" item, pursuant to City Code Section 2-17?

Yes

Is this item related to a G.O. Bond Project?

No

Department

Public Works

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Condensed Title

Approve MacArthur CSWY Water Main Upsizing Project, RFQ 2022-122-ND. PW