


COUNCIL COMMUNICATION

	Number:	22-480	Meeting:	October 24, 2022
	Agenda Item:	6E	Roll Call:	22-1607
	Submitted by:	Jonathan A. Gano, P.E., Public Works Director, and Steven L. Naber, P.E., City Engineer		

AGENDA HEADING:

Ordering construction of the following: Des Moines Levee Alterations - Phase C - Receiving bids, (11-22-22), and Setting date of hearing, (12-12-22). Construction Estimate - \$15,400,000.

SYNOPSIS:

Recommend the City Council order construction of the improvement and set dates to receive bids and hold a public hearing, as required by Iowa Code, utilizing the method of financing referenced below. This public improvement project includes improvements to the levee system along the Des Moines River from the confluence of the Raccoon River to S.E. 14th Street and is part of the City's Flood Mitigation Program with the goal of mitigating flood risk and meeting the requirements for Federal Emergency Management Agency (FEMA) accreditation of the downtown levees. Improvements include earthen levee raises, gatewell structure modifications, pipe penetration improvements (sewer replacement and abandonments), and construction of seepage relief trenches to increase levee stability.

FISCAL IMPACT:

Amount: \$15,400,000 (City Engineer's Estimate)

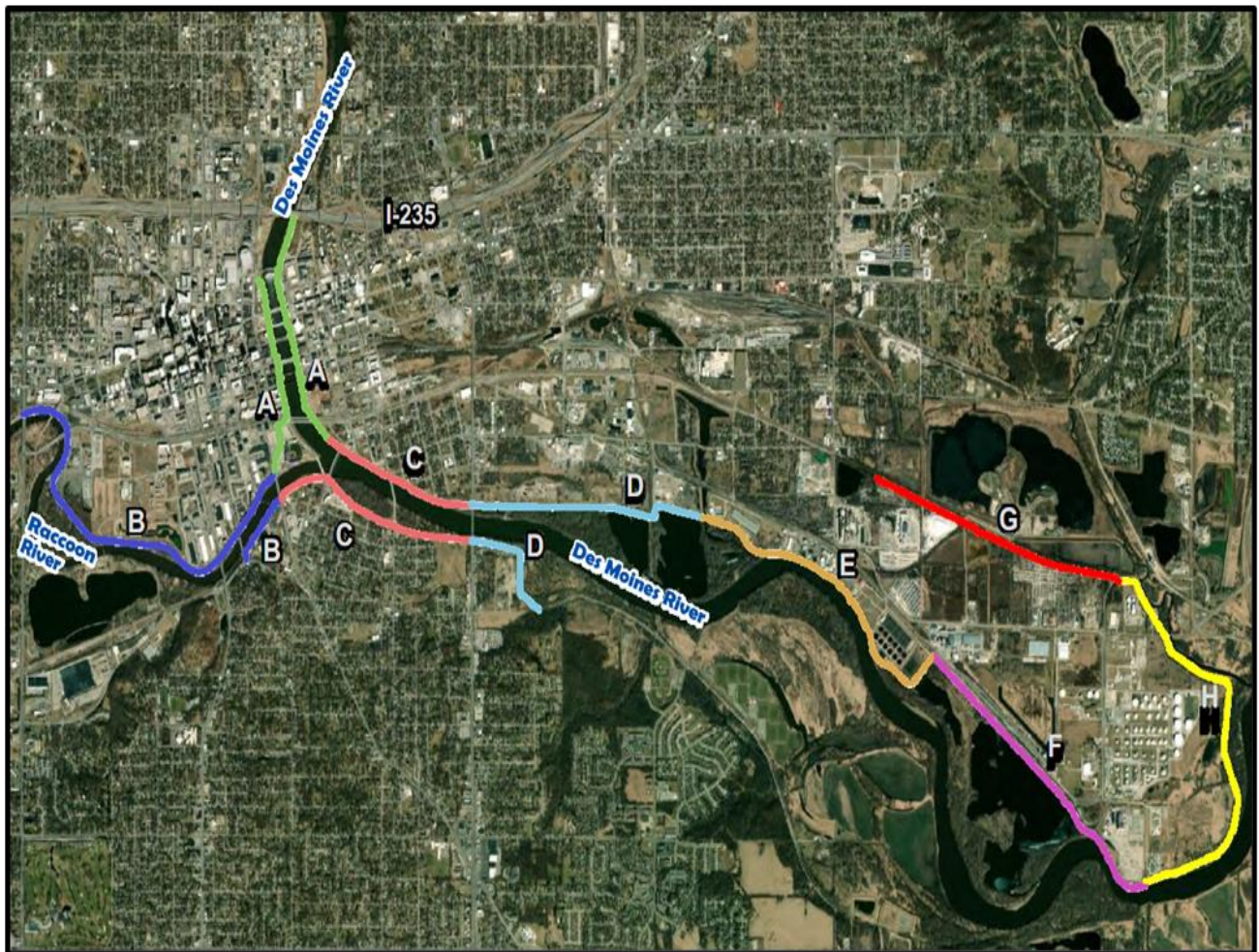
Funding Source: 2022-23 CIP, Page 106, Flood Mitigation Improvements, SM087, Being: Storm Water Utility Funds and Flood Mitigation Sales Tax

ADDITIONAL INFORMATION:

- The Engineering Department has prepared plans, specifications, form of contract documents, and City Engineer's estimate for the construction of the Des Moines Levee Alterations - Phase C, Activity ID 08-2020-006. The improvement includes earthen levee raise and widening, earthwork, excavation, clearing, revetment, sheet piling, gatewell raise, sewer pipe and repair, seepage relief pipe, swing gates, articulated concrete block, utility abandonment, rain garden, Portland Cement Concrete (PCC) pavement, Hot Mix Asphalt (HMA) pavement, light pole relocation, erosion control, seeding, other incidental items and miscellaneous associated work including cleanup; all in accordance with the contract documents, including Plan File No. 638-222/388, with improvements located along the Des Moines River from the confluence of the Raccoon River to S.E. 14th Street, Des Moines.
- The estimated construction cost is \$15,400,000. The proposed plans, specifications, and form of contract documents are available for public inspection in the Des Moines City Engineer's Office.

- The United States Army Corps of Engineers (USACE) released the Des Moines River Regulated Flow Frequency Study in January 2011, which showed a higher risk of flooding along the Des Moines and Raccoon Rivers and the existing levees in downtown Des Moines do not meet the standards for FEMA accreditation of levees provided in Title 44 of the Code of Federal Regulations (44 CFR) Section 65.10 of the National Flood Insurance Program regulations impacting FEMA flood hazard mapping.
- In response, the City worked with USACE to develop a Section 408 Concept Submittal to improve the levee system to reduce flood risk and satisfy FEMA accreditation requirements and work through 33 USC 408 (Section 408) requirements. The Section 408 Concept Submittal was approved by USACE in July 2018.
- The Section 408 Concept proposes improving approximately 8.8-miles of City levees along the Des Moines and Raccoon Rivers (known as the DM I, DM II, and DM III levee systems) and approximately seven (7) miles of USACE levee along the Des Moines River and Fourmile Creek, which is hydraulically connected to the City levee system, in multiple project phases shown below.

LEVEE IMPROVEMENTS PHASING MAP



- The City has completed several flood mitigation improvement projects, including elevating the Red Pedestrian Bridge, stormwater closure improvements, replacement and/or improving

multiple storm water pump stations along the levee system, and interior drainage improvements including storm sewer capacity improvements and constructing a storm water detention facility.

- Phase A, which incorporates the upstream reaches of the DM-I and DM-II levee systems along the Des Moines River upstream of the confluence with the Raccoon River, was completed in 2021.
- Phase B, which incorporates reaches of the DM-II and DM-III levee systems along the Raccoon River upstream of SW 3rd Street, is currently under construction and targeting completion by the end of 2023.
- Phase C incorporates the downstream reaches of the DM-I and DM-III levee systems along the Des Moines River from approximately the confluence with Raccoon River to S.E. 14th Street. Phase C levee system improvements include earthen levee raises, gatewell structure modifications, pipe penetration improvements (sewer replacement and abandonments), and construction of seepage relief trenches to increase levee stability. Construction of this Phase C public improvement project is anticipated to begin in spring 2023 and be completed at the end of 2024.
- Phases D, E, F, G, and H, are currently under design and anticipated to be constructed between 2024 and 2028.
- The design and construction staging of this project has been coordinated with the Iowa Confluence (ICON) Water Trails proposed improvements at the Scott Avenue Dam.
- The ICON Water Trails project and Phases B and C of the levee system improvements will require closures of the John Pat Dorrian Trail, Carl Voss Trail, and Meredith Trail during construction. Trail detours will be posted during the closures. The John Pat Dorrian Trail between Scott Avenue and S.E. 14th Street on the north side of the Des Moines River is anticipated to be closed for the majority of 2023 to accommodate construction of the ICON Water Trails project and Phase C levee system improvements. On the south side of the Des Moines River, the Meredith Trail between S.W. 3rd Street and Scott Avenue, as well as the Carl Voss Trail between Scott Avenue and S.E. 14th Street, are anticipated to be closed the majority of 2024 to accommodate construction of the ICON Water Trails project and Phase C levee system improvements. All closures and detours will be coordinated with the Parks and Recreation Department for appropriate detour routes, signage and appropriate 2-week notice of the trail closures to the general public.
- A virtual public meeting was held using Zoom on September 30, 2021, to present the Phase B and C levee system improvement projects and the anticipated construction staging.
- Bids for Phase C levee system improvements were previously received on February 8, 2022. Due to the lowest bid being 30.18% over the project estimate, all bids were rejected at the March 7, 2022, Council meeting. To lower construction costs, a new borrow site for fill material has been added, an option to use vinyl sheet piling instead of only steel has been added, and more time is being allowed to complete certain phases of this Phase C project.

PREVIOUS COUNCIL ACTION(S):

Date: March 7, 2022

Roll Call Number: [22-0372](#)

Action: [On](#) Des Moines Levee Alterations – Phase C to reject all bids on Des Moines Levee Alterations – Phase C and to close the hearing on the plans, specifications, form of contract documents and Engineer’s estimate. ([Council Communication No. 22-092](#)) Moved by Gatto to adopt. Second by Boesen. Motion Carried 7-0.

BOARD/COMMISSION ACTION(S): NONE

ANTICIPATED ACTIONS AND FUTURE COMMITMENTS:

Anticipated actions include public hearing, receive and file bids, designate lowest bidder, and approve contract and bond; also, partial payments to the contractor and final acceptance of work.

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