


# COUNCIL COMMUNICATION

	Number:	22-569	Meeting:	December 12, 2022
	Agenda Item:	6	Roll Call:	22-1859
	Submitted by:	Steven L. Naber, P.E., City Engineer		

**AGENDA HEADING:**

Authorizing submittal of Federal Surface Transportation Block Grant (STBG) Fiscal Year (FY) 2027 applications to the Des Moines Area Metropolitan Planning Organization (MPO).

**SYNOPSIS:**

The MPO is currently soliciting project applications for STBG funds for Federal FY 2027. City staff recommend submitting applications for the following projects:

1. Douglas Avenue Corridor Improvements - Merle Hay Road to Lower Beaver Road
2. East Army Post Road Improvements – Southeast 14th Street to Indianola Avenue
3. University Avenue Bridge over the Des Moines River Rehabilitation
4. Intelligent Transportation Systems Upgrade

Additionally, the MPO anticipates soliciting project applications for Transportation Alternatives Program (TAP) funds for Federal FY 2027 in January 2023.

**FISCAL IMPACT:**

Amount: Local matching funds for the following projects are included in the 2022-23/2026-27 Capital Improvement Program (CIP) or will be included in future CIPs if the applications are successful.

Funding Source:

1. Douglas Avenue Corridor Improvements – Merle Hay Road to Lower Beaver Road
 

FY 2027 STBG Funds Request	\$ 1,750,000
FY 2026 STBG Funds Received	\$ 2,250,000
Anticipated City Funds	\$ 6,000,000
<i>(2022-2023 CIP, Page 144, Douglas Avenue Merle Hay Road to Lower Beaver Road, ST289)</i>	
Total Estimated Project Cost	\$10,000,000
  
2. East Army Post Road Improvements – Southeast 14th Street to Indianola Avenue
 

FY 2027 STBG Funds Request	\$ 4,000,000
Anticipated City Funds	\$ 8,000,000
<i>(Budget Request for CIP FY 2023-2024 Budget, FY 2025-2027 Plan)</i>	
Total Estimated Project Cost	\$12,000,000

3. University Avenue Bridge over the Des Moines River Rehabilitation	
FY 2027 STBG Funds Request	\$ 1,250,000
FY 2026 STBG Funds Received	\$ 1,750,000
Anticipated City Funds ( <i>Future CIP Budget Request</i> )	\$ 1,000,000
Total Estimated Project Cost	\$ 4,000,000
4. Intelligent Transportation Systems Upgrade	
FY 2027 STBG Funds Request for Phase 7	\$ 1,000,000
STBG Funds Previously Received	\$ 3,500,000
FY 2022 \$ 500,000 STBG for Phase 2	
FY 2023 \$ 500,000 STBG for Phase 3	
FY 2024 \$ 500,000 STBG for Phase 4	
FY 2025 \$ 500,000 STBG for Phase 5	
FY 2026 \$1,500,000 STBG for Phase 6	
Anticipated City Funds	\$1,000,000 to \$1,500,000 per year
( <i>2022-2023 CIP, Page 174, Traffic System Operation Improvements, TR097</i> )	
Total Estimated Project Cost	\$12,500,000

#### **ADDITIONAL INFORMATION:**

- The MPO will award STBG Program funds to transportation projects throughout the region.
- The MPO is currently soliciting project applications for STBG for Federal FY 2027. The STBG applications must be submitted to the MPO by January 6, 2023. Historically, in recent years, approximately \$13 million has been made available in STBG funding for the Greater Des Moines region.
- The MPO is considering five (5) major categories of STBG projects:
  - Roadway Projects/System Capacity
  - Bridge
  - Major Reconstruction/Replacement
  - System Optimization
  - Transit
- Staff reviewed potential STBG eligible projects and recommends submitting applications for the following projects for FY 2027 STBG funding:
  1. Douglas Avenue Corridor Improvements – Merle Hay Road to Lower Beaver Road
    - The Douglas Avenue Corridor between Merle Hay Road and Lower Beaver Road had a crash rate that was more than double the statewide average for a corridor of similar context between 2013 and 2017, with primary crash types being rear-end crashes, broadside crashes and sideswipe crashes. This corridor has gaps in the sidewalk network and many sidewalks are less than four (4) feet in width and have minimal to no parkway buffer between the roadway and sidewalk.

- The Douglas Avenue Coalition completed a corridor plan in February 2020. The goal of the corridor plan was to create a vision for the Douglas Avenue corridor from Merle Hay Road to Martin Luther King Jr. Parkway. The corridor plan proposes Douglas Avenue from Merle Hay Road to Lower Beaver Road be converted to a 3-lane cross-section with the goals of improving vehicle and pedestrian safety by calming traffic and generating additional economic development along the corridor.
- On April 20, 2020, by Roll Call Number 20-0610, City Council directed staff to submit a proposal to the Iowa Department of Transportation (IDOT) for the Douglas Avenue (U.S. Highway 6) Lane Reduction Pilot Project, converting Douglas Avenue from Merle Hay Road to Lower Beaver Road from a 4-lane cross section to a 3-lane cross section. The proposal includes Pilot Project Evaluation Criteria to determine if the Pilot Project is successful (and permanent improvements should be considered) or not (and Douglas Avenue should be restored to its original 4-lane cross section).
- On February 8, 2021, by Roll Call Number 21-0175, City Council approved IDOT Agreement No. 2021-6-069 for Douglas Avenue (U.S. Highway 6) from Merle Hay Road to the Des Moines River.
- In 2021, in accordance with the IDOT Agreement and at the request of the City, IDOT constructed the Douglas Avenue (U.S. Highway 6) Lane Reduction Pilot Project, converting Douglas Avenue from Merle Hay Road to Lower Beaver Road from a 4-lane cross section to a 3-lane cross section.
- In 2022 and 2023 the Pilot Project is being evaluated, comparing “after Pilot Project” traffic data with “before Pilot Project” traffic data.
- Should the Pilot Project Evaluation Criteria be considered effective as defined in the proposal, the City will begin design of permanent improvements for the corridor. The design of the permanent improvements would be submitted to the IDOT for review and approval prior to anticipated construction in 2026-2027.
- Permanent improvements could include removal and replacement of roadway and curbs to provide a 3-lane roadway section, new sidewalks, and intersection improvements and could cost an estimated \$10,000,000 to improve approximately two (2) miles of the Douglas Avenue Corridor between Merle Hay Road and Lower Beaver Road.
- The City applied for \$4,000,000 FY 2026 STBG funding last year for the Douglas Avenue Corridor Improvements - Merle Hay Road to Lower Beaver Road, but received \$2,250,000. City staff recommend applying for an additional \$1,750,000 in STBG funding for the Douglas Avenue Corridor Improvements - Merle Hay Road to Lower Beaver Road.

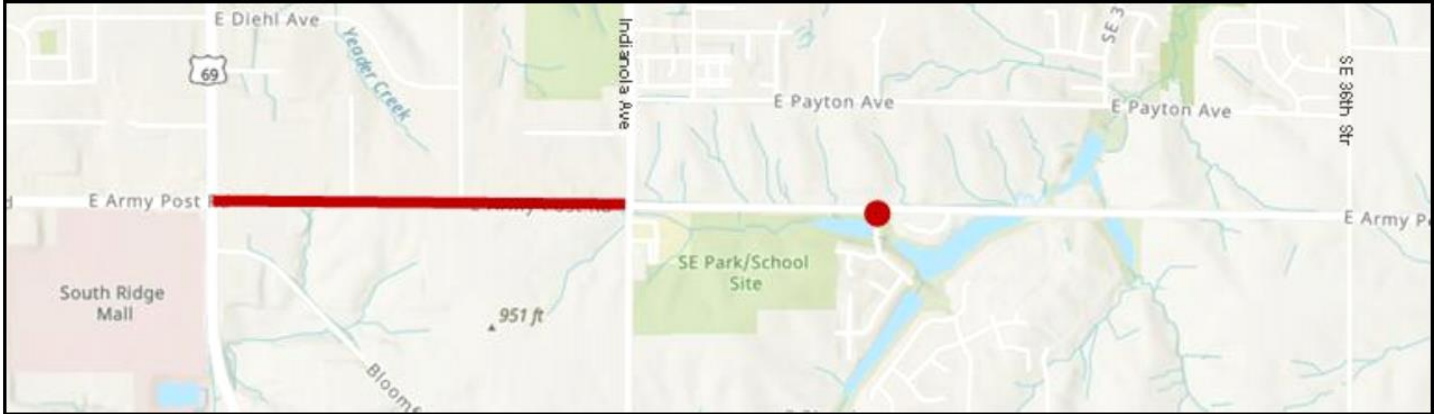
- Douglas Avenue at 39th Street looking east taken after 2021 Pilot Project Installation:



## 2. East Army Post Road Improvements – Southeast 14th Street to Indianola Avenue

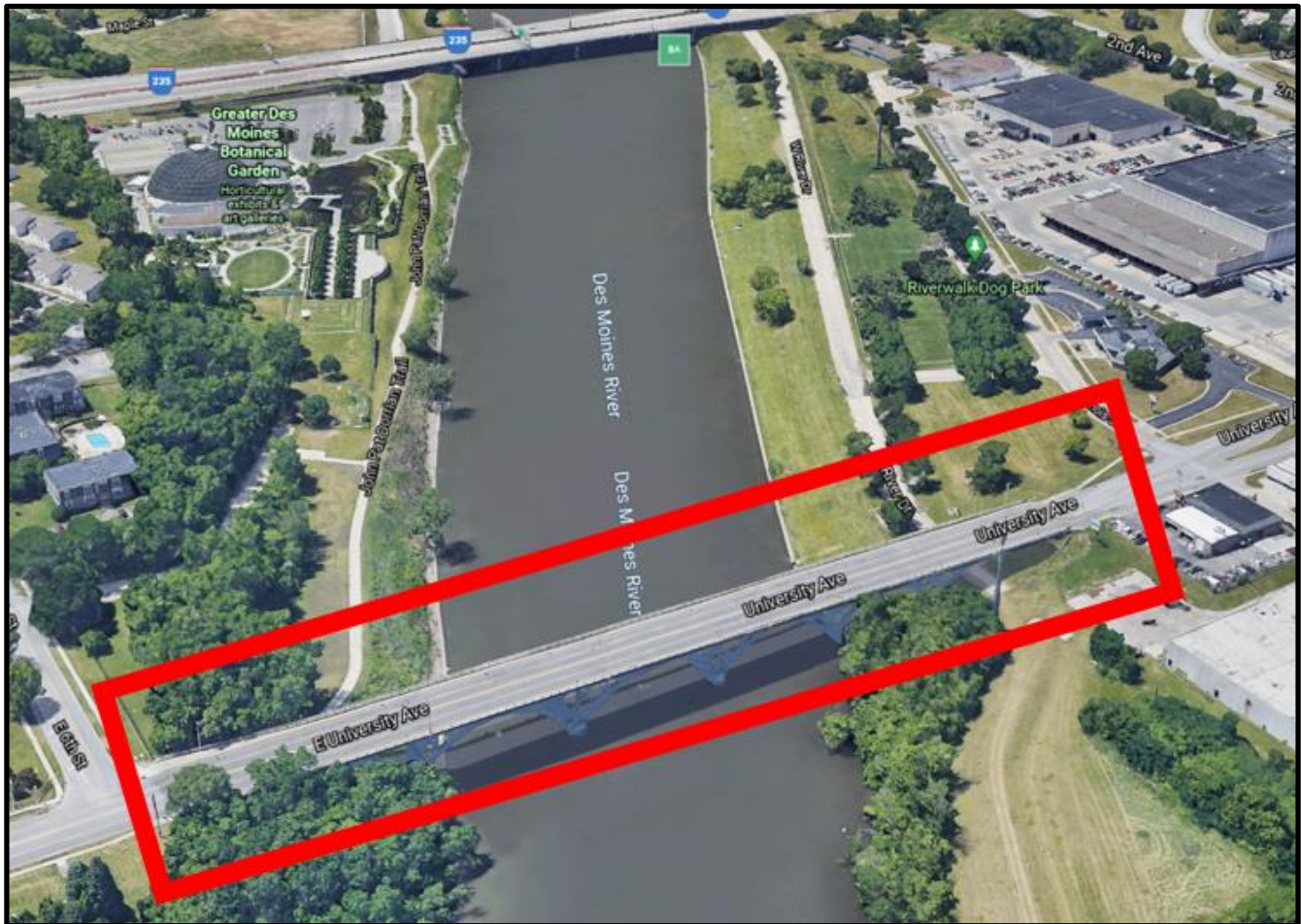
- In 2022, a traffic study was completed for the E Army Post Road corridor from Southeast 14th Street to the east corporate limits. The purpose of the study was to evaluate existing and proposed conditions along the corridor and recommend improvements to address traffic safety and future development. The study showed that over 200 crashes occurred on the entire study corridor over a 5-year period, with the segment between Southeast 14th Street and Indianola Avenue experiencing a crash rate 30% higher than the statewide average for similar corridors.
- East Army Post Road, east of Southeast 14th Street, is a 2-lane roadway with a rural cross section and no pedestrian or bicycle facilities.
- While improvements are recommended for the entire corridor between Southeast 14th Street and the east corporate limits, based on the high crash rate, existing commercial development and planned Exodus development in this area, Engineering staff recommends phasing improvements beginning with the section between Southeast 14th Street and Indianola Avenue. Proposed improvements include reconstruction of the roadway to a 3-lane, urban cross-section, storm sewer, construction of a shared-use path on the north side, filling in sidewalk gaps on the south side, and medians for access management where possible.

- Staff also recommends including the proposed roundabout at the intersection with Three Lakes Parkway to coincide with the planned roundabout at SE 36th Street and E Army Post Road.
- City staff recommend applying for \$4,000,000 in STBG funding for this project.



### 3. University Avenue Bridge over the Des Moines River Rehabilitation

- The University Avenue Bridge over the Des Moines River is an 850-foot long, six-span open spandrel concrete arch bridge that was constructed in 1920. The bridge carries four (4) lanes of traffic with 17,300 vehicles per day on average (2016 traffic count by IDOT) and has sidewalks on both sides. This University Avenue corridor is a primary east-west crossing of the Des Moines River north of downtown Des Moines and serves as a truck route, priority transit corridor, primary emergency response route, and incident bypass route for I-235.
- Based on recent bridge inspections, the University Avenue Bridge over the Des Moines River needs targeted repairs and rehabilitation strategies to preserve and improve the structural integrity of the bridge.
- The City applied for \$2,000,000 FY 2026 STBG funding last year for the University Avenue Bridge over the Des Moines River Rehabilitation, but received \$1,750,000. With the estimated construction cost of the bridge rehabilitation project increasing to \$4,000,000, City staff recommend applying for an additional \$1,250,000 in STBG funding.



#### 4. Intelligent Transportation Systems Upgrade

- The City of Des Moines ITS Master Plan Report was completed and adopted by the City Council on November 19, 2018, by Roll Call Number 18-1895. The Report outlines a 7-phase implementation plan to upgrade of the City's ITS systems (traffic signals, communication network, video camera observation system, central management software, etc.), which will enable the City to actively manage traffic during peak travel times, special events, construction detours, and emergency situations. This capability will provide safer and more efficient travel for people throughout the region as they travel to, from, or within Des Moines.
- This project consists of updating the City's traffic signal controllers, central management software, transportation communication system, and video observation camera system. The total estimated project cost is \$12.5 million. The City plans to request \$1,000,000 in FY 2027 funds for Upgrade Phase #7. Previously, STP funds in the amounts of \$500,000 (FY 2022 – Phase 2), \$500,000 (FY 2023 – Phase 3), \$500,000 (FY 2024 – Phase 4), \$500,000 (FY 2025 – Phase 5), and \$1,500,000 (FY 2026 – Phase 6) were awarded. Phases 1 construction was substantially completed in 2021. Phase 2 construction is nearing completion and should be complete in spring 2023. Phase 3 construction will begin in spring 2023 and be completed in spring 2024.

**PREVIOUS COUNCIL ACTION(S):**

Date: December 6, 2021

Roll Call Number: [21-1792](#)

Action: [Authorizing](#) submittal of Federal Surface Transportation Block Grant (STBG) and Transportation Alternative Program (TAP), also known as Surface Transportation Block Grant Set-Aside Program, Fiscal Year (FY) 2026 applications to the Des Moines Metropolitan Planning Organization (MPO). ([Council Communication No. 21-511](#)) Moved by Gatto to adopt. Motion Carried 7-0.

**BOARD/COMMISSION ACTION(S): NONE**

**ANTICIPATED ACTIONS AND FUTURE COMMITMENTS:**

Approval of project agreements with the IDOT.

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