MOBILITY DEPARTMENT
OPERATIONS DIVISION
BRIDGE & PUMP STATION MAINTENANCE & OPERATIONS
AUDIT 24-18
DECEMBER 17, 2024

City of Tampa
Jane Castor, Mayor

Internal Audit Department
315 E. Kennedy Boulevard
Tampa, Florida 33602
Office (813) 274-7159

December 17, 2024

Honorable Jane Castor
Mayor, City of Tampa
1 City Hall Plaza
Tampa, Florida

RE: Bridge & Pump Station Maintenance & Operations, Audit 24-18

Dear Mayor Castor:

Attached is the Internal Audit Department's report on Bridge & Pump Station Maintenance & Operations, Audit 24-18. We thank the management and staff of the Mobility Department for their cooperation and assistance during this audit.

Sincerely,

/s/ Christine Glover

Christine Glover
Internal Audit Director

cc: John Bennett, Chief of Staff
Jean Duncan, Administrator of Infrastructure and Mobility
Dennis Rogero, Chief Financial Officer
Vik Bhide, Mobility Director
Bryan Rodger, Mobility Operations Manager
Megan Birnholz-Couture, Assistant City Attorney

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Not Available to Sign

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Senior Auditor

/s/ Vivian Walker

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Lead Senior Auditor

/s/ Christine Glover

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Audit Director

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BACKGROUND

The City of Tampa (City) roads and bridges inventory currently contains fixed and movable bridges. The Bridge Maintenance & Operations Section (Unit) in the Operations Division (Division) of the Mobility Department (Department) is responsible for day-to-day activities such as routine inspections and minor repairs. The activities include providing administrative support for the Florida Department of Transportation local bridge inspection program.

The Division's Stormwater Pump Stations Maintenance & Operations Unit is responsible for maintaining and operating stormwater pump stations to prevent flooding. The primary duties include inspecting equipment, performing routine maintenance, repairing damaged components, monitoring pump performance, and ensuring the stations function effectively during heavy rainfall to manage stormwater runoff and protect public safety.

STATEMENT OF OBJECTIVES

This audit was conducted in accordance with the Internal Audit Department's FY 2024 Audit Agenda. The objectives of this audit were to ensure that:

1. The system of internal controls related to bridge & pump station maintenance & operations are adequate.

2. The bridge inspection program is conducted according to the procedures set in Florida Administrative Code (F.A.C) Rule 14-48.001.

3. The City is complying with the terms of the interlocal agreement with Hillsborough County for the maintenance of county-owned bridges.

STATEMENT OF SCOPE

The audit period covered bridge & pump station maintenance & operations and activities that occurred from 2021 to 2024. Tests were performed to determine whether the Department personnel were fulfilling their stated duties and responsibilities in an effective and efficient manner. The source of information reviewed includes the City Work Management System (Cityworks), annual and biannual bridge inspection reports, and the interlocal agreement with Hillsborough County, for the maintenance of county-owned bridges. An analysis was performed and determined that the data generated by Cityworks is reliable. Original records as well as copies were used as evidence and verified through observation and physical examination.

STATEMENT OF METHODOLOGY

To achieve our objectives, we performed the following:

- Evaluated core activities of the bridge & pump stations' maintenance & operations to assess the adequacy of internal controls.

- Reviewed documentation on bridge and inspections, maintenance activities, and repairs.

- Reviewed documentation on pump station inspections, maintenance, and repairs.

- Reviewed the City interlocal agreement with Hillsborough County for the maintenance of county-owned bridges.

- Reviewed Tampa.gov, Intranet, and the budget book for performance metrics related to bridge & pump stations' maintenance & operations program. There are currently no relevant performance measures.

STATEMENT OF AUDITING STANDARDS

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

AUDIT CONCLUSIONS

Based upon the test work performed and the audit findings noted below, we conclude that:

1. The system of internal controls related to the bridge & pump stations maintenance & operations needs to be improved.

2. The bridge inspection program is conducted according to the procedures set in F.A.C. Rule 14-48.001. However, documentation of maintenance activities needs to be improved.

3. The City is complying with the terms of the interlocal agreement with Hillsborough County for the maintenance of county-owned bridges.

PUMP STATION TECHNICAL MAINTENANCE

STATEMENT OF CONDITION: The Division's pump station maintenance and operations is not performing technical maintenance as required by their established checklists. This includes electrical, mechanical, and control systems troubleshooting for the pump stations.

CRITERIA: The established maintenance checklists require performing technical maintenance activities. This includes control system troubleshooting that may impact the capabilities of the pump stations and the stormwater management system.

CAUSE: Due to retirement, there is a lack of expertise in performing required electrical, mechanical, and control system tasks for the pump stations.

EFFECT OF CONDITION: The nonperformance of critical maintenance tasks increases the risk of malfunctions or failures. Malfunctions can lead to hazardous conditions, endangering maintenance staff and the public. The City may fail to meet the State of Florida permit requirements. This non-compliance could result in regulatory fines, penalties, and potential legal action.

RECOMMENDATION 1: The Division should regularly assess the pump station management system to identify maintenance gaps and address them promptly. Align these assessments with permit requirements to ensure compliance.

MANAGEMENT RESPONSE: Management would like to make a slight modification to the Statement of Condition. We feel that we are in fact performing technical maintenance as required but at a basic level. Management agrees with the rest of the assessment and recommendation. The division has been aware of the skills gap it is currently facing. Through organizational adjustments and recruitment, the division has tried to address these concerns, however, these efforts have not been successful. While the division attempts to train and develop the skill sets necessary for maintaining and operating the stormwater pump stations properly, the division will use specialty contractors to supplement internal efforts.

TARGET IMPLEMENTATION DATE: September 30, 2025.

REPAIRS IMPLEMENTATION DOCUMENTATION

STATEMENT OF CONDITION: The documentation of specific maintenance activities performed in response to repair recommendations needs to be improved. We found that Cityworks did not document the specific repair recommendations that have been completed. Maintenance work done is only logged as man hours worked in Cityworks and the work order is not linked to a specific repair recommendation.

CRITERIA: According to the Division's Standard Operating Procedure (SOP), the inspection reports shall be reviewed carefully to determine if work should be scheduled, identify work required, and post projects to Cityworks.

CAUSE: Currently in Cityworks, Management has not identified a way to link a specific job to a correlated repair recommendation.

EFFECT OF CONDITION: Without proper documentation, it is challenging to hold staff accountable for repairs, as there is no clear connection between hours worked and specific repairs. Failure to log and document specific repair recommendations can lead to critical repairs being overlooked or delayed, increasing the risk of future bridge failures.

RECOMMENDATION 2: The Division should implement a documentation, recordkeeping, and logging process that integrates maintenance actions with inspection repair recommendations in Cityworks. This process should link specific job work orders and maintenance activities directly to the corresponding repair recommendations from inspection reports.

MANAGEMENT RESPONSE: While the division sees the importance of holding our staff accountable for repairs, most of the repairs that are required are escalated to the Transportation Engineering Division due to the fact that the repair costs are so high. Many times, the repairs also require a professional engineer's expertise to design and program the funding.

Outside agencies that provide inspections and recommendations suggest repairs that are often already known and have been included in the City's capital project programming. The Operations Division simply provides minor maintenance and operations which does not include recommended repairs.

TARGET IMPLEMENTATION DATE: N/A

POLICIES AND PROCEDURES

STATEMENT OF CONDITION: Our review of the Division's stormwater pump station maintenance and operations revealed an inadequate internal control system.

The deficiencies identified are as follows:

- No formal SOP manual for job activities to ensure specific or similar jobs are conducted uniformly.

- No comprehensive preventive maintenance program that ensures all critical pump station components are inspected and serviced regularly.

- Maintenance records are not being kept. We found that inspection checklists that document specific tasks performed and quality review notes are not being tracked and recorded.

CRITERIA: City Code of Ordinance (Code) Chapter 2-46 requires that all departments establish and maintain policies and procedures. Per F.A.C. Rule 62-330.310, the operation and maintenance of stormwater management systems must ensure scheduled maintenance to prevent system deterioration, conduct regular inspections to ensure proper functioning, and maintain records of all maintenance activities and inspections.

CAUSE: The deficiencies were primarily attributed to the absence of a formal SOP manual that provides guidelines and defines processes for accomplishing job duties, a preventive maintenance program, and recordkeeping procedures.

EFFECT OF CONDITION: Operating without written procedures is not compliant with the requirements of Chapter 2-46 of the Code. Without formalized procedures, there is a high likelihood of inconsistency in how tasks are carried out leading to inefficiencies and potential loss of institutional knowledge. Further, the lack of scheduled maintenance, regular inspections, and proper recordkeeping poses a risk of noncompliance with F.A.C. Rule 62-330.310.

RECOMMENDATION 3: The Division should develop a formal SOP document covering all pump station maintenance and operations activities. It should also identify important information that should be recorded and retained; and the protocols for tracking all critical tasks performed. The Division should implement scheduled maintenance, and regular inspections, and maintain records of all maintenance activities and inspections as required by F.A.C. Rule 62-330.310.

MANAGEMENT RESPONSE: Management concurs with Internal Audit's recommendations to develop a formal SOP document covering all pump station maintenance and operations activities.

TARGET IMPLEMENTATION DATE: The target completion date for this response will be January 31, 2025.