

DATE: August 5, 2024

TO: Wade Bryson, Chair  
Public Works and Facilities Committee

THROUGH: Denise Koch, Engineering and Public Works Director

FROM: John Bohan, Chief CIP Engineer

SUBJECT: Mendenhall River Drainage Outfall Culverts- Update – **CHECK VALVES INSTALLED!**

The eight culverts along Meander / Rivercourt Way and Marion Drive have check valves installed and complete as of July 19. The last update, on April 15, was a transfer request to help fund the check valve project. The PWFC recommended the request to the full Assembly for approval. The formal transfer was approved on April 29, 2024.

All pieces of the work aligned perfectly to allow this project to be completed by mid-July and for a very reasonable cost. The neighbors were very amenable to allowing access to the culverts across their private property (and not just limited to the formal drainage easements), allowing the contractor to avoid and minimize damage to yards and associated landscaping items (saving the project significant demolition and restoration costs). The In-line check valve manufacturer held true to the expedited manufacturing timeline of half what they normally provide (they had them ready for shipping in 5 weeks as opposed to their normal 10 to 13 weeks), and the contractor began installing them the week they arrived on the barge lines and had them completed within a week of starting. The project cost was about \$130K (\$112K - check valves purchase and construction contractor bid, \$18K staff time for resident outreach, coordination, property documentation, bid preparation and project inspection.)

- **One-way check valve:** Is installed inside of the culvert with a pressure fit band sealing to the inside of the culvert. The rubber diaphragm (internal to pipe) remains sealed except when the inside water pressure is greater than the water pressure outside of the pipe. (Outside water pressure typically nonexistent except during flood events.)



Figure 1 Image of Trailer load of In-line Check Valves



*Figure 2 Image of installation of check valve at Rivercourt Way.*



*Figure 3 Image of installation of check valve at Rivercourt Way.*



*Figure 4 Image of the installed and functioning check valve – Meander at Northland Outfall*

**Attachment:**  
***Meander and Marion Culvert Check Valves Installed July 2024 – Map***