

PUBLIC WORKS DEPARTMENT

BENNY DUNN, DIRECTOR
bdunn@daltonga.gov

535 N. Elm Street
P.O. Box 1205
Dalton, GA 30722-1205
Office: (706) 278-7077
FAX: (706) 278-1847



DAVID PENNINGTON, MAYOR

CITY COUNCIL MEMBERS:

DENNIS MOCK
ANNALEE HARLAN
TYREE GOODLETT
STEVE FARROW

M E M O R A N D U M

TO: Mayor and City Councilmembers

FROM: Benny J. Dunn, Interim Public Works Director

RE: Corrective Action Plan & Permanent Easement –
Walnut North Drainage Basin Stormwater
Improvements

DATE: January 10th, 2022

As part of the City's Stormwater initiative, the Public Works Department has been working in collaboration with the Stormwater consultant Arcadis to conduct a drainage study of the Walnut North Drainage Basin to identify solutions to mitigate flooding within the watershed. Historically, properties located at 612 Ridge Street, 622 McFarland Avenue, and 705 Valley Drive have reported damages to property caused by flooding from runoff with substantial drainage areas originating within the West Hill Cemetery. On June 9th, 2021 Arcadis delivered an existing conditions memo identifying the drainage areas where runoff originates prior to impacting downstream properties. Utilizing the results from the existing conditions study, Arcadis developed a memo consisting of five (5) proposed improvement scenarios listed as A through E within the study area to address the flooding both reported by impacted residents, as well as results shown within their hydraulic models. This Corrective Action Plan is for implementation of certain aspects within "Improvement Scenario E – West Hill Cemetery Stormwater Detention & Ridge Street Bypass & West Franklin Street Improvements" located within the "Ridge Street Drainage Study – Improvement Scenarios" memo dated October 25th, 2021.

Improvement Scenario E is a cumulative approach incorporating elements from scenarios B through D starting with the stormwater improvements upstream located within the West Hill Cemetery, and ending at the outfall located on the property of 707 Valley Drive. Starting with improvements located within the Ridge Street study area, a proposed bypass stormwater conveyance system consisting of a 48" RCP storm pipe with a dual 36" RCP outlet to the existing open channel south of Ridge Street will increase the level of service to existing culverts located on private property of 610, 612, and 614 Ridge Street to 100-years. A temporary construction easement and permanent maintenance easement where the bypass system connects to the existing conveyance system located off right-of-way will be required for 601 Greenwood Drive and 701 Greenwood Drive. For the proposed bypass system located South of Ridge Street, 100 linear feet

of 4' x 8' box culvert is proposed to replace the existing 36" CMP and culvert inlet at 622 McFarland Street. From there, 700 linear feet of 42" RCP is proposed to run parallel to the existing storm system along the southern lane of West Franklin Street. Lastly, 520 linear feet of 42" RCP will connect from the storm pipe system at the intersection of West Franklin Street and Valley Drive, flowing South within the Valley Drive right-of-way and across private property to a proposed outfall, to the open channel located in the rear yard of 707 Valley Drive. A temporary construction easement and permanent maintenance easement will also be required to complete the bypass system's scope of work located on the properties of 622 McFarland Avenue and 707 Valley Drive where the proposed system spans off City right of way.

Due to the open channel being incised, stream bank stabilization starting from the outfall location on Valley Drive spanning to Walnut Avenue will be essential to reduce the risk of property loss caused by scouring of the embankment during periods of high flows. High flows can also lead to increased sedimentation downstream which can lead to further property loss, and a significant decrease in water quality. A temporary construction easement and permanent maintenance easement will be required for properties residing within the stream buffer including 705 Valley Drive, 707 Valley Drive, 704 South Thornton Avenue, and 502 Walnut Avenue.

Furthermore, to both extend the lifespan and increase hydraulic performance of the existing stormwater infrastructure located off right of way conveying flow from drainage basins from City property, a temporary construction easement and permanent maintenance easement will be required to complete pipe restorations via centrifugally cast lining for culverts located at the following properties: 602 Ridge Street, 612 Ridge Street, 614 Ridge Street, 622 McFarland Avenue, and 705 Valley Drive.

In conjunction with the proposed upstream improvements on Ridge Street and within the West Hill Cemetery, Arcadis' findings indicate the level of service of the existing stormwater conveyance network potentially increasing to 100-years for 622 McFarland Avenue, 100, 50, and 25-years for portions of West Franklin Street and Miller Street, and 10-years for the 705 Valley Drive culvert. The existing level of service for these locations range from one (1) to two (2) years. Arcadis' findings also show flood reduction benefits for portions of Ridge Street, McFarland Avenue, West Franklin Street, and Valley Drive without negatively impacting downstream locations within the modeled drainage basin by significantly increasing peak flows.

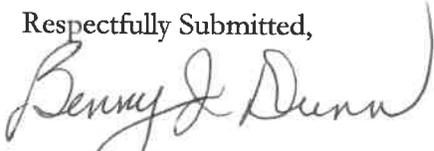
Sec. 96-1 of City Code provides for the acceptance of temporary or permanent easements for public dedication of certain drainage systems including those connected directly to the City's existing system and conveys runoff from City right of way. The Public Works Department has developed the enclosed Corrective Action Plan drawings for the subject location and is recommending that City Council adopt this plan to allow City intervention. This plan would provide a long-term solution for a key drainage network for the watershed. The Corrective Action Plan requires a temporary construction and permanent drainage easement be provided by the property owner and accepted by the City Council. The property owner must provide written commitment to provide the easement areas described. The City Attorney will prepare the temporary work easement, and approval of this Corrective Action Plan will authorize the City to accept a permanent drainage easement along the proposed storm drain system. The Corrective Action Plan is subject to minor revisions related to the exact alignment of the pipe to accommodate unforeseen field conditions.

Due to the urgent nature of this matter which includes deterioration of the existing conveyance system within the study area, the Public Works Department is actively proceeding with portions of

the improvements within scenario E located within the West Hill Cemetery to provide meaningful flow attenuation for other impacted residents within the study area without raising the base flood elevations during any given storm event.

Should you have any questions or need additional information regarding this matter, please do not hesitate to contact me.

Respectfully Submitted,



Benny J. Dunn
Interim Public Works Director

Cc: City Administrator, Andrew Parker, P.E.
City Attorney, Terry Miller

Enclosures:

Corrective Action Plan – 601 & 701 Greenwood Street, 602, 612 & 614 Ridge Street,
622 & 618 McFarland Avenue, 705 & 707 Valley Drive, 704 South Thornton Avenue,
and 502 Walnut Avenue
Temporary Work Easement