



DATE: *June 27, 2018*
TO: Mayor and City Council
FROM: Assets & Facilities Administrator
SUBJECT: Stormwater Culvert Repair – Pipe lining

RECOMMENDED ACTION

Authorize the Mayor to sign a \$142,200 contract agreement with Rawlins Plumbing Contractors for pipe lining of 3 failing culverts at: 4701 Deep Creek Drive; 6050 Eagle Close Lane; and Secret Cove Drive; upon city attorney contract approval. Further authorize \$20,000 contingency for unforeseen expenses, to be performed either by the contractor or city staff.

BUDGET IMPACT

The annual capital improvement budget includes \$300,000 for Stormwater items, including this project.

DISCUSSION

The Street & Stormwater staffs have noted several stormwater culverts that are failing and will require a more ‘immediate’ repair before structural integrity is lost. The culverts pass under city roads and also convey state waters (a ‘live’ or flowing stream) from 1 side of the roadway to the other. These stormwater pipes are all corrugated metal pipes (cmp) and were originally installed in the 1980s. Due to the combination of the depth of the pipes and the conveyance of the state waters, traditional ‘open trench’ replacement would be extremely costly, requiring closing of roads for an extended amount of time and constant monitoring of stream levels.

Location	Pipe Size	Pipe Depth	Pipe Length
Deep Creek Drive (West Price Hills S/D)	36”	17	77-ft
Eagle Close Lane (The Links S/D)	30”	27-ft	150-ft
Secret Cove Drive (Secret Cove S/D)	48”	12	157-ft

A relatively new product has been on the market for several years which installs a pipe 'liner' coated with an epoxy resin into the old pipe. The liner is then inflated with steam heat, allowing the liner to take the shape of the existing pipe and activates/hardens the epoxy to the inside of the old pipe. The city used a very similar process when the Bowl's electrical conduits were lined last year.

Gwinnett County has used this pipe lining system on several of their stormwater pipes with no real issues. The structural integrity of the cured liner is 'as strong or stronger' than the original pipe. The city's engineering contractor (Clark Patterson Lee) has reviewed various piping lining materials and confirms that the liners, when properly designed and installed, has sufficient strength to replace the pipe when it fails completely. The pipe liner has a 50-year warranty.

This would be the first stormwater use of this pipe lining system in Sugar Hill, and if successful, staff will identify and recommend other stormwater pipe candidates for future consideration.