

"COLLEGE PARK FLOOD/DRAINAGE IMPROVEMENT CONCEPT ALTERNATIVES" IMPROVE DRAINAGE CAPACITY, REDUCE FREQUENCY OF FLOODING

Other Flood Mitigation Considerations
Cost Estimate: \$TBD

Other Flood Mitigation Considerations

- Property Owners are Encouraged to Obtain Flood Insurance
- Encourage UMD to Perform Underground Storage/Retention to Maximum Extent Possible for Existing Impervious Area
- Evaluate Sub-Watershed Timing with Upland BMP Controls
- Property Owners are Encouraged to Implement SWM Best Management Practices on Their Properties (Rebates and CWA Fee Credits)

Total Part "A" Improvements
Cost Estimate: \$483K

A1-Cornell Ave / Gullford Rd Culvert Upgrade:

- Existing 60" RCP Culvert Overtops Cornell approx. for the 1-yr Storm
- Upgrade to Twin 7x5' Conc. Box
- Reduces Frequency of Flooding by Passing approx. the 5-yr Storm
- Depress Culvert by 1' for Aquatic Species Migration
- Approx. Cost: \$162K

A2-Rosburg Drive / Gullford Rd Culvert Upgrade:

- Existing 60" CMP Culvert Overtops Rosburg at approx. the 1-yr Storm
- Upgrade to Twin 10x6' Conc. Box
- Reduces Frequency of Flooding by Passing approx. the 5-yr Storm
- Depress Culvert by 1' for Aquatic Species Migration
- Approx. Cost: \$399K

A3-Cornell to Rowait Ave Channel Maintenance:

- Improve Existing Channel by Removing Debris, Woody & Invasive Vegetation
- Repair Dilapidated Concrete Bottom /Side Slabs as needed
- Channel Carries Approx. the 5-yr Storm
- Approx. Cost: \$22K

Total Part "D" Improvements
Cost Estimate: \$600K

Part "D" Improvements
Dartmouth Ave Storm Drain Extension Upgrade:

- Alleviate Frequency and Severity of Flooding by Diverting Excess Flows from Gullford Rd and Rhode Island Ave to Dartmouth Ave Storm Drain System
- Replace/Upgrade Ex. 15" and 18" Drain System on Gullford Rd from West of Dartmouth Ave to Erskin Rd on Dartmouth Ave
- Replace/Upgrade Ex. 54" RCP Upstream of Ex. 5x5' Arch Box under CSX (south of Calvert Park) with 54"x68" RCP to increase conveyance capacity from the 5-yr to 10-yr Storm
- Approx. Cost: \$600K

Part "B" Improvements
Upgrade Culvert Entrance at Rowait Ave/ Gullford Rd; Resize Channel Between Rowait Outfall & Baltimore Rd; and Upgrade Culvert Under Baltimore Ave:

- Existing Combined Entrance: 48"x74" Elliptical Conc. Pipe Plus 10"x4.5" Box Culvert (Partially Cinder-Blocked Leaving 2.5"x4.5" Opening) Overtops Rowait approx. at 1-yr Storm
- Increase Conveyance by Barring Culvert Entrance Edges and Removing Cinder Blocks
- Increase Conveyance by adding approx. 200' of 1' high (exposed) floodwall upstream of Culvert Wingwall Entrance
- Increase Conveyance by Widening the Channel between Rowait and Balt. Ave Using Imbricated Side Walls
- Increase Conveyance by Replacing Existing 5x5' Stone Culvert under Balt. Ave With Twin 5x5' Conc. Box Culvert
- The Above Reduces Frequency of Flooding by Passing approx. the 5-yr Storm
- Approx. Cost: \$502K

Total Part "B" Improvements
Cost Estimate: \$502K

Part "C" Improvements
Drainage Diversion & Underground Storage Attenuation System at Calvert Park:

- Alleviate Frequency and Severity of Flooding in the Area Bounded by Calvert Rd, Bowline Ave, Harvard Rd, and Dartmouth Ave by Diverting Drainage Area to Calvert Park
- Construct Underground Storage Vault System to Attenuate The 10-yr Storm at Calvert Park to Receive Diverted Drainage Area
- Connect Storage Vault System Outfall to Existing CSX, Inco 54" Cross Culvert
- Approx. Cost: \$2.2M

Total Part "C" Improvements
Cost Estimate: \$2.2M



LEGEND

- EXISTING STORM DRAIN SYSTEM (NOT ANALYZED)
- EXISTING STORM DRAIN SYSTEM (ANALYZED)
- PROPOSED STORM DRAIN SYSTEM
- OPEN CHANNEL
- DRAINAGE AREA BOUNDARY
- SUB-DRAINAGE AREA BOUNDARY
- EXISTING CONTOUR
- 100-YR FLOODPLAIN
- UNDERGROUND STORAGE FACILITY
- SEWER BACKUP
- STORM DRAIN FLOODING
- STREET FLOODING

120 0 120 240
SCALE: 1" = 120'

**COLLEGE PARK/CALVERT HILLS
FLOODING STUDY
CITY OF COLLEGE PARK
DECEMBER 2013**

RK&K
Resonant People | Creative Solutions

City of College Park

Prince George's County
Department of Environmental Resource