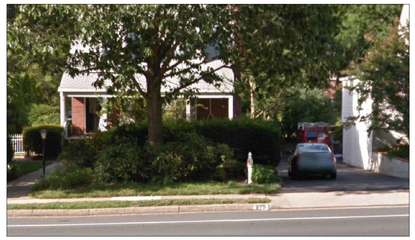
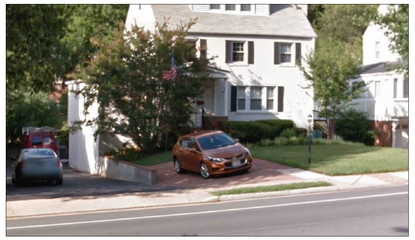
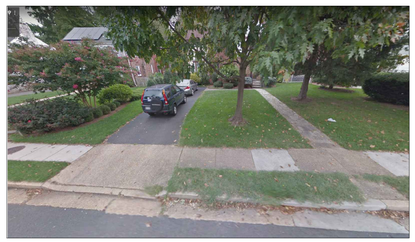


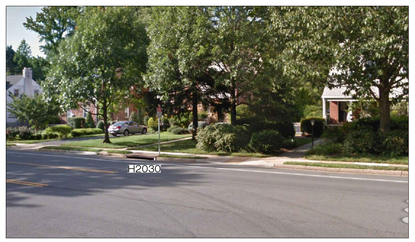
915 HILLWOOD AVENUE AT SHADY LANE
(IMAGE FROM GOOGLEM STREET VIEW, NOV 2017)



1001 HILLWOOD AVENUE
(IMAGE FROM GOOGLE STREET VIEW, JULY 2017)



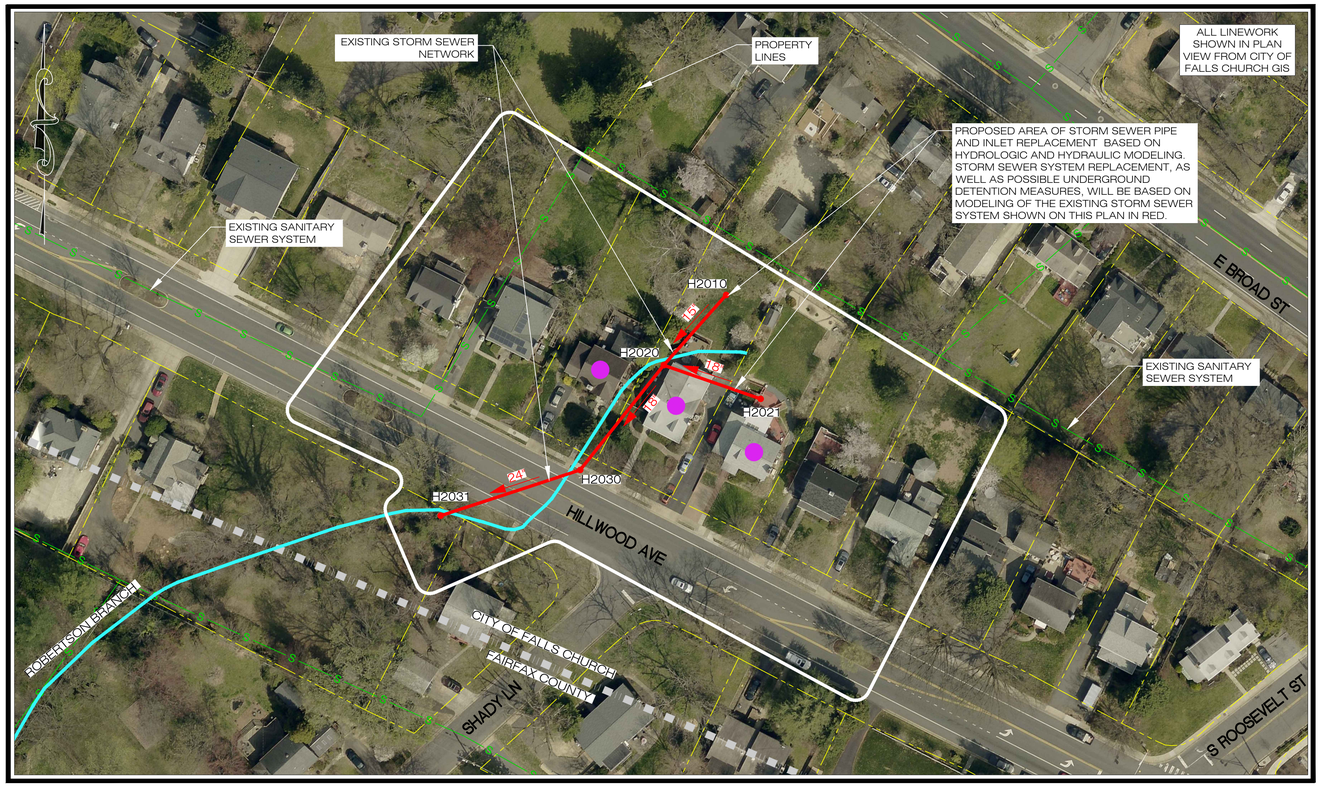
913 HILLWOOD AVENUE
(IMAGE FROM GOOGLE STREET VIEW, SEPT. 2017)



STORM SEWER STR. H2030 BETWEEN 915 AND 913 HILLWOOD AVENUE
(IMAGE FROM GOOGLE STREET VIEW, JULY 2017)

2/6 EXISTING CONDITIONS PHOTOS

NOT TO SCALE



1/6 HILLWOOD AVENUE 2 PROJECT CONCEPTUAL LAYOUT

1" = 50'

GRAPHIC SCALE
50 0 25 50 100
(IN FEET)
1 inch = 50 ft.

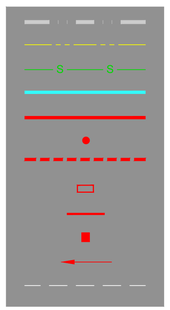
CONCEPTUAL PLAN NARRATIVE

THE GOAL OF THIS PROJECT IS TO ANALYZE THE AREAS OF SIGNIFICANT FLOODING OCCURRING IN THE BACKYARDS OF PROPERTIES 913, 915, AND 1001 HILLWOOD AVENUE IN THE CITY OF FALLS CHURCH. THESE SUBJECT PROPERTIES ARE REPRESENTED IN PLAN VIEW WITH A PURPLE DOT. THE STORM SEWER NETWORK IN THE SUBJECT PROBLEM AREAS WILL BE MODELED TO DETERMINE ITS CAPACITY DURING A 10-YEAR STORM EVENT.

THIS CONCEPTUAL PLAN CONSIDERS NEW STORM SEWER PIPES, YARD INLETS, AND POTENTIAL UNDERGROUND DETENTION IN THE BACKYARDS OF 913, 915 AND 1001 HILLWOOD AVENUE. THE NEW STORM SEWER SYSTEM AND POSSIBLE UNDERGROUND DETENTION WOULD CONVEY THE 10-YEAR STORM TO ALLEVIATE FLOODING IN THE PROBLEM AREA.

CONCEPTUAL PLAN LEGEND

JURISDICTIONAL BOUNDARY
PROPERTY LINES
EXISTING SANITARY SEWER
STREAM CENTERLINE
EXISTING STORM SEWER PIPE
EXISTING STORM STRUCTURE
PROPOSED STORM SEWER PIPE
PROPOSED CURB INLET
PROPOSED CULVERT PIPE
PROPOSED JUNCTION BOX
DIRECTIONAL ARROW
RESOURCE PROTECTION AREA



ALL INFORMATION HEREON, INCLUDING THE PLAN AND COST ESTIMATE, IS IN DRAFT FORM AT A CONCEPTUAL LEVEL OF DESIGN, PRODUCED AS AN INTERIM PRODUCT. INFORMATION WILL CHANGE AS SUBSEQUENT LEVELS OF DESIGN ARE COMPLETED.

CONCEPTUAL PLAN CONSTRAINTS

No.	Constraint	Cost	Schedule	Constructability	Comments
1	Water lines exist along Hillwood Avenue (Not Shown) that could impact potential upsizing of the storm sewer pipes and curb inlets located underneath and along the street.	Moderate Impact		Minimal Impact	Pending survey, proposed pipe horizontal and vertical alignment will be located to minimimize conflicts with waterline; however, care must be taken in construction to protect existing pipe and avoid damage during excavation. If waterline is found to be in conflict, waterline may be relocated.
2	There may be other unknown utilities in the area of proposed work that could cause a potential conflict.	Moderate Impact	Moderate Impact	Moderate Impact	Pending survey, proposed pipe horizontal and vertical alignment will be located to minimimize conflicts with existing utilities; however, care must be taken in construction to protect existing pipe and avoid damage during excavation. If utilities are found to be in conflict, they may be relocated.
3	Improvements may be required for storm sewer pipes on private property.	Minimal Impact	Moderate Impact	Minimal Impact	Permissions will need to be obtained.
4	Mature trees, fences, sheds, etc. potentially impacted by any construction between storm sewer structures H2020, H2010 AND H2021.	Moderate Impact	Minimal Impact	Moderate Impact	Permissions will need to be obtained and coordination with homeowners will be required.
5	While all potential work is proposed within the City limits, the outfall point of this storm sewer system is very close to the Fairfax County line. Any increases in flow will likely need to be coordinated with Fairfax County staff.	Moderate Impact	Moderate Impact	Moderate Impact	If flow increases are not allowed, then larger underground detention may be required.
6	Once a full hydrologic and hydraulic analysis of the existing conditions has been completed, the results will determine feasibility of the project and the proposed design shown may be altered.				To be determined.

Legend

- Minimal Impact
- Moderate Impact

Project: City of Falls Curch Watershed Master Plan: Hillwood Avenue 2 Project
Design Assumptions: New Storm Sewer System and Detention Structure
Estimate Type: Conceptual Construction Cost Estimate
Prepared by: GKY & Associates, Inc.
Date: January 13, 2020

#	ITEM	QUANTITY	UNIT	UNIT COST	COST
1	**EROSION & SEDIMENT CONTROL**				
2	Erosion and Sediment Controls	1	LS	$50,000 / LS	$50,000
3	**EROSION & SEDIMENT CONTROL SUB TOTAL:**				**$50,000**
4	**PROPOSED IMPROVEMENTS**				
5	15" RCP CL III Pipe	70	LF	$300 / LF	$21,000
6	18" RCP CL III Pipe	170	LF	$350 / LF	$59,500
7	24" RCP CL III Pipe	110	LF	$400 / LF	$44,000
8	Yard Inlet Structure	3	EA	$8,000 / EA	$24,000
9	DI-4, Curb Inlet for 24" Pipe	1	EA	$25,000 / EA	$25,000
10	ES-1 End Section for 24" Pipe	1	LF	$8,000 LF	$8,000
11	Underground Stormwater Detention System	1	LS	$30,000 / LS	$30,000
12	Pavement Restoration	1	LS	$50,000 / LS	$50,000
13	**PROPOSED IMPROVEMENTS SUB TOTAL:**				**$261,500**
14	**MISCELLANEOUS**				
15	Mobilization	1	EA	$25,000 / EA	$25,000
16	Maintenance of Traffic	1	LS	$40,000 / LS	$40,000
17	Utility Coordination and/or Relocation	1	LS	$50,000 / LS	$50,000
18	Construction Design, Survey, and Stakeout	1	LS	$50,000 / LS	$50,000
19	**MISCELLANEOUS SUB TOTAL:**				**$165,000**
20					
21	**PROJECT SUB TOTAL:**				**$476,500**
22	**CONTINGENCY (45% of PROJECT SUB TOTAL):**				**$214,425**
23	**PROJECT TOTAL:**				**$690,925**

3/6 HILLWOOD AVENUE 2 PROJECT CONCEPTUAL COST ESTIMATE

GKY & Associates, Inc.

GKY & ASSOCIATES, INC.
4229 LAFAYETTE CENTER DRIVE
SUITE 1850
CHANTILLY, VIRGINIA 20151
PHONE (703) 870-7000
FAX (703) 870-7039
www.gky.com

HILLWOOD AVENUE 2
PROJECT CONCEPTUAL PLAN

WATERSHED MANAGEMENT PLAN PROJECTS
CITY OF FALLS CHURCH, VIRGINIA

NOT FOR CONSTRUCTION

DATE	DESCRIPTION
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H SCALE: 1" = 50'
H DATUM: NAD83
V SCALE: N/A
V DATUM: NGVD29

DESIGNED: SM/CA
DRAFTED: SM/AJ
CHECKED: BK

PROJECT#: 2016-006
CONTRACT#: TO#30