City of Rockville
Get Into It

111 Maryland Avenue | Rockville, Maryland 20850-2364 | 240-314-5000
www.rockvillemd.gov

January 29, 2025

Mr. Andrew McGeorge
Hines
555 13th Street NW, Suite 400 W
Washington, District of Columbia 20004

SUBJECT: 1818 Chapman Avenue – Twinbrook Hines – Safe Conveyance Study; SMC2021-00005, STP2022-00436

Dear Mr. McGeorge:

The Safe Conveyance Study for the above referenced project is conditionally approved. Staff has determined that the existing downstream storm drain system has the capacity to safely convey the proposed 10-year runoff from this project and that no system upgrades or mitigating measures are required for this application and the proposed development.

The site is 9.37 acres and is identified as the Halpine subdivision, Lots 2, 3, 4, 5, and 6, Block 4 and Lot 1, Block B located at 1818 Chapman Avenue. The proposed development includes the construction of a mixed-use building with multi-family apartments, retail and office space, and an underground parking garage. The property is in the Rock Creek Watershed and is zoned Mixed-Use Transit District (MXTD). The on-site impervious area subject to Stormwater Management (SWM) is 3.02 acres. The total impervious area in the existing adjacent Right-of-way (ROW) of Chapman Avenue subject to SWM is 0.41 acres.

The development proposes to connect to existing public storm drain located at proposed private alley connecting Thompson Avenue and Twinbrook Metro Station. Storm drain computations submitted with the Stormwater Management Concept Plan demonstrate the existing storm drain system has adequate capacity to safely collect and convey the runoff associated with the 10-year storm for the designed contributing area, including the proposed development.

The Safe Conveyance Study is conditionally approved subject to the following conditions which must be addressed at the stages in the process as indicated below:

1. At final engineering, the Applicant shall demonstrate to the satisfaction of the Department of Public Works (DPW) that the existing public storm drain system can safely collect runoff from the 10-year event according to Montgomery County design criteria. The proposed connection will be reviewed in conjunction with the DPW Permit.
2. At final engineering, the Applicant shall demonstrate to the satisfaction of DPW that all existing and proposed public storm drain infrastructure affected by the development can safely collect and convey runoff from the 10-year event.

3. The limits of the downstream conveyance must be shown to the nearest stream or pond outfall, to a point where three consecutive storm drain pipe runs are able to convey the proposed peak design discharge without surcharging the system, or to a distance of 500 feet of conveyance, as directed by DPW.

This Plan approval does not supersede or negate other required project approvals. The approval is contingent on meeting all other City of Rockville and other governmental agency requirements including, but not limited to the requirements of forestry, traffic and transportation, and planning.

Any significant modification, revisions, or alterations to the proposed development may result in the requirement to submit a revised Safe Conveyance Study for approval by DPW.

If you have any questions, please contact Senior Civil Engineer Yi Kuo via email at ykuo@rockvillemd.gov or via telephone at 240-314-8520.

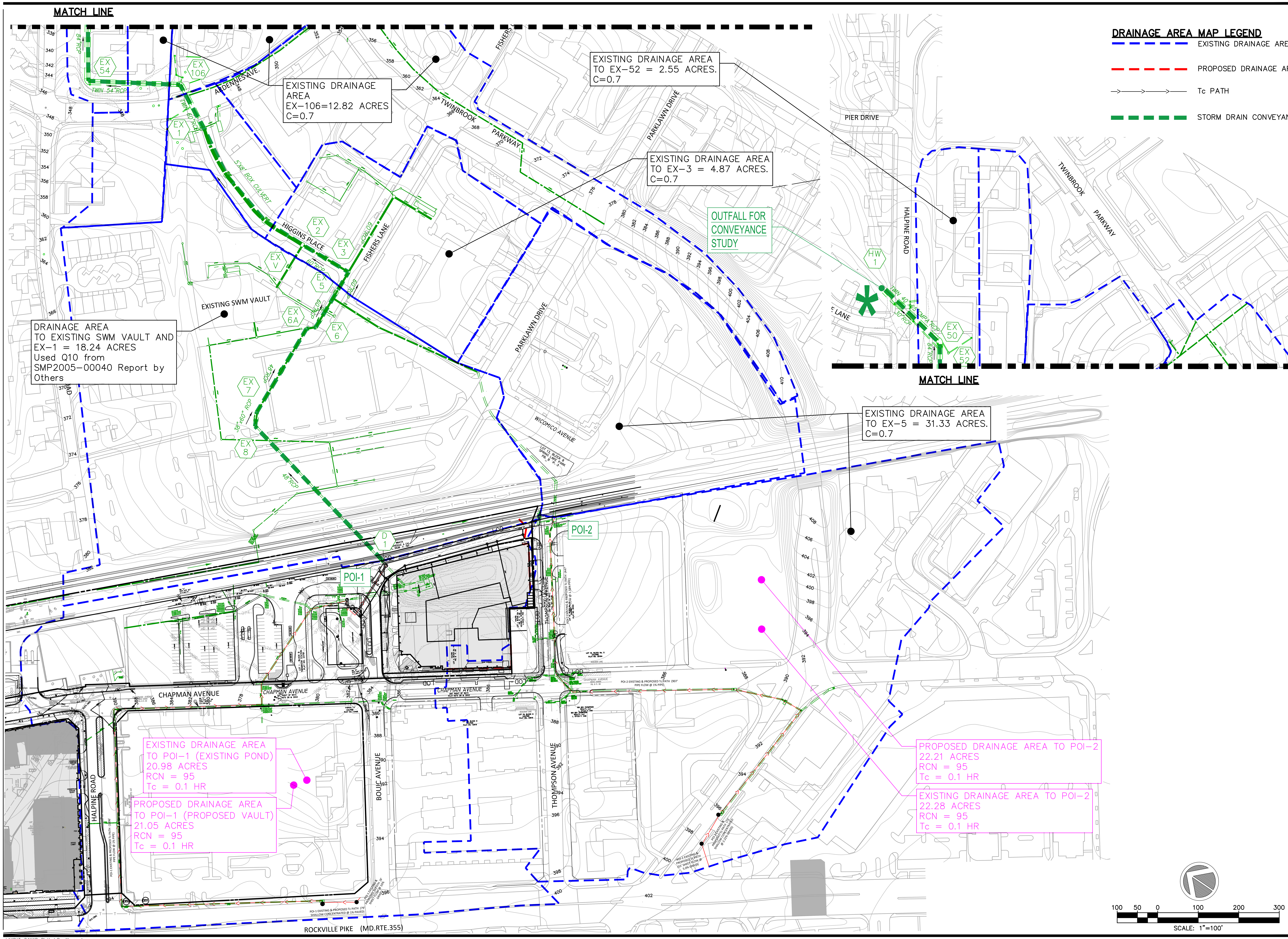
Sincerely,

John Scabis, P.E.
Chief of Engineering

JKS/YK/ktt

Attachments: Twinbrook Hines – Downstream Storm Drain Analysis, dated December 24, 2024.

cc: Jim Lapping, P.E., Engineering Supervisor
Shaun Ryan, Planning Supervisor
Nelson Ortiz, Principal Planner
NB Ventures I, L.L.C.
Heather Dlhopolsky, Wire Gill LLP
Laurent Mounaud, VIKA Maryland
Permit plan, SMC2021-00005, STP2022-00436
Day file



LAYOUT: DAMAP, Plotted By: Mounaud

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REVISIONS	DATE
Resubmission	9/30/2022
Resubmission	12/08/2022
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1800 CHAPMAN

SITE PLAN APPLICATION
4TH ELECTION DISTRICT
MONTGOMERY COUNTY, MARYLAND
WSSC GRID: 216NW06
TAX MAP:GQ63

DRAINAGE STUDY AREA MAP

PROFESSIONAL SEAL

STATE OF MARYLAND LAURENT G. MOUNAUD NO. 36749 PROFESSIONAL ENGINEER

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
NAME: LAURENT G. MOUNAUD
LICENSE No.: 36749
EXPIRATION DATE: JANUARY 21, 2025

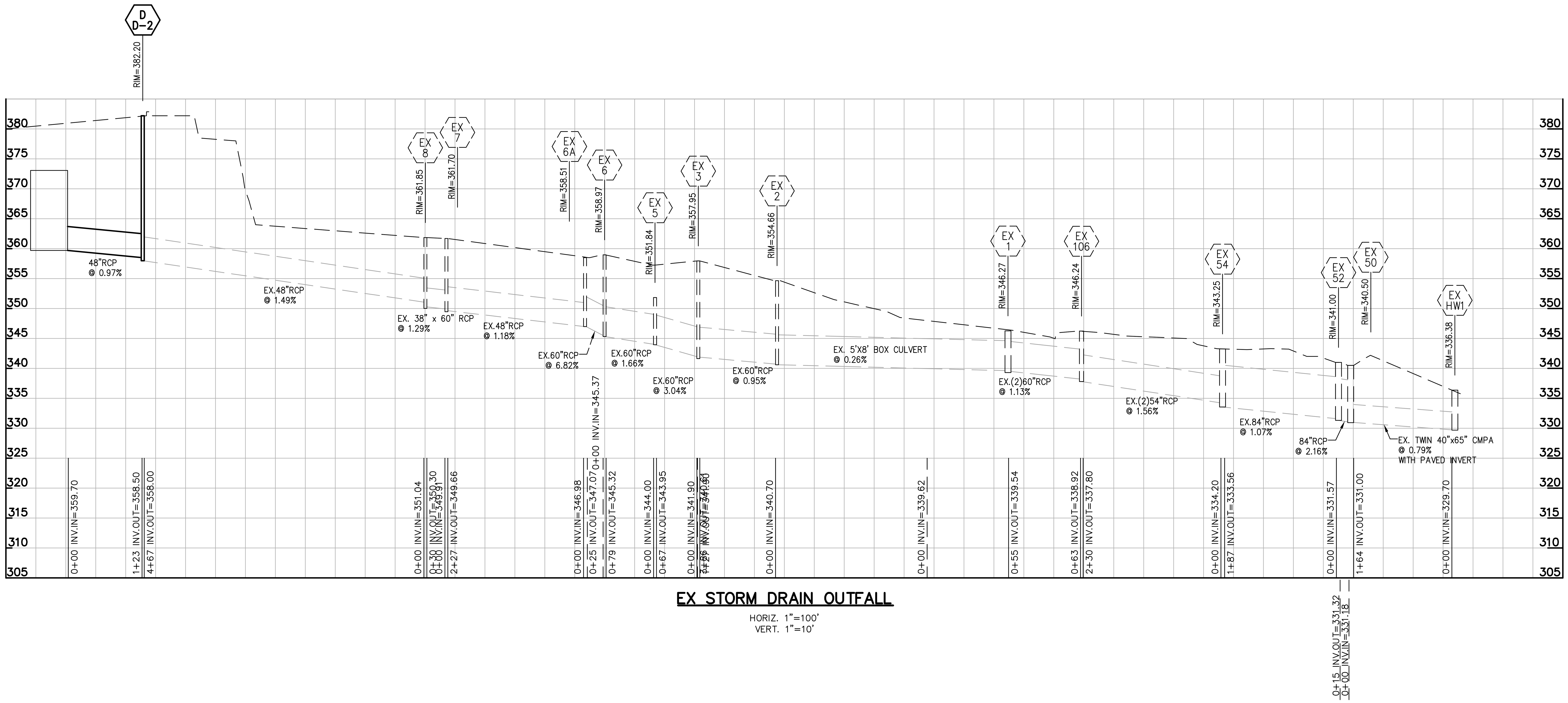
DRAWN BY: CC
DESIGNED BY: JAE
DATE ISSUED: 11/12/2021

VIKA PROJECT: VM50024

DRAWING NO.: DAMAP

SHEET NO. 1 OF 1

Z:\50000-50500\50024\CADD\SITE\PLOT SHEETS\50024200_P_DAMAP-OFFSITE_DA STUDY.dwg ~ Tuesday, December 24, 2024 9:04:29 AM



EX STORM DRAIN OUTFALL

HORIZ. 1"=100'
VERT. 1"=10'

Project Name:	Twinbrook Hines	Computed:	LGM	INPUT
Project No.:	VM50024J	Checked:	LGM	USER VERIFIED
Date:	January 15, 2025			

ENGINEERING ♻ PLANNING ♻ LANDSCAPE ARCHITECTURE ♻ SURVEYING/GEOMATICS

10YR. STORM DRAIN COMPUTATION (PROPOSED)

FROM	TO	INC. AREA ACRES	TOTAL AREA ACRES	C	A*C	ACUM. A*C	Tc MIN-SEC	I 10 YR IN/HR	Q10 CFS	MIN SLOPE %	ACT SLOPE %	n	PIPE SIZE IN	NOTE:	F.F. VEL FPS	ACT VEL FPS	LENGTH FEET	TIME IN PIPE MIN	Q CAPACITY CFS
VAULT	D-1	21.05	21.05	0.82 **	17.25	17.25	5.00	7.07	121.9	0.72	1.00	0.013	48	RCP	11.43	12.8	121	0.16	143.64
D-1	EX-8	0.00	21.05	0.00	0.00	17.25	5.16	7.02	121.1	1.45	1.50	0.013	42	RCP	12.81	14.6	463	0.53	123.22
EX-8	EX-7	0.00	21.05	0.00	0.00	17.25	5.69	6.87	118.5		1.29	0.013	38x60	RCP	12.61		30	0.04	156.33*
EX-7	EX-6A	0.00	21.05	0.00	0.00	17.25	5.73	6.86	118.3	0.68	1.18	0.013	48	RCP	12.42	13.7	235	0.29	156.04
EX-6A	EX-6	0.00	21.05	0.00	0.00	17.25	6.01	6.78	117.0	0.20	6.82	0.013	60	RCP	34.64	25.9	18	0.01	680.15
EX-6	EX-5	0.00	21.05	0.00	0.00	17.25	6.02	6.78	116.9	0.20	1.66	0.013	60	RCP	17.09	15.5	78	0.08	335.56
EX-5	EX-3	31.33	52.38	0.70	21.93	39.18	6.11	6.75	264.7	1.03	3.04	0.013	60	RCP	23.13	24.0	70	0.05	454.10
EX-3	EX-2	4.87	57.25	0.70	3.41	42.59	6.16	6.74	287.1	1.22	0.95	0.013	60	RCP	12.93	14.6	127	0.14	253.85
EX-V SMP2005-00040	EX-2	18.21	18.21	0.26 ***	4.81	4.81	5.00	7.07	34.0	0.03	0.62	0.013	54	RCP	9.74	7.8	141	0.30	154.84
EX-2	EX-1	0.00	75.46	0.00	0.00	47.40	6.30	6.70	317.7		0.26	0.013	5'x8'	BOX CULVERT	7.77		386	0.83	310.69*
EX-1	EX-106	1.39	76.85	0.70	0.97	48.37	7.13	6.49	314.0	1.45	0.82	0.013	60	(TWIN)	12.01	12.0	117	0.16	471.68
EX-106	EX-54	12.82	89.67	0.70	8.97	57.34	7.29	6.45	370.0	3.54	1.56	0.013	54	(TWIN)	15.44	15.4	230	0.25	491.23
EX-54	EX-52	0.00	89.67	0.60	0.00	57.34	7.54	6.39	366.5	0.33	1.07	0.013	84	RCP	17.17	17.6	187	0.18	660.81
EX-52	EX-50	2.55	92.22	0.76	1.94	59.28	7.72	6.35	376.4	0.35	2.16	0.013	84	RCP	24.40	23.1	15	0.01	938.89
EX-50	EX HW-1	0.00	92.22	0.80	0.00	59.28	7.73	6.35	376.3		0.96	0.013	'x65" + 30"	CMPA (TWIN) w/ conc. Inv	11.33		164		2x160+60.28= 380.28 *
EX-50	EX HW-1	0.00	92.22	0.80	0.00	59.28	7.73	6.35	376.3	84.15	2.16	0.013	30		12.28	76.7	15	0.00	60.28

** C VALUE SELECTED TO MATCH RESULTS FROM TR-20 VAULT ROUTING
Qp10= 121.97 CFS

*** C VALUE SELECTED TO MATCH RESULT FROM SMP2005-00040 TR-20 VAULT ROUTING FOR THE EXISTING VAULT INSTALLED IN PHASE 1A OF THE TWINBROOK STATION DEVELOPMENT.
Qp10=34 CFS

* REFER TO FLOWMASTER COMPUTATIONS

EX-8 TO EX-7

Worksheet for Elliptical Pipe - 1

Project Description

Friction Method	Manning Formula	
Solve For	Discharge	

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.01290	ft/ft
Normal Depth	3.16	ft
Rise	3.16	ft
Span	5.00	ft

Results

Discharge	156.44	ft³/s
Flow Area	12.41	ft²
Wetted Perimeter	12.97	ft
Hydraulic Radius	0.96	ft
Top Width	0.00	ft
Critical Depth	2.98	ft
Percent Full	100.0	%
Critical Slope	0.01086	ft/ft
Velocity	12.61	ft/s
Velocity Head	2.47	ft
Specific Energy	5.63	ft
Froude Number	0.00	
Maximum Discharge	170.49	ft³/s
Discharge Full	156.33	ft³/s
Slope Full	0.01288	ft/ft
Flow Type	Subcritical	

EX-2 TO EX-1

Worksheet for Box Pipe - 1

Project Description

Friction Method	Manning Formula	
Solve For	Discharge	

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.00260	ft/ft
Normal Depth	5.00	ft
Height	5.00	ft
Bottom Width	8.00	ft

Results

Discharge	310.69	ft³/s
Flow Area	40.00	ft²
Wetted Perimeter	26.00	ft
Hydraulic Radius	1.54	ft
Top Width	8.00	ft
Critical Depth	3.61	ft
Percent Full	100.0	%
Critical Slope	0.00378	ft/ft
Velocity	7.77	ft/s
Velocity Head	0.94	ft
Specific Energy	5.94	ft
Froude Number	0.61	
Discharge Full	310.69	ft³/s
Slope Full	0.00260	ft/ft
Flow Type	Subcritical	

EX-50 TO HW-1

Worksheet for Elliptical Pipe - 1

Project Description

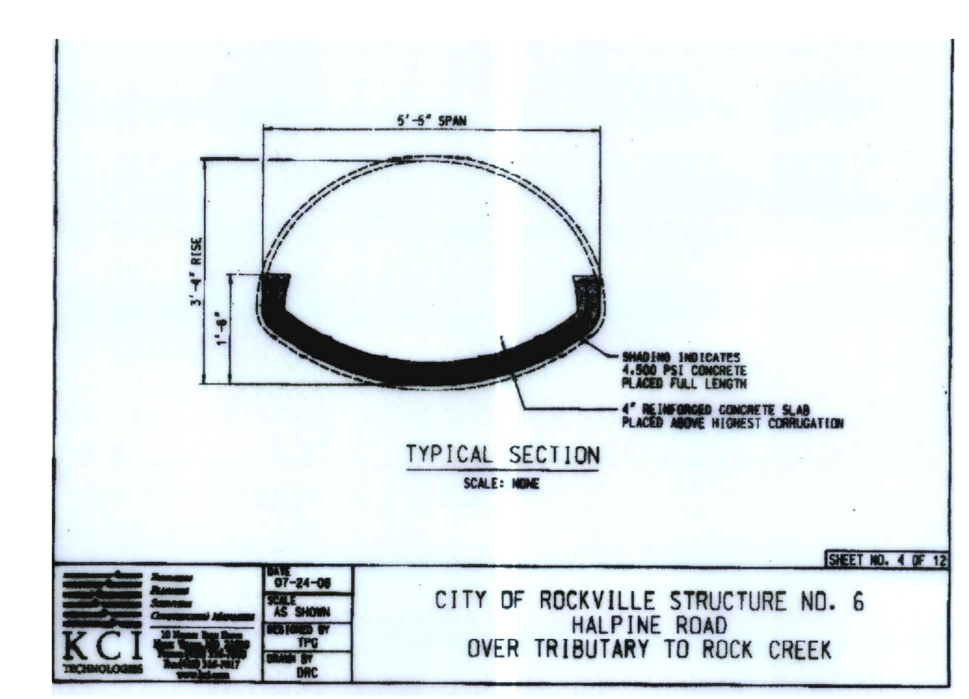
Friction Method	Manning Formula	
Solve For	Discharge	

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.00960	ft/ft
Normal Depth	3.33	ft
Rise	3.33	ft
Span	5.41	ft

Results

Discharge	160.27	ft³/s
Flow Area	14.15	ft²
Wetted Perimeter	13.91	ft
Hydraulic Radius	1.02	ft
Top Width	0.00	ft
Critical Depth	3.03	ft
Percent Full	100.0	%
Critical Slope	0.00809	ft/ft
Velocity	11.33	ft/s
Velocity Head	1.99	ft
Specific Energy	5.32	ft
Froude Number	0.00	
Maximum Discharge	174.85	ft³/s
Discharge Full	160.17	ft³/s x2 (TWIN) = 320 CFS
Slope Full	0.00959	ft/ft
Flow Type	Subcritical	



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EXISTING STORM DRAIN OUTFALL PROFILES

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