

DRESDNER ROBIN

STORMWATER MANAGEMENT REPORT

320 VALLEY BROOK AVENUE

LOTS 4, 5 AND 6 OF BLOCK 68

TOWNSHIP OF LYNDHURST, BERGEN COUNTY, NEW JERSEY

DRESDNER ROBIN PROJECT NO.: 10938-002

PREPARED FOR

312 VALLEY BROOK, LLC
320 VALLEY BROOK AVENUE
LYNDHURST, NJ 07071

PREPARED BY

DRESDNER ROBIN
55 LANE ROAD, SUITE 220
FAIRFIELD, NEW JERSEY 07004

DATE

JANUARY 2020
LAST REVISED MARCH 2022

MATTHEW J. NEULS, PE, CME, LEED AP
ASSOCIATE DIRECTOR
LICENSE NO. 24GE04313300

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1.0 INTRODUCTION

The proposed site (known as Lots 4, 5, & 6 in Block 68 in the Township of Lyndhurst, NJ) fronts Valley Brook Avenue to the northeast, mixed used building to the northwest, Livingston Avenue and single family residential properties to the southeast, and residential properties to the southwest. The site contains approximately 0.522 acres (22,750 square feet) of property and is situated in the B "Business" district. The site is currently developed with a three-story residential building, a single-story restaurant space, and a single-story commercial space. The site contains ancillary site improvements such as a garage, concrete walkways, asphalt parking, and grass areas. The existing lot consists of approximately 18,816 square feet (82.7%) of impervious coverage. The proposed project will increase the impervious coverage by approximately 2,050 square feet. This Project proposes to construct a three-story multi-residential building with associated parking areas, utilities, and landscaping. The proposed project will not disturb more than 1 acre, or increase impervious coverage by more than 0.25 acres, therefore the project is not classified as a "Major Development" per N.J.A.C. 7:8, and thus, is not subject to the regulations governing stormwater quantity, stormwater quality or groundwater recharge contained in the above listed regulations, however, is consistent with the purpose of these rules. This report will address stormwater pipe system conveyance.

2.0 STORM SEWER DESIGN

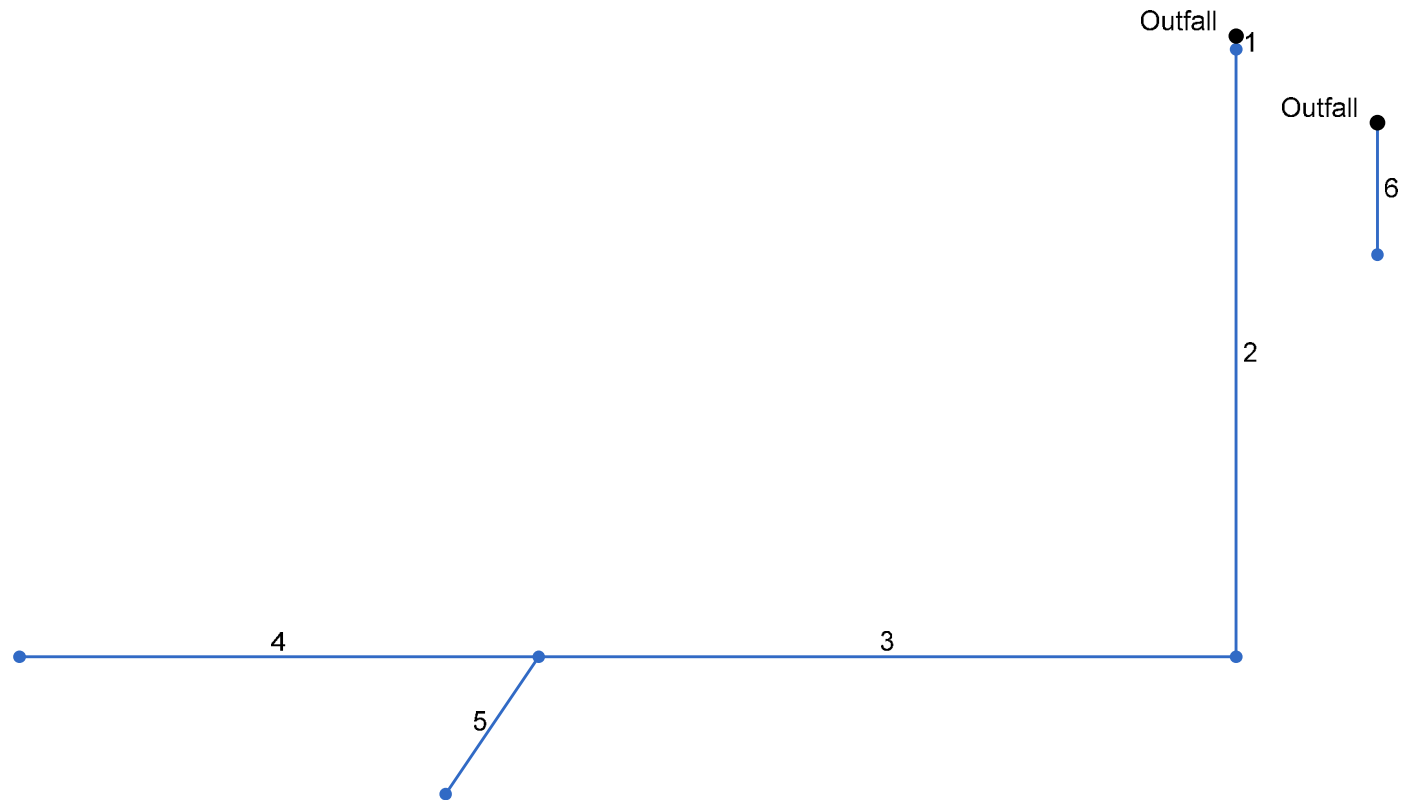
The proposed on-site storm sewer collection system has been designed to collect runoff from the proposed building and on-grade parking area. A 15" reinforced concrete pipe (RCP) storm sewer system exists within the Valley Brook Avenue Right-of-Way, along the north side of the property. The proposed on-site storm sewer conveyance system will connect to this pipe via an existing B-Inlet on the southwest corner of Valley Brook Avenue and Livingston Avenue. On-site storm sewer piping systems have been designed based upon a 25-year storm and detailed storm sewer pipe sizing calculations are located in **Appendix A** of this report. A supporting Inlet Area Map is located in **Appendix B** of this report.

3.0 CONCLUSION

In conclusion, the proposed drainage pattern for the subject site is generally in keeping with the existing drainage pattern. The proposed on-site storm sewer conveyance system is sized appropriately to handle the 25-year storm for the subject site. The project is not anticipated to have any negative impacts on the drainage patterns of the site, neighboring properties, or the area as a whole.

APPENDIX A
STORM SEWER PIPE
CALCUATIONS

Hydraflow Storm Sewers Extension for Autodesk® Civil 3D® Plan



Storm Sewer Tabulation

Station		Len (ft)	Drng Area		Rnoff coeff (C)	Area x C		Tc		Rain (l) (in/hr)	Total flow (cfs)	Cap full (cfs)	Vel (ft/s)	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line		Incr (ac)	Total (ac)		Incr	Total	Inlet (min)	Syst (min)					Size (in)	Slope (%)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	
1	End	2.000	0.10	0.57	0.96	0.09	0.54	10.0	15.1	4.9	2.67	14.44	6.44	15	5.00	31.77	31.87	32.14	32.52	35.15	34.85	A4-MANHOLE
2	1	92.000	0.08	0.47	0.95	0.08	0.45	10.0	14.3	5.0	2.26	6.13	4.09	15	0.90	31.97	32.80	32.52	33.40	34.85	36.05	A3-A4
3	2	90.000	0.27	0.39	0.97	0.26	0.37	10.0	13.5	5.2	1.93	6.77	3.95	15	1.10	32.90	33.89	33.40	34.44	36.05	36.93	A2-A3
4	3	67.000	0.07	0.07	0.97	0.07	0.07	10.0	10.0	5.8	0.39	6.46	1.66	15	1.00	33.99	34.66	34.44	34.90	36.93	37.60	A1.1-A2
5	3	24.000	0.05	0.05	0.88	0.04	0.04	10.0	10.0	5.8	0.25	6.46	1.36	15	1.00	33.99	34.23	34.44	34.43	36.93	37.63	A1.2-A2
6	End	20.000	0.47	0.47	0.98	0.46	0.46	10.0	10.0	5.8	2.67	5.00	4.12	15	0.60	32.00	32.12	32.65	32.77	34.97	34.70	D1-Manhole

Project File: Stormwater pipe analysis.stm

Number of lines: 6

Run Date: 3/4/2022

NOTES: Intensity = 54.89 / (Inlet time + 10.50) ^ 0.74; Return period = Yrs. 25 ; c = cir e = ellip b = box

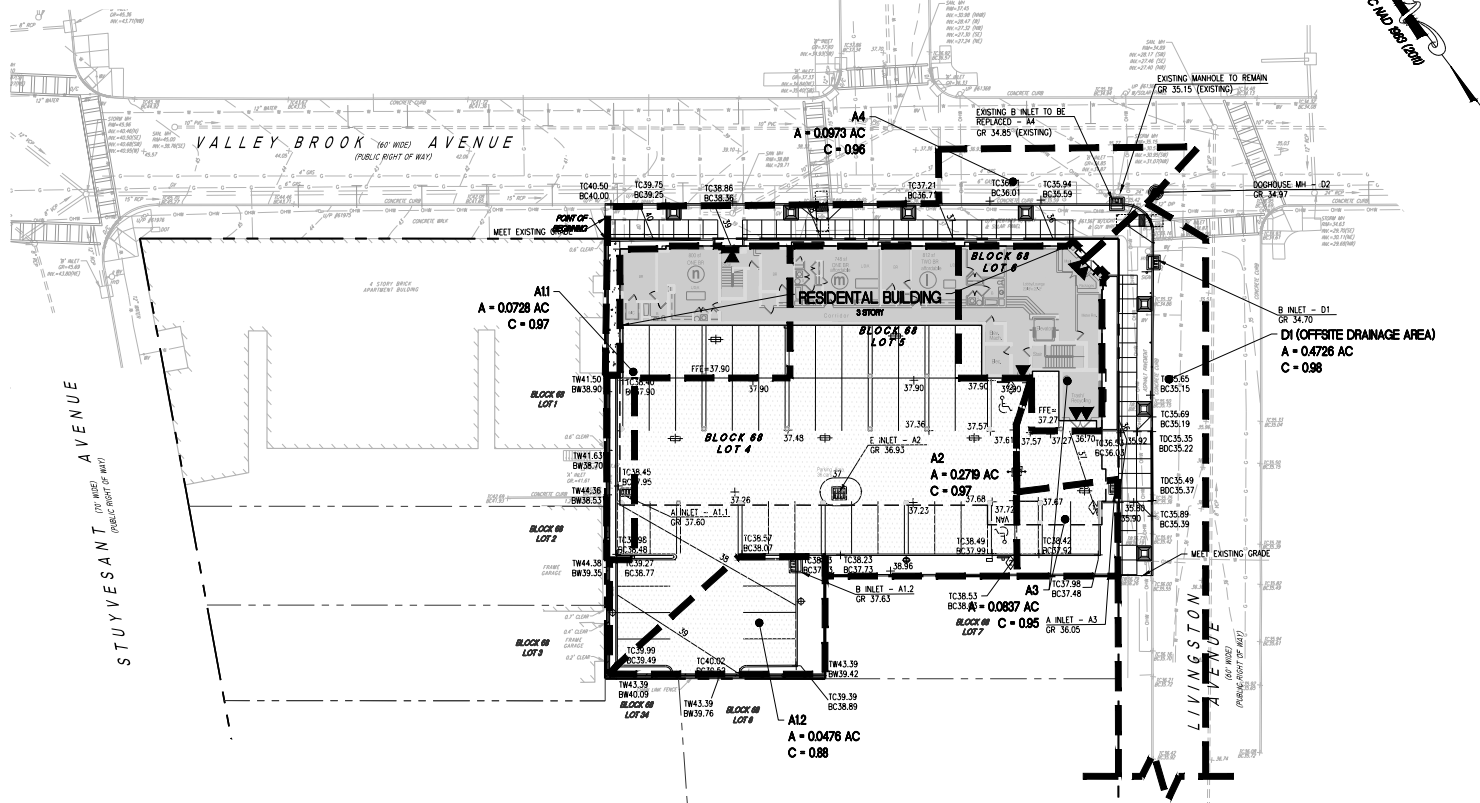
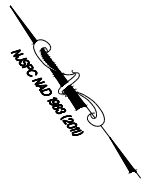
APPENDIX B

INLET DRAINAGE AREA MAP

DRESDNER ROBIN

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 NJ REGISTRATION NO. 34643790000

JERSEY CITY ■ FAIRFIELD ■ ASBURY PARK ■ CHERRY HILL



NO.	DATE	REVISIONS:	BY
01	03-04-2023	GENERAL REVISIONS	MJM
02	07-01-2021	REV. PER ENGINEER OF RECORD	LMP
03		DATE	DESCRIPTION

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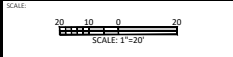
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INLET DRAINAGE AREA MAP

320 VALLEY BROOK AVENUE

LOCATION:
 312-318 & 324 VALLEY BROOK AVENUE
 LOTS 4, 5, & 6, BLOCK 68
 TOWNSHIP OF LYNDHURST
 BERGEN COUNTY, NEW JERSEY

MATTHEW J. NEULS
 PROFESSIONAL ENGINEER
 NJ LICENSE NUMBER 24650493200



DESIGNED BY: GRG/LV
 CHECKED BY: MJN
 DATE: JAN 2020
 SHEET NO.: 10938-002 SHEET 01 OF 01

LABEL	DRAINAGE AREAS						"C" VALUE				
	DRNG (SF)	DRNG (ACRES)	PERV (SF)	PERV (ACRES)	IMPERV (SF)	IMPERV (ACRES)	PERV	IMPERV	"C" VALUE	INTENSITY	Q (CFS)
A1.1	3173	0.0728	137	0.0031	3036	0.0697	0.51	0.99	0.97	6.8	SEE APPENDIX C
A1.2	2074	0.0476	459	0.0105	1615	0.0371	0.51	0.99	0.88	6.8	SEE APPENDIX C
A2	11846	0.2719	418	0.0096	11428	0.2624	0.51	0.99	0.97	6.8	SEE APPENDIX C
A3	3644	0.0837	314	0.0072	3330	0.0764	0.51	0.99	0.95	6.8	SEE APPENDIX C
A4	4239	0.0973	296	0.0068	3944	0.0905	0.51	0.99	0.96	6.8	SEE APPENDIX C
D1	20586	0.4726	267	0.0061	20319	0.4665	0.51	0.99	0.98	6.8	3.161

- REFERENCES:
- EXISTING CONDITIONS SHOWN BASED ON DRAWING ENTITLED "BOUNDARY AND TOPOGRAPHIC SURVEY 312-318 & 324 VALLEY BROOK AVENUE, LOTS 4, 5 & 6, BLOCK 68, TOWNSHIP OF LYNDHURST, BERGEN COUNTY, NEW JERSEY," PREPARED BY DRESDNER ROBIN FOR MEU PLUMBING, AND DATED 04/18/2018.
 - ARCHITECTURAL BACKGROUND PROVIDED BY VIRGONA + VIRGONA ON 11/19/2019.