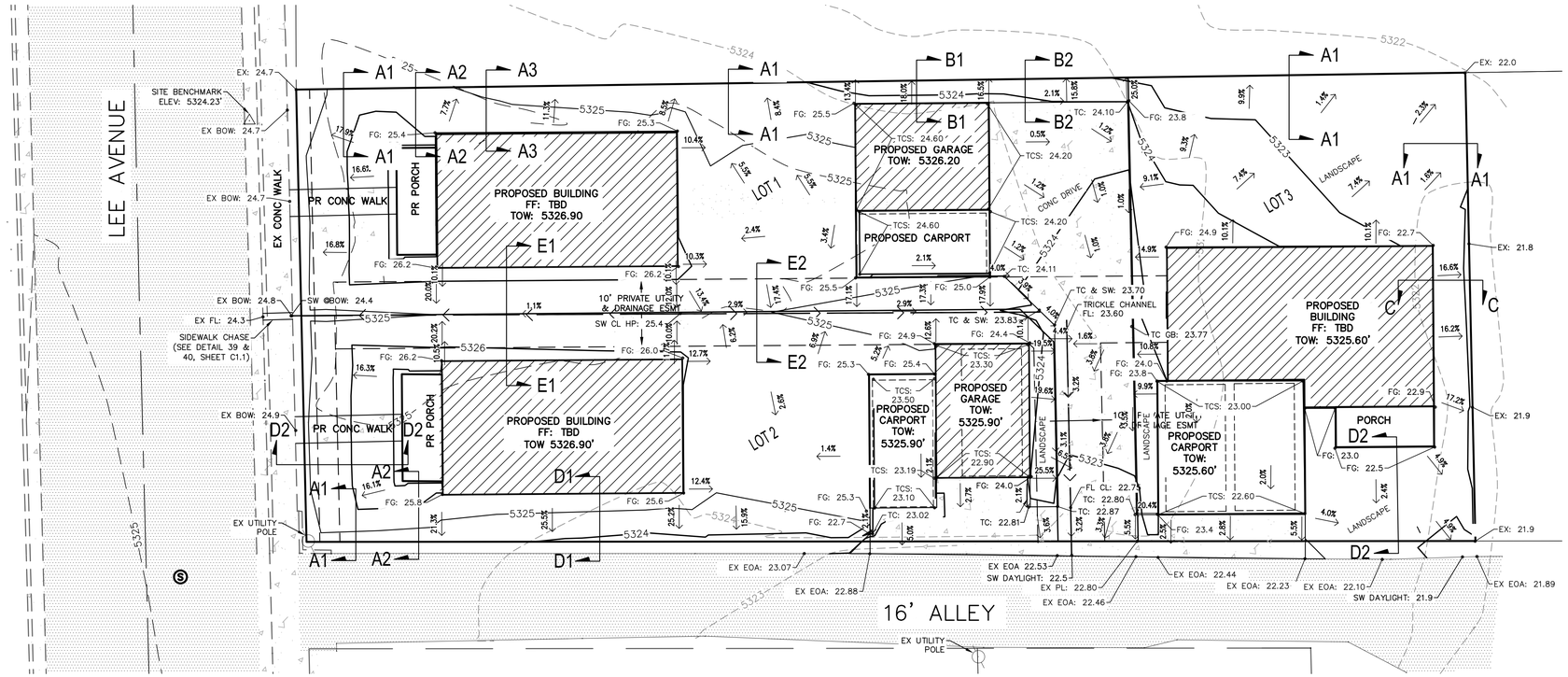
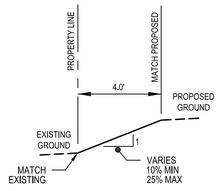


1 C1.0 GRADING PLAN

SCALE: 1" = 10'-0"

NORTH



SECTION A1-A1

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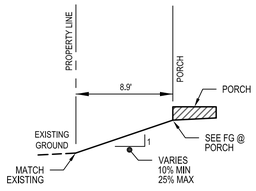

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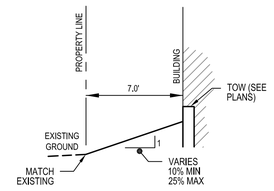

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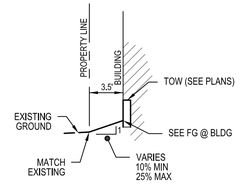

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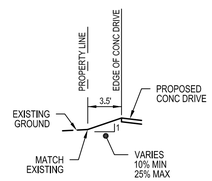

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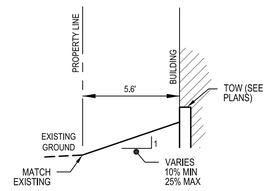

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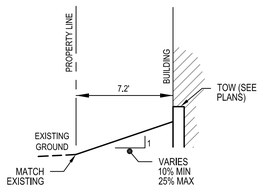

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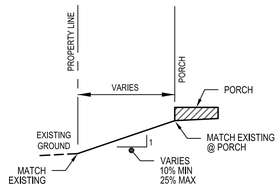

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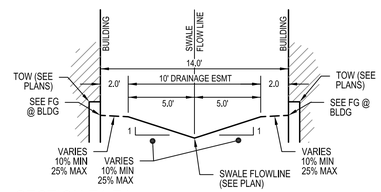

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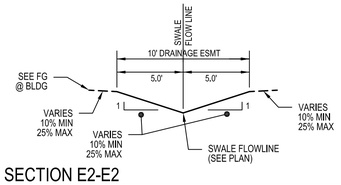

SECTION E2-E2

NOT TO SCALE

Notes

1. BUILDING FOOTPRINTS ARE HYPOTHETICAL AS PROVIDED BY THE ARCHITECT. ACTUAL BUILDING FOOTPRINTS MAY VARY FROM THIS DEPICTION. ANY REQUIRED MODIFICATIONS TO THE DRAINAGE MAP AND CIVIL DRAWINGS WILL BE PROVIDED AT TIME OF BUILDING PERMIT APPLICATION.

Provided Information Note

THE EXISTING, ON-SITE CONDITIONS AND TOPOGRAPHY USED FOR THE DESIGN BY CIVILARTS, WERE SUPPLIED BY OTHERS. CIVILARTS CANNOT CERTIFY TO, AND IS NOT RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS INFORMATION PROVIDED BY OTHERS. CIVILARTS IS NOT RESPONSIBLE FOR ANY DESIGN ERRORS DUE TO ERRORS OR INACCURACIES IN INFORMATION PROVIDED BY OTHERS.

Legend

- PROPERTY BOUNDARY
- SECTION LINE
- EXISTING MAJOR CONTOUR — 5000
- EXISTING MINOR CONTOUR — 5007
- PROPOSED MAJOR CONTOUR — 5000
- PROPOSED MINOR CONTOUR — 5007
- SWALE CENTERLINE
- SWALE LIMITS
- PERCENT SLOPE — X.X%
- FLOW DIRECTION
- EXISTING SPOT ELEVATION — 4662.54
- PROPOSED CONCRETE
- EXISTING ASPHALT PAVING

Abbreviations

EX	EXISTING	WP	WOOD POST	HP	HIGH POINT
EG	EXISTING GRADE	CLP	CLOTHES LINE POLE	BLDG	BUILDING
TC	TOP OF CONCRETE	FFE	FINISHED FLOOR ELEVARION	ESMT	EASEMENT
FG	FINISHED GRADE	PP	POWER POLE	TCS	POT OF CONCRETE SLAB
SW	SWALE	CO	CLEANOUT		
CL	CENTERLINE	WV	WATER VALVE		
BM	TOP OF BERM	RCP	REINFORCED CONCRETE PIPE		
INT	INTERSECTION	SMH	SANITARY MANHOLE		
EB	ELECTRICAL BOX	INV	INVERT		
SP	STEEL POST	DIP	DUCTILE IRON PIPE		
EM	ELECTRICAL METER	VCP	VITRIFIED CLAY PIPE		
IVB	IRRIGATION VALVE BOX	BTM	BOTTOM		
IWS	IRRIGATION WATER SPIGOT	TYP	TYPICAL		
MB	MAIL BOX	LP	LOW POINT		

811 FOR BURIED UTILITY INFORMATION CALL 811 (or 1-800-922-1987) THREE (3) BUSINESS DAYS BEFORE YOU DIG UTILITY NOTIFICATION CENTER OF COLORADO (UNCC) www.uncc.org

REVISIONS

NO.	DESCRIPTION	DATE	BY
1	SITE PLAN SUBMITTAL	5/13/24	MB
2	PER CLIENT COMMENTS	5/14/24	MB

ENGINEERING :: 1500 Kansas Ave., Suite 2-E
PLANNING :: Longmont, CO 80501
SURVEYING :: P 303.682.1131
F 303.682.1149
CIVILARTS

824 LEE AVE. IMPROVMENTS
824 LEE AVENUE
LOUISVILLE, COLORADO 80027
GRADING PLAN

COLORADO LICENSED PATRICK E. HIGH 55300 PROFESSIONAL ENGINEER 5/15/2024

DATE: 2/23/2024
DRAWN BY: MB
CHECKED BY: PEH
JOB NO: E-435

SHEET NO:
C1.0
1 OF 4

PLOTTED: TUE 05/14/24 02:50PM BY: MICHAEL BEST
MODIFIED: 5/14/24 BY: MBEST
DRAWING: Q:\E-435 824 LEE STREET MINOR SUBDIVISION_ENG C3D\GRADING REV 2.DWG

CIVILARTS
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PLANNING
SURVEYING
P 303.682.1131
F 303.682.1149
info@civilarts.us
www.civilarts.us
1500 Kansas Avenue, Suite 2-E
Longmont, CO 80501

May 13, 2024

Mr. Eric Ellis
Hartronft Associates PC
950 Spruce Street.
STE #2A
Louisville, CO 80027

Re: Drainage Letter
824 Lee Street
Louisville, Colorado 80027
Legal Description: Lots 1-3, Block 3, Louisville East City of Louisville, County of Boulder, State of Colorado.

This preliminary drainage letter is submitted in conjunction with the site plan review and topo survey prepared for the above referenced project and parcel of land.

The existing parcel consists of a single-family residential home and detached garage on 0.28 acres of subdivided land. The legal description is: Lots 1-3, Block 3, Louisville East.
An Alta survey was prepared by Ehrhart Land Surveying dated May 19, 2023, which we used in preparing this drainage letter.

The existing drainage conditions are as follows:
The existing site has a single-family home and detached garage lying on 0.28 acres of land. The existing impervious area is approximately 15%. The existing runoff and topography was reviewed and 5-10% is directed west to Lee Avenue via sheet flow. 15-20% is directed north to Miners Field via sheet flow. 60-70% is directed south to the Alley via sheet flow.
The existing soils are 100% (AcA) – Acalon sandy loam 0 – 3% slopes.
The Hydrologic Soil Group is classified as "B" and is considered well drained. The runoff class is considered low and the capacity to percolate and transmit water high, (0.6 – 2.0 in/hr.).
We have attached herewith the Custom Soils Resource Report obtained from the Natural Resources Conservation Service.

The proposed site development drainage plan calls for a RESI Minor Subdivision with 3 residential homes and garages. The impervious area planned is approximately 50%.

The proposed drainage plan will be to capture water in grass buffers and swales for water quality treatment. Because the site and disturbed area is less than 1 acre, (0.28 acres total) we have discussed previously with the City of Louisville engineering department about obtaining a detention waiver due to the negligible impact of such a small lot. In summary, we intend to provide 100% water quality treatment within the grass buffers and swales.

824 Lee Street Louisville Colorado 80027

If you should have any questions or comments regarding either the information or conclusions presented herein, feel free to contact me at your convenience.

CivilArts

Patrick High

Patrick E. High, P.E.
Senior Project Manager

NOAA Atlas 14, Volume 8, Version 2
Location name: Louisville, Colorado, USA*
Latitude: 39.9783°, Longitude: -105.1292°
Elevation: 5325 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Deborah Martin, Sandra Pavlovic, Ishani Roy, Michael St. Laurent, Carl Trypaluk, Dale Unruh, Michael Yekta, Geoffery Bonnin

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	**0.215** (0.170-0.272)	**0.265** (0.209-0.336)	**0.359** (0.282-0.456)	**0.449** (0.351-0.573)	**0.590** (0.453-0.801)	**0.714** (0.531-0.974)	**0.849** (0.608-1.18)	**1.00** (0.684-1.43)	**1.22** (0.798-1.78)	**1.40** (0.884-2.05)
10-min	**0.315** (0.249-0.399)	**0.388** (0.306-0.492)	**0.525** (0.413-0.668)	**0.657** (0.514-0.839)	**0.864** (0.664-1.17)	**1.04** (0.777-1.43)	**1.24** (0.890-1.74)	**1.46** (1.00-2.09)	**1.78** (1.17-2.61)	**2.05** (1.30-3.00)
15-min	**0.384** (0.304-0.487)	**0.473** (0.374-0.599)	**0.640** (0.504-0.814)	**0.801** (0.627-1.02)	**1.05** (0.810-1.43)	**1.28** (0.948-1.74)	**1.52** (1.09-2.12)	**1.78** (1.22-2.55)	**2.17** (1.42-3.18)	**2.50** (1.58-3.66)
30-min	**0.531** (0.420-0.673)	**0.651** (0.514-0.826)	**0.879** (0.692-1.12)	**1.10** (0.859-1.40)	**1.44** (1.11-1.96)	**1.74** (1.30-2.38)	**2.08** (1.48-2.90)	**2.44** (1.67-3.49)	**2.97** (1.95-4.36)	**3.41** (2.16-5.01)
60-min	**0.653** (0.516-0.827)	**0.803** (0.634-1.02)	**1.08** (0.854-1.38)	**1.35** (1.06-1.73)	**1.78** (1.36-2.41)	**2.14** (1.59-2.92)	**2.54** (1.82-3.54)	**2.99** (2.04-4.27)	**3.63** (2.38-5.31)	**4.16** (2.63-6.10)
2-hr	**0.775** (0.619-0.970)	**0.954** (0.762-1.20)	**1.29** (1.03-1.62)	**1.61** (1.27-2.03)	**2.11** (1.63-2.82)	**2.54** (1.91-3.42)	**3.01** (2.18-4.14)	**3.53** (2.44-4.98)	**4.28** (2.84-6.19)	**4.90** (3.14-7.10)
3-hr	**0.845** (0.679-1.05)	**1.04** (0.836-1.30)	**1.40** (1.12-1.75)	**1.75** (1.39-2.19)	**2.28** (1.77-3.02)	**2.74** (2.06-3.66)	**3.24** (2.35-4.42)	**3.78** (2.63-5.30)	**4.58** (3.05-6.56)	**5.22** (3.36-7.52)
6-hr	**1.02** (0.832-1.26)	**1.25** (1.01-1.54)	**1.66** (1.34-2.05)	**2.05** (1.64-2.53)	**2.64** (2.08-3.45)	**3.15** (2.40-4.15)	**3.70** (2.72-4.99)	**4.31** (3.02-5.95)	**5.18** (3.49-7.33)	**5.89** (3.84-8.37)
12-hr	**1.30** (1.06-1.57)	**1.56** (1.28-1.89)	**2.03** (1.66-2.48)	**2.47** (2.01-3.03)	**3.15** (2.50-4.06)	**3.72** (2.87-4.84)	**4.34** (3.22-5.77)	**5.02** (3.56-6.84)	**5.99** (4.08-8.36)	**6.78** (4.47-9.52)
24-hr	**1.56** (1.30-1.88)	**1.91** (1.58-2.29)	**2.51** (2.07-3.02)	**3.04** (2.49-3.68)	**3.83** (3.05-4.84)	**4.48** (3.47-5.71)	**5.16** (3.86-6.74)	**5.89** (4.22-7.89)	**6.92** (4.75-9.50)	**7.74** (5.16-10.7)
2-day	**1.78** (1.49-2.10)	**2.23** (1.87-2.65)	**3.00** (2.50-3.56)	**3.64** (3.02-4.35)	**4.55** (3.64-5.62)	**5.26** (4.10-6.58)	**5.99** (4.51-7.67)	**6.74** (4.86-8.85)	**7.75** (5.36-10.5)	**8.53** (5.75-11.7)
3-day	**1.94** (1.63-2.28)	**2.40** (2.02-2.83)	**3.18** (2.67-3.75)	**3.84** (3.20-4.54)	**4.76** (3.83-5.84)	**5.49** (4.31-6.82)	**6.23** (4.72-7.92)	**7.00** (5.08-9.13)	**8.04** (5.60-10.8)	**8.84** (6.00-12.0)
4-day	**2.08** (1.76-2.43)	**2.53** (2.14-2.96)	**3.28** (2.76-3.85)	**3.92** (3.29-4.63)	**4.84** (3.92-5.92)	**5.57** (4.40-6.89)	**6.33** (4.82-8.01)	**7.11** (5.19-9.23)	**8.18** (5.74-10.9)	**9.01** (6.15-12.2)
7-day	**2.43** (2.07-2.81)	**2.83** (2.42-3.28)	**3.53** (3.00-4.10)	**4.14** (3.50-4.83)	**5.03** (4.13-6.10)	**5.76** (4.60-7.06)	**6.52** (5.03-8.19)	**7.33** (5.41-9.44)	**8.45** (5.99-11.2)	**9.33** (6.43-12.5)
10-day	**2.72** (2.34-3.13)	**3.12** (2.68-3.60)	**3.81** (3.26-4.40)	**4.42** (3.76-5.12)	**5.31** (4.38-6.39)	**6.03** (4.85-7.35)	**6.79** (5.27-8.47)	**7.60** (5.65-9.72)	**8.73** (6.23-11.5)	**9.62** (6.67-12.8)
20-day	**3.54** (3.08-4.03)	**4.03** (3.50-4.58)	**4.84** (4.18-5.51)	**5.52** (4.74-6.32)	**6.48** (5.38-7.65)	**7.24** (5.87-8.65)	**8.01** (6.27-9.80)	**8.80** (6.60-11.1)	**9.88** (7.12-12.7)	**10.7** (7.51-14.0)
30-day	**4.20** (3.67-4.73)	**4.79** (4.18-5.41)	**5.75** (5.00-6.51)	**6.54** (5.66-7.43)	**7.62** (6.35-8.88)	**8.44** (6.87-9.97)	**9.24** (7.27-11.2)	**10.1** (7.58-12.5)	**11.1** (8.05-14.2)	**11.9** (8.41-15.5)
45-day	**5.00** (4.40-5.60)	**5.74** (5.05-6.43)	**6.92** (6.06-7.76)	**7.86** (6.85-8.86)	**9.12** (7.63-10.5)	**10.0** (8.23-11.8)	**10.9** (8.66-13.1)	**11.8** (8.96-14.5)	**12.9** (9.42-16.3)	**13.7** (9.77-17.7)
60-day	**5.67** (5.01-6.31)	**6.54** (5.77-7.28)	**7.90** (6.95-8.82)	**8.99** (7.86-10.1)	**10.4** (8.76-11.9)	**11.5** (9.43-13.3)	**12.5** (9.91-14.8)	**13.4** (10.2-16.4)	**14.6** (10.7-18.4)	**15.5** (11.1-19.9)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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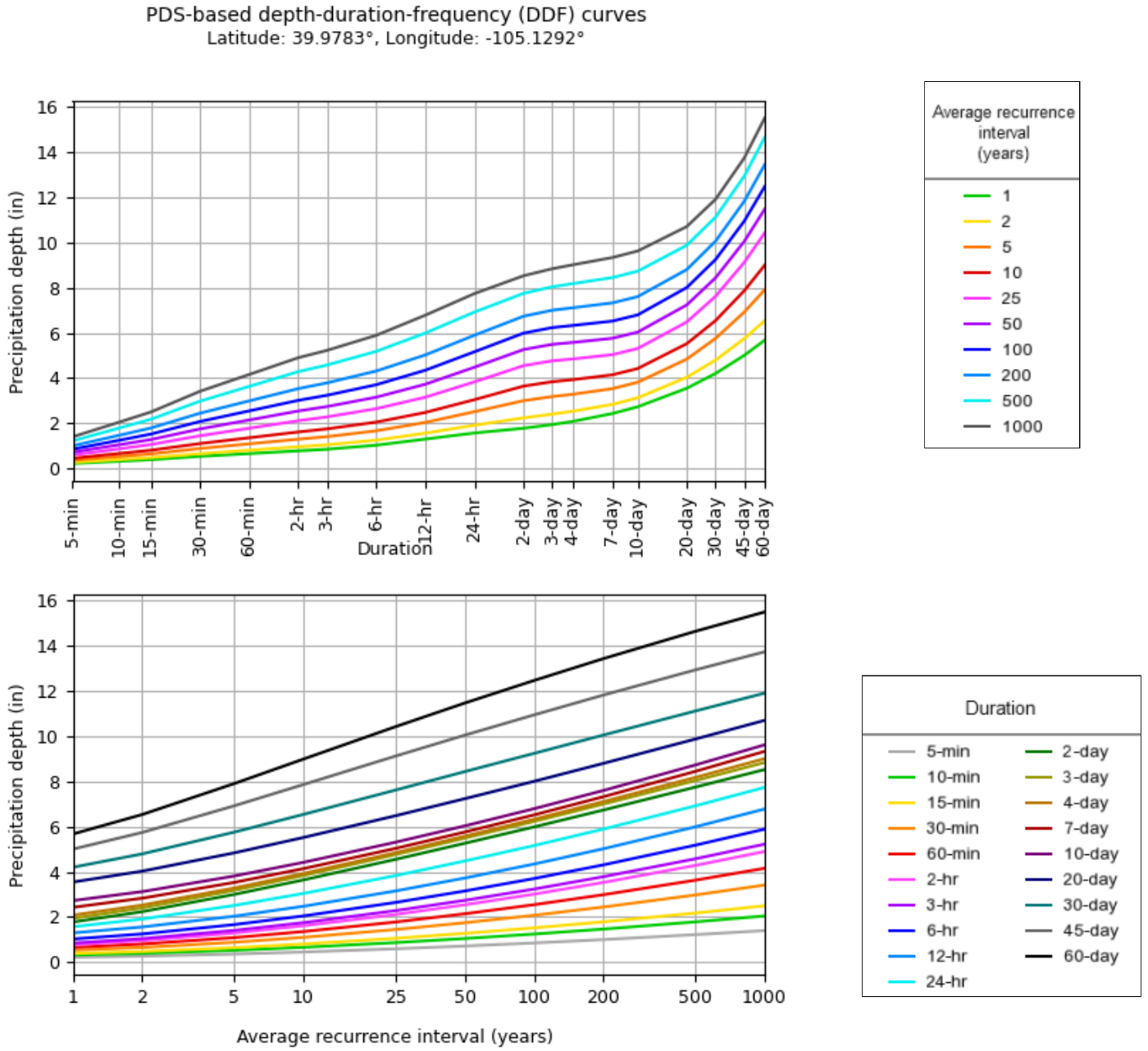
PF graphical



NOAA Atlas 14, Volume 8, Version 2

Created (GMT): Fri Feb 23 21:48:47 2024

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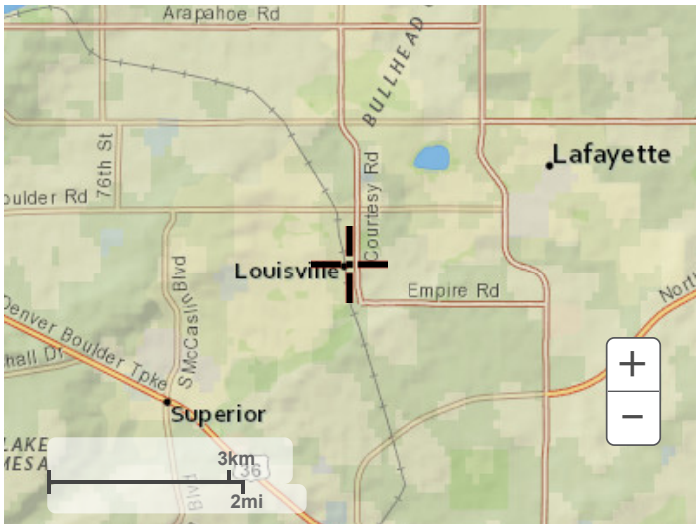
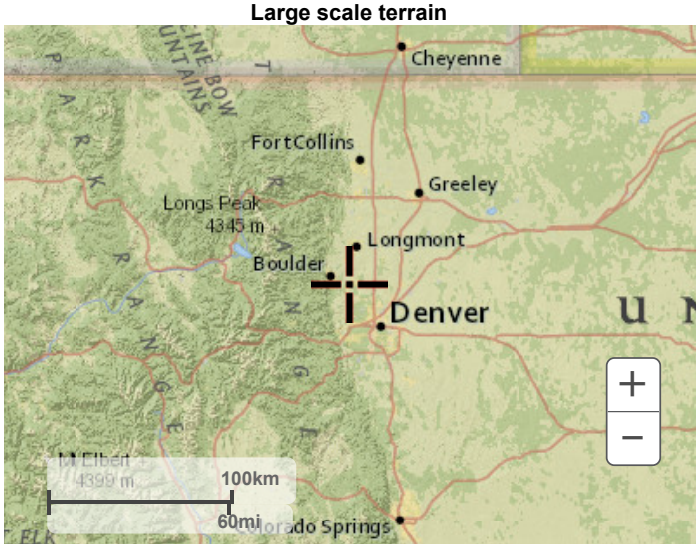
Maps & aerials

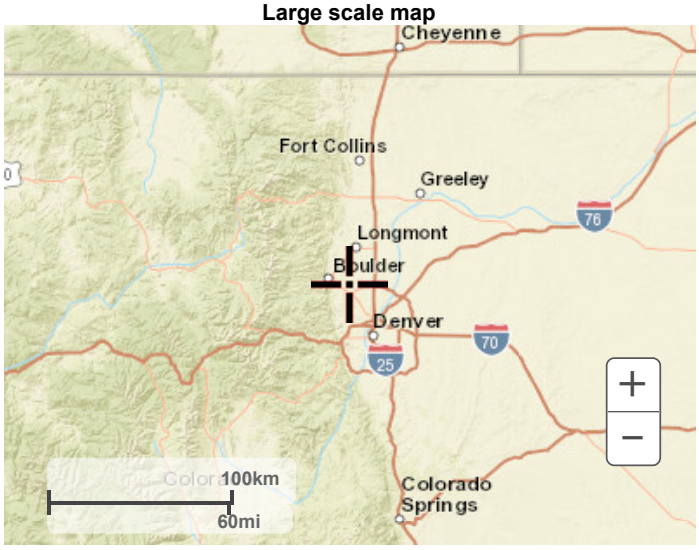
Small scale terrain



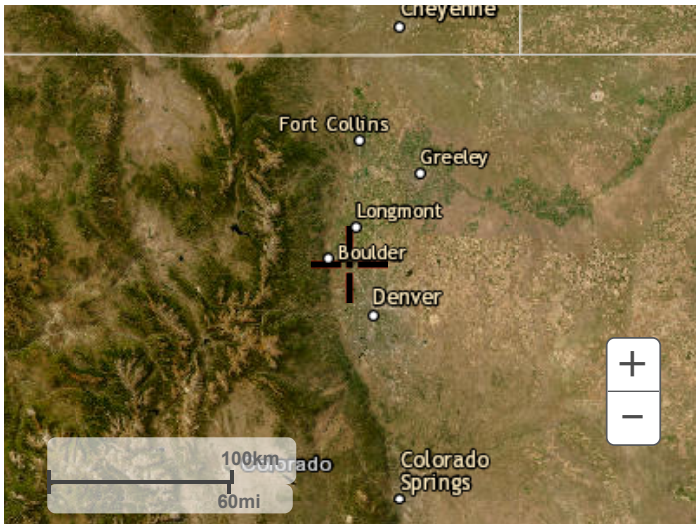
Large scale terrain



Large scale map



Large scale aerial



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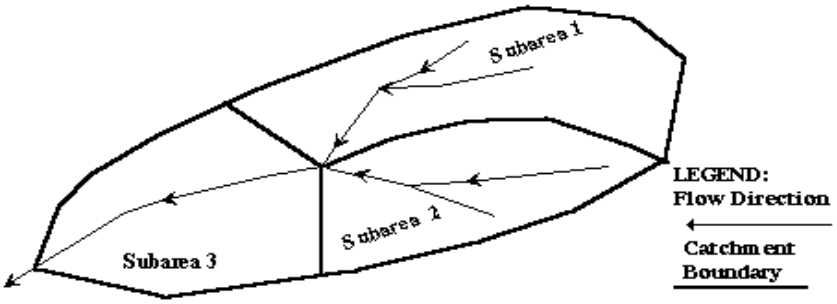
US Department of Commerce
National Oceanic and Atmospheric Administration
National Weather Service
National Water Center
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

Disclaimer

Area-Weighted Runoff Coefficient Calculations

Version 2.00 released May 2017

Designer: Parick E. High
Company: CivilArts
Date: 2/26/2024
Project: 824 Lee Street; (Minor Subdivision)
Location: Louisville, Colorado



Subcatchment Name

Cells of this color are for required user-input
Cells of this color are for optional override values
Cells of this color are for calculated results based on overrides

See sheet "Design Info" for imperviousness-based runoff coefficient values.

Sub-Area ID	Area (ac)	NRCS Hydrologic Soil Group	Percent Imperviousness	Runoff Coefficient, C						
				2-yr	5-yr	10-yr	25-yr	50-yr	100-yr	500-yr
EX-1	0.04	B	62.0	0.48	0.51	0.56	0.64	0.67	0.71	0.76
EX-2	0.06	B	2.0	0.01	0.01	0.07	0.26	0.34	0.44	0.54
EX-3	0.17	B	12.0	0.07	0.09	0.15	0.32	0.39	0.48	0.58
DA-1	0.04	B	53.0	0.40	0.43	0.48	0.58	0.62	0.67	0.73
DA-2	0.06	B	14.0	0.08	0.10	0.17	0.34	0.41	0.49	0.59
DA-3	0.17	B	51.0	0.38	0.41	0.47	0.57	0.61	0.66	0.72
Total Area (ac)	**0.54**		**Area-Weighted C**	**0.22**	**0.24**	**0.30**	**0.44**	**0.50**	**0.57**	**0.65**
			Area-Weighted Override C	**0.22**	**0.24**	**0.30**	**0.44**	**0.50**	**0.57**	**0.65**

Calculation of Peak Runoff using Rational Method

Designer: Parick E. High
Company: CivilArts
Date: 2/26/2024
Project: 824 Lee Street; (Minor Subdivision)
Location: Louisville, Colorado

Version 2.00 released May 2017

Cells of this color are for required user-input
Cells of this color are for optional override values
Cells of this color are for calculated results based on overrides

$$t_i = \frac{0.395(1.1 - C_5)\sqrt{L_i}}{S_i^{0.33}}$$

$$t_t = \frac{L_t}{60K\sqrt{S_t}} = \frac{L_t}{60V_t}$$

Computed $t_c = t_i + t_t$

Regional $t_c = (26 - 17i) + \frac{L_t}{60(14i + 9)\sqrt{S_t}}$

$t_{minimum}$= 5 (urban)
$t_{minimum}$= 10 (non-urban)

Selected $t_c = \max\{t_{minimum}, \min(\text{Computed } t_c, \text{Regional } t_c)\}$

Select UDFCD location for NOAA Atlas 14 Rainfall Depths from the pulldown list OR enter your own depths obtained from the NOAA website (click this link)

	2-yr	5-yr	10-yr	25-yr	50-yr	100-yr	500-yr
1-hour rainfall depth, P1 (in) =	0.80	1.08	1.35	1.78	2.14	2.54	3.63
	a	b	c				
Rainfall Intensity Equation Coefficients =	28.50	10.00	0.786				

$$I(in/hr) = \frac{a * P_1}{(b + t_c)^c}$$

$$Q(cfs) = CIA$$

Subcatchment Name	Area (ac)	NRCS Hydrologic Soil Group	Percent Imperviousness	Runoff Coefficient, C							Overland (Initial) Flow Time					Channelized (Travel) Flow Time							Time of Concentration			Rainfall Intensity, I (in/hr)							Peak Flow, Q (cfs)						
				2-yr	5-yr	10-yr	25-yr	50-yr	100-yr	500-yr	Overland Flow Length L_i (ft)	U/S Elevation (ft) (Optional)	D/S Elevation (ft) (Optional)	Overland Flow Slope S_i (ft/ft)	Overland Flow Time t_i (min)	Channelized Flow Length L_t (ft)	U/S Elevation (ft) (Optional)	D/S Elevation (ft) (Optional)	Channelized Flow Slope S_t (ft/ft)	NRCS Conveyance Factor K	Channelized Flow Velocity V_t (ft/sec)	Channelized Flow Time t_t (min)	Computed t_c (min)	Regional t_c (min)	Selected t_c (min)	2-yr	5-yr	10-yr	25-yr	50-yr	100-yr	500-yr	2-yr	5-yr	10-yr	25-yr	50-yr	100-yr	500-yr
EX-1	0.04	B	62.0	0.48	0.51	0.56	0.64	0.67	0.71	0.76	25.00			0.030	3.71	0.00			0.030	7	1.21	0.00	3.71	15.46	5.00	2.72	3.66	4.58	6.04	7.26	8.62	12.31	0.05	0.07	0.10	0.15	0.20	0.25	0.38
EX-2	0.06	B	2.0	0.01	0.01	0.07	0.26	0.34	0.44	0.54	35.00			0.030	8.09	0.00			0.030	7	1.21	0.00	8.09	25.66	10.00	2.17	2.92	3.65	4.82	5.79	6.87	9.82	0.00	0.00	0.02	0.08	0.12	0.18	0.32
EX-3	0.17	B	12.0	0.07	0.09	0.15	0.32	0.39	0.48	0.58	50.00			0.030	9.01	0.00			0.030	7	1.21	0.00	9.01	23.96	10.00	2.17	2.92	3.65	4.82	5.79	6.87	9.82	0.03	0.04	0.10	0.27	0.39	0.56	0.97
DA-1	0.04	B	53.0	0.40	0.43	0.48	0.58	0.62	0.67	0.73	25.00			0.020	4.82	0.00			0.020	7	0.99	0.00	4.82	16.99	5.00	2.72	3.66	4.58	6.04	7.26	8.62	12.31	0.04	0.06	0.09	0.14	0.18	0.23	0.36
DA-2	0.06	B	14.0	0.08	0.10	0.17	0.34	0.41	0.49	0.59	35.00			0.020	8.49	0.00			0.020	7	0.99	0.00	8.49	23.62	10.00	2.17	2.92	3.65	4.82	5.79	6.87	9.82	0.01	0.02	0.04	0.10	0.14	0.20	0.35
DA-3	0.17	B	51.0	0.38	0.41	0.47	0.57	0.61	0.66	0.72	50.00			0.020	6.99	0.00			0.020	7	0.99	0.00	6.99	17.33	6.99	2.47	3.32	4.15	5.47	6.58	7.81	11.16	0.16	0.23	0.33	0.53	0.69	0.88	1.37

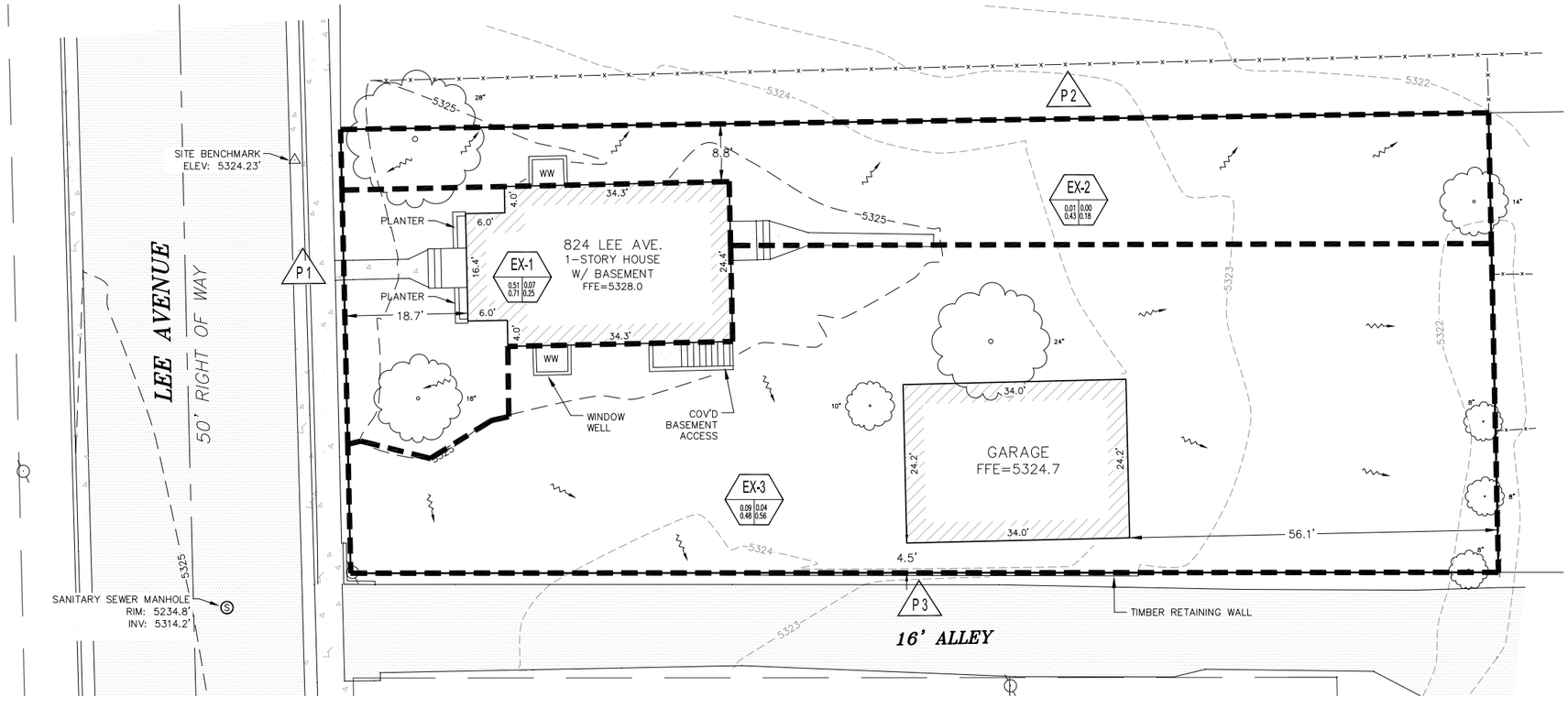
PRE-VS-POST DRAINAGE RUNOFF SUMMARY

DESIGN POINTS	DRAINAGE BASINS	AREA (AC)	IMPERVIOUS (%)	C2	C5	C10	C100	Q2 CFS	Q5 CFS	Q10CFS	Q100 CFS	VOL-100 CUBIC FT	SUM-DIF CUBIC FT
P1-PRE	EX-1	0.04	62	0.48	0.51	0.56	0.71	0.05	0.07	0.1	0.25	261	
P2-PRE	EX-2	0.06	2	0.01	0.01	0.07	0.44	0	0	0.02	0.18	239	
P3-PRE	EX-3	0.17	12	0.07	0.09	0.15	0.48	0.03	0.04	0.1	0.97	752	
P1-POST	DA-1	0.04	53	0.40	0.43	0.48	0.67	0.04	0.06	0.09	0.36	232	(-) 29
P2-POST	DA-2	0.06	14	0.08	0.10	0.17	0.49	0.01	0.02	0.04	0.35	272	(+) 33
P3-POST	DA-3	0.17	51	0.38	0.41	0.47	0.66	0.16	0.23	0.33	1.37	1034	(+) 281

100-YEAR VOLUME

EX-1 2.54 (0.71) (0.04) = 0.072 AC-IN = 261 CUBIC-FT
EX-2 2.54 (0.43) (0.06) = 0.066 AC-IN = 239 CUBIC-FT
EX-3 2.54 (0.48) (0.17) = 0.207 AC-IN = 752 CUBIC-FT

DA-1 2.54 (0.63) (0.04) = 0.064 AC-IN = 232 CUBIC FT
DA-2 2.54 (0.49) (0.06) = 0.075 AC-IN = 272 CUBIC FT
DA-3 2.54 (0.66) (0.17) = 0.285 AC-IN = 1034 CUBIC FT



1 C2.0 PRE-DEVELOPMENT DRAINAGE MAP

SCALE: 1" = 10'-0"

Pre-Development Drainage Summery

DRAINAGE BASIN	Q_5	Q_{100}
EX-1	0.07	0.25
EX-2	0.00	0.18
EX-3	0.04	0.56

Drainage Area Table

TOTAL DRAINAGE AREA: ±12,063 SQ. FT.

EX-1 AREA: ±1,793 SQ. FT.
BUILDING: ±935 SQ. FT.
CONCRETE: ±172 SQ. FT.
GREEN: ±686 SQ. FT.

EX-2 AREA: ±2,769 SQ. FT.
CONCRETE: ±22 SQ. FT.
GREEN: ±2,747 SQ. FT.

EX-3 AREA: ±7,501 SQ. FT.
BUILDING: ±823 SQ. FT.
CONCRETE: ±55 SQ. FT.
GREEN: ±6,623 SQ. FT.

Legend

PROPERTY BOUNDARY
SECTION LINE
EXISTING MAJOR CONTOUR (5000)
EXISTING MINOR CONTOUR (5007)
EXISTING FENCE
DRAINAGE FLOW DIRECTION
INDICATES LIMITS OF DRAINAGE SUB-BASIN
DRAINAGE BASIN (DA-1 — BASIN NAME; 5yr 'C' FACTOR 0.05 0.70 Q_5; 100yr 'C' FACTOR 0.01 0.70 Q_{100})
DESIGN POINT (P1)

811 FOR BURIED UTILITY INFORMATION
CALL 811 (or 1-800-922-1987)
THREE (3) BUSINESS DAYS
BEFORE YOU DIG
UTILITY NOTIFICATION CENTER
OF COLORADO (UNCC)
www.uncc.org

REVISIONS

NO	DESCRIPTION	DATE	BY
1	SITE PLAN SUBMITTAL	5/13/24	MB

ENGINEERING :: 1500 Kansas Ave., Suite 2-E
PLANNING :: Longmont, CO 80501
SURVEYING :: P 303.682.1131
F 303.682.1149
CIVILARTS

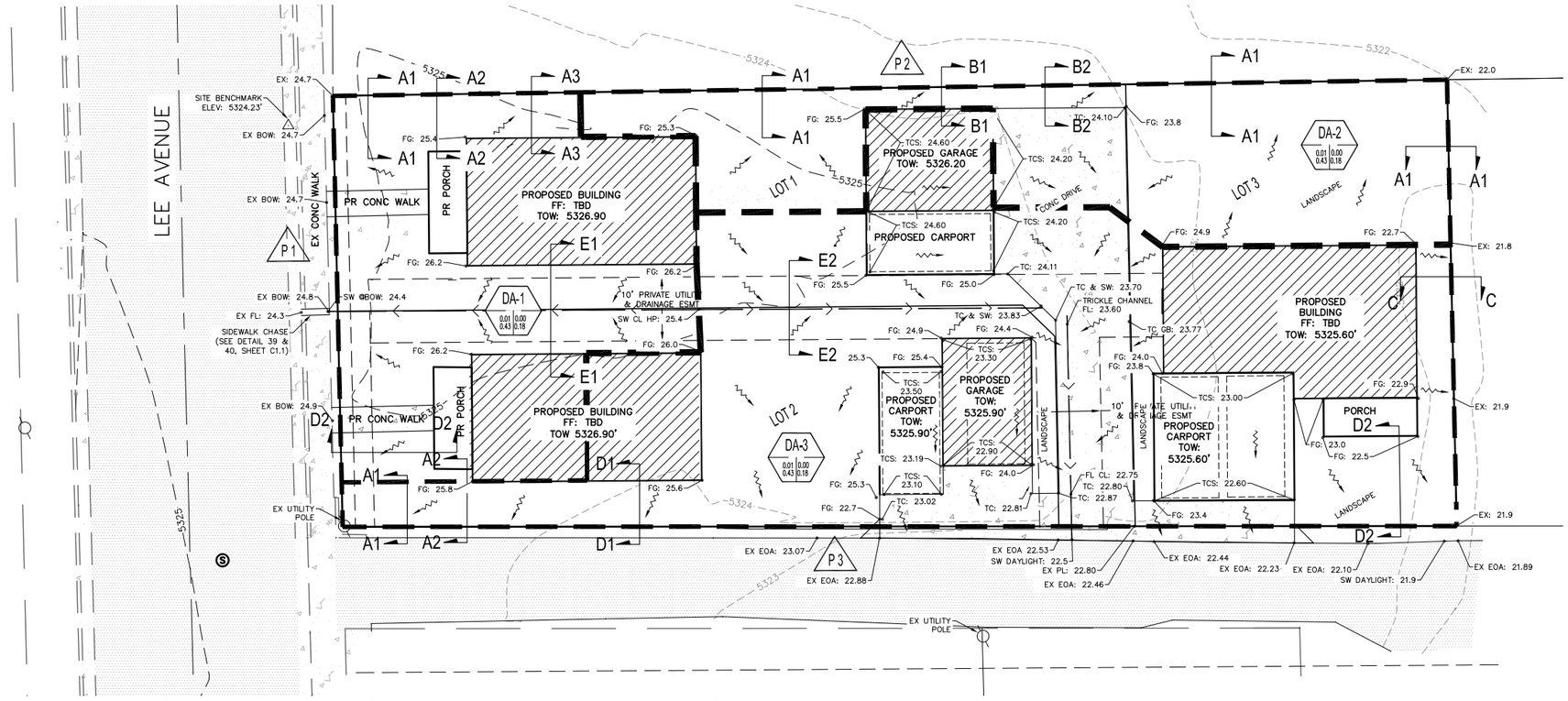
824 LEE AVE. IMPROVMENTS
824 LEE AVENUE
LOUISVILLE, COLORADO 80027
PRE-DEVELOPMENT DRAINAGE MAP

COLORADO LICENSED
PATRICK E. HIGH
55300
5/13/2024
PROFESSIONAL ENGINEER

DATE: 2/23/2024
DRAWN BY: MB
CHECKED BY: PEH
JOB NO: E-435

SHEET NO:
C2.0
3 OF 4

PLOTTED: MON 05/13/24 10:30AM BY: MICHAEL BEST
MODIFIED: 5/13/24 BY: MBEST
DRAWING: G:\E-435 824 LEE STREET MINOR SUBDIVISION_ENG C3D\PREDEV DRAINAGE MAP.DWG



1 POST-DEVELOPMENT DRAINAGE MAP

A1 SCALE: 1" = 10'-0"

DA-1 AREA: ±2967.5 SQ. FT.
BUILDINGS: ±1272.2 SQ. FT. (43%)
CONCRETE: ±117.4 SQ. FT. (4%)
GREEN: ±1577.9 SQ. FT. (53%)

DA-2 AREA: ±2391.9 SQ. FT.
CONCRETE: ±329.4 SQ. FT. (14%)
GREEN: ±2062.5 SQ. FT. (86%)

DA-3 AREA: ±6703.9 SQ. FT.
BUILDINGS: ±2398.9 SQ. FT. (36%)
CONCRETE: ±1023.2 SQ. FT. (15%)
GREEN: ±3281.8 SQ. FT. (49%)

Basis of Bearings

THE NORTH LINE OF THE SUBJECT PROPERTY, BEARING N89°10'07"E (ASSUMED), A DISTANCE OF 175.07 FEET, MONUMENTED AS SHOWN HEREON.

Benchmark

BOULDER COUNTY "LL-16D" - 2.5" BOULDER COUNTY BRASS CAP IN STORM INLET AT THE SOUTHWEST CORNER OF THE INTERSECTION OF MAIN AND SPRUCE STREETS, ELEV: 5336.16' (NAVD88-GEOID18)

Notes

1. BUILDING FOOTPRINTS ARE HYPOTHETICAL AS PROVIDED BY ARCHITECT.

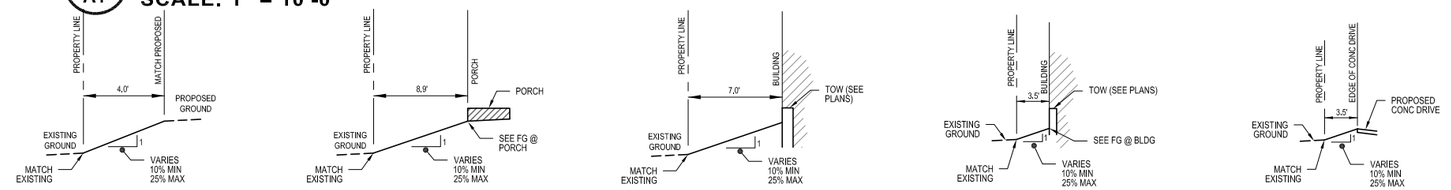
2. ACTUAL BUILDING FOOTPRINTS MAY VARY FROM THIS DEPICTION.

3. ANY REQUIRED MODIFICATIONS TO THE DRAINAGE MAP AND CIVIL DRAWINGS WILL BE PROVIDED AT TIME OF BUILDING PERMIT APPLICATION.

NORTH

100-YEAR VOLUME

EX-1	2.54 (0.71) (0.04) = 0.072 AC-IN = 261 CUBIC-FT
EX-2	2.54 (0.43) (0.06) = 0.066 AC-IN = 239 CUBIC-FT
EX-3	2.54 (0.48) (0.17) = 0.207 AC-IN = 752 CUBIC-FT
DA-1	2.54 (0.63) (0.04) = 0.064 AC-IN = 232 CUBIC FT
DA-2	2.54 (0.49) (0.06) = 0.075 AC-IN = 272 CUBIC FT
DA-3	2.54 (0.66) (0.17) = 0.285 AC-IN = 1034 CUBIC FT



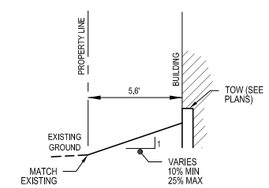
SECTION A1-A1
NOT TO SCALE

SECTION A2-A2
NOT TO SCALE

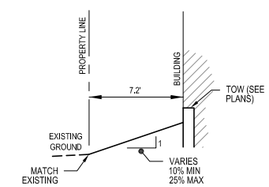
SECTION A3-A3
NOT TO SCALE

SECTION B1-B1
NOT TO SCALE

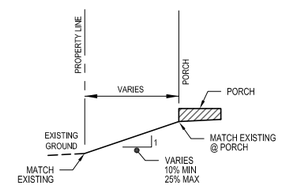
SECTION B2-B2
NOT TO SCALE



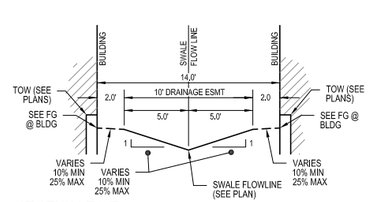
SECTION C-C
NOT TO SCALE



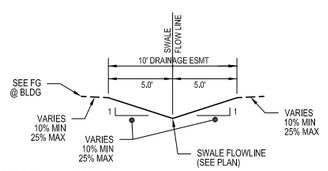
SECTION D1-D1
NOT TO SCALE



SECTION D2-D2
NOT TO SCALE



SECTION E1-E1
NOT TO SCALE



SECTION E2-E2
NOT TO SCALE

PRE-VS-POST DRAINAGE RUNOFF SUMMARY

DESIGN POINTS	DRAINAGE BASINS	AREA (AC)	IMPERVIOUS (%)	C2	C5	C10	C100	Q2 CFS	Q5 CFS	Q10CFS	Q100 CFS	VOL-100 CUBIC FT	SUM-DIF CUBIC FT
P1-PRE	EX-1	0.04	62	0.48	0.51	0.56	0.71	0.05	0.07	0.1	0.25	261	
P2-PRE	EX-2	0.06	2	0.01	0.01	0.07	0.44	0	0	0.02	0.18	239	
P3-PRE	EX-3	0.17	12	0.07	0.09	0.15	0.48	0.03	0.04	0.1	0.97	752	
P1-POST	DA-1	0.04	53	0.40	0.43	0.48	0.67	0.04	0.06	0.09	0.36	232	(-) 29
P2-POST	DA-2	0.06	14	0.08	0.10	0.17	0.49	0.01	0.02	0.04	0.35	272	(+) 33
P3-POST	DA-3	0.17	51	0.38	0.41	0.47	0.66	0.16	0.23	0.33	1.37	1034	(+) 281

Legend

PROPERTY BOUNDARY
SECTION LINE
EXISTING MAJOR CONTOUR — 5000
EXISTING MINOR CONTOUR — 5007
PROPOSED MAJOR CONTOUR — 5000
PROPOSED MINOR CONTOUR — 5007
PROPOSED 1" WATER SERVICE
DRAINAGE FLOW DIRECTION
INDICATES LIMITS OF DRAINAGE SUB-BASIN
INDICATES PROPOSED SWALE FLOW LINE
DRAINAGE BASIN — DA-1 (BASIN NAME); 5yr 'C' FACTOR 0.05 0.70 Q5; 100yr 'C' FACTOR 0.01 0.70 Q100
DESIGN POINT — P1

PLOTTED: TUE 05/14/24 03:00PM BY: MICHAEL BEST
MODIFIED: 5/14/24 BY: MBEST
DRAWING G:\E-435 824 LEE STREET MINOR SUBDIVISION_ENG C3D\POSTDEV DRAINAGE MAP.DWG

REVISIONS

NO	DESCRIPTION	DATE	BY
1	SITE PLAN SUBMITTAL	5/13/24	MB
2	PER CLIENT COMMENTS	5/14/24	MB

ENGINEERING
PLANNING
SURVEYING
1500 Kansas Ave, Suite 2-E
Longmont, CO 80501
P 303.682.7131
F 303.682.1148
CIVILARTS

824 LEE AVE. IMPROVMENTS
824 LEE AVENUE
LOUISVILLE, COLORADO 80027
POST DEVELOPMENT DRAINAGE MAP

COLORADO LICENSED PATRICK E. HIGH 55300 PROFESSIONAL ENGINEER 5/15/2024

DATE: 2/23/2024
DRAWN BY: MB
CHECKED BY: PEH
JOB NO: E-435

SHEET NO:
C2.1
4 OF 4