



Carmina • Wood • Morris^{DPC}

487 Main Street Suite 600 Buffalo, New York 14203 P: 716.842.3165 F: 716.842.0263 W: cwm-ae.com

ENGINEER'S REPORT

for

Proposed Laundromat
1450 Ridge Road
Town of West Seneca, Erie County, New York

Prepared for

Jesco Industries

P.O. Box 1003
Buffalo, NY 14224

Prepared by

Carmina Wood Morris, D.P.C.

487 Main Street, Suite 500
Buffalo, NY 14203

Telephone: (716) 842-3165
Fax: (716) 842-0263

February 2021



Architecture Engineering Interior Design

Table of Contents

Written Engineer's Report

Section 1 - Location & Description

Section 2 - Water Service

Section 3 - Sanitary Sewer Service

Section 4 - Storm Sewer Service

Appendices

Appendix A Sanitary Sewer and Water Demand Calculations

Appendix B Storm Sewer System Drainage Calculations

- Existing Runoff
- Proposed Runoff

Appendix C Soils Information

Appendix D Civil Plan Set

Section 1 - Location & Description

This project is a development of a 0.2 acre site located at 1450 Ridge Road in the Town of West Seneca. Proposed is the construction of a single story, 1,066 sf laundromat. The site is currently vacant (crushed stone and asphalt) and was previously used as contractor's equipment storage area. The existing driveway onto Hilbert Avenue will be upgraded and reused.

Section 2 - Water Service

A new 2" type "k" copper domestic service will be tapped off the existing ECWA water main along Ridge Road. Within the utility room, a 2" Watts LF009 RPZ & 2" meter (by ECWA) will be installed on the domestic service. Heat & light for testing will be provided in the area of the meter & RPZ to prevent freezing. Drainage due to testing or failure will be to the exterior through a drain. The owner will be responsible for keeping the drainage ports clear of snow and debris. The drain will exit 12" above grade & drainage will be via gravity away from the building. There are no existing water services to this site, and therefore none to be killed/abandoned per ECWA requirements.

Domestic Summary:

Peak Operating Demand:	4.5 gpm
Water Main:	ECWA main on Ridge Road
Static Pressure:	80 psi (estimated)
Friction Loss:	0.05 psi
Loss through meter/RPZ:	13.0 psi
Elevation Loss:	0.0 psi
Pressure after RPZ & Meter:	66.9 psi

Repairs to all devices will be made during off hours, dual backflow preventers are not required. The site is not located in a 100-year flood plain. Disinfection of the water service following installation will be continuous feed, according to AWWA C-651, latest revision.

Section 3 - Sanitary Sewer Service

The proposed sanitary sewer service will connect to the existing Town of West Seneca 10" sanitary sewer located on the town owned property to north side of the site. The proposed service will consist of approximately 65 LF of 6" SDR-35 PVC sanitary sewer lateral at a minimum slope of 2.0%.

Design Parameters

Laundromat: 10 machines x 12 gal/cycle x 15 cycles/day/machine = 1,800 gpd

The hydraulic loading rate is per information provided by the washing machine manufacturer, this information is included in Appendix A along with the water and sewer calculations.

Section 4 - Storm Sewer Service

The proposed onsite storm sewer system consists of a system of swales, yard drains and catch basins which will ultimately discharge to the town of West Seneca system on Hilbert Avenue. The site will sheet drain to a swale located on the north and east sides of the parcel. The front portion of the site which slopes to the northwest will be picked up by a yard drain. The gutter downspouts will connect to the on-site storm system. The above items will connect to the catch basin located in the south portion of the driveway and will be connected to the Hilbert Avenue system by an 8" HDPE pipe.

The existing site has a mix of asphalt and crushed stone with a CN of 96. The proposed site will be occupied by the building and parking and will incorporate additional greenspace. With the reduction in impervious area (37% reduction), the proposed site will have a CN of 88. Below is a summary of the existing and proposed 1-year through 100-year storm events. As indicated by the summary below, the runoff following redevelopment of the site will result in a reduction in peak runoff rates and therefore storm water detention is not required.

The site is 0.2 acres therefore NYSDEC storm drainage design requirements do not apply and a SPDES permit is not required.

Storm pipes: 10-year storm

RUNOFF SUMMARY – EAST

EVENT	EX. RUNOFF (cfs)	PRO. RUNOFF (cfs)	RESULT (cfs)
1-year	0.48	0.31	-0.17
2-year	0.59	0.41	-0.18
5-year	0.74	0.55	-0.19
10-year	0.87	0.69	-0.18
25-year	1.08	0.91	-0.17
50-year	1.28	1.11	-0.17
100-year	1.50	1.34	-0.16

See Appendix B for the storm calculations.

Appendix A

Sanitary Sewer and Water Demand Calculations

CARMINA WOOD MORRIS, D.P.C.

487 MAIN STREET, SUITE 600

BUFFALO, NEW YORK, 14203

(716) 842-3165

FAX (716) 842-0263

Project No.:

Date: 1/30/2021

Project Name: Laundromat

Project Address: 1450 Ridge Rd

Subject: Sanitary Sewage & Domestic Water Demand Calcs

Sheet: 1 of 1

Sanitary Sewage Demand Calculations:

Proposed Laundromat:

$$10 \text{ machines} \times 12 \text{ gallons/cycle} \times 15 \text{ cycles/day/machine} = 1800 \text{ gpd}$$

note: average water usage per cycle is 12 gallons, 15 estimated cycles per day per machine (avg cycle is 35 mins)

$$\text{Total Site Sanitary Demand:} = 1,800 \text{ gpd}$$

Water Demand Calculations (domestic):

Proposed Mixed Use Building:

$$\text{Sewer Demand} = \text{Water Demand} = 1,800 \text{ gpd}$$

*use 1.8 peaking factor and assume a 12 hour day

$$1,800 \text{ gpm} \times 1 \text{ day/12hr} \times 1 \text{ hr/60min} = 2.50 \text{ gpm}$$

$$2.50 \text{ gpm} \times 1.8 = 4.50 \text{ gpm } Q_{\text{peak}}$$

Headlosses:

$$Q_{\text{peak}} = 4.50 \text{ gpm}$$

$$\text{Pipe} = 2 \text{ inch type "k" copper } C = 140$$

$$\text{Length} = 50 \text{ LF (approx. distance from ROW to RPZ)}$$

$$H_L = \frac{10.44 L Q^{1.85}}{C^{1.85} D^{4.866}} = \frac{10.44(224)(5.84)^{1.85}}{(140)^{1.85} (1.5)^{4.866}} = 0.13 \text{ ft} = 0.05 \text{ psi}$$

$$\Delta \text{ elev} = 0 \text{ ft} = 0.00 \text{ psi}$$

$$\text{Loss through meter} = 1 \text{ psi}$$

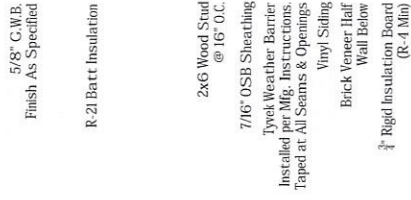
$$\text{Loss through RPZ} = 12 \text{ psi}$$

$$\text{Total Losses} = 13.1 \text{ psi}$$

$$\text{Static Pressure} = 80 \text{ psi (estimated)}$$

$$\text{Residual Pressure Following RPZ} = 80 - 13.1 = 66.9 \text{ psi (available after rpz \& meter)}$$

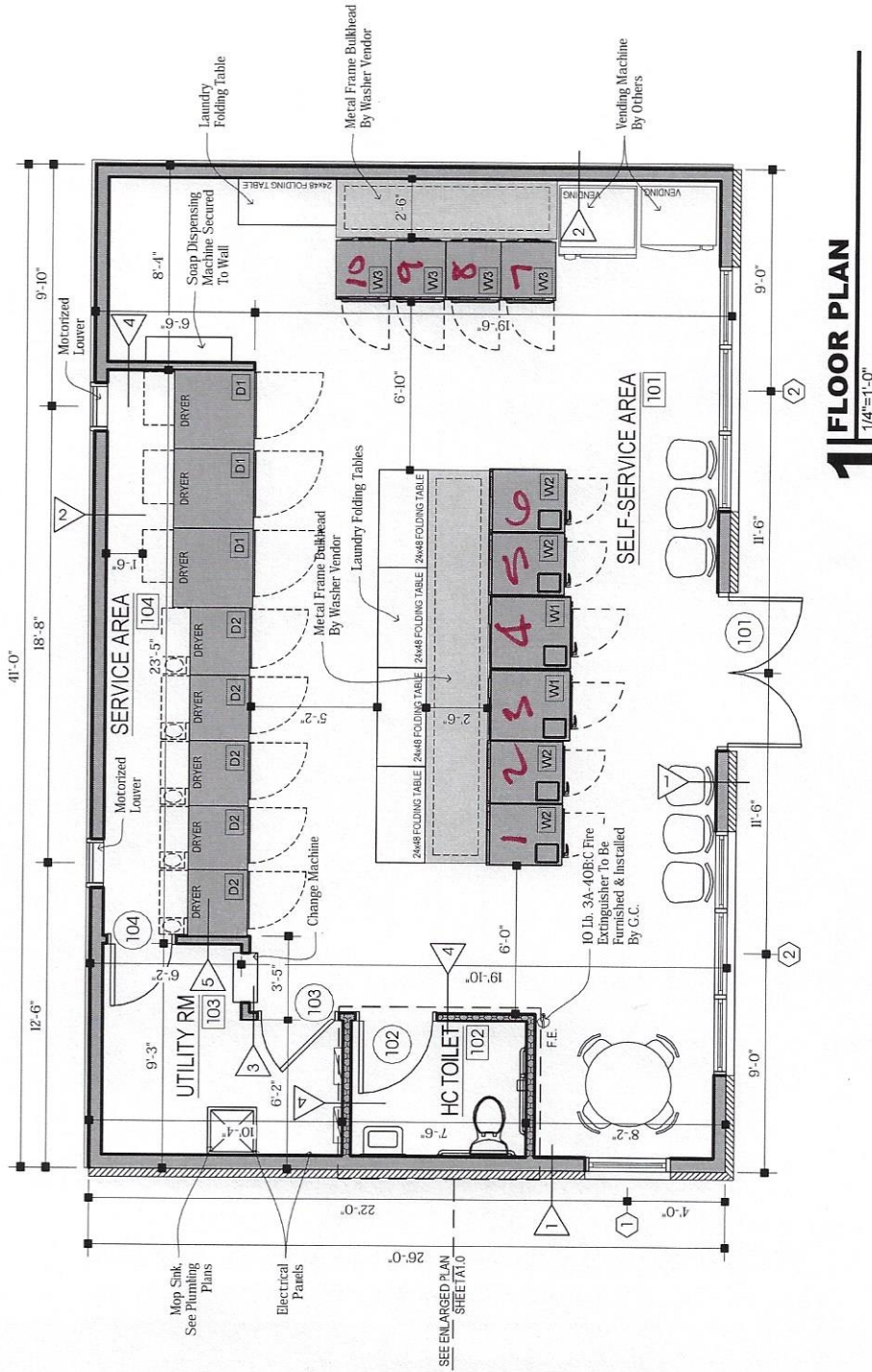
WALL TYPES



1 | TYP EXTERIOR | 3"=1'-0"



2 | TYP EXTERIOR | 3"=1'-0"



1 | FLOOR PLAN | 1/4"=1'-0"

DOOR SCHEDULE

No.	To	Door		Frame				Hardware Group	Remarks
		Opening	Type	Mat	Fin	Label	Type		
101	Exterior	3'-0" x 7'-0"	A	AL	PF	1	AL	PF	1
102	HC Toilet	3'-0" x 7'-0"	B	WD	PT	2	HM	PT	2



VENDED FRONT LOAD WASHER

Leading-edge. That's what Huebsch® stands for. We continuously develop and manufacture laundry equipment that is ahead of the game—like new front load washers with our leading Galaxy™ 600 controls, featuring advanced cycle modifiers to maximize your revenue. These machines offer a 20% larger capacity, and they're more powerful than ever. Our engineers push them to the limit using our 5-step development process to ensure maximum commercial performance and reliability. They're equipped with innovation that delivers ultimate efficiency, lowering your utility bills and making more money for you over the lifetime of your equipment. For customers, this game-changing equipment is designed to provide a laundry experience that is second to none.



CUTTING-EDGE BALANCE SENSING SYSTEM

An updated suspension and new sensing technologies powerfully combine to redistribute loads and maintain cycle times—resulting in less utility costs, shorter wait times and increased turns through your store.

INCREDIBLE 440 G-FORCE

Increased spin speed exerts high G-Force to maximize moisture removal and lower drying times, getting customers in and out of your store faster and ensuring they leave satisfied.

20% LARGER CAPACITY

Increased capacity means bigger loads, which allow for higher vend pricing. In addition, improved water and energy efficiencies lower utility bills and keep more money in your pocket.

10-DEGREE TILTED CONTROL PANEL

Provides improved control visibility and ease of use for the utmost user experience.

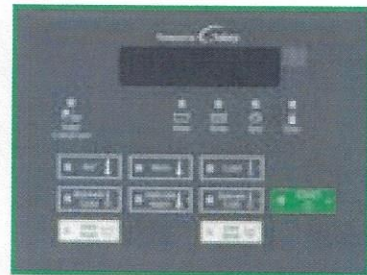
INNER & OUTER STAINLESS STEEL TUBS

Built for virtually indestructible durability.

UNMATCHED DURABILITY

Commercial-grade quality that will deliver reliable, efficient operation load after load. Built with premium materials and tested to meet the demands of the harshest environments, the entire machine receives Huebsch's standard three-year warranty.*

GALAXY™ 600 CONTROLS



Easy-to-use Galaxy 600 controls offer intuitive operation and simple programming throughout your store with revenue-boosting options such as cycle modifiers (extra wash, extra rinse), multi-level vend, time-of-day pricing, 30 programmable water levels and 24 customizable cycle selections.

visit huebsch.com

*Parts only, labor not included. See Huebsch Warranty Bond for specifics.

VENDED FRONT LOAD WASHER

Specifications	Front Control			Rear Control
Galaxy™ 600 Controls Slate - White	Models HFNKCASP113TW01 HFNKDASP113CW01 HFNKXASP113CW01	HFNKYASP113CW01 HFNKCASG113TW01 HFNKDASG113CW01	HFNKXASG113CW01 HFNKYASG113CW01	
Galaxy 600 Controls Slate - Stainless Steel	Models HFNKCASP113TN01 HFNKDASP113CN01 HFNKXASP113CN01	HFNKYASP113CN01 HFNKCASG113TN01 HFNKDASG113CN01	HFNKXASG113CN01 HFNKYASG113CN01	
Galaxy 600 Controls Cityscape - Stainless Steel	Models HFNKCASP113TN31 HFNKDASP113CN31 HFNKXASP113CN31	HFNKYASP113CN31 HFNKCASG113TN31 HFNKDASG113CN31	HFNKXASG113CN31 HFNKYASG113CN31	
Galaxy 600 Controls Citron - Stainless Steel	Models HFNKCASP113TN32 HFNKDASP113CN32 HFNKXASP113CN32	HFNKYASP113CN32 HFNKCASG113TN32 HFNKDASG113CN32	HFNKXASG113CN32 HFNKYASG113CN32	
MDC Controls	Models HFNBCASP113TW01 HFNBCASG113TW01	HFNBASP113CW01 HFNBYSAG113CW01 HFNBASP113CW01 HFNBASG113CW01	HFNBASP113CW01 HFNBXASP113CW01	Models HFNBCRSP113TW01 HFNBYSRSP113CW01 HFNBDRSP113CW01 HFNBERSP113CW01
Coin Slide Controls				Models HFNSXRSP113CW01
Capacity - lb (kg)	21.5 (9.5)			21.5 (9.5)
Cylinder Volume - cu. ft. (liters)	3.42 (96.8)			3.42 (96.8)
Width - in (mm)	26 7/8 (683)			26 7/8 (683)
Depth - in (mm)	27 3/4 (704)			27 3/4 (704)
Height - in (mm)	44 3/8 (1126)			43 (1092)
Maximum Spin Speed - G-Force (RPM)	440 (1200)			440 (1200)
Motor Size - HP (kw)	Variable Speed Induction 0.9 (0.67)			Variable Speed Induction 0.9 (0.67)
Water Consumption per Cycle* - g (l)	11.7 (44.3)			11.7 (44.3)
WF (Water Factor)	3.8			3.8
MEF (Modified Energy Factor)	2.98			2.98
Available Water Temperatures	3			3
Available Cycles*	Hot, Warm, Cold, Blankets, Delicate Warm, Delicate Cold			Normal, Perm Press., Delicate
Water Pressure - PSI (Bar)	20-120 (1.4/8.3)			20-120 (1.4/8.3)
Cycle Indicator Lights	Yes			Yes
Cylinder Finish	Stainless Steel			Stainless Steel
Available Colors	White, Stainless Steel			White
Door Type (Solid/Window)	Window			Window
Available Electrical Requirements - (Voltage/Hz/Ph)	120/60/1 - 15 Amp			120/60/1 - 15 Amp
Net Weight - lb (kg)	270 (122)			253 (115)
Shipping Weight - lb (kg)	290 (132)			273 (124)
Shipping Width - in (mm)	29 (737)			29 (737)
Shipping Depth - in (mm)	32 3/4 (832)			32 3/4 (832)
Shipping Height - in (mm)	45 1/2 (1156)			45 1/2 (1156)
Available Agency Approvals	C ^{UL} US			C ^{UL} US

* Information shown applies to highest end control available.

Note: Not all options are available for all models. Twelfth digit in model number indicates US or Canadian unit. C=Canada & T=US.

Refer to the price list for the available models and options.

Front control unit is ADA Compliant.

For the most accurate information, the installation guide should be used for all design and construction purposes. Due to continuous product improvements, design and specifications subject to change without notice. The quality management system of Alliance Laundry Systems' Ripon facility has been registered to ISO 9001:2008.

© 2016 Alliance Laundry Systems LLC



ENERGY STAR®
Certified Washer

For a complete listing of ENERGY STAR compliant models please visit www.energystar.gov



AH16-0004

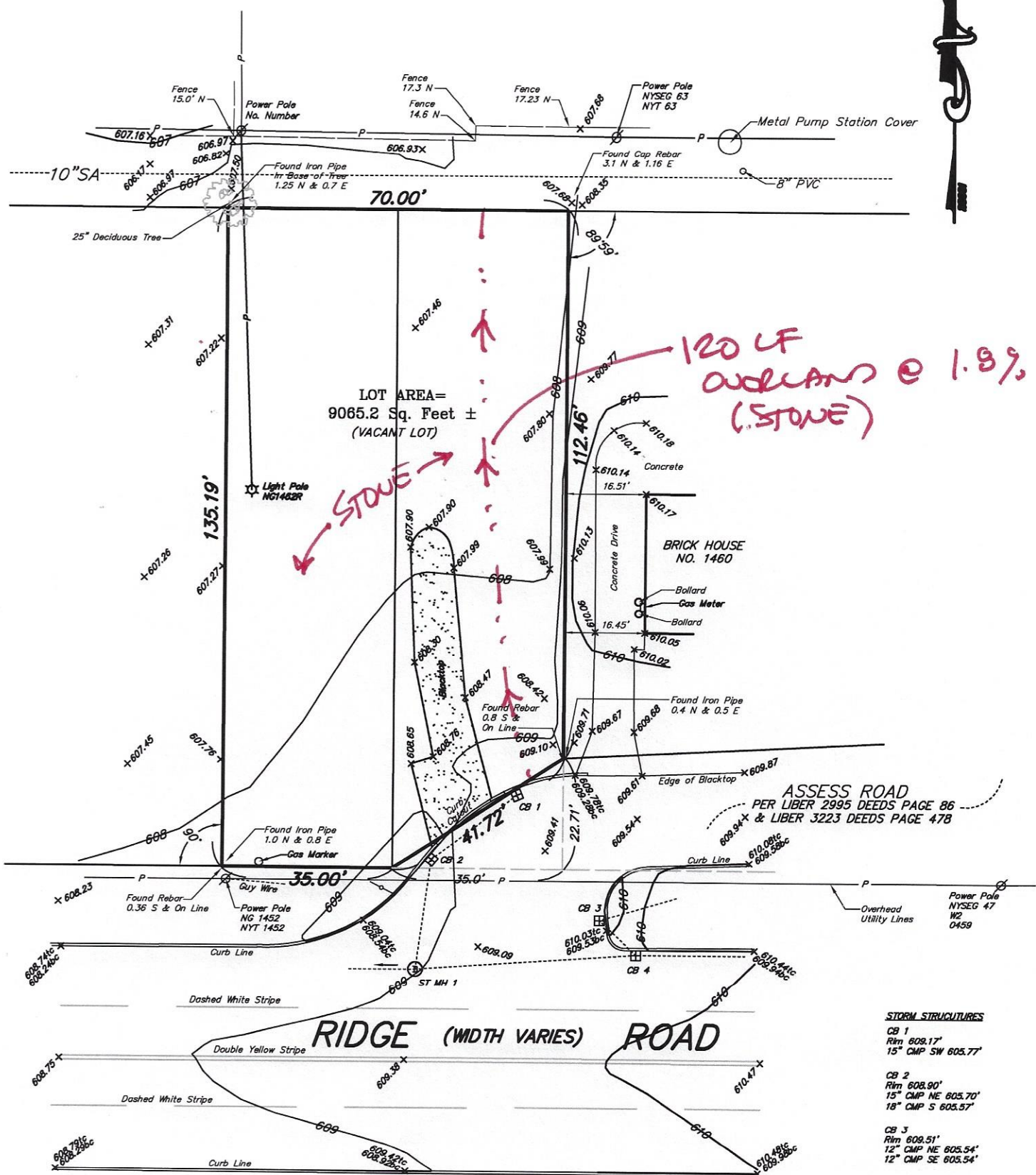
Alliance Laundry Systems LLC, Shepard Street, Ripon, WI 54971, 1-800-553-5120

huebsch.com

Appendix B

Storm Sewer System Drainage Calculations

Existing Runoff



- STORM STRUCTURES**
- CB 1**
 Rim 608.17'
 15" CMP SW 605.77'
 - CB 2**
 Rim 608.90'
 15" CMP NE 605.70'
 18" CMP S 605.57'
 - CB 3**
 Rim 608.51'
 12" CMP NE 605.54'
 12" CMP SE 605.54'
 - CB 4**
 Rim 608.46'
 24" CMP W 604.43'
 12" CMP NW 604.64'
 15" CMP E 604.92'
 - ST MH 1**
 Rim 608.98'
 18" CMP N 603.78'
 24" CMP W 602.98'
 24" CMP E 602.87'

Existing

Prepared by Hewlett-Packard Company

HydroCAD® 10.00-18 s/n 05019 © 2016 HydroCAD Software Solutions LLC

Type II 24-hr 100-Year Rainfall=5.28"

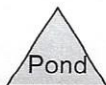
Printed 1/31/2021

Events for Subcatchment 1S: Existing

Event	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
1-Year	0.48	0.024	1.44
2-Year	0.59	0.029	1.77
5-Year	0.74	0.038	2.26
10-Year	0.87	0.045	2.70
25-Year	1.08	0.057	3.41
50-Year	1.28	0.068	4.06
100-Year	1.50	0.080	4.81



Existing



Existing-Proposed

Prepared by Hewlett-Packard Company
HydroCAD® 10.00-18 s/n 05019 © 2016 HydroCAD Software Solutions LLC

Printed 1/31/2021

Page 1

Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.010	86	<50% Grass cover, Poor, HSG C (1S)
0.180	96	Gravel surface, HSG C (1S)
0.010	98	Paved parking, HSG C (1S)
0.200	96	TOTAL AREA

Existing-Proposed

Prepared by Hewlett-Packard Company

HydroCAD® 10.00-18 s/n 05019 © 2016 HydroCAD Software Solutions LLC

Printed 1/31/2021

Page 2

Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.200	HSG C	1S
0.000	HSG D	
0.000	Other	
0.200		TOTAL AREA

Existing-Proposed

Prepared by Hewlett-Packard Company

HydroCAD® 10.00-18 s/n 05019 © 2016 HydroCAD Software Solutions LLC

Printed 1/31/2021

Page 3

Ground Covers (selected nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.010	0.000	0.000	0.010	<50% Grass cover, Poor	1S
0.000	0.000	0.180	0.000	0.000	0.180	Gravel surface	1S
0.000	0.000	0.010	0.000	0.000	0.010	Paved parking	1S
0.000	0.000	0.200	0.000	0.000	0.200	TOTAL AREA	

Existing-Proposed

Prepared by Hewlett-Packard Company

HydroCAD® 10.00-18 s/n 05019 © 2016 HydroCAD Software Solutions LLC

Type II 24-hr 1-Year Rainfall=1.86"

Printed 1/31/2021

Page 4

Summary for Subcatchment 1S: Existing

Runoff = 0.48 cfs @ 11.95 hrs, Volume= 0.024 af, Depth= 1.44"

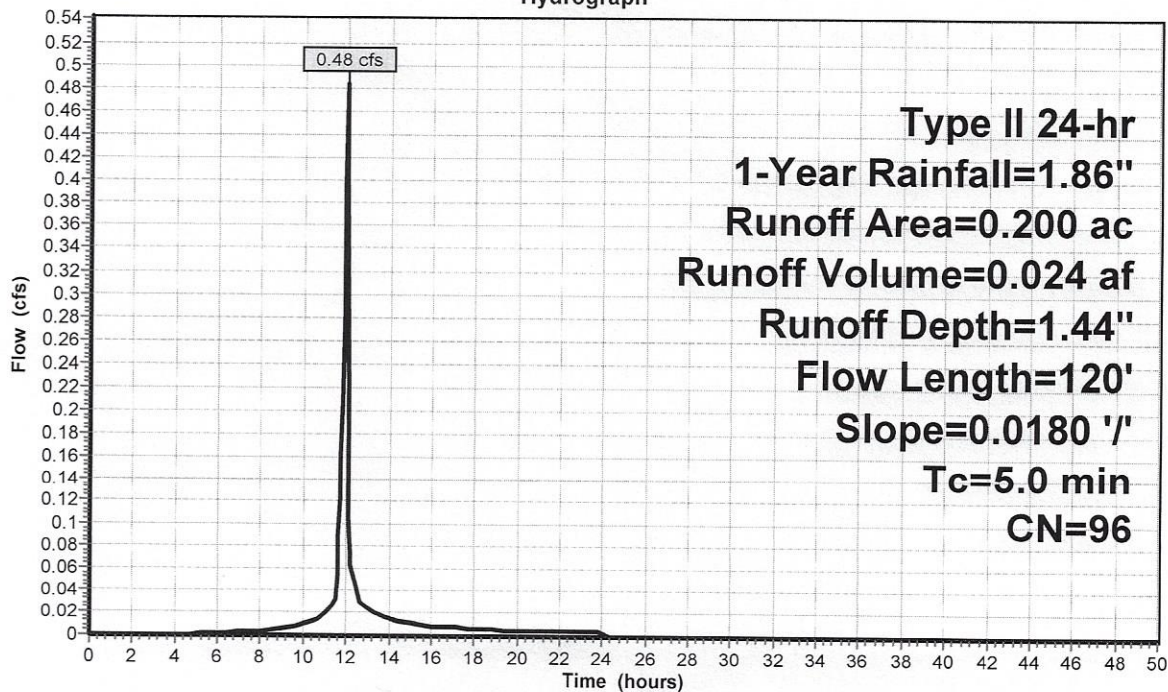
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-Year Rainfall=1.86"

Area (ac)	CN	Description
0.180	96	Gravel surface, HSG C
0.010	86	<50% Grass cover, Poor, HSG C
0.010	98	Paved parking, HSG C
0.200	96	Weighted Average
0.190		95.00% Pervious Area
0.010		5.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.4	100	0.0180	1.17		Sheet Flow, stone Smooth surfaces n= 0.011 P2= 2.50"
0.2	20	0.0180	2.16		Shallow Concentrated Flow, stone Unpaved Kv= 16.1 fps
1.6	120	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 1S: Existing

Hydrograph



Existing-Proposed

Prepared by Hewlett-Packard Company

HydroCAD® 10.00-18 s/n 05019 © 2016 HydroCAD Software Solutions LLC

Type II 24-hr 2-Year Rainfall=2.20"

Printed 1/31/2021

Page 5

Summary for Subcatchment 1S: Existing

Runoff = 0.59 cfs @ 11.95 hrs, Volume= 0.029 af, Depth= 1.77"

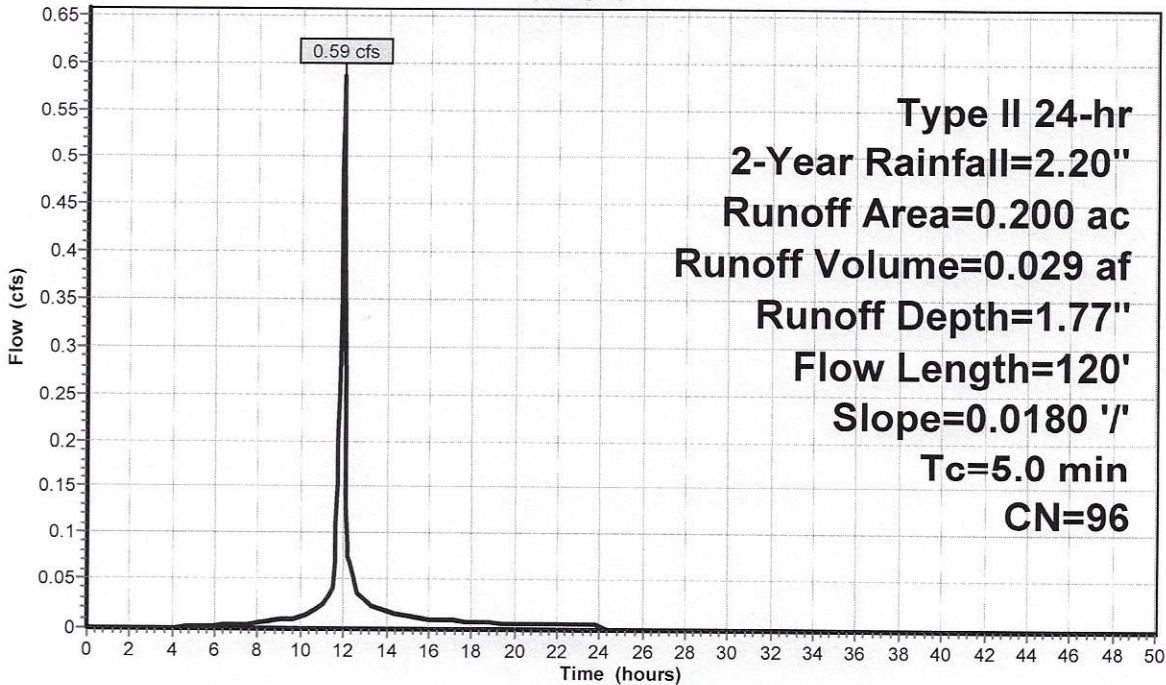
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-Year Rainfall=2.20"

Area (ac)	CN	Description
0.180	96	Gravel surface, HSG C
0.010	86	<50% Grass cover, Poor, HSG C
0.010	98	Paved parking, HSG C
0.200	96	Weighted Average
0.190		95.00% Pervious Area
0.010		5.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.4	100	0.0180	1.17		Sheet Flow, stone Smooth surfaces n= 0.011 P2= 2.50"
0.2	20	0.0180	2.16		Shallow Concentrated Flow, stone Unpaved Kv= 16.1 fps
1.6	120	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 1S: Existing

Hydrograph



Existing-Proposed

Prepared by Hewlett-Packard Company

HydroCAD® 10.00-18 s/n 05019 © 2016 HydroCAD Software Solutions LLC

Type II 24-hr 5-Year Rainfall=2.70"

Printed 1/31/2021

Page 6

Summary for Subcatchment 1S: Existing

Runoff = 0.74 cfs @ 11.95 hrs, Volume= 0.038 af, Depth= 2.26"

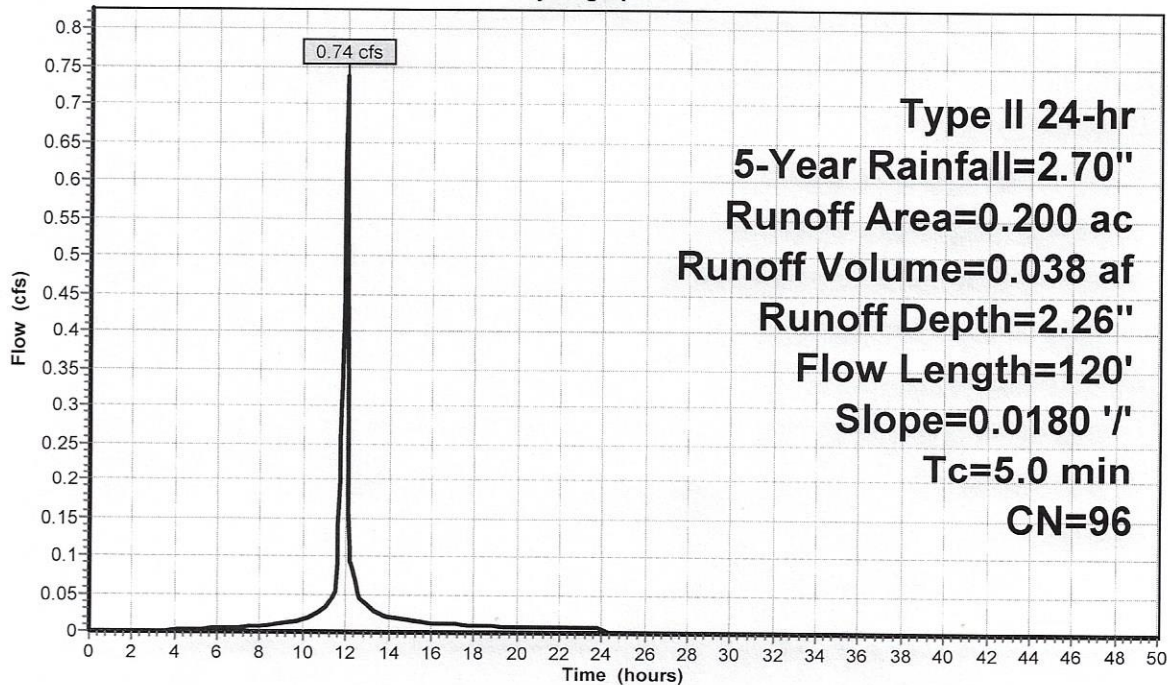
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs
Type II 24-hr 5-Year Rainfall=2.70"

Area (ac)	CN	Description
0.180	96	Gravel surface, HSG C
0.010	86	<50% Grass cover, Poor, HSG C
0.010	98	Paved parking, HSG C
0.200	96	Weighted Average
0.190		95.00% Pervious Area
0.010		5.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.4	100	0.0180	1.17		Sheet Flow, stone Smooth surfaces n= 0.011 P2= 2.50"
0.2	20	0.0180	2.16		Shallow Concentrated Flow, stone Unpaved Kv= 16.1 fps
1.6	120	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 1S: Existing

Hydrograph



Existing-Proposed

Prepared by Hewlett-Packard Company

HydroCAD® 10.00-18 s/n 05019 © 2016 HydroCAD Software Solutions LLC

Type II 24-hr 10-Year Rainfall=3.15"

Printed 1/31/2021

Page 7

Summary for Subcatchment 1S: Existing

Runoff = 0.87 cfs @ 11.95 hrs, Volume= 0.045 af, Depth= 2.70"

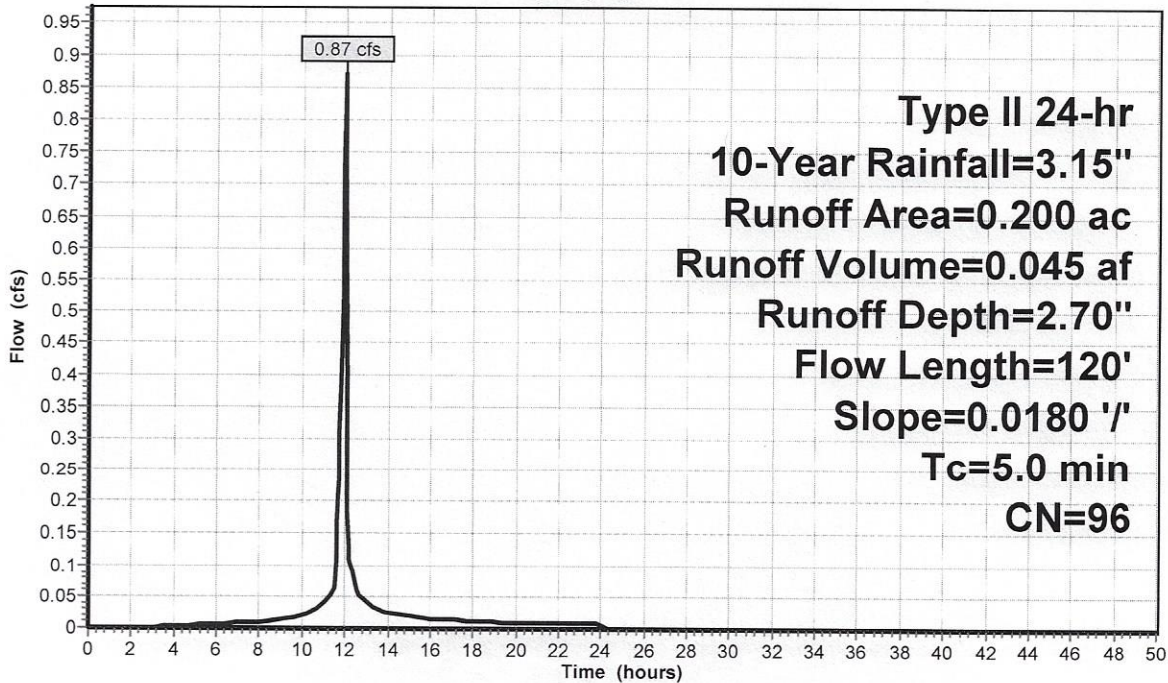
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-Year Rainfall=3.15"

Area (ac)	CN	Description
0.180	96	Gravel surface, HSG C
0.010	86	<50% Grass cover, Poor, HSG C
0.010	98	Paved parking, HSG C
0.200	96	Weighted Average
0.190		95.00% Pervious Area
0.010		5.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.4	100	0.0180	1.17		Sheet Flow, stone Smooth surfaces n= 0.011 P2= 2.50"
0.2	20	0.0180	2.16		Shallow Concentrated Flow, stone Unpaved Kv= 16.1 fps
1.6	120	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 1S: Existing

Hydrograph



Existing-Proposed

Prepared by Hewlett-Packard Company

HydroCAD® 10.00-18 s/n 05019 © 2016 HydroCAD Software Solutions LLC

Type II 24-hr 25-Year Rainfall=3.87"

Printed 1/31/2021

Page 8

Summary for Subcatchment 1S: Existing

Runoff = 1.08 cfs @ 11.95 hrs, Volume= 0.057 af, Depth= 3.41"

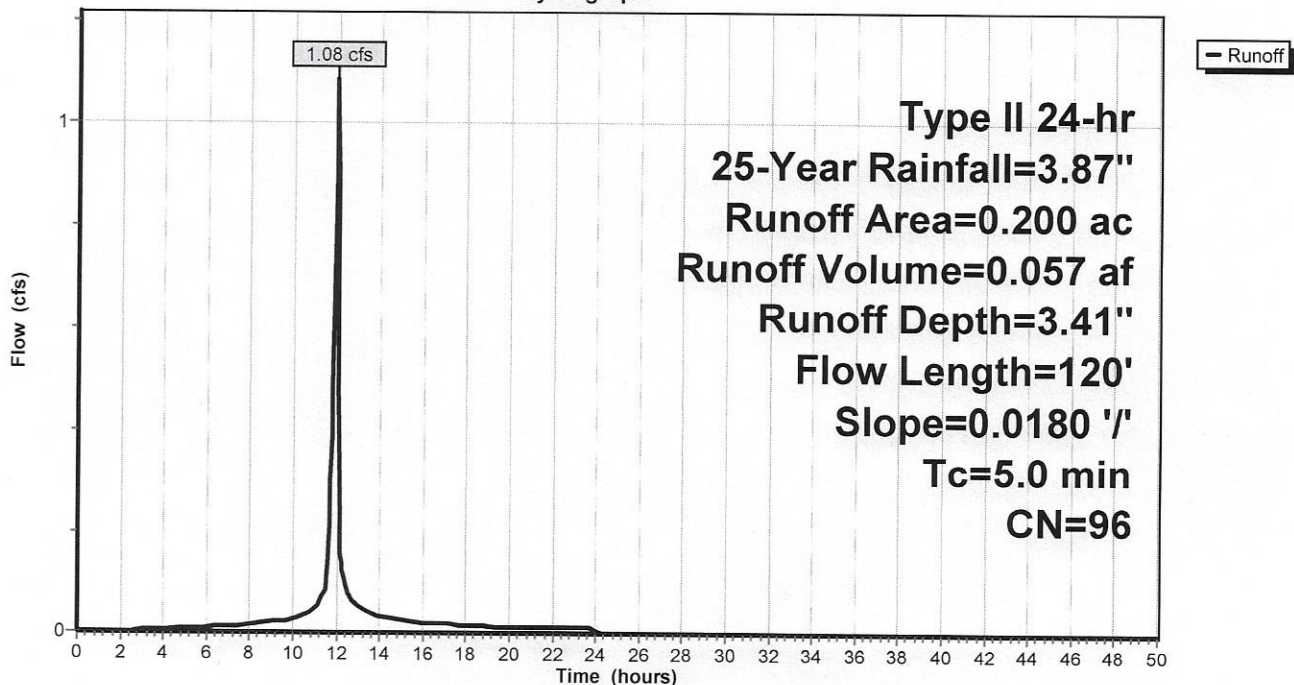
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-Year Rainfall=3.87"

Area (ac)	CN	Description
0.180	96	Gravel surface, HSG C
0.010	86	<50% Grass cover, Poor, HSG C
0.010	98	Paved parking, HSG C
0.200	96	Weighted Average
0.190		95.00% Pervious Area
0.010		5.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.4	100	0.0180	1.17		Sheet Flow, stone Smooth surfaces n= 0.011 P2= 2.50"
0.2	20	0.0180	2.16		Shallow Concentrated Flow, stone Unpaved Kv= 16.1 fps
1.6	120	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 1S: Existing

Hydrograph



Existing-Proposed

Prepared by Hewlett-Packard Company

HydroCAD® 10.00-18 s/n 05019 © 2016 HydroCAD Software Solutions LLC

Type II 24-hr 50-Year Rainfall=4.52"

Printed 1/31/2021

Page 9

Summary for Subcatchment 1S: Existing

Runoff = 1.28 cfs @ 11.95 hrs, Volume= 0.068 af, Depth= 4.06"

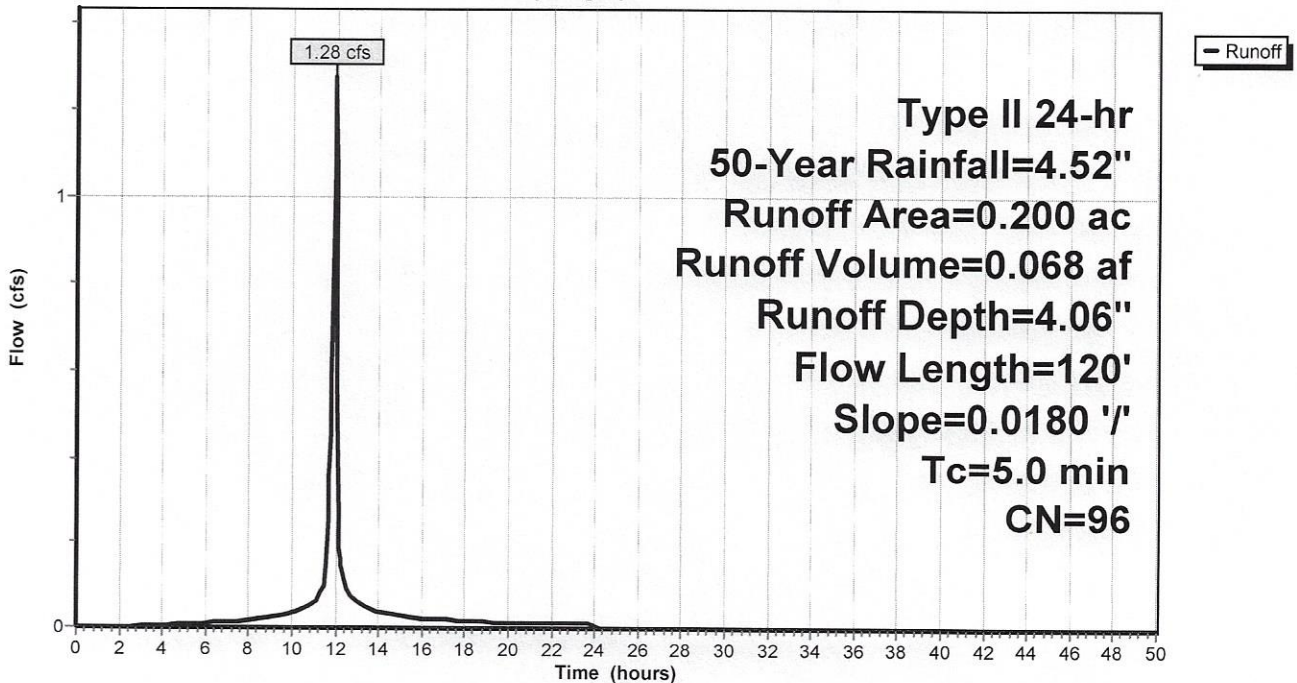
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs
Type II 24-hr 50-Year Rainfall=4.52"

Area (ac)	CN	Description
0.180	96	Gravel surface, HSG C
0.010	86	<50% Grass cover, Poor, HSG C
0.010	98	Paved parking, HSG C
0.200	96	Weighted Average
0.190		95.00% Pervious Area
0.010		5.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.4	100	0.0180	1.17		Sheet Flow, stone Smooth surfaces n= 0.011 P2= 2.50"
0.2	20	0.0180	2.16		Shallow Concentrated Flow, stone Unpaved Kv= 16.1 fps
1.6	120	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 1S: Existing

Hydrograph



Existing-Proposed

Prepared by Hewlett-Packard Company

HydroCAD® 10.00-18 s/n 05019 © 2016 HydroCAD Software Solutions LLC

Type II 24-hr 100-Year Rainfall=5.28"

Printed 1/31/2021

Page 10

Summary for Subcatchment 1S: Existing

Runoff = 1.50 cfs @ 11.95 hrs, Volume= 0.080 af, Depth= 4.81"

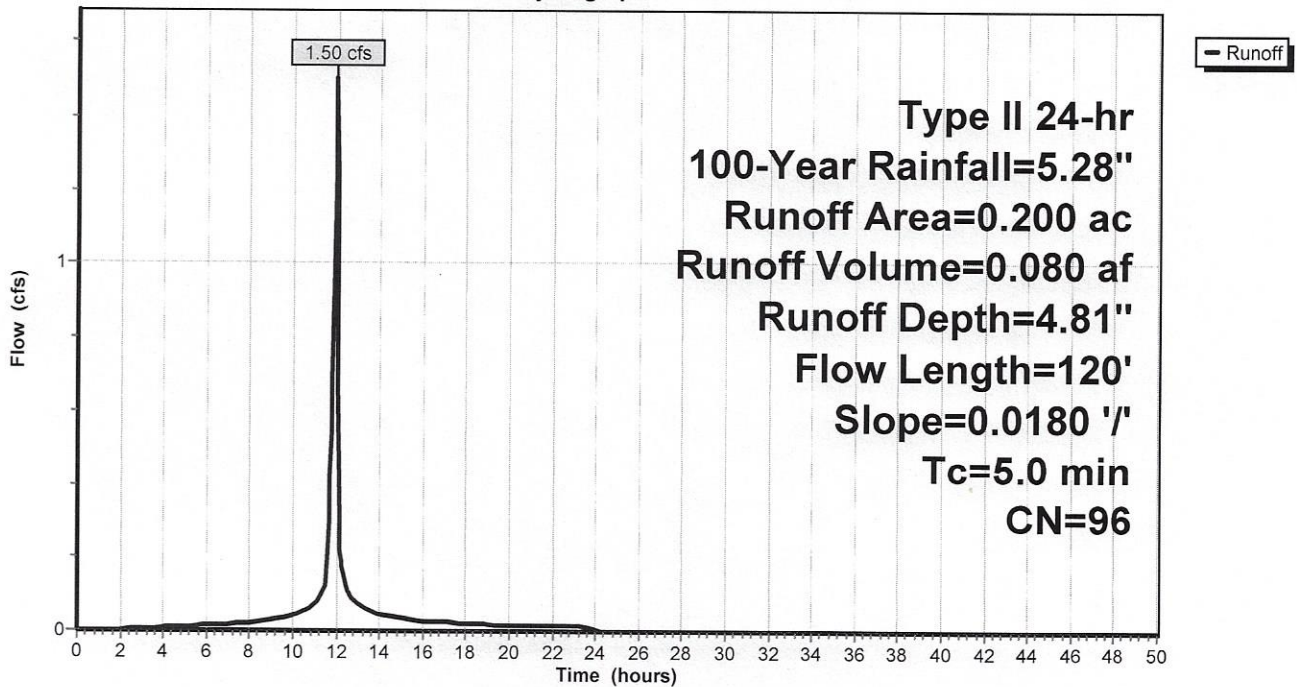
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-Year Rainfall=5.28"

Area (ac)	CN	Description
0.180	96	Gravel surface, HSG C
0.010	86	<50% Grass cover, Poor, HSG C
0.010	98	Paved parking, HSG C
0.200	96	Weighted Average
0.190		95.00% Pervious Area
0.010		5.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.4	100	0.0180	1.17		Sheet Flow, stone Smooth surfaces n= 0.011 P2= 2.50"
0.2	20	0.0180	2.16		Shallow Concentrated Flow, stone Unpaved Kv= 16.1 fps
1.6	120	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 1S: Existing

Hydrograph



Proposed Runoff

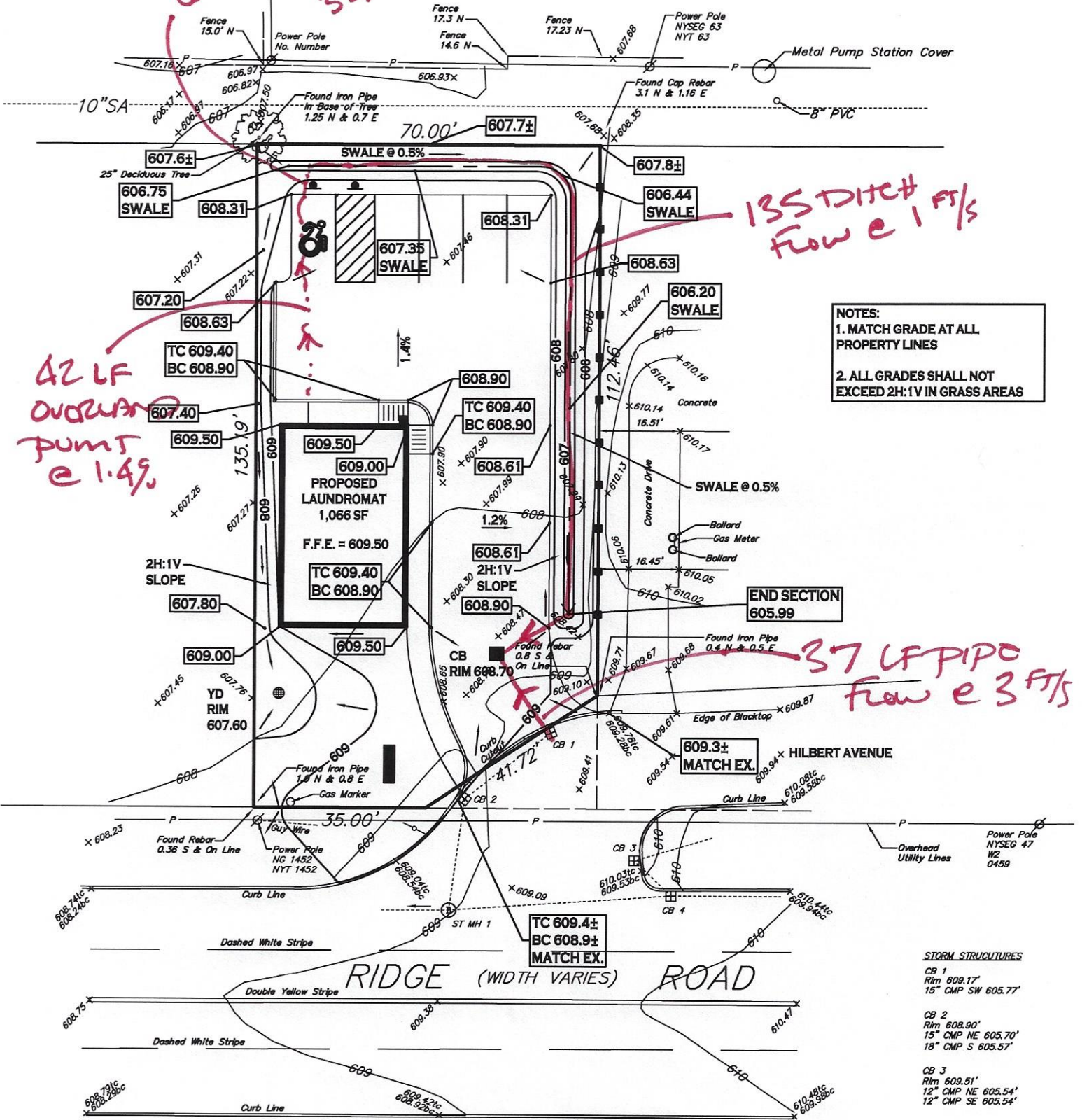
6 LF OVERLAND
GRASS @
3.5%

42 LF
OVERLAND
PUMP
@ 1.4%

135 DITCH
Flow @ 1 FT/S

37 LF PIPE
Flow @ 3 FT/S

Proposed



NOTES:
1. MATCH GRADE AT ALL PROPERTY LINES
2. ALL GRADES SHALL NOT EXCEED 2H:1V IN GRASS AREAS

- STORM STRUCTURES**
- CB 1
Rim 609.17'
15" CMP SW 605.77'
 - CB 2
Rim 608.90'
15" CMP NE 605.70'
18" CMP S 605.57'
 - CB 3
Rim 609.51'
12" CMP NE 605.54'
12" CMP SE 605.54'
 - CB 4
Rim 609.46'
24" CMP W 604.43'
12" CMP NW 604.64'
15" CMP E 604.92'

- ST MH 1
Rim 608.98'
18" CMP N 603.78'
24" CMP W 602.98'
24" CMP E 602.87'

N GRADING PLAN
SCALE: 1"=20'

Existing-Proposed

Prepared by Hewlett-Packard Company

HydroCAD® 10.00-18 s/n 05019 © 2016 HydroCAD Software Solutions LLC

Type II 24-hr 100-Year Rainfall=5.28"

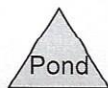
Printed 1/31/2021

Events for Subcatchment 2S: Proposed

Event	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
1-Year	0.31	0.014	0.85
2-Year	0.41	0.019	1.13
5-Year	0.55	0.026	1.55
10-Year	0.69	0.033	1.95
25-Year	0.91	0.043	2.61
50-Year	1.11	0.054	3.22
100-Year	1.34	0.066	3.94



Proposed



Existing-Proposed

Prepared by Hewlett-Packard Company

HydroCAD® 10.00-18 s/n 05019 © 2016 HydroCAD Software Solutions LLC

Printed 1/31/2021

Page 2

Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.080	74	>75% Grass cover, Good, HSG C (2S)
0.120	98	Paved parking, HSG C (2S)
0.200	88	TOTAL AREA

Existing-Proposed

Prepared by Hewlett-Packard Company
HydroCAD® 10.00-18 s/n 05019 © 2016 HydroCAD Software Solutions LLC

Printed 1/31/2021

Page 3

Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.200	HSG C	2S
0.000	HSG D	
0.000	Other	
0.200		TOTAL AREA

Existing-Proposed

Prepared by Hewlett-Packard Company

Printed 1/31/2021

HydroCAD® 10.00-18 s/n 05019 © 2016 HydroCAD Software Solutions LLC

Page 4

Ground Covers (selected nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.080	0.000	0.000	0.080	>75% Grass cover, Good	2S
0.000	0.000	0.120	0.000	0.000	0.120	Paved parking	2S
0.000	0.000	0.200	0.000	0.000	0.200	TOTAL AREA	

Existing-Proposed

Prepared by Hewlett-Packard Company

HydroCAD® 10.00-18 s/n 05019 © 2016 HydroCAD Software Solutions LLC

Type II 24-hr 1-Year Rainfall=1.86"

Printed 1/31/2021

Page 5

Summary for Subcatchment 2S: Proposed

Runoff = 0.31 cfs @ 11.96 hrs, Volume= 0.014 af, Depth= 0.85"

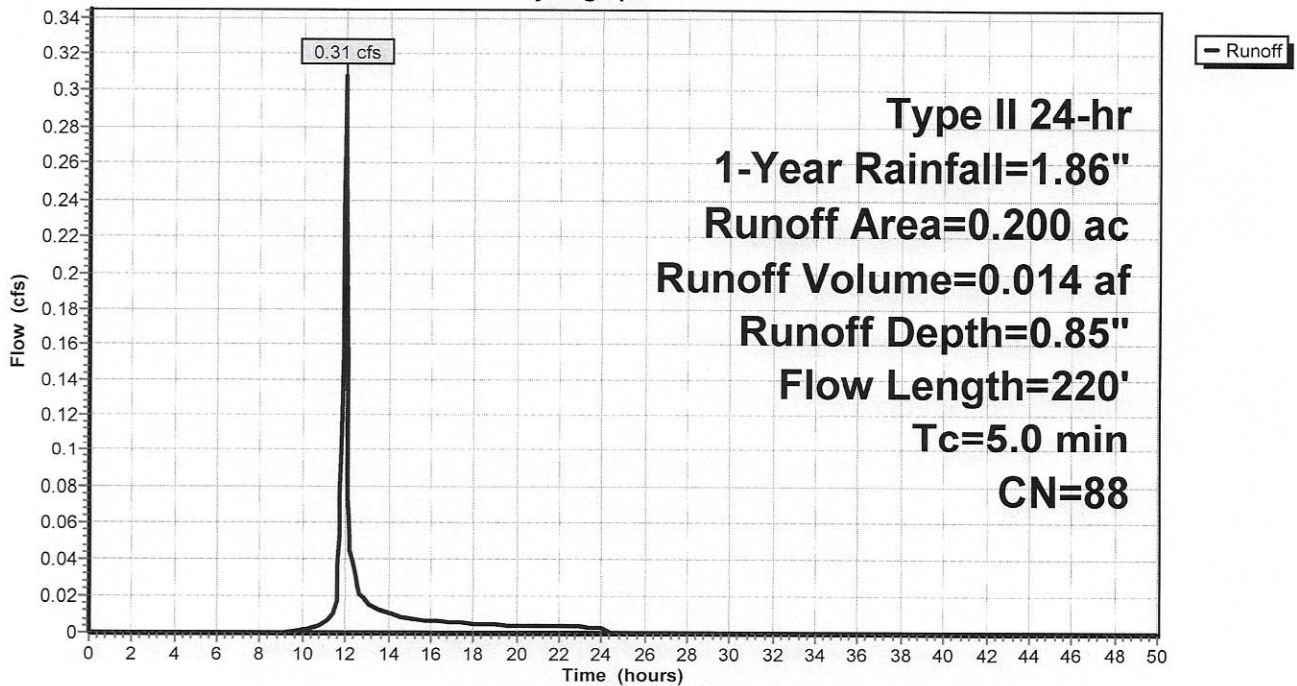
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-Year Rainfall=1.86"

Area (ac)	CN	Description
0.080	74	>75% Grass cover, Good, HSG C
0.120	98	Paved parking, HSG C
0.200	88	Weighted Average
0.080		40.00% Pervious Area
0.120		60.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	42	0.0140	0.89		Sheet Flow, pavement Smooth surfaces n= 0.011 P2= 2.50"
0.6	6	0.3300	0.18		Sheet Flow, grass Grass: Dense n= 0.240 P2= 2.50"
2.2	135		1.00		Direct Entry, ditch
0.2	37		3.00		Direct Entry, pipe flow
3.9	220	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 2S: Proposed

Hydrograph



Existing-Proposed

Prepared by Hewlett-Packard Company

HydroCAD® 10.00-18 s/n 05019 © 2016 HydroCAD Software Solutions LLC

Type II 24-hr 2-Year Rainfall=2.20"

Printed 1/31/2021

Page 6

Summary for Subcatchment 2S: Proposed

Runoff = 0.41 cfs @ 11.96 hrs, Volume= 0.019 af, Depth= 1.13"

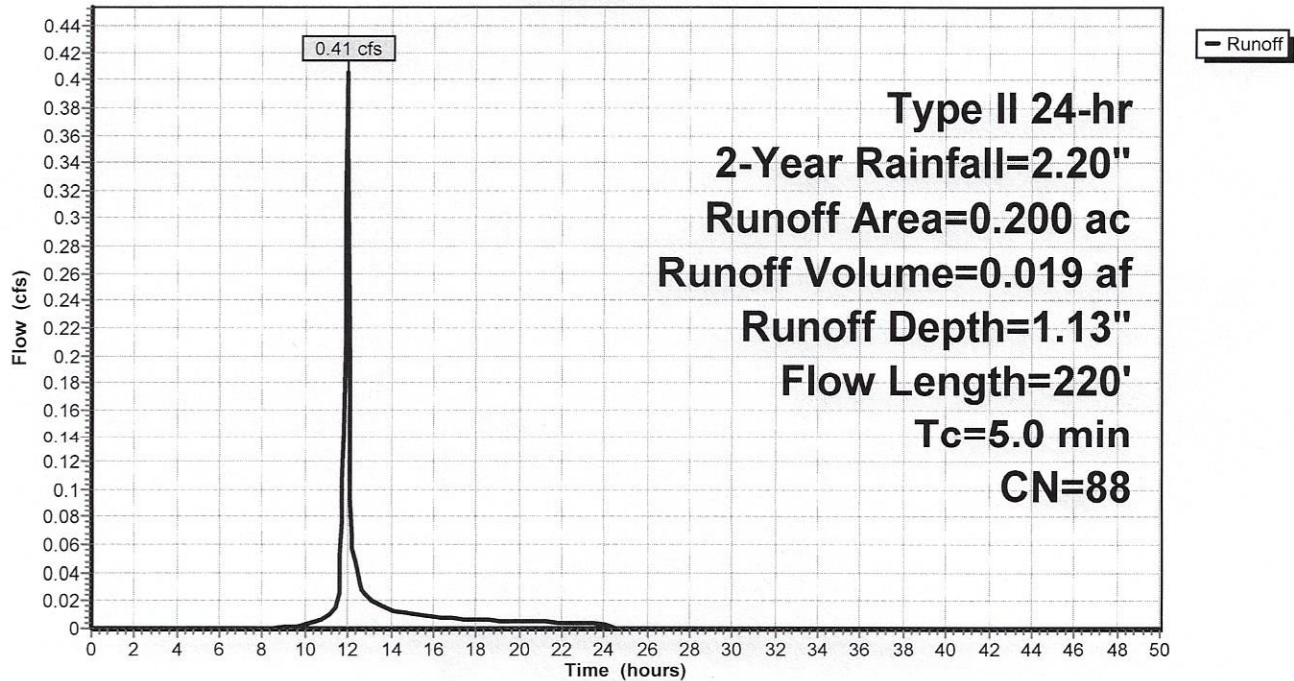
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-Year Rainfall=2.20"

Area (ac)	CN	Description
0.080	74	>75% Grass cover, Good, HSG C
0.120	98	Paved parking, HSG C
0.200	88	Weighted Average
0.080		40.00% Pervious Area
0.120		60.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	42	0.0140	0.89		Sheet Flow, pavement Smooth surfaces n= 0.011 P2= 2.50"
0.6	6	0.3300	0.18		Sheet Flow, grass Grass: Dense n= 0.240 P2= 2.50"
2.2	135		1.00		Direct Entry, ditch
0.2	37		3.00		Direct Entry, pipe flow
3.9	220	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 2S: Proposed

Hydrograph



Existing-Proposed

Prepared by Hewlett-Packard Company

HydroCAD® 10.00-18 s/n 05019 © 2016 HydroCAD Software Solutions LLC

Type II 24-hr 5-Year Rainfall=2.70"

Printed 1/31/2021

Page 7

Summary for Subcatchment 2S: Proposed

Runoff = 0.55 cfs @ 11.96 hrs, Volume= 0.026 af, Depth= 1.55"

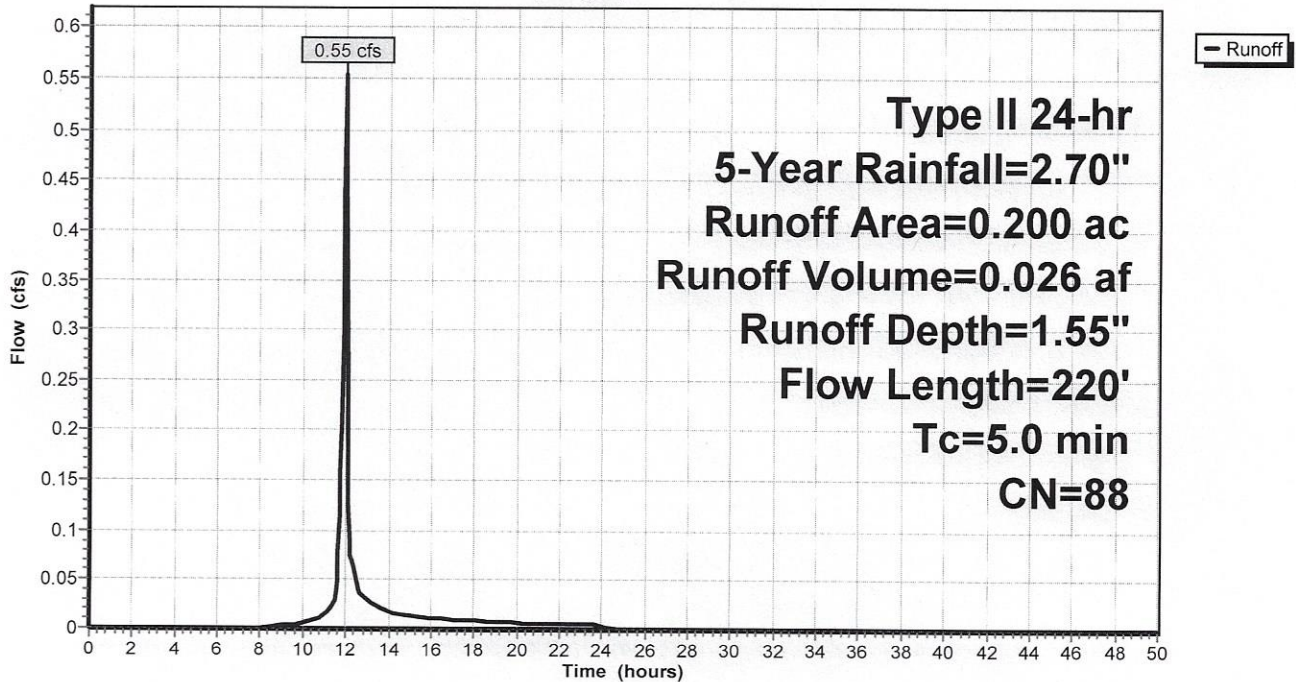
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs
Type II 24-hr 5-Year Rainfall=2.70"

Area (ac)	CN	Description
0.080	74	>75% Grass cover, Good, HSG C
0.120	98	Paved parking, HSG C
0.200	88	Weighted Average
0.080		40.00% Pervious Area
0.120		60.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	42	0.0140	0.89		Sheet Flow, pavement Smooth surfaces n= 0.011 P2= 2.50"
0.6	6	0.3300	0.18		Sheet Flow, grass Grass: Dense n= 0.240 P2= 2.50"
2.2	135		1.00		Direct Entry, ditch
0.2	37		3.00		Direct Entry, pipe flow
3.9	220	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 2S: Proposed

Hydrograph



Existing-Proposed

Prepared by Hewlett-Packard Company

HydroCAD® 10.00-18 s/n 05019 © 2016 HydroCAD Software Solutions LLC

Type II 24-hr 10-Year Rainfall=3.15"

Printed 1/31/2021

Page 8

Summary for Subcatchment 2S: Proposed

Runoff = 0.69 cfs @ 11.96 hrs, Volume= 0.033 af, Depth= 1.95"

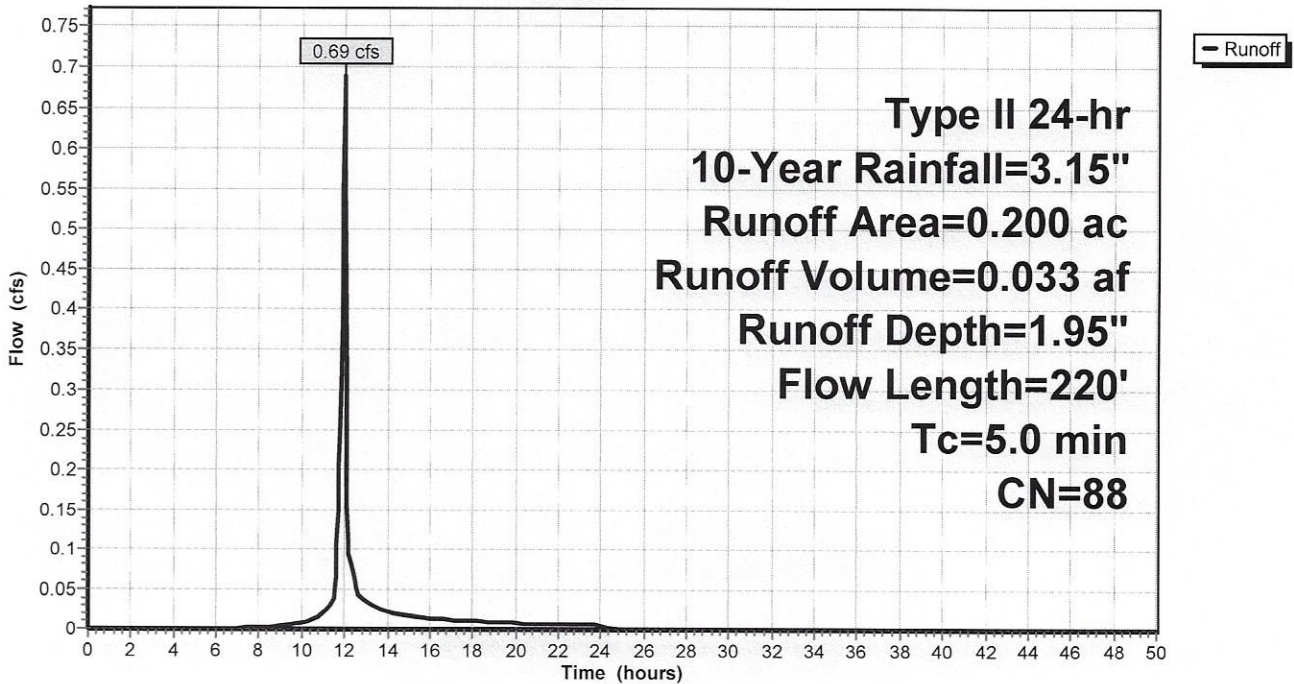
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-Year Rainfall=3.15"

Area (ac)	CN	Description
0.080	74	>75% Grass cover, Good, HSG C
0.120	98	Paved parking, HSG C
0.200	88	Weighted Average
0.080		40.00% Pervious Area
0.120		60.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	42	0.0140	0.89		Sheet Flow, pavement Smooth surfaces n= 0.011 P2= 2.50"
0.6	6	0.3300	0.18		Sheet Flow, grass Grass: Dense n= 0.240 P2= 2.50"
2.2	135		1.00		Direct Entry, ditch
0.2	37		3.00		Direct Entry, pipe flow
3.9	220	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 2S: Proposed

Hydrograph



Existing-Proposed

Prepared by Hewlett-Packard Company

HydroCAD® 10.00-18 s/n 05019 © 2016 HydroCAD Software Solutions LLC

Type II 24-hr 25-Year Rainfall=3.87"

Printed 1/31/2021

Page 9

Summary for Subcatchment 2S: Proposed

Runoff = 0.91 cfs @ 11.95 hrs, Volume= 0.043 af, Depth= 2.61"

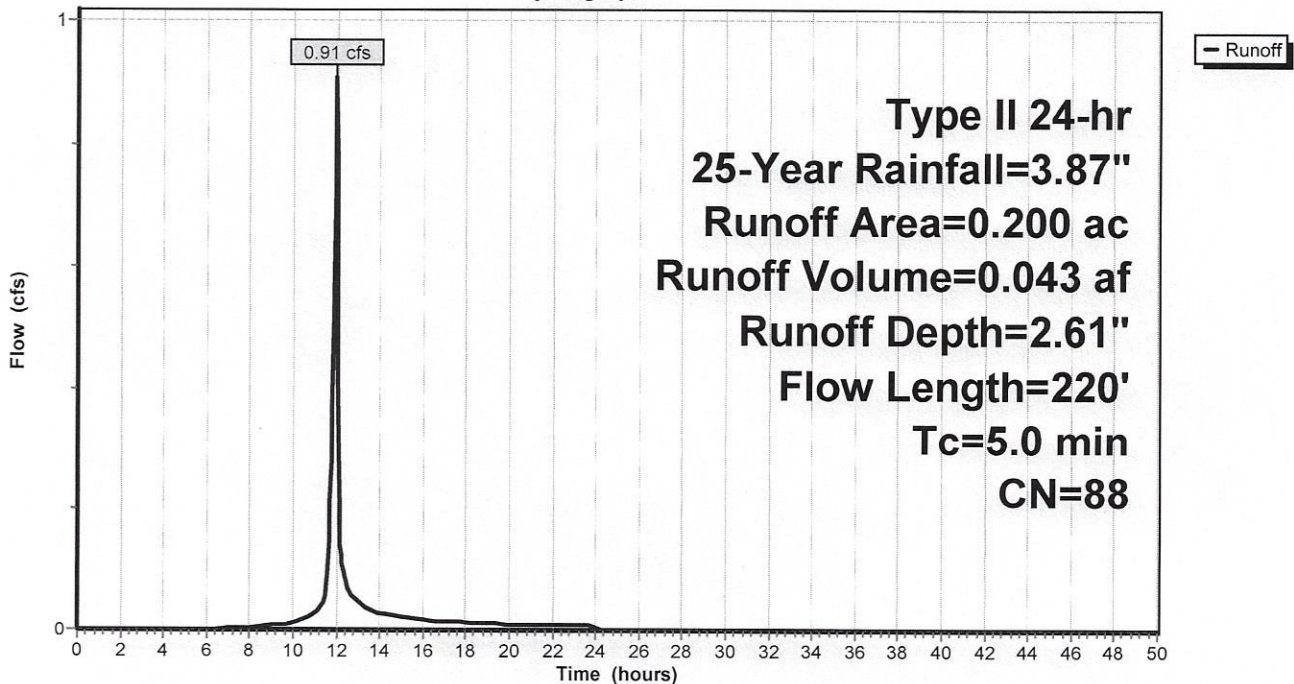
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-Year Rainfall=3.87"

Area (ac)	CN	Description
0.080	74	>75% Grass cover, Good, HSG C
0.120	98	Paved parking, HSG C
0.200	88	Weighted Average
0.080		40.00% Pervious Area
0.120		60.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	42	0.0140	0.89		Sheet Flow, pavement Smooth surfaces n= 0.011 P2= 2.50"
0.6	6	0.3300	0.18		Sheet Flow, grass Grass: Dense n= 0.240 P2= 2.50"
2.2	135		1.00		Direct Entry, ditch
0.2	37		3.00		Direct Entry, pipe flow
3.9	220	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 2S: Proposed

Hydrograph



Existing-Proposed

Prepared by Hewlett-Packard Company

HydroCAD® 10.00-18 s/n 05019 © 2016 HydroCAD Software Solutions LLC

Type II 24-hr 50-Year Rainfall=4.52"

Printed 1/31/2021

Page 10

Summary for Subcatchment 2S: Proposed

Runoff = 1.11 cfs @ 11.95 hrs, Volume= 0.054 af, Depth= 3.22"

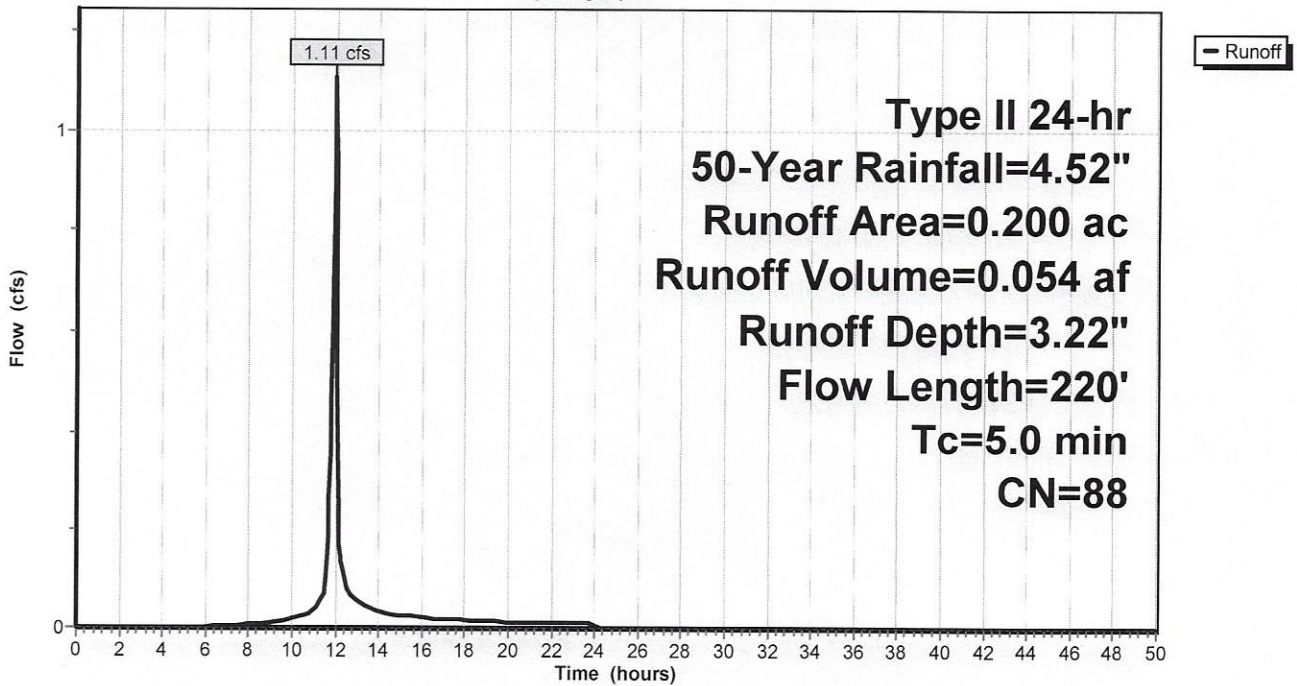
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs
Type II 24-hr 50-Year Rainfall=4.52"

Area (ac)	CN	Description
0.080	74	>75% Grass cover, Good, HSG C
0.120	98	Paved parking, HSG C
0.200	88	Weighted Average
0.080		40.00% Pervious Area
0.120		60.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	42	0.0140	0.89		Sheet Flow, pavement Smooth surfaces n= 0.011 P2= 2.50"
0.6	6	0.3300	0.18		Sheet Flow, grass Grass: Dense n= 0.240 P2= 2.50"
2.2	135		1.00		Direct Entry, ditch
0.2	37		3.00		Direct Entry, pipe flow
3.9	220	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 2S: Proposed

Hydrograph



Existing-Proposed

Prepared by Hewlett-Packard Company

HydroCAD® 10.00-18 s/n 05019 © 2016 HydroCAD Software Solutions LLC

Type II 24-hr 100-Year Rainfall=5.28"

Printed 1/31/2021

Page 11

Summary for Subcatchment 2S: Proposed

Runoff = 1.34 cfs @ 11.95 hrs, Volume= 0.066 af, Depth= 3.94"

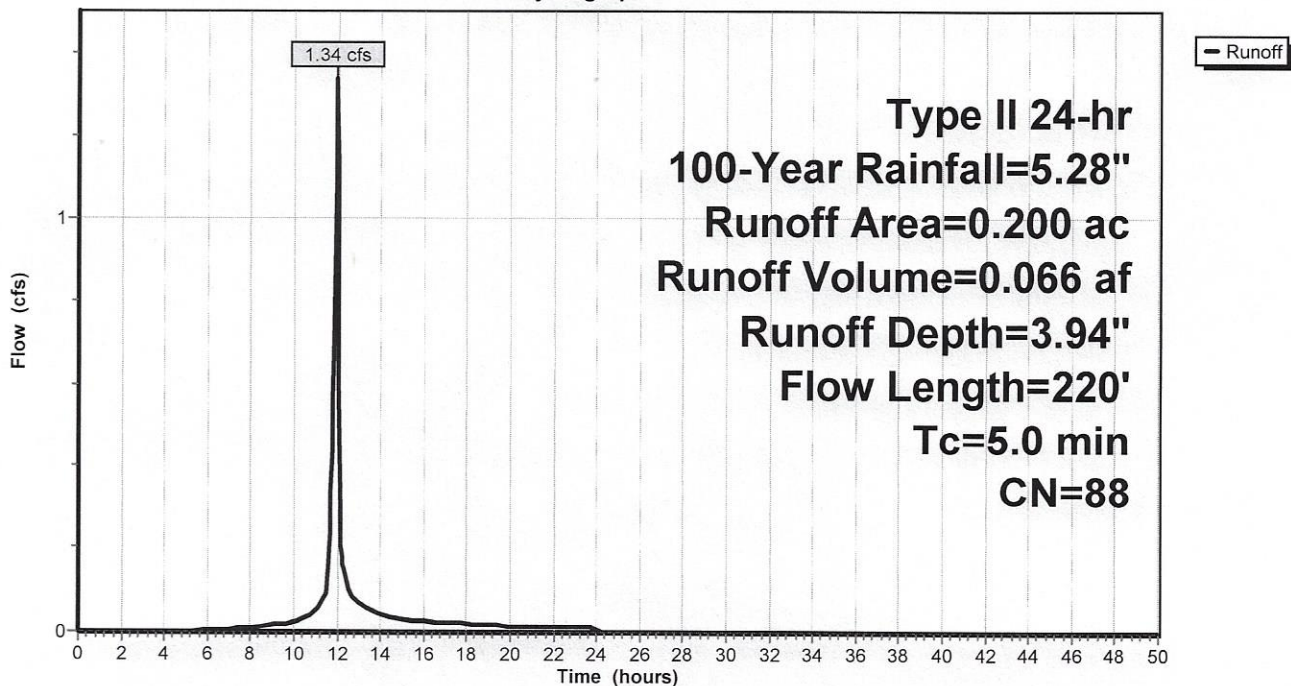
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-Year Rainfall=5.28"

Area (ac)	CN	Description
0.080	74	>75% Grass cover, Good, HSG C
0.120	98	Paved parking, HSG C
0.200	88	Weighted Average
0.080		40.00% Pervious Area
0.120		60.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	42	0.0140	0.89		Sheet Flow, pavement Smooth surfaces n= 0.011 P2= 2.50"
0.6	6	0.3300	0.18		Sheet Flow, grass Grass: Dense n= 0.240 P2= 2.50"
2.2	135		1.00		Direct Entry, ditch
0.2	37		3.00		Direct Entry, pipe flow
3.9	220	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 2S: Proposed

Hydrograph



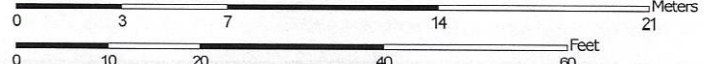
Appendix C
Soils Information

Hydrologic Soil Group—Erie County, New York
(1450 Ridge Rd)



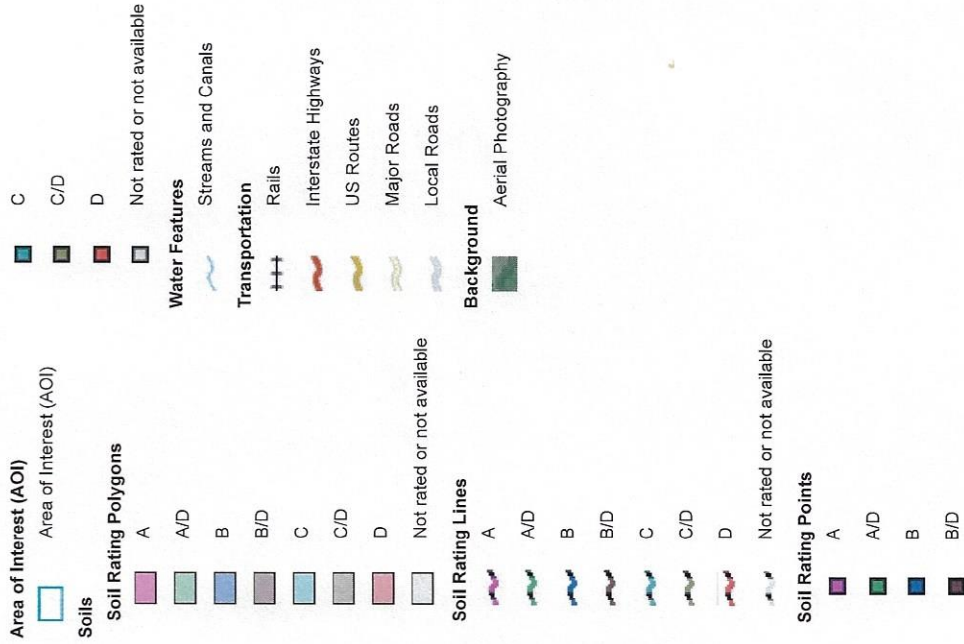
Soil Map may not be valid at this scale.

Map Scale: 1:241 if printed on A portrait (8.5" x 11") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

MAP LEGEND



MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Erie County, New York
Survey Area Data: Version 20, Jun 11, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 14, 2019—Jul 27, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
RgA	Rhinebeck silt loam, 0 to 3 percent slopes	C/D	0.2	100.0%
Totals for Area of Interest			0.2	100.0%

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

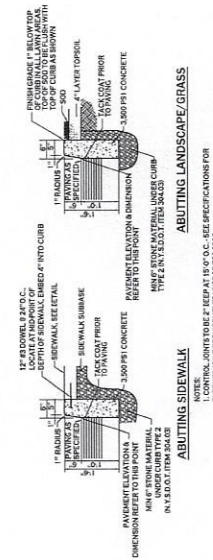
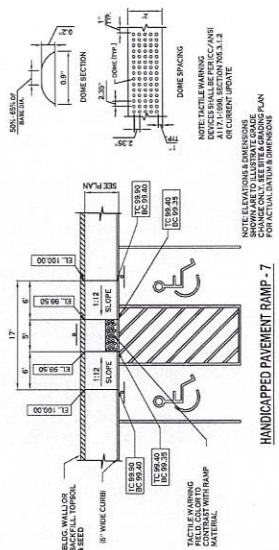
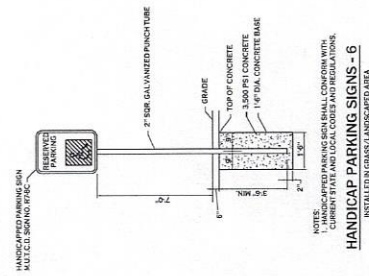
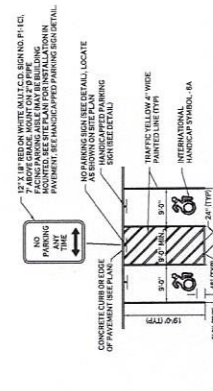
Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

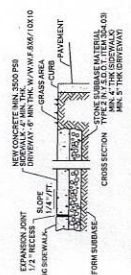
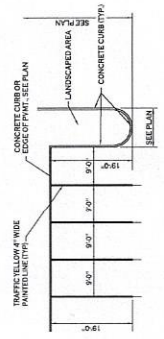
Tie-break Rule: Higher

Appendix D
Civil Plan Set

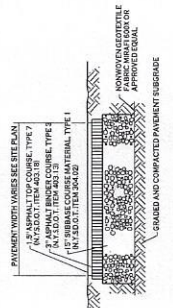
NO.	DESCRIPTION



TYPE 'A' CONCRETE CURB - 1



1. CONTROL JOINTS TO BE AT 6' O.C. BOWWAYS WHERE APPLICABLE.
2. CONCRETE SIDEWALK AND DRIVEWAY MATERIAL SHALL CONFORM TO TYPICAL SPECIFICATIONS FOR CONCRETE SIDEWALK AND DRIVEWAY MATERIAL.
3. SUBBASE GRADE SHALL FOLLOW THE PROPOSED GRADE OF THE DRIVEWAY AND DRIVEWAY SHALL BE CONFORMANT TO TYPICAL SPECIFICATIONS FOR DRIVEWAY AND DRIVEWAY MATERIAL.
4. FULL DEPTH EXPANSION JOINTS SHALL BE INSTALLED AT 20' O.C. BOWWAYS WHERE APPLICABLE AND SHALL BE CONFORMANT TO TYPICAL SPECIFICATIONS FOR DRIVEWAY AND DRIVEWAY MATERIAL.
5. SEE CURB DETAILS FOR DIMENSIONAL REQUIREMENTS WHERE ABUTTING CURB.
6. INSTALL 6" LONG #3 REINFORCING BARS AT 6" O.C. WHERE SIDEWALK ABUTS A BELONGING WALL OR CURB. DO NOT THICKEN OR THIN SIDEWALK SHALL EXTEND 18" EITHER SIDE OF ENTRANCE BELONGING TO THE DRIVEWAY.
7. INITIALLY PREPARED EXPANSION JOINT WITH THICKER ROD & SEALANT WHERE SIDEWALK ABUTS BELONGING TO THE DRIVEWAY.



NOTE: CONSTRUCTION METHODS FOR ASPHALT PAVEMENT SHALL CONFORM TO TYPICAL SPECIFICATIONS FOR ASPHALT PAVEMENT AND DRIVEWAY MATERIAL. SEE TYPICAL SPECIFICATIONS FOR ASPHALT PAVEMENT AND DRIVEWAY MATERIAL.



Carmina Wood Morris
 145 Ridge Road, West Seneca, NY 11787
 P: 516.442.3838

Proposed Landmat

1450 Ridge Road
 West Seneca, New York

Date: 01/20/21
 Scale: As Noted

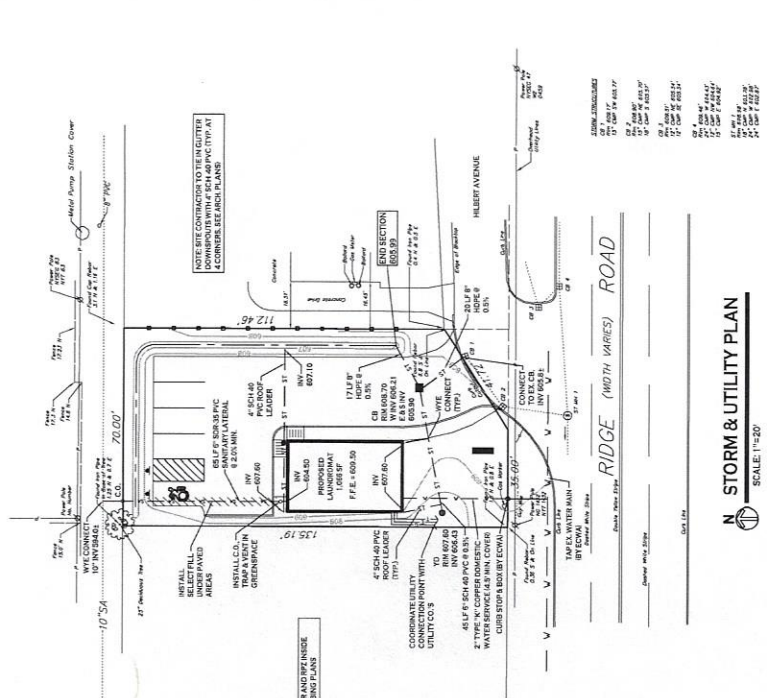
PROJECT NAME:
 New Construction
 DRAWING NAME:
 Storm/Utility Plan

DRAWING NO.
C-200

Project no.: 20_xxx

REVISIONS

No.	Description	Date

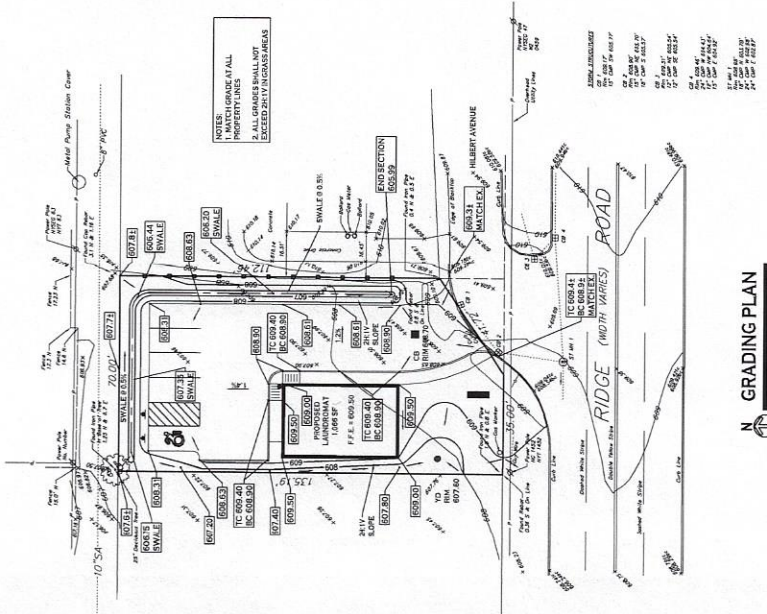


STORM & UTILITY PLAN
 SCALE: 1"=20'

- PROPOSED UTILITY LEGEND**
- PROPOSED STORM SEWER ———— 12"
 - PROPOSED SANITARY SEWER ———— 14"
 - PROPOSED WATERLINE ———— 12"
 - PROPOSED GAS/IG. ELECTRIC E.L. ———— 12"
 - PROPOSED TELEPHONE/TV ———— 12"
 - PROPOSED CATCH BASIN ■ CB
 - PROPOSED YARD DRAIN ● YD



NOTE: RESPONSIBILITY FOR DESIGN AND CONSTRUCTION OF ALL UTILITIES AND CONNECTIONS TO EXISTING UTILITIES SHALL BE ASSUMED BY THE CLIENT. CARMINA WOOD MORRIS, P.C. ASSUMES NO RESPONSIBILITY FOR THE ACCURACY.

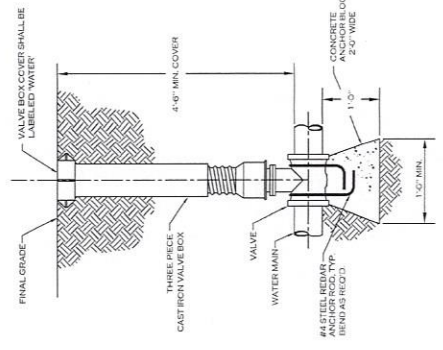


GRADING PLAN
 SCALE: 1"=20'

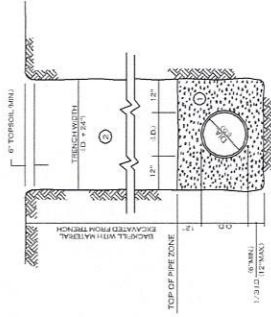
- PROPOSED GRADING LEGEND**
- PROPOSED CONTOUR ———— 10'
 - PROPOSED SPOT ELEVATION 100.35'
 - PROPOSED TOP/BOTTOM OF CURB ELEV. TC 100.50' / BC 100.00'
 - PROPOSED CATCH BASIN ■ CB
 - PAVEMENT/GROUND SLOPE ————
 - PROPOSED YARD DRAIN ● YD

As shown, the client hereby warrants that it is the owner of the land shown on this plan, and that it has the right to use the land as shown on this plan. The client shall be responsible for obtaining all necessary permits and approvals from the appropriate authorities. Carmina Wood Morris, P.C. is not responsible for the accuracy of any data provided by the client, and assumes no responsibility for the accuracy of the design. The client shall be responsible for the accuracy of any data provided by the client, and assumes no responsibility for the accuracy of the design.

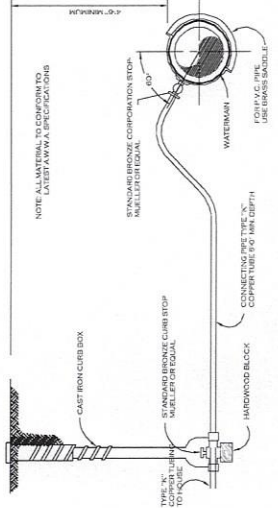
NO.	REVISIONS	DATE



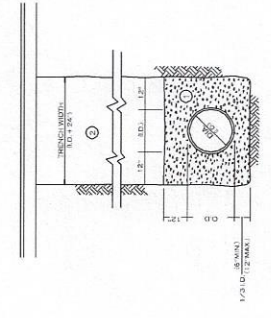
TYPICAL GATE VALVE DETAIL



TYPICAL WATER SERVICE LINE INSTALLATION



TYPICAL COMMERCIAL SERVICE WITHOUT BASEMENT DETAIL



TYPICAL RISER & HOUSE CONNECTION DETAIL FOR SEWERS UP TO 18\"/>

- NOTES**
- PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
 - TRENCH OPERATIONS SHALL INCLUDE ALL NECESSARY EREWATERING, PROTECTIVE OPERATIONS AND NECESSARY EREWATERING.
 - TRENCH DETAILS ARE ONLY SHOWN FOR PURPOSES OF MATERIAL PLACEMENT AND MANUFACTURE.
 - NO SLAG SHALL BE ALLOWED FOR WATER.
- MATERIALS**
- TYPE 1 CURB/STONE OR CURB/STONE WITH GRADATION CONFORMING WITH HOBASIT SPECIFICATIONS. THE MATERIAL SHALL BE WELL GRADED WITH NO PARTICLES LARGER THAN ONE (1) INCHES AND HAVING A MAXIMUM CRUSHING STRENGTH OF 18,000 PSI. THE MATERIAL SHALL BE COMPACTED TO THE PROPOSED FINISH GRADE.
 - TYPE 2 CURB/STONE OR CURB/STONE WITH GRADATION CONFORMING WITH HOBASIT SPECIFICATIONS. THE MATERIAL SHALL BE WELL GRADED WITH NO PARTICLES LARGER THAN ONE (1) INCHES AND HAVING A MAXIMUM CRUSHING STRENGTH OF 18,000 PSI. THE MATERIAL SHALL BE COMPACTED TO THE PROPOSED FINISH GRADE.

- NOTES**
- PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
 - TRENCH OPERATIONS SHALL INCLUDE ALL NECESSARY EREWATERING, PROTECTIVE OPERATIONS AND NECESSARY EREWATERING.
 - TRENCH DETAILS ARE ONLY SHOWN FOR PURPOSES OF MATERIAL PLACEMENT AND MANUFACTURE.
 - NO SLAG SHALL BE ALLOWED FOR WATER.
- MATERIALS**
- TYPE 1 CURB/STONE OR CURB/STONE WITH GRADATION CONFORMING WITH HOBASIT SPECIFICATIONS. THE MATERIAL SHALL BE WELL GRADED WITH NO PARTICLES LARGER THAN ONE (1) INCHES AND HAVING A MAXIMUM CRUSHING STRENGTH OF 18,000 PSI. THE MATERIAL SHALL BE COMPACTED TO THE PROPOSED FINISH GRADE.
 - TYPE 2 CURB/STONE OR CURB/STONE WITH GRADATION CONFORMING WITH HOBASIT SPECIFICATIONS. THE MATERIAL SHALL BE WELL GRADED WITH NO PARTICLES LARGER THAN ONE (1) INCHES AND HAVING A MAXIMUM CRUSHING STRENGTH OF 18,000 PSI. THE MATERIAL SHALL BE COMPACTED TO THE PROPOSED FINISH GRADE.

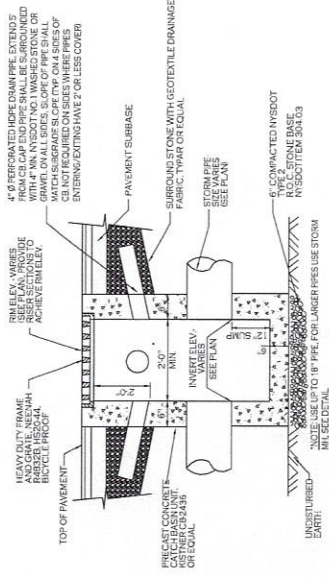
NO SLAG SHALL BE ALLOWED FOR WATER.

NO SLAG SHALL BE ALLOWED FOR WATER.

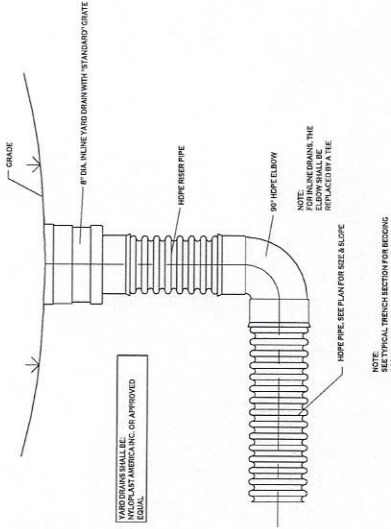
UTILITY TRENCH SECTION IN UNPAVED AREAS

UTILITY TRENCH SECTION IN PAVED AREAS

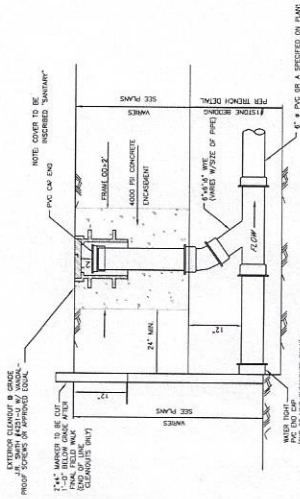
NO.	DESCRIPTION	DATE



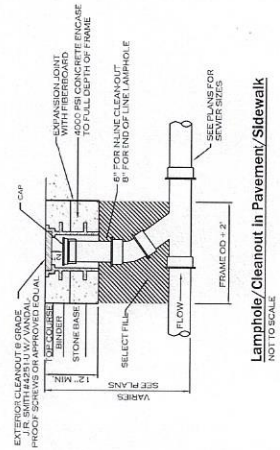
TYPICAL PRECAST CATCH BASIN



TYPICAL YARD DRAIN DETAIL



LAMPHOLE/CLEANOUT IN LAWN/FIELD AREAS
 NOT TO SCALE



Lamphole/Cleanout in Pavement/Sidewalk
 NOT TO SCALE



Carmina Wood Morris
 157 West 11th Street, 10th Floor
 New York, NY 10011
 P: 212.463.2020
 F: 212.463.2022

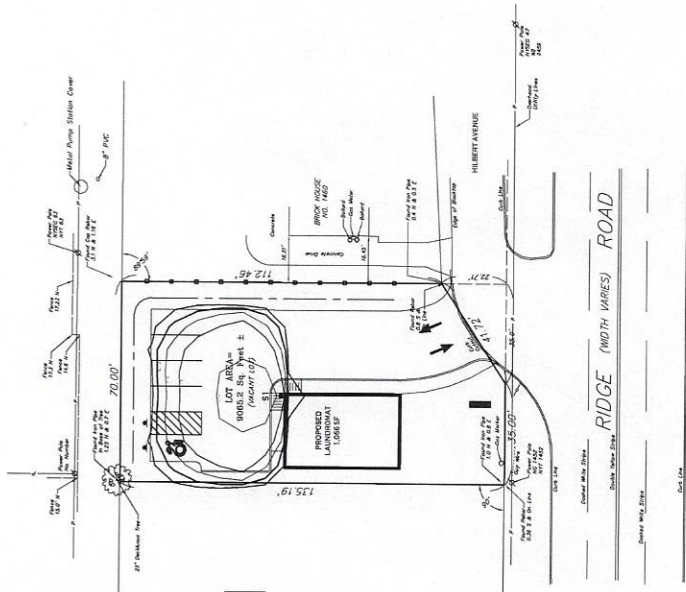
Proposed Landromat
 1450 Ridge Road
 West Seneca, New York

DATE: 11/08/21
 DRAWN BY: [Name]
 CHECKED BY: [Name]
 PROJECT NAME: [Name]

DRAWING NO. LP-100
 Project no.: 20.xxx



NOTE: BOUNDARIES AND SURVEYING INFORMATION PROVIDED BY OTHERS. CARMINA WOOD MORRIS, D.P.C. ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.



N SITE PLAN
 SCALE: 1"=20'

SEE LEGEND
 WALL EIGHTH (81) - GRATEDS ECF-45-4-TJA-WN-23-15-BHF-Wall HIG 8' 15"

NO.	Description	Date

All rights reserved. Failure of these documents without the consent of Carmina Wood Morris DPC is prohibited. All drawings are the property of Carmina Wood Morris DPC. No part of this drawing may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or by any information storage and retrieval system, without the prior written permission of Carmina Wood Morris DPC. A professional seal and signature of a registered professional engineer is required for all drawings.