



**ADR & Associates, Ltd.**

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## Clientcentric Consulting

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August 19, 2022

City of Columbus, Department of Public Utilities

Attn: Greg Fedner, P.E.

Section Manager, Private Development

910 Dublin Road

Columbus, Ohio 43215

**Subject:** Type II Variance for American Self Storage, Phase II Refugee Road

Dear Mr. Fedner,

On behalf of American Self Storage of Pickerington, LLC, we are writing to request a Type II Variance from the City of Columbus Stormwater Drainage Manual (SWDM) dated May 2021 for the above referenced project. The requested variance applies to Section 3.1.7 of the SWDM:

Storage capacity below the base flood elevation shall not be included in total storage capacity calculations for stormwater control facilities located adjacent to or vertically within the 100 year floodplain boundary.

### Site Information:

Project Name:	American Self Storage, Phase II (CC-19493)
Address:	1701 Refugee Road, Columbus, Ohio 43147
PID:	050-255283
Site Disturbance:	3.45 Acres
Total Site Area:	8.26 Acres
Date Property Acquired:	May, 2016
Primary Owner Contact:	American Self Storage of Pickerington, LLC C/o Robert LeVeck 232 Frankfort Sq Columbus, Ohio 43026 (614) 582-4765;

[rleveck@leveckconstruction.com](mailto:rleveck@leveckconstruction.com)

### Reasoning for Variance Request

This project is an expansion of an existing self-storage facility, constructed in 2017. The site exists largely within the 100-year floodplain, with a base flood elevation (BFE) of 795.50. To construct the development, fill was placed to raise the building site to an approximate minimum elevation of 797.00, above the BFE, and compensatory cut was provided adjacent to the storage units. No construction took place within the Stream Corridor Protection Zone or the Floodway. At the time of construction of the now-existing facility, the storm water control basin was

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installed with storage volume below the BFE, which at the time was not specifically disallowed by the SWDM.

The Owner intends to develop Phase II of this project by adding three more self-storage structures inside the site. The intent is to further fill within the floodplain to expand the site building pad using compensatory cut. To accommodate stormwater we will reshape the top of bank of the existing basin to better define and slightly expand it. This will expand the surface area of the basin from 15,084 square feet to 15,323 square feet, and raise the 100-year storage elevation from 793.84 to 794.54, a 0.7' increase.

The impact on water quality and quantity if this variance is granted will be minimal. This is a minor expansion of an existing basin, which will continue to function as it currently does. The volume of storage below the base flood elevation is slightly increased, but this will not have a significant impact in how the basin functions in relation to the upstream watershed. The basin has an extremely small tributary area (5.06 acres) compared to the 50-square mile upstream tributary area of Blacklick Creek (see the attached streamstats report for details), so the relative drainage increase is extremely small. Additionally, with a 23.6 mile flow path, the time of concentration for the area of floodplain in question will be substantially longer than that of the basin, so it is highly unlikely that both tributary areas will achieve peak flows simultaneously. To further reduce impacts, the Developer as part of this project will install a backwater device on the existing basin outlet as part of this Variance.

### **Hardship**

As stated below, there are no viable alternatives for further development of the site if a variance is not able to be granted. The Owner bought the property in 2016 and was able to build out the initial phase of the site by providing storage below the elevation of the BFE under the August 2012 SWDM. The inability to finish this development would cause the Owner to suffer economic hardship as they would be unable to realize the development potential of the site as they understood it when they purchased it in 2016.

### **Alternatives**

Unfortunately, there are no viable alternatives to continue to develop this site within the requirements of the latest edition of the SWDM. Since most of the site has already been developed at the previously stated elevations, it is infeasible to raise the newer portion of the development to a higher elevation to allow storage to be provided above the BFE. The site does not have sufficient space to raise the new portion of the site several feet and construct a new basin as well as provide compensatory cut for this enlarged pad area. The banks of the existing basin cannot be raised because they are constrained by the floodway on one side and the existing storage facilities on the other, and because the existing stormwater drainage infrastructure would not allow a significant increase in the storage elevation of the basin. As

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such, there are only two alternatives—no development, or the preferred alternative as shown on the attached exhibit.

Alternative 1, No Development, is self-explanatory. The site would continue to exist as-is.

Alternative 2, the Preferred Alternative, would expand the site to the southwest as shown in the attached exhibit. The site would be filled to raise the building pad areas and the new limits of the stormwater basin out of the floodplain, and compensatory cut taken from the southern area of the site. A Map Revision would be submitted to FEMA to revise the floodplain around the site. The basin’s operating elevations would remain substantially similar to the existing condition, but the owner would install a backflow device to ensure that floodwaters do not encroach on required storage. As stated above, it is highly unlikely that the two tributary areas would peak simultaneously.

If you have any questions regarding this request, please do not hesitate to contact me at 740-345-1921 or via email at [nmill@adrinnovation.com](mailto:nmill@adrinnovation.com).

Thank you for your consideration of this request.

Sincerely,

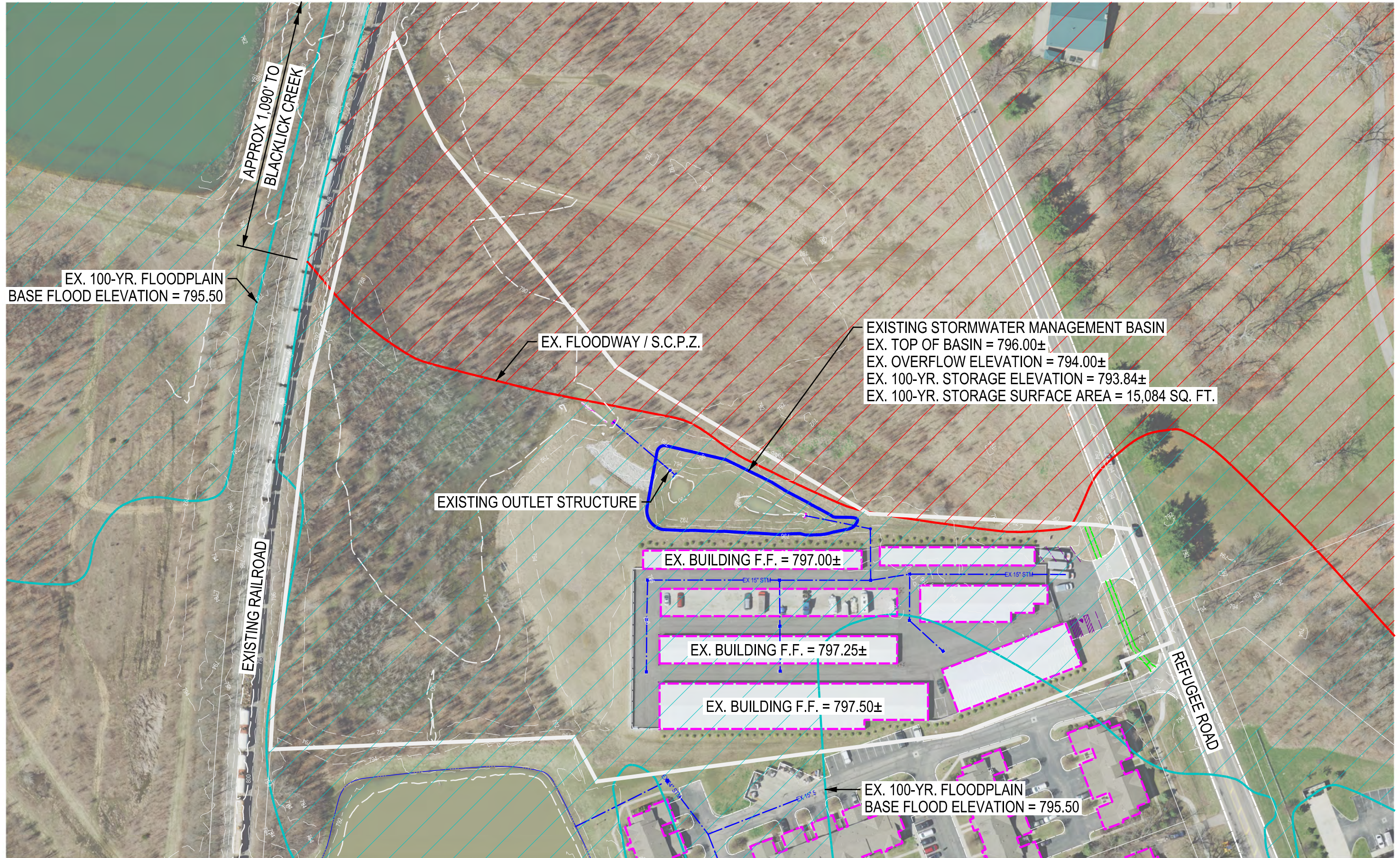
Nicholas D. Mill, PE



- Enclosures: Exhibit 1: Alternate 1, No Development  
 Exhibit 2: Alternate 2, Preferred Alternate  
 Streamstats Report

- Copies: File  
 Robert LeVeck

# ALTERNATE 1 - NO DEVELOPMENT



EX. 100-YR. FLOODPLAIN  
BASE FLOOD ELEVATION = 795.50

APPROX 1,090' TO  
BLACKLICK CREEK

EX. FLOODWAY / S.C.P.Z.

EXISTING STORMWATER MANAGEMENT BASIN  
EX. TOP OF BASIN = 796.00±  
EX. OVERFLOW ELEVATION = 794.00±  
EX. 100-YR. STORAGE ELEVATION = 793.84±  
EX. 100-YR. STORAGE SURFACE AREA = 15,084 SQ. FT.

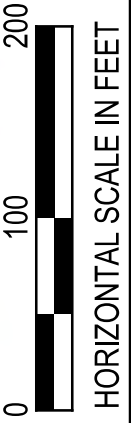
EXISTING OUTLET STRUCTURE

EX. BUILDING F.F. = 797.00±

EX. BUILDING F.F. = 797.25±

EX. BUILDING F.F. = 797.50±

EX. 100-YR. FLOODPLAIN  
BASE FLOOD ELEVATION = 795.50



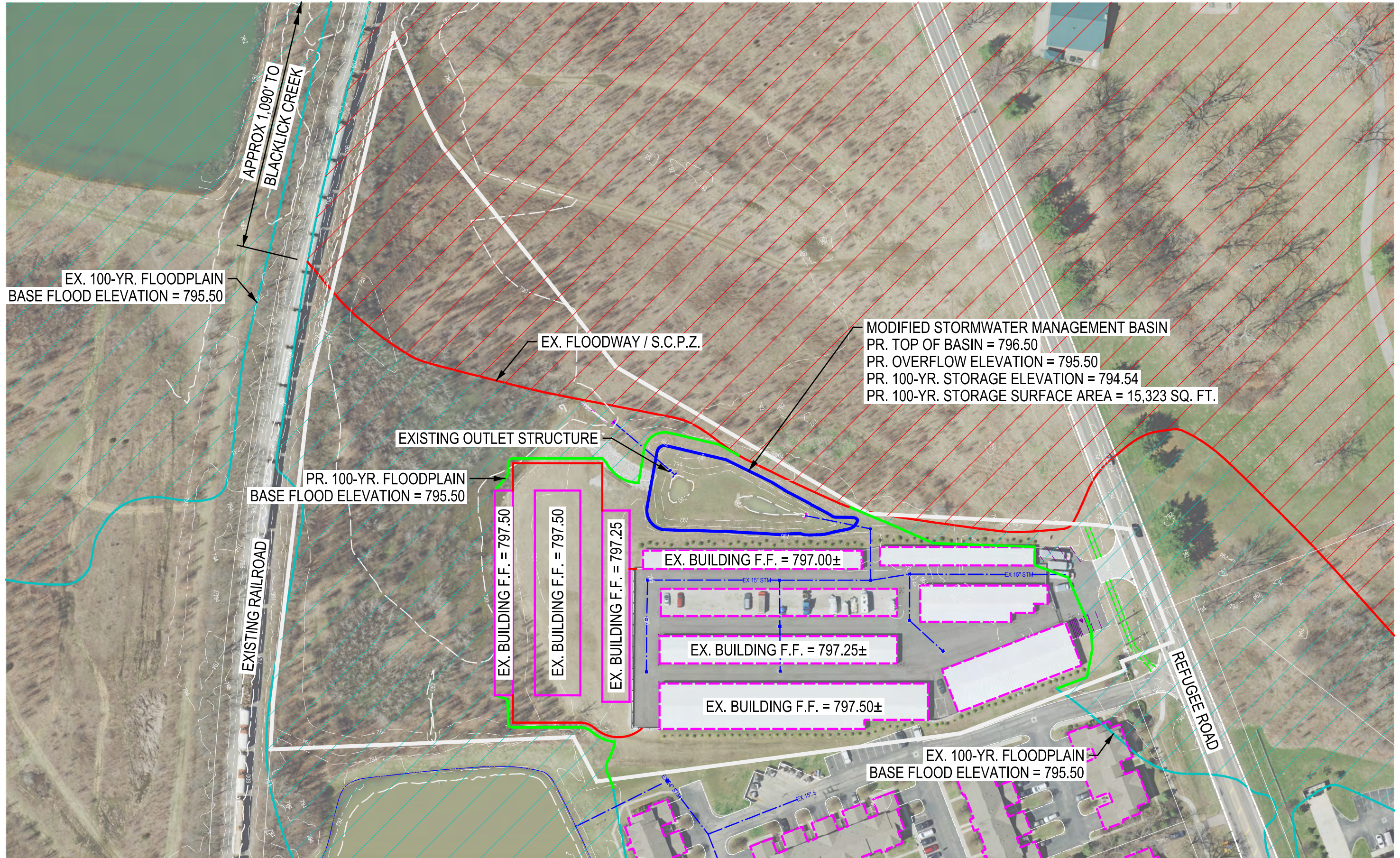
DRAWN  
BJW  
JOB NO.  
21-076



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AMERICAN SELF STORAGE, PHASE II  
1701 REFUGEE ROAD  
TYPE II STORMWATER VARIANCE

# ALTERNATE 2 - PREFERRED ALTERNATIVE



DRAWN  
BJW  
JOB NO.  
21-076



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AMERICAN SELF STORAGE, PHASE II  
1701 REFUGEE ROAD  
TYPE II STORMWATER VARIANCE

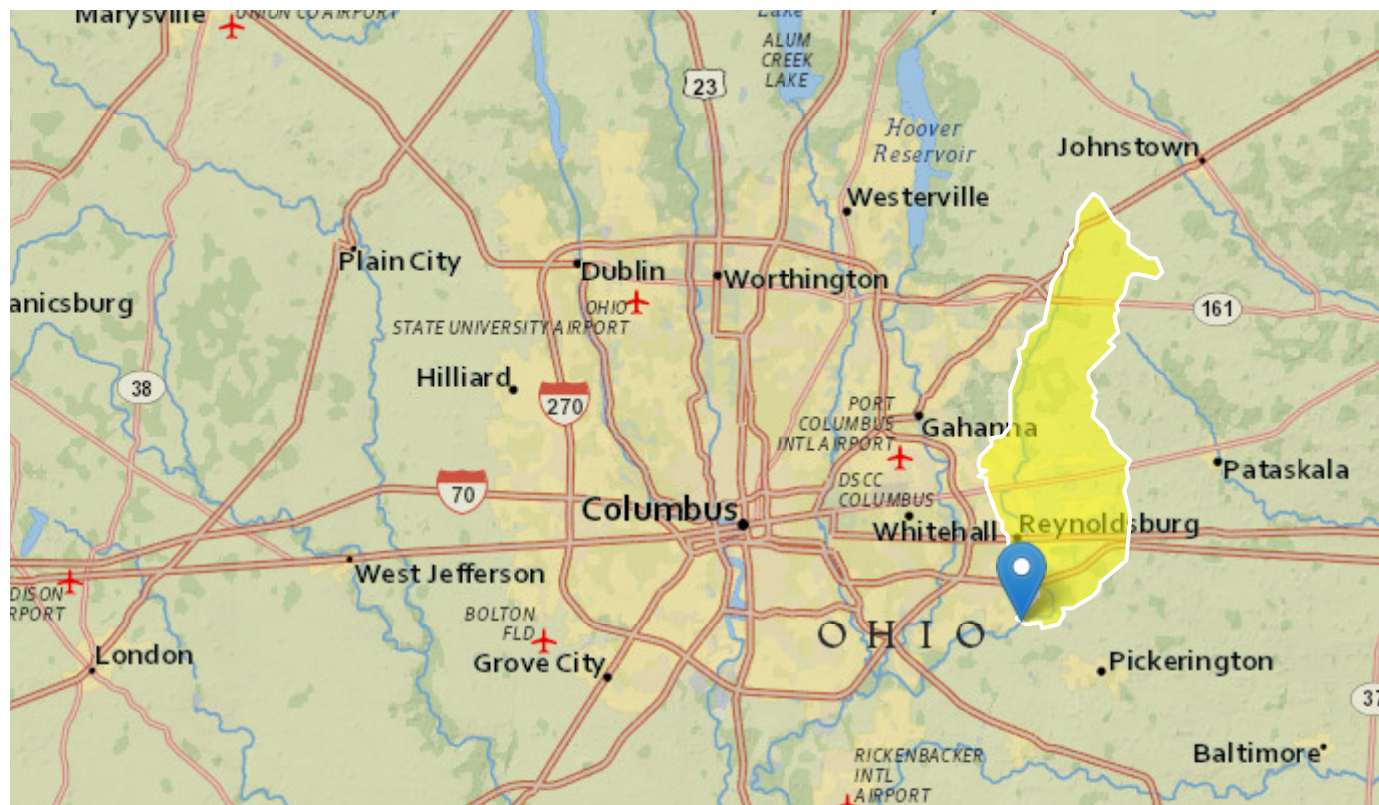
# American Self Storage Pickerington Streamstats Report

Region ID: OH

Workspace ID: OH20220811175929044000

Clicked Point (Latitude, Longitude): 39.91102, -82.80945

Time: 2022-08-11 13:58:43 -0400



Collapse All

## ➤ Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
CSL1085LFP	Change in elevation divided by length between points 10 and 85 percent of distance along the longest flow path to the basin divide, LFP from 2D grid	17.1	feet per mi
DRNAREA	Area that drains to a point on a stream	50	square miles
FOREST	Percentage of area covered by forest	26.3	percent
LC92STOR	Percentage of water bodies and wetlands determined from the NLCD	1.37	percent

Parameter Code	Parameter Description	Value	Unit
LFPLENGTH	Length of longest flow path	23.6	miles
OHREGA	Ohio Region A Indicator	1	dimensionless
OHREGC	Ohio Region C Indicator	0	dimensionless
PRECIPCENT	Mean Annual Precip at Basin Centroid	37.4	inches
STREAM_VARG	Streamflow variability index as defined in WRIR 02-4068, computed from regional grid	0.55	dimensionless

➤ Peak-Flow Statistics

Peak-Flow Statistics Parameters [Peak Flow Full Model Reg A SIR2019 5018]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	50	square miles	0.04	5989
OHREGC	Ohio Region C Indicator 1 if in C else 0	0	dimensionless	0	1
OHREGA	Ohio Region A Indicator 1 if in A else 0	1	dimensionless	0	1
CSL1085LFP	Stream Slope 10 and 85 Longest Flow Path	17.1	feet per mi	1.53	516
LC92STOR	Percent Storage from NLCD1992	1.37	percent	0	25.35

Peak-Flow Statistics Flow Report [Peak Flow Full Model Reg A SIR2019 5018]

PII: Prediction Interval-Lower, Plu: Prediction Interval-Upper, ASEp: Average Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	PII	Plu	ASEp
50-percent AEP flood	1880	ft <sup>3</sup> /s	996	3550	40.1
20-percent AEP flood	3000	ft <sup>3</sup> /s	1660	5410	37.2
10-percent AEP flood	3850	ft <sup>3</sup> /s	2120	6990	37.6
4-percent AEP flood	5050	ft <sup>3</sup> /s	2760	9220	38.1
2-percent AEP flood	6010	ft <sup>3</sup> /s	3260	11100	37.8
1-percent AEP flood	7030	ft <sup>3</sup> /s	3770	13100	39.6

Statistic	Value	Unit	PII	Plu	ASEp
0.2-percent AEP flood	9610	ft <sup>3</sup> /s	5110	18100	40.3

*Peak-Flow Statistics Citations*

**Koltun, G.F., 2019, Flood-frequency estimates for Ohio streamgages based on data through water year 2015 and techniques for estimating flood-frequency characteristics of rural, unregulated Ohio streams: U.S. Geological Survey Scientific Investigations Report 2019–5018, 25 p. (<https://dx.doi.org/10.3133/sir20195018>)**

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Application Version: 4.10.1

StreamStats Services Version: 1.2.22

NSS Services Version: 2.2.1