ENGINEERS REPORT
for
NORTH FRENCH ROAD SOCCER FIELDHOUSE AND PARKING LOT PROJECT
1681 N. FRENCH ROAD
GETZVILLE NY 14068

Prepared for

TOWN OF AMHERST
ENGINEERING DEPARTMENT
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ENGINEERS REPORT

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I. INTRODUCTION

DiDonato Associates, P.E., P.C. has been retained by the Town of Amherst to perform the site design services for a fieldhouse building a parking lot North French Road Soccer Fields located at 1681 N. French Road Town of Amherst, Erie County, New York.

The following Engineers Report, which includes the drainage study, has been performed in accordance with the Town of Amherst requirements. The drainage study for the parking lot and the building site will address the existing site drainage and the proposed drainage measures related to the construction of the project. Additional information related to the watershed to the south of the new parking lot is required to provide the required detention measures for this project.

II. ANALYSIS

A. *Methodology*:

The Natural Resources Conservation Service (NRCS), formerly the Soils Conservation Service (SCS) Technical Report 20 (TR-20) method utilizing HydroCAD 10.0 program by Applied Microcomputer Systems was used to analyze the runoff hydrograph and perform stormwater routing calculations.

B. *Design Parameters*:

It is proposed that 0.36 acres of new impervious cover will be added to the existing watershed. The soccer field area is divided into four watersheds, Watershed WSA-1 is area to the west of the walkway path, watershed (WSA-2) which is in the middle and adjacent to the existing parking lot, watershed WSA-3 to the west side draining into an existing swale and some wetlands and watershed WSA-4 to the south. Watershed area WSA-2 is the area which will be disturbed for the construction of the field house and the new parking lot. Since the other watershed areas will not be disturbed only WSA-2 was used to determine the runoff coefficient for the area based on the watershed characteristics for the existing and proposed hydraulic analysis. This area outfalls to a closed drainage system along N. French Road via a 12-inch pipe and an 18-inch pipe. The time of concentration was taken as the travel time from the most hydraulically distant point in the area to the upstream end of the receiving point. The requirement for detention of any excess runoff has been waved for this project. This project will disturb less than an acre of the site. Watershed area drawing for the existing and proposed conditions is attached in Appendix C.

III. RESULTS

The increase in runoff from the post-developed conditions as compared to the pre-developed conditions is due to the increase in the impervious areas for the proposed building and the new parking lot.

A. EXISTING DRAINAGE CONDITIONS

The overall area for the North French soccer field complex consists of approximately 28 acres and is divided in four watersheds as described previously. Soccer fields areas (WSA-1) to the west of the asphalt walkway drain into a drainage swale that outfalls into the North French closed

storm sewer system. A section of the soccer fields grass area (WSA-3) to the east flows into the wetlands along the I-990. The existing parking lot runoff part of WSA-1 is conveyed to the North French closed system via a 12-inch pipe. Runoff from the southern section of the watershed (WSA-4) is conveyed to a pond and a wetland area to the south. Area to the east of the asphalt walkway (WSA-2) consists of playing fields and runoffs from this 6.2 acres of soccer field area is conveyed to a drainage swale running in between the fields to the east and west. A set of 2–12-inch pipes convey this runoff under the walkway across to another swale where the runoff is detained for some time and ultimately conveyed to the closed system along N. French Road via an 18-inch metal pipe.

B. PROPOSED DRAINAGE CONDITIONS

The new parking lot and the field house will add approximately 15,850± SF (0.36 acre) of impervious cover within watershed area WSA-2. This new construction will require relocating the of the existing swale along with the existing 12-inch pipes to convey runoff from the southern part of WSA-2 and the new parking lot to the outfall as well as to keep the hydrology of the area unchanged. A set of two plastic pipes will carry runoff from the southern section away from the concrete pad that supports the irrigation sprinkler control system to the new swale. The new parking lot will surface drain into a swale that connects to a wider drainage swale between the new parking lot and the soccer fields to the west. This new swale merges with the existing grass lined swale to the north of the parking lot ultimately draining to the closed drainage system along N. French Road via the existing 18-inch outlet pipe.

The new drainage swale is designed wider and slightly deeper than the existing swale thus providing additional storage and reducing the velocity of the flow and keeping the flows similar to the existing pattern. Drainage analysis is attached in Appendix C of this report. The following table provides a summary of the existing and proposed watershed conditions.

PEAK RUNOFF - WSA 2					
DRAINAGE CONDITIONS	STORM FREQUENCY	DRAINAGE AREA (Acre)			PEAK RUNOFF (cfs)
		Impervious	Pervious	Total	
EXISTING CONDITIONS	10 YEAR	0	6.56	6.56	3.86
	25 YEAR	0	6.56	6.56	5.56
PEOPOSED CONDITIONS	10 YEAR	0.36	6.2	6.56	4.13
	25 YEAR	0.36	6.2	6.56	5.91

IV. SUMMARY AND CONCLUSIONS

The proposed construction of the restroom facility at Paradise Park and extension of some sidewalks will increase the impervious cover slightly but will not significantly change the existing area characteristics or the area runoff drainage pattern.

V. WATERLINE DESIGN / RPZ REPORT

There is an existing Watts 3-inch backflow preventer located at existing soccer facility, and it is proposed that the water services to the new building will be connected to the existing water line at the RPZ after the double check valves.. The existing RPZ services a sprinkler system for the soccer fields that operate during the late nighttime hours when the soccer fields are not being used. It is proposed that a new 2-inch water line will be installed to service the fieldhouse. This new water service will be used for typical bathroom uses (including toilet flushing and hand washing). The design water usage for the proposed office building shall be 2582 gpd based on the peak water demand. The existing water system should suffice for the field house assuming that the sprinkler system continues to operate during the night hours when the soccer fields/fieldhouse facility are not being used.

Waterline Chlorination and Testing

The newly installed water service shall be tested prior to being placed in service. Current Erie County Water Authority and Erie County Health Department (Erie County Department of Environment and Planning) standards will be utilized for these tests. All installed pipes will be new and in excellent condition and will be disinfected with a chlorine solution meeting the requirements of the ECWA and the American Water Works Association (AWWA). Approval from the Erie County Water Authority will be obtained prior to placing any waterline in service.

VI. SANITARY SEWER DESIGN

A new field house with restroom facilities is being constructed at the North French Recreational Area along North French Road. This facility includes multiple soccer fields. In order to enhance the user experience of this recreational facility a new single-story, ADA-compliant building will be constructed to include restrooms and storage and will be near the onsite recreational elements. The new restroom building to be constructed will be seasonal in nature and in use from April through August.

Wastewater from the site will flow east from the new building (shown on the enclosed site plan) by a new six (6) inch sanitary service lateral and connecting into a new manhole on the east side of the building. This six-inch line will be connected to an existing sewer manhole located along North French Road.

Sanitary Flows (as per demand calculations provided) are provided

North French Soccer Sanitary Demand Calculations

Facility	Sport	Players / Day	Coaches / Day	Total / Day	Use / Week	Weekly Users	Ave. Daily Users	NYSDEC Design Use Rate (2014) [gpd]	Design Designation	Average Daily Flow [gpd]	Use Months
Soccer Fields											
	Field 1	20	4	24	4	96	14	5	Public Park	68.6	April thru August
	Field 2	20	4	24	4	96	14	5	Public Park	68.6	April thru August
	Field 3	20	4	24	4	96	14	5	Public Park	68.6	April thru August
	Field 4	20	4	24	4	96	14	5	Public Park	68.6	April thru August
	Field 5	20	4	24	4	96	14	5	Public Park	68.6	April thru August
	Field 6	20	4	24	4	96	14	5	Public Park	68.6	April thru August
	Spectators (6 fields)	60	-	60	4	240	34	5	Public Park	171.4	April thru August
										582.9	*April thru August*

Seasonal Sanitary Sewer Demand Summary Table

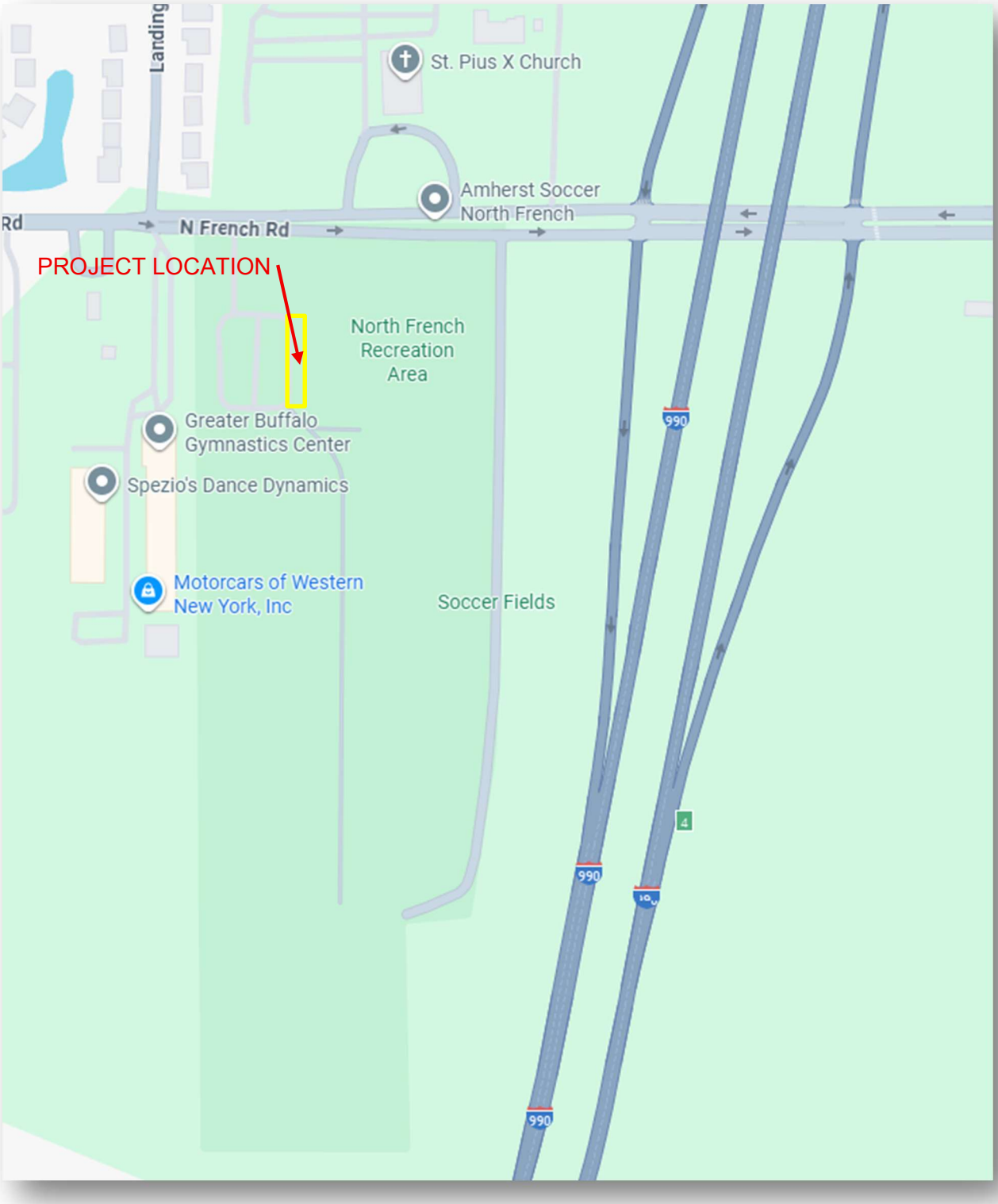
Month	Seasonal Uses (gpd) *Soccer*		*Total ADF (gpd)*
January			
February			
March			
April	582.9		582.9
May	582.9		582.9
June	582.9		582.9
July	582.9		582.9
August	582.9		582.9
September			
October			

AVERAGE DAILY FLOWS: 0.00058 MGD (582.9 gpd)
Seasonal flows from April Through August

NOTE: Average sanitary demand is well less than 2,500 gpd and therefore a Downstream Sewer Capacity Analysis (DSCA) and I/I mitigation is not required.

APPENDIX A

LOCATION & SOIL MAPS



PROJECT LOCATION MAP	
NORTH FRENCH ROAD SOCCER FIELDHOUSE **1681 N. FRENCH ROAD.** **GETZVILLE, NY**	DiDonato Associates Engineering and Architecture, P.C.

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Erie County, New York

N French Road Soccer Fieldhouse

August 18, 2025

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

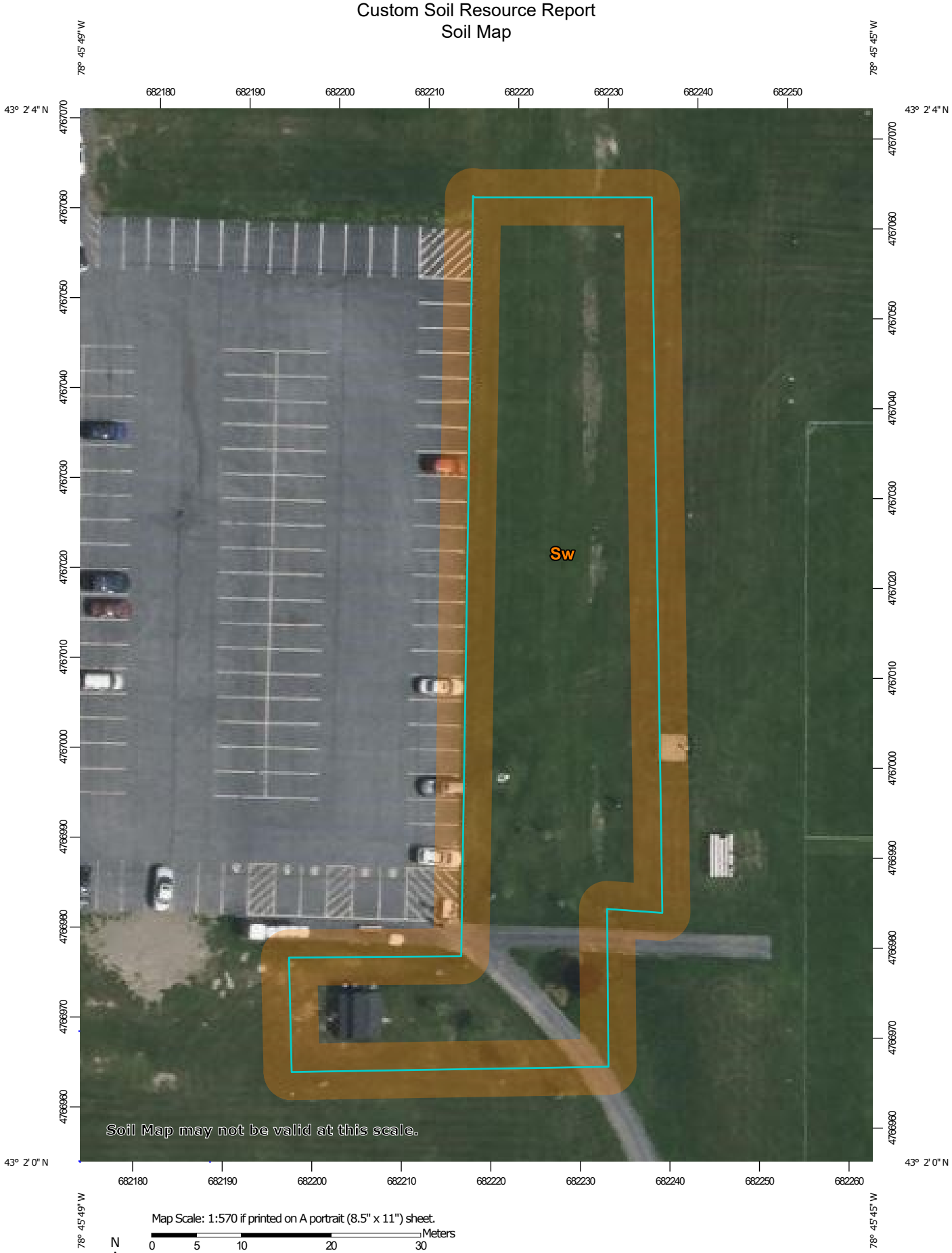
Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.



Map Scale: 1:570 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 5 10 20 30

Feet
0 25 50 100 150

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

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

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 24, Aug 25, 2024

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

Date(s) aerial images were photographed: May 13, 2023—May 27, 2023

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.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Sw	Swormville clay loam	0.5	100.0%
Totals for Area of Interest		**0.5**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Erie County, New York

Sw—Swormville clay loam

Map Unit Setting

National map unit symbol: 9rq0
Elevation: 250 to 650 feet
Mean annual precipitation: 36 to 48 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 115 to 195 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Swormville and similar soils: 75 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Swormville

Setting

Landform: Lake plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Silty glaciolacustrine deposits overlying sandy glaciolacustrine, deltaic, or glaciofluvial deposits

Typical profile

H1 - 0 to 8 inches: clay loam
H2 - 8 to 20 inches: clay loam
H3 - 20 to 26 inches: loamy fine sand
H4 - 26 to 60 inches: sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Low (about 5.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C/D
Ecological site: F101XY006NY - Moist Outwash
Hydric soil rating: No

Minor Components

Getzville

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Lamson

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Minoa

Percent of map unit: 5 percent
Hydric soil rating: No

Niagara

Percent of map unit: 5 percent
Hydric soil rating: No

Raynham

Percent of map unit: 5 percent
Hydric soil rating: No

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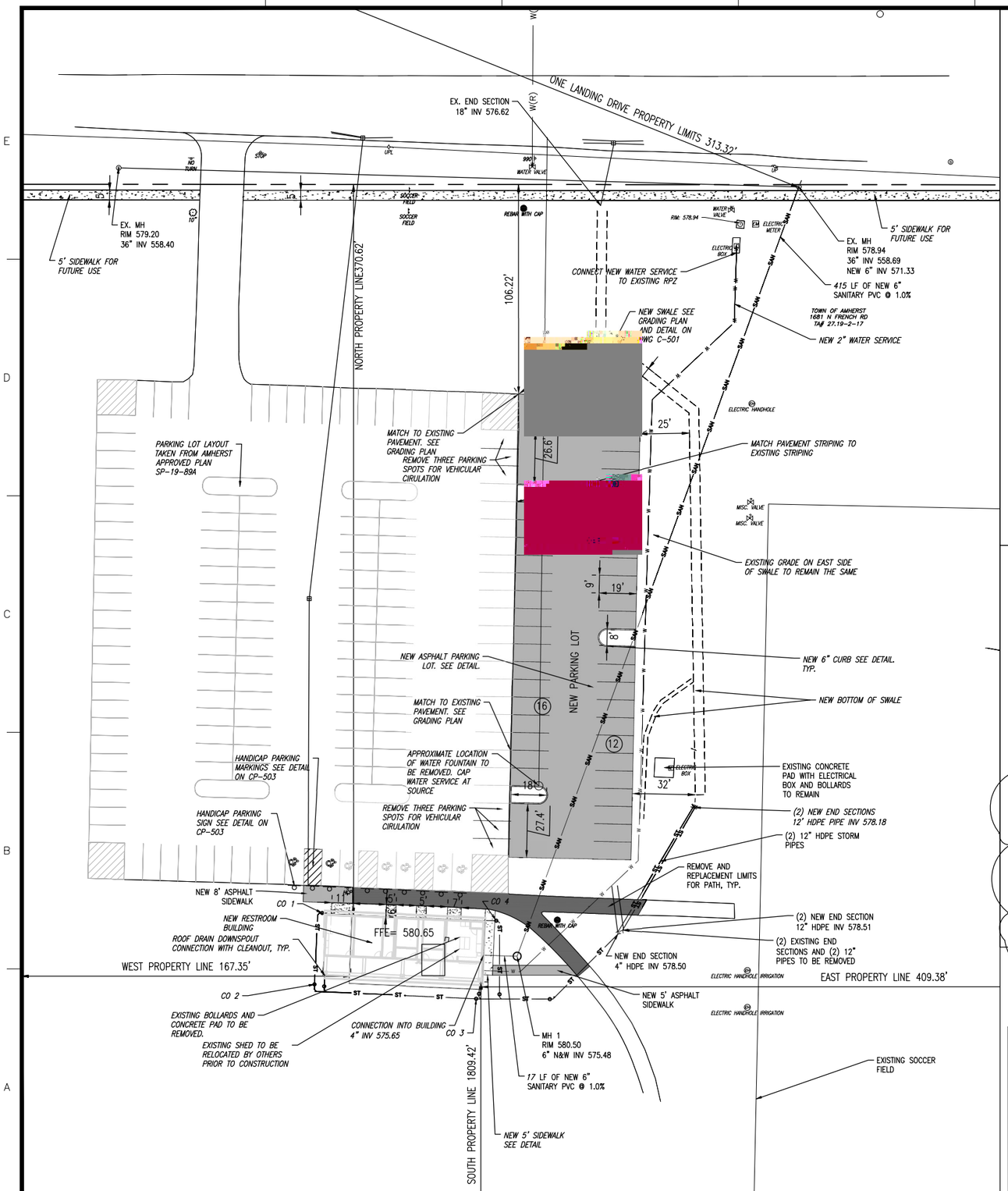
APPENDIX B

PROJECT DRAWINGS



SITE AND UTILITY PLAN

NOTES:

1. CONTRACTOR SHALL FIELD VERIFY SERVICE LOCATIONS AND DEPTHS AT START OF CONSTRUCTION AND NOTIFY ENGINEER OF ANY DISCREPANCIES.
2. CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PRESERVE THE INTEGRITY OF THE EXISTING UTILITIES TO REMAIN AND SHALL PROVIDE UNINTERRUPTED SERVICE TO ALL USERS OF THE EXISTING UTILITIES. INSTALLATION OF ALL UTILITIES, INCLUDING ANY REMOVAL OR RELOCATION, SHALL BE IN ACCORDANCE WITH THE TOWN OF AMHERST REQUIREMENTS.
3. EXISTING UTILITIES (LOCATION, SIZES AND INVERTS) SHOWN ON THE PLANS HAVE BEEN PLOTTED FROM FIELD SURVEYS AND RECORD MAPS AND ARE NOT CERTIFIED AS TO THE ACCURACY OF THEIR LOCATION OR COMPLETENESS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATIONS AND DEPTH OF ALL UTILITIES AND STRUCTURES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DELAYS OR DAMAGES OCCURRING AS A RESULT OF INCORRECTLY LOCATED UTILITIES. NO EXTENSIONS OF CONTRACT TIME AND NO MONETARY DAMAGE CLAIMS SHALL BE ALLOWED AS A RESULT OF REVISED DESIGN LOCATIONS.
4. THE CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AHEAD OF ALL PIPE LAYING OPERATIONS TO ALLOW FOR MINOR ADJUSTMENTS TO BE MADE IN ELEVATION AND/OR ALIGNMENT DUE TO INTERFERENCE FROM THESE UTILITIES, IF NECESSARY.
5. CONTRACTOR SHALL PROVIDE TOWN REPRESENTATIVES AND DESIGN TEAM INSPECTORS FREE ACCESS TO ALL PARTS OF THE SITE FOR PROPER INSPECTION.
6. CONTRACTOR SHALL PERFORM NO WORK OUTSIDE OF THE DESIGNATED WORK LIMITS WITHOUT APPROVAL FROM THE ENGINEER.
7. CONTRACTOR SHALL RESTORE ALL DISTURBED GRASS AREAS IN-KIND USING A MINIMUM OF 4" OF TOPSOIL AND SEED.
8. CONTRACTOR SHALL TAKE CARE TO NOT DISTURB ADJACENT EXISTING PAVEMENT WHEN TRENCHING IN GRASS AREA.
9. IN AREAS WHERE PROPOSED UTILITIES CROSS EXISTING ASPHALT PAVEMENT, REFER TO DWG CP501 FOR EXISTING ASPHALT SIDEWALK PAVEMENT SECTION AND DWG CP502 FOR TRENCH DETAILS.

NOTES:

1. **SITE DOES NOT CONTAIN ANY STATE WETLANDS AND IS NOT LOCATED IN A FEMA FLOODPLAIN OR FLOODWAY. APPROXIMATE LOCATION OF FEDERAL WETLANDS (USFWS) IS SHOWN PER TOWN OF AMHERST GIS MAP.**
2. **1681 NORTH FRENCH SOCCER FIELD**
3. **BOUNDARY AND TOPOGRAPHIC INFORMATION TAKEN FROM TOPOGRAPHIC MAP – JOB #4805, PREPARED BY KHEOPS ARCHITECTURE, ENGINEERING AND SURVEY DPC DATED 6/25/2025.**

RECREATION CONSERVATION DISTRICT(RC)–ZONING REQUIREMENTS

BUILDING SETBACKS:	REQUIRED:	PROVIDED:
NORTH (FRONT)	20'	371'
SOUTH (REAR)	15'	1809'
EAST (SIDE)	15'	167'
WEST (SIDE)	15'	409'

VEHICLE USE SETBACKS	REQUIRED:	PROVIDED:
NORTH (FRONT)	15'	N/A
SOUTH (REAR)	5'	N/A
EAST (SIDE)	5'	N/A
WEST (SIDE)	10'	N/A

* NOTE SETBACKS BASED ON MAX. STRUCTURE HEIGHT < 35'

AVAILABLE PARKING DATA

EXISTING PARKING LOT – HANDICAP SPACES – 5
STANDARD SPACES – 148

PROPOSED PARKING LOT – HANDICAP SPACES – 7
STANDARD SPACES – 180

INTERIOR GREEN SPACE CALCULATION

NEW PARKING LOT AREA – 13431 SF
PARKING GREEN SPACE – 1440 SF
INTERIOR PARKING LANDSCAPE AREA – 9.3%

SITE INFORMATION

SITE DATA:	SITE DATA:
CURRENT ZONING: NORTH FRENCH SOCCER FIELD	COMMUNITY FACILITIES (CF)
TOTAL SITE AREA:	27.94 Ac
TOTAL PROJECT DISTURBANCE:	40,546 S.F.±
BUILDING DATA	
GROSS BUILDING AREA:	1686 S.F.±
NET BUILDING AREA:	1686 S.F.±
MAX. BUILDING HT.:	18'

N

LEGEND

- ASPHALT PAVEMENT
- CONCRETE SIDEWALK
- NUMBER OF PARKING SPACES
- ST — STORM SEWER PIPE
- SAN — SANITARY SEWER PIPE
- W — WATER SERVICE PIPE
- LIGHTING FIXTURE
- TREE
- HANDICAP PARKING SIGN

CLEAN OUTS	
LOCATION	INVERT
CO 1	579.55
CO 2	579.26
CO 3	578.93
CO 4	579.10

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TOWN OF AMHERST

NORTH FRENCH SOCCER FIELDHOUSE AND PARKING LOT

MARK	DATE	DESCRIPTION
1	9/2/2025	SPA COMMENTS
	8/18/2025	SITE PLAN SUBMISSION

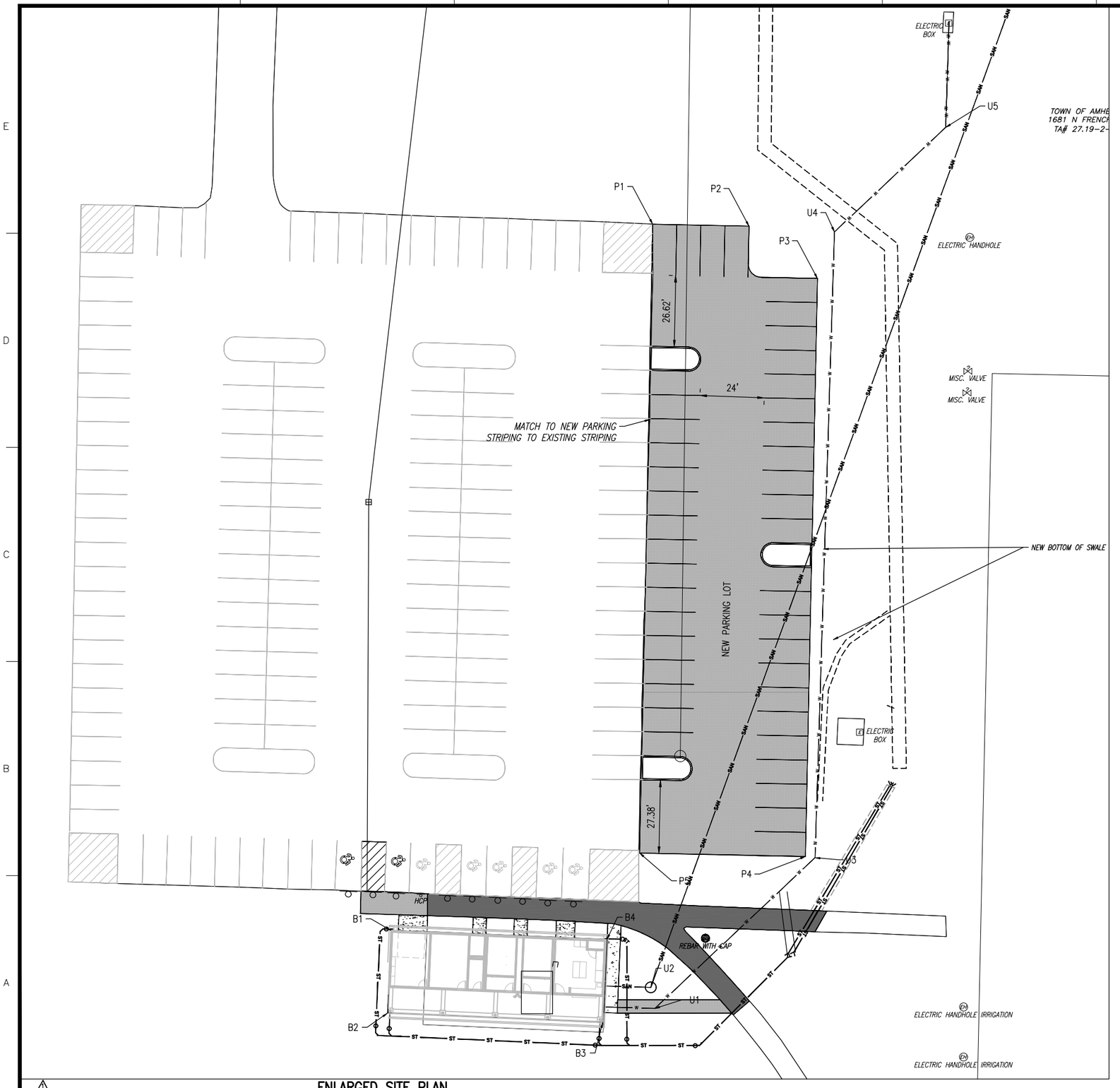
ISSUE:	
PROJECT NO:	2015.024A
DESIGNER PROJECT NO:	25-3656
CAD DWG FILE:	CP100.DWG
DRAWN BY:	AJH
CHECKED BY:	WR
SCALE:	1"=30'
COPYRIGHT:	

SHEET TITLE

SITE AND UTILITY PLAN

DRAWING#

CP101



ENLARGED SITE PLAN

N

LEGEND

- ASPHALT PAVEMENT
- CONCRETE SIDEWALK
- NUMBER OF PARKING SPACES
- ST — STORM SEWER PIPE
- SAN — SANITARY SEWER PIPE
- W — WATER SERVICE PIPE
- LIGHTING FIXTURE
- TREE
- HANDICAP PARKING SIGN

DATA POINTS		
LOCATION	NORTHING	EASTING
B1	11053585.86	1100090.25
B2	1105354.89	1100088.92
B3	1105351.44	1100169.41
B4	1105382.47	1100171.02
P1	1105649.69	1100188.11
P2	1105648.94	1100224.10
P3	1105629.40	1100249.70
P4	1100245.16	1100245.16
P5	1105414.75	1100183.18
U1	1105356.67	1100188.86
U2	1105364.56	1100187.38
U3	1105412.99	1100248.79
U4	1105646.83	1100256.04
U5	1105685.87	1100297.63

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TOWN OF AMHERST

NORTH FRENCH SOCCER FIELDHOUSE AND PARKING LOT

MARK	DATE	DESCRIPTION
1	9/2/2025	SPA COMMENTS
	8/18/2025	SITE PLAN SUBMISSION

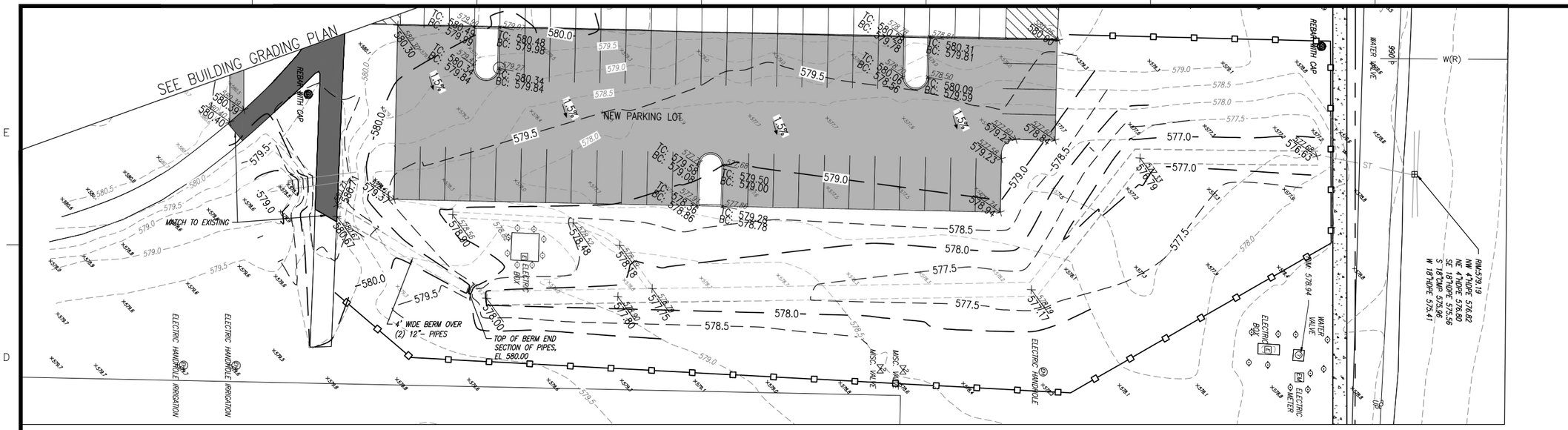
ISSUE:	
PROJECT NO:	2015.024A
DESIGNER PROJECT NO:	25-3656
CAD DWG FILE:	CP100.DWG
DRAWN BY:	AJH
CHECKED BY:	WR
SCALE:	1"=20'
COPYRIGHT:	

SHEET TITLE

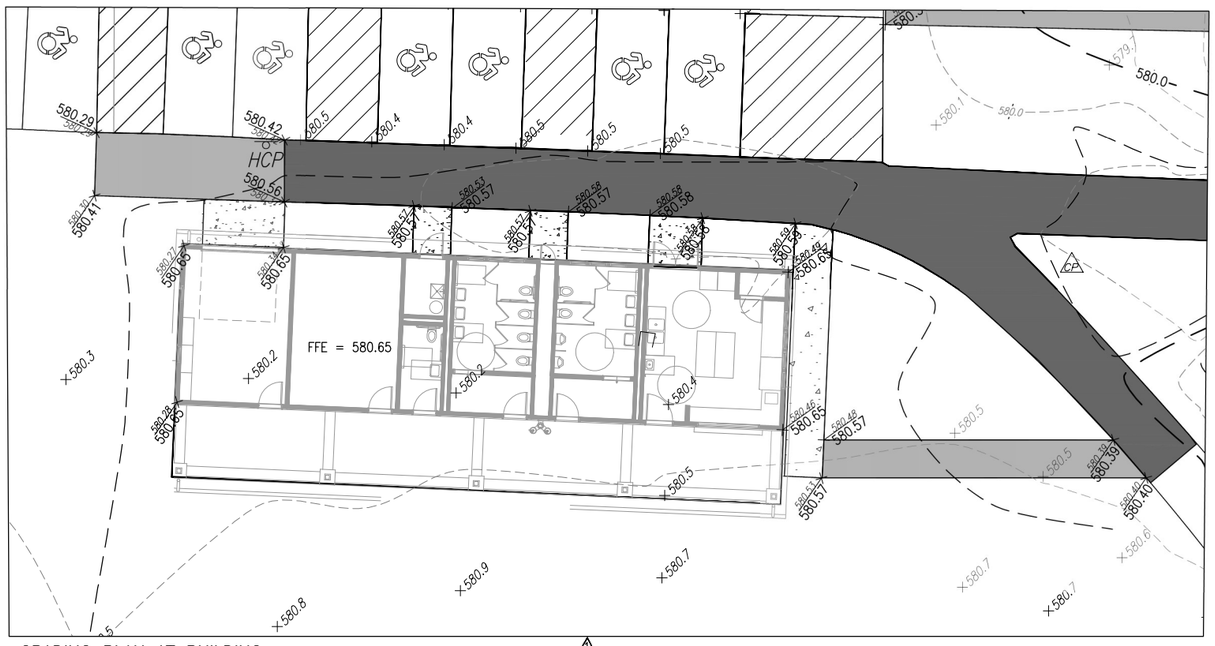
PARKING AND BUILDING LOCATION PLAN

DRAWING#

CP102



GRADING PLAN AT PARKING LOT
SCALE: 1"=20'



GRADING PLAN AT BUILDING
SCALE: 1"=10'

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TOWN OF AMHERST

NORTH FRENCH SOCCER FIELDHOUSE AND PARKING LOT

MARK	DATE	DESCRIPTION
1	9/2/2025	SPA COMMENTS
	8/18/2025	SITE PLAN SUBMISSION

ISSUE:	
PROJECT NO:	2015.024A
DESIGNER PROJECT NO:	25-3656
CAD DWG FILE:	CP100.DWG
DRAWN BY:	AJH
CHECKED BY:	WR
SCALE:	AS NOTED
COPYRIGHT:	

SHEET TITLE

GRADING PLAN

DRAWING#

GP-101

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APPENDIX C

HYDRAULIC ANALYSIS

Engineers Report
North French Road Soccer Fieldhouse
1681 N. French Road
Getzville, NY

Extreme Precipitation Tables

Northeast Regional Climate Center

Data represents point estimates calculated from partial duration series. All precipitation amounts are displayed in inches.

Metadata for Point

Smoothing	Yes
State	New York
Location	New York, United States
Latitude	43.021 degrees North
Longitude	78.712 degrees West
Elevation	170 feet
Date/Time	Mon Nov 18 2024 12:00:41 GMT-0500 (Eastern Standard Time)

Extreme Precipitation Estimates

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.27	0.41	0.51	0.66	0.83	1.01	**1yr**	0.71	0.94	1.14	1.34	1.57	1.81	2.08	**1yr**	1.60	2.00	2.41	2.90	3.37	**1yr**
2yr	0.31	0.47	0.59	0.77	0.97	1.19	**2yr**	0.84	1.09	1.34	1.59	1.87	2.17	2.43	**2yr**	1.92	2.34	2.76	3.29	3.78	**2yr**
5yr	0.36	0.56	0.70	0.94	1.20	1.48	**5yr**	1.04	1.36	1.68	1.98	2.31	2.65	2.97	**5yr**	2.34	2.86	3.35	3.95	4.50	**5yr**
10yr	0.40	0.64	0.80	1.09	1.42	1.76	**10yr**	1.23	1.62	1.99	2.35	2.71	3.08	3.46	**10yr**	2.72	3.32	3.87	4.53	5.14	**10yr**
25yr	0.48	0.76	0.97	1.34	1.78	2.21	**25yr**	1.53	2.03	2.49	2.92	3.34	3.76	4.23	**25yr**	3.33	4.07	4.70	5.45	6.13	**25yr**
50yr	0.54	0.87	1.12	1.56	2.10	2.62	**50yr**	1.81	2.41	2.96	3.45	3.92	4.38	4.93	**50yr**	3.88	4.74	5.44	6.27	7.00	**50yr**
100yr	0.62	1.00	1.29	1.83	2.49	3.12	**100yr**	2.15	2.86	3.52	4.08	4.61	5.10	5.74	**100yr**	4.52	5.52	6.29	7.21	8.01	**100yr**
200yr	0.71	1.16	1.50	2.14	2.96	3.70	**200yr**	2.55	3.41	4.17	4.82	5.41	5.95	6.70	**200yr**	5.27	6.44	7.29	8.29	9.16	**200yr**
500yr	0.85	1.40	1.82	2.65	3.71	4.65	**500yr**	3.20	4.29	5.23	6.01	6.69	7.29	8.21	**500yr**	6.45	7.89	8.86	9.98	10.94	**500yr**

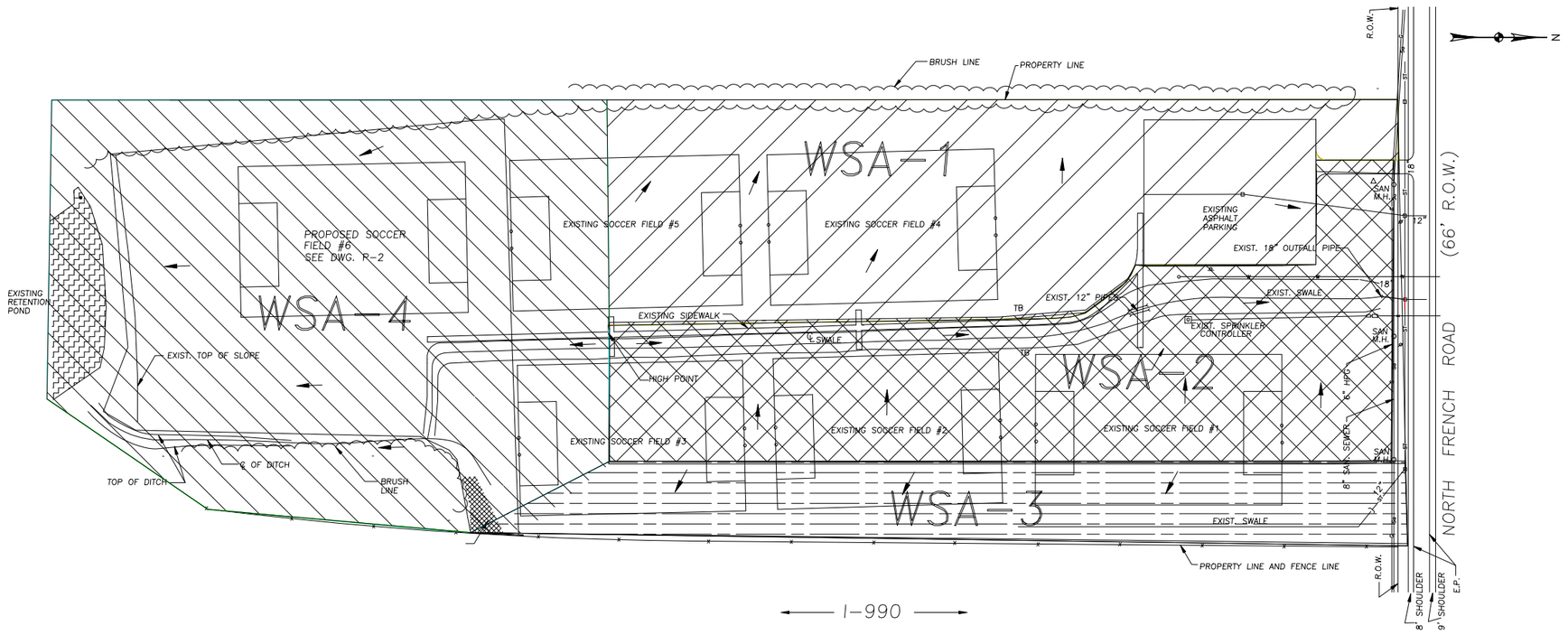
Lower Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.23	0.35	0.43	0.58	0.71	0.89	**1yr**	0.61	0.87	0.85	1.16	1.47	1.66	1.96	**1yr**	1.47	1.89	2.16	2.51	3.04	**1yr**
2yr	0.29	0.45	0.56	0.76	0.93	1.07	**2yr**	0.81	1.05	1.17	1.43	1.72	2.11	2.37	**2yr**	1.87	2.28	2.70	3.21	3.69	**2yr**
5yr	0.33	0.51	0.63	0.87	1.11	1.27	**5yr**	0.96	1.24	1.39	1.67	2.02	2.45	2.79	**5yr**	2.17	2.68	3.17	3.73	4.24	**5yr**
10yr	0.36	0.56	0.69	0.96	1.24	1.43	**10yr**	1.07	1.40	1.57	1.88	2.27	2.74	3.16	**10yr**	2.43	3.04	3.56	4.18	4.65	**10yr**
25yr	0.41	0.63	0.79	1.12	1.48	1.70	**25yr**	1.27	1.66	1.82	2.19	2.66	3.17	3.72	**25yr**	2.81	3.58	4.14	4.84	5.18	**25yr**
50yr	0.46	0.69	0.86	1.24	1.67	1.92	**50yr**	1.44	1.87	2.03	2.45	2.99	3.53	4.22	**50yr**	3.13	4.06	4.66	5.42	5.62	**50yr**
100yr	0.50	0.75	0.94	1.36	1.87	2.16	**100yr**	1.61	2.11	2.26	2.73	3.36	3.94	4.78	**100yr**	3.49	4.60	5.22	6.07	6.06	**100yr**
200yr	0.55	0.83	1.05	1.52	2.11	2.45	**200yr**	1.82	2.40	2.50	3.02	3.75	4.38	5.41	**200yr**	3.88	5.21	5.85	6.78	6.51	**200yr**
500yr	0.62	0.93	1.20	1.74	2.47	2.89	**500yr**	2.13	2.82	2.84	3.45	4.33	5.03	6.39	**500yr**	4.45	6.14	6.81	7.85	7.12	**500yr**

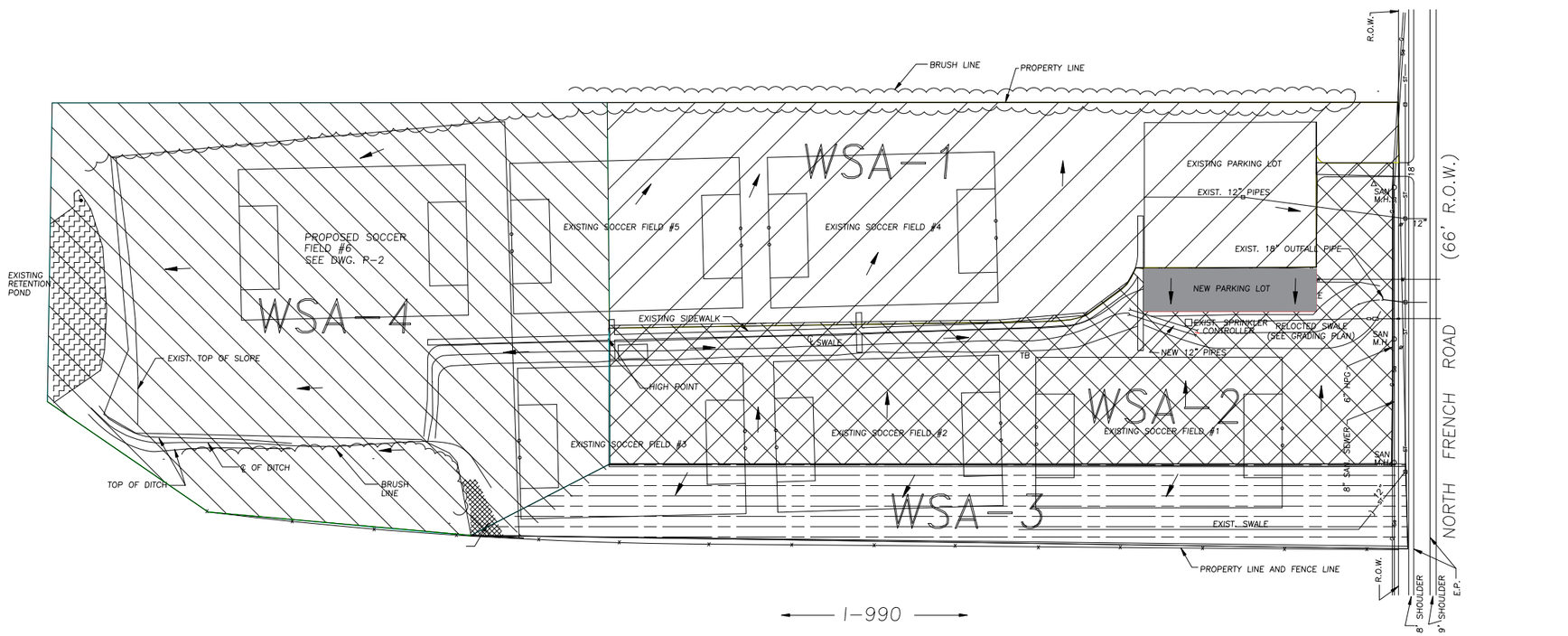
Upper Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.30	0.46	0.56	0.75	0.92	1.07	**1yr**	0.80	1.04	1.21	1.41	1.68	1.91	2.21	**1yr**	1.69	2.12	2.56	3.08	3.56	**1yr**
2yr	0.32	0.49	0.60	0.82	1.01	1.17	**2yr**	0.87	1.14	1.30	1.57	1.86	2.25	2.50	**2yr**	1.99	2.41	2.86	3.37	3.95	**2yr**
5yr	0.39	0.60	0.74	1.02	1.30	1.54	**5yr**	1.12	1.51	1.70	2.07	2.45	2.86	3.16	**5yr**	2.53	3.04	3.54	4.17	4.73	**5yr**
10yr	0.46	0.71	0.88	1.22	1.58	1.90	**10yr**	1.36	1.86	2.11	2.57	3.03	3.43	3.77	**10yr**	3.04	3.63	4.18	4.91	5.53	**10yr**
25yr	0.58	0.88	1.10	1.57	2.06	2.52	**25yr**	1.78	2.47	2.81	3.43	4.00	4.39	4.77	**25yr**	3.89	4.59	5.23	6.10	6.82	**25yr**
50yr	0.69	1.04	1.30	1.87	2.51	3.14	**50yr**	2.17	3.07	3.50	4.27	4.94	5.30	5.71	**50yr**	4.69	5.49	6.20	7.19	8.02	**50yr**
100yr	0.82	1.24	1.55	2.24	3.07	3.89	**100yr**	2.65	3.80	4.38	5.33	6.12	6.40	6.82	**100yr**	5.67	6.55	7.36	8.49	9.42	**100yr**
200yr	0.97	1.47	1.86	2.69	3.75	4.83	**200yr**	3.24	4.72	5.50	6.67	7.58	7.74	8.14	**200yr**	6.85	7.83	8.72	10.03	11.08	**200yr**
500yr	1.24	1.84	2.37	3.44	4.90	6.44	**500yr**	4.22	6.30	7.43	8.97	10.09	9.98	10.32	**500yr**	8.84	9.92	10.94	12.50	13.74	**500yr**

Powered by ACIS Northeast Regional Climate Center



EXISTING WATERSHED AREAS



PROPOSED WATERSHED AREAS

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TOWN OF AMHERST

NORTH FRENCH SOCCER FIELDHOUSE AND PARKING LOT

MARK	DATE	DESCRIPTION
⚠	9/2/2025	SPA COMMENTS
	8/18/2025	SITE PLAN SUBMISSION

ISSUE:

PROJECT NO:	2015.024A
DESIGNER PROJECT NO:	25-3656
CAD DWG FILE:	WSA.DWG
DRAWN BY:	JHB
CHECKED BY:	PKS
SCALE:	1:100
COPYRIGHT:	

SHEET TITLE

EXISTING & PROPOSED WATERSHEDS

DRAWING#

WS - 101

DiDonato Associates

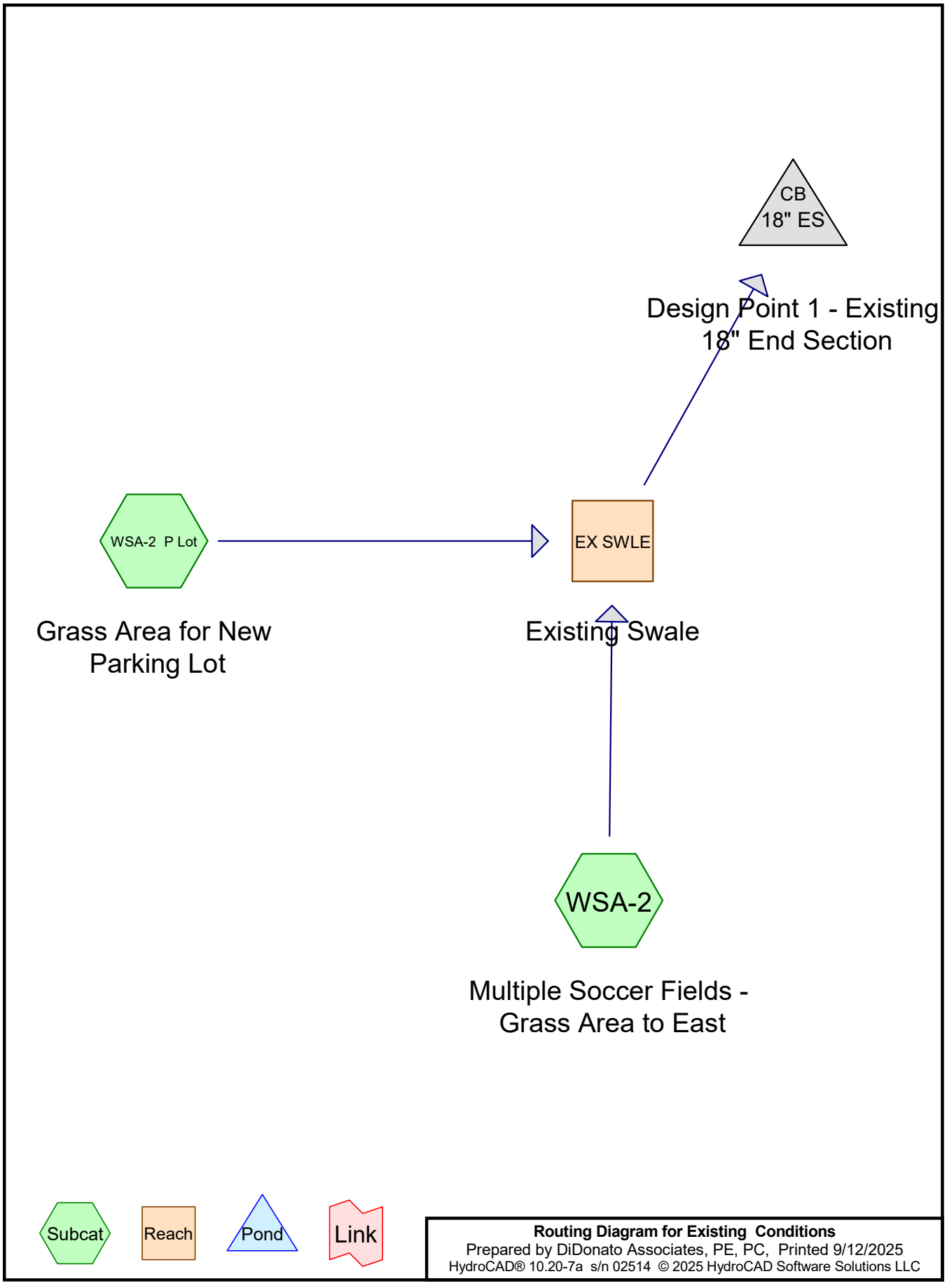
EXISTING CONDITIONS

DiDonato Associates

10 & 25 YEAR STORM

EXISTING CONDITIONS

Engineers Report
North French Road Soccer Fieldhouse
1681 N. French Road
Getzville, NY


CB
18" ES
Design Point 1 - Existing
18" End Section
WSA-2 P Lot
EX SWLE
Grass Area for New
Parking Lot
Existing Swale
WSA-2
Multiple Soccer Fields -
Grass Area to East
Subcat
Reach
Pond
Link
Routing Diagram for Existing Conditions
Prepared by DiDonato Associates, PE, PC, Printed 9/12/2025
HydroCAD® 10.20-7a s/n 02514 © 2025 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
6.564	80	>75% Grass cover, Good, HSG D (WSA-2, WSA-2 P Lot)
6.564	**80**	**TOTAL AREA**

Summary for Subcatchment WSA-2: Multiple Soccer Fields - Grass Area to East

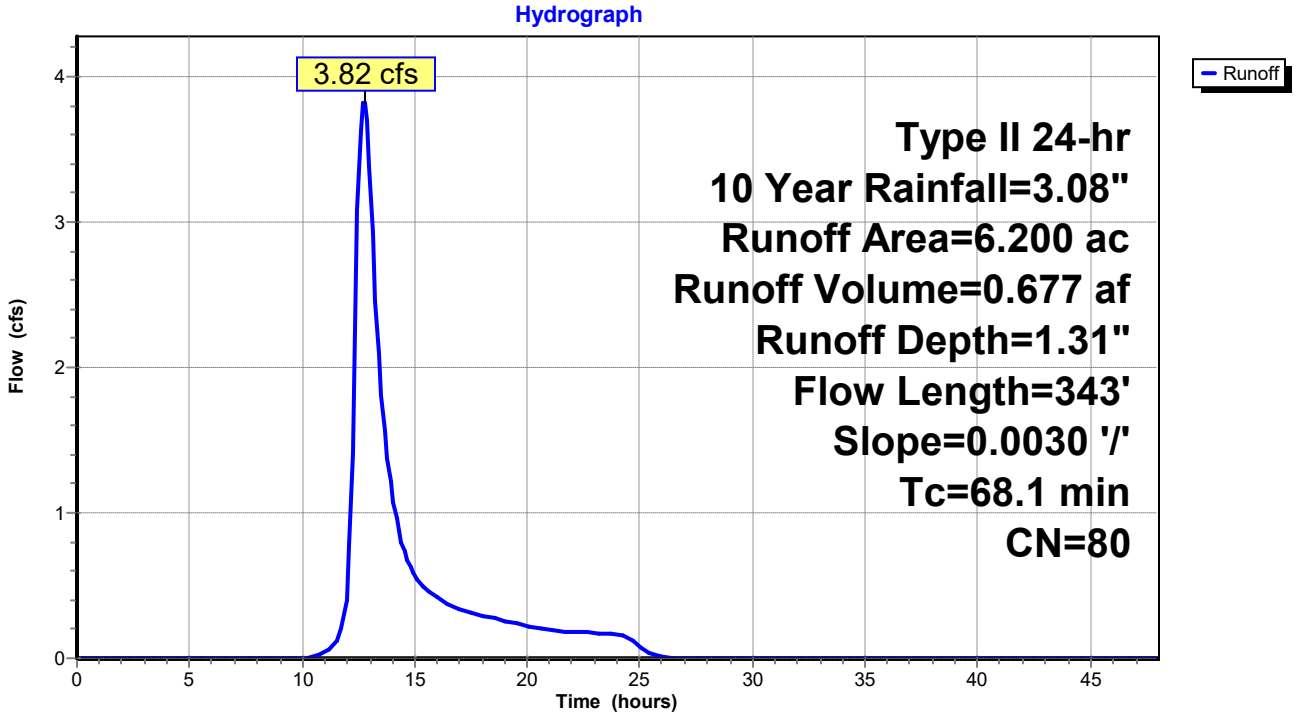
Runoff = 3.82 cfs @ 12.76 hrs, Volume= 0.677 af, Depth= 1.31"
Routed to Reach EX SWLE : Existing Swale

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-47.97 hrs, dt= 0.13 hrs
Type II 24-hr 10 Year Rainfall=3.08"

Area (ac)	CN	Description
6.200	80	>75% Grass cover, Good, HSG D
6.200		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
68.1	343	0.0030	0.08		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.17"

Subcatchment WSA-2: Multiple Soccer Fields - Grass Area to East



Summary for Subcatchment WSA-2 P Lot: Grass Area for New Parking Lot

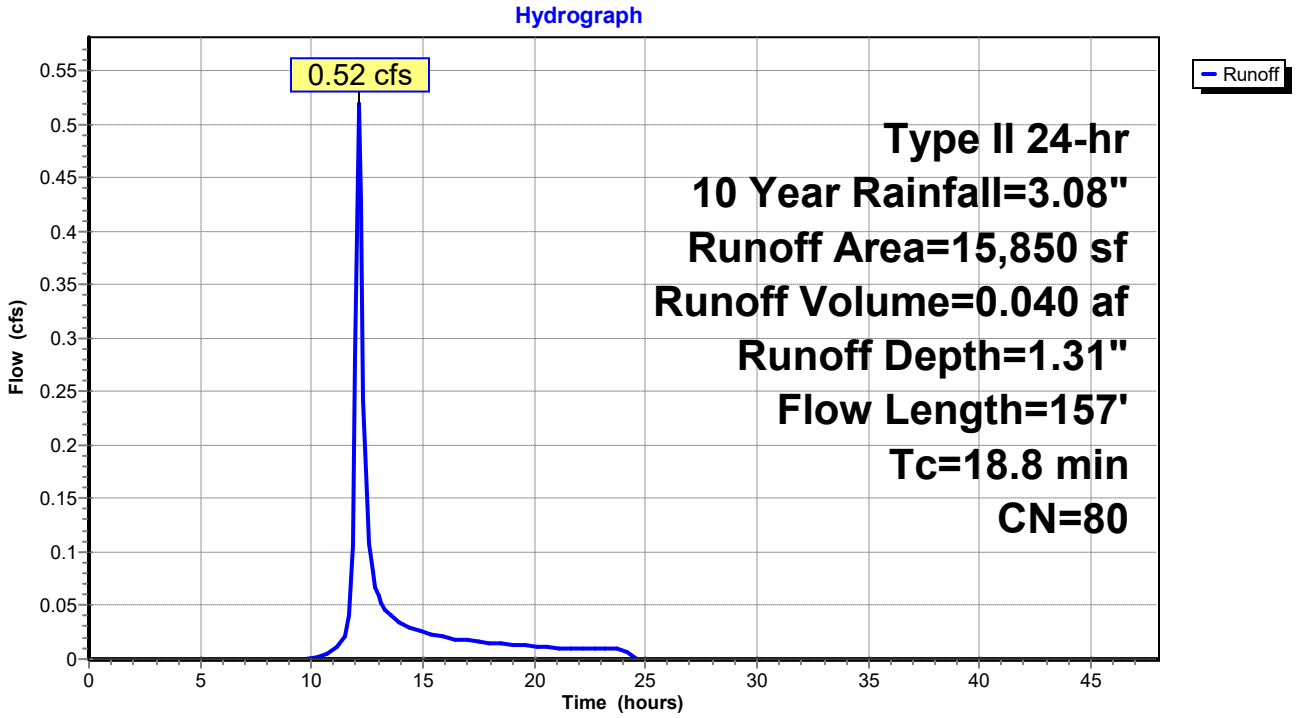
Runoff = 0.52 cfs @ 12.12 hrs, Volume= 0.040 af, Depth= 1.31"
Routed to Reach EX SWLE : Existing Swale

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-47.97 hrs, dt= 0.13 hrs
Type II 24-hr 10 Year Rainfall=3.08"

Area (sf)	CN	Description
15,850	80	>75% Grass cover, Good, HSG D
15,850		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.3	62	0.0030	0.06		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.17"
1.5	95	0.0050	1.06		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
18.8	157	Total			

Subcatchment WSA-2 P Lot: Grass Area for New Parking Lot



Summary for Reach EX SWLE: Existing Swale

Inflow Area = 6.564 ac, 0.00% Impervious, Inflow Depth = 1.31" for 10 Year event
Inflow = 3.90 cfs @ 12.75 hrs, Volume= 0.717 af
Outflow = 3.86 cfs @ 12.81 hrs, Volume= 0.717 af, Atten= 1%, Lag= 3.8 min
Routed to Pond 18" ES : Design Point 1 - Existing 18" End Section

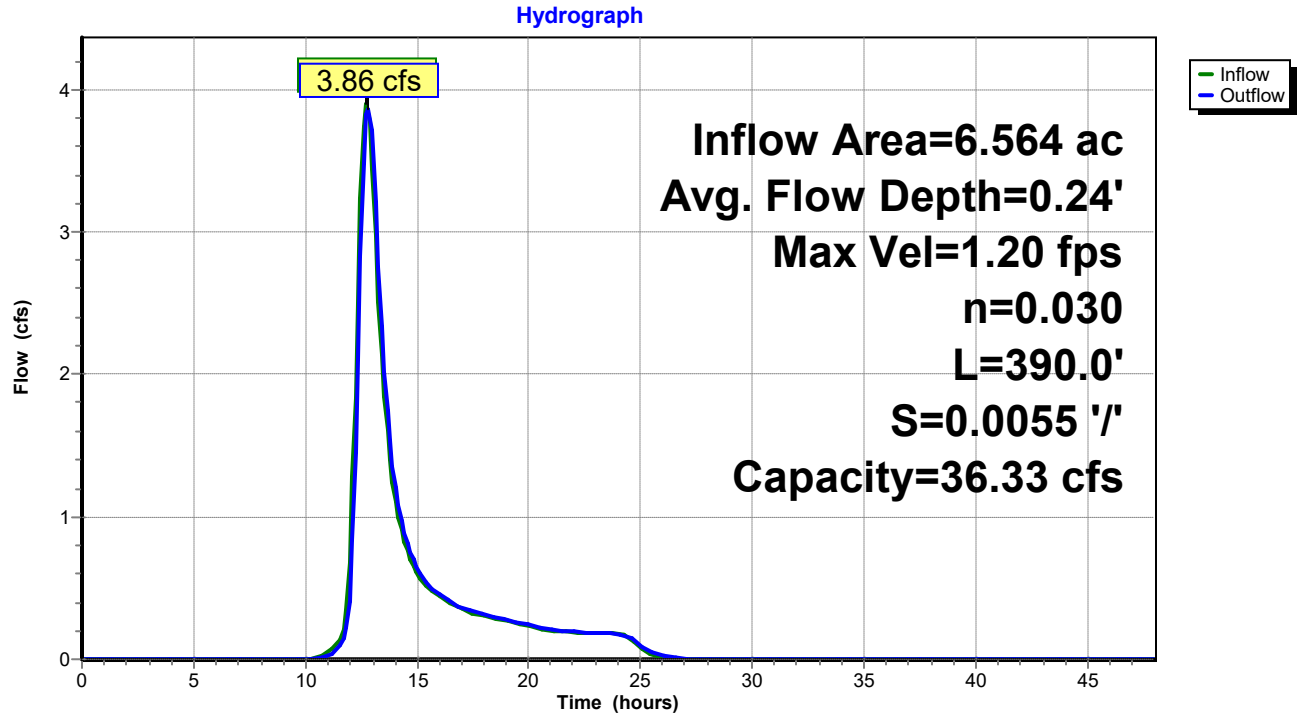
Routing by Stor-Ind method, Time Span= 0.00-47.97 hrs, dt= 0.13 hrs
Max. Velocity= 1.20 fps, Min. Travel Time= 5.4 min
Avg. Velocity = 0.42 fps, Avg. Travel Time= 15.6 min

Peak Storage= 1,251 cf @ 12.81 hrs
Average Depth at Peak Storage= 0.24' , Surface Width= 17.10'
Bank-Full Depth= 0.75' Flow Area= 15.9 sf, Capacity= 36.33 cfs

10.00' x 0.75' deep channel, n= 0.030 Short grass
Side Slope Z-value= 15.0 '/' Top Width= 32.50'
Length= 390.0' Slope= 0.0055 '/'
Inlet Invert= 578.10', Outlet Invert= 575.96'

‡

Reach EX SWLE: Existing Swale



Summary for Pond 18" ES: Design Point 1 - Existing 18" End Section

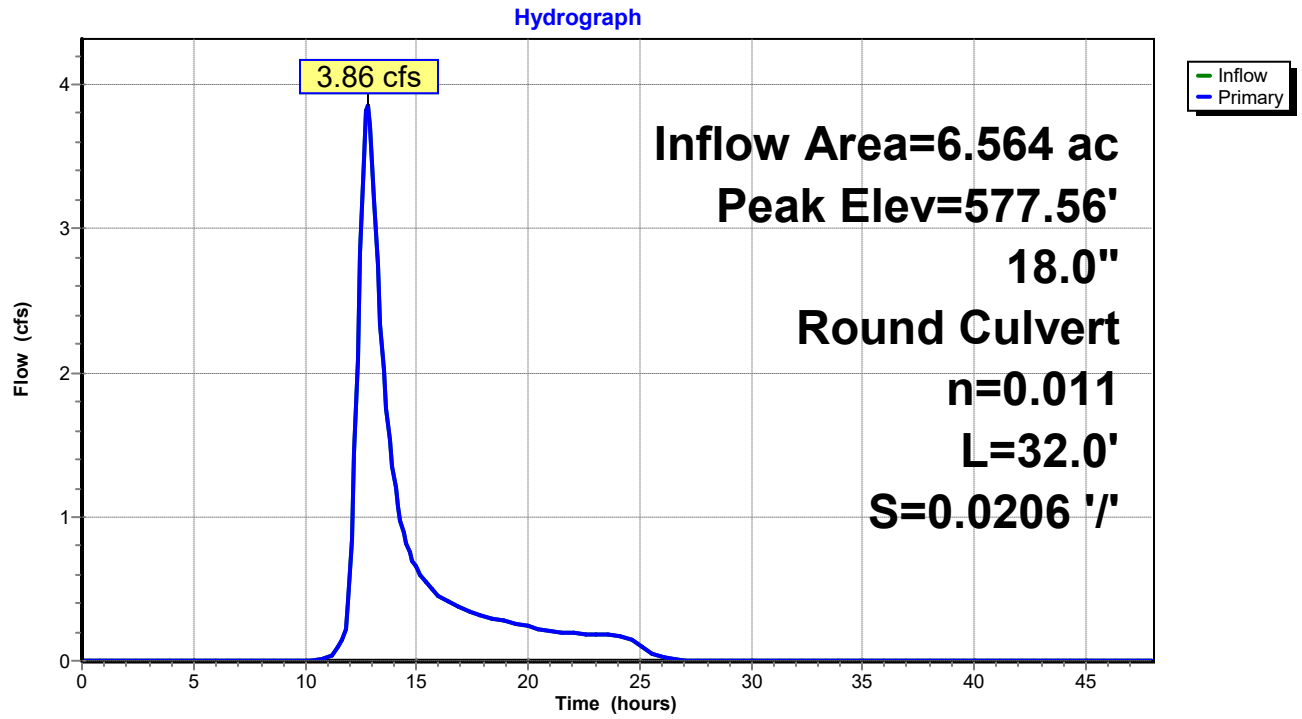
Inflow Area = 6.564 ac, 0.00% Impervious, Inflow Depth = 1.31" for 10 Year event
Inflow = 3.86 cfs @ 12.81 hrs, Volume= 0.717 af
Outflow = 3.86 cfs @ 12.81 hrs, Volume= 0.717 af, Atten= 0%, Lag= 0.0 min
Primary = 3.86 cfs @ 12.81 hrs, Volume= 0.717 af

Routing by Stor-Ind method, Time Span= 0.00-47.97 hrs, dt= 0.13 hrs
Peak Elev= 577.56' @ 12.81 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	576.62'	**18.0" Round Culvert** L= 32.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 576.62' / 575.96' S= 0.0206 '/' Cc= 0.900 n= 0.011, Flow Area= 1.77 sf

Primary OutFlow Max=3.83 cfs @ 12.81 hrs HW=577.56' (Free Discharge)
1=Culvert (Inlet Controls 3.83 cfs @ 3.30 fps)

Pond 18" ES: Design Point 1 - Existing 18" End Section



Summary for Subcatchment WSA-2: Multiple Soccer Fields - Grass Area to East

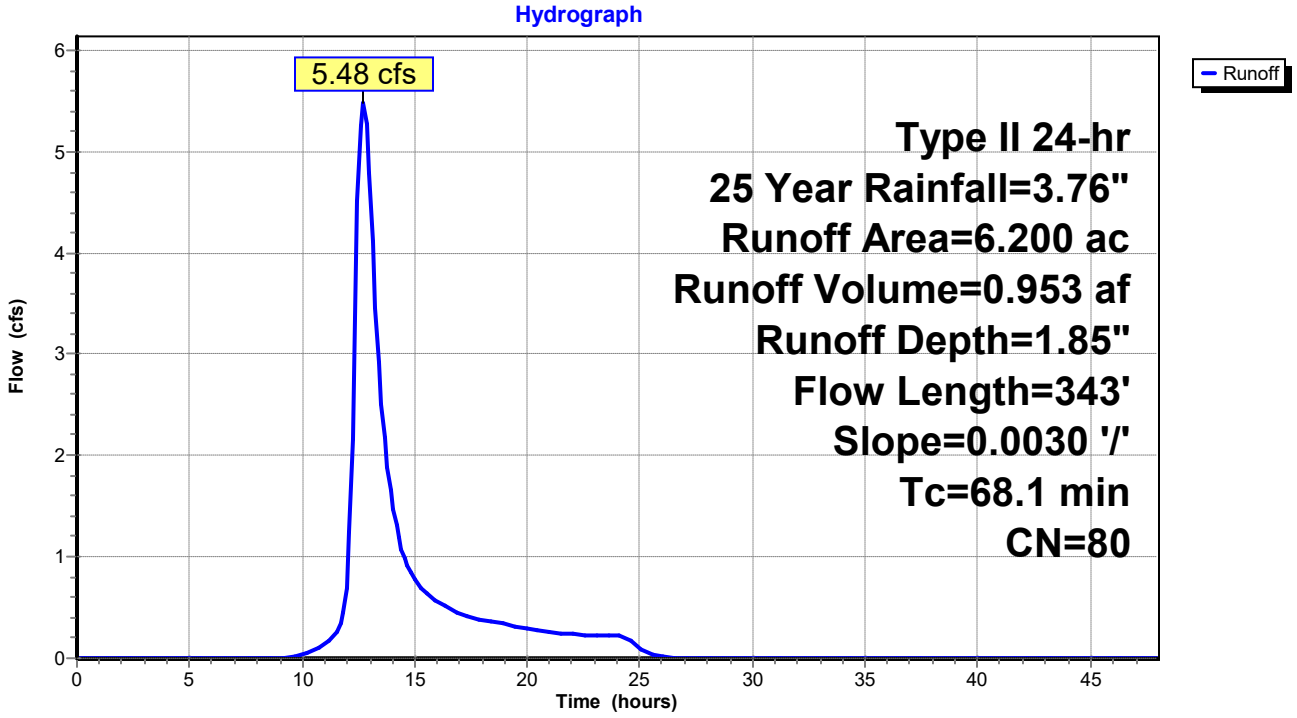
Runoff = 5.48 cfs @ 12.74 hrs, Volume= 0.953 af, Depth= 1.85"
Routed to Reach EX SWLE : Existing Swale

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-47.97 hrs, dt= 0.13 hrs
Type II 24-hr 25 Year Rainfall=3.76"

Area (ac)	CN	Description
6.200	80	>75% Grass cover, Good, HSG D
6.200		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
68.1	343	0.0030	0.08		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.17"

Subcatchment WSA-2: Multiple Soccer Fields - Grass Area to East



Summary for Subcatchment WSA-2 P Lot: Grass Area for New Parking Lot

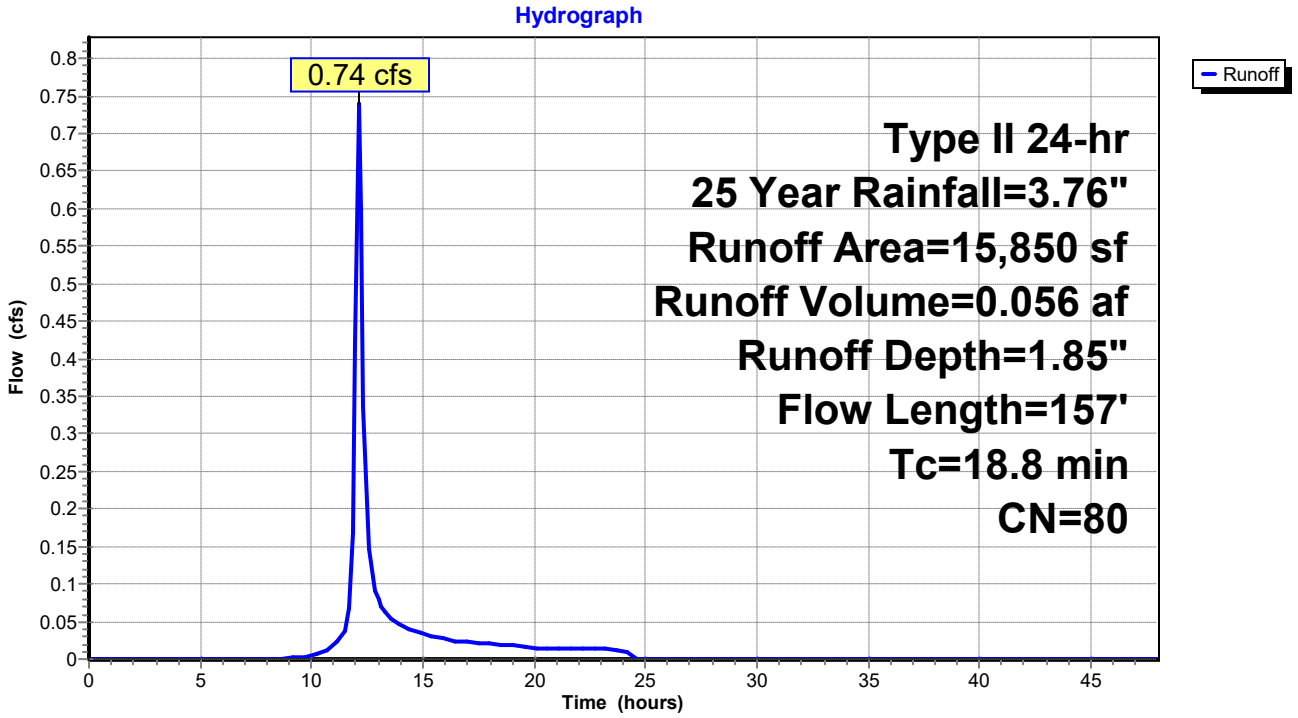
Runoff = 0.74 cfs @ 12.12 hrs, Volume= 0.056 af, Depth= 1.85"
Routed to Reach EX SWLE : Existing Swale

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-47.97 hrs, dt= 0.13 hrs
Type II 24-hr 25 Year Rainfall=3.76"

Area (sf)	CN	Description
15,850	80	>75% Grass cover, Good, HSG D
15,850		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.3	62	0.0030	0.06		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.17"
1.5	95	0.0050	1.06		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
18.8	157	Total			

Subcatchment WSA-2 P Lot: Grass Area for New Parking Lot



Summary for Reach EX SWLE: Existing Swale

Inflow Area = 6.564 ac, 0.00% Impervious, Inflow Depth = 1.85" for 25 Year event
Inflow = 5.59 cfs @ 12.73 hrs, Volume= 1.009 af
Outflow = 5.56 cfs @ 12.79 hrs, Volume= 1.009 af, Atten= 1%, Lag= 3.5 min
Routed to Pond 18" ES : Design Point 1 - Existing 18" End Section

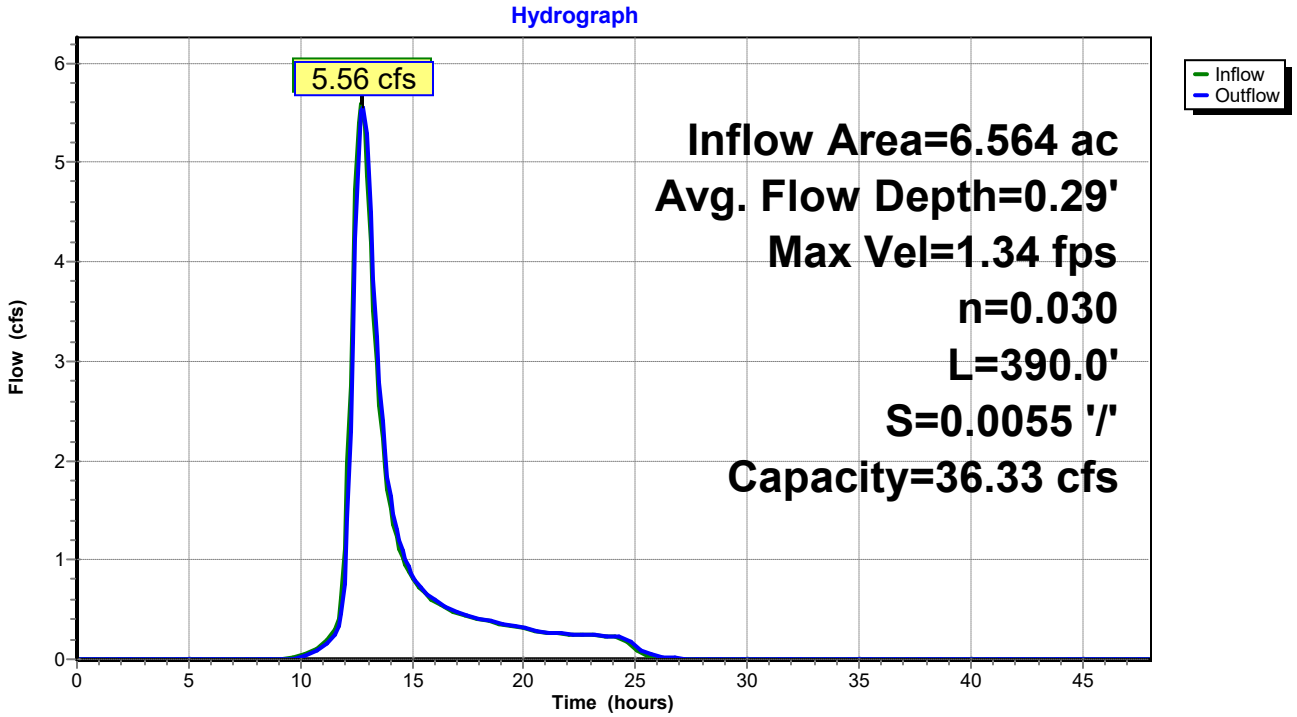
Routing by Stor-Ind method, Time Span= 0.00-47.97 hrs, dt= 0.13 hrs
Max. Velocity= 1.34 fps, Min. Travel Time= 4.8 min
Avg. Velocity = 0.45 fps, Avg. Travel Time= 14.3 min

Peak Storage= 1,613 cf @ 12.79 hrs
Average Depth at Peak Storage= 0.29' , Surface Width= 18.66'
Bank-Full Depth= 0.75' Flow Area= 15.9 sf, Capacity= 36.33 cfs

10.00' x 0.75' deep channel, n= 0.030 Short grass
Side Slope Z-value= 15.0 '/' Top Width= 32.50'
Length= 390.0' Slope= 0.0055 '/'
Inlet Invert= 578.10', Outlet Invert= 575.96'

‡

Reach EX SWLE: Existing Swale



Summary for Pond 18" ES: Design Point 1 - Existing 18" End Section

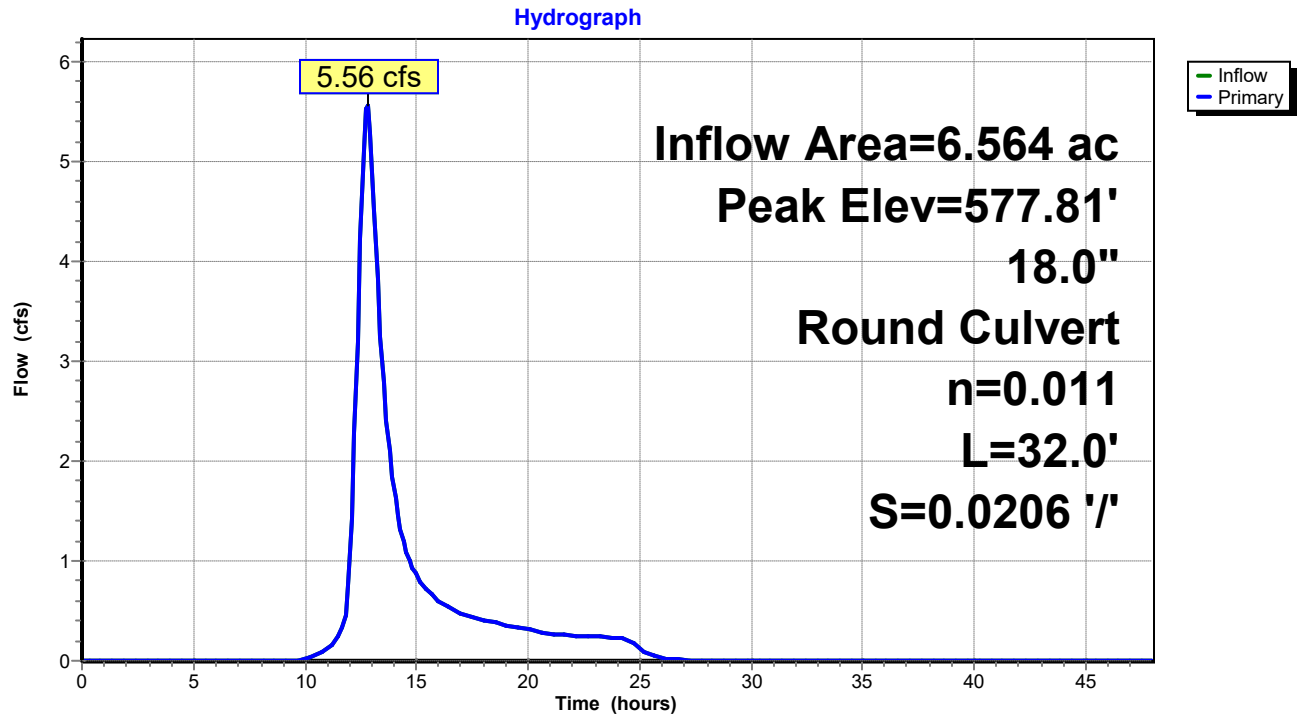
Inflow Area = 6.564 ac, 0.00% Impervious, Inflow Depth = 1.85" for 25 Year event
Inflow = 5.56 cfs @ 12.79 hrs, Volume= 1.009 af
Outflow = 5.56 cfs @ 12.79 hrs, Volume= 1.009 af, Atten= 0%, Lag= 0.0 min
Primary = 5.56 cfs @ 12.79 hrs, Volume= 1.009 af

Routing by Stor-Ind method, Time Span= 0.00-47.97 hrs, dt= 0.13 hrs
Peak Elev= 577.81' @ 12.79 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	576.62'	**18.0" Round Culvert** L= 32.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 576.62' / 575.96' S= 0.0206 '/' Cc= 0.900 n= 0.011, Flow Area= 1.77 sf

Primary OutFlow Max=5.50 cfs @ 12.79 hrs HW=577.80' (Free Discharge)
1=Culvert (Inlet Controls 5.50 cfs @ 3.70 fps)

Pond 18" ES: Design Point 1 - Existing 18" End Section



DiDonato Associates

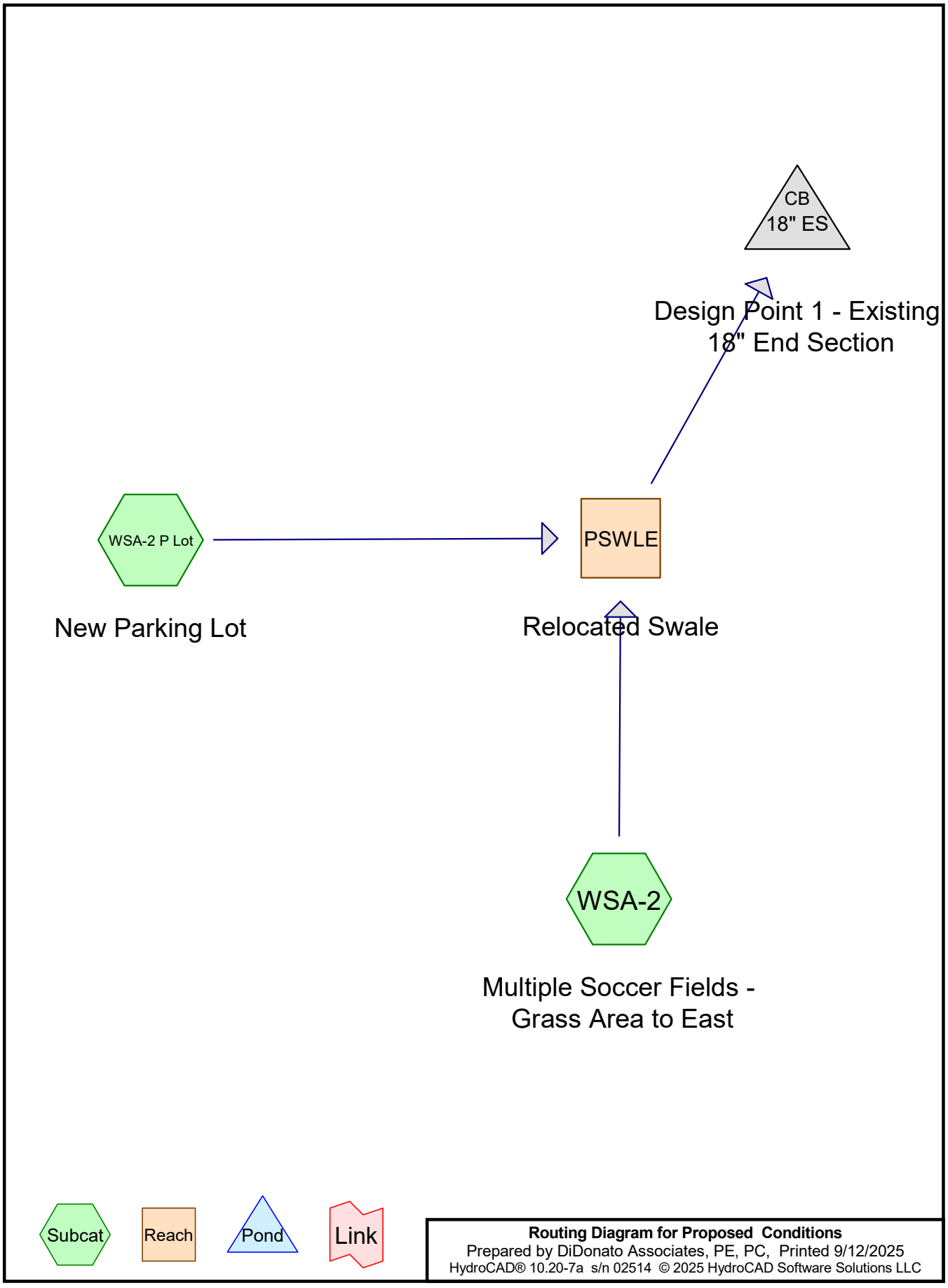
PROPOSED CONDITIONS

DiDonato Associates

10 & 25 YEAR STORM

PROPOSED CONDITIONS

Engineers Report
North French Road Soccer Fieldhouse
1681 N. French Road
Getzville, NY



Routing Diagram for Proposed Conditions
Prepared by DiDonato Associates, PE, PC, Printed 9/12/2025

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
6.200	80	>75% Grass cover, Good, HSG D (WSA-2)
0.364	98	Paved parking, HSG D (WSA-2 P Lot)
6.564	**81**	**TOTAL AREA**

Summary for Subcatchment WSA-2: Multiple Soccer Fields - Grass Area to East

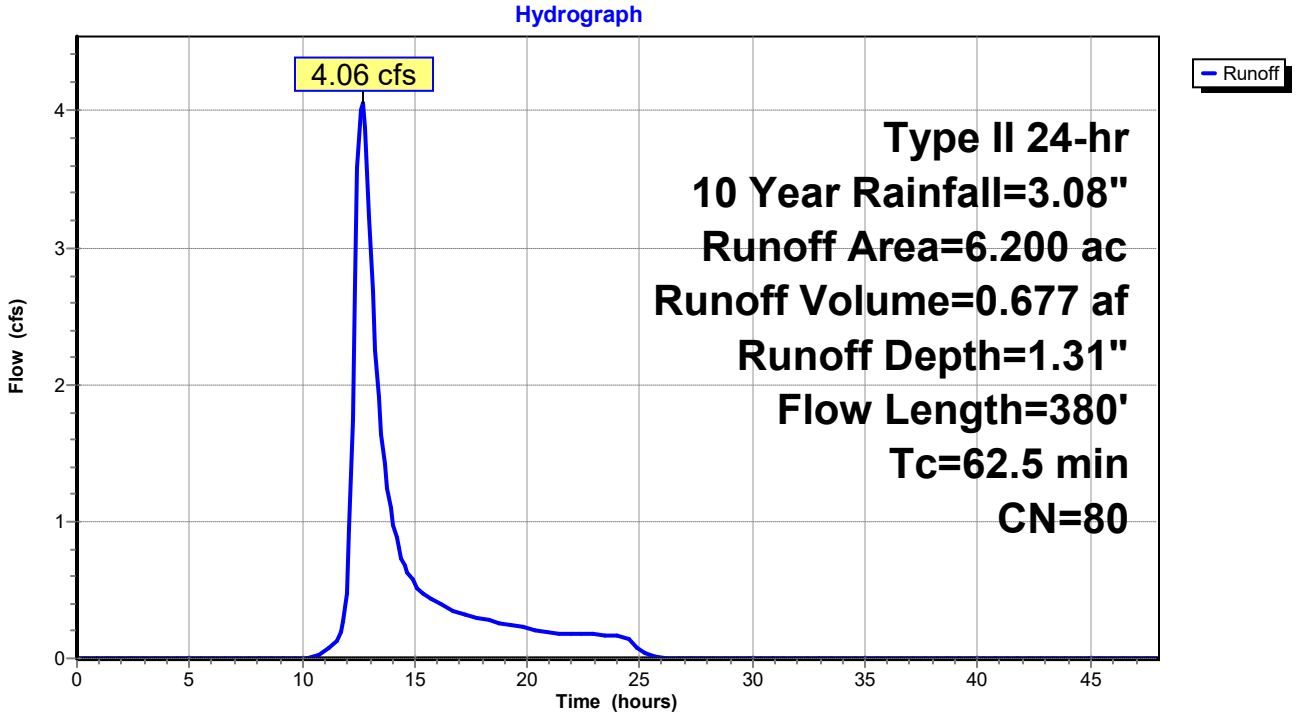
Runoff = 4.06 cfs @ 12.68 hrs, Volume= 0.677 af, Depth= 1.31"
Routed to Reach PSWLE : Relocated Swale

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-47.97 hrs, dt= 0.13 hrs
Type II 24-hr 10 Year Rainfall=3.08"

Area (ac)	CN	Description
6.200	80	>75% Grass cover, Good, HSG D
6.200		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
62.2	306	0.0030	0.08		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.17"
0.3	74	0.0050	3.79	2.98	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.011
62.5	380	Total			

Subcatchment WSA-2: Multiple Soccer Fields - Grass Area to East



Summary for Subcatchment WSA-2 P Lot: New Parking Lot

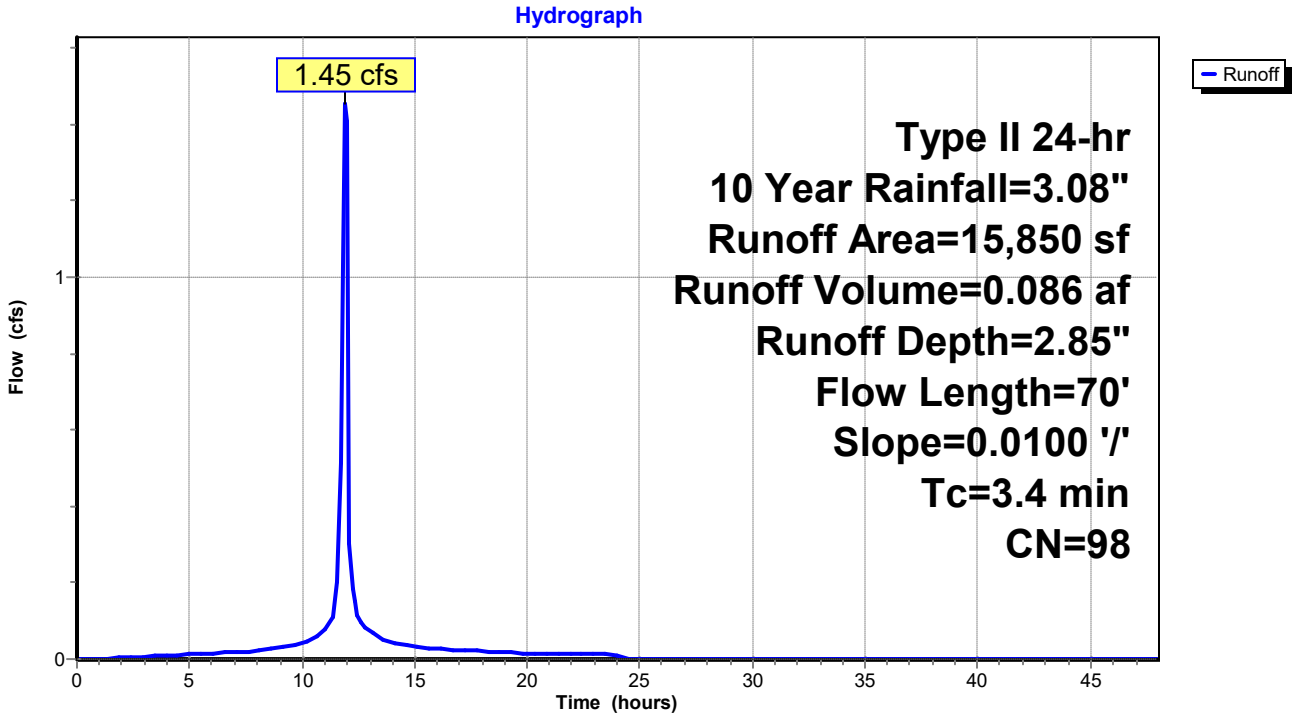
Runoff = 1.45 cfs @ 11.93 hrs, Volume= 0.086 af, Depth= 2.85"
Routed to Reach PSWLE : Relocated Swale

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-47.97 hrs, dt= 0.13 hrs
Type II 24-hr 10 Year Rainfall=3.08"

Area (sf)	CN	Description
15,850	98	Paved parking, HSG D
15,850		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.1	8	0.0100	0.06		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.17"
1.3	62	0.0100	0.78		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.17"
3.4	70	Total			

Subcatchment WSA-2 P Lot: New Parking Lot



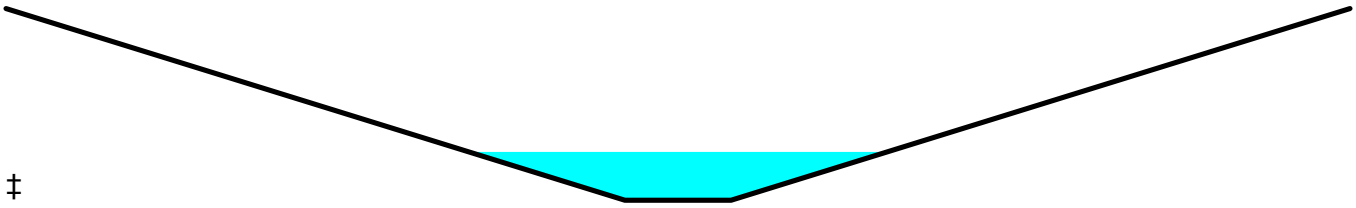
Summary for Reach PSWLE: Relocated Swale

Inflow Area = 6.564 ac, 5.54% Impervious, Inflow Depth = 1.40" for 10 Year event
Inflow = 4.15 cfs @ 12.68 hrs, Volume= 0.763 af
Outflow = 4.13 cfs @ 12.73 hrs, Volume= 0.763 af, Atten= 0%, Lag= 3.2 min
Routed to Pond 18" ES : Design Point 1 - Existing 18" End Section

Routing by Stor-Ind method, Time Span= 0.00-47.97 hrs, dt= 0.13 hrs
Max. Velocity= 1.28 fps, Min. Travel Time= 3.8 min
Avg. Velocity = 0.46 fps, Avg. Travel Time= 10.5 min

Peak Storage= 938 cf @ 12.73 hrs
Average Depth at Peak Storage= 0.26' , Surface Width= 19.68'
Bank-Full Depth= 1.04' Flow Area= 35.5 sf, Capacity= 102.68 cfs

5.00' x 1.04' deep channel, n= 0.030 Short grass
Side Slope Z-value= 28.0 '/' Top Width= 63.24'
Length= 290.0' Slope= 0.0074 '/'
Inlet Invert= 578.10', Outlet Invert= 575.96'



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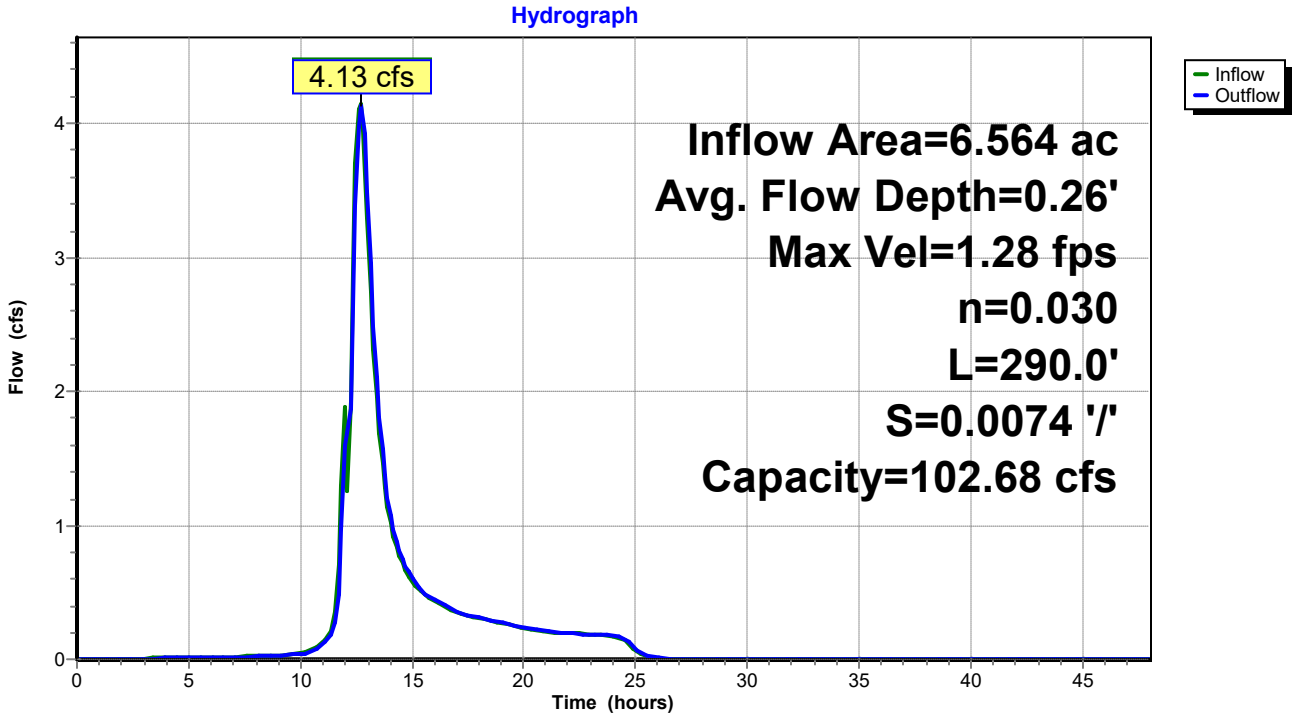
Reach PSWLE: Relocated Swale



Summary for Pond 18" ES: Design Point 1 - Existing 18" End Section

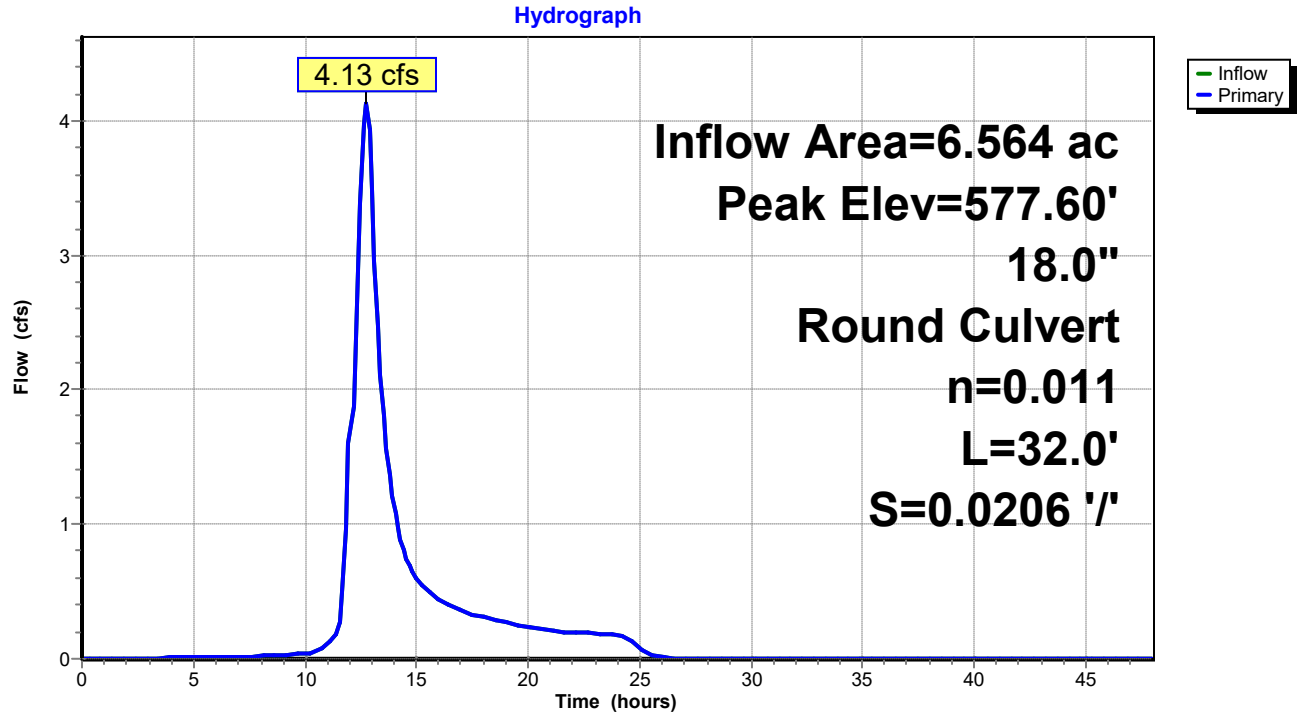
Inflow Area = 6.564 ac, 5.54% Impervious, Inflow Depth = 1.40" for 10 Year event
Inflow = 4.13 cfs @ 12.73 hrs, Volume= 0.763 af
Outflow = 4.13 cfs @ 12.73 hrs, Volume= 0.763 af, Atten= 0%, Lag= 0.0 min
Primary = 4.13 cfs @ 12.73 hrs, Volume= 0.763 af

Routing by Stor-Ind method, Time Span= 0.00-47.97 hrs, dt= 0.13 hrs
Peak Elev= 577.60' @ 12.73 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	576.62'	**18.0" Round Culvert** L= 32.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 576.62' / 575.96' S= 0.0206 '/' Cc= 0.900 n= 0.011, Flow Area= 1.77 sf

Primary OutFlow Max=4.12 cfs @ 12.73 hrs HW=577.60' (Free Discharge)
1=Culvert (Inlet Controls 4.12 cfs @ 3.37 fps)

Pond 18" ES: Design Point 1 - Existing 18" End Section



Summary for Subcatchment WSA-2: Multiple Soccer Fields - Grass Area to East

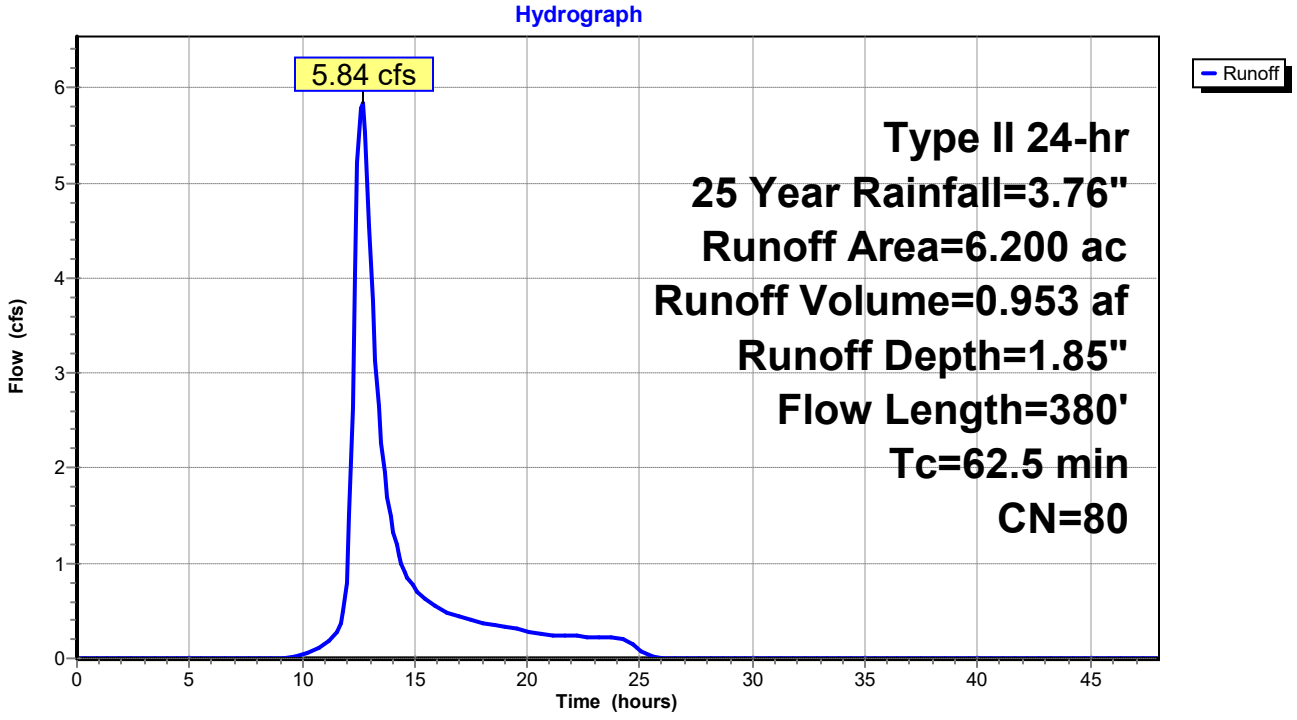
Runoff = 5.84 cfs @ 12.67 hrs, Volume= 0.953 af, Depth= 1.85"
Routed to Reach PSWLE : Relocated Swale

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-47.97 hrs, dt= 0.13 hrs
Type II 24-hr 25 Year Rainfall=3.76"

Area (ac)	CN	Description
6.200	80	>75% Grass cover, Good, HSG D
6.200		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
62.2	306	0.0030	0.08		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.17"
0.3	74	0.0050	3.79	2.98	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.011
62.5	380	Total			

Subcatchment WSA-2: Multiple Soccer Fields - Grass Area to East



Summary for Subcatchment WSA-2 P Lot: New Parking Lot

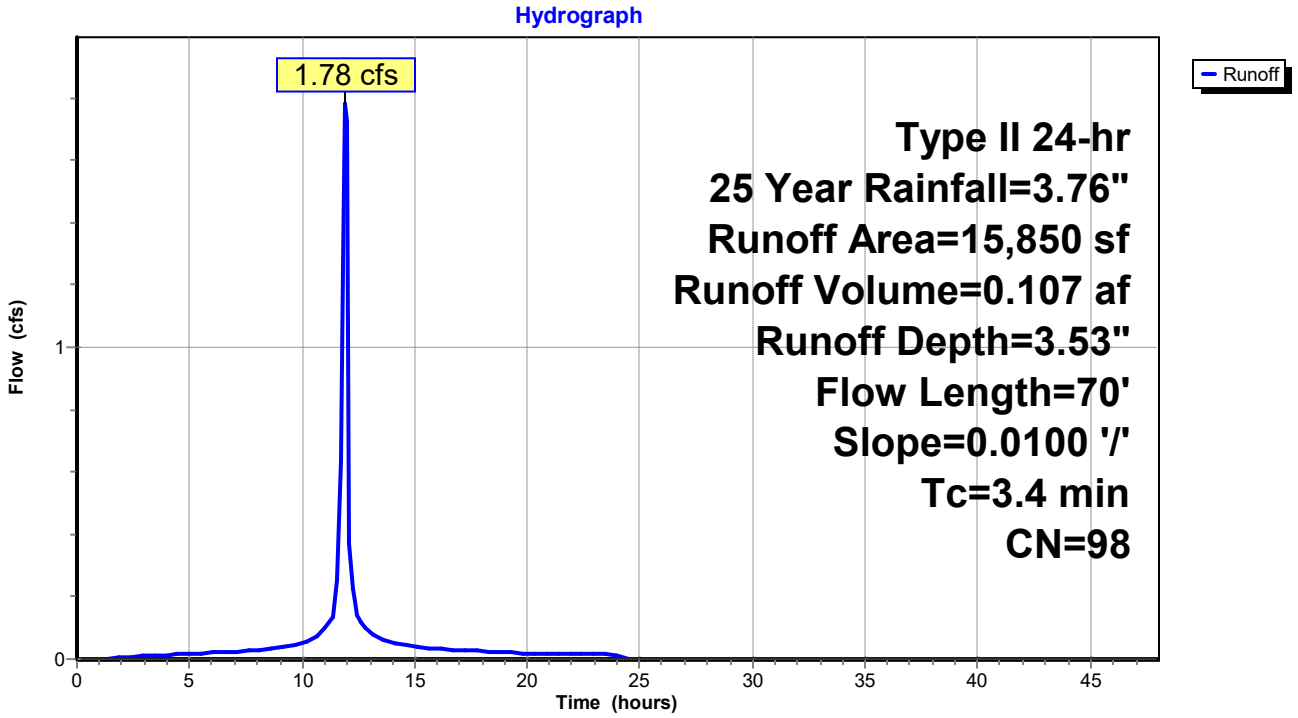
Runoff = 1.78 cfs @ 11.93 hrs, Volume= 0.107 af, Depth= 3.53"
Routed to Reach PSWLE : Relocated Swale

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-47.97 hrs, dt= 0.13 hrs
Type II 24-hr 25 Year Rainfall=3.76"

Area (sf)	CN	Description
15,850	98	Paved parking, HSG D
15,850		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.1	8	0.0100	0.06		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.17"
1.3	62	0.0100	0.78		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.17"
3.4	70	Total			

Subcatchment WSA-2 P Lot: New Parking Lot



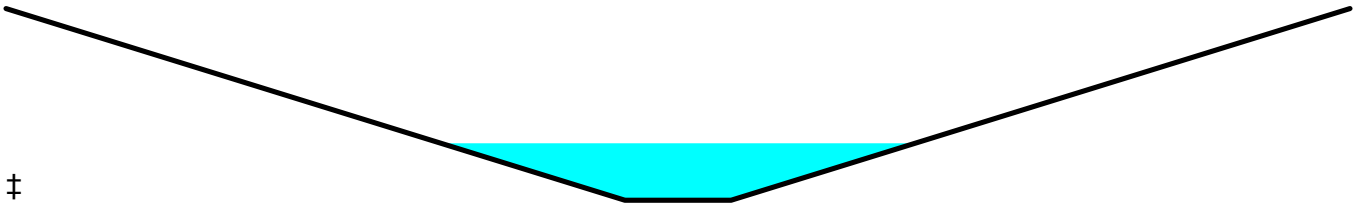
Summary for Reach PSWLE: Relocated Swale

Inflow Area = 6.564 ac, 5.54% Impervious, Inflow Depth = 1.94" for 25 Year event
Inflow = 5.95 cfs @ 12.67 hrs, Volume= 1.060 af
Outflow = 5.91 cfs @ 12.71 hrs, Volume= 1.060 af, Atten= 1%, Lag= 2.8 min
Routed to Pond 18" ES : Design Point 1 - Existing 18" End Section

Routing by Stor-Ind method, Time Span= 0.00-47.97 hrs, dt= 0.13 hrs
Max. Velocity= 1.40 fps, Min. Travel Time= 3.4 min
Avg. Velocity = 0.50 fps, Avg. Travel Time= 9.7 min

Peak Storage= 1,223 cf @ 12.71 hrs
Average Depth at Peak Storage= 0.31' , Surface Width= 22.30'
Bank-Full Depth= 1.04' Flow Area= 35.5 sf, Capacity= 102.68 cfs

5.00' x 1.04' deep channel, n= 0.030 Short grass
Side Slope Z-value= 28.0 '/' Top Width= 63.24'
Length= 290.0' Slope= 0.0074 '/'
Inlet Invert= 578.10', Outlet Invert= 575.96'



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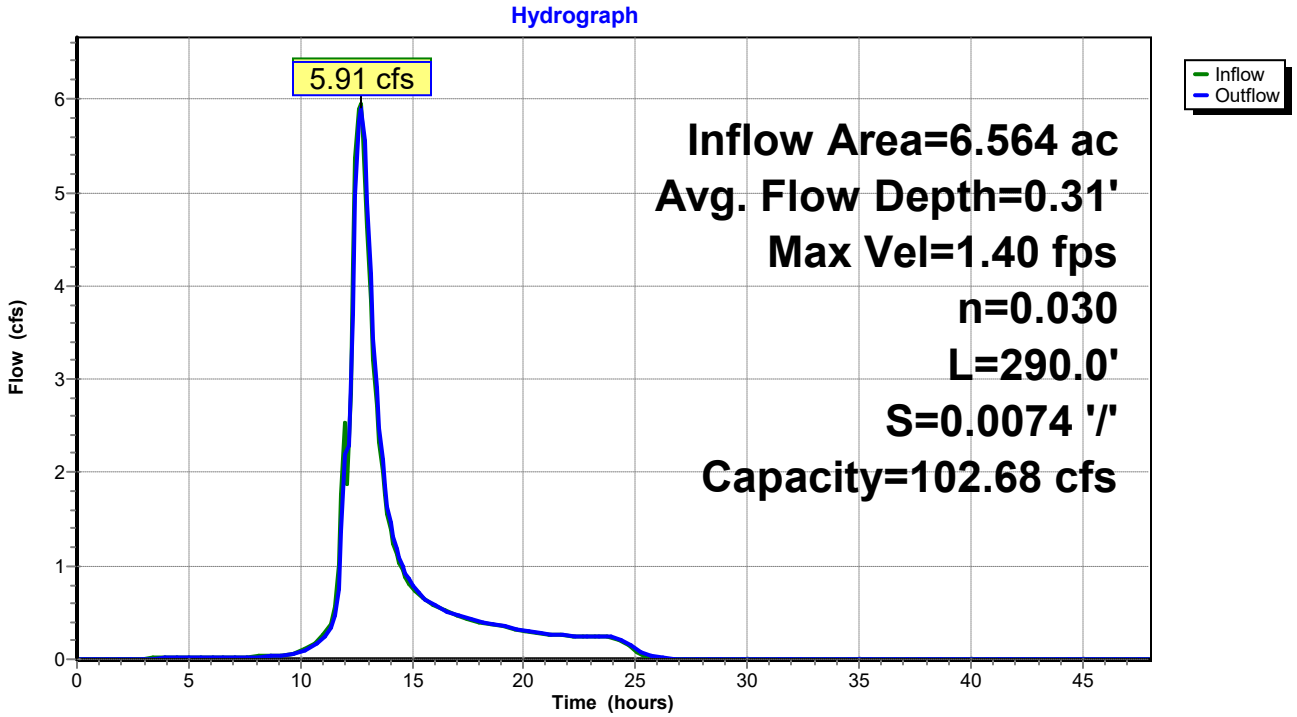
Reach PSWLE: Relocated Swale



Summary for Pond 18" ES: Design Point 1 - Existing 18" End Section

Inflow Area = 6.564 ac, 5.54% Impervious, Inflow Depth = 1.94" for 25 Year event
Inflow = 5.91 cfs @ 12.71 hrs, Volume= 1.060 af
Outflow = 5.91 cfs @ 12.71 hrs, Volume= 1.060 af, Atten= 0%, Lag= 0.0 min
Primary = 5.91 cfs @ 12.71 hrs, Volume= 1.060 af

Routing by Stor-Ind method, Time Span= 0.00-47.97 hrs, dt= 0.13 hrs
Peak Elev= 577.86' @ 12.71 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	576.62'	**18.0" Round Culvert** L= 32.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 576.62' / 575.96' S= 0.0206 '/' Cc= 0.900 n= 0.011, Flow Area= 1.77 sf

Primary OutFlow Max=5.87 cfs @ 12.71 hrs HW=577.85' (Free Discharge)
1=Culvert (Inlet Controls 5.87 cfs @ 3.78 fps)

Pond 18" ES: Design Point 1 - Existing 18" End Section