

DRAINAGE STATEMENT

For

Jay Ventures LLC

Proposed Single-Family Dwelling

**Block 2402, Lots 15, 16 & 17
154 Millerick Avenue
Township of Lawrence, Mercer County, New Jersey**

Prepared by:



**1904 Main Street
Lake Como, NJ 07719**

A handwritten signature in dark ink, appearing to read 'J. Sewald', is written over a horizontal line.

**Joshua M. Sewald, PE, PP
NJ Professional Engineer License #52908**

**June 2026
DEC # 5945-26-01149**

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- NRCS Web Soil Survey
- 2-yr, 10-yr, 100-yr Storm Drainage Calculations (Current & Proposed)
- Drainage Area Maps

I. Drainage Summary

This Drainage Statement has been prepared to define and analyze the stormwater drainage conditions that would occur as a result of the proposed single-family dwelling on the property identified as Block 2402, Lots 15, 16 & 17, as shown on the Township of Lawrence Tax Map Sheet No. 24, located in the Township of Lawrence, Mercer County, New Jersey. The subject site consists of 0.69 acres (30,000 SF) and is located at 154 Millerick Avenue.

Under the existing conditions the site is developed with one (1) single-family dwelling with an associated garage. The proposed project consists of replacing the existing garage & driveway with a second single-family dwelling. Additional improvements include driveways, utilities, and other associated site amenities. As a result of the proposed development, the amount of impervious surface area will be decreased by approximately 880 SF.

The project consists of less than one (1) acre of disturbance, and will not increase the impervious coverage or motor vehicle surfaces on-site by $\frac{1}{4}$ acre or more. Therefore, the proposed project is not classified as a “major development” as defined in NJAC 7:8. Since the proposed development decreases the existing impervious surfaces on site, the proposed project is not subject to NJAC 7:8 runoff rate reduction requirements. It should be noted that due to the decrease in impervious coverage on site, the peak runoff rates will be reduced under the proposed conditions. Existing and proposed runoff rates to each study area are summarized below for each storm event:

	Study Area North		Study Area South	
Storm Event	Existing	Proposed	Existing	Proposed
2-yr current	0.10	0.07	0.87	0.81
2-yr proposed	0.15	0.12	1.06	1.00
10-yr current	0.29	0.26	1.58	1.49
10-yr proposed	0.39	0.36	1.92	1.82
100-yr current	0.78	0.75	3.22	3.08
100-yr proposed	1.22	1.16	4.61	4.42

The stormwater runoff for the proposed development has been designed to maintain existing runoff patterns which contain two drainage areas. Stormwater runoff in the northerly portion of the site drains via overland flow to the north. Stormwater runoff in the southerly portion of the site drains via overland flow to Millerick Avenue.

II. Conclusion

The proposed project has been designed to ensure safe and efficient control of the stormwater runoff in a manner that will not adversely impact the existing drainage patterns, adjacent roadways, or adjacent parcels. Furthermore, the project decreases the impervious coverage on-site and thereby does not increase the peak stormwater runoff rates from the parcel. We anticipate that the subject project will not significantly impact the existing drainage infrastructure located within the surrounding area.

APPENDIX

NRCS WEB SOIL SURVEY



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 **Mercer County, New Jersey**



May 18, 2026

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.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

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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

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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.

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Soil Map



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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 1:24,000.

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: Mercer County, New Jersey

Survey Area Data: Version 21, Aug 28, 2025

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

Date(s) aerial images were photographed: Jun 4, 2022—Jul 22, 2022

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
MbpB	Matapeake loam, 2 to 5 percent slopes	0.8	100.0%
Totals for Area of Interest		0.8	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.

Mercer County, New Jersey

MbpB—Matapeake loam, 2 to 5 percent slopes

Map Unit Setting

National map unit symbol: 4jng
Landscape: Coastal plains
Elevation: 10 to 120 feet
Mean annual precipitation: 28 to 59 inches
Mean annual air temperature: 46 to 79 degrees F
Frost-free period: 161 to 231 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Matapeake and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Matapeake

Setting

Landscape: Coastal plains
Landform: Interfluves
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Silty eolian deposits over marine deposits and/or coarse fluviomarine deposits

Typical profile

Ap - 0 to 8 inches: loam
AB - 8 to 15 inches: loam
BA - 15 to 19 inches: loam
Bt - 19 to 27 inches: clay loam
BC - 27 to 41 inches: loam
2C - 41 to 60 inches: stratified sand to silty clay

Properties and qualities

Slope: 2 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 2.00 in/hr)
Depth to water table: About 48 to 122 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 10.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Ecological site: F153CY030MD - Well Drained Loess Upland
Hydric soil rating: No

Minor Components

Mattapex

Percent of map unit: 5 percent

Landscape: Coastal plains

Landform: Upland flats, Upland terraces

Down-slope shape: Linear

Across-slope shape: Linear

Ecological site: F153CY020MD - Moist Loess Upland

Hydric soil rating: No

Woodstown

Percent of map unit: 5 percent

Landscape: North atlantic coastal plains

Landform: Low hills

Down-slope shape: Linear

Across-slope shape: Linear

Ecological site: F149AY130NJ - Moist Loamy Upland

Hydric soil rating: No

Soil Information for All Uses

Soil Properties and Qualities

The Soil Properties and Qualities section includes various soil properties and qualities displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each property or quality.

Soil Qualities and Features

Soil qualities are behavior and performance attributes that are not directly measured, but are inferred from observations of dynamic conditions and from soil properties. Example soil qualities include natural drainage, and frost action. Soil features are attributes that are not directly part of the soil. Example soil features include slope and depth to restrictive layer. These features can greatly impact the use and management of the soil.

Hydrologic Soil Group

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.

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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.

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Map—Hydrologic Soil Group



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MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

Soil Rating Polygons

 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Lines

 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Points

 A
 A/D
 B
 B/D

 C
 C/D
 D
 Not rated or not available

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 1:24,000.

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

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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)

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Table—Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
MbpB	Matapeake loam, 2 to 5 percent slopes	B	0.8	100.0%
Totals for Area of Interest			0.8	100.0%

Rating Options—Hydrologic Soil Group

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Water Features

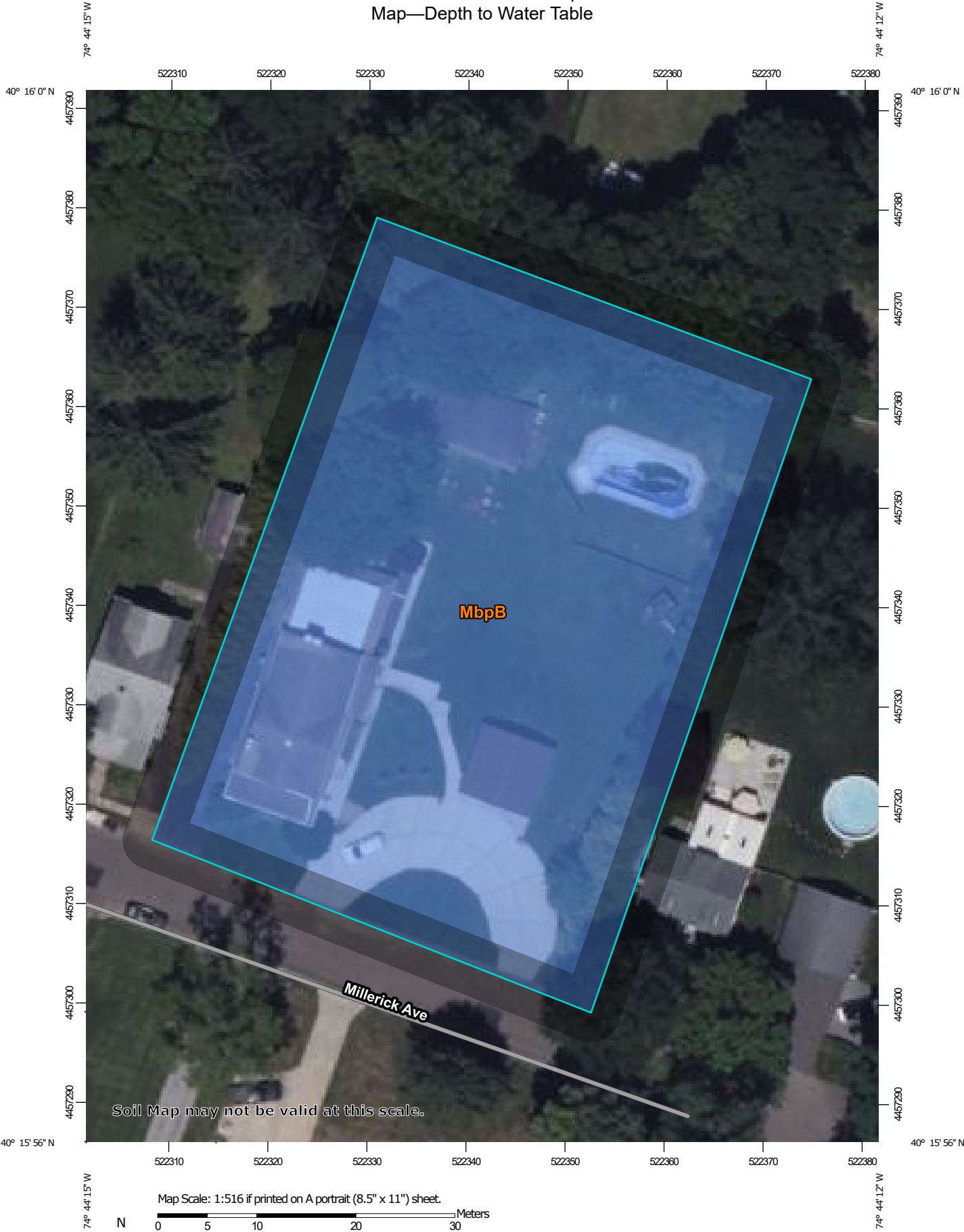
Water Features include ponding frequency, flooding frequency, and depth to water table.

Depth to Water Table

"Water table" refers to a saturated zone in the soil. It occurs during specified months. Estimates of the upper limit are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

This attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

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Map—Depth to Water Table



Soil Map may not be valid at this scale.

Map Scale: 1:516 if printed on A portrait (8.5" x 11") sheet.

0 5 10 20 30 Meters
0 25 50 100 150 Feet
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

Soil Rating Polygons

 0 - 25
 25 - 50
 50 - 100
 100 - 150
 150 - 200
 > 200
 Not rated or not available

Soil Rating Lines

 0 - 25
 25 - 50
 50 - 100
 100 - 150
 150 - 200
 > 200
 Not rated or not available

Soil Rating Points

 0 - 25
 25 - 50
 50 - 100
 100 - 150
 150 - 200
 > 200

 Not rated or not available

Water Features

 Streams and Canals

Transportation

 Rails
 Interstate Highways
 US Routes
 Major Roads
 Local Roads

Background

 Aerial Photography

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Table—Depth to Water Table

Map unit symbol	Map unit name	Rating (centimeters)	Acres in AOI	Percent of AOI
MbpB	Matapeake loam, 2 to 5 percent slopes	183	0.8	100.0%
Totals for Area of Interest			0.8	100.0%

Rating Options—Depth to Water Table

Units of Measure: centimeters

Aggregation Method: Dominant Component

Component Percent Cutoff: None Specified

Tie-break Rule: Lower

Interpret Nulls as Zero: No

Beginning Month: January

Ending Month: December

References

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2-YR, 10-YR, 100-YR STORM DRAINAGE CALCULATIONS

Summary for Subcatchment 1S: Exis. SA South IMP

[49] Hint: Tc<2dt may require smaller dt

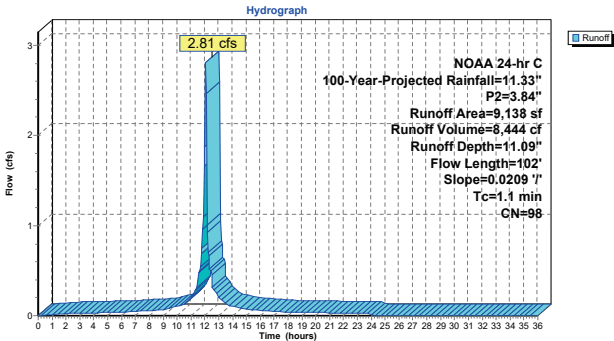
Runoff = 2.81 cfs @ 12.06 hrs, Volume= 8,444 cf, Depth=11.09"
Routed to Link 3L : Exis. SA South Total

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
NOAA 24-hr C 100-Year-Projected Rainfall=11.33", P2=3.84"

Area (sf)	CN	Description
2,378	98	Roofs, HSG B
6,760	98	Paved parking, HSG B
9,138	98	Weighted Average
9,138		100.00% Impervious Area

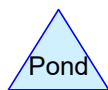
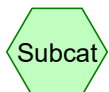
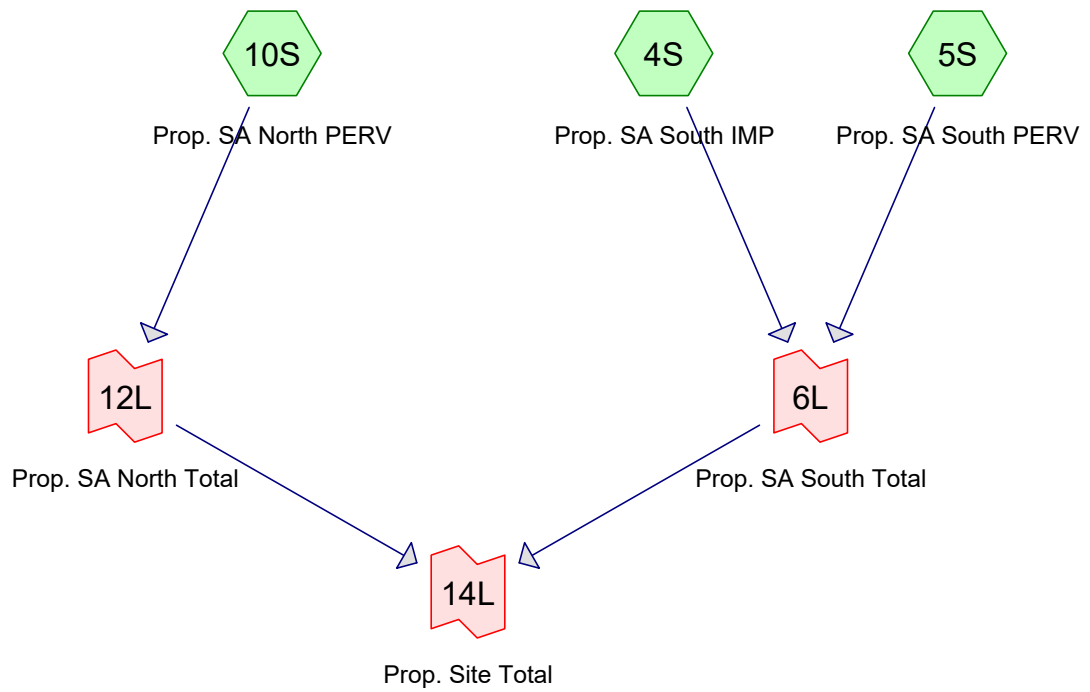
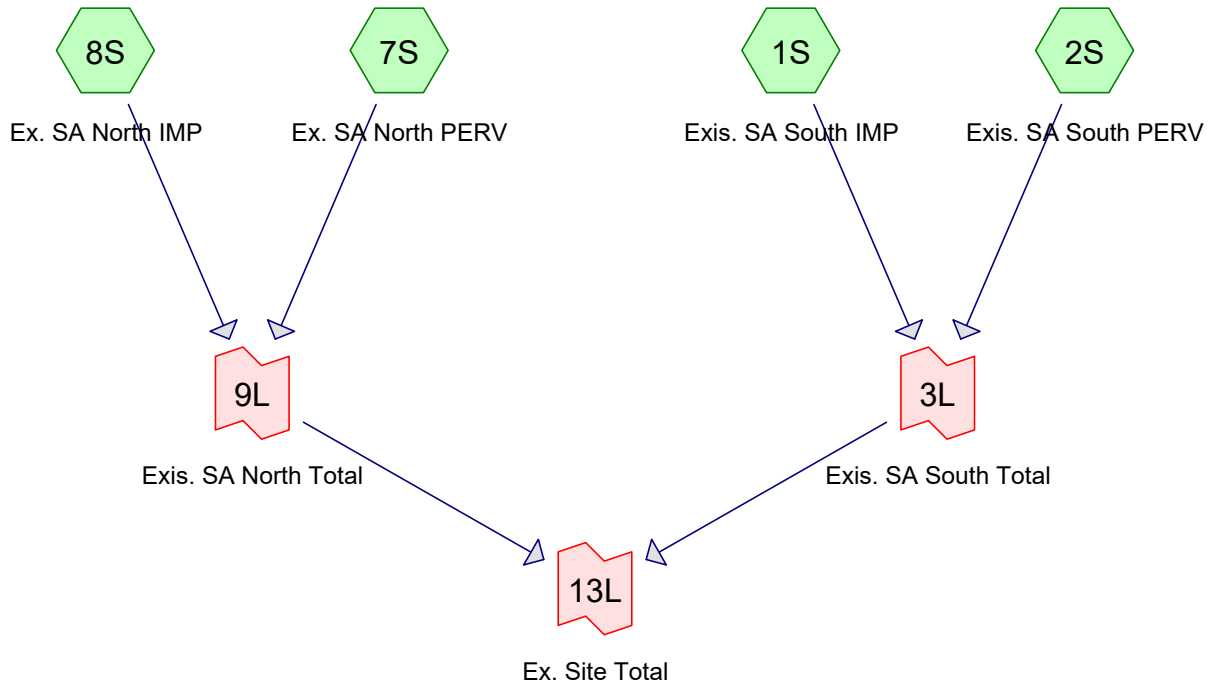
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.1	100	0.0209	1.53		Sheet Flow, Segment A-B Smooth surfaces n= 0.011 P2= 3.84"
0.0	2	0.0209	2.93		Shallow Concentrated Flow, Segment B-C Paved Kv= 20.3 fps
1.1	102	Total			

Subcatchment 1S: Exis. SA South IMP



Hydrograph for Subcatchment 1S: Exis. SA South IMP

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.06	0.00	0.00
1.00	0.12	0.02	0.01
1.50	0.19	0.06	0.02
2.00	0.26	0.11	0.02
2.50	0.33	0.17	0.02
3.00	0.40	0.23	0.03
3.50	0.48	0.30	0.03
4.00	0.55	0.37	0.03
4.50	0.64	0.44	0.03
5.00	0.72	0.52	0.03
5.50	0.81	0.61	0.04
6.00	0.90	0.69	0.04
6.50	1.00	0.79	0.04
7.00	1.11	0.89	0.05
7.50	1.23	1.01	0.05
8.00	1.36	1.14	0.06
8.50	1.50	1.28	0.06
9.00	1.65	1.43	0.07
9.50	1.84	1.61	0.08
10.00	2.07	1.84	0.10
10.50	2.34	2.11	0.12
11.00	2.72	2.49	0.19
11.50	3.35	3.11	0.34
12.00	5.40	5.16	1.88
12.50	7.98	7.74	0.45
13.00	8.61	8.37	0.21
13.50	8.99	8.75	0.13
14.00	9.26	9.02	0.11
14.50	9.49	9.25	0.09
15.00	9.68	9.43	0.07
15.50	9.83	9.59	0.06
16.00	9.97	9.73	0.06
16.50	10.10	9.86	0.05
17.00	10.22	9.98	0.05
17.50	10.33	10.09	0.04
18.00	10.43	10.19	0.04
18.50	10.52	10.28	0.04
19.00	10.61	10.37	0.04
19.50	10.69	10.45	0.04
20.00	10.78	10.53	0.03
20.50	10.85	10.61	0.03
21.00	10.93	10.69	0.03
21.50	11.00	10.76	0.03
22.00	11.07	10.83	0.03
22.50	11.14	10.90	0.03
23.00	11.21	10.96	0.03
23.50	11.27	11.03	0.03
24.00	11.33	11.09	0.03
24.50	11.33	11.09	0.00
25.00	11.33	11.09	0.00
25.50	11.33	11.09	0.00



Routing Diagram for WQ, 2, 10, 100
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WQ, 2, 10, 100

Prepared by Dynamic Engineering

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Page 2

Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
45,362	61	>75% Grass cover, Good, HSG B (2S, 5S, 7S, 10S)
12,541	98	Paved parking, HSG B (1S, 4S, 8S)
5,761	98	Roofs, HSG B (1S, 4S)
63,664	72	TOTAL AREA

WQ, 2, 10, 100

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Soil Listing (all nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
0	HSG A	
63,664	HSG B	1S, 2S, 4S, 5S, 7S, 8S, 10S
0	HSG C	
0	HSG D	
0	Other	
63,664		TOTAL AREA

WQ, 2, 10, 100

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Page 4

Ground Covers (all nodes)

HSG-A (sq-ft)	HSG-B (sq-ft)	HSG-C (sq-ft)	HSG-D (sq-ft)	Other (sq-ft)	Total (sq-ft)	Ground Cover
0	45,362	0	0	0	45,362	>75% Grass cover, Good
0	12,541	0	0	0	12,541	Paved parking
0	5,761	0	0	0	5,761	Roofs
0	63,664	0	0	0	63,664	TOTAL AREA

Time span=0.00-36.00 hrs, dt=0.05 hrs, 721 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: Exis. SA South IMP Runoff Area=9,138 sf 100.00% Impervious Runoff Depth=11.09"
Flow Length=102' Slope=0.0209 '/' Tc=1.1 min CN=98 Runoff=2.81 cfs 8,444 cf

Subcatchment2S: Exis. SA South PERV Runoff Area=16,256 sf 0.00% Impervious Runoff Depth=6.14"
Flow Length=125' Tc=9.0 min CN=61 Runoff=2.65 cfs 8,322 cf

Subcatchment4S: Prop. SA South IMP Runoff Area=8,580 sf 100.00% Impervious Runoff Depth=11.09"
Flow Length=102' Slope=0.0209 '/' Tc=1.1 min CN=98 Runoff=2.64 cfs 7,928 cf

Subcatchment5S: Prop. SA South PERV Runoff Area=16,830 sf 0.00% Impervious Runoff Depth=6.14"
Flow Length=174' Slope=0.0145 '/' Tc=9.6 min CN=61 Runoff=2.67 cfs 8,616 cf

Subcatchment7S: Ex. SA North PERV Runoff Area=5,854 sf 0.00% Impervious Runoff Depth=6.14"
Flow Length=32' Slope=0.0275 '/' Tc=4.6 min CN=61 Runoff=1.10 cfs 2,997 cf

Subcatchment8S: Ex. SA North IMP Runoff Area=584 sf 100.00% Impervious Runoff Depth=11.09"
Flow Length=10' Slope=0.0500 '/' Tc=0.1 min CN=98 Runoff=0.18 cfs 540 cf

Subcatchment10S: Prop. SA North PERV Runoff Area=6,422 sf 0.00% Impervious Runoff Depth=6.14"
Flow Length=39' Slope=0.0270 '/' Tc=5.4 min CN=61 Runoff=1.16 cfs 3,288 cf

Link 3L: Exis. SA South Total Inflow=4.61 cfs 16,767 cf
Primary=4.61 cfs 16,767 cf

Link 6L: Prop. SA South Total Inflow=4.42 cfs 16,545 cf
Primary=4.42 cfs 16,545 cf

Link 9L: Exis. SA North Total Inflow=1.22 cfs 3,537 cf
Primary=1.22 cfs 3,537 cf

Link 12L: Prop. SA North Total Inflow=1.16 cfs 3,288 cf
Primary=1.16 cfs 3,288 cf

Link 13L: Ex. Site Total Inflow=5.81 cfs 20,303 cf
Primary=5.81 cfs 20,303 cf

Link 14L: Prop. Site Total Inflow=5.52 cfs 19,833 cf
Primary=5.52 cfs 19,833 cf

Total Runoff Area = 63,664 sf Runoff Volume = 40,136 cf Average Runoff Depth = 7.57"
71.25% Pervious = 45,362 sf 28.75% Impervious = 18,302 sf

Summary for Subcatchment 2S: Exis. SA South PERV

Runoff = 2.65 cfs @ 12.16 hrs, Volume= 8,322 cf, Depth= 6.14"

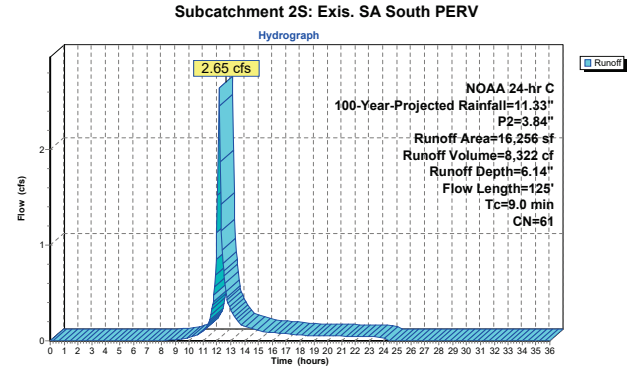
Routed to Link 3L : Exis. SA South Total

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs

NOAA 24-hr C 100-Year-Projected Rainfall=11.33", P2=3.84"

Area (sf)	CN	Description
16,256	61	>75% Grass cover, Good, HSG B
16,256		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.5	61	0.0215	0.12		Sheet Flow, Segment A-B Grass: Dense n= 0.240 P2= 3.84" Using McCuen-Spiess flow length
0.5	64	0.0200	2.28		Shallow Concentrated Flow, Segment B-C Unpaved Kv= 16.1 fps
9.0	125	Total			



Hydrograph for Subcatchment 2S: Exis. SA South PERV

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	26.00	11.33	6.14	0.00
0.50	0.06	0.00	0.00	26.50	11.33	6.14	0.00
1.00	0.12	0.00	0.00	27.00	11.33	6.14	0.00
1.50	0.19	0.00	0.00	27.50	11.33	6.14	0.00
2.00	0.26	0.00	0.00	28.00	11.33	6.14	0.00
2.50	0.33	0.00	0.00	28.50	11.33	6.14	0.00
3.00	0.40	0.00	0.00	29.00	11.33	6.14	0.00
3.50	0.48	0.00	0.00	29.50	11.33	6.14	0.00
4.00	0.55	0.00	0.00	30.00	11.33	6.14	0.00
4.50	0.64	0.00	0.00	30.50	11.33	6.14	0.00
5.00	0.72	0.00	0.00	31.00	11.33	6.14	0.00
5.50	0.81	0.00	0.00	31.50	11.33	6.14	0.00
6.00	0.90	0.00	0.00	32.00	11.33	6.14	0.00
6.50	1.00	0.00	0.00	32.50	11.33	6.14	0.00
7.00	1.11	0.00	0.00	33.00	11.33	6.14	0.00
7.50	1.23	0.00	0.00	33.50	11.33	6.14	0.00
8.00	1.36	0.00	0.00	34.00	11.33	6.14	0.00
8.50	1.50	0.01	0.01	34.50	11.33	6.14	0.00
9.00	1.65	0.02	0.01	35.00	11.33	6.14	0.00
9.50	1.84	0.05	0.02	35.50	11.33	6.14	0.00
10.00	2.07	0.09	0.03	36.00	11.33	6.14	0.00
10.50	2.34	0.15	0.05				
11.00	2.72	0.26	0.10				
11.50	3.35	0.51	0.21				
12.00	5.40	1.62	1.14				
12.50	7.98	3.43	0.73				
13.00	8.61	3.92	0.33				
13.50	8.99	4.22	0.21				
14.00	9.26	4.43	0.16				
14.50	9.49	4.62	0.13				
15.00	9.68	4.77	0.11				
15.50	9.83	4.89	0.09				
16.00	9.97	5.01	0.09				
16.50	10.10	5.12	0.08				
17.00	10.22	5.22	0.07				
17.50	10.33	5.31	0.07				
18.00	10.43	5.39	0.06				
18.50	10.52	5.46	0.06				
19.00	10.61	5.54	0.05				
19.50	10.69	5.61	0.05				
20.00	10.78	5.68	0.05				
20.50	10.85	5.74	0.05				
21.00	10.93	5.81	0.05				
21.50	11.00	5.87	0.05				
22.00	11.07	5.93	0.04				
22.50	11.14	5.98	0.04				
23.00	11.21	6.04	0.04				
23.50	11.27	6.09	0.04				
24.00	11.33	6.14	0.04				
24.50	11.33	6.14	0.00				
25.00	11.33	6.14	0.00				
25.50	11.33	6.14	0.00				

Summary for Subcatchment 4S: Prop. SA South IMP

[49] Hint: Tc<2dt may require smaller dt

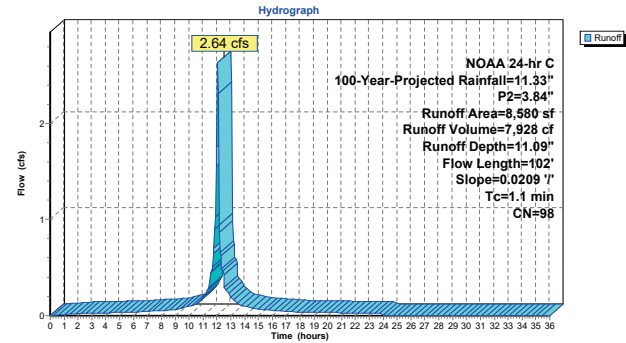
Runoff = 2.64 cfs @ 12.06 hrs, Volume= 7,928 cf, Depth=11.09"
Routed to Link 6L : Prop. SA South Total

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
NOAA 24-hr C 100-Year-Projected Rainfall=11.33", P2=3.84"

Area (sf)	CN	Description
3,383	98	Roofs, HSG B
5,197	98	Paved parking, HSG B
8,580	98	Weighted Average
8,580		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.1	100	0.0209	1.53		Sheet Flow, Segment A-B
					Smooth surfaces n= 0.011 P2= 3.84"
0.0	2	0.0209	2.93		Shallow Concentrated Flow, Segment B-C
					Paved Kv= 20.3 fps
1.1	102	Total			

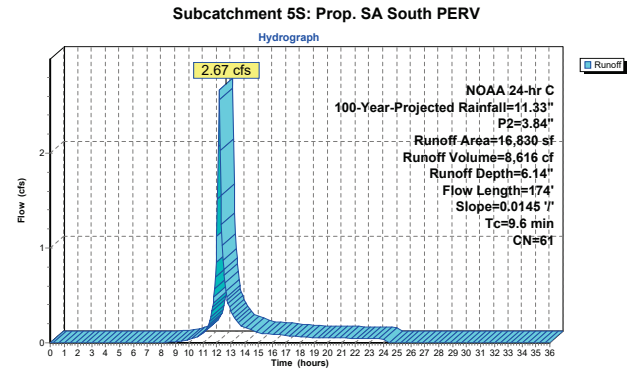
Subcatchment 4S: Prop. SA South IMP



Hydrograph for Subcatchment 4S: Prop. SA South IMP

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.06	0.00	0.00
1.00	0.12	0.02	0.01
1.50	0.19	0.06	0.02
2.00	0.26	0.11	0.02
2.50	0.33	0.17	0.02
3.00	0.40	0.23	0.03
3.50	0.48	0.30	0.03
4.00	0.55	0.37	0.03
4.50	0.64	0.44	0.03
5.00	0.72	0.52	0.03
5.50	0.81	0.61	0.03
6.00	0.90	0.69	0.04
6.50	1.00	0.79	0.04
7.00	1.11	0.89	0.04
7.50	1.23	1.01	0.05
8.00	1.36	1.14	0.05
8.50	1.50	1.28	0.06
9.00	1.65	1.43	0.06
9.50	1.84	1.61	0.08
10.00	2.07	1.84	0.10
10.50	2.34	2.11	0.12
11.00	2.72	2.49	0.18
11.50	3.35	3.11	0.32
12.00	5.40	5.16	1.76
12.50	7.98	7.74	0.43
13.00	8.61	8.37	0.20
13.50	8.99	8.75	0.12
14.00	9.26	9.02	0.10
14.50	9.49	9.25	0.08
15.00	9.68	9.43	0.07
15.50	9.83	9.59	0.06
16.00	9.97	9.73	0.05
16.50	10.10	9.86	0.05
17.00	10.22	9.98	0.05
17.50	10.33	10.09	0.04
18.00	10.43	10.19	0.04
18.50	10.52	10.28	0.04
19.00	10.61	10.37	0.03
19.50	10.69	10.45	0.03
20.00	10.78	10.53	0.03
20.50	10.85	10.61	0.03
21.00	10.93	10.69	0.03
21.50	11.00	10.76	0.03
22.00	11.07	10.83	0.03
22.50	11.14	10.90	0.03
23.00	11.21	10.96	0.03
23.50	11.27	11.03	0.02
24.00	11.33	11.09	0.02
24.50	11.33	11.09	0.00
25.00	11.33	11.09	0.00
25.50	11.33	11.09	0.00

Summary for Subcatchment 5S: Prop. SA South PERV					
Runoff	=	2.67 cfs @ 12.17 hrs,	Volume=	8,616 cf,	Depth= 6.14"
Routed to Link 6L : Prop. SA South Total					
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs					
NOAA 24-hr C 100-Year-Projected Rainfall=11.33", P2=3.84"					
Area (sf)	CN	Description			
16,830	61	>75% Grass cover, Good, HSG B			
16,830		100.00% Pervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.5	50	0.0145	0.10		Sheet Flow, Segment A-B
					Grass: Dense n= 0.240 P2= 3.84"
					Using McCuen-Spiess flow length
1.1	124	0.0145	1.94		Shallow Concentrated Flow, Segment B-C
					Unpaved Kv= 16.1 fps
9.6	174	Total			



Hydrograph for Subcatchment 5S: Prop. SA South PERV							
Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	26.00	11.33	6.14	0.00
0.50	0.06	0.00	0.00	26.50	11.33	6.14	0.00
1.00	0.12	0.00	0.00	27.00	11.33	6.14	0.00
1.50	0.19	0.00	0.00	27.50	11.33	6.14	0.00
2.00	0.26	0.00	0.00	28.00	11.33	6.14	0.00
2.50	0.33	0.00	0.00	28.50	11.33	6.14	0.00
3.00	0.40	0.00	0.00	29.00	11.33	6.14	0.00
3.50	0.48	0.00	0.00	29.50	11.33	6.14	0.00
4.00	0.55	0.00	0.00	30.00	11.33	6.14	0.00
4.50	0.64	0.00	0.00	30.50	11.33	6.14	0.00
5.00	0.72	0.00	0.00	31.00	11.33	6.14	0.00
5.50	0.81	0.00	0.00	31.50	11.33	6.14	0.00
6.00	0.90	0.00	0.00	32.00	11.33	6.14	0.00
6.50	1.00	0.00	0.00	32.50	11.33	6.14	0.00
7.00	1.11	0.00	0.00	33.00	11.33	6.14	0.00
7.50	1.23	0.00	0.00	33.50	11.33	6.14	0.00
8.00	1.36	0.00	0.00	34.00	11.33	6.14	0.00
8.50	1.50	0.01	0.01	34.50	11.33	6.14	0.00
9.00	1.65	0.02	0.01	35.00	11.33	6.14	0.00
9.50	1.84	0.05	0.02	35.50	11.33	6.14	0.00
10.00	2.07	0.09	0.04	36.00	11.33	6.14	0.00
10.50	2.34	0.15	0.05				
11.00	2.72	0.26	0.10				
11.50	3.35	0.51	0.22				
12.00	5.40	1.62	1.13				
12.50	7.98	3.43	0.77				
13.00	8.61	3.92	0.35				
13.50	8.99	4.22	0.22				
14.00	9.26	4.43	0.16				
14.50	9.49	4.62	0.14				
15.00	9.68	4.77	0.11				
15.50	9.83	4.89	0.10				
16.00	9.97	5.01	0.09				
16.50	10.10	5.12	0.08				
17.00	10.22	5.22	0.08				
17.50	10.33	5.31	0.07				
18.00	10.43	5.39	0.06				
18.50	10.52	5.46	0.06				
19.00	10.61	5.54	0.06				
19.50	10.69	5.61	0.05				
20.00	10.78	5.68	0.05				
20.50	10.85	5.74	0.05				
21.00	10.93	5.81	0.05				
21.50	11.00	5.87	0.05				
22.00	11.07	5.93	0.05				
22.50	11.14	5.98	0.04				
23.00	11.21	6.04	0.04				
23.50	11.27	6.09	0.04				
24.00	11.33	6.14	0.04				
24.50	11.33	6.14	0.00				
25.00	11.33	6.14	0.00				
25.50	11.33	6.14	0.00				

Summary for Subcatchment 7S: Ex. SA North PERV

[49] Hint: Tc<2dt may require smaller dt

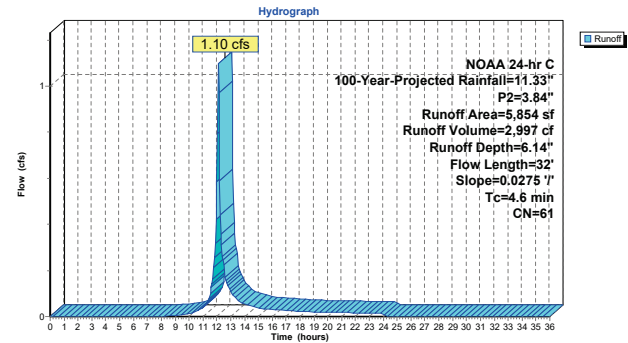
Runoff = 1.10 cfs @ 12.11 hrs, Volume= 2,997 cf, Depth= 6.14"
Routed to Link 9L : Exis. SA North Total

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
NOAA 24-hr C 100-Year-Projected Rainfall=11.33", P2=3.84"

Area (sf)	CN	Description
5,854	61	>75% Grass cover, Good, HSG B
5,854		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.6	32	0.0275	0.12		Sheet Flow, A-B
Grass: Dense n= 0.240 P2= 3.84"					

Subcatchment 7S: Ex. SA North PERV



Hydrograph for Subcatchment 7S: Ex. SA North PERV

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	26.00	11.33	6.14	0.00
0.50	0.06	0.00	0.00	26.50	11.33	6.14	0.00
1.00	0.12	0.00	0.00	27.00	11.33	6.14	0.00
1.50	0.19	0.00	0.00	27.50	11.33	6.14	0.00
2.00	0.26	0.00	0.00	28.00	11.33	6.14	0.00
2.50	0.33	0.00	0.00	28.50	11.33	6.14	0.00
3.00	0.40	0.00	0.00	29.00	11.33	6.14	0.00
3.50	0.48	0.00	0.00	29.50	11.33	6.14	0.00
4.00	0.55	0.00	0.00	30.00	11.33	6.14	0.00
4.50	0.64	0.00	0.00	30.50	11.33	6.14	0.00
5.00	0.72	0.00	0.00	31.00	11.33	6.14	0.00
5.50	0.81	0.00	0.00	31.50	11.33	6.14	0.00
6.00	0.90	0.00	0.00	32.00	11.33	6.14	0.00
6.50	1.00	0.00	0.00	32.50	11.33	6.14	0.00
7.00	1.11	0.00	0.00	33.00	11.33	6.14	0.00
7.50	1.23	0.00	0.00	33.50	11.33	6.14	0.00
8.00	1.36	0.00	0.00	34.00	11.33	6.14	0.00
8.50	1.50	0.01	0.00	34.50	11.33	6.14	0.00
9.00	1.65	0.02	0.00	35.00	11.33	6.14	0.00
9.50	1.84	0.05	0.01	35.50	11.33	6.14	0.00
10.00	2.07	0.09	0.01	36.00	11.33	6.14	0.00
10.50	2.34	0.15	0.02				
11.00	2.72	0.26	0.04				
11.50	3.35	0.51	0.08				
12.00	5.40	1.62	0.59				
12.50	7.98	3.43	0.24				
13.00	8.61	3.92	0.11				
13.50	8.99	4.22	0.07				
14.00	9.26	4.43	0.06				
14.50	9.49	4.62	0.05				
15.00	9.68	4.77	0.04				
15.50	9.83	4.89	0.03				
16.00	9.97	5.01	0.03				
16.50	10.10	5.12	0.03				
17.00	10.22	5.22	0.03				
17.50	10.33	5.31	0.02				
18.00	10.43	5.39	0.02				
18.50	10.52	5.46	0.02				
19.00	10.61	5.54	0.02				
19.50	10.69	5.61	0.02				
20.00	10.78	5.68	0.02				
20.50	10.85	5.74	0.02				
21.00	10.93	5.81	0.02				
21.50	11.00	5.87	0.02				
22.00	11.07	5.93	0.02				
22.50	11.14	5.98	0.02				
23.00	11.21	6.04	0.01				
23.50	11.27	6.09	0.01				
24.00	11.33	6.14	0.02				
24.50	11.33	6.14	0.00				
25.00	11.33	6.14	0.00				
25.50	11.33	6.14	0.00				

Summary for Subcatchment 8S: Ex. SA North IMP

[49] Hint: Tc<2dt may require smaller dt

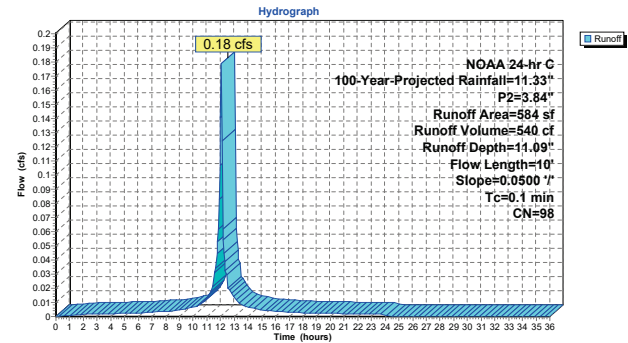
Runoff = 0.18 cfs @ 12.05 hrs, Volume= 540 cf, Depth=11.09"
Routed to Link 9L : Exis. SA North Total

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
NOAA 24-hr C 100-Year-Projected Rainfall=11.33", P2=3.84"

Area (sf)	CN	Description
584	98	Paved parking, HSG B
584		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	10	0.0500	1.37		Sheet Flow, A-B
Smooth surfaces n= 0.011 P2= 3.84"					

Subcatchment 8S: Ex. SA North IMP



Hydrograph for Subcatchment 8S: Ex. SA North IMP

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	26.00	11.33	11.09	0.00
0.50	0.06	0.00	0.00	26.50	11.33	11.09	0.00
1.00	0.12	0.00	0.00	27.00	11.33	11.09	0.00
1.50	0.19	0.06	0.00	27.50	11.33	11.09	0.00
2.00	0.26	0.11	0.00	28.00	11.33	11.09	0.00
2.50	0.33	0.17	0.00	28.50	11.33	11.09	0.00
3.00	0.40	0.23	0.00	29.00	11.33	11.09	0.00
3.50	0.48	0.30	0.00	29.50	11.33	11.09	0.00
4.00	0.55	0.37	0.00	30.00	11.33	11.09	0.00
4.50	0.64	0.44	0.00	30.50	11.33	11.09	0.00
5.00	0.72	0.52	0.00	31.00	11.33	11.09	0.00
5.50	0.81	0.61	0.00	31.50	11.33	11.09	0.00
6.00	0.90	0.69	0.00	32.00	11.33	11.09	0.00
6.50	1.00	0.79	0.00	32.50	11.33	11.09	0.00
7.00	1.11	0.89	0.00	33.00	11.33	11.09	0.00
7.50	1.23	1.01	0.00	33.50	11.33	11.09	0.00
8.00	1.36	1.14	0.00	34.00	11.33	11.09	0.00
8.50	1.50	1.28	0.00	34.50	11.33	11.09	0.00
9.00	1.65	1.43	0.00	35.00	11.33	11.09	0.00
9.50	1.84	1.61	0.01	35.50	11.33	11.09	0.00
10.00	2.07	1.84	0.01	36.00	11.33	11.09	0.00
10.50	2.34	2.11	0.01				
11.00	2.72	2.49	0.01				
11.50	3.35	3.11	0.03				
12.00	5.40	5.16	0.14				
12.50	7.98	7.74	0.03				
13.00	8.61	8.37	0.01				
13.50	8.99	8.75	0.01				
14.00	9.26	9.02	0.01				
14.50	9.49	9.25	0.01				
15.00	9.68	9.43	0.00				
15.50	9.83	9.59	0.00				
16.00	9.97	9.73	0.00				
16.50	10.10	9.86	0.00				
17.00	10.22	9.98	0.00				
17.50	10.33	10.09	0.00				
18.00	10.43	10.19	0.00				
18.50	10.52	10.28	0.00				
19.00	10.61	10.37	0.00				
19.50	10.69	10.45	0.00				
20.00	10.78	10.53	0.00				
20.50	10.85	10.61	0.00				
21.00	10.93	10.69	0.00				
21.50	11.00	10.76	0.00				
22.00	11.07	10.83	0.00				
22.50	11.14	10.90	0.00				
23.00	11.21	10.96	0.00				
23.50	11.27	11.03	0.00				
24.00	11.33	11.09	0.00				
24.50	11.33	11.09	0.00				
25.00	11.33	11.09	0.00				
25.50	11.33	11.09	0.00				

Summary for Subcatchment 10S: Prop. SA North PERV

[49] Hint: Tc<2dt may require smaller dt

Runoff = 1.16 cfs @ 12.12 hrs, Volume= 3,288 cf, Depth= 6.14"
Routed to Link 12L : Prop. SA North Total

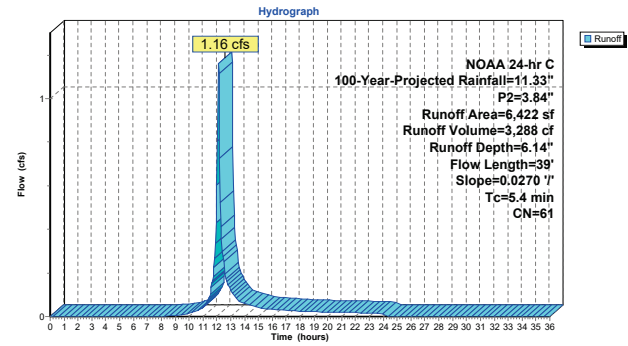
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
NOAA 24-hr C 100-Year-Projected Rainfall=11.33", P2=3.84"

Area (sf)	CN	Description
6,422	61	>75% Grass cover, Good, HSG B
6,422		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.4	39	0.0270	0.12		

Sheet Flow, A-B
Grass: Dense n= 0.240 P2= 3.84"

Subcatchment 10S: Prop. SA North PERV



Hydrograph for Subcatchment 10S: Prop. SA North PERV

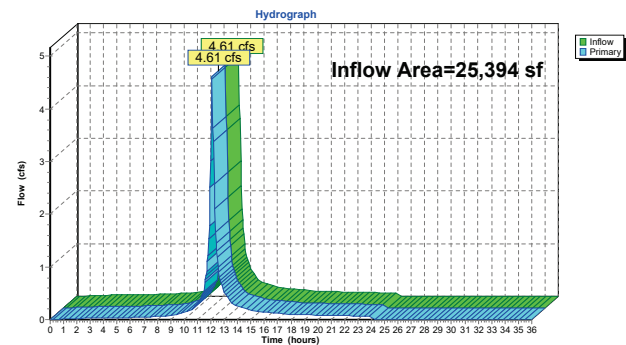
Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	26.00	11.33	6.14	0.00
0.50	0.06	0.00	0.00	26.50	11.33	6.14	0.00
1.00	0.12	0.00	0.00	27.00	11.33	6.14	0.00
1.50	0.19	0.00	0.00	27.50	11.33	6.14	0.00
2.00	0.26	0.00	0.00	28.00	11.33	6.14	0.00
2.50	0.33	0.00	0.00	28.50	11.33	6.14	0.00
3.00	0.40	0.00	0.00	29.00	11.33	6.14	0.00
3.50	0.48	0.00	0.00	29.50	11.33	6.14	0.00
4.00	0.55	0.00	0.00	30.00	11.33	6.14	0.00
4.50	0.64	0.00	0.00	30.50	11.33	6.14	0.00
5.00	0.72	0.00	0.00	31.00	11.33	6.14	0.00
5.50	0.81	0.00	0.00	31.50	11.33	6.14	0.00
6.00	0.90	0.00	0.00	32.00	11.33	6.14	0.00
6.50	1.00	0.00	0.00	32.50	11.33	6.14	0.00
7.00	1.11	0.00	0.00	33.00	11.33	6.14	0.00
7.50	1.23	0.00	0.00	33.50	11.33	6.14	0.00
8.00	1.36	0.00	0.00	34.00	11.33	6.14	0.00
8.50	1.50	0.01	0.00	34.50	11.33	6.14	0.00
9.00	1.65	0.02	0.00	35.00	11.33	6.14	0.00
9.50	1.84	0.05	0.01	35.50	11.33	6.14	0.00
10.00	2.07	0.09	0.01	36.00	11.33	6.14	0.00
10.50	2.34	0.15	0.02				
11.00	2.72	0.26	0.04				
11.50	3.35	0.51	0.09				
12.00	5.40	1.62	0.60				
12.50	7.98	3.43	0.26				
13.00	8.61	3.92	0.12				
13.50	8.99	4.22	0.08				
14.00	9.26	4.43	0.06				
14.50	9.49	4.62	0.05				
15.00	9.68	4.77	0.04				
15.50	9.83	4.89	0.04				
16.00	9.97	5.01	0.03				
16.50	10.10	5.12	0.03				
17.00	10.22	5.22	0.03				
17.50	10.33	5.31	0.03				
18.00	10.43	5.39	0.02				
18.50	10.52	5.46	0.02				
19.00	10.61	5.54	0.02				
19.50	10.69	5.61	0.02				
20.00	10.78	5.68	0.02				
20.50	10.85	5.74	0.02				
21.00	10.93	5.81	0.02				
21.50	11.00	5.87	0.02				
22.00	11.07	5.93	0.02				
22.50	11.14	5.98	0.02				
23.00	11.21	6.04	0.02				
23.50	11.27	6.09	0.02				
24.00	11.33	6.14	0.02				
24.50	11.33	6.14	0.00				
25.00	11.33	6.14	0.00				
25.50	11.33	6.14	0.00				

Summary for Link 3L: Exis. SA South Total

Inflow Area = 25,394 sf, 35.98% Impervious, Inflow Depth = 7.92" for 100-Year-Projected event
Inflow = 4.61 cfs @ 12.09 hrs, Volume= 16,767 cf
Primary = 4.61 cfs @ 12.09 hrs, Volume= 16,767 cf, Atten= 0%, Lag= 0.0 min
Routed to Link 13L : Ex. Site Total

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs

Link 3L: Exis. SA South Total



Hydrograph for Link 3L: Exis. SA South Total

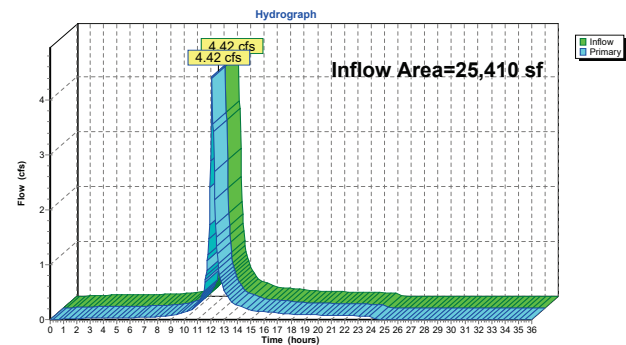
Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	26.00	0.00	0.00	0.00
0.50	0.00	0.00	0.00	26.50	0.00	0.00	0.00
1.00	0.01	0.00	0.01	27.00	0.00	0.00	0.00
1.50	0.02	0.00	0.02	27.50	0.00	0.00	0.00
2.00	0.02	0.00	0.02	28.00	0.00	0.00	0.00
2.50	0.02	0.00	0.02	28.50	0.00	0.00	0.00
3.00	0.03	0.00	0.03	29.00	0.00	0.00	0.00
3.50	0.03	0.00	0.03	29.50	0.00	0.00	0.00
4.00	0.03	0.00	0.03	30.00	0.00	0.00	0.00
4.50	0.03	0.00	0.03	30.50	0.00	0.00	0.00
5.00	0.03	0.00	0.03	31.00	0.00	0.00	0.00
5.50	0.04	0.00	0.04	31.50	0.00	0.00	0.00
6.00	0.04	0.00	0.04	32.00	0.00	0.00	0.00
6.50	0.04	0.00	0.04	32.50	0.00	0.00	0.00
7.00	0.05	0.00	0.05	33.00	0.00	0.00	0.00
7.50	0.05	0.00	0.05	33.50	0.00	0.00	0.00
8.00	0.06	0.00	0.06	34.00	0.00	0.00	0.00
8.50	0.07	0.00	0.07	34.50	0.00	0.00	0.00
9.00	0.08	0.00	0.08	35.00	0.00	0.00	0.00
9.50	0.11	0.00	0.11	35.50	0.00	0.00	0.00
10.00	0.14	0.00	0.14	36.00	0.00	0.00	0.00
10.50	0.17	0.00	0.17				
11.00	0.29	0.00	0.29				
11.50	0.55	0.00	0.55				
12.00	3.01	0.00	3.01				
12.50	1.18	0.00	1.18				
13.00	0.54	0.00	0.54				
13.50	0.34	0.00	0.34				
14.00	0.26	0.00	0.26				
14.50	0.22	0.00	0.22				
15.00	0.18	0.00	0.18				
15.50	0.16	0.00	0.16				
16.00	0.14	0.00	0.14				
16.50	0.13	0.00	0.13				
17.00	0.12	0.00	0.12				
17.50	0.11	0.00	0.11				
18.00	0.10	0.00	0.10				
18.50	0.09	0.00	0.09				
19.00	0.09	0.00	0.09				
19.50	0.09	0.00	0.09				
20.00	0.09	0.00	0.09				
20.50	0.08	0.00	0.08				
21.00	0.08	0.00	0.08				
21.50	0.08	0.00	0.08				
22.00	0.07	0.00	0.07				
22.50	0.07	0.00	0.07				
23.00	0.07	0.00	0.07				
23.50	0.06	0.00	0.06				
24.00	0.07	0.00	0.07				
24.50	0.00	0.00	0.00				
25.00	0.00	0.00	0.00				
25.50	0.00	0.00	0.00				

Summary for Link 6L: Prop. SA South Total

Inflow Area = 25,410 sf, 33.77% Impervious, Inflow Depth = 7.81" for 100-Year-Projected event
Inflow = 4.42 cfs @ 12.09 hrs, Volume= 16,545 cf
Primary = 4.42 cfs @ 12.09 hrs, Volume= 16,545 cf, Atten= 0%, Lag= 0.0 min
Routed to Link 14L : Prop. Site Total

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs

Link 6L: Prop. SA South Total



Hydrograph for Link 6L: Prop. SA South Total

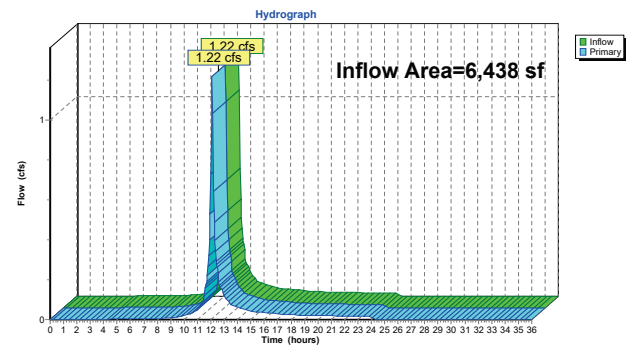
Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	26.00	0.00	0.00	0.00
0.50	0.00	0.00	0.00	26.50	0.00	0.00	0.00
1.00	0.01	0.00	0.01	27.00	0.00	0.00	0.00
1.50	0.02	0.00	0.02	27.50	0.00	0.00	0.00
2.00	0.02	0.00	0.02	28.00	0.00	0.00	0.00
2.50	0.02	0.00	0.02	28.50	0.00	0.00	0.00
3.00	0.03	0.00	0.03	29.00	0.00	0.00	0.00
3.50	0.03	0.00	0.03	29.50	0.00	0.00	0.00
4.00	0.03	0.00	0.03	30.00	0.00	0.00	0.00
4.50	0.03	0.00	0.03	30.50	0.00	0.00	0.00
5.00	0.03	0.00	0.03	31.00	0.00	0.00	0.00
5.50	0.03	0.00	0.03	31.50	0.00	0.00	0.00
6.00	0.04	0.00	0.04	32.00	0.00	0.00	0.00
6.50	0.04	0.00	0.04	32.50	0.00	0.00	0.00
7.00	0.04	0.00	0.04	33.00	0.00	0.00	0.00
7.50	0.05	0.00	0.05	33.50	0.00	0.00	0.00
8.00	0.05	0.00	0.05	34.00	0.00	0.00	0.00
8.50	0.06	0.00	0.06	34.50	0.00	0.00	0.00
9.00	0.07	0.00	0.07	35.00	0.00	0.00	0.00
9.50	0.10	0.00	0.10	35.50	0.00	0.00	0.00
10.00	0.13	0.00	0.13	36.00	0.00	0.00	0.00
10.50	0.17	0.00	0.17				
11.00	0.28	0.00	0.28				
11.50	0.54	0.00	0.54				
12.00	2.89	0.00	2.89				
12.50	1.20	0.00	1.20				
13.00	0.54	0.00	0.54				
13.50	0.34	0.00	0.34				
14.00	0.26	0.00	0.26				
14.50	0.22	0.00	0.22				
15.00	0.18	0.00	0.18				
15.50	0.16	0.00	0.16				
16.00	0.14	0.00	0.14				
16.50	0.13	0.00	0.13				
17.00	0.12	0.00	0.12				
17.50	0.11	0.00	0.11				
18.00	0.10	0.00	0.10				
18.50	0.09	0.00	0.09				
19.00	0.09	0.00	0.09				
19.50	0.09	0.00	0.09				
20.00	0.08	0.00	0.08				
20.50	0.08	0.00	0.08				
21.00	0.08	0.00	0.08				
21.50	0.08	0.00	0.08				
22.00	0.07	0.00	0.07				
22.50	0.07	0.00	0.07				
23.00	0.07	0.00	0.07				
23.50	0.06	0.00	0.06				
24.00	0.06	0.00	0.06				
24.50	0.00	0.00	0.00				
25.00	0.00	0.00	0.00				
25.50	0.00	0.00	0.00				

Summary for Link 9L: Exis. SA North Total

Inflow Area = 6,438 sf, 9.07% Impervious, Inflow Depth = 6.59" for 100-Year-Projected event
Inflow = 1.22 cfs @ 12.10 hrs, Volume= 3,537 cf
Primary = 1.22 cfs @ 12.10 hrs, Volume= 3,537 cf, Atten= 0%, Lag= 0.0 min
Routed to Link 13L : Ex. Site Total

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs

Link 9L: Exis. SA North Total



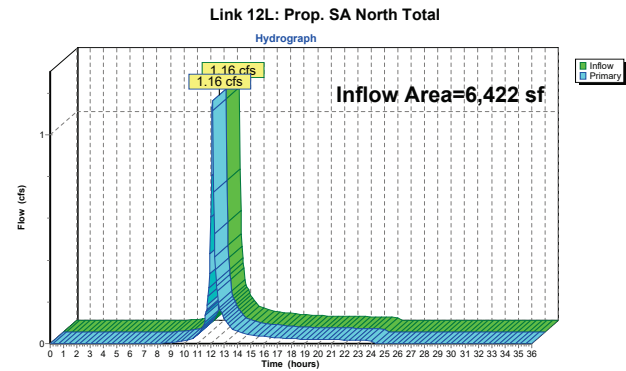
Hydrograph for Link 9L: Exis. SA North Total

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	26.00	0.00	0.00	0.00
0.50	0.00	0.00	0.00	26.50	0.00	0.00	0.00
1.00	0.00	0.00	0.00	27.00	0.00	0.00	0.00
1.50	0.00	0.00	0.00	27.50	0.00	0.00	0.00
2.00	0.00	0.00	0.00	28.00	0.00	0.00	0.00
2.50	0.00	0.00	0.00	28.50	0.00	0.00	0.00
3.00	0.00	0.00	0.00	29.00	0.00	0.00	0.00
3.50	0.00	0.00	0.00	29.50	0.00	0.00	0.00
4.00	0.00	0.00	0.00	30.00	0.00	0.00	0.00
4.50	0.00	0.00	0.00	30.50	0.00	0.00	0.00
5.00	0.00	0.00	0.00	31.00	0.00	0.00	0.00
5.50	0.00	0.00	0.00	31.50	0.00	0.00	0.00
6.00	0.00	0.00	0.00	32.00	0.00	0.00	0.00
6.50	0.00	0.00	0.00	32.50	0.00	0.00	0.00
7.00	0.00	0.00	0.00	33.00	0.00	0.00	0.00
7.50	0.00	0.00	0.00	33.50	0.00	0.00	0.00
8.00	0.00	0.00	0.00	34.00	0.00	0.00	0.00
8.50	0.01	0.00	0.01	34.50	0.00	0.00	0.00
9.00	0.01	0.00	0.01	35.00	0.00	0.00	0.00
9.50	0.01	0.00	0.01	35.50	0.00	0.00	0.00
10.00	0.02	0.00	0.02	36.00	0.00	0.00	0.00
10.50	0.03	0.00	0.03				
11.00	0.05	0.00	0.05				
11.50	0.11	0.00	0.11				
12.00	0.73	0.00	0.73				
12.50	0.26	0.00	0.26				
13.00	0.12	0.00	0.12				
13.50	0.08	0.00	0.08				
14.00	0.06	0.00	0.06				
14.50	0.05	0.00	0.05				
15.00	0.04	0.00	0.04				
15.50	0.04	0.00	0.04				
16.00	0.03	0.00	0.03				
16.50	0.03	0.00	0.03				
17.00	0.03	0.00	0.03				
17.50	0.03	0.00	0.03				
18.00	0.02	0.00	0.02				
18.50	0.02	0.00	0.02				
19.00	0.02	0.00	0.02				
19.50	0.02	0.00	0.02				
20.00	0.02	0.00	0.02				
20.50	0.02	0.00	0.02				
21.00	0.02	0.00	0.02				
21.50	0.02	0.00	0.02				
22.00	0.02	0.00	0.02				
22.50	0.02	0.00	0.02				
23.00	0.02	0.00	0.02				
23.50	0.02	0.00	0.02				
24.00	0.02	0.00	0.02				
24.50	0.00	0.00	0.00				
25.00	0.00	0.00	0.00				
25.50	0.00	0.00	0.00				

Summary for Link 12L: Prop. SA North Total

Inflow Area = 6,422 sf, 0.00% Impervious, Inflow Depth = 6.14" for 100-Year-Projected event
Inflow = 1.16 cfs @ 12.12 hrs, Volume= 3,288 cf
Primary = 1.16 cfs @ 12.12 hrs, Volume= 3,288 cf, Atten= 0%, Lag= 0.0 min
Routed to Link 14L : Prop. Site Total

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs

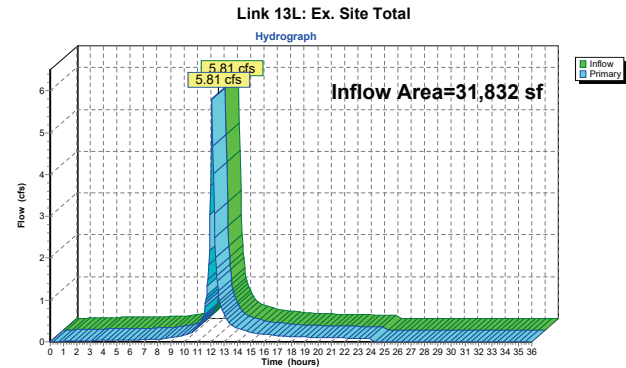


Hydrograph for Link 12L: Prop. SA North Total

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	26.00	0.00	0.00	0.00
0.50	0.00	0.00	0.00	26.50	0.00	0.00	0.00
1.00	0.00	0.00	0.00	27.00	0.00	0.00	0.00
1.50	0.00	0.00	0.00	27.50	0.00	0.00	0.00
2.00	0.00	0.00	0.00	28.00	0.00	0.00	0.00
2.50	0.00	0.00	0.00	28.50	0.00	0.00	0.00
3.00	0.00	0.00	0.00	29.00	0.00	0.00	0.00
3.50	0.00	0.00	0.00	29.50	0.00	0.00	0.00
4.00	0.00	0.00	0.00	30.00	0.00	0.00	0.00
4.50	0.00	0.00	0.00	30.50	0.00	0.00	0.00
5.00	0.00	0.00	0.00	31.00	0.00	0.00	0.00
5.50	0.00	0.00	0.00	31.50	0.00	0.00	0.00
6.00	0.00	0.00	0.00	32.00	0.00	0.00	0.00
6.50	0.00	0.00	0.00	32.50	0.00	0.00	0.00
7.00	0.00	0.00	0.00	33.00	0.00	0.00	0.00
7.50	0.00	0.00	0.00	33.50	0.00	0.00	0.00
8.00	0.00	0.00	0.00	34.00	0.00	0.00	0.00
8.50	0.00	0.00	0.00	34.50	0.00	0.00	0.00
9.00	0.00	0.00	0.00	35.00	0.00	0.00	0.00
9.50	0.01	0.00	0.01	35.50	0.00	0.00	0.00
10.00	0.01	0.00	0.01	36.00	0.00	0.00	0.00
10.50	0.02	0.00	0.02				
11.00	0.04	0.00	0.04				
11.50	0.09	0.00	0.09				
12.00	0.60	0.00	0.60				
12.50	0.26	0.00	0.26				
13.00	0.12	0.00	0.12				
13.50	0.08	0.00	0.08				
14.00	0.06	0.00	0.06				
14.50	0.05	0.00	0.05				
15.00	0.04	0.00	0.04				
15.50	0.04	0.00	0.04				
16.00	0.03	0.00	0.03				
16.50	0.03	0.00	0.03				
17.00	0.03	0.00	0.03				
17.50	0.03	0.00	0.03				
18.00	0.02	0.00	0.02				
18.50	0.02	0.00	0.02				
19.00	0.02	0.00	0.02				
19.50	0.02	0.00	0.02				
20.00	0.02	0.00	0.02				
20.50	0.02	0.00	0.02				
21.00	0.02	0.00	0.02				
21.50	0.02	0.00	0.02				
22.00	0.02	0.00	0.02				
22.50	0.02	0.00	0.02				
23.00	0.02	0.00	0.02				
23.50	0.02	0.00	0.02				
24.00	0.02	0.00	0.02				
24.50	0.00	0.00	0.00				
25.00	0.00	0.00	0.00				
25.50	0.00	0.00	0.00				

Summary for Link 13L: Ex. Site Total

Inflow Area = 31,832 sf, 30.54% Impervious, Inflow Depth = 7.65" for 100-Year-Projected event
Inflow = 5.81 cfs @ 12.09 hrs, Volume= 20,303 cf
Primary = 5.81 cfs @ 12.09 hrs, Volume= 20,303 cf, Atten= 0%, Lag= 0.0 min
Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs

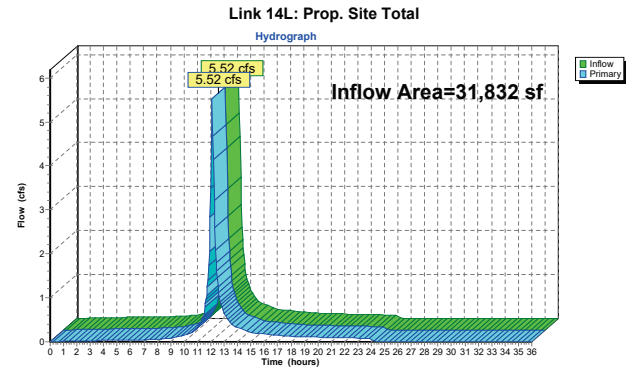


Hydrograph for Link 13L: Ex. Site Total

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	26.00	0.00	0.00	0.00
0.50	0.00	0.00	0.00	26.50	0.00	0.00	0.00
1.00	0.01	0.00	0.01	27.00	0.00	0.00	0.00
1.50	0.02	0.00	0.02	27.50	0.00	0.00	0.00
2.00	0.02	0.00	0.02	28.00	0.00	0.00	0.00
2.50	0.03	0.00	0.03	28.50	0.00	0.00	0.00
3.00	0.03	0.00	0.03	29.00	0.00	0.00	0.00
3.50	0.03	0.00	0.03	29.50	0.00	0.00	0.00
4.00	0.03	0.00	0.03	30.00	0.00	0.00	0.00
4.50	0.03	0.00	0.03	30.50	0.00	0.00	0.00
5.00	0.04	0.00	0.04	31.00	0.00	0.00	0.00
5.50	0.04	0.00	0.04	31.50	0.00	0.00	0.00
6.00	0.04	0.00	0.04	32.00	0.00	0.00	0.00
6.50	0.04	0.00	0.04	32.50	0.00	0.00	0.00
7.00	0.05	0.00	0.05	33.00	0.00	0.00	0.00
7.50	0.06	0.00	0.06	33.50	0.00	0.00	0.00
8.00	0.06	0.00	0.06	34.00	0.00	0.00	0.00
8.50	0.07	0.00	0.07	34.50	0.00	0.00	0.00
9.00	0.09	0.00	0.09	35.00	0.00	0.00	0.00
9.50	0.12	0.00	0.12	35.50	0.00	0.00	0.00
10.00	0.16	0.00	0.16	36.00	0.00	0.00	0.00
10.50	0.20	0.00	0.20				
11.00	0.34	0.00	0.34				
11.50	0.66	0.00	0.66				
12.00	3.74	0.00	3.74				
12.50	1.44	0.00	1.44				
13.00	0.66	0.00	0.66				
13.50	0.42	0.00	0.42				
14.00	0.32	0.00	0.32				
14.50	0.27	0.00	0.27				
15.00	0.22	0.00	0.22				
15.50	0.19	0.00	0.19				
16.00	0.18	0.00	0.18				
16.50	0.17	0.00	0.17				
17.00	0.15	0.00	0.15				
17.50	0.14	0.00	0.14				
18.00	0.12	0.00	0.12				
18.50	0.12	0.00	0.12				
19.00	0.11	0.00	0.11				
19.50	0.11	0.00	0.11				
20.00	0.11	0.00	0.11				
20.50	0.10	0.00	0.10				
21.00	0.10	0.00	0.10				
21.50	0.09	0.00	0.09				
22.00	0.09	0.00	0.09				
22.50	0.09	0.00	0.09				
23.00	0.08	0.00	0.08				
23.50	0.08	0.00	0.08				
24.00	0.08	0.00	0.08				
24.50	0.00	0.00	0.00				
25.00	0.00	0.00	0.00				
25.50	0.00	0.00	0.00				

Summary for Link 14L: Prop. Site Total

Inflow Area = 31,832 sf, 26.95% Impervious, Inflow Depth = 7.48" for 100-Year-Projected event
Inflow = 5.52 cfs @ 12.10 hrs, Volume= 19,833 cf
Primary = 5.52 cfs @ 12.10 hrs, Volume= 19,833 cf, Atten= 0%, Lag= 0.0 min
Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs



Hydrograph for Link 14L: Prop. Site Total

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	26.00	0.00	0.00	0.00
0.50	0.00	0.00	0.00	26.50	0.00	0.00	0.00
1.00	0.01	0.00	0.01	27.00	0.00	0.00	0.00
1.50	0.02	0.00	0.02	27.50	0.00	0.00	0.00
2.00	0.02	0.00	0.02	28.00	0.00	0.00	0.00
2.50	0.02	0.00	0.02	28.50	0.00	0.00	0.00
3.00	0.03	0.00	0.03	29.00	0.00	0.00	0.00
3.50	0.03	0.00	0.03	29.50	0.00	0.00	0.00
4.00	0.03	0.00	0.03	30.00	0.00	0.00	0.00
4.50	0.03	0.00	0.03	30.50	0.00	0.00	0.00
5.00	0.03	0.00	0.03	31.00	0.00	0.00	0.00
5.50	0.03	0.00	0.03	31.50	0.00	0.00	0.00
6.00	0.04	0.00	0.04	32.00	0.00	0.00	0.00
6.50	0.04	0.00	0.04	32.50	0.00	0.00	0.00
7.00	0.04	0.00	0.04	33.00	0.00	0.00	0.00
7.50	0.05	0.00	0.05	33.50	0.00	0.00	0.00
8.00	0.06	0.00	0.06	34.00	0.00	0.00	0.00
8.50	0.07	0.00	0.07	34.50	0.00	0.00	0.00
9.00	0.08	0.00	0.08	35.00	0.00	0.00	0.00
9.50	0.11	0.00	0.11	35.50	0.00	0.00	0.00
10.00	0.15	0.00	0.15	36.00	0.00	0.00	0.00
10.50	0.19	0.00	0.19				
11.00	0.33	0.00	0.33				
11.50	0.63	0.00	0.63				
12.00	3.49	0.00	3.49				
12.50	1.46	0.00	1.46				
13.00	0.67	0.00	0.67				
13.50	0.42	0.00	0.42				
14.00	0.32	0.00	0.32				
14.50	0.27	0.00	0.27				
15.00	0.22	0.00	0.22				
15.50	0.19	0.00	0.19				
16.00	0.18	0.00	0.18				
16.50	0.16	0.00	0.16				
17.00	0.15	0.00	0.15				
17.50	0.14	0.00	0.14				
18.00	0.12	0.00	0.12				
18.50	0.12	0.00	0.12				
19.00	0.11	0.00	0.11				
19.50	0.11	0.00	0.11				
20.00	0.10	0.00	0.10				
20.50	0.10	0.00	0.10				
21.00	0.10	0.00	0.10				
21.50	0.09	0.00	0.09				
22.00	0.09	0.00	0.09				
22.50	0.09	0.00	0.09				
23.00	0.08	0.00	0.08				
23.50	0.08	0.00	0.08				
24.00	0.08	0.00	0.08				
24.50	0.00	0.00	0.00				
25.00	0.00	0.00	0.00				
25.50	0.00	0.00	0.00				

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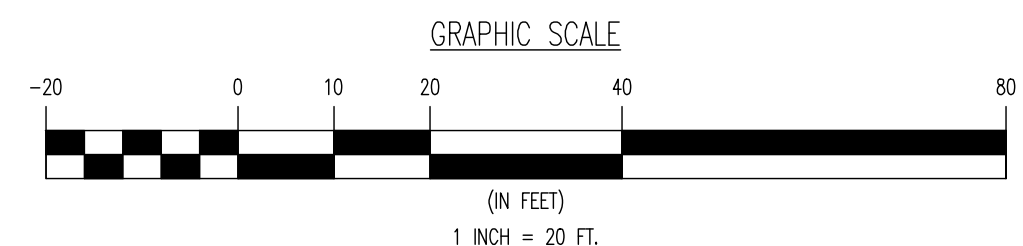
Project Reports

- 1 Routing Diagram
- 2 Area Listing (all nodes)
- 3 Soil Listing (all nodes)
- 4 Ground Covers (all nodes)

Current Event

- 5 Node Listing
- 6 Subcat 1S: Exis. SA South IMP
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- 10 Subcat 4S: Prop. SA South IMP
- 12 Subcat 5S: Prop. SA South PERV
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- 28 Link 13L: Ex. Site Total
- 30 Link 14L: Prop. Site Total

DRAINAGE AREA MAPS





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PROJECT: JAY VENTURES LLC PROPOSED SINGLE-FAMILY DWELLING BLOCK 2402, LOTS 15, 16, & 17 154 MILLERICK AVENUE TOWNSHIP OF LAWRENCE, MERCER COUNTY, NEW JERSEY	JOB No: 5945-26-01149	DATE: 06/11/2026
	DRAWN BY: DBS	SCALE: (H) 1"=20' (V)
	DESIGNED BY: RC	SHEET No:

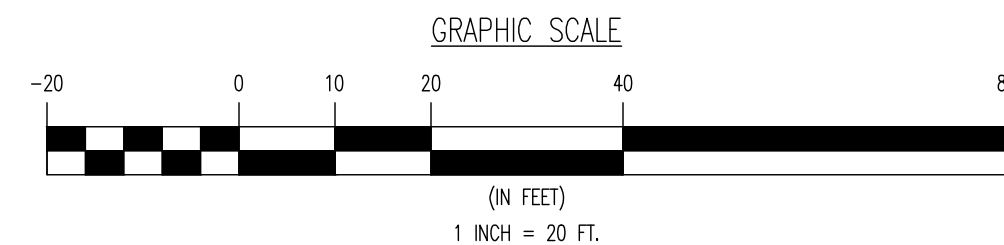
811

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GRADING/UTILITY GRAPHIC LEGEND

 EXIST. CUT WIRE  PROP. LIGHT POLE  EXIST. BUILDING  EXIST. SHOE BOX LIGHT  EXIST. CORBA LIGHT POLE  EXIST. TRAFFIC SIGNAL POLE  EXIST. MANHOLE  EXIST. "7\" INLET  EXIST. "8\" INLET  EXIST. "12\" INLET  EXIST. YARD INLET  EXIST. FLARED END SECTION  EXIST. HEADWALL  EXIST. UTILITY POLE	 PROPERTY LINE (PARCEL IN QUESTION)  OFF-SITE PROPERTY LINES  EXIST. MONITORING WELL  APPROX. TEST PIT LOCATION  EXIST. FIRE HYDRANT  EXIST. GAS VALVE  EXIST. GAS METER  EXIST. ELECTRIC METER  EXIST. ELECTRIC BOX  EXIST. CLEAN OUT  EXIST. WELL  EXIST. WATER SHUT OFF VALVE  EXIST. TELEPHONE BOX  EXIST. CABLE TV BOX  PROP. HEADWALL	 PROP. WATER VALVE  PROP. GAS VALVE  PROP. STORM CLEANOUT  PROP. SANITARY CLEANOUT  PROP. AREA LIGHT  PROP. OUTLET CONTROL STRUCTURE  PROP. DRAINAGE MANHOLE  PROP. SANITARY SEWER MANHOLE  PROP. "1\" INLET  PROP. "2\" INLET  PROP. "4\" INLET  PROP. "6\" INLET  PROP. "8\" INLET  PROP. "12\" INLET  PROP. YARD INLET  PROP. FLARED END SECTION	 EXIST. CABLE LINE  PROP. CABLE LINE  EXIST. ELECTRIC LINE  EXIST. ELECTRIC LINE  EXIST. FIBER OPTIC LINE  EXIST. FIBER OPTIC LINE  EXIST. GAS LINE  PROP. GAS LINE  EXIST. OVERHEAD WIRES  PROP. OVERHEAD WIRES  EXIST. TELEPHONE LINE  PROP. TELEPHONE LINE  EXIST. WATER SERVICE  PROP. WATER SERVICE  EXIST. FIRE SERVICE  PROP. FIRE SERVICE	 EXIST. UNDERGROUND ELEC./TELE. SERVICE (NO. & SIZE OF CONDUITS NOT DEFINED)  PROP. UNDERGROUND ELEC./TELE. SERVICE (NO. & SIZE OF CONDUITS NOT DEFINED)  EXIST. SANITARY SEWER LINE  PROP. SANITARY SEWER LINE  EXIST. FORCE MAIN  PROP. FORCE MAIN  EXIST. STORM DRAIN LINE  PROP. STORM DRAIN LINE  EXIST. UNDERGROUND UTILITY QUALITY LEVEL  EXIST. MINOR CONTOUR & ELEVATION  PROP. MINOR CONTOUR & ELEVATION  EXIST. MAJOR CONTOUR & ELEVATION  PROP. MAJOR CONTOUR & ELEVATION  PROP. DIRECTION OF DRAINAGE FLOW ARROW	 EXIST. SPOT ELEVATIONS  EXIST. GUTTER ELEV.  EXIST. TOP OF CURB ELEV.  EXIST. FINISH FLOOR ELEV.  EXIST. GARAGE FLOOR ELEV.  PROP. GRADE SPOT ELEV.  PROP. TOP OF CURB & FINISHED GRADE ELEV.  PROP. FINISHED FLOOR ELEV.  PROP. TOP OF WALL & FINISHED GRADE @ LOW SIDE OF WALL (ACTUAL BOTTOM OF WALL FOOTING TO BE ESTABLISHED BY WALL DESIGNER)  PROP. TOP OF EXTENDED CURB, (24) FINISHED GRADE @ HIGH SIDE OF EXTENDED CURB & (3) FINISHED GRADE @ LOW SIDE OF EXTENDED CURB
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