JONES ASSOCIATES
Foresters, Surveyors and Environmental Consultants

Development Review Application

Auburn Suburban Baseball and Softball
P.O. Box 1615
Auburn, Maine 04211

February 2023
JA Job #21-011AU

JONES
ASSOCIATES
Foresters, Surveyors and
Environmental Consultants

February 2023

Office of Economic and Community Development
City of Auburn
60 Court Street
Auburn, Maine 04210

Dear City of Auburn,

On behalf of Auburn Suburban Baseball and Softball, Jones Associates, Inc. is pleased to submit a Development Review Application for their proposed project located at Stevens Mill and Hotel Road in Auburn, Maine. The Maine Department of Environmental Protection (MDEP) has allowed the City of Auburn to review this application under delegated review for a Site Location of Development Application.

Other municipal permit applications include a Fill Permit and Driveway Entrance Application with the City of Auburn's Public Works Department. A Fill Permit was submitted in November of 2022 and a Driveway Entrance Application will be submitted prior to construction.

In addition to the Development Review Application, this project also required permitting through the MDEP and Army Corps. of Engineers in the form of a Tier I Natural Resources Protection Act (NRPA) Application. Approval was granted for these applications on November 10th, 2022 and November 25th, 2022, respectively.

Auburn Suburban Baseball and softball is seeking approval of the development review application conditionally, with field surface material to be finalized dependent on fundraising.

Sincerely,

Evan Jones

Rick Jones

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City of Auburn, Maine
Office of Planning & Permitting
Eric J. Cousens, Director
60 Court Street | Auburn, Maine 04210
www.auburnmaine.gov | 207.333.6601

Development Review Application

PROJECT NAME: Auburn Suburban Baseball and Softball

PROPOSED DEVELOPMENT ADDRESS: Stevens Mills and Hotel Road

PARCEL ID #: 217-002

REVIEW TYPE: **Site Plan** ☑ **Site Plan Amendment** ☐
Subdivision ☐ **Subdivision Amendment** ☐

PROJECT DESCRIPTION: Auburn Suburban Baseball and Softball is proposing the development of a new ballfield facility comprised of three ball fields, one practice in-field, concessions and meeting building, field lighting, batting cages, and parking facilities. The development will take place on an approximately 29.83 acre parcel that is currently undeveloped. Field constrction will either be natural grass fields or artificil turf fields depending on the level of fundraising obtained.

CONTACT INFORMATION:

Applicant	
Name:	Auburn Suburban Baseball and Softball
Address:	P.O. Box 1615
City / State	Auburn, Maine
Zip Code	04211
Work #:	
Cell #:	207-409-9269
Fax #:	
Home #:	
Email:	bashaw15@roadrunner.com fmkunas@hotmail.com

Property Owner	
Name:	Auburn Suburban Baseball and Softball
Address:	P.O. Box 1615
City / State	Auburn, Maine
Zip Code	04210
Work #:	
Cell #:	207-409-9269
Fax #:	
Home #:	
Email:	bashaw15@roadrunner.com fmkunas@hotmail.com

Project Representative	
Name:	Jones Associates, Inc.
Address:	280 Poland Spring Road
City / State	Auburn, Maine
Zip Code	04210
Work #:	207-241-0235
Cell #:	
Fax #:	
Home #:	
Email:	ejones@jonesai.com. jray@jonesai.com rjones@jonesai.com

Other professional representatives for the project (surveyors, engineers, etc.),	
Name:	
Address:	
City / State	
Zip Code	
Work #:	
Cell #:	
Fax #:	
Home #:	
Email:	

PROJECT DATA

The following information is required where applicable, in order complete the application

IMPERVIOUS SURFACE AREA/RATIO

Existing Total Impervious Area	0	sq. ft.
Proposed Total Paved Area	16,926.8	sq. ft.
Proposed Total Impervious Area	264,473.17	sq. ft.
Proposed Impervious Net Change	+ 264,473.17	sq. ft.
Impervious surface ratio existing	0	% of lot area
Impervious surface ratio proposed	20%	% of lot area

BUILDING AREA/LOT COVERAGE

Existing Building Footprint	0	sq. ft.
Proposed Building Footprint	1,425 sq. ft.	sq. ft.
Proposed Building Footprint Net change	+ 1,425 sq. ft.	sq. ft.
Existing Total Building Floor Area	0	sq. ft.
Proposed Total Building Floor Area	1,425 sq. ft.	sq. ft.
Proposed Building Floor Area Net Change	+ 1,425 sq. ft.	sq. ft
New Building	yes	(yes or no)
Building Area/Lot coverage existing	0	% of lot area
Building Area/Lot coverage proposed	0.1%	% of lot area

ZONING

Existing	Suburban Residential
Proposed, if applicable	Suburban Residential

LAND USE

Existing	Undeveloped / Wood Lot
Proposed	Recreational

RESIDENTIAL, IF APPLICABLE

Existing Number of Residential Units	0
Proposed Number of Residential Units	0
Subdivision, Proposed Number of Lots	0

PARKING SPACES

Existing Number of Parking Spaces	0
Proposed Number of Parking Spaces	134
Number of Handicapped Parking Spaces	7
Proposed Total Parking Spaces	134

ESTIMATED COST OF PROJECT: $954,000 - $3,029,049 (dependent upon fundraising)

DELEGATED REVIEW AUTHORITY CHECKLIST

SITE LOCATION OF DEVELOPMENT AND STORMWATER MANAGEMENT

Existing Impervious Area	0	sq. ft.
Proposed Disturbed Area	378,397.26	sq. ft.
Proposed Impervious Area	264,473.17	sq. ft.

1. ***If the proposed disturbance is greater than one acre, then the applicant shall apply for a Maine Construction General Permit (MCGP) with MDEP.***
2. ***If the proposed impervious area is greater than one acre including any impervious area crated since 11/16/05, then the applicant shall apply for a MDEP Stormwater Management Permit, Chapter 500, with the City.***
3. ***If total impervious area (including structures, pavement, etc) is greater than 3 acres since 1971 but less than 7 acres, then the applicant shall apply for a Site Location of Development Permit with the City. If more than 7 acres then the application shall be made to MDEP unless determined otherwise.***
4. ***If the development is a subdivision of more than 20 acres but less than 100 acres then the applicant shall apply for a Site Location of Development Permit with the City. If more than 100 acres then the application shall be made to MDEP unless determined otherwise.***

TRAFFIC ESTIMATE

Total traffic estimated in the peak hour-existing (Since July 1, 1997) 0 passenger car equivalents (PCE)

Total traffic estimated in the peak hour-proposed (Since July 1, 1997) 146 passenger car equivalents (PCE)

If the proposed increase in traffic exceeds 100 one-way trips in the peak hour then a traffic movement permit will be required.

Zoning Summary

1. Property is located in the Suburban Residential zoning district.
2. Parcel Area: 29.83 acres / 1,299,394.8 square feet(sf).

Regulations	Required/Allowed	Provided
Min Lot Area	21,780	/ 1,299,394.8
Street Frontage	150	/ 1,721
Min Front Yard	25	/ See S1 Plan
Min Rear Yard	23	/ See S1 Plan
Min Side Yard	15	/ See S1 Plan
Max. Building Height	35	/ See S1 Plan
Use Designation	Recreational / municipal	/ Recreational
Parking Requirement	1 space/ per	square feet of floor area
Total Parking:	134 spaces	/
Overlay zoning districts (if any):	Manufactured Housing	/ /
Urban impaired stream watershed?	YES/NO If yes, watershed name	No

DEVELOPMENT REVIEW APPLICATION SUBMISSION

Submissions shall include fifteen (15) complete packets containing the following materials:

1. 5 Full size plans and 10 smaller (no larger than 11" x 17") plans containing the information found in the attached sample plan checklist.
2. Application form that is completed and signed by the property owner or designated representative. (NOTE: All applications will be reviewed by staff and any incomplete application will not be accepted until all deficiencies are corrected.
3. Cover letter stating the nature of the project.
4. All written submittals including evidence of right, title and interest.
5. Copy of the checklist completed for the proposal listing the material contained in the submitted application.

Refer to the application checklist for a detailed list of submittal requirements.

To view the City of Auburn Zoning Ordinance, go to:
www.auburnmaine.gov under City Departments / Planning, Permitting & Code / Subdivisions / Land Use /Zoning Ordinance

I hereby certify that I am the Owner of record of the named property, or that the owner of record authorizes the proposed work and that I have been authorized by the owner to make this application as his/her authorized agent. I agree to conform to all applicable laws of this jurisdiction. In addition, I certify that the City's authorized representative shall have the authority to enter all areas covered by this permit at any reasonable hour to enforce the provisions of the codes applicable to this permit.

This application is for development review only; a Performance Guarantee, Inspection Fee, Building Permit Application and other associated fees and permits will be required prior to construction.

Signature of Applicant:	Agent of Applicant: Jones Associates, Inc.	**Date:** February 9th, 2023

City of Auburn, Maine
Office of Planning & Permitting
Eric J. Cousens, Director
60 Court Street | Auburn, Maine 04210
www.auburnmaine.gov | 207.333.6601

Development Review Checklist

The following information is required where applicable to be submitted for an application to be complete

PROJECT NAME: Auburn Suburban Baseball and Softball

PROPOSED DEVELOPMENT ADDRESS: Stevens Mill and Hotel Road

PARCEL #: 217-002

Required Information		*Check when Submitted*		*Applicable Ordinance*
Site Plan		*Applicant*	*Staff*	
	Owner's Names/Address	X		
	Names of Development	X		
	Professionally Prepared Plan	X		
	Tax Map or Street/Parcel Number	X		
	Zoning of Property	X		
	Distance to Property Lines	X		
	Boundaries of Abutting land	X		
	Show Setbacks, Yards and Buffers	X		
	Airport Area of Influence	N/A		
	Parking Space Calcs	N/A		
	Drive Openings/Locations	X		
	Subdivision Restrictions	N/A		
	Proposed Use	X		
	PB/BOA/Other Restrictions			
	Fire Department Review	X		
	Open Space/Lot Coverage	X		

Required Information		*Check when Submitted*		*Applicable Ordinance*
Landscape Plan		***Applicant***	***Staff***	
	Greenspace Requirements	N/A		
	Setbacks to Parking	X		
	Buffer Requirements	X		
	Street Tree Requirements	N/A		
	Screened Dumpsters	X		
	Additional Design Guidelines	N/A		
	Planting Schedule	N/A		
Stormwater & Erosion Control Plan		***Applicant***	***Staff***	
	Compliance w/ chapter 500	X		
	Show Existing Surface Drainage	X		
	Direction of Flow	X		
	Location of Catch Basins, etc.	X		
	Drainage Calculations	X		
	Erosion Control Measures	X		
	Maine Construction General Permit	X		
	Bonding and Inspection Fees	X		
	Post-Construction Stormwater Plan	X		
	Inspection/monitoring requirements	X		
Lighting Plan		***Applicant***	***Staff***	
	Full cut-off fixtures	X		
	Meets Parking Lot Requirements	N/A		
Traffic Information		***Applicant***	***Staff***	
	Access Management	X		
	Signage	X		
	PCE - Trips in Peak Hour	X		

Required Information		*Check when Submitted*		*Applicable Ordinance*
	Vehicular Movements	X		
	Safety Concerns	X		
	Pedestrian Circulation	X		
	Police Traffic	X		
	Engineering Traffic	X		
Utility Plan		***Applicant***	***Staff***	
	Water	X		
	Adequacy of Water Supply	X		
	Water main extension agreement	N/A		
	Sewer	N/A		
	Available city capacity	N/A		
	Electric	X		
	Natural Gas	N/A		
	Cable/Phone	N/A		
Natural Resources		***Applicant***	***Staff***	
	Shoreland Zone	N/A		
	Flood Plain	X		
	Wetlands or Streams	X		
	Urban Impaired Stream	N/A		
	Phosphorus Check	N/A		
	Aquifer/Groundwater Protection	N/A		
	Applicable State Permits	X		
	Lake Auburn Watershed	N/A		
	Taylor Pond Watershed	N/A		
Right, Title or Interest		***Applicant***	***Staff***	
	Verify	X		
	Document Existing Easements, Covenants, etc.	X		

Required Information		*Check when Submitted*		*Applicable Ordinance*
Technical & Financial Capacity		***Applicant***	***Staff***	
	Cost Est./Financial Capacity	X		
	Performance Guarantee	N/A		
State Subdivision Law		***Applicant***	***Staff***	
	Verify/Check	N/A		
	Covenants/Deed Restrictions	N/A		
	Offers of Conveyance to City	N/A		
	Association Documents	N/A		
	Location of Proposed Streets & Sidewalks	N/A		
	Proposed Lot Lines, etc.	N/A		
	Data to Determine Lots, etc.	N/A		
	Subdivision Lots/Blocks	N/A		
	Specified Dedication of Land	N/A		
Additional Subdivision Standards		***Applicant***	***Staff***	
	Mobile Home Parks	N/A		
	PUD	N/A		
A JPEG or PDF of the proposed site plan		***Applicant***	***Staff***	
		X		
Final sets of the approved plans shall be submitted digitally to the City, on a CD or DVD, in AutoCAD format R 14 or greater, along with PDF images of the plans for archiving				

Agent Authorization Letter

Letter of Application

Dear City of Auburn Planning Board,

We, Auburn Suburban Baseball and Softball, authorize Jones Associates Inc. to act as our agent in the processing of this application.

Respectfully,

Travis Bashaw
ASBS Past President & POC

Section 1: Project Description

Auburn Suburban Baseball & Softball (ASBS) is a non-profit youth sports organization serving Auburn, Maine. Nationally, the league is chartered with Cal Ripken Baseball affording the ability to expand ASBS scope to local, state, and national level play. This partnership has allowed ASBS to expand their reach, serve more children, and continue to foster development at all ages and ability levels. ASBS currently supports roughly 500 boys & girls ranging in age from 4-16 years. With nearly 50 teams in their 2019 season, they were able to maximize playing time and development for each child and each team. ASBS supports their own regular season, in house playoffs for several leagues and participation in Regional and State All Star Tournaments.

As a result of the need to move from its existing facility, ASBS is planning for a new facility to be located on the corner of Hotel & Stevens Mills Roads in Auburn. The organization plans to make this the exclusive home for all ASBS games, events & activities. The complex will be composed of 4 fields to support youth development of both baseball and softball.

This project will consist of a new ballfield facility with two little league-size fields and one Babe Ruth-size baseball field, as well as a practice field with two batting cages. The facility will be served by three parking areas such that they can be built as the facility is phased into use. A concession building with bathroom facilities will be located at the front of the facility along with a maintenance and storage garage. Portable bathrooms will also serve the facilities temporarily and with fluctuations in seasonal demand.

The scope of work includes tree clearing/grubbings, stump/boulder removal, construction of the gravel access road, installation of a storm drain system with vegetated swales, and the construction of grassed under drained soil filters. Final construction-level plans for stormwater management system will need to be submitted once fundraising has determined field surface material.

Section 2: Title, Right or Interest

Bk 10273 Ps149 #133
01-02-2020 @ 02:53p

NOT AN OFFICIAL COPY

QUITCLAIM DEED WITH COVENANT

NOT AN OFFICIAL COPY

HELEN R. FOSS and **ROBERT E. FOSS**, husband and wife, of Auburn, County of Androscoggin, State of Maine, for consideration paid, **grant** to **AUBURN SUBURBAN BASEBALL AND SOFTBALL**, a Maine non-profit corporation with a registered address of 45 Rosewood Road, Auburn, ME 04210, with **quitclaim covenant**, real property situated on **both Hotel and Stevens Mill Road** in the **City of Auburn**, County of Androscoggin, State of Maine, described in "**EXHIBIT A**" attached hereto.

The above-described premises are conveyed **subject to the restriction** that these premises shall be used primarily for youth outdoors recreational purposes including playing, coaching and competing at baseball and softball in the greater community of Auburn, Maine. This restriction shall prohibit the sale of these premises or any portion of it to any person or entity that will not use these premises as required by this paragraph. The grantee, its officers and assigns agree that grantors, their personal representative, heirs and assigns may enforce or modify the terms of this restriction with the grantee, its officers or assigns being liable for all costs of said enforcement or change, including reasonable attorney's fees. By accepting delivery of this deed, Auburn Suburban Baseball and Softball acknowledges, accepts and agrees to the terms of the above-stated restriction.

MAINE REAL ESTATE TRANSFER TAX PAID

WITNESS our hands and seals this 30th day of December, 2019.

Witness

Witness

HELEN R. FOSS

ROBERT E. FOSS

AUBURN SUBURBAN BASEBALL AND SOFTBALL

Witness

By: **Travis Bashaw**, its President

STATE OF MAINE
ANDROSCOGGIN, SS.

December 30, 2019

Then personally appeared before me the above-named **Helen R. Foss** and acknowledged the foregoing instrument to be her free act and deed.

Attorney-at-Law/Notary Public

Printed Name:

ANITA L. DIONNE
Notary Public-Maine
My Commission Expires
October 05, 2021

"EXHIBIT A"

NOT AN OFFICIAL COPY

A certain parcel of land abutting Stevens Mill Road and Hotel Road in the City of Auburn, County of Androscoggin State of Maine, described as follows:

NOT AN OFFICIAL COPY

1. Beginning at an iron pin at the intersection of the southerly line of Stevens Mill Road and the Westerly line of Hotel Road; thence South fourteen degrees fifty-three minutes forty-nine seconds West (S 14° 53' 49" W) along said westerly line of Hotel Road to an iron pin marking the northeasterly corner of land now or formerly of Henry Bellavance as described in a deed recorded in Book 1089, Page 60, in the Androscoggin County Registry of Deeds;

2. Thence North seventy-five degrees six minutes eleven seconds West (N 75° 06' 11" W) along the northerly line of said Henry Bellavance one hundred seventy-three (173') feet to an iron pin;

3. Thence South fourteen degrees fifty-three minutes forty-nine seconds West (S 14° 53' 49" W) along the westerly line of said Henry Bellavance two hundred (200') feet to an iron pin;

4. Thence North seventy-five degrees seven minutes ten seconds West (N 75° 07' 10" W) one thousand twenty-eight and forty-four hundredths (1028.44') feet to an iron pin on the line of William H. Marshall et al;

5. Thence North twenty-one degrees twenty-one minutes eleven seconds West (N 21° 21' 11" W) five hundred fifty and twenty-six hundredths (550.26') feet to an iron pin;

6. Thence North fifty-four degrees twenty-four minutes thirty-seven seconds East (N 54° 24' 37" E) six hundred thirty-five and fifty-seven hundredths (635.57') feet to an iron pin on the line of Roland Houle;

7. Thence South seventy-six degrees eleven minutes East (S 76° 11' E) two hundred thirty-one and ninety-five hundredths (231.95') feet to an iron pin;

8. Thence North thirteen degrees forty-nine minutes East (N 13° 49' E) one hundred fifty-one and eighty-six hundredths (151.86') feet to an iron pin on the southerly line of Stevens Mill Road;

9. Thence South seventy-six degrees eleven minutes East (S 76° 11' E) along said southerly line of Stevens Mill Road ninety-seven and thirty-four hundredths (97.34') feet to an iron pin;

10. Thence South sixty-six degrees forty-three minutes thirteen seconds East (S 66° 43' 13' E) eight hundred four and sixty-six hundredths (804.66') feet along said southerly line of Stevens Mill Road to the point of beginning.

This parcel comprises a total land area of 30.1 acres.

FOR SOURCE OF TITLE see a Quitclaim Deed with Covenant from Land Tree Corp. to Robert E. Foss and Helen R. Foss dated November 21, 2019, recorded in said Registry of Deeds in Book 10243, Page 307.

JONES ASSOCIATES
Foresters, Surveyors and Environmental Consultants

WETLAND REPORT

LAND TREE CORPORATION – ROBERT FOSS

STEVENS MILL RD

AUBURN, MAINE

Prepared for:	Prepared by:
Harriman Associates 46 Harriman Dr. Auburn, Maine 04210	Jones Associates, Inc. 280 Poland Spring Road Auburn, Maine 04210

JA Job #18-011AU
May 2018

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INTRODUCTION

Jones Associates, Inc. was contracted to provide a delineation review of a previously conducted wetland delineation that took place in July of 2007 for Harriman Associates by Jones Associates Inc. This lot is approximately 74.9 acres and is located off of Hotel and Steven Mills Road. The lot can be found on the town's website with a Parcel ID of (217-002). This update confirms that wetlands on site are undisturbed. Wetland flags placed in 2007 have been freshened with new blue sub-zero flagging. Where old flagging could not be found new flags have been placed. New wetland data sheets were collected to confirm wetlands have not changed on site, and will be provided with this report. Streams and vernal pools were also located by transecting the property. This additional information was located with GPS. The following report compares 2007 site conditions observed to those in April of 2018.

Wetland/upland boundaries for the 2007 wetland delineation were identified and delineated according to *U.S. Army Corps of Engineers (ACOE) Wetlands Delineation Manual (Environmental Laboratory 1987)* and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region, January 2012*. Wetlands were identified based on the presence of hydric soil (inundated or saturated soil conditions resulting from permanent or periodic inundation by ground water or surface water), hydrology (movement and distribution of water), and predominance of hydrophytic species (Hydrophytes: vegetation typically adapted for life in saturated soil conditions).

Wetland delineations consist of transecting the property, examining periodic soil samples, observing any evidence of hydrology and assessing each stratum of vegetation for its percentage of hydrophytic species. If all three factors were evident, the study plot was considered wetland habitat. Transitions between upland and wetland were clearly marked with blue sub-zero flagging every 30-40 feet, and labeled with alphanumeric codes to identify individual systems (A1, A2, A3….).

EXISTING CONDITIONS

The subject site is located in Auburn, Maine. The property is bounded by Minot Avenue, Hotel Road, Stevens Mill Road, and Garfield Road. The lot is primarily bounded by private property. The site has road frontage on all aforementioned roads except for Minot Ave. The parcel is very large for this area of town and lies amongst smaller residential parcels and developments on all sides. Traditional use of the parcel has been for timber harvest evidenced by cut stumps and skid trails.

General topography within the site is gently rolling with drainage patterns to the southeast. A number of narrow drainage channels empty into a large stream which flows across the southern boundary of the property. The stream is a main tributary to Taylor Brook, which flows into the Little Androscoggin River.

Conditions during the delineation review in early April 2018 included snow and limited herbaceous spring growth. Unlike the delineation which took place in July 2007, during peak growing season. It is expected very similar herbaceous vegetation is still present in 2018 considering soil conditions, hydrology, trees, shrubs and saplings did match very closely to 2007 wetland delineation.

Approximately two thirds of the property is forested uplands. These forested portions of the site have been timber harvested within the past few decades and the residual forested landscape is made up of pole sized saw-timber. Common vegetation included: eastern white pine (*Pinus strobus*), eastern hemlock (*Tsuga canadensis*), black cherry (*Prunus serotina*), northern red oak (*Quercus rubra*), maples (*Acer spp.),* birches (*Betula spp*.), white ash (*Fraxinus Americana*), American beech (*Fagus grandifolia*) and trembling aspen (*Populus tremuloides*). Understory vegetation found in these areas include the same tree species as seedlings and saplings, as well as raspberries, lowbush blueberry (*Vaccinium angustifolium*), several fern species, morrows honeysuckle (*Lonicera morrowii*), Japanese barberry (*Berberis thunbergii*), and ground cedar (*Diphasiastrum complanatum*).

WETLAND CHARACTERISTICS

The term "wetlands" means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.--Corps of Engineers Wetlands Delineation Manual (U.S. Army Corps of Engineers 1987)

Not much has changed in regards to the wetlands that were described during the wetland delineation in 2007. The few changes include the addition of two new small sections of stream and two vernal pools. The site, as it did previously, contains many small drainages and some larger streams, all of which are connected as part of a large wetland system. Three wetland types were observed during the delineation review and are described individually in the following paragraphs.

EMERGENT WETLANDS

In 2007 JAI observed only one area of emergent wetlands during the site visit. A small area (<1/4 acre) of cattail (*Typha spp.)* was observed along the road frontage of Stevens Mill Road just east of where Cedar Wood Road meets Stevens Mill Road. This area was once part of a larger portion of emergent wetland which lies on the north side of Stevens Mill Road. It appears construction of Stevens Mill Road dissected this wetland and is now hydrologically connected via a road culvert.

During the 2018 delineation review JAI observed this emergent wetland again. It now contains abundant common reed grass (*Phragmites australis*) and cattail. Common reed grass has taken over a good portion of the emergent wetland and appears to be out-competing the previously existing cattail. The wetland across the street to the north has not been affected by common reed grass to the same degree. The size of this wetland has also increased due to the hydraulic restrictions of the road.

SCRUB SHRUB WETLANDS:

During the 2007 delineation it was described that areas immediately adjacent to the streams and small drainages are scrub shrub wetland which lie in depressions. Wetland types were for the most part narrow strips paralleling drainages. The typical species observed included Gray Birch (*Betula populifolia),* Black Willow *(Salix nigra),* Bebb Willow (*Salix bebbiana),* Cinnamon Fern (*Osmunda cinnamomea*), Sensitive Fern (*Onoclea sensibilis),* Spirea (*Spirea),* Dark Green Bulrush (*Scirpus atrovirens*), Broom Sedge (*Carex scoparia),* Smooth alder (*Alnus serrulata*), Speckled Alder (*Alnus incana),* Winterberry (*Ilex verticillata*) and Red Maple (*Acer rubrum).*

As of April 2018 observations through transecting the property, refreshing the wetland flags, and auguring new test pits indicate that this wetland type has not been disturbed and that little to no change in this wetland type has occurred.

FORESTED WETLANDS:

The majority of wetlands found on this property were forested wetlands and most drainages are surrounded by forested wetlands. These wetland areas typically have distinct banks separating the uplands from the wetlands. Typical wetland vegetation includes red maple *(Acer rubrum),* balsam fir (*Abies balsamea),* larch (*Larix laricina),* black ash (*Fraxinus nigra),* cinnamon fern (*Osmunda cinnamomea*), sensitive fern (*Onoclea sensibilis),* skunk cabbage (*Symplocarpus foetidus),* highbush blueberry (*Vaccinium corymbosum),* American elm (*Ulmus Americana)* yellow birch (*Betula alleghaniensis)* and eastern hemlock (*Tsuga canadensis*).

The majority of the eastern half of the parcel is a red maple swamp. This area has seen limited timber harvesting due to its wet conditions. In some places within these wetlands the first horizon of soil was deeper than 20” of organic matter, instantly classifying them as hydric soils. Often, immediately below the organic layer was a light gray to almost white depleted sandy soil. Soil conditions like this are prime growing conditions for species such as skunk cabbage and cinnamon fern which are very abundant in this portion of the site. Cinnamon fern is a “facultative wet” species which prefers moist soil conditions. Skunk cabbage is an “obligate” species which is only found in the wettest of areas. Other dominant species found in the red maple swamp include balsam fir and yellow birch.

Slight elevational changes and a dominant hemlock overstory were the leading factors when reviewing delineation lines. To the average eye these areas may seem to be contiguous with the wetlands, however dominant upland vegetation and lack of hydrology put these areas into the upland category. Observations through transecting the property, refreshing the wetland flags, and auguring new test pits indicate that this wetland type has not been disturbed and that little to no change in this wetland type has occurred.

SOILS

According to U.S. Department of Agriculture, Natural Resources Conservation Service, the soil series typed within the property area are Brayton Fine Sandy Loam and Sheepscot Fine Sandy Loam. Characteristics of each series are described in the soil report according to: Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture, Official Soil Series Descriptions, https://soilseries.sc.egov.usda.gov/osdname.aspx.

ADAM SERIES

The Adams series consists of very deep, excessively and somewhat excessively drained soils formed in glacial-fluvial or glacio-lacustrine sand. They are on outwash plains, deltas, lake plains, moraines, terraces, and eskers. Saturated hydraulic conductivity is high or very high. Slope ranges from 0 through 70 percent. Mean annual temperature is 6 degrees C. and mean annual precipitation is 970 millimeters.

TYPICAL PEDON: Adams loamy fine sand, on a 1 percent slope in a forested area. (Colors are for moist soil unless otherwise noted.)

GEOGRAPHIC SETTING: Adams soils are on nearly level to very steep sand plains, kames, moraines, benches, eskers, deltas, and terraces. Slope ranges from 0 through 70 percent. These soils formed in sandy glaciofluvial or glaciolacustrine deposits from predominantly crystalline rock or meta-sandstone. Mean annual temperature ranges from 3 to 8 degrees C., mean annual precipitation ranges from 760 to 1270 millimeters, and mean annual frost-free period ranges from 70 to 160 days. Elevation ranges from 91 to 915 meters above sea level.

DRAINAGE AND SATURATED HYDRAULIC CONDUCTIVITY: Somewhat excessively drained. Runoff is very slow to medium. Saturated hydraulic conductivity is high or very high in the mineral surface layer and upper part of the subsoil and very high in the lower part of the subsoil and substratum.

USE AND VEGETATION: Extensive areas are idle and support aspen, birch, and pine seedlings or sweet fern, spirea, and brambles. Uncleared areas support maple, beech, spruce, and pine. Farmed areas are used mainly for hay or pasture with limited acreages of corn and small grain.

ELMWOOD SERIES

The Elmwood series consists of very deep, moderately well drained soils that formed in a thin mantle of loamy outwash materials over clayey marine or lacustrine deposits on lake and marine plains, and outwash plains and deltas. Permeability is moderately rapid in the loamy mantle and slow or very slow in the clayey substratum. Slope ranges from 0 to 25 percent. Mean annual temperature is about 45 degrees F, and mean annual precipitation is about 43 inches at the type location.

TYPICAL PEDON: Elmwood fine sandy loam - grassland. (Colors are for moist soil)

GEOGRAPHIC SETTING: Elmwood soils are on glaciolacustrine, marine or outwash plains and deltas. Slope ranges from 0 to 25 percent. These soils formed in loamy outwash or lacustrine materials underlain by fine-textured lacustrine or marine deposits. The climate is humid and cool temperate. Mean annual temperature ranges from 43 to 46 degrees F, and the mean annual precipitation ranges from 38 to 55 inches. The frost-free season ranges from 130 to 190 days. Elevation ranges from 5 to 900 feet above mean sea level.

DRAINAGE AND PERMEABILITY: Moderately well drained. Permeability is moderately rapid in the loamy mantle and slow to very slow in the clayey substratum.

USE AND VEGETATION: Most areas of this soil are used for hay and pasture with a small amount used for growing row crops and woodland. Common tree species are white pine, red oak, hemlock, sugar maple, beech, elm, gray birch and white birch.

MERRIMAC SERIES

The Merrimac series consists of very deep, somewhat excessively drained soils formed in outwash. They are nearly level through very steep soils on outwash terraces and plains and other glaciofluvial landforms. Slope ranges from 0 through 35 percent. Saturated hydraulic conductivity is high or very high. Mean annual temperature is about 48 degrees F. (9 degrees C.) and mean annual precipitation is about 42 inches (1067 millimeters).

TYPICAL PEDON: Merrimac fine sandy loam cultivated, at an elevation of about 122 meters. (Colors are for moist soil.)

GEOGRAPHIC SETTING: Merrimac soils are level to very steep soils on outwash plains and valley trains, and associated kames, eskers, stream terraces and water deposited parts of moraines. The steeper slopes are on the margin escarpments of terraces and plains, and on eskers and kames. Slope ranges from 0 through 35 percent. The soils formed in water sorted gravelly and sandy material derived mainly from granitic, gneissic, and some schistose rocks. Mean annual precipitation ranges from 28 through 55 inches (711 through 1397 millimeters); mean annual air temperature ranges from 45 through 50 degrees F. (7 through 10 degrees C.), mean growing season ranges from 120 through 200 days.

DRAINAGE AND SATURATED HYDRAULIC CONDUCTIVITY: Somewhat excessively drained. Runoff is negligible through medium. Saturated hydraulic conductivity is high or very high.

USE AND VEGETATION: Most areas are cultivated and used for growing hay, pasture, silage, corn, or truck crops. Some areas are used to grow tobacco in the Connecticut River Valley in Massachusetts and Connecticut. Some areas are forested with mostly white pine, gray birch, hemlock, red maple, and red, black, white, and scarlet oaks.

NINIGRET SERIES

The Ninigret series consists of very deep, moderately well drained soils formed in loamy over sandy and gravelly glacial outwash. They are nearly level to strongly sloping soils on glaciofluvial landforms, typically in slight depressions and broad drainage ways. Slope ranges from 0 through 15 percent. Saturated hydraulic conductivity is moderately high or high in the solum and high or very high in the substratum. Mean annual temperature is about 49 degrees F. and mean annual precipitation is about 48 inches.

TYPICAL PEDON: Ninigret fine sandy loam - idle field, 2 percent slope. (Colors are for moist soil unless otherwise noted.)

GEOGRAPHIC SETTING: Ninigret soils are nearly level to strongly sloping soils on glaciofluvial landforms. Slopes range from 0 through 15 percent, but commonly are 0 through 8 percent. The soils formed in loamy over stratified sandy and gravelly glacial outwash derived from a variety of acid rocks. Mean annual temperature ranges from 45 through 52 degrees F., mean annual precipitation ranges from 35 through 50 inches, and the growing season ranges from 120 through 195 days.

DRAINAGE AND SATURATED HYDRAULIC CONDUCTIVITY: Moderately will drained. Surface runoff is negligible to medium. Saturated hydraulic conductivity is moderately high or high in the solum and high or very high in the substratum. The soil has a seasonal high water table.

USE AND VEGETATION: Much of the acreage is used for cultivated crops, hay, or pasture. Common crops are silage corn, vegetables, tobacco, and nursery stock. Some areas are idle, wooded, or used for community development. Common trees are red, white and black oak, red maple, sugar maple, white pine, gray birch, white ash, and hemlock.

SCARBORO SERIES

The Scarboro series consists of very deep, very poorly drained soils in sandy glaciofluvial deposits on outwash plains, deltas, and terraces. They are nearly level soils in depressions. Slope ranges from 0 through 3 percent. Saturated hydraulic conductivity is high or very high. Mean annual temperature is about 49 degrees F. (9 degrees C.) and the mean annual precipitation is about 44 inches (1118 millimeters).

TYPICAL PEDON: Scarboro mucky fine sandy loam woodland; in an area of Scarboro mucky fine sandy loam at an elevation of about 212 meters. (Colors are for moist soil.)

GEOGRAPHIC SETTING: Scarboro soils are in level or nearly level depressions on outwash plains, deltas, and terraces. Slope is less than 3 percent. The soils formed in sandy glaciofluvial deposits. Mean annual temperature ranges from 46 through 57 degrees F. (8 through 14 degrees C.) and mean annual precipitation ranges from 38 through 55 inches (965 through 1397 millimeters).

DRAINAGE AND SATURATED HYDRAULIC CONDUCTIVITY: Very poorly drained. Saturated hydraulic conductivity is high or very high. Surface runoff is high or very high. The water table is at or near the surface for 6 to 12 months of the year, and many areas are ponded for short periods.

USE AND VEGETATION: Shrub and brush land or woodland. Common shrubs are speckled alder, smooth alder, rhoda azalea, steeplebush spirea, leatherleaf, labrador-tea, winterberry, highbush blueberry, large cranberry, black huckleberry, poison sumac, and sheep laurel. Common trees are red maple, slippery elm, Atlantic white cedar, tamarack, eastern white pine, willow, and gray birch.

WALPOLE SERIES

The Walpole Series consists of very deep, poorly drained sandy soils formed in outwash and stratified drift. They are nearly level to gently sloping soils in low-lying positions on terraces and plains. Slope ranges from 0 to 8 percent. Saturated hydraulic conductivity is moderately high or high in the surface layer and subsoil, and high or very high in the substratum. Mean annual temperature is about 48 degrees F., and mean annual precipitation is about 43 inches.

TYPICAL PEDON: Walpole sandy loam - forested, 2 percent slope. (Colors are for moist soil.)

GEOGRAPHIC SETTING: Walpole soils are nearly level and gently sloping soils in shallow drainageways and low-lying areas on terraces and plains. Slope ranges from 0 to 8 percent. The soils formed in sandy glaciofluvial and stratified drift materials derived mainly from crystalline rocks. Mean annual temperature ranges from 7 to 12 degrees C., mean annual precipitation ranges from 940 to 1270 mm, and the growing season ranges from 120 to 190 days.

DRAINAGE AND SATURATED HYDRAULIC CONDUCTIVITY: Poorly drained. Surface runoff is slow. Saturated hydraulic conductivity is moderately high or high in the surface layer and subsoil, and high or very high in the substratum. Walpole soils have a water table at or near the surface much of the year.

USE AND VEGETATION: Most areas are wooded. Cleared areas are used for hay and pasture. Drained areas are used for silage corn and hay. hemlockThe typical vegetation consists of a forested community with canopy trees of Red Maple, American Elm, and/or scattered black gum, swamp white oak and yellow birch and/or eastern hemlock; with an shrub understory of spicebush, silky dogwood, northern arrow-wood with sweet pepperbush, and winterberry in slightly wetter situations; and a herb layer of cinnamon fern, royal fern, false hellebore, violets, wood-reed grass, with skunk cabbage and sedges.

WHATELY SERIES

The Whately series consists of very deep, very poorly drained soils that formed in a thin mantle of loamy outwash materials over clayey marine or lacustrine deposits on lakes and marine plains, and outwash plains and deltas. Permeability is moderately slow to moderately rapid in the organic surface, moderately rapid in the loamy mantle, and slow or very slow in the clayey substratum. Slope ranges from 0 to 3 percent. Mean annual temperature is about 45 degrees F, and mean annual precipitation is about 43 inches at the type location.

TYPICAL PEDON: Whately muck-pasture (Colors are for moist soil.)

GEOGRAPHIC SETTING: Whately soils are in depressional areas on glaciolacustrine, marine or outwash plains and deltas. Slope ranges from 0 to 3 percent. The soil formed in loamy outwash or lacustrine materials underlain by fine-textured lacustrine or marine deposits. The climate is humid and cool temperate. Mean annual temperature ranges from 43 to 46 degrees F, and the mean annual precipitation ranges from 40 to 48 inches. The frost-free season ranges from 90 to 160 days. Elevation ranges from 5 to 900 feet above mean sea level.

USE AND VEGETATION: Most of the soil is idle or in woodland although a few areas are pastured. Present vegetation is primarily alder and sedges. Balsam fir, tamarack, black spruce, and red maple are common in forested areas.

RARE OR UNUSUAL FEATURES

During our investigations Jones Associates, Inc. did not observe any rare or unusual plant or animal species within the mapped wetland area. Wetlands on this property were dominated by plant communities typical of this region of Maine.

VERNAL POOLS

In early April snowmelt caused many small shallow pockets of water to appear on site, most of which are only a few inches in depth and were unlikely to become vernal pools. During the initial site visits potential vernal pools were marked with a GPS if they were approximately 4-6 inches in depth or greater. Vernal pool presence and classification was determined by multiple visits to the pools during spotted/blue salamander breeding season (April 20th - May 10th), and wood frog breeding season (April 10th – April 25th)

Seven potential vernal pools were initially located on site. Of these seven potential vernal pools only one of them became an actual vernal pool (Vernal Pool #1) which is classified as a significant vernal pool and is shown on the attached maps. This vernal pool is classified as significant because the MDEP criterion defines a vernal pool with 20 or more spotted salamander egg masses to be significant. 46 spotted salamander egg masses were found in this pool at the height of the year. 40 egg masses from wood frogs are needed to define a significant vernal pool. During the height of the year only 13 wood frog egg masses were found classifying them as insignificant in this pool. Nevertheless, it is still a significant vernal pool as defined by the spotted salamander requirement.

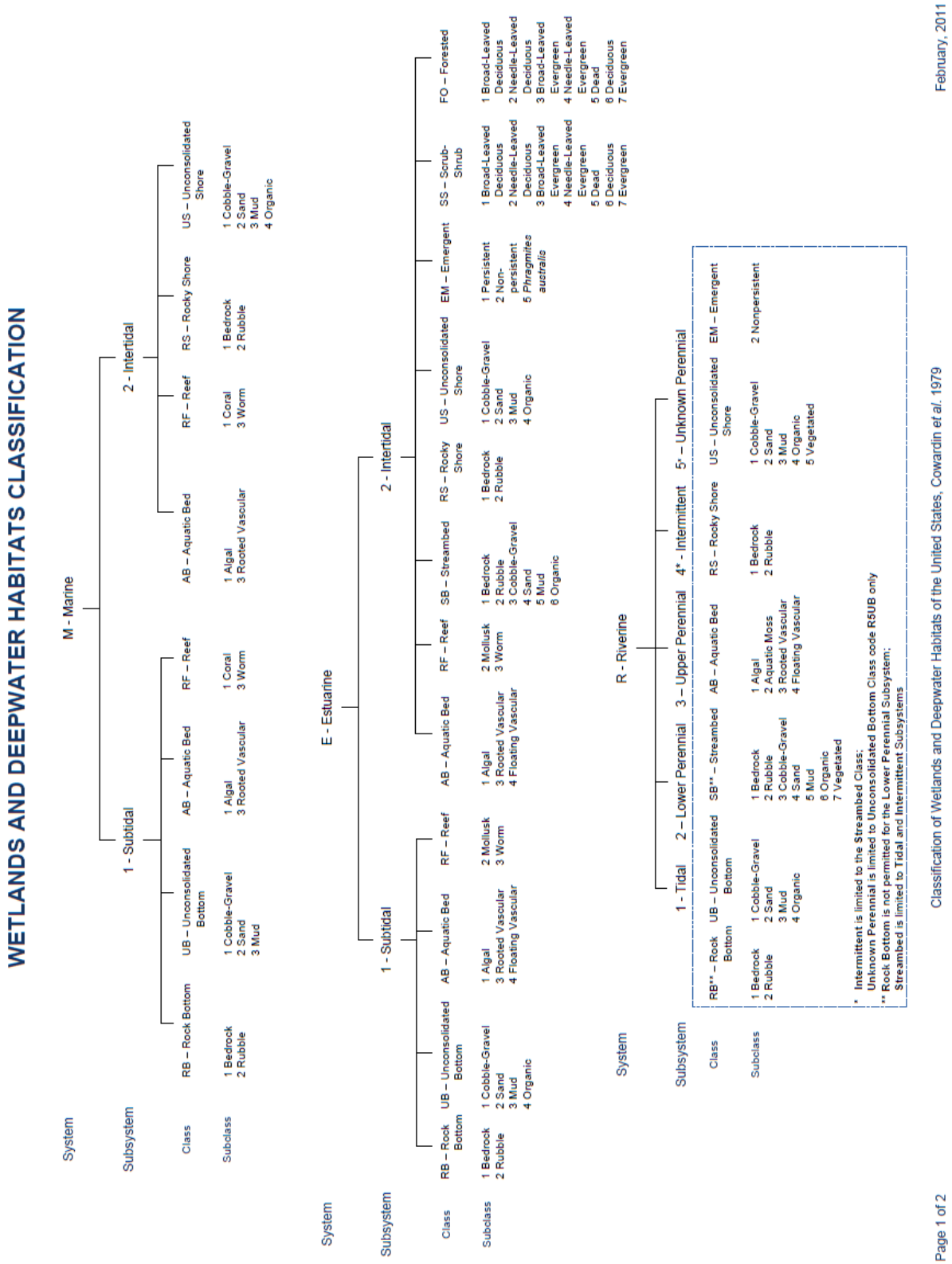
Further snowmelt contributed to an additional vernal pool discovery on site and is shown as Vernal Pool #2 on the attached maps, for a combined total of 2 vernal pools on site. This vernal pool had 12 spotted salamander egg masses and 2 wood frog egg masses. Neither of the aforementioned criterions was met to define this pool as significant.

For more detailed information on the vernal pools reference the attached vernal pool datasheets as well as the Vernal Pool section of this report under the Wetland Rules and Information section below.

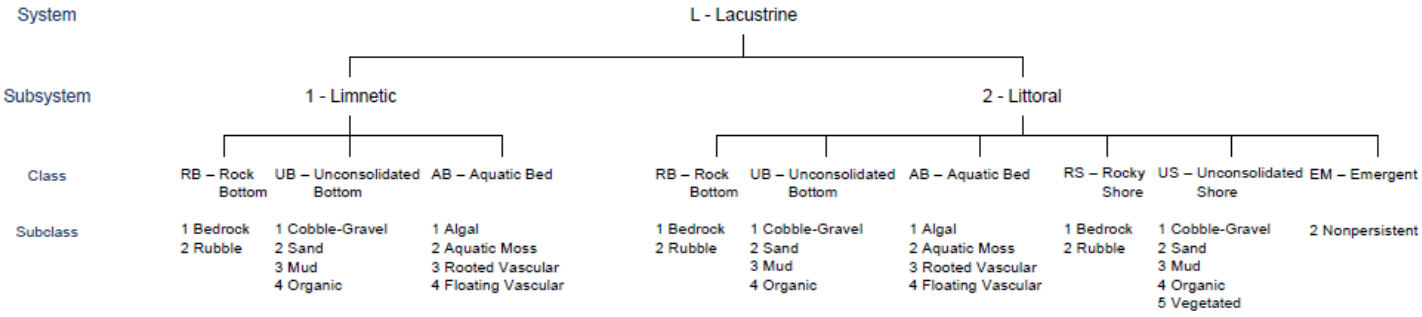
NORTHERN LONG-EARED BAT

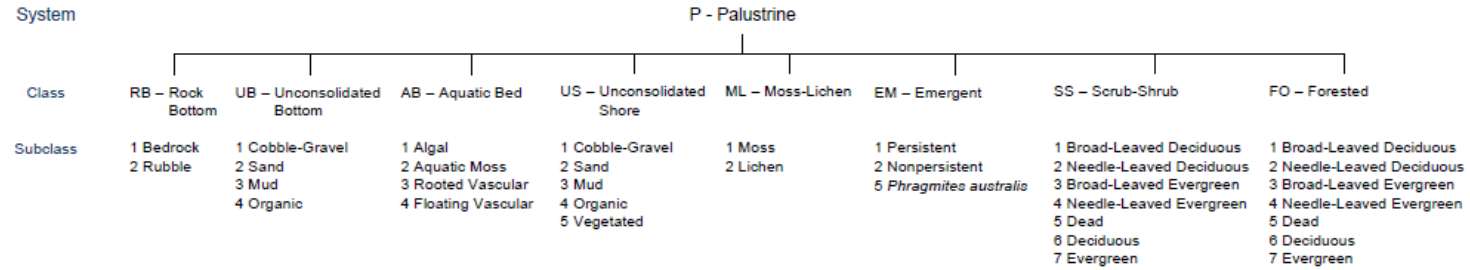
The United States Fish and Wildlife Service listed the Northern Long-Eared Bat (NLEB) (*Myotis septentrionalis*) as threatened with Interim 4(d) Rule. This listing affects development occurring within the range of the NLEB (www.fws.gov/midwest/endangered/mammals/nleb/nlebRangeMap.html) and within the White Nose Syndrome Buffer Zone (http://www.fws.gov/midwest/nleb/WNSBuffer.pdf) that could cause purposeful or incidental take (harm, kill or otherwise harass). This includes the clearing of trees where NLEB could be living. If your project requires such action a permit may be necessary.

US Fish and Wildlife Service, http://www.fws.gov/wetlands/Documents/Wetlands-and-Deepwater-Habitats-Classification-chart.pdf



WETLANDS AND DEEPWATER HABITATS CLASSIFICATION





MODIFIERS

In order to more adequately describe the wetland and deepwater habitats, one or more of the water regime, water chemistry, soil, or special modifiers may be applied at the class or lower level in the hierarchy. The farmed modifier may also be applied to the ecological system.

Water Regime			Special Modifiers	Water Chemistry			Soil
Nontidal	**Saltwater Tidal**	**Freshwater Tidal**		**Coastal Halinity**	**Inland Salinity**	**pH Modifiers for all Fresh Water**	
A Temporarily Flooded	L Subtidal	S Temporarily Flooded-Tidal	b Beaver	1 Hyperhaline	7 Hypersaline	a Acid	g Organic
B Saturated	M Irregularly Exposed	R Seasonally Flooded-Tidal	d Partly Drained/Ditched	2 Euhaline	8 Eusaline	t Circumneutral	n Mineral
C Seasonally Flooded	N Regularly Flooded	T Semipermanently Flooded-Tidal	f Farmed	3 Mixohaline (Brackish)	9 Mixosaline	i Alkaline	
E Seasonally Flooded/ Saturated	P Irregularly Flooded	V Permanently Flooded-Tidal	h Diked/Impounded	4 Polyhaline	0 Fresh		
F Semipermanently Flooded			r Artificial	5 Mesohaline			
G Intermittently Exposed			s Spoil	6 Oligohaline			
H Permanently Flooded			x Excavated	0 Fresh			
J Intermittently Flooded							
K Artificially Flooded							

WETLAND RULES AND INFORMATION

WETLANDS OF SPECIAL SIGNIFICANCE

All coastal wetlands and great ponds are considered wetlands of special significance. In addition, certain freshwater wetlands are considered wetlands of special significance.

A. Freshwater Wetlands of Special Significance. A freshwater wetland of special significance has one or more of the following characteristics.

(1) Critically imperiled or imperiled community. The freshwater wetland contains a natural community that is critically imperiled (S1) or imperiled (S2) as defined by the Natural Areas Program.

(2) Significant wildlife habitat. The freshwater wetland contains significant wildlife habitat as defined by 38 M.R.S.A. § 480-B (10).

(3) Location near coastal wetland. The freshwater wetland area is located within 250 feet of a coastal wetland.

(4) Location near GPA great pond. The freshwater wetland area is located within 250 feet of the normal high water line, and within the same watershed, of any lake or pond classified as GPA under 38 M.R.S.A. § 465-A.

(5) Aquatic vegetation, emergent marsh vegetation or open water. The freshwater wetland contains, under normal circumstances, at least 20,000 square feet of aquatic vegetation, emergent marsh vegetation or open water, unless the 20,000 or more square foot area is the result of an artificial pond or impoundment.

(6) Wetlands subject to flooding. The freshwater wetland area is inundated with floodwater during a 100-year flood event based on flood insurance maps produced by the Federal Emergency Management Agency or other site-specific information.

(7) Peatlands. The freshwater wetland is or contains peatlands, except that the department may determine that a previously mined peatland, or portion thereof, is not a wetland of special significance.

(8) River, stream or brook. The freshwater wetland area is located within 25 feet of a river, stream or brook.

B. Permit Process. Alterations of wetlands of special significance usually require an individual permit. However, some alterations of freshwater wetlands of special significance may be eligible for Tier 1 or 2 review if the department determines, at the applicant's request, that the activity will not negatively affect the freshwater wetlands or other protected natural resources present. In making this determination, the department considers such factors as the size of the alteration, functions of the impacted area, existing development or character of the area in and around the alteration site, elevation differences and hydrological connection to surface water or other protected natural resources, among other things.

C. Seasonal Factors. When determining the significance of a resource or impact from an activity, seasonal factors and events that temporarily reduce the numbers or visibility of plants or animals, or obscure the topography and characteristics of a wetland such as a period of high water, snow and ice cover, erosion event, or drought, are taken into account. Determinations may be deferred for an amount of time necessary to allow an assessment of the resource without such seasonal factors.

STREAM CHANNELS

According to Maine's Natural Resource Protection Act, Title 38, Article 5-A, Protection of Natural Resources, §480-B Definitions:

"River, stream or brook" means a channel between defined banks. A channel is created by the action of surface water and has two or more of the following characteristics:

(1) It is depicted as a solid or broken blue line on the most recent edition of the U.S. Geological Survey 7.5-minute series topographic map or, if that is not available, a 15-minute series topographic map.

(2) It contains or is known to contain flowing water continuously for a period of at least 6 months of the year in most years.

(3) The channel bed is primarily composed of mineral material such as sand and gravel, parent material or bedrock that has been deposited or scoured by water.

(4) The channel contains aquatic animals such as fish, aquatic insects or mollusks in the water or, if no surface water is present, within the stream bed.

(5) The channel contains aquatic vegetation and is essentially devoid of upland vegetation.

"River, stream or brook" does not mean a ditch or other drainage way constructed, or constructed and maintained, solely for the purpose of draining storm water or a grassy swale.

VERNAL POOLS

As defined by Maine's Department of Environmental Protection (MDEP): A vernal pool, also referred to as a seasonal forest pool, is a natural, temporary to semi-permanent body of water occurring in a shallow depression that typically fills during the spring or fall and may dry during the summer. Vernal pools have no permanent inlet and no viable populations of predatory fish. A vernal pool may provide the primary breeding habitat for wood frogs (*Rana sylvatica*), spotted salamanders (*Ambystoma maculatum*), blue-spotted salamanders (*Ambystoma laterale*), and fairy shrimp (*Eubranchipus spp*.), as well as valuable habitat for other plants and wildlife, including several rare, threatened, and endangered species. A vernal pool intentionally created for the purposes of compensatory mitigation is included in this definition.

As of September 1, 2007, "Significant Vernal Pools" are defined by MDEP as "Significant Wildlife Habitat." As read in MDEP's Chapter 335 -- Significant Wildlife Habitat Rules, "Whether a vernal pool is a significant vernal pool is determined by the number and type of pool-breeding amphibian egg masses in a pool, or the presence of fairy shrimp, or use by threatened or endangered species as specified in Section 9(B). Significant vernal pool habitat consists of a vernal pool depression and a portion of the critical terrestrial habitat within a 250 foot radius of the spring or fall high water mark of the depression. An activity that takes place in, on, over, or adjacent to a significant vernal pool habitat must meet the standards of this chapter."

Species and abundance criteria required for Significant Vernal Pools.

Species	Abundance Criteria
Fairy shrimp	Presence in any life stage.
Blue spotted salamanders	Presence of 10 or more egg masses.
Spotted salamanders	Presence of 20 or more egg masses.
Wood frogs	Presence of 40 or more egg masses.

MDEP habitat management standards for significant vernal pools: To the greatest extent practicable, the following management practices must be followed within significant vernal pool habitat.

(1) No disturbance within the vernal pool depression;

(2) Maintain a minimum of 75% of the critical terrestrial habitat as unfragmented forest with at least a partly-closed canopy of overstory trees to provide shade, deep litter and woody debris.

(3) Maintain or restore forest corridors connecting wetlands and significant vernal pools;

(4) Minimize forest floor disturbance; and

(5) Maintain native understory vegetation and downed woody debris.

If more than 25% of the critical terrestrial habitat has been previously developed, restoring a portion of that area through supplemental planting or regrowth of native forest

species may be considered toward meeting these standards, or towards standards for avoidance, minimization, or compensation. For purposes of Chapter 355, developed area includes disturbed areas excluding areas that are returned to a condition with the same drainage patterns and the same or improved cover type that existed prior to the disturbance;

Currently, Army Corps of Engineers (ACOE) regulate vernal pools but do not have specific characteristics that define a vernal pool, or a definition of which vernal pools require protection or buffering. They review each site on a case by case basis. ACOE's jurisdiction does not begin until the waters of the United States are impacted.

NATURAL RESOURCES PROTECTION ACT

Jones Associates, Inc. has many years of experience working with and interpreting Maine's environmental laws; however MDEP has several unwritten policies that may change without public notice, therefore, certain project specific questions may need review by MDEP staff.

The Natural Resources Protection Act (NRPA) became effective on August 4, 1988. The law is focused on "protected natural resources". A permit is required when an "activity" will be:

(1) Located in, on or over any protected natural resource, or

(2) Located adjacent to (A) a coastal wetland, great pond, river, stream or brook or significant wildlife habitat contained within a freshwater wetland, or (B) certain freshwater wetlands.

An "activity" is (A) dredging, bulldozing, removing or displacing soil, sand, vegetation or other materials; (B) draining or otherwise dewatering; (C) filling, including adding sand or other material to a sand dune; or (D) any construction, repair or alteration of any permanent structure.

The Maine Department of Environmental Protection (MDEP) does not have to be contacted for projects involving minor wetland impacts. Single, complete activities that impact less than 4,300 square feet of freshwater wetland and do NOT occur within: another type of protected natural resource; 25 feet of another protected natural resource and erosion controls are used; a municipal shoreland zone; a wetland normally containing at least 20,000 sq. ft. of open water, aquatic or emergent marsh vegetation; or a peatland are exempt under the Natural Resources Protection Act, 38 M.R.S.A. Section 480-Q(17).

NRPA - PERMIT BY RULE

A "permit by rule" or "PBR", when approved by MDEP, is an approval for an activity that requires a permit under the Natural Resources Protection Act (NRPA). Only those activities described in Chapter 305 may proceed under the PBR process. A PBR activity will not significantly affect the environment if carried out in accordance with this chapter, and generally has less of an impact on the environment than an activity requiring an individual permit. A PBR satisfies the NRPA permit requirement and Water Quality Certification requirement. The following projects may be eligible as PBR activities:

Section (2) Activity Adjacent to Protected Natural Resource

(An activity adjacent to (any land area within 75 feet, measured horizontally, of the normal high water line), but not in: a coastal wetland, great pond, river, stream or brook or significant wildlife habitat contained within a freshwater wetland; or freshwater wetlands consisting of or containing: under normal circumstances, at least 20,000 square feet of aquatic vegetation, emergent marsh vegetation or open water, except for artificial ponds or impoundments; or peatlands dominated by shrubs, sedges and sphagnum moss.

Section (3) Placement of permanent intake pipes and water monitoring devices (including drilled wells)

Section (4) Replacement of Structures

Section (6) Movement of Rocks or Vegetation

Section (7) Placement of outfall pipes (including ditches and drain tiles)

Section (8) Shoreline stabilization using vegetation or riprap

Section (9) Construction of crossings (utility lines, pipes and cables)

Section (10) Construction of stream crossings (bridges, culverts and fords)

Section (11) State Transportation Facilities

Section (12) Restoration of natural areas (i.e., "undoing" human alteration)

Section (13) Fisheries & wildlife habitat creation or enhancement and water quality improvement projects

Section (15) Public Boat Ramps

Section (16) Selected activities in coastal sand dunes

Section (17) Transfers and Permit Extensions

Section (18) One-time renewals of maintenance dredging permits

Section (19) Activities in/on/over significant vernal pool habitat

Section (20) Activities located in/on/over high or moderate value inland waterfowl & wading bird habitat or shorebird nesting, feeding & roosting areas

NRPA - TIER REVIEW PROCESS

NRPA's Tier Review process constitutes a joint application to both the Maine Department of Environmental Protection (MDEP) and the U.S. Army Corps of Engineers (USACOE) for a proposed alteration to a freshwater wetland that qualifies for Tier 1, 2 or 3 review. The square footage of impact is based on the alteration or impact of the whole activity in the wetland. If any part of the overall activity requires a higher tier review, then the whole activity will be reviewed under that higher tier.

The Tier Review process is required for impacts larger than 4,300 square feet, and for requesting a permit for activities in, on, or over a protected natural resource. It is also used for activities adjacent to certain protected natural resources (38 MRSA 480-C(1)). The Tier Review process is required when the activity is not eligible for a PBR.

According to 38 M.R.S.A. Section 480-X(2), an application for a permit to undertake activities altering freshwater wetlands must be reviewed in accordance with the following:

(1) A Tier 1 review process applies to any activity that involves a freshwater wetland alteration up to 15,000 square feet and does not involve the alteration of freshwater wetlands listed in 38 M.R.S.A. Section 480-X(4);

(2) A Tier 2 review process applies to any activity that involves a freshwater wetland alteration of 15,000 square feet up to one acre and does not involve the alteration of freshwater wetlands listed in 38 M.R.S.A. Section 480-X (4 or 5);

(3) A Tier 3 review process applies to any activity that does involve a freshwater wetland alteration greater than one acre, or an alteration of a freshwater wetland listed in 38 M.R.S.A. Section 480-X (4 or 5).

According to 38 M.R.S.A. Section 480-X(4), the following activities are not eligible for Tier 1 or Tier 2 review unless MDEP determines that the activity will not negatively affect the freshwater wetlands and other protected natural resources present.

(1) Activities located within 250 feet of a coastal wetland;

(2) Activities located within 250 feet of the normal high-water line, and within the same watershed, of any lake or pond classified as GPA under section 465-A;

(3) Activities occurring in freshwater wetlands, other than artificial ponds or impoundments, containing under normal circumstances at least 20,000 square feet of aquatic vegetation, emergent marsh vegetation or open water;

(4) Activities occurring in freshwater wetlands that are inundated with floodwater during a 100-year flood event based on flood insurance maps produced by the Federal Emergency Management Agency or other site-specific information;

(5) Activities occurring in freshwater wetlands containing significant wildlife habitat that has been mapped, identified or defined, as required pursuant to section 480-B(10), at the time of the filing by the applicant;

(6) Activities occurring in peatlands dominated by shrubs, sedges and sphagnum moss, except that applications proposing work in previously mined peatlands may be considered by the department for Tier 1 or Tier 2 review, as applicable;

(7) Activities occurring within 25 feet of a river, stream or brook.

According to 38 M.R.S.A. Section 480-X(5), an activity in freshwater wetlands containing a natural community that is imperiled (S2) or critically imperiled (S1), as defined by the Natural Areas Program pursuant to Title 12, Section 544 is not eligible for Tier 2 review unless the department determines that the activity will not negatively affect the freshwater wetlands and other protected natural resources present.

NRPA General Requirements for both the Tier 1 and Tier 2 review process require that the proposed freshwater wetland alteration must be avoided, if feasible, after considering cost, logistics, technology and the overall purpose of the project. However, if unavoidable, the alteration must be limited to the minimum amount necessary to complete the project. The project must utilize both temporary and permanent erosion control measures to prevent sedimentation of any protected natural resource. In addition, the alteration site must maintain an undisturbed 25 foot buffer strip between the activity and any river, stream or brook and must not violate any state water quality law, including those governing the classification of the State's waters.

WETLAND DELINEATION CHECKLIST

Job #:	18-011AU	Map/Lot: MAP 217 LOT 002	+/- 74.9 ACRES
Client:	HARRIMAN ASSOCIATES		
Site Address:	HOTEL, GARFIELD, & STEVENS MILL ROADS		

Wetland Scientist:	JASON TOME
Date of Office Review:	04/2018
Date(s) of Field Delineation Review:	04/2018

Wetlands of Special Significance

Yes	No	
	X	Does the on-site or immediately adjacent wetland contain a mapped and numbered DWA?
	X	Does the on-site or immediately adjacent wetland contain an Inland Waterfowl Wading Bird Habitat?
X		Does the on-site or immediately adjacent wetland contain a potential significant vernal pool?
	X	Does the recent aerial photos of the on-site or immediately adjacent wetland show? Or are there any open water or emergent wetlands with areas greater than 20,000 sq. ft.?
	X	Does the on-site or immediately adjacent wetland contain a 100 year flood plain?
	X	Does the on-site or immediately adjacent wetland contain a S1 or S2 community?
	X	Does the on-site or immediately adjacent wetland contain a significant wildlife habitat?
	X	Is the on-site wetland within 250' of a coastal wetland?
	X	Is the on-site wetland within 250' of a great pond?
	X	Does the site contain peatlands?

Stormwater Qualifications

X		Is the site in the watershed of a Great Pond or Impaired stream?
	X	Is the site in a lake watershed?
	X	Is the site in a watershed most at risk?

Additional Comments:
FEMA flood zone FIRM:
Auburn 23001C0309E, Effective July 8, 2013
Watershed:
HUC_8: 01040002 Lower Androscoggin
HUC_10: 0104000210 Little Androscoggin River
HUC_12: 010400021005 Taylor Pond-Little Androscoggin

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United States Army Corps of Engineers, New England District: www.nae.usace.army.mil/Missions/Regulatory.aspx

United States Natural Resources Conservation Service, United States Department of Agriculture, Official Soil Series Descriptions: soils.usda.gov/technical/classification/osd/index.html.

ADDENDUM:

- **NRCS CUSTOM SOIL RESOURCE REPORT**
- **WETLAND DETERMINATION DATA FORMS**
- **VERNAL POOL DATA SHEETS & PHOTOGRAPHS**
- **VERNAL POOL SKETCH PLAN**
- **WETLAND SKETCH PLAN**

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 Androscoggin and Sagadahoc Counties, Maine

Land Tree Corporation

April 6, 2018

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.

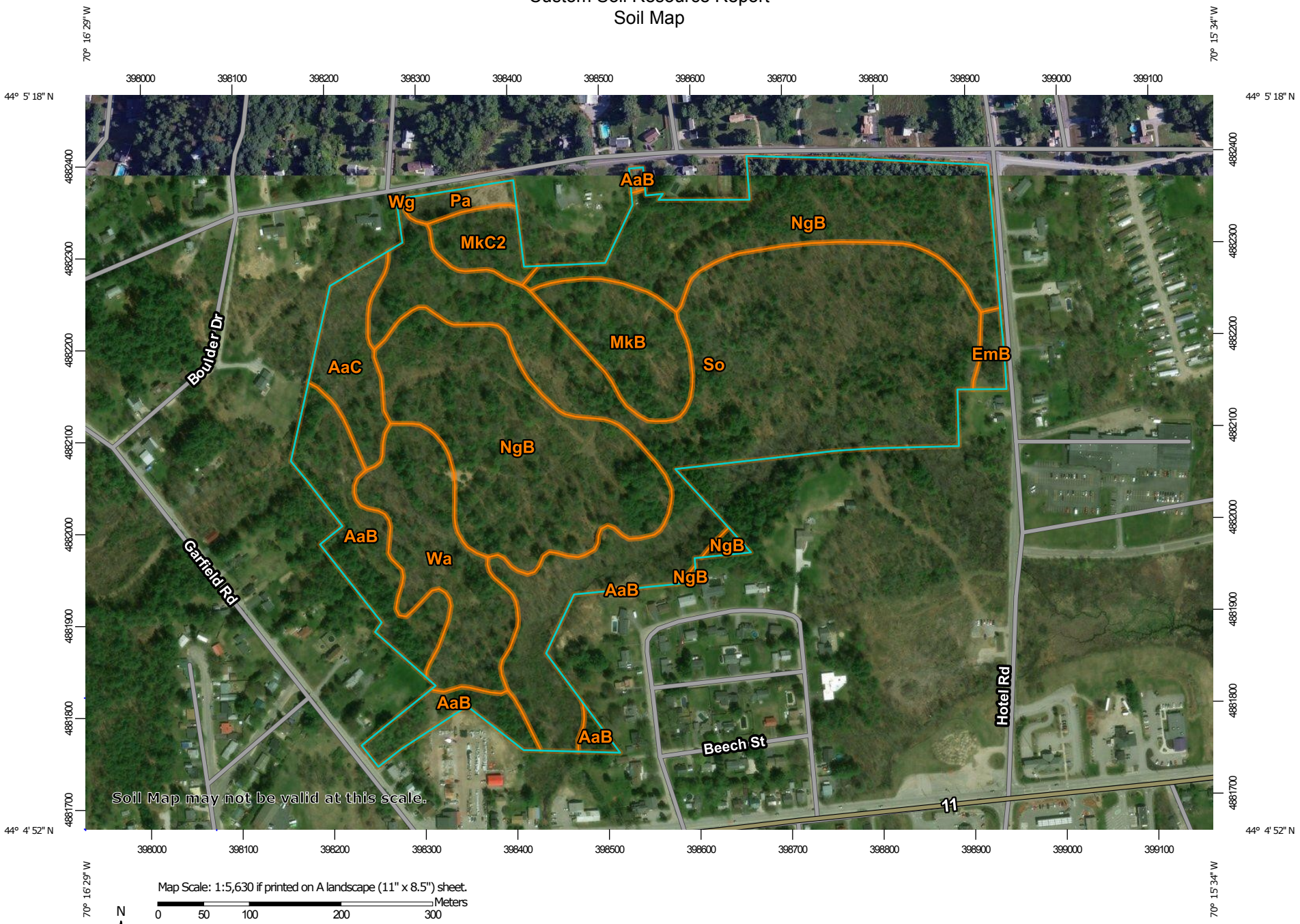
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

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.

Custom Soil Resource Report
Soil Map



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: Androscoggin and Sagadahoc Counties, Maine
Survey Area Data: Version 18, Sep 14, 2017

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

Date(s) aerial images were photographed: Dec 31, 2009—Oct 13, 2016

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND

MAP INFORMATION

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
AaB	Adams loamy sand, 0 to 8 percent slopes	6.3	8.5%
AaC	Adams loamy sand, 8 to 15 percent slopes	2.8	3.8%
EmB	Elmwood fine sandy loam, 2 to 8 percent slopes	0.6	0.8%
MkB	Merrimac fine sandy loam, 0 to 8 percent slopes	3.9	5.3%
MkC2	Merrimac fine sandy loam, 8 to 15 percent slopes, eroded	1.6	2.2%
NgB	Ninigret fine sandy loam, 0 to 8 percent slopes	22.9	31.2%
Pa	Peat and Muck	0.8	1.1%
So	Scarboro fine sandy loam	28.5	38.7%
Wa	Walpole fine sandy loam	6.1	8.4%
Wg	Whately fine sandy loam	0.0	0.0%
Totals for Area of Interest		**73.5**	**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.

Androscoggin and Sagadahoc Counties, Maine

AaB—Adams loamy sand, 0 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2wqn9
Elevation: 10 to 2,000 feet
Mean annual precipitation: 31 to 95 inches
Mean annual air temperature: 27 to 52 degrees F
Frost-free period: 90 to 160 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Adams and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Adams

Setting

Landform: Outwash terraces
Landform position (two-dimensional): Backslope, summit
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy glaciofluvial deposits

Typical profile

Ap - 0 to 7 inches: loamy sand
Bs - 7 to 21 inches: sand
BC - 21 to 27 inches: sand
C - 27 to 65 inches: sand

Properties and qualities

Slope: 0 to 8 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (1.42 to 14.17 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water storage in profile: Low (about 3.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: A
Hydric soil rating: No

AaC—Adams loamy sand, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2wqn8
Elevation: 10 to 2,000 feet
Mean annual precipitation: 31 to 95 inches
Mean annual air temperature: 27 to 52 degrees F
Frost-free period: 90 to 160 days
Farmland classification: Not prime farmland

Map Unit Composition

Adams and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Adams

Setting

Landform: Outwash terraces
Landform position (two-dimensional): Backslope, summit
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy glaciofluvial deposits

Typical profile

Ap - 0 to 7 inches: loamy sand
Bs - 7 to 21 inches: sand
BC - 21 to 27 inches: sand
C - 27 to 65 inches: sand

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (1.42 to 14.17 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water storage in profile: Low (about 3.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: A
Hydric soil rating: No

EmB—Elmwood fine sandy loam, 2 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9kd2
Elevation: 10 to 900 feet
Mean annual precipitation: 38 to 55 inches
Mean annual air temperature: 43 to 46 degrees F
Frost-free period: 130 to 195 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Elmwood and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Elmwood

Setting

Landform: Stream terraces
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Coarse-loamy glaciolacustrine deposits

Typical profile

H1 - 0 to 9 inches: fine sandy loam
H2 - 9 to 23 inches: sandy loam
H3 - 23 to 40 inches: silty clay loam

Properties and qualities

Slope: 2 to 8 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 6.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: B
Hydric soil rating: No

MkB—Merrimac fine sandy loam, 0 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9kdt
Elevation: 10 to 2,000 feet
Mean annual precipitation: 34 to 46 inches
Mean annual air temperature: 37 to 46 degrees F
Frost-free period: 90 to 140 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Merrimac and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Merrimac

Setting

Landform: Outwash terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Riser
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy glaciofluvial deposits derived from granite and gneiss

Typical profile

H1 - 0 to 9 inches: fine sandy loam
H2 - 9 to 22 inches: gravelly fine sandy loam
H3 - 22 to 28 inches: very gravelly loamy sand
H4 - 28 to 65 inches: stratified extremely gravelly coarse sand

Properties and qualities

Slope: 0 to 8 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 5.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: A
Hydric soil rating: No

MkC2—Merrimac fine sandy loam, 8 to 15 percent slopes, eroded

Map Unit Setting

National map unit symbol: 9kdv
Elevation: 10 to 2,000 feet
Mean annual precipitation: 34 to 46 inches
Mean annual air temperature: 37 to 46 degrees F
Frost-free period: 90 to 140 days
Farmland classification: Not prime farmland

Map Unit Composition

Merrimac and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Merrimac

Setting

Landform: Outwash terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Riser
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy glaciofluvial deposits derived from granite and gneiss

Typical profile

H1 - 0 to 5 inches: fine sandy loam
H2 - 5 to 18 inches: gravelly fine sandy loam
H3 - 18 to 24 inches: very gravelly loamy sand
H4 - 24 to 65 inches: stratified extremely gravelly coarse sand

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 4.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: A
Hydric soil rating: No

NgB—Ninigret fine sandy loam, 0 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9kdx
Elevation: 20 to 2,000 feet
Mean annual precipitation: 34 to 48 inches
Mean annual air temperature: 37 to 46 degrees F
Frost-free period: 80 to 160 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Ninigret and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ninigret

Setting

Landform: Outwash terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Coarse-loamy glaciofluvial deposits derived from slate

Typical profile

H1 - 0 to 8 inches: fine sandy loam
H2 - 8 to 28 inches: fine sandy loam
H3 - 28 to 65 inches: loamy fine sand

Properties and qualities

Slope: 0 to 8 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 8.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C
Hydric soil rating: No

Pa—Peat and Muck

Map Unit Setting

National map unit symbol: 9kdz
Elevation: 10 to 2,100 feet
Mean annual precipitation: 34 to 48 inches
Mean annual air temperature: 37 to 46 degrees F
Frost-free period: 80 to 160 days
Farmland classification: Not prime farmland

Map Unit Composition

Peat and similar soils: 45 percent
Muck and similar soils: 40 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Peat

Setting

Landform: Swamps
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Organic material

Typical profile

Oe - 0 to 24 inches: peat
Oi - 24 to 65 inches: peat

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (1.42 to 6.00 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Available water storage in profile: Very high (about 18.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8w
Hydrologic Soil Group: A/D
Hydric soil rating: Yes

Description of Muck

Setting

Landform: Swamps
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Organic material

Typical profile

Oa1 - 0 to 6 inches: mucky peat
Oa2 - 6 to 65 inches: mucky peat

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 6.00 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Available water storage in profile: Very high (about 19.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8w
Hydrologic Soil Group: A/D
Hydric soil rating: Yes

So—Scarboro fine sandy loam

Map Unit Setting

National map unit symbol: 9kff
Elevation: 10 to 2,800 feet
Mean annual precipitation: 34 to 48 inches
Mean annual air temperature: 37 to 46 degrees F
Frost-free period: 80 to 160 days
Farmland classification: Not prime farmland

Map Unit Composition

Scarboro and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Scarboro

Setting

Landform: Outwash plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy glaciofluvial deposits derived from granite and gneiss

Typical profile

Oa - 0 to 10 inches: mucky peat
H2 - 10 to 21 inches: fine sandy loam
H3 - 21 to 65 inches: fine sand

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 6.00 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Available water storage in profile: Moderate (about 6.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: A/D
Hydric soil rating: Yes

Wa—Walpole fine sandy loam

Map Unit Composition

Walpole and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Walpole

Setting

Landform: Outwash plains
Landform position (three-dimensional): Talf
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Sandy glaciofluvial deposits

Typical profile

H1 - 0 to 6 inches: fine sandy loam
H2 - 6 to 15 inches: loamy sand
H3 - 15 to 60 inches: sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: About 0 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 5.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: A/D

Hydric soil rating: Yes

Wg—Whately fine sandy loam

Map Unit Setting

National map unit symbol: 9kfr
Elevation: 10 to 900 feet
Mean annual precipitation: 40 to 48 inches
Mean annual air temperature: 43 to 46 degrees F
Frost-free period: 90 to 160 days
Farmland classification: Not prime farmland

Map Unit Composition

Whately and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Whately

Setting

Landform: Outwash plains
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Coarse-loamy glaciolacustrine deposits

Typical profile

Oa - 0 to 5 inches: moderately decomposed plant material
H1 - 5 to 9 inches: fine sandy loam
H2 - 9 to 29 inches: fine sandy loam
H3 - 29 to 65 inches: silty clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Available water storage in profile: High (about 9.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: D
Hydric soil rating: Yes

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WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Land Tree Corporation City/County: Auburn/Androscoggin Sampling Date: 04/2018

Applicant/Owner: Harriman Associates State: ME Sampling Point: 1

Investigator(s): JT Section, Township, Range:

Landform (hillside, terrace, etc.): GENTLE SLOPE Local relief (concave, convex, none): CONCAVE Slope (%): 3

Subregion (LRR or MLRA): LRR R, MLRA 144B Lat: 44° 5'10.77"N Long: 70°16'0.03"W Datum:

Soil Map Unit Name: Androscoggin and Sagadahoc Counties, Maine NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation NO , Soil NO , or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation NO , Soil NO , or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area**	
Hydric Soil Present?	Yes X	No	**within a Wetland?**	**Yes** X **No**
Wetland Hydrology Present?	Yes X	No	If yes, optional Wetland Site ID:	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- High Water Table (A2)
- X Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- X Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- Marl Deposits (B15)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- X Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No	Depth (inches): 1/8"	
Water Table Present?	Yes	No X	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes X	No	Depth (inches): SURFACE	**Wetland Hydrology Present?** **Yes** X **No**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: 1

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	40	Yes	FAC
2. *Pinus strobus*	10	No	FACU
3. *Abies balsamea*	10	No	FAC
4.			
5.			
6.			
7.			
	60	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Ilex verticillata*	10	Yes	FACW
2. *Vaccinium corymbosum*	10	Yes	FACW
3.			
4.			
5.			
6.			
7.			
	20	=Total Cover	
Herb Stratum (Plot size: 5')			
1. *Poa spp.*	5	Yes	FACW
2. *Osmundastrum cinnamomeum*	5	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	10	=Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *N/A*			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	30	x 2 =	60
FAC species	50	x 3 =	150
FACU species	10	x 4 =	40
UPL species	0	x 5 =	0
Column Totals:	90 (A)		250 (B)

Prevalence Index = B/A = 2.78

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-20	7.5YR 4/2						Sandy	REDOX FEATURES

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- X Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

Dark soil with chroma less than 2 down to 20" immediately classfiying this soil as hydric.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Land Tree Corporation City/County: Auburn/Androscoggin Sampling Date: 04/2018

Applicant/Owner: Harriman Associates State: ME Sampling Point: 1

Investigator(s): JT Section, Township, Range:

Landform (hillside, terrace, etc.): GENTLE SLOPE Local relief (concave, convex, none): CONVEX Slope (%): 3

Subregion (LRR or MLRA): LRR R, MLRA 144B Lat: 44° 5'10.77"N Long: 70°16'0.03"W Datum:

Soil Map Unit Name: Androscoggin and Sagadahoc Counties, Maine NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation NO , Soil NO , or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation NO , Soil NO , or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No X	**Is the Sampled Area**
Hydric Soil Present?	Yes	No X	**within a Wetland?** **Yes** **No** X
Wetland Hydrology Present?	Yes	No X	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	Depth (inches):
Water Table Present?	Yes	No	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	Depth (inches):

Wetland Hydrology Present? **Yes** **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: 1

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	20	Yes	FAC
2. *Quercus rubra*	20	Yes	FACU
3. *Pinus strobus*	20	Yes	FACU
4.			
5.			
6.			
7.			
	60	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Pinus strobus*	2	Yes	FACU
2. *Fagus grandifolia*	2	Yes	FACU
3. *Quercus rubra*	2	Yes	FACU
4.			
5.			
6.			
7.			
	6	=Total Cover	
Herb Stratum (Plot size: 5')			
1. *N/A*			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
		=Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *N/A*			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 16.7% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	20	x 3 =	60
FACU species	46	x 4 =	184
UPL species	0	x 5 =	0
Column Totals:	66 (A)		244 (B)
Prevalence Index = B/A =			3.70

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3								ORGANIC DUFF
3-20	10YR 5/6						Sandy	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Land Tree Corporation City/County: Auburn/Androscoggin Sampling Date: 04/2018

Applicant/Owner: Harriman Associates State: ME Sampling Point: 2

Investigator(s): JT Section, Township, Range:

Landform (hillside, terrace, etc.): GENTLE SLOPE Local relief (concave, convex, none): CONCAVE Slope (%): 3

Subregion (LRR or MLRA): LRR R, MLRA 144B Lat: 44° 5'12.11"N Long: 70°15'53.73"W Datum:

Soil Map Unit Name: Androscoggin and Sagadahoc Counties, Maine NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation NO , Soil NO , or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation NO , Soil NO , or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area**	
Hydric Soil Present?	Yes X	No	**within a Wetland?**	**Yes** X **No**
Wetland Hydrology Present?	Yes X	No	If yes, optional Wetland Site ID:	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- High Water Table (A2)
- X Saturation (A3)
- X Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- Marl Deposits (B15)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No	Depth (inches): 1/8"	
Water Table Present?	Yes	No X	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes X	No	Depth (inches): SURFACE	**Wetland Hydrology Present?** **Yes** X **No**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: 2

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus rubra*	5	Yes	FACU
2. *Pinus strobus*	5	Yes	FACU
3. *Acer rubrum*	15	Yes	FAC
4.			
5.			
6.			
7.			
	25	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Vaccinium corymbosum*	5	Yes	FACW
2. *Ilex verticillata*	5	Yes	FACW
3. *Pinus strobus*	5	Yes	FACU
4. *Abies balsamea*	5	Yes	FAC
5.			
6.			
7.			
	20	=Total Cover	
Herb Stratum (Plot size: 5')			
1. *Coptis trifolia*	10	Yes	FACW
2. *Symplocarpus foetidus*	5	No	OBL
3. *Sphagnum spp.*	20	Yes	FACW
4. *Scirpus atrovirens*	5	No	OBL
5. *Osmundastrum cinnamomeum*	5	No	FACW
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	45	=Total Cover	
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 9 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	10	x 1 =	10
FACW species	45	x 2 =	90
FAC species	20	x 3 =	60
FACU species	15	x 4 =	60
UPL species	0	x 5 =	0
Column Totals:	90 (A)		220 (B)

Prevalence Index = B/A = 2.44

Hydrophytic Vegetation Indicators:

__ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

__ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** __

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2								ORGANIC DUFF
2-18	10YR 2/1						Mucky Sand	
18-20	5Y 5/3						Sandy	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- X Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- X Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

Very dark soils up to 18" in depth. At 18' the sand became coarser and depleted, this soils was very gray.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Land Tree Corporation City/County: Auburn/Androscoggin Sampling Date: 04/2018

Applicant/Owner: Harriman Associates State: ME Sampling Point: 2

Investigator(s): JT Section, Township, Range:

Landform (hillside, terrace, etc.): GENTLE SLOPE Local relief (concave, convex, none): CONVEX Slope (%): 3

Subregion (LRR or MLRA): LRR R, MLRA 144B Lat: 44° 5'12.11"N Long: 70°15'53.73"W Datum:

Soil Map Unit Name: Androscoggin and Sagadahoc Counties, Maine NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation NO , Soil NO , or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation NO , Soil NO , or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No X	**Is the Sampled Area**
Hydric Soil Present?	Yes	No X	**within a Wetland?** **Yes** **No** X
Wetland Hydrology Present?	Yes	No X	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	Depth (inches):
Water Table Present?	Yes	No	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	Depth (inches):

Wetland Hydrology Present? **Yes** **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: 2

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Pinus strobus*	30	Yes	FACU
2. *Acer rubrum*	5	No	FAC
3. *Fagus grandifolia*	5	No	FACU
4. *Abies balsamea*	5	No	FAC
5. *Quercus rubra*	5	No	FACU
6.			
7.			
	50	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Pinus strobus*	15	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	15	=Total Cover	
Herb Stratum (Plot size: 5')			
1. *Diphasiastrum complanatum*	20	Yes	FACU
2. *Dendrolycopodium dendroideum*	15	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	35	=Total Cover	
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	10	x 3 =	30
FACU species	90	x 4 =	360
UPL species	0	x 5 =	0
Column Totals:	100 (A)		390 (B)

Prevalence Index = B/A = 3.90

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1								ORGANIC DUFF
1-16	10YR 3/4						Sandy	
16-20	10YR 5/8						Sandy	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Land Tree Corporation City/County: Auburn/Androscoggin Sampling Date: 04/2018

Applicant/Owner: Harriman Associates State: ME Sampling Point: 3

Investigator(s): JT Section, Township, Range:

Landform (hillside, terrace, etc.): GENTLE SLOPE Local relief (concave, convex, none): CONCAVE Slope (%): 4

Subregion (LRR or MLRA): LRR R, MLRA 144B Lat: 44° 5'8.63"N Long: 70°15'51.04"W Datum:

Soil Map Unit Name: Androscoggin and Sagadahoc Counties, Maine NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ____ (If no, explain in Remarks.)

Are Vegetation NO , Soil NO , or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation NO , Soil NO , or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**	
Hydric Soil Present?	Yes X	No ____	**within a Wetland?**	**Yes** X **No** ____
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID:	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- X Water Marks (B1)
- ____ Sediment Deposits (B2)
- ____ Drift Deposits (B3)
- ____ Algal Mat or Crust (B4)
- ____ Iron Deposits (B5)
- ____ Inundation Visible on Aerial Imagery (B7)
- ____ Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ____ Aquatic Fauna (B13)
- ____ Marl Deposits (B15)
- ____ Hydrogen Sulfide Odor (C1)
- ____ Oxidized Rhizospheres on Living Roots (C3)
- ____ Presence of Reduced Iron (C4)
- ____ Recent Iron Reduction in Tilled Soils (C6)
- ____ Thin Muck Surface (C7)
- ____ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ____ Surface Soil Cracks (B6)
- X Drainage Patterns (B10)
- ____ Moss Trim Lines (B16)
- ____ Dry-Season Water Table (C2)
- ____ Crayfish Burrows (C8)
- ____ Saturation Visible on Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No ____	Depth (inches): SURFACE	
Water Table Present?	Yes X	No ____	Depth (inches): 2"	
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): SURACE	**Wetland Hydrology Present?** **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: 3

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Tsuga canadensis*	70	Yes	FACU
2. *Acer rubrum*	5	No	FAC
3.			
4.			
5.			
6.			
7.			
	75	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Pinus strobus*	5	Yes	FACU
2. *Tsuga canadensis*	5	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	10	=Total Cover	
Herb Stratum (Plot size: 5')			
1. *Symplocarpus foetidus*	10	Yes	OBL
2. *Osmundastrum cinnamomeum*	10	Yes	FACW
3. *Sphagnum spp.*	5	No	
4. *Scirpus atrovirens*	15	Yes	OBL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	40	=Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *N/A*			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	25	x 1 =	25
FACW species	10	x 2 =	20
FAC species	5	x 3 =	15
FACU species	80	x 4 =	320
UPL species	0	x 5 =	0
Column Totals:	120 (A)		380 (B)

Prevalence Index = B/A = 3.17

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)
Most of the wetland vegetation is found in the understory in the herb stratum.

SOIL

Sampling Point: 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-20	10YR 2/1						Muck	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- X Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

Dark soils all the way to 20" immediately classifiying it a wetland soil.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Land Tree Corporation City/County: Auburn/Androscoggin Sampling Date: 04/2018

Applicant/Owner: Harriman Associates State: ME Sampling Point: 3

Investigator(s): JT Section, Township, Range:

Landform (hillside, terrace, etc.): GENTLE SLOPE Local relief (concave, convex, none): CONVEX Slope (%): 4

Subregion (LRR or MLRA): LRR R, MLRA 144B Lat: 44° 5'8.63"N Long: 70°15'51.04"W Datum:

Soil Map Unit Name: Androscoggin and Sagadahoc Counties, Maine NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation NO , Soil NO , or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation NO , Soil NO , or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No X	**Is the Sampled Area**
Hydric Soil Present?	Yes	No X	**within a Wetland?** **Yes** **No** X
Wetland Hydrology Present?	Yes	No X	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	Depth (inches):
Water Table Present?	Yes	No	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	Depth (inches):

Wetland Hydrology Present? **Yes** **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: 3

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Tsuga canadensis*	70	Yes	FACU
2. *Pinus strobus*	10	No	FACU
3. *Fagus grandifolia*	5	No	FACU
4.			
5.			
6.			
7.			
	85	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Pinus strobus*	2	No	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	2	=Total Cover	
Herb Stratum (Plot size: 5')			
1. *Abies balsamea*	2	No	FAC
2. *Dryopteris marginalis*	2	No	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	4	=Total Cover	
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	2	x 3 =	6
FACU species	89	x 4 =	356
UPL species	0	x 5 =	0
Column Totals:	91 (A)		362 (B)

Prevalence Index = B/A = 3.98

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2								ORGANIC DUFF
2-20	10YR 4/6						Sandy	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Land Tree Corporation City/County: Auburn/Androscoggin Sampling Date: 04/2018

Applicant/Owner: Harriman Associates State: ME Sampling Point: 4

Investigator(s): JT Section, Township, Range:

Landform (hillside, terrace, etc.): GENTLE SLOPE Local relief (concave, convex, none): CONCAVE Slope (%): 5

Subregion (LRR or MLRA): LRR R, MLRA 144B Lat: 44° 5'2.18"N Long: 70°16'7.38"W Datum:

Soil Map Unit Name: Androscoggin and Sagadahoc Counties, Maine NWI classification: PFO1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation NO , Soil NO , or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation NO , Soil NO , or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area**	
Hydric Soil Present?	Yes X	No	**within a Wetland?**	**Yes** X **No**
Wetland Hydrology Present?	Yes X	No	If yes, optional Wetland Site ID:	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

Surface Water (A1)	X Water-Stained Leaves (B9)	Aquatic Fauna (B13)
High Water Table (A2)	Marl Deposits (B15)	Hydrogen Sulfide Odor (C1)
X Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Presence of Reduced Iron (C4)
X Water Marks (B1)	Recent Iron Reduction in Tilled Soils (C6)	Thin Muck Surface (C7)
Sediment Deposits (B2)	Other (Explain in Remarks)	
Drift Deposits (B3)		
Algal Mat or Crust (B4)		
Iron Deposits (B5)		
Inundation Visible on Aerial Imagery (B7)		
Sparsely Vegetated Concave Surface (B8)		

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No X	Depth (inches):	
Water Table Present?	Yes	No X	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes X	No	Depth (inches): SURFACE	

Wetland Hydrology Present? **Yes** X **No**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: 4

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus rubra*	5	No	FACU
2. *Alnus serrulata*	35	Yes	OBL
3.			
4.			
5.			
6.			
7.			
	40	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Alnus serrulata*	10	Yes	OBL
2. *Cornus alba*	5	Yes	FACW
3.			
4.			
5.			
6.			
7.			
	15	=Total Cover	
Herb Stratum (Plot size: 5')			
1. *Osmundastrum cinnamomeum*	10	Yes	FACW
2. *Scirpus atrovirens*	10	Yes	OBL
3. *Panicum virgatum*	15	Yes	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	35	=Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *N/A*			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	55	x 1 =	55
FACW species	15	x 2 =	30
FAC species	15	x 3 =	45
FACU species	5	x 4 =	20
UPL species	0	x 5 =	0
Column Totals:	90 (A)		150 (B)

Prevalence Index = B/A = 1.67

Hydrophytic Vegetation Indicators:

__ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

__ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** __

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-20	10YR 2/1						Mucky Sand	VERY DARK SOIL

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- X Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

DARK SOIL UP TO DEPTH OF 20" IMMEDIATELY CLASSIFIES THIS SOIL AS A WETLAND.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Land Tree Corporation City/County: Auburn/Androscoggin Sampling Date: 04/2018

Applicant/Owner: Harriman Associates State: ME Sampling Point: 4

Investigator(s): JT Section, Township, Range:

Landform (hillside, terrace, etc.): GENTLE SLOPE Local relief (concave, convex, none): CONVEX Slope (%): 5

Subregion (LRR or MLRA): LRR R, MLRA 144B Lat: 44° 5'2.18"N Long: 70°16'7.38"W Datum:

Soil Map Unit Name: Androscoggin and Sagadahoc Counties, Maine NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ____ (If no, explain in Remarks.)

Are Vegetation NO , Soil NO , or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation NO , Soil NO , or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area**		
Hydric Soil Present?	Yes ____	No X	**within a Wetland?**	**Yes** ____	**No** X
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID:		

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No ____	Depth (inches): ____	
Water Table Present?	Yes ____	No ____	Depth (inches): ____	
Saturation Present? (includes capillary fringe)	Yes ____	No ____	Depth (inches): ____	**Wetland Hydrology Present?** **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: 4

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fagus grandifolia*			FACU
2. *Pinus strobus*			FACU
3. *Acer rubrum*			FAC
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1. *Pinus strobus*			FACU
2. *Fagus grandifolia*			FACU
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5')			
1. *N/A*			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	=Total Cover		
Woody Vine Stratum (Plot size: 30')			
1. *N/A*			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals:	(A)	(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-20	10YR 3/4						Sandy	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Land Tree Corporation City/County: Auburn/Androscoggin Sampling Date: 04/2018

Applicant/Owner: Harriman Associates State: ME Sampling Point: 5

Investigator(s): JT Section, Township, Range:

Landform (hillside, terrace, etc.): GENTLE SLOPE Local relief (concave, convex, none): CANCAVE Slope (%): 3

Subregion (LRR or MLRA): LRR R, MLRA 144B Lat: 44° 5'2.51"N Long: 70°16'11.99"W Datum:

Soil Map Unit Name: Androscoggin and Sagadahoc Counties, Maine NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation NO , Soil NO , or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation NO , Soil NO , or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area**	
Hydric Soil Present?	Yes X	No	**within a Wetland?**	**Yes** X **No**
Wetland Hydrology Present?	Yes X	No	If yes, optional Wetland Site ID:	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- High Water Table (A2)
- X Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- Marl Deposits (B15)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No	Depth (inches): 1/8"	
Water Table Present?	Yes	No	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes X	No	Depth (inches): SURFACE	**Wetland Hydrology Present?** **Yes** X **No**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: 5

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	10	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	10	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Vaccinium corymbosum*	10	Yes	FACW
2. *Ilex verticillata*	5	Yes	FACW
3. *Alnus serrulata*	10	Yes	OBL
4.			
5.			
6.			
7.			
	25	=Total Cover	
Herb Stratum (Plot size: 5')			
1. *Osmundastrum cinnamomeum*	5	Yes	FACW
2. *Carex venusta*	10	Yes	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	15	=Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *N/A*			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	20	x 1 =	20
FACW species	20	x 2 =	40
FAC species	10	x 3 =	30
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	50 (A)		90 (B)

Prevalence Index = B/A = 1.80

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-15	10YR 2/1						Mucky Sand	
15-20	2.5YR 5/2						Sandy	DEPLETED

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- X Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

VERY DARK SOIL UP UNTIL 15" WHERE IT BECOMES A GRAY COLOR INDICATING DEPLETION.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Land Tree Corporation City/County: Auburn/Androscoggin Sampling Date: 04/2018

Applicant/Owner: Harriman Associates State: ME Sampling Point: 5

Investigator(s): JT Section, Township, Range:

Landform (hillside, terrace, etc.): GENTLE SLOPE Local relief (concave, convex, none): CONVEX Slope (%): 3

Subregion (LRR or MLRA): LRR R, MLRA 144B Lat: 44° 5'2.51"N Long: 70°16'11.99"W Datum:

Soil Map Unit Name: Androscoggin and Sagadahoc Counties, Maine NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation NO , Soil NO , or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation NO , Soil NO , or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No X	**Is the Sampled Area**
Hydric Soil Present?	Yes	No X	**within a Wetland?** **Yes** **No** X
Wetland Hydrology Present?	Yes	No X	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No X	Depth (inches):
Water Table Present?	Yes	No X	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No X	Depth (inches):

Wetland Hydrology Present? **Yes** **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: 5

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Pinus strobus*	25	Yes	FACU
2. *Fagus grandifolia*	15	Yes	FACU
3. *Quercus rubra*	10	No	FACU
4. *Acer rubrum*	10	No	FAC
5.			
6.			
7.			
	60	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Fagus grandifolia*	10	Yes	FACU
2. *Pinus strobus*	10	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	20	=Total Cover	
Herb Stratum (Plot size: 5')			
1. *N/A*			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
		=Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *N/A*			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	10	x 3 =	30
FACU species	70	x 4 =	280
UPL species	0	x 5 =	0
Column Totals:	80 (A)		310 (B)

Prevalence Index = B/A = 3.88

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-17	10YR 3/3						Sandy	
17-20	10YR 4/6						Sandy	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: Vernal Pool #1 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Jason Tome

b. Contact and credentials previously provided? ◉ No (submit Addendum 1) ○ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ◉ same as observer ○ other _____

b. Contact and credentials previously provided? ◉ No (submit Addendum 1) ○ Yes

c. Project Name: Harriman 18-011AU - Bob Foss Land Tree Corporation

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ◉ No If no, was landowner permission obtained for survey? ◉ Yes ○ No

b. Landowner's contact information (required)

Name: Robert Foss - Land Tree Corporation Phone: (207) 784-5100

Street Address: PO Box 3346 City: Auburn State: ME Zip: 04210

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Auburn

Brief site directions to the pool (using mapped landmarks):

This vernal pool can be found roughly 400ft North of the center of Carson Street in Auburn.

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: 70°15'59.02"W Latitude/Northing: 44° 5'3.68"N

Coordinate system: WGS84

Check one:

○ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

◉ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ◉ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☑ Forested swamp
- ☐ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☑ Floodplain
- ☑ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ◉ Natural ○ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ◉ Semi-permanent (drying partially in all years and completely in drought years)
- ○ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

Pretty deep pool (approximately 15"). Likely dries out during hot summers. being a floodplain depression it may periodically take water during large rain events.

■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ◉ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: 10 ◉ m ○ ft Length: 30 ◉ m ○ ft

■ Predominate substrate in order of increasing hydroperiod:

- ◉ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ○ Mineral soil (sphagnum moss present)
- ○ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☑ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☑ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☐ Sphagnum moss (anchored or suspended)
- ☐ Wet site ferns (e.g. royal fern, marsh fern)
- ☐ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☐ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ○ No inlet or outlet
- ◉ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 4/17/18, 4/30/18, 5/9/18

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ◉ Yes ○ No
- Was the entire pool surveyed for egg masses? ◉ Yes ○ No; what % of entire pool surveyed? _____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog	0	13	13		3	3		M	H			X			3
Spotted Salamander	12	46	40	2	3	3	M	M	H			X			3
Blue-spotted Salamander	0	0	0												
Fairy Shrimp[3]	0	0	0												

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☑ SVP ☐ Potential SVP ☐ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Annual flooding of the stream on-site is a crucial component to the creation of this vernal pool.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

PHOTOGRAPHS - VERNAL POOL #1 (SIGNIFICANT)

Vernal Pool #1 05/09/2018

Vernal Pool #1 05/09/2018

VERNAL POOL #1 – LAND TREE CORPORATION

Jones Associates Inc. Photographer: Jason Tome

PHOTOGRAPHS - VERNAL POOL #1 (SIGNIFICANT)

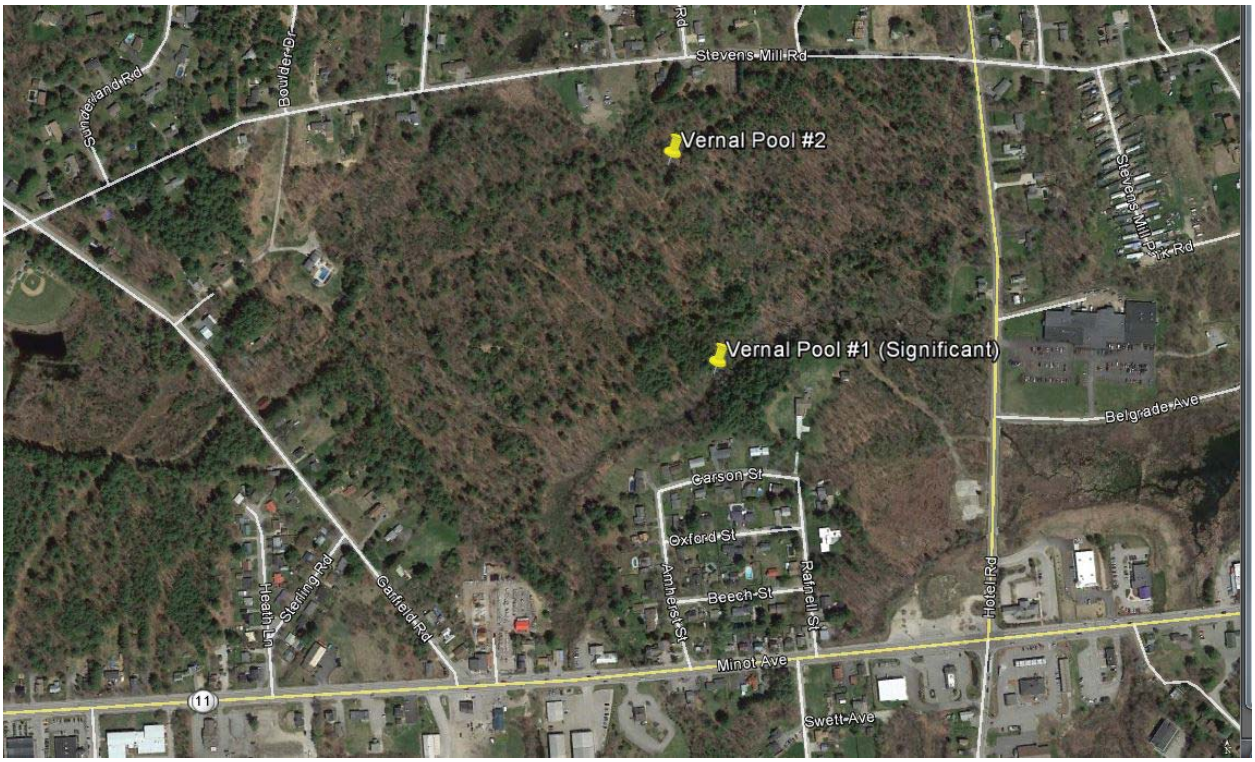
Wood Frog and Spotted Salamander Egg Masses 04/30/2018

Wood Frog and Spotted Salamander Egg Masses 04/30/2018

VERNAL POOL INDICATORS – LAND TREE CORPORATION

Jones Associates Inc. Photographer: Jason Tome

VERNAL POOL LOCATIONS



AERIAL PHOTOGRAPH WITH MARKED VERNAL POOLS ON SITE

LAND TREE CORPORATION

Jones Associates Inc. Photographer: Jason Tome

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: Vernal Pool 2 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Jason Tome

b. Contact and credentials previously provided? ◉ No (submit Addendum 1) ○ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ◉ same as observer ○ other _____

b. Contact and credentials previously provided? ◉ No (submit Addendum 1) ○ Yes

c. Project Name: 18-011AU Harriman - Bob Foss Land Tree Corporation

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ◉ No If no, was landowner permission obtained for survey? ◉ Yes ○ No

b. Landowner's contact information (required)

Name: Robert Foss - Land Tree Corporation Phone: (207) 784-5100

Street Address: PO Box 3346 City: Auburn State: ME Zip: 04210

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Auburn

Brief site directions to the pool (using mapped landmarks):

By parking on Stevens Mill Road head toward the northern center of the property. The vernal pool is located about 250ft from the southern most property line of 356 Stevens Mill Road.

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: 70°16'1.46"W Latitude/Northing: 44° 5'11.80"N

Coordinate system: WGS84

Check one:

- ○ GIS shapefile
  - send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)
- ○ The pool perimeter is delineated by multiple GPS points. (Excellent)
  - Include map or spreadsheet with coordinates.
- ◉ The above GPS point is at the center of the pool. (Good)
- ○ The center of the pool is approximately _____ m ◉ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ◉ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☑ Forested swamp
- ☐ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☐ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ○ Natural ◉ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

Wood road intersects a wetland drainage causing pooling on one side of the wood road.

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ◉ Semi-permanent (drying partially in all years and completely in drought years)
- ○ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

This pool is likely semi-permanent as it is not very deep (12").

■ Maximum depth at survey: ◉ 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: 20 ◉ m ○ ft Length: 20 ◉ m ○ ft

■ Predominate substrate in order of increasing hydroperiod:

- ◉ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ○ Mineral soil (sphagnum moss present)
- ○ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☐ Sphagnum moss (anchored or suspended)
- ☐ Wet site ferns (e.g. royal fern, marsh fern)
- ☐ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☑ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ○ No inlet or outlet
- ◉ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 4/17/18, 4/30/18, 5/9/18

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ◉ No
- Was the entire pool surveyed for egg masses? ◉ Yes ○ No; what % of entire pool surveyed? _____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog	0	2	2		2	2		M	H			X			3
Spotted Salamander	2	12	9	3	3	3	M	M	H			X			3
Blue-spotted Salamander	0	0	0												
Fairy Shrimp[3]	0	0	0												

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☐ Potential SVP ☑ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

PHOTOGRAPHS - VERNAL POOL #2

Vernal Pool #2 04/30/2018

Vernal Pool #2 05/09/2018

VERNAL POOL #2 – LAND TREE CORPORATION

Jones Associates Inc. Photographer: Jason Tome

PHOTOGRAPHS - VERNAL POOL #2

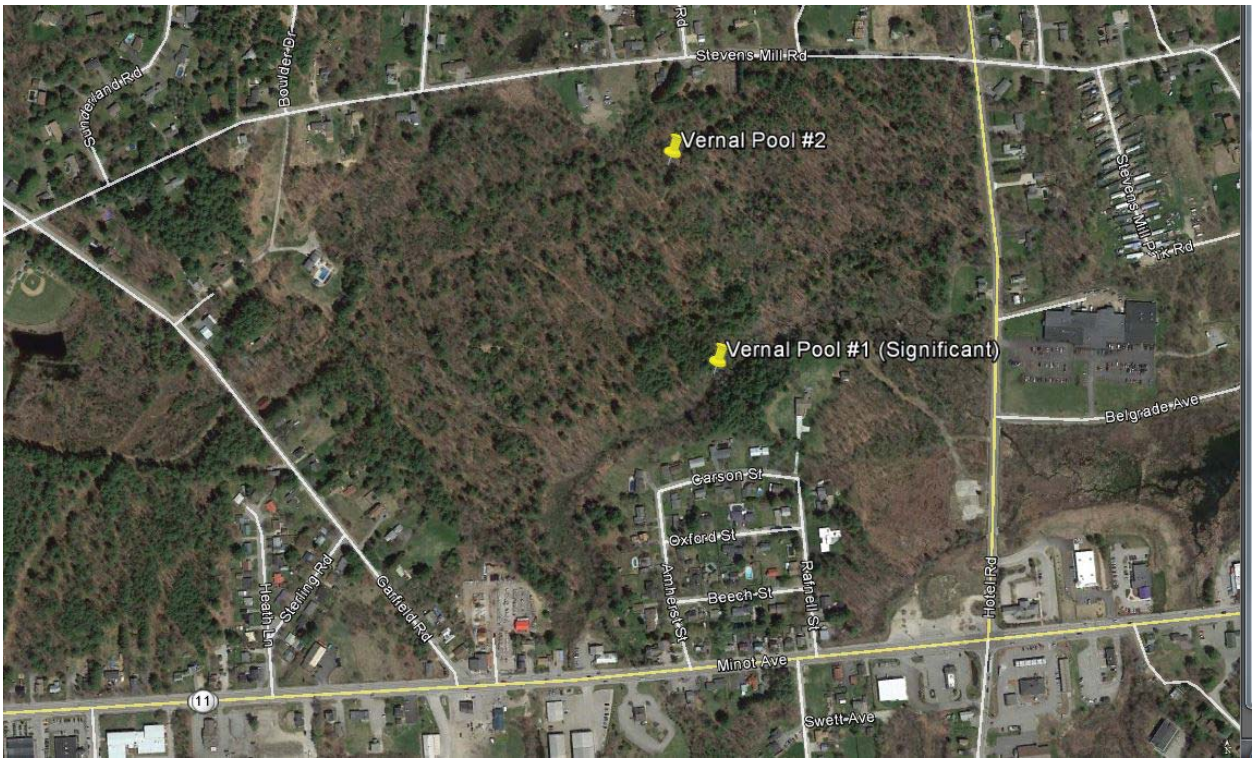
Wood Frog Egg Masses 04/30/2018

Spotted Salamander Egg Masses 04/30/2018

VERNAL POOL INDICATORS – LAND TREE CORPORATION

Jones Associates Inc. Photographer: Jason Tome

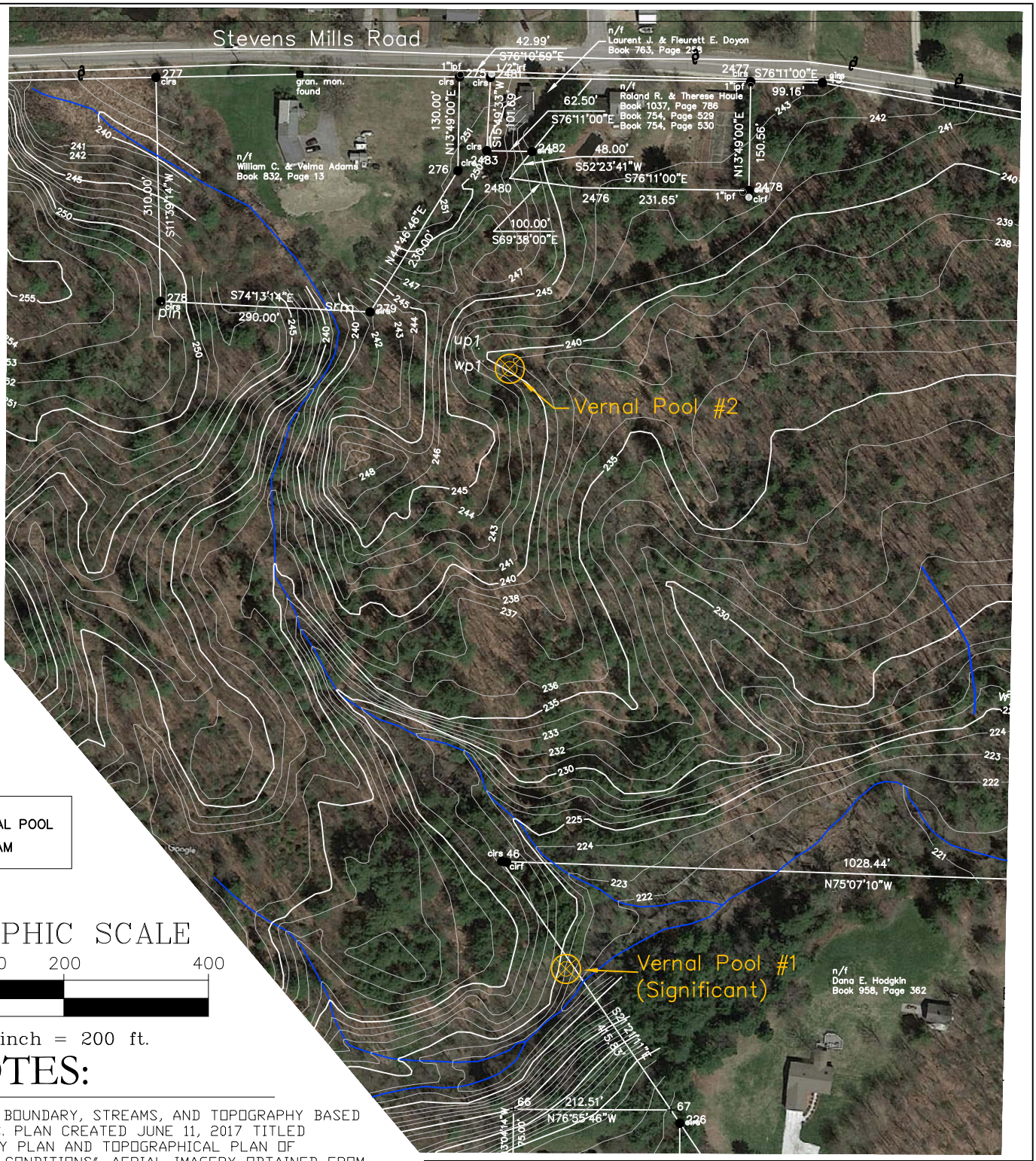
VERNAL POOL LOCATIONS



AERIAL PHOTOGRAPH WITH MARKED VERNAL POOLS ON SITE

LAND TREE CORPORATION

Jones Associates Inc. Photographer: Jason Tome



LEGEND
- VERNAL POOL
- STREAM

GRAPHIC SCALE

0 100 200 400

1 inch = 200 ft.

NOTES:

1. EXTERIOR BOUNDARY, STREAMS, AND TOPOGRAPHY BASED ON A.R.C.C. PLAN CREATED JUNE 11, 2017 TITLED "PROPERTY PLAN AND TOPOGRAPHICAL PLAN OF EXISTING CONDITIONS". AERIAL IMAGERY OBTAINED FROM GOOGLE EARTH IMAGE DATE: 5/9/2016. IMAGERY PROJECTION IS APPROXIMATE. THIS PLAN DOES NOT SHOW THE EXTENT OF THE BOUNDARIES, THE INTENT OF THIS PLAN IS TO SHOW VERNAL POOL LOCATIONS.

2. IN EARLY APRIL SNOWMELT CAUSED MANY SMALL SHALLOW POCKETS OF WATER TO APPEAR ON SITE, MOST OF WHICH ARE ONLY A FEW INCHES IN DEPTH AND WERE UNLIKELY TO BECOME VERNAL POOLS. DURING THE INITIAL SITE VISITS POTENTIAL VERNAL POOLS WERE MARKED WITH A GPS IF THEY WERE APPROXIMATELY 4-6 INCHES IN DEPTH OR GREATER.

3. CLASSIFICATION OF VERNAL POOL #1 AS SIGNIFICANT WAS BASED ON MDEP CRITERION WHICH DEFINES A SIGNIFICANT VERNAL POOL AS HAVING 20 OR MORE SPOTTED SALAMANDER EGG MASSES. 46 SPOTTED SALAMANDER EGG MASSES WERE FOUND IN THIS POOL AT THE PEAK OF THE BREEDING SEASON. VERNAL POOL #2 HAD 12 SPOTTED SALAMANDER EGG MASSES AND 2 WOOD FROG EGG MASSES. NIETHER WHICH WERE ABUNDANT ENOUGH TO DEFINE THIS POOL AS SIGNIFICANT.

VERNAL POOL SKETCH PLAN
LAND TREE CORPORATION
HOTEL, GARFIELD, & STEVENS MILL ROADS
AUBURN, MAINE

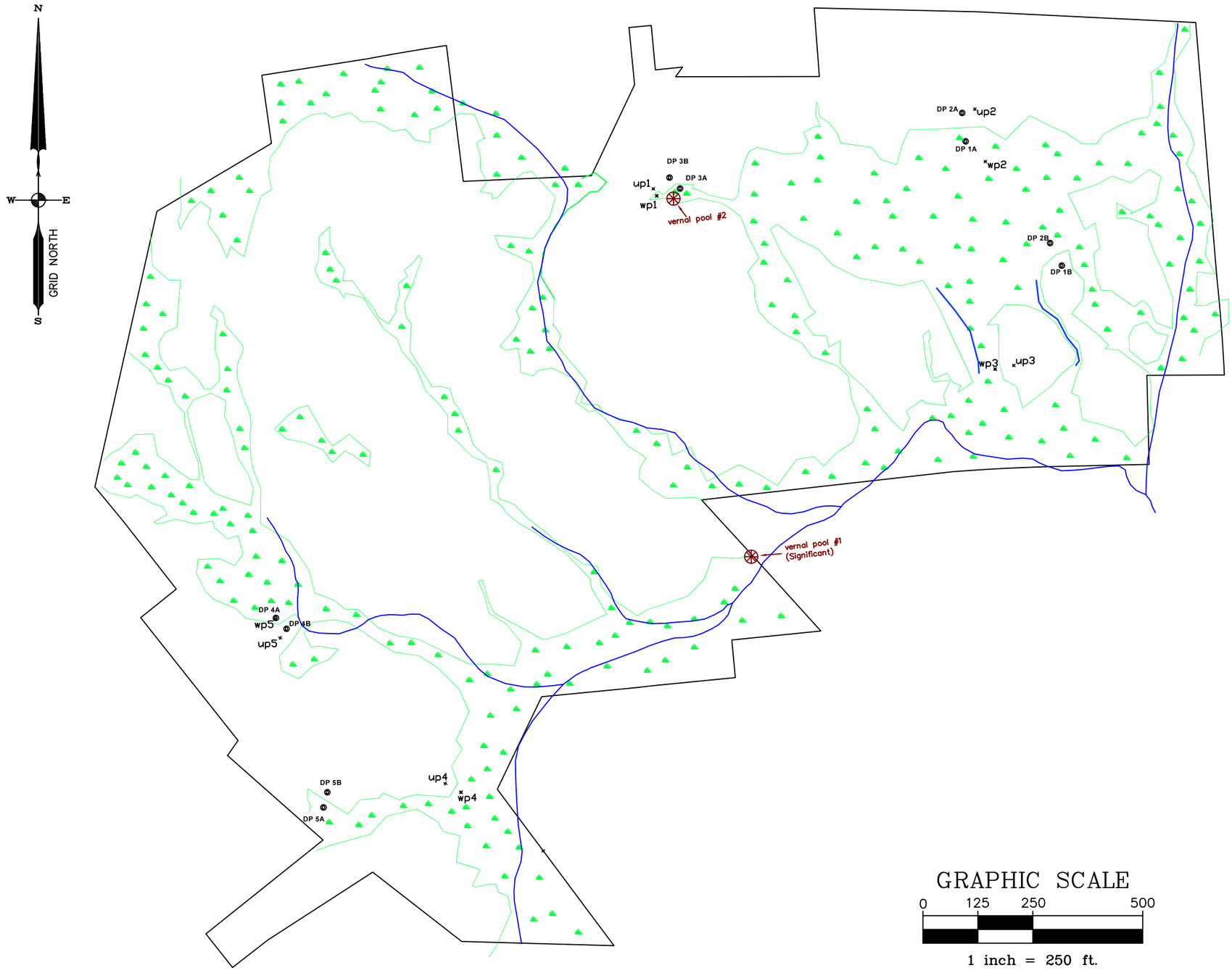
PREPARED BY:
JONES ASSOCIATES INC.
Foresters, Surveyors And Environmental Consultants
280 POLAND SPRING ROAD, AUBURN, MAINE 04210
(207) 241-0235

PLAN DATE: MAY 21, 2018

FIELD WORK DATE: APRIL 2018

SCALE: 1"=200'

PROJ. #: 18-011AU



GRAPHIC SCALE

0 125 250 500

1 inch = 250 ft.

LEGEND

Ⓓ	2007 Data Sheet Collection Locations
up/wp	2018 Data Sheet Collection Locations
	Wetland
	Vernal Pool
	Stream

1. EXTERIOR BOUNDARY AND STREAMS BASED ON PLAN TITLED "PROPERTY PLAN AND TOPOGRAPHICAL PLAN OF EXISTING CONDITIONS" PREPARED FOR ROBERT FOSS BY A.R.C.C. LAND SURVEYORS INC. DATED JUNE 11, 2017.

2. WETLAND BOUNDARIES WERE IDENTIFIED AND DELINEATED IN JULY 2007 BY JONES ASSOCAITES INC. ACCORDING TO U.S. ARMY CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL (1987) AND REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHCENTRAL AND NORTHEAST REGION. A DELINEATION REVIEW WAS CONDUCTED BY JONES ASSOCIATES INC. IN APRIL 2018.

3. IN JULY 2007 WETLAND FLAGS WERE LOCATED USING TRIMBLE GLOBAL POSITIONING SYSTEM (GPS) TECHNOLOGY WITH EXPECTED AVERAGE ACCURACY OF SUB-METER. THIS METHOD IS RECOGNIZED BY BOTH STATE AND FEDERAL AGENCIES. HOWEVER, JONES ASSOCIATES INC RECOMMENDS THAT THE WETLAND BOUNDARY BE SURVEYED USING A MORE PRECISE METHOD IF ANY FILL OR REGULATED ACTIVITIES ARE TO BE PERFORMED WITHIN 20 FEET OF THE GPS LOCATED WETLAND. WETLAND FLAGS WERE FRESHENED IN APRIL 2018.

REVISIONS			
NO.	DATE	DESCRIPTION	BY

PLAN TITLE:

WETLAND SKETCH PLAN

HOTEL, GARFIELD, & STEVENS MILL ROADS
AUBURN, MAINE

PREPARED FOR:
HARRIMAN ASSOCIATES
46 HARRIMAN DRIVE
AUBURN, MAINE

PREPARED BY:
JONES ASSOCIATES INC.
Foresters, Surveyors And Environmental Consultants
280 POLAND SPRING ROAD, AUBURN, MAINE 04210
(207) 241-0235

PLAN DATE: 5/21/18

FIELD WORK DATE: APRIL/MAY 2018

SCALE: 1"=250'

PROJ. #: 18-011AU

Section 4: Technical and Financial Capacity

A. Financial Capacity

a. Estimated Project Costs

Auburn Suburban Ballfields								
Scenario 1			**Scenario 2**			**Scenario 3**		
	Qty	**Total**		**Qty**	**Total**		**Qty**	**Total**
90' Lighted Synthetic	1	1,247,413	90' Natural Lighted	1	439,397	90' Lighted Synthetic	1	1,496,896
90' Natural	1	60,397	90' Natural	1	60,397	90' Natural	1	72,476
60' Lighted Synthetic	1	642,402	60' Lighted Natural	1	276,642	60' Lighted Synthetic	1	770,882
60' Natural	1	38,162	60' Natural	1	38,162	60' Natural	1	45,794
						Structures		168,000
						Infrastructure		275,000
Infrastructure		140,000	Infrastructure		140,000	Contingency		200,000
Total		**2,128,374**	**Total**		**954,598**	**Total**		**3,029,049**
						Updated 8/3/22		
			Infrastructure = concessions building and utility garage					

b. Financial Capacity of the Applicant

Dear City of Auburn Planning Board,

ASBS intends to fund the project with sponsorships, grants and fundraising efforts. We recently began marketing to local businesses and community organizations and have already raised over 60K and have only scratched the surface.

We met with a marketing agency to develop an easily customizable presentation that allows us to communicate the value of our project within the community. Finalization of permitting will allow us to have a much more definitive schedule as we discuss the scope of the project with potential donors.

We have begun preliminary discussions with several financial institutions for complex sponsorship and naming rights. These discussions involve a large upfront sum to help us get started and annual re-occurring payments over a set schedule of time.

Respectfully yours,

Travis Bashaw
ASBS Past President & ASBS POC

B. Technical Capacity

a. Technical Capacity of Applicant

ASBS has a rich history in the community. ASBS was founded in 1957 through the hardwork and dedication of a community that has always been known for their work ethic and commitment to giving children opportunities to play sports. Originally located in East Auburn and later relocated to land near the Lewiston-Auburn Airport in 1960 as expansion occurred, ASBS was forced to move in 1990 to their Garfield Rd. location to make way for UPS. ASBS has been a pioneer in the community utilizing help and volunteerism from organizations like The Grange, the Women's Auxiliary, Bates College, Army National Guard, and East Auburn Community Unit (EACU).

b. Technical Capacity of Agent

Jones Associates, Inc. (JAI), is an environmental consulting and forestry firm. The success of the firm is strengthened by over 30 years of experience in environmental permitting, forestry, and land-use issues. The firm's approach to resolving environmental issues is designed to identify potential environmental impacts and then devise balanced solutions, which are both environmentally sound and economically efficient.

The firm has been involved with a myriad of project types ranging from preparing land surveys, concept plans, permitting applications, forest management plans, prescriptions and harvesting, environmental assessments, wildlife studies, wetland delineation and mitigation design and various GPS and GIS projects. The firm has experience in serving and working with both private sectors (including commercial, industrial, and individual landowners) and governmental sectors (federal, state, and municipal). JAI is made up of highly qualified individuals who are capable of explaining their findings before various forums.

JAI has extensive experience with shepherding projects through the initial site evaluation, to concept design, to permitting of projects. The staff is regularly involved in initial investigations of potential development sites for both residential and commercial projects. Our involvement in hundreds of wetland and resource evaluations provides invaluable experience in dealing with many different project objectives.

JAI's pertinent qualifications include over thirty years of experience in project management from wetland delineations and functional assessments to land surveys and concept design, to layout and permitting at the local, state and federal levels.

Section 5: Stormwater Management

The facility will be served by 5 under drained soil filters, as calculated and shown on the plans in Appendix G. Approval would be conditional on submittal of final stormwater calculations to be determined by final field surface.

Section 6: Landscape Plan

The project site has been designed in order to maintain a 30 setback from all parking areas to all property lines. The majority of parking areas are screened from the road and adjacent property by existing wooded areas within these setbacks. Areas immediately surrounding the ballfield facility will be maintained as lawns in order to better facilitate spectators while all other non-wooded areas will be maintained as meadow in order reduce stormwater impacts. The intent of the facility is to create an open and safe recreation facility.

Section 7: Lighting

A typical lighting design plan for each size of ballfield is included in Appendix D.

Storm Water Management for Auburn Suburban Baseball & Softball Field Project in Auburn, Maine

February 10, 2023

Introduction:

This storm water narrative is being provided to complete the storm water section of the Site Location of Development Permit application being submitted by Auburn Suburban Baseball & Softball Association, for the proposed roadway and ball field development proposed on the south side of Stevens Mill Road in Auburn, Maine. The paragraphs below outline the existing conditions as well as the storm water management for the proposed improvements on the parcel.

The management plan provides attenuation of the peak runoff conditions for the 2, 10 and 25 year storm events, and complies with the latest Storm Water Management standards outlined in Chapter 500. Our storm water management modeling has been included for both the pre and post development areas within the watershed area.

The submission of this application includes the construction of the roadway, asphalt and gravel parking areas, 3 turf fields, and 1 grassed practice field. The total development areas proposed for this project parcel include the following:

1. Artificial Turf areas (3 fields) – 190,578 s.f.
2. Proposed Gravel areas – 52,158 s.f.
3. Proposed Asphalt areas – 16,927 s.f.
4. Infield impervious area for practice field – 3,386 s.f.
5. Grass area for practice field – 12,669 s.f.
6. Landscaped/mowed lawn (not including practice field) – 12,669 s.f.

For the purposes of the storm water management, all artificial turf areas are considered as impervious area, since the subsurface drainage is very close to the surface, and has limited time of concentration.

Existing Conditions:

Prior to 2008, the parcel included mostly wooded areas. A large portion of the partial has been delineated as wetlands by Jones Associates. Most of the parcel is relatively low sloping, draining in a southerly direction and discharging into an existing stream that runs along the southern edge of the parcel. This existing unnamed stream eventually flows in the Androscoggin River.

Proposed Conditions:

The proposed project includes the construction of asphalt roadway, asphalt and gravel parking areas, 3 artificial turf fields, 1 practice field, a 40’ x 20’ snack shack with attached 20’ x 20’ garage, and asphalt walkways linking the fields and parking areas.

In order to assess the requirement qualitative treatment, we analyzed the entire development as a non-linear project. Most of the roadway sections are within 50 feet from other impervious areas of

the project, so these associated roadway segments could not be considered for linear standards. Chapter 500 definition indicates that any linear roadway that is within 50 feet from other associated impervious areas cannot be counted as linear. Therefore, all are required to have at least 95 percent of new impervious area treated, while no less than 80 percent of the total developed area treated.

The proposed project includes five underdrain grass filters and one wooded buffer area, which are spread throughout the project area to treat storm water runoff generated from new developed areas. As evidenced in the following paragraphs, these treatment areas have been designed to meet the standards outlined in Chapter 500,and in accordance with the Maine Stormwater Management Design Manual, Technical Design Manual, Volume III, dated May 2016.

The proposed project consists of the improvements to the site as outlined above and shown in the design plan package. The following information shows that the site design meets the requirements of both the Storm Water section of the Maine Site Location of Development Law, as well as the City of Auburn Land Use Development Ordinance.

Our office uses HydroCAD software, version 10.10-4A to calculate the peak runoff for both the predevelopment and post development conditions. In order to development the storm water model for this parcel, several assumptions were made. These assumptions include;

1. One day precipitation values were derived from the Storm Water Management for Maine, Best Management Practices. The 24-hour duration rainfalls for the 2, 10 and 25 year storm frequencies were 3.0, 4.3 and 5.4, respectively. The storm type used for the model was a Type III storm event.
2. An Antecedent Moisture Content (AMC) of 2 was used, which constitutes a normal saturation condition of the moisture content of the soils.
3. Sizing of the underdrain grass filters and forested buffer areas were based upon the Best Management Practices as defined by the Department of Environmental Protection Storm Water BMP Manual.

Using our HydroCAD storm water modeling software, our office has determined the following peak runoff for the project site with the proposed improvements outlined above.

Pre-Development Peak Runoff			
Storm	**2-year**	**10-year**	**25-year**
Analysis Pnt.	**Storm**	**Storm**	**Storm**
WAP 1	3.05 cfs	11.22 cfs	21.40 cfs
Subtotals	***3.05 cfs***	***11.22 cfs***	***21.40 cfs***
Post-Development Peak Runoff			
Storm	**2-year**	**10-year**	**25-year**
Analysis Pnt.	**Storm**	**Storm**	**Storm**
WAP 1	XX.XX cfs	XX.XX cfs	XX.XX cfs
Subtotals	***XX.XX cfs***	***XX.XX cfs***	***XX.XX cfs***

Quality Treatment

For the quality treatment portion of law, since the project drains into a stream which eventually drains into the Kennebec River, the project is not required to meet the phosphorus standards. The following calculations and data show that the project meets the General Requirement Standards of Chapter 500, with more than 75 percent of the new impervious area treated, and more than 50 percent of the developed area treated.

Impervious Area Treatment Calculation

Total New Impervious Area 276,389 s.f.

Total New Impervious Area treated 259,894 s.f.

Total Offsite Impervious Area treated 20,400 s.f.

Percentage of New Impervious Area treated

(259,894 s.f. + (20,400 s.f. * 0.5))/276,389 s.f. = 0.977 or **97.7%**

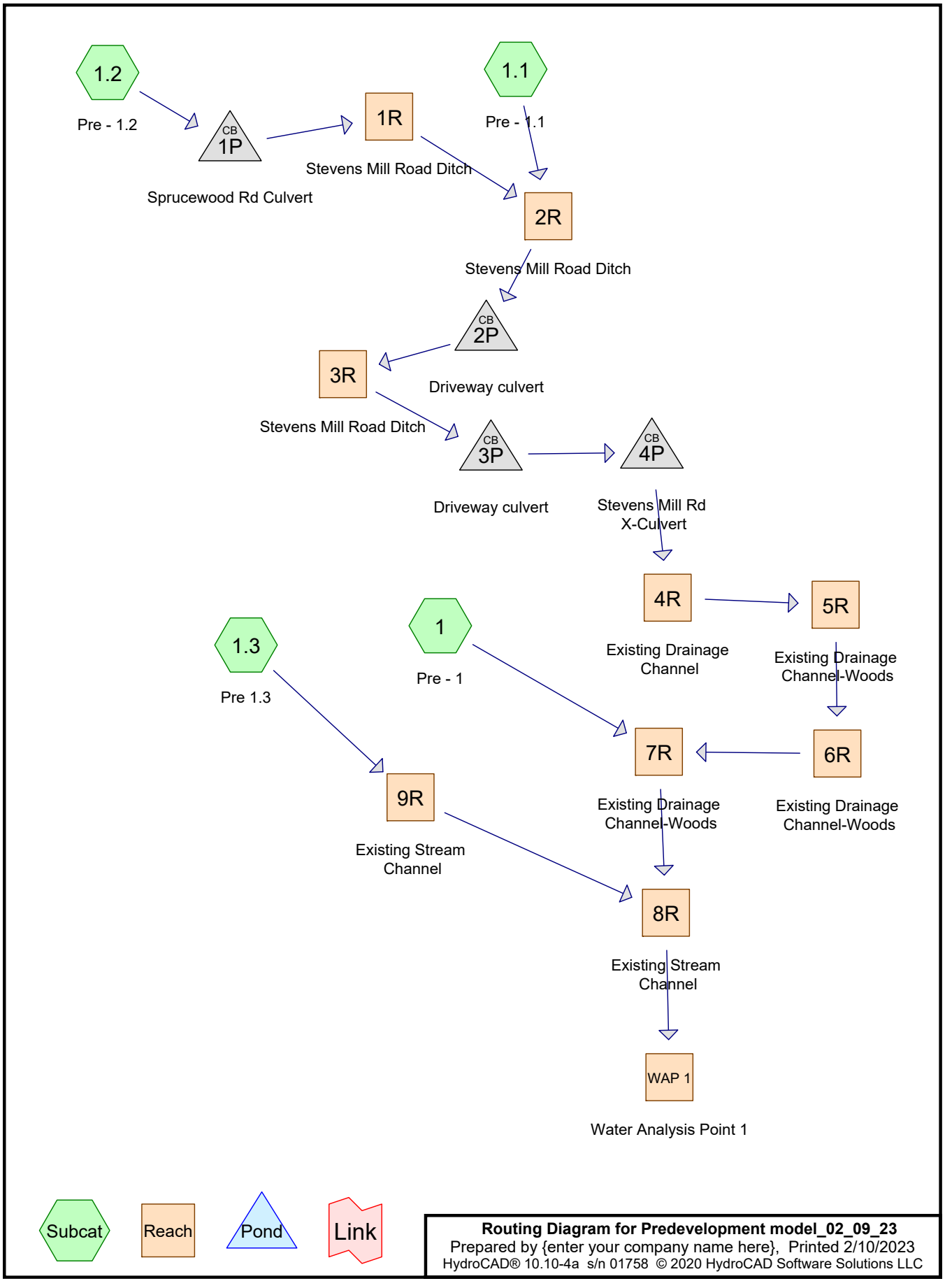
Total New Developed Area 404,690 s.f.

Total New Developed Area treated 349,091 s.f.

Total Offsite Developed Area treated 76,595 s.f.

Percentage of New Developed Area treated

(349,091 s.f. + (76,595 s.f. * 0.5))/404,690 s.f. = 0.957 or **95.7%**



Routing Diagram for Predevelopment model_02_09_23
Prepared by {enter your company name here}, Printed 2/10/2023

Rainfall Events Listing

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	2-year storm	Type III 24-hr		Default	24.00	1	3.00	2
2	10-year storm	Type III 24-hr		Default	24.00	1	4.30	2
3	25-year storm	Type III 24-hr		Default	24.00	1	5.40	2

Summary for Subcatchment 1: Pre - 1

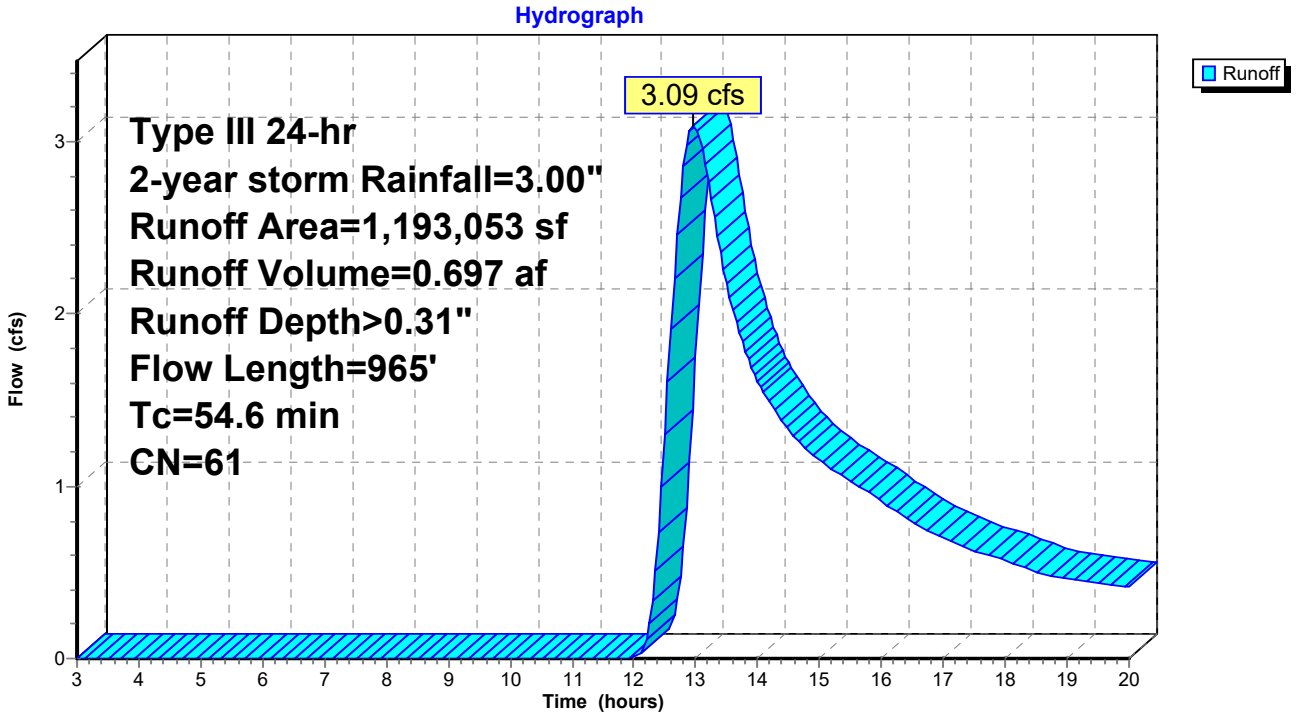
Runoff = 3.09 cfs @ 12.96 hrs, Volume= 0.697 af, Depth> 0.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 3.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year storm Rainfall=3.00"

Area (sf)	CN	Description
11,361	92	Paved roads w/open ditches, 50% imp, HSG C
5,445	83	Paved roads w/open ditches, 50% imp, HSG A
10,970	98	Unconnected pavement, HSG A
818	98	Unconnected pavement, HSG C
343,270	30	Woods, Good, HSG A
454,108	70	Woods, Good, HSG C
367,081	77	Woods, Good, HSG D
1,193,053	61	Weighted Average
1,172,862		98.31% Pervious Area
20,191		1.69% Impervious Area
11,788		58.38% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	14	0.0208	0.91		**Sheet Flow, Stevens Mill Road** Smooth surfaces n= 0.011 P2= 3.00"
2.0	10	0.0083	0.08		**Sheet Flow, Field/Meadow** Range n= 0.130 P2= 3.00"
37.9	126	0.0083	0.06		**Sheet Flow, Woodland** Woods: Light underbrush n= 0.400 P2= 3.00"
13.2	510	0.0167	0.65		**Shallow Concentrated Flow, Woodland** Woodland Kv= 5.0 fps
1.2	305	0.0230	4.31	14.38	**Parabolic Channel, Wooded Channel** W=10.00' D=0.50' Area=3.3 sf Perim=10.1' n= 0.025 Earth, clean & winding
54.6	965	Total			

Subcatchment 1: Pre - 1



Summary for Subcatchment 1.1: Pre - 1.1

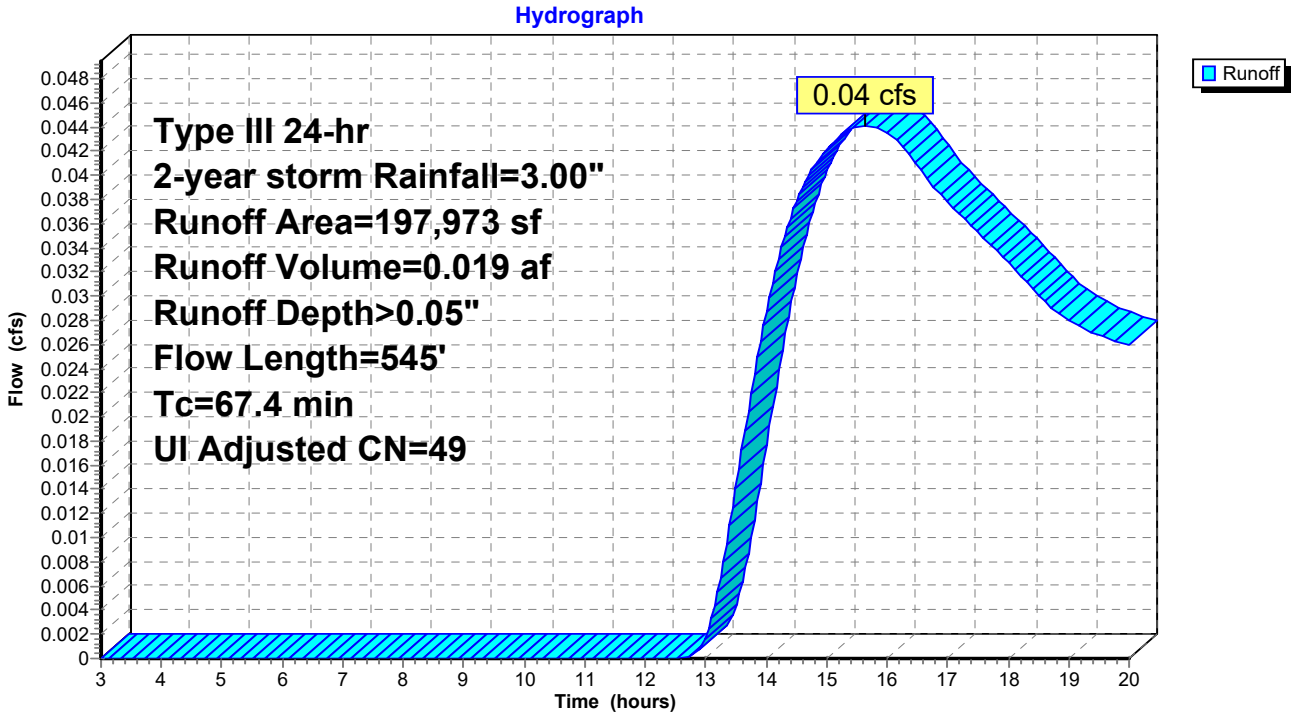
Runoff = 0.04 cfs @ 15.65 hrs, Volume= 0.019 af, Depth> 0.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 3.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year storm Rainfall=3.00"

Area (sf)	CN	Adj	Description
8,288	92		Paved roads w/open ditches, 50% imp, HSG C
7,140	83		Paved roads w/open ditches, 50% imp, HSG A
471	98		Unconnected pavement, HSG C
7,007	98		Unconnected pavement, HSG C
10,292	98		Unconnected pavement, HSG A
101,459	30		Woods, Good, HSG A
54,560	70		Woods, Good, HSG C
8,756	30		Woods, Good, HSG A
197,973	52	49	Weighted Average, UI Adjusted
172,489			87.13% Pervious Area
25,484			12.87% Impervious Area
17,770			69.73% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.4	30	0.1050	0.11		**Sheet Flow, lawn** Grass: Bermuda n= 0.410 P2= 3.00"
36.2	90	0.0050	0.04		**Sheet Flow, Lawn** Grass: Bermuda n= 0.410 P2= 3.00"
14.7	30	0.0050	0.03		**Sheet Flow, Woods - Good** Woods: Light underbrush n= 0.400 P2= 3.00"
11.3	240	0.0050	0.35		**Shallow Concentrated Flow, Woods** Woodland Kv= 5.0 fps
0.8	155	0.0440	3.15		**Shallow Concentrated Flow, Lawn** Grassed Waterway Kv= 15.0 fps
67.4	545	Total			

Subcatchment 1.1: Pre - 1.1



Summary for Subcatchment 1.2: Pre - 1.2

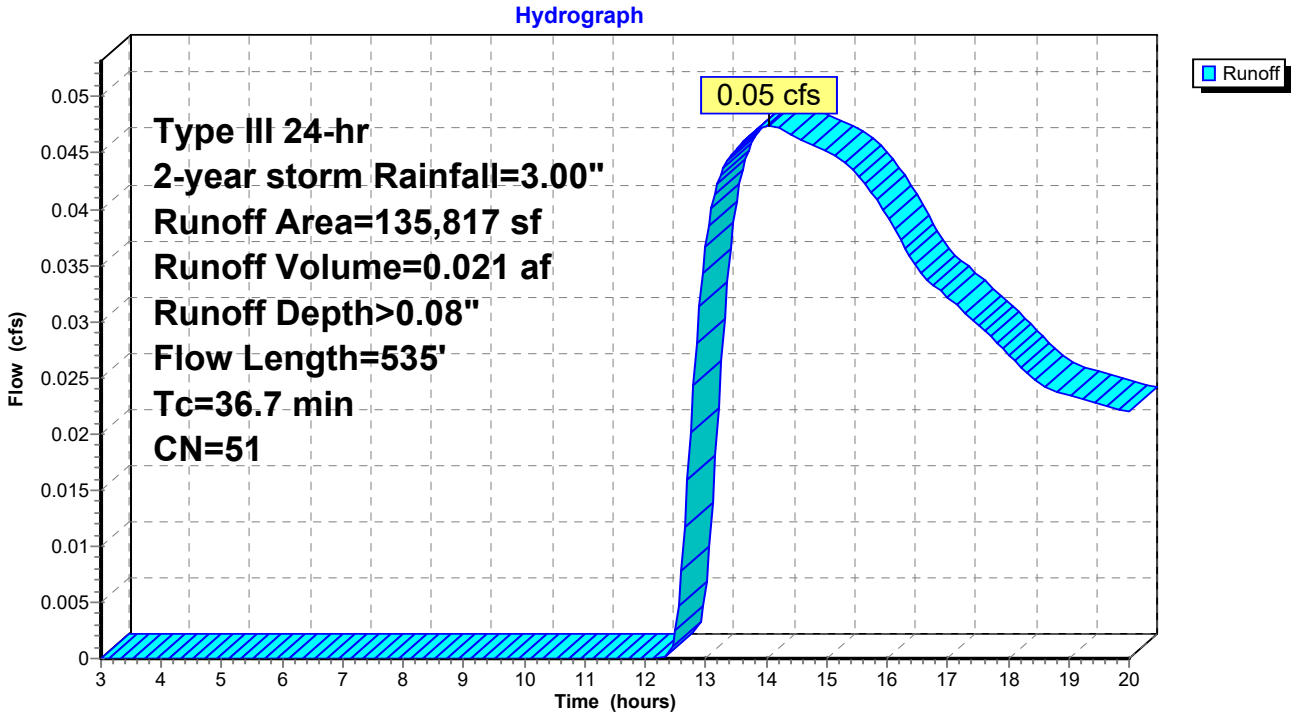
Runoff = 0.05 cfs @ 14.04 hrs, Volume= 0.021 af, Depth> 0.08"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 3.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year storm Rainfall=3.00"

Area (sf)	CN	Description
10,242	83	Paved roads w/open ditches, 50% imp, HSG A
20,828	98	Paved parking, HSG A
7,787	98	Paved parking, HSG C
88,183	30	Woods, Good, HSG A
8,635	70	Woods, Good, HSG C
142	30	Woods, Good, HSG A
135,817	51	Weighted Average
102,081		75.16% Pervious Area
33,736		24.84% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.8	50	0.0710	0.11		**Sheet Flow, lawn** Grass: Bermuda n= 0.410 P2= 3.00"
25.4	100	0.0150	0.07		**Sheet Flow, lawn** Grass: Bermuda n= 0.410 P2= 3.00"
2.4	225	0.0190	1.56	62.50	**Parabolic Channel, Existing Wooded channel** W=60.00' D=1.00' Area=40.0 sf Perim=60.0' n= 0.100 Heavy timber, flow below branches
0.8	100	0.0125	2.01	3.35	**Parabolic Channel, lawn drainage swale** W=10.00' D=0.25' Area=1.7 sf Perim=10.0' n= 0.025 Earth, clean & winding
0.3	60	0.0100	3.10	12.39	**Parabolic Channel, Sprucewood Road ditch** W=6.00' D=1.00' Area=4.0 sf Perim=6.4' n= 0.035 Earth, dense weeds
36.7	535	Total			

Subcatchment 1.2: Pre - 1.2



Summary for Subcatchment 1.3: Pre 1.3

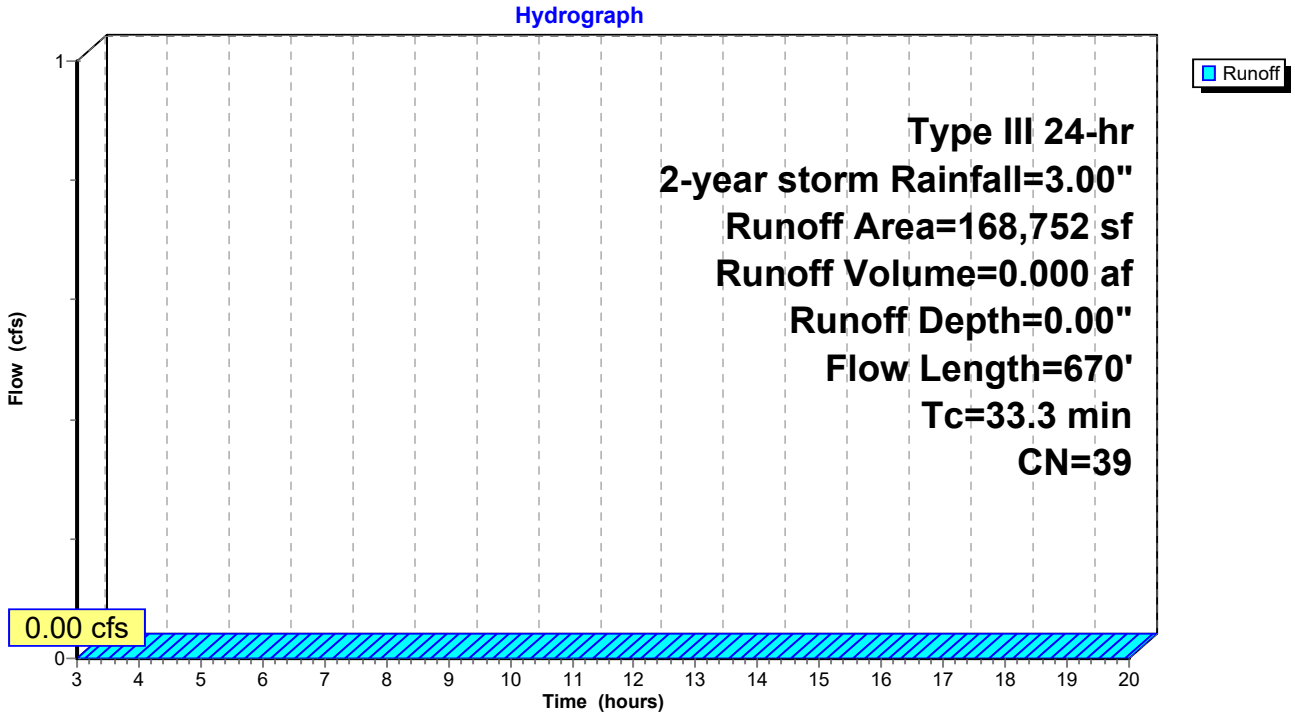
Runoff = 0.00 cfs @ 3.00 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 3.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year storm Rainfall=3.00"

Area (sf)	CN	Description
136,436	30	Woods, Good, HSG A
32,316	77	Woods, Good, HSG D
168,752	39	Weighted Average
168,752		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.0	150	0.0370	0.10		**Sheet Flow, Woodland** Woods: Light underbrush n= 0.400 P2= 3.00"
9.3	520	0.0346	0.93		**Shallow Concentrated Flow, Woodland** Woodland Kv= 5.0 fps
33.3	670	Total			

Subcatchment 1.3: Pre 1.3



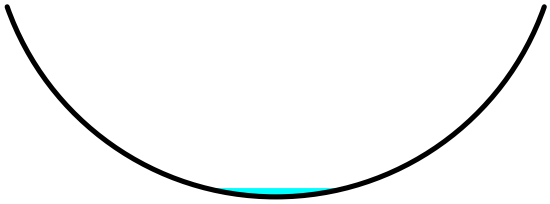
Summary for Reach 1R: Stevens Mill Road Ditch

Inflow Area = 3.118 ac, 24.84% Impervious, Inflow Depth > 0.08" for 2-year storm event
Inflow = 0.05 cfs @ 14.04 hrs, Volume= 0.021 af
Outflow = 0.05 cfs @ 14.18 hrs, Volume= 0.021 af, Atten= 0%, Lag= 8.3 min

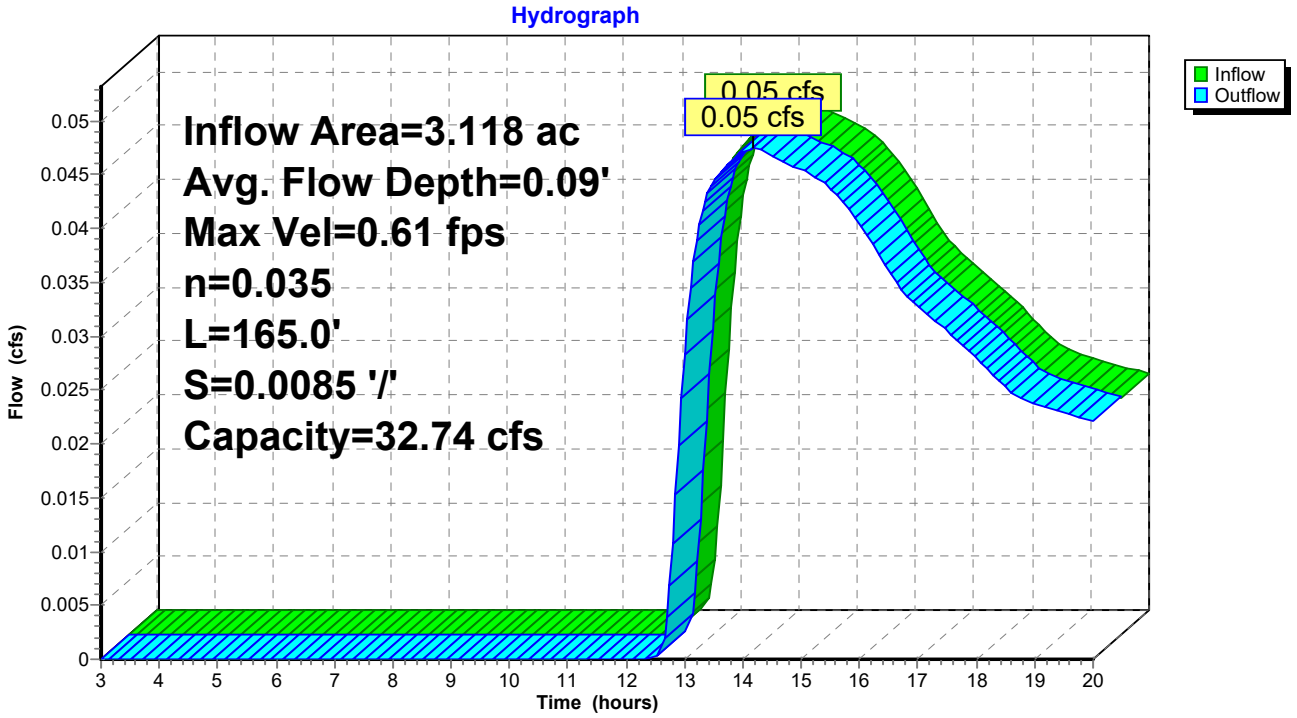
Routing by Stor-Ind+Trans method, Time Span= 3.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 0.61 fps, Min. Travel Time= 4.5 min
Avg. Velocity = 0.53 fps, Avg. Travel Time= 5.2 min

Peak Storage= 13 cf @ 14.10 hrs
Average Depth at Peak Storage= 0.09' , Surface Width= 1.28'
Bank-Full Depth= 2.00' Flow Area= 8.0 sf, Capacity= 32.74 cfs

6.00' x 2.00' deep Parabolic Channel, n= 0.035 Earth, dense weeds
Length= 165.0' Slope= 0.0085 '/'
Inlet Invert= 244.60', Outlet Invert= 243.20'



Reach 1R: Stevens Mill Road Ditch



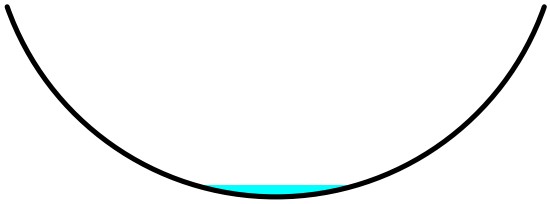
Summary for Reach 2R: Stevens Mill Road Ditch

Inflow Area = 7.663 ac, 17.74% Impervious, Inflow Depth > 0.06" for 2-year storm event
Inflow = 0.09 cfs @ 15.22 hrs, Volume= 0.040 af
Outflow = 0.09 cfs @ 15.32 hrs, Volume= 0.040 af, Atten= 0%, Lag= 5.6 min

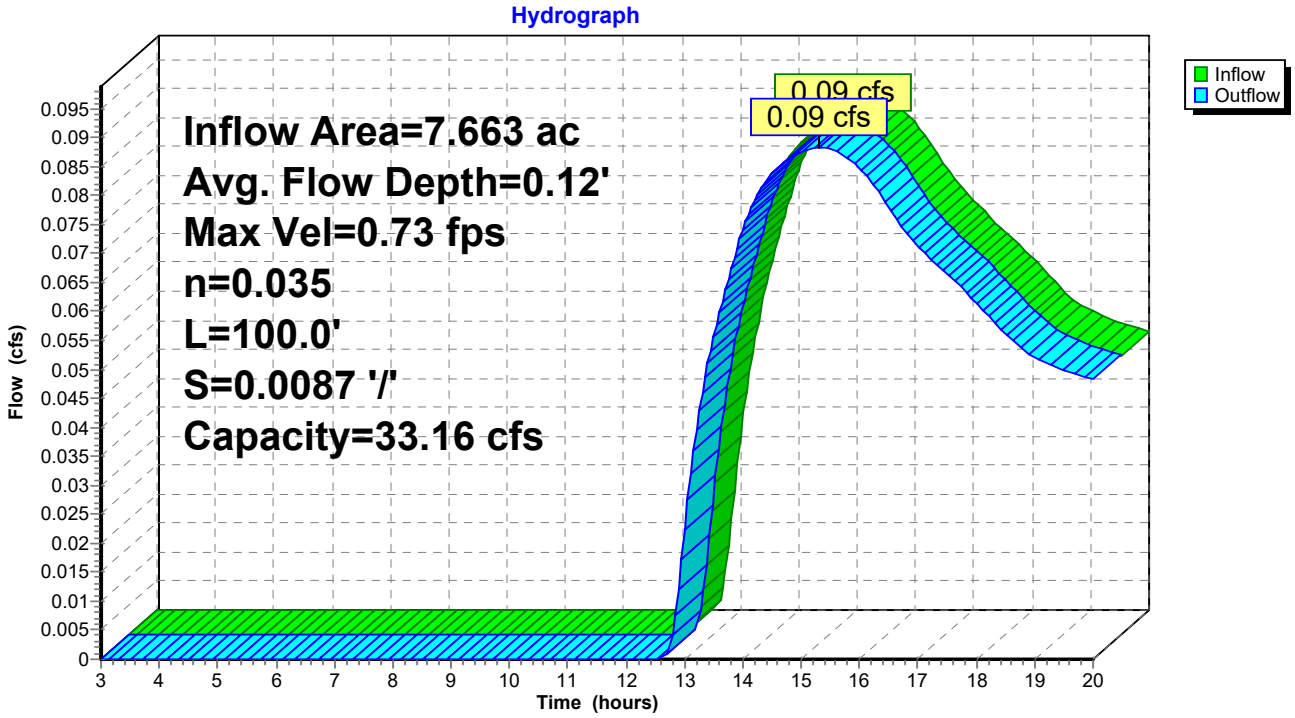
Routing by Stor-Ind+Trans method, Time Span= 3.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 0.73 fps, Min. Travel Time= 2.3 min
Avg. Velocity = 0.65 fps, Avg. Travel Time= 2.6 min

Peak Storage= 12 cf @ 15.27 hrs
Average Depth at Peak Storage= 0.12' , Surface Width= 1.48'
Bank-Full Depth= 2.00' Flow Area= 8.0 sf, Capacity= 33.16 cfs

6.00' x 2.00' deep Parabolic Channel, n= 0.035 Earth, dense weeds
Length= 100.0' Slope= 0.0087 '/'
Inlet Invert= 243.20', Outlet Invert= 242.33'



Reach 2R: Stevens Mill Road Ditch



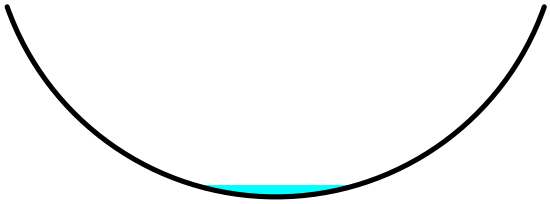
Summary for Reach 3R: Stevens Mill Road Ditch

Inflow Area = 7.663 ac, 17.74% Impervious, Inflow Depth > 0.06" for 2-year storm event
Inflow = 0.09 cfs @ 15.32 hrs, Volume= 0.040 af
Outflow = 0.09 cfs @ 15.40 hrs, Volume= 0.039 af, Atten= 0%, Lag= 4.9 min

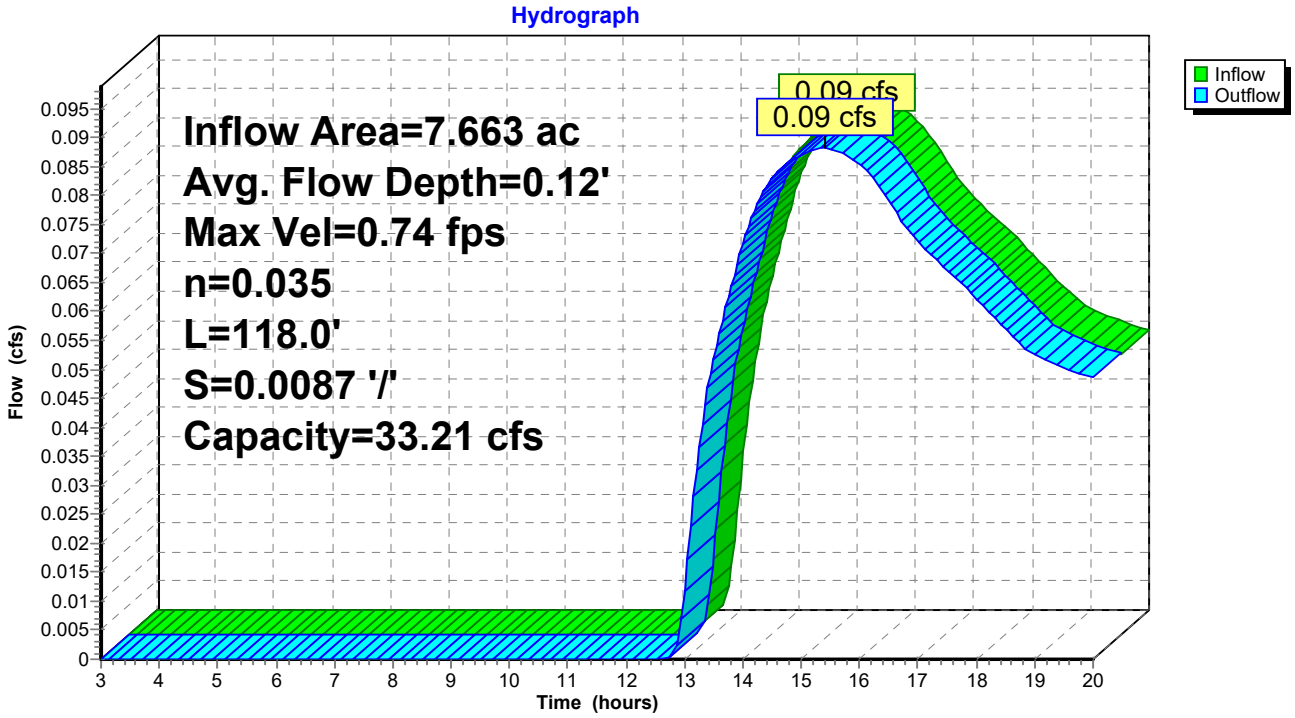
Routing by Stor-Ind+Trans method, Time Span= 3.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 0.74 fps, Min. Travel Time= 2.7 min
Avg. Velocity = 0.65 fps, Avg. Travel Time= 3.0 min

Peak Storage= 14 cf @ 15.35 hrs
Average Depth at Peak Storage= 0.12' , Surface Width= 1.48'
Bank-Full Depth= 2.00' Flow Area= 8.0 sf, Capacity= 33.21 cfs

6.00' x 2.00' deep Parabolic Channel, n= 0.035 Earth, dense weeds
Length= 118.0' Slope= 0.0087 '/'
Inlet Invert= 242.09', Outlet Invert= 241.06'



Reach 3R: Stevens Mill Road Ditch



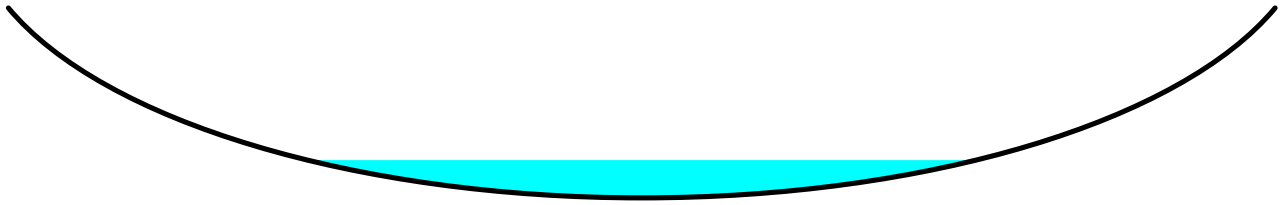
Summary for Reach 4R: Existing Drainage Channel

Inflow Area = 7.663 ac, 17.74% Impervious, Inflow Depth > 0.06" for 2-year storm event
Inflow = 0.09 cfs @ 15.40 hrs, Volume= 0.039 af
Outflow = 0.09 cfs @ 15.60 hrs, Volume= 0.038 af, Atten= 0%, Lag= 12.2 min

Routing by Stor-Ind+Trans method, Time Span= 3.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 0.63 fps, Min. Travel Time= 7.2 min
Avg. Velocity = 0.55 fps, Avg. Travel Time= 8.1 min

Peak Storage= 38 cf @ 15.48 hrs
Average Depth at Peak Storage= 0.06' , Surface Width= 3.55'
Bank-Full Depth= 0.30' Flow Area= 1.6 sf, Capacity= 2.96 cfs

8.00' x 0.30' deep Parabolic Channel, n= 0.025 Earth, clean & winding
Length= 270.0' Slope= 0.0083 '/'
Inlet Invert= 239.66', Outlet Invert= 237.41'



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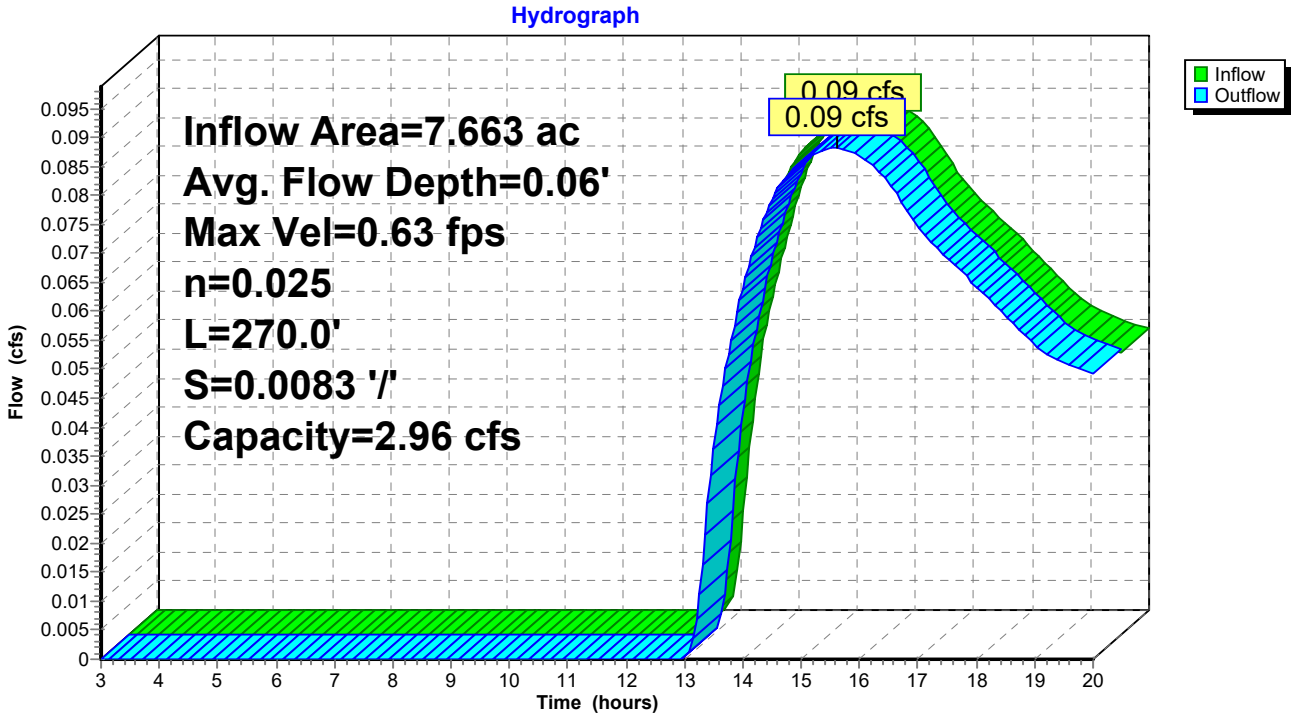
Reach 4R: Existing Drainage Channel



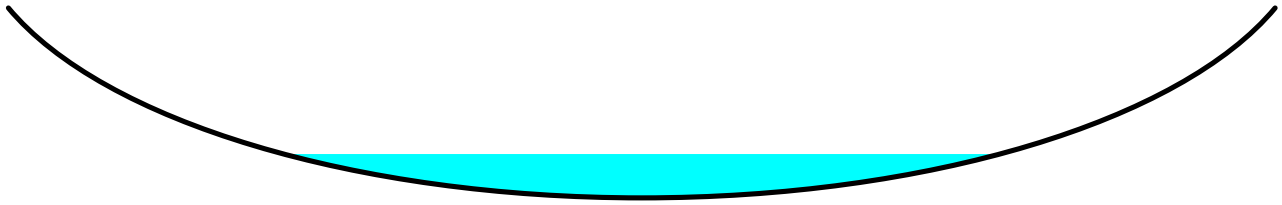
Summary for Reach 5R: Existing Drainage Channel-Woods

Inflow Area = 7.663 ac, 17.74% Impervious, Inflow Depth > 0.06" for 2-year storm event
Inflow = 0.09 cfs @ 15.60 hrs, Volume= 0.038 af
Outflow = 0.09 cfs @ 15.80 hrs, Volume= 0.037 af, Atten= 0%, Lag= 11.9 min

Routing by Stor-Ind+Trans method, Time Span= 3.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 0.75 fps, Min. Travel Time= 7.1 min
Avg. Velocity = 0.66 fps, Avg. Travel Time= 8.0 min

Peak Storage= 37 cf @ 15.68 hrs
Average Depth at Peak Storage= 0.05' , Surface Width= 3.83'
Bank-Full Depth= 0.20' Flow Area= 1.1 sf, Capacity= 2.15 cfs

8.00' x 0.20' deep Parabolic Channel, n= 0.025 Earth, clean & winding
Length= 320.0' Slope= 0.0169 '/'
Inlet Invert= 237.41', Outlet Invert= 232.00'



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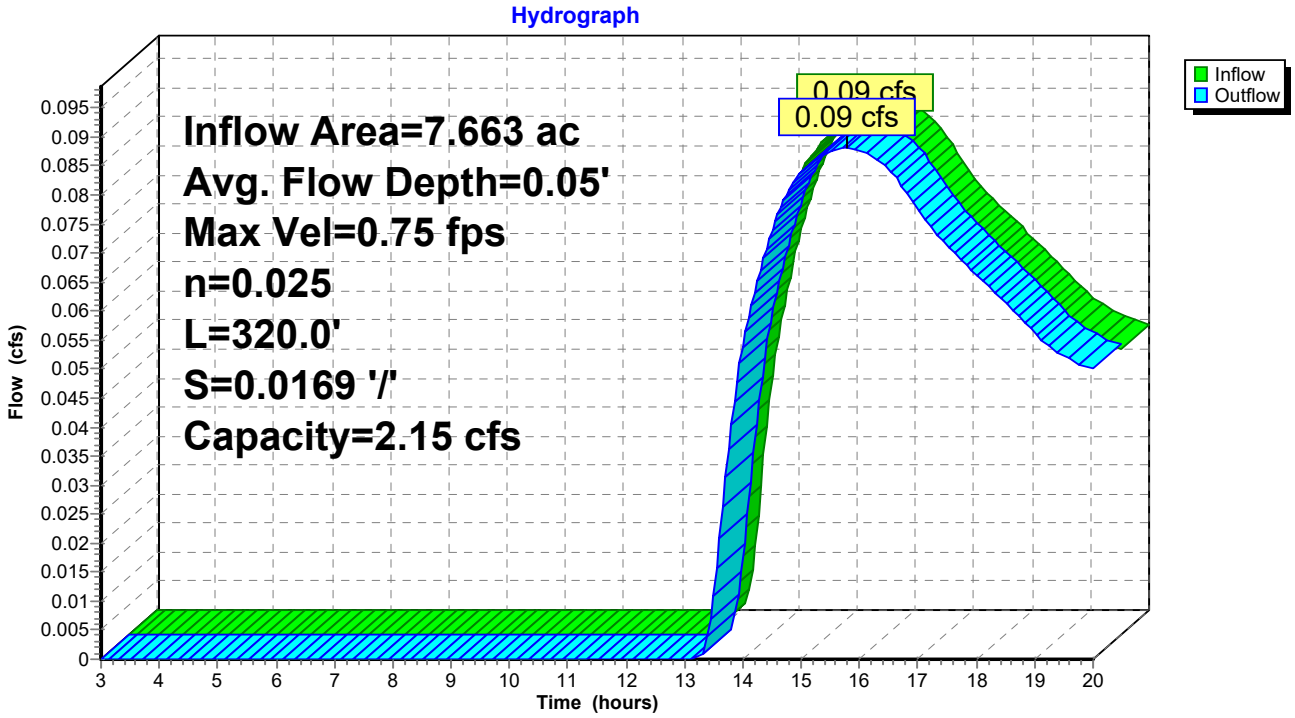
Reach 5R: Existing Drainage Channel-Woods



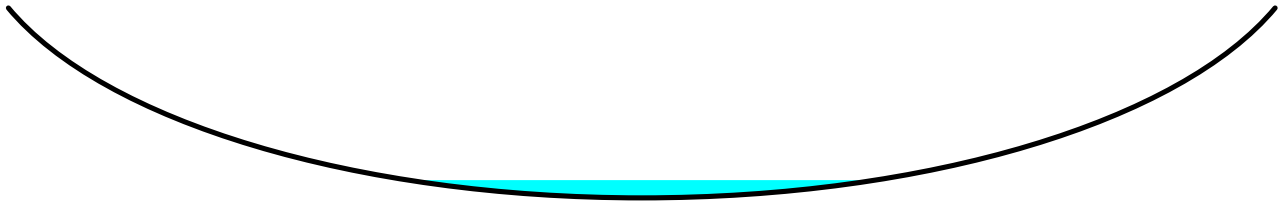
Summary for Reach 6R: Existing Drainage Channel-Woods

Inflow Area = 7.663 ac, 17.74% Impervious, Inflow Depth > 0.06" for 2-year storm event
Inflow = 0.09 cfs @ 15.80 hrs, Volume= 0.037 af
Outflow = 0.09 cfs @ 15.93 hrs, Volume= 0.036 af, Atten= 0%, Lag= 7.8 min

Routing by Stor-Ind+Trans method, Time Span= 3.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 0.95 fps, Min. Travel Time= 4.7 min
Avg. Velocity = 0.84 fps, Avg. Travel Time= 5.3 min

Peak Storage= 25 cf @ 15.85 hrs
Average Depth at Peak Storage= 0.05' , Surface Width= 3.03'
Bank-Full Depth= 0.50' Flow Area= 3.3 sf, Capacity= 15.41 cfs

10.00' x 0.50' deep Parabolic Channel, n= 0.025 Earth, clean & winding
Length= 265.0' Slope= 0.0264 '/'
Inlet Invert= 232.00', Outlet Invert= 225.00'



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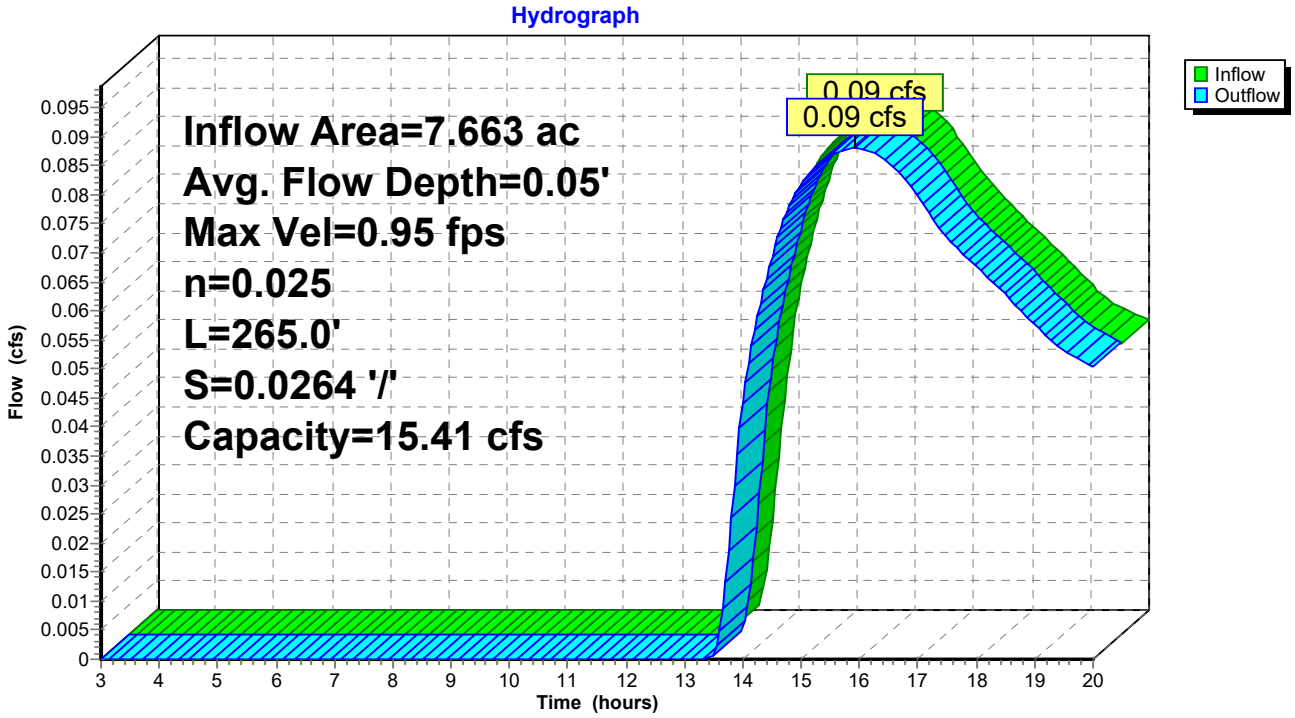
Reach 6R: Existing Drainage Channel-Woods



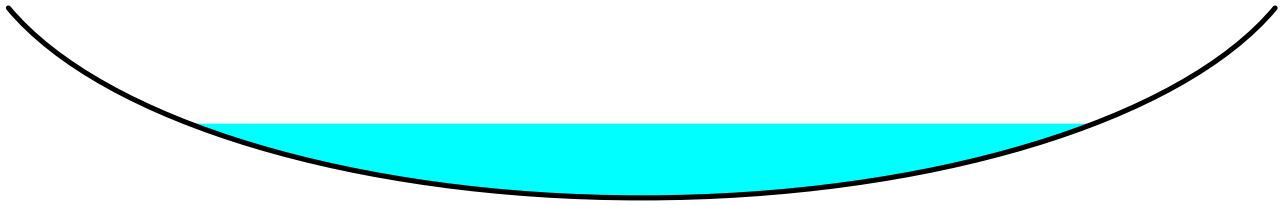
Summary for Reach 7R: Existing Drainage Channel-Woods

Inflow Area = 35.051 ac, 5.20% Impervious, Inflow Depth > 0.25" for 2-year storm event
Inflow = 3.09 cfs @ 12.96 hrs, Volume= 0.734 af
Outflow = 3.08 cfs @ 13.02 hrs, Volume= 0.730 af, Atten= 0%, Lag= 3.4 min

Routing by Stor-Ind+Trans method, Time Span= 3.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 1.90 fps, Min. Travel Time= 1.9 min
Avg. Velocity = 1.31 fps, Avg. Travel Time= 2.8 min

Peak Storage= 358 cf @ 12.99 hrs
Average Depth at Peak Storage= 0.39' , Surface Width= 6.25'
Bank-Full Depth= 1.00' Flow Area= 6.7 sf, Capacity= 23.43 cfs

10.00' x 1.00' deep Parabolic Channel, n= 0.040 Winding stream, pools & shoals
Length= 220.0' Slope= 0.0159 '/'
Inlet Invert= 225.00', Outlet Invert= 221.50'



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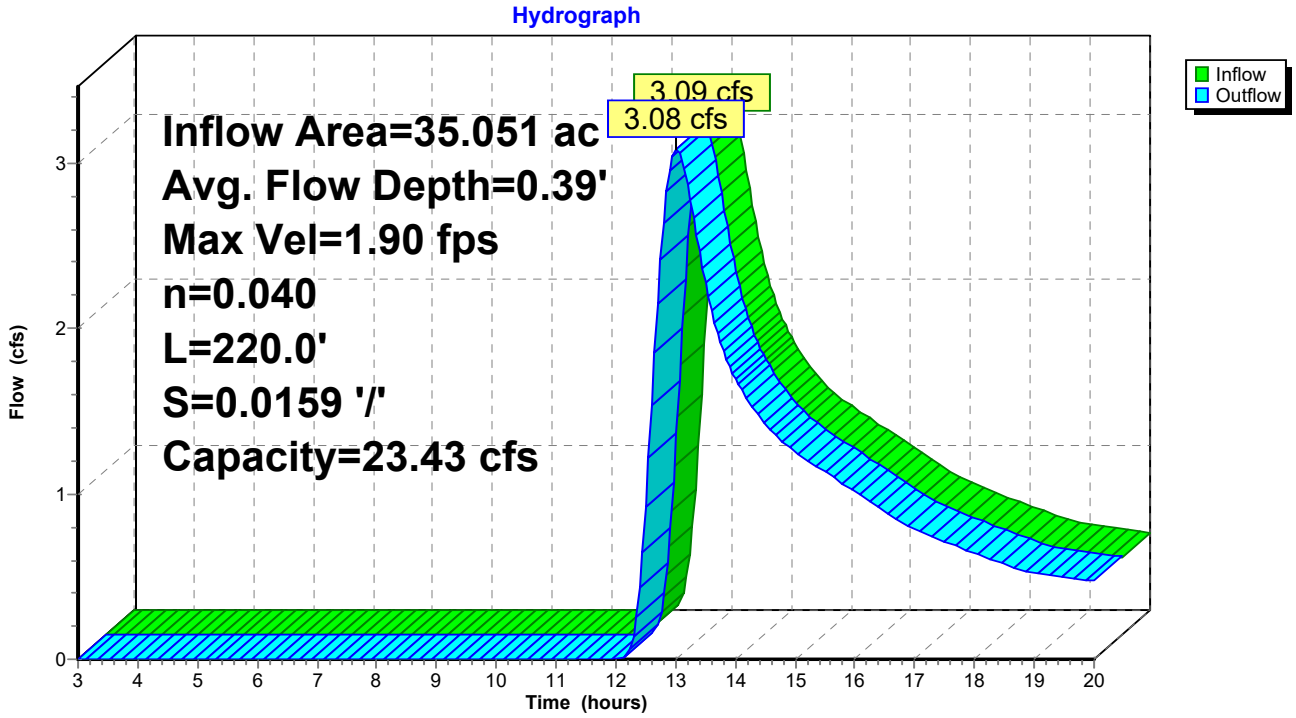
Reach 7R: Existing Drainage Channel-Woods



Summary for Reach 8R: Existing Stream Channel

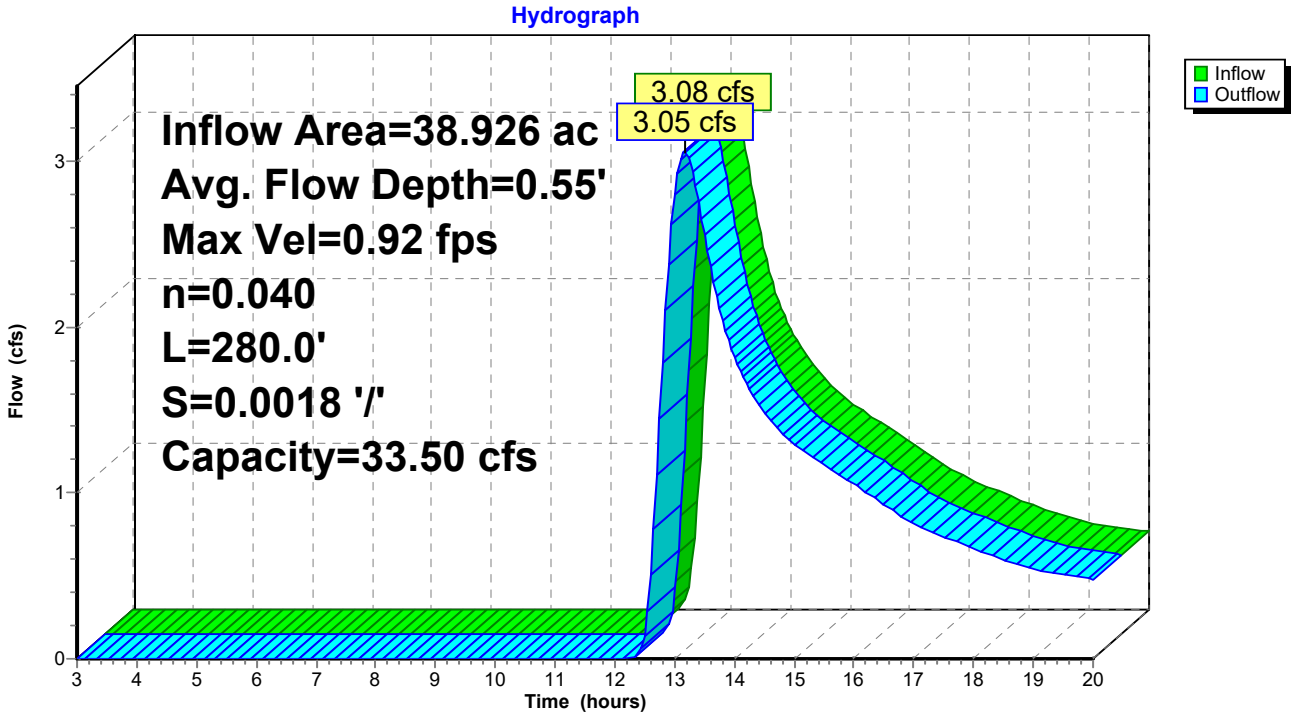
Inflow Area = 38.926 ac, 4.68% Impervious, Inflow Depth > 0.23" for 2-year storm event
Inflow = 3.08 cfs @ 13.02 hrs, Volume= 0.730 af
Outflow = 3.05 cfs @ 13.17 hrs, Volume= 0.720 af, Atten= 1%, Lag= 8.9 min

Routing by Stor-Ind+Trans method, Time Span= 3.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 0.92 fps, Min. Travel Time= 5.1 min
Avg. Velocity = 0.61 fps, Avg. Travel Time= 7.6 min

Peak Storage= 931 cf @ 13.08 hrs
Average Depth at Peak Storage= 0.55' , Surface Width= 7.18'
Bank-Full Depth= 2.00' Flow Area= 18.0 sf, Capacity= 33.50 cfs

5.00' x 2.00' deep channel, n= 0.040 Winding stream, pools & shoals
Side Slope Z-value= 2.0 '/' Top Width= 13.00'
Length= 280.0' Slope= 0.0018 '/'
Inlet Invert= 221.50', Outlet Invert= 221.00'

Reach 8R: Existing Stream Channel



Summary for Reach 9R: Existing Stream Channel

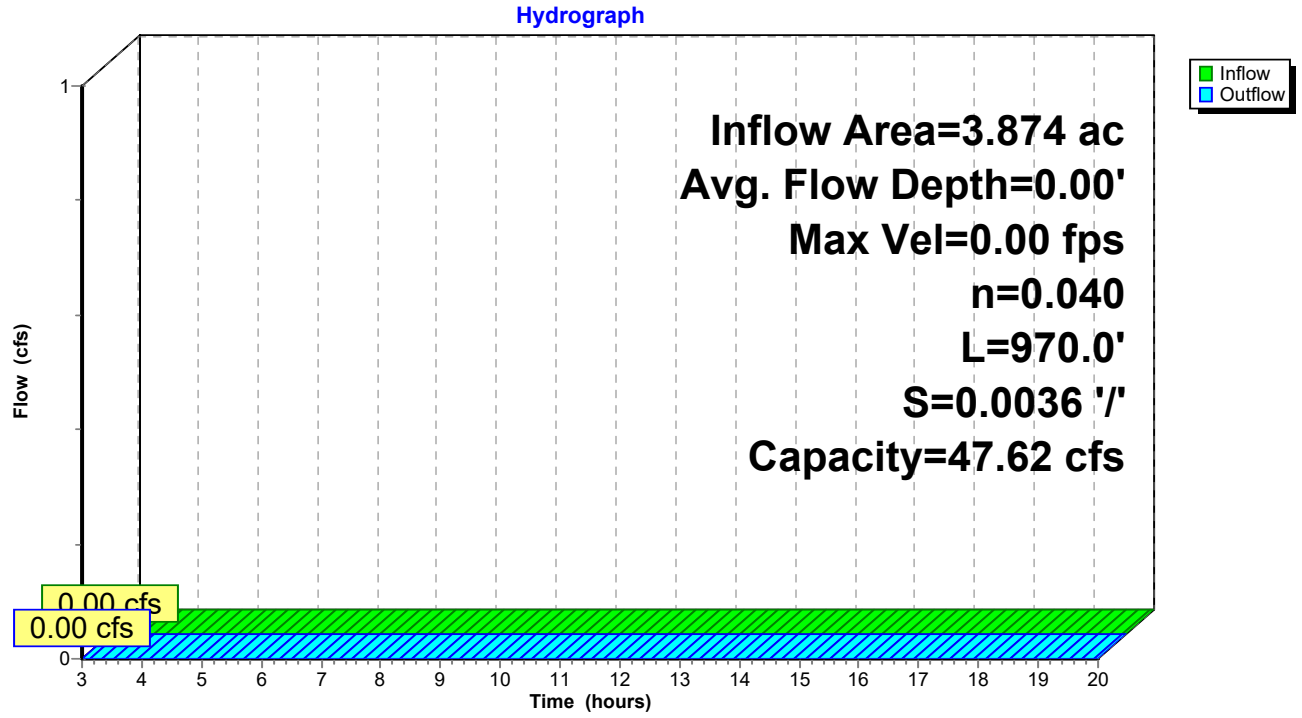
Inflow Area = 3.874 ac, 0.00% Impervious, Inflow Depth = 0.00" for 2-year storm event
Inflow = 0.00 cfs @ 3.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 3.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 3.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 3.00 hrs
Average Depth at Peak Storage= 0.00'
Bank-Full Depth= 2.00' Flow Area= 18.0 sf, Capacity= 47.62 cfs

5.00' x 2.00' deep channel, n= 0.040 Winding stream, pools & shoals
Side Slope Z-value= 2.0 '/' Top Width= 13.00'
Length= 970.0' Slope= 0.0036 '/'
Inlet Invert= 225.00', Outlet Invert= 221.50'

Reach 9R: Existing Stream Channel

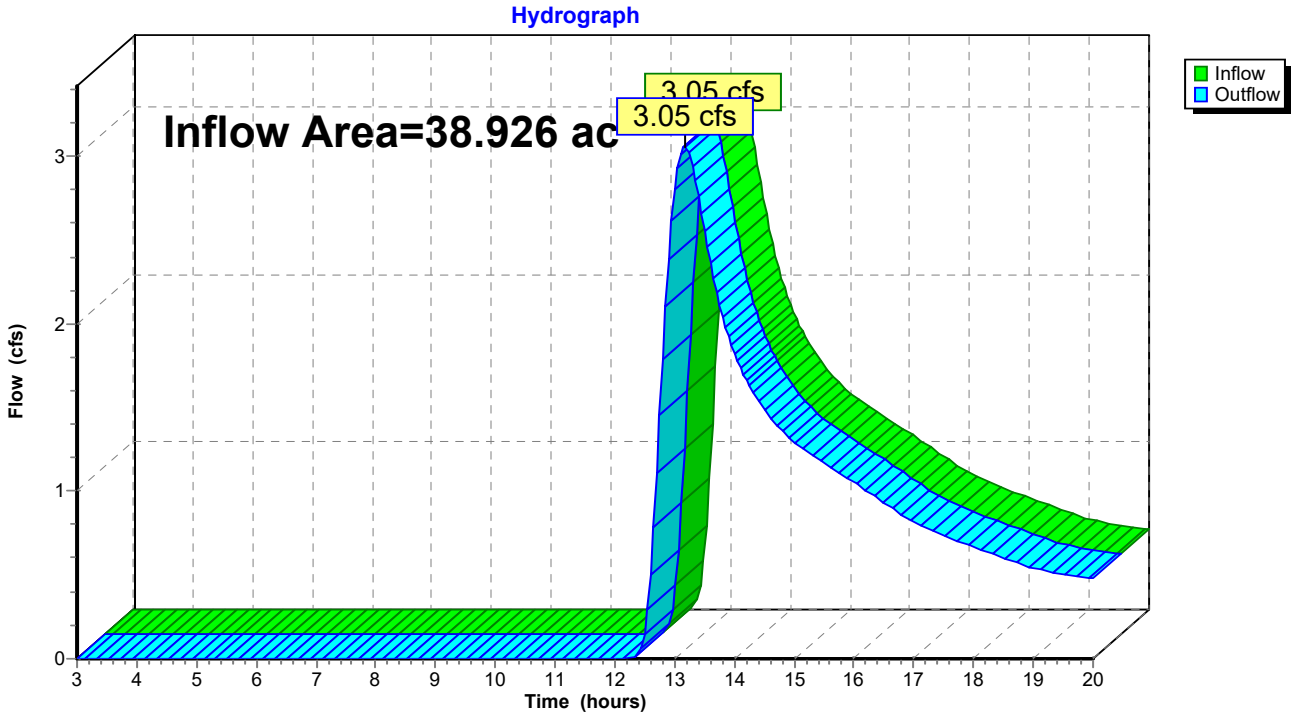


Summary for Reach WAP 1: Water Analysis Point 1

Inflow Area = 38.926 ac, 4.68% Impervious, Inflow Depth > 0.22" for 2-year storm event
Inflow = 3.05 cfs @ 13.17 hrs, Volume= 0.720 af
Outflow = 3.05 cfs @ 13.17 hrs, Volume= 0.720 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 3.00-20.00 hrs, dt= 0.05 hrs

Reach WAP 1: Water Analysis Point 1



Summary for Pond 1P: Sprucewood Rd Culvert

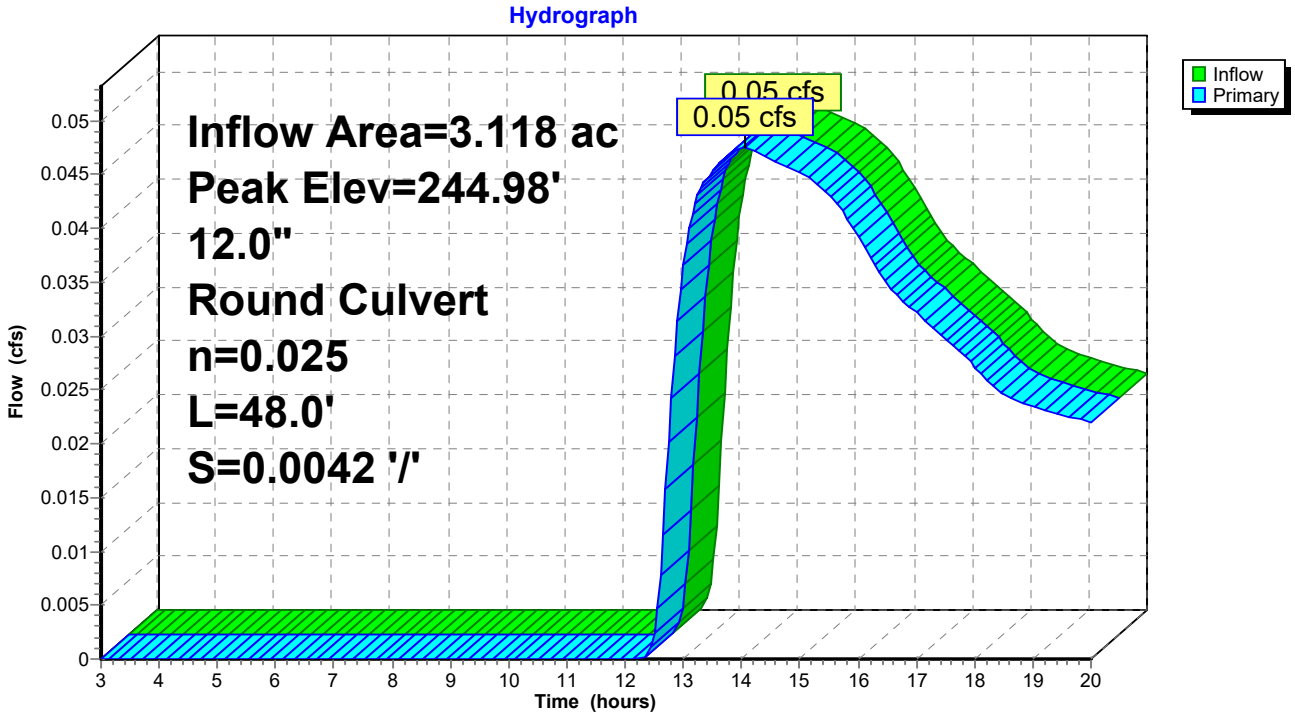
Inflow Area = 3.118 ac, 24.84% Impervious, Inflow Depth > 0.08" for 2-year storm event
Inflow = 0.05 cfs @ 14.04 hrs, Volume= 0.021 af
Outflow = 0.05 cfs @ 14.04 hrs, Volume= 0.021 af, Atten= 0%, Lag= 0.0 min
Primary = 0.05 cfs @ 14.04 hrs, Volume= 0.021 af

Routing by Stor-Ind method, Time Span= 3.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 244.98' @ 14.04 hrs
Flood Elev= 246.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	244.80'	**12.0" Round Culvert** L= 48.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 244.80' / 244.60' S= 0.0042 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 0.79 sf

Primary OutFlow Max=0.05 cfs @ 14.04 hrs HW=244.98' (Free Discharge)
1=Culvert (Barrel Controls 0.05 cfs @ 0.77 fps)

Pond 1P: Sprucewood Rd Culvert



Summary for Pond 2P: Driveway culvert

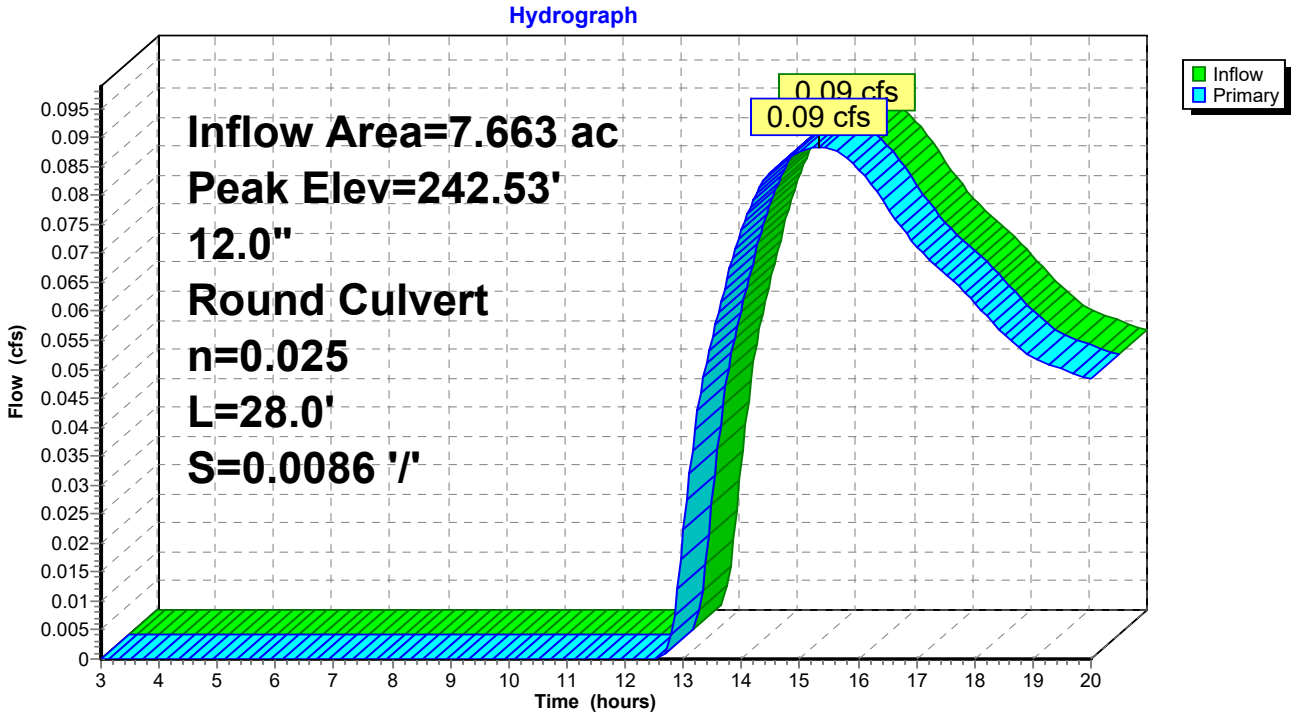
Inflow Area = 7.663 ac, 17.74% Impervious, Inflow Depth > 0.06" for 2-year storm event
Inflow = 0.09 cfs @ 15.32 hrs, Volume= 0.040 af
Outflow = 0.09 cfs @ 15.32 hrs, Volume= 0.040 af, Atten= 0%, Lag= 0.0 min
Primary = 0.09 cfs @ 15.32 hrs, Volume= 0.040 af

Routing by Stor-Ind method, Time Span= 3.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 242.53' @ 15.32 hrs
Flood Elev= 243.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	242.33'	**12.0" Round Culvert** L= 28.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 242.33' / 242.09' S= 0.0086 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 0.79 sf

Primary OutFlow Max=0.09 cfs @ 15.32 hrs HW=242.53' (Free Discharge)
1=Culvert (Barrel Controls 0.09 cfs @ 1.16 fps)

Pond 2P: Driveway culvert



Summary for Pond 3P: Driveway culvert

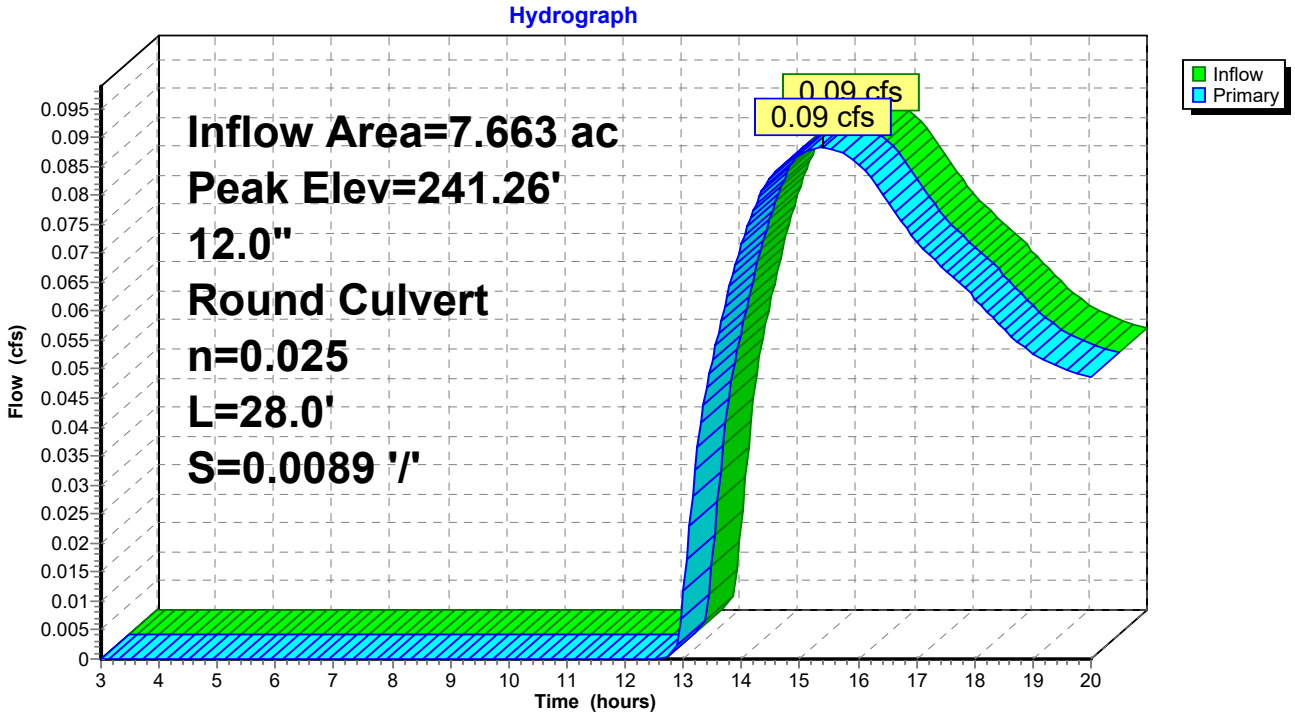
Inflow Area = 7.663 ac, 17.74% Impervious, Inflow Depth > 0.06" for 2-year storm event
Inflow = 0.09 cfs @ 15.40 hrs, Volume= 0.039 af
Outflow = 0.09 cfs @ 15.40 hrs, Volume= 0.039 af, Atten= 0%, Lag= 0.0 min
Primary = 0.09 cfs @ 15.40 hrs, Volume= 0.039 af

Routing by Stor-Ind method, Time Span= 3.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 241.26' @ 15.40 hrs
Flood Elev= 243.16'

Device	Routing	Invert	Outlet Devices
#1	Primary	241.06'	**12.0" Round Culvert** L= 28.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 241.06' / 240.81' S= 0.0089 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 0.79 sf

Primary OutFlow Max=0.09 cfs @ 15.40 hrs HW=241.26' (Free Discharge)
1=Culvert (Barrel Controls 0.09 cfs @ 1.18 fps)

Pond 3P: Driveway culvert



Summary for Pond 4P: Stevens Mill Rd X-Culvert

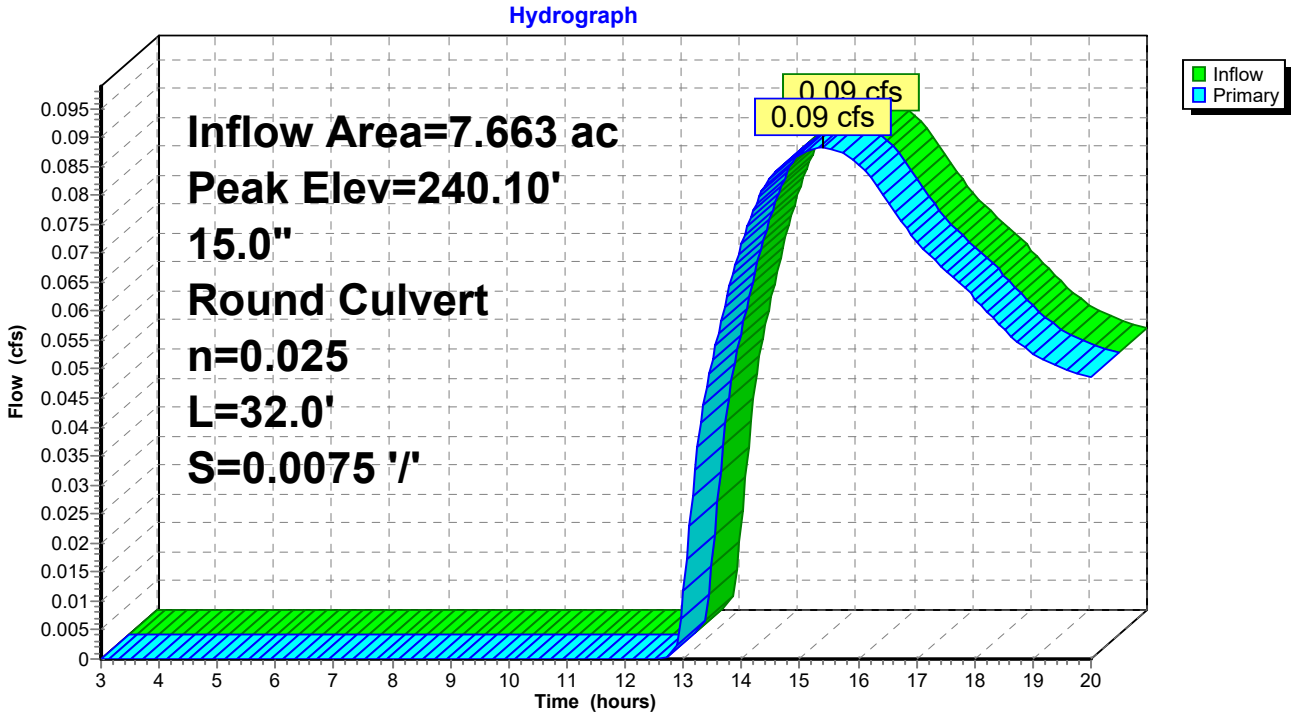
Inflow Area = 7.663 ac, 17.74% Impervious, Inflow Depth > 0.06" for 2-year storm event
Inflow = 0.09 cfs @ 15.40 hrs, Volume= 0.039 af
Outflow = 0.09 cfs @ 15.40 hrs, Volume= 0.039 af, Atten= 0%, Lag= 0.0 min
Primary = 0.09 cfs @ 15.40 hrs, Volume= 0.039 af

Routing by Stor-Ind method, Time Span= 3.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 240.10' @ 15.40 hrs
Flood Elev= 243.16'

Device	Routing	Invert	Outlet Devices
#1	Primary	239.90'	**15.0" Round Culvert** L= 32.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 239.90' / 239.66' S= 0.0075 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 1.23 sf

Primary OutFlow Max=0.09 cfs @ 15.40 hrs HW=240.10' (Free Discharge)
1=Culvert (Barrel Controls 0.09 cfs @ 1.08 fps)

Pond 4P: Stevens Mill Rd X-Culvert



Summary for Subcatchment 1: Pre - 1

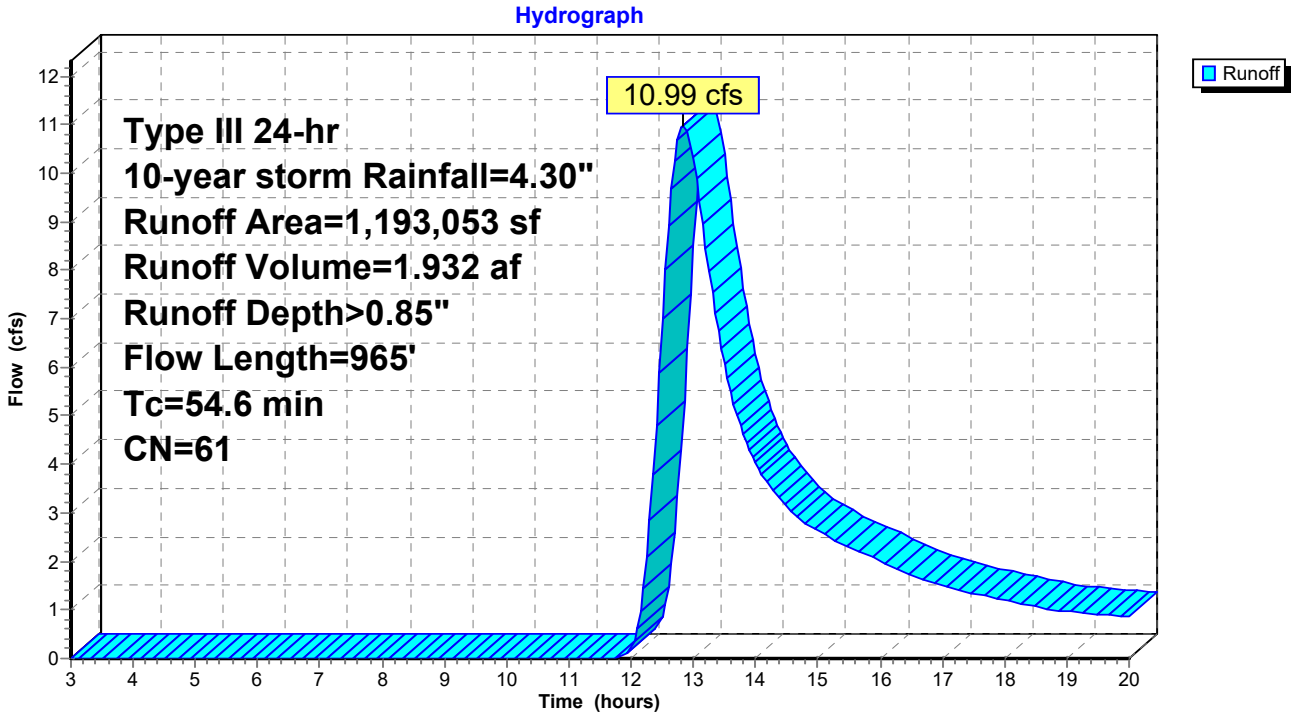
Runoff = 10.99 cfs @ 12.84 hrs, Volume= 1.932 af, Depth> 0.85"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 3.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year storm Rainfall=4.30"

Area (sf)	CN	Description
11,361	92	Paved roads w/open ditches, 50% imp, HSG C
5,445	83	Paved roads w/open ditches, 50% imp, HSG A
10,970	98	Unconnected pavement, HSG A
818	98	Unconnected pavement, HSG C
343,270	30	Woods, Good, HSG A
454,108	70	Woods, Good, HSG C
367,081	77	Woods, Good, HSG D
1,193,053	61	Weighted Average
1,172,862		98.31% Pervious Area
20,191		1.69% Impervious Area
11,788		58.38% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	14	0.0208	0.91		**Sheet Flow, Stevens Mill Road** Smooth surfaces n= 0.011 P2= 3.00"
2.0	10	0.0083	0.08		**Sheet Flow, Field/Meadow** Range n= 0.130 P2= 3.00"
37.9	126	0.0083	0.06		**Sheet Flow, Woodland** Woods: Light underbrush n= 0.400 P2= 3.00"
13.2	510	0.0167	0.65		**Shallow Concentrated Flow, Woodland** Woodland Kv= 5.0 fps
1.2	305	0.0230	4.31	14.38	**Parabolic Channel, Wooded Channel** W=10.00' D=0.50' Area=3.3 sf Perim=10.1' n= 0.025 Earth, clean & winding
54.6	965	Total			

Subcatchment 1: Pre - 1



Summary for Subcatchment 1.1: Pre - 1.1

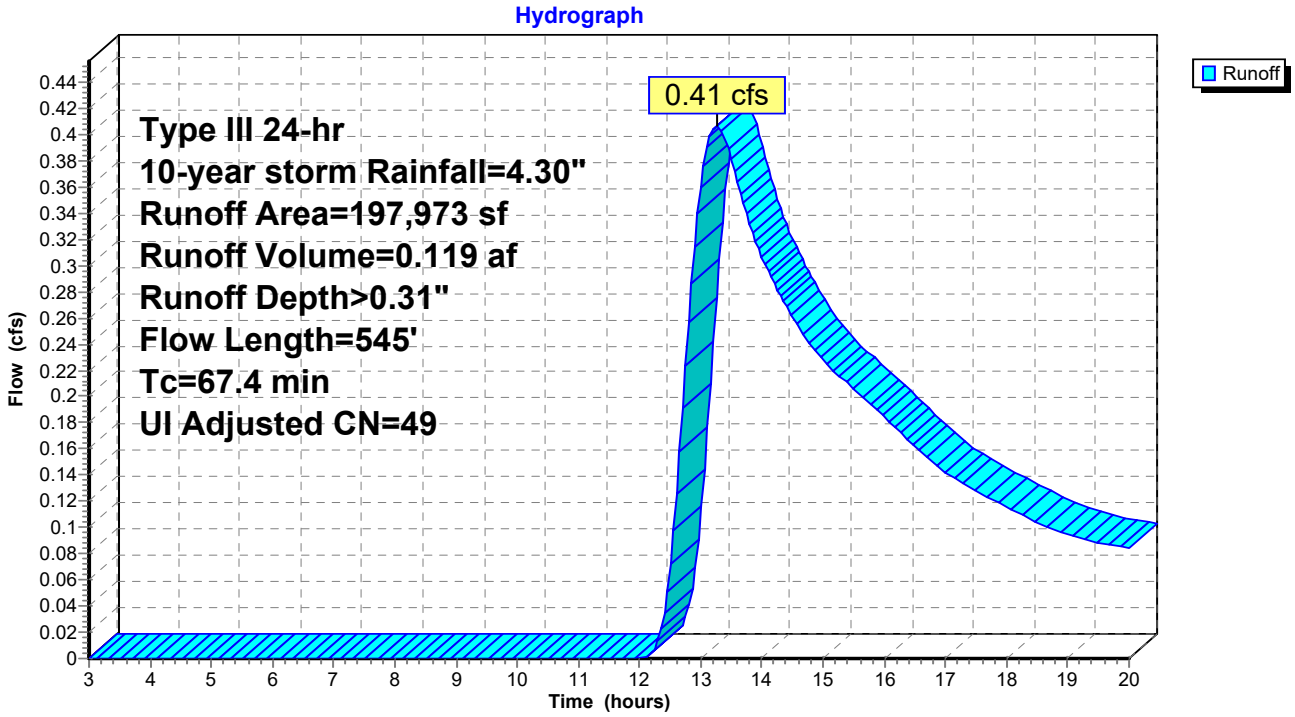
Runoff = 0.41 cfs @ 13.26 hrs, Volume= 0.119 af, Depth> 0.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 3.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year storm Rainfall=4.30"

Area (sf)	CN	Adj	Description
8,288	92		Paved roads w/open ditches, 50% imp, HSG C
7,140	83		Paved roads w/open ditches, 50% imp, HSG A
471	98		Unconnected pavement, HSG C
7,007	98		Unconnected pavement, HSG C
10,292	98		Unconnected pavement, HSG A
101,459	30		Woods, Good, HSG A
54,560	70		Woods, Good, HSG C
8,756	30		Woods, Good, HSG A
197,973	52	49	Weighted Average, UI Adjusted
172,489			87.13% Pervious Area
25,484			12.87% Impervious Area
17,770			69.73% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.4	30	0.1050	0.11		**Sheet Flow, lawn** Grass: Bermuda n= 0.410 P2= 3.00"
36.2	90	0.0050	0.04		**Sheet Flow, Lawn** Grass: Bermuda n= 0.410 P2= 3.00"
14.7	30	0.0050	0.03		**Sheet Flow, Woods - Good** Woods: Light underbrush n= 0.400 P2= 3.00"
11.3	240	0.0050	0.35		**Shallow Concentrated Flow, Woods** Woodland Kv= 5.0 fps
0.8	155	0.0440	3.15		**Shallow Concentrated Flow, Lawn** Grassed Waterway Kv= 15.0 fps
67.4	545	Total			

Subcatchment 1.1: Pre - 1.1



Summary for Subcatchment 1.2: Pre - 1.2

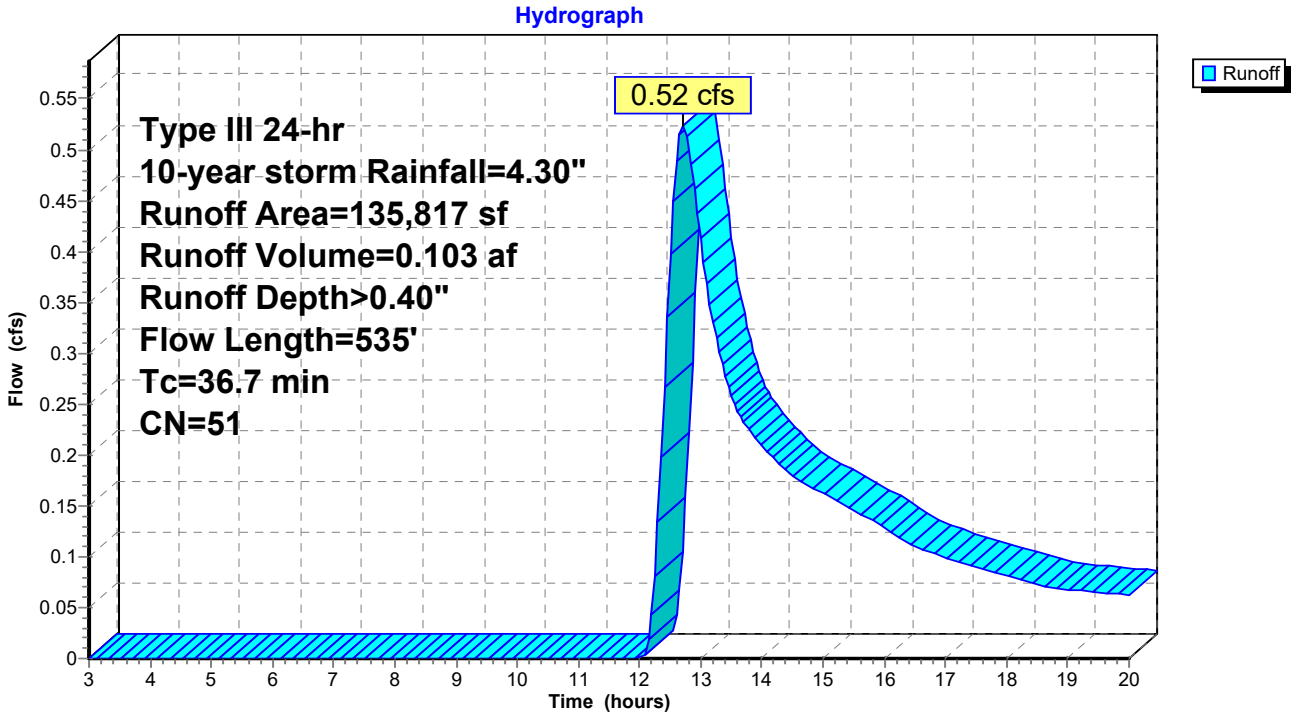
Runoff = 0.52 cfs @ 12.71 hrs, Volume= 0.103 af, Depth> 0.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 3.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year storm Rainfall=4.30"

Area (sf)	CN	Description
10,242	83	Paved roads w/open ditches, 50% imp, HSG A
20,828	98	Paved parking, HSG A
7,787	98	Paved parking, HSG C
88,183	30	Woods, Good, HSG A
8,635	70	Woods, Good, HSG C
142	30	Woods, Good, HSG A
135,817	51	Weighted Average
102,081		75.16% Pervious Area
33,736		24.84% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.8	50	0.0710	0.11		**Sheet Flow, lawn** Grass: Bermuda n= 0.410 P2= 3.00"
25.4	100	0.0150	0.07		**Sheet Flow, lawn** Grass: Bermuda n= 0.410 P2= 3.00"
2.4	225	0.0190	1.56	62.50	**Parabolic Channel, Existing Wooded channel** W=60.00' D=1.00' Area=40.0 sf Perim=60.0' n= 0.100 Heavy timber, flow below branches
0.8	100	0.0125	2.01	3.35	**Parabolic Channel, lawn drainage swale** W=10.00' D=0.25' Area=1.7 sf Perim=10.0' n= 0.025 Earth, clean & winding
0.3	60	0.0100	3.10	12.39	**Parabolic Channel, Sprucewood Road ditch** W=6.00' D=1.00' Area=4.0 sf Perim=6.4' n= 0.035 Earth, dense weeds
36.7	535	Total			

Subcatchment 1.2: Pre - 1.2



Summary for Subcatchment 1.3: Pre 1.3

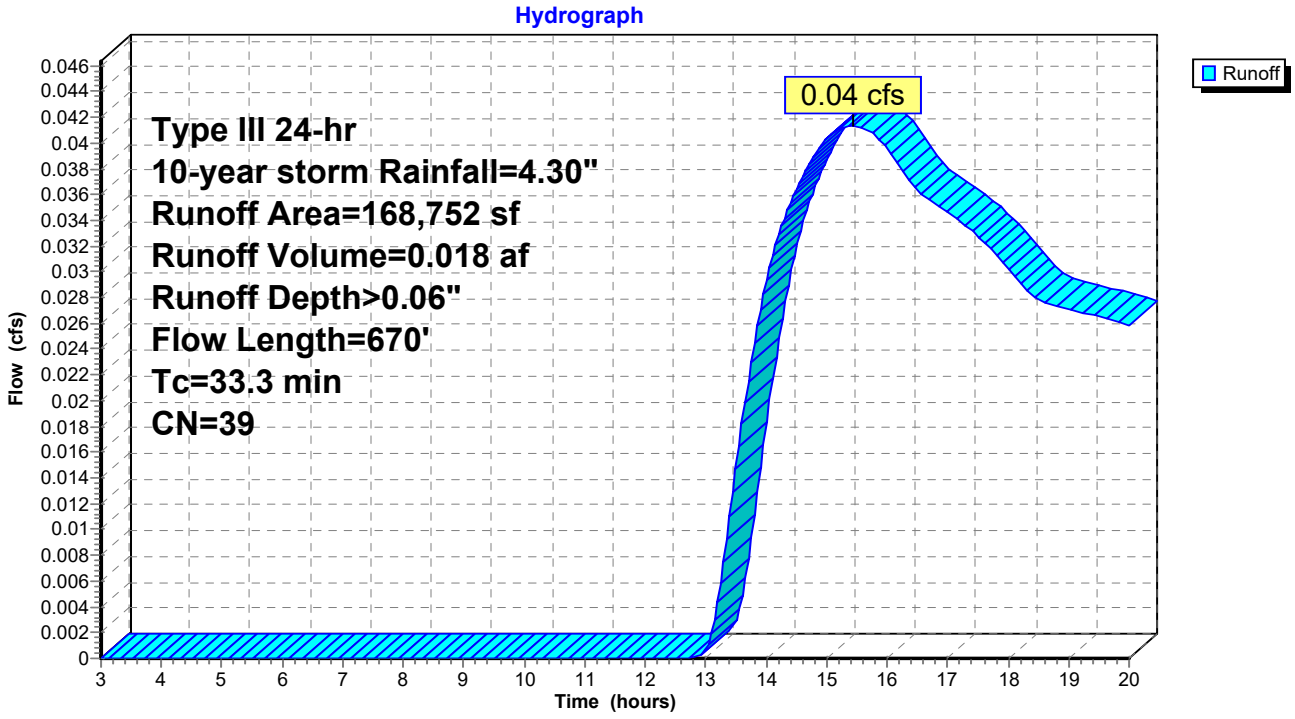
Runoff = 0.04 cfs @ 15.44 hrs, Volume= 0.018 af, Depth> 0.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 3.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year storm Rainfall=4.30"

Area (sf)	CN	Description
136,436	30	Woods, Good, HSG A
32,316	77	Woods, Good, HSG D
168,752	39	Weighted Average
168,752		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.0	150	0.0370	0.10		**Sheet Flow, Woodland** Woods: Light underbrush n= 0.400 P2= 3.00"
9.3	520	0.0346	0.93		**Shallow Concentrated Flow, Woodland** Woodland Kv= 5.0 fps
33.3	670	Total			

Subcatchment 1.3: Pre 1.3



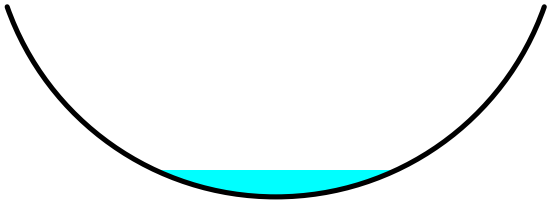
Summary for Reach 1R: Stevens Mill Road Ditch

Inflow Area = 3.118 ac, 24.84% Impervious, Inflow Depth > 0.40" for 10-year storm event
Inflow = 0.52 cfs @ 12.71 hrs, Volume= 0.103 af
Outflow = 0.52 cfs @ 12.77 hrs, Volume= 0.103 af, Atten= 1%, Lag= 3.9 min

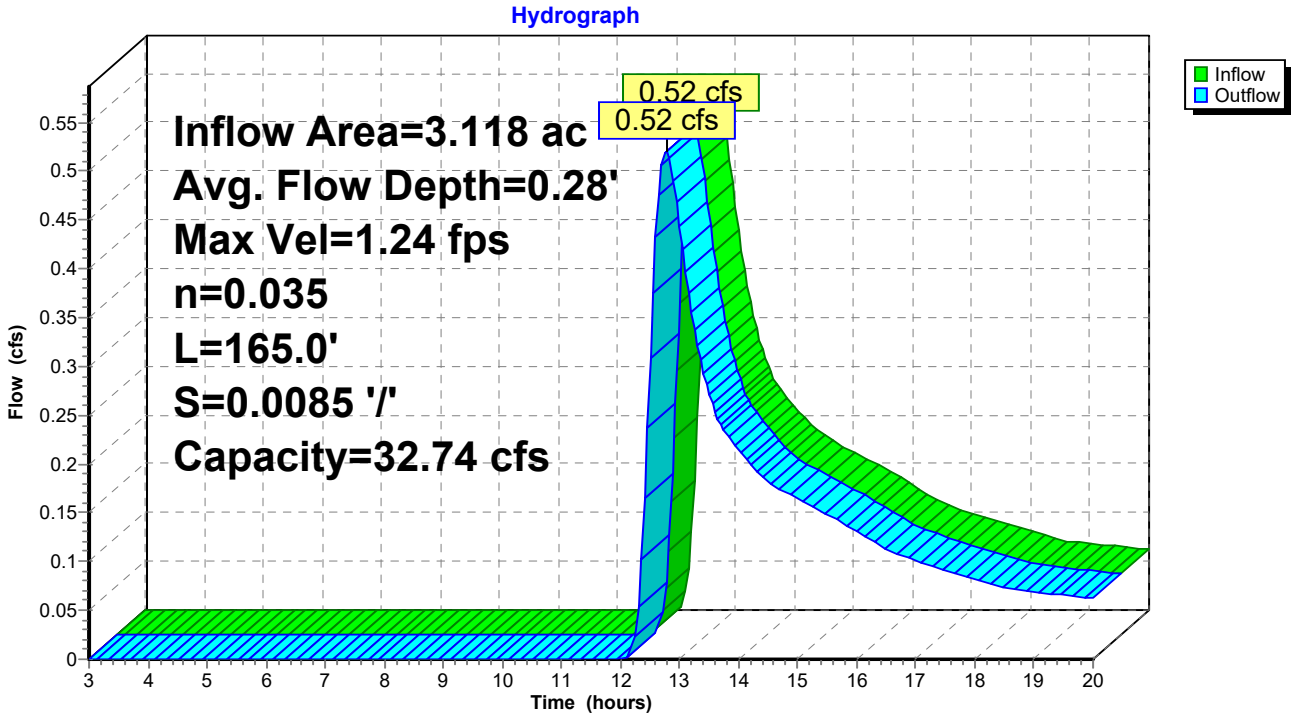
Routing by Stor-Ind+Trans method, Time Span= 3.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 1.24 fps, Min. Travel Time= 2.2 min
Avg. Velocity = 0.82 fps, Avg. Travel Time= 3.3 min

Peak Storage= 69 cf @ 12.74 hrs
Average Depth at Peak Storage= 0.28' , Surface Width= 2.25'
Bank-Full Depth= 2.00' Flow Area= 8.0 sf, Capacity= 32.74 cfs

6.00' x 2.00' deep Parabolic Channel, n= 0.035 Earth, dense weeds
Length= 165.0' Slope= 0.0085 '/'
Inlet Invert= 244.60', Outlet Invert= 243.20'



Reach 1R: Stevens Mill Road Ditch



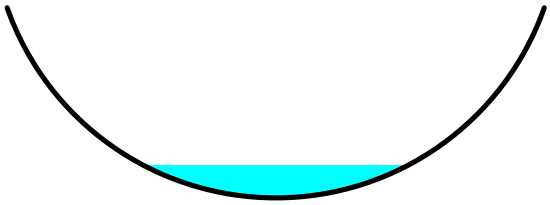
Summary for Reach 2R: Stevens Mill Road Ditch

Inflow Area = 7.663 ac, 17.74% Impervious, Inflow Depth > 0.35" for 10-year storm event
Inflow = 0.81 cfs @ 12.94 hrs, Volume= 0.222 af
Outflow = 0.81 cfs @ 12.98 hrs, Volume= 0.221 af, Atten= 0%, Lag= 2.0 min

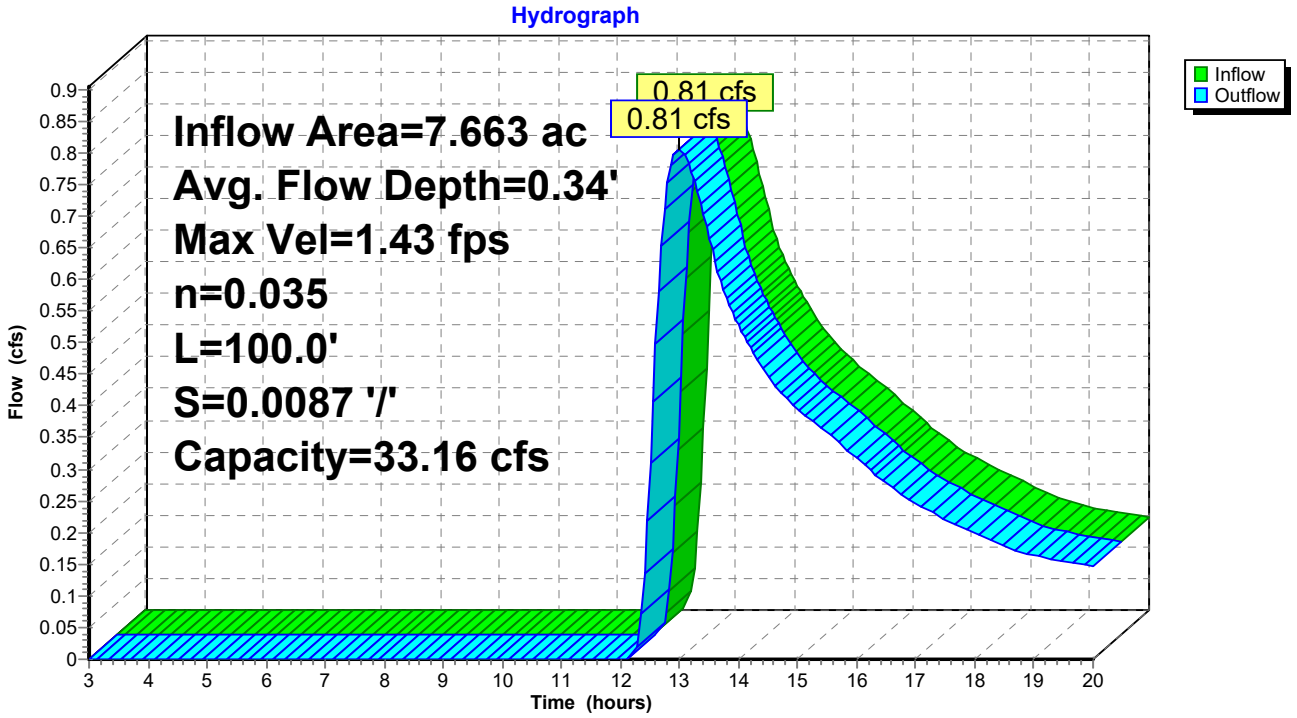
Routing by Stor-Ind+Trans method, Time Span= 3.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 1.43 fps, Min. Travel Time= 1.2 min
Avg. Velocity = 1.06 fps, Avg. Travel Time= 1.6 min

Peak Storage= 56 cf @ 12.96 hrs
Average Depth at Peak Storage= 0.34' , Surface Width= 2.48'
Bank-Full Depth= 2.00' Flow Area= 8.0 sf, Capacity= 33.16 cfs

6.00' x 2.00' deep Parabolic Channel, n= 0.035 Earth, dense weeds
Length= 100.0' Slope= 0.0087 '/'
Inlet Invert= 243.20', Outlet Invert= 242.33'



Reach 2R: Stevens Mill Road Ditch



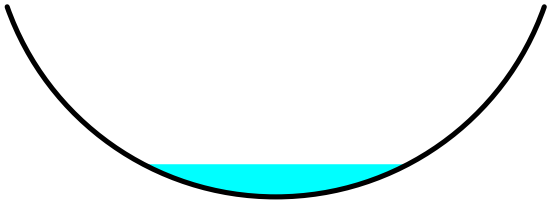
Summary for Reach 3R: Stevens Mill Road Ditch

Inflow Area = 7.663 ac, 17.74% Impervious, Inflow Depth > 0.35" for 10-year storm event
Inflow = 0.81 cfs @ 12.98 hrs, Volume= 0.221 af
Outflow = 0.81 cfs @ 13.02 hrs, Volume= 0.220 af, Atten= 0%, Lag= 2.5 min

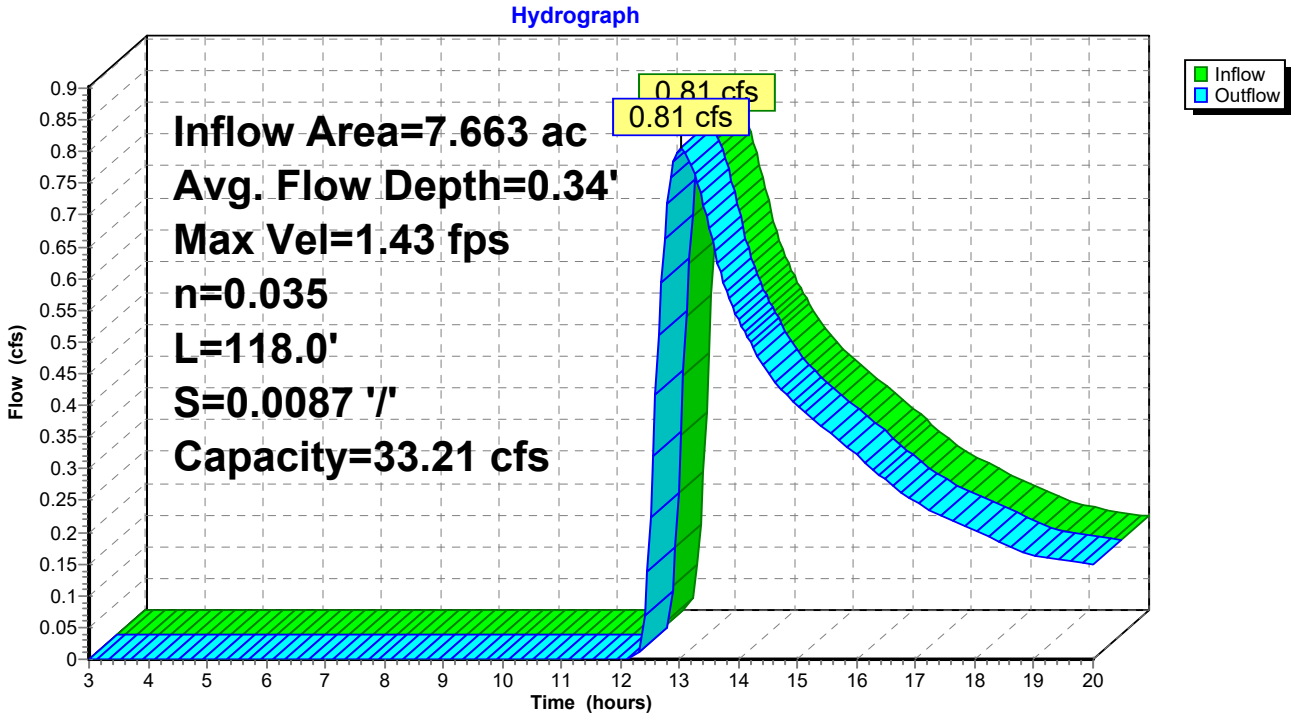
Routing by Stor-Ind+Trans method, Time Span= 3.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 1.43 fps, Min. Travel Time= 1.4 min
Avg. Velocity = 1.06 fps, Avg. Travel Time= 1.9 min

Peak Storage= 66 cf @ 13.00 hrs
Average Depth at Peak Storage= 0.34' , Surface Width= 2.48'
Bank-Full Depth= 2.00' Flow Area= 8.0 sf, Capacity= 33.21 cfs

6.00' x 2.00' deep Parabolic Channel, n= 0.035 Earth, dense weeds
Length= 118.0' Slope= 0.0087 '/'
Inlet Invert= 242.09', Outlet Invert= 241.06'



Reach 3R: Stevens Mill Road Ditch



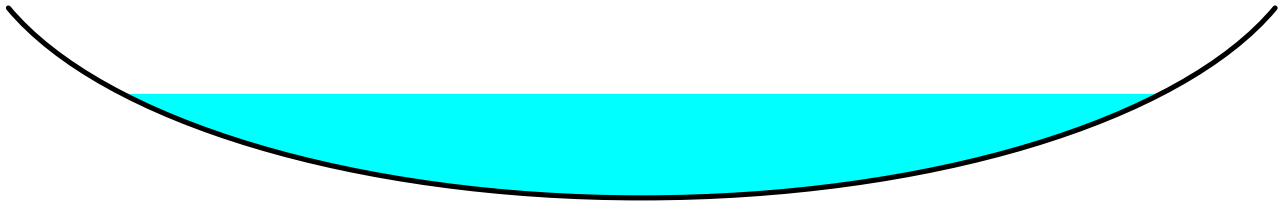
Summary for Reach 4R: Existing Drainage Channel

Inflow Area = 7.663 ac, 17.74% Impervious, Inflow Depth > 0.34" for 10-year storm event
Inflow = 0.81 cfs @ 13.02 hrs, Volume= 0.220 af
Outflow = 0.80 cfs @ 13.13 hrs, Volume= 0.218 af, Atten= 0%, Lag= 6.6 min

Routing by Stor-Ind+Trans method, Time Span= 3.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 1.24 fps, Min. Travel Time= 3.6 min
Avg. Velocity = 0.91 fps, Avg. Travel Time= 5.0 min

Peak Storage= 175 cf @ 13.07 hrs
Average Depth at Peak Storage= 0.16' , Surface Width= 5.92'
Bank-Full Depth= 0.30' Flow Area= 1.6 sf, Capacity= 2.96 cfs

8.00' x 0.30' deep Parabolic Channel, n= 0.025 Earth, clean & winding
Length= 270.0' Slope= 0.0083 '/'
Inlet Invert= 239.66', Outlet Invert= 237.41'



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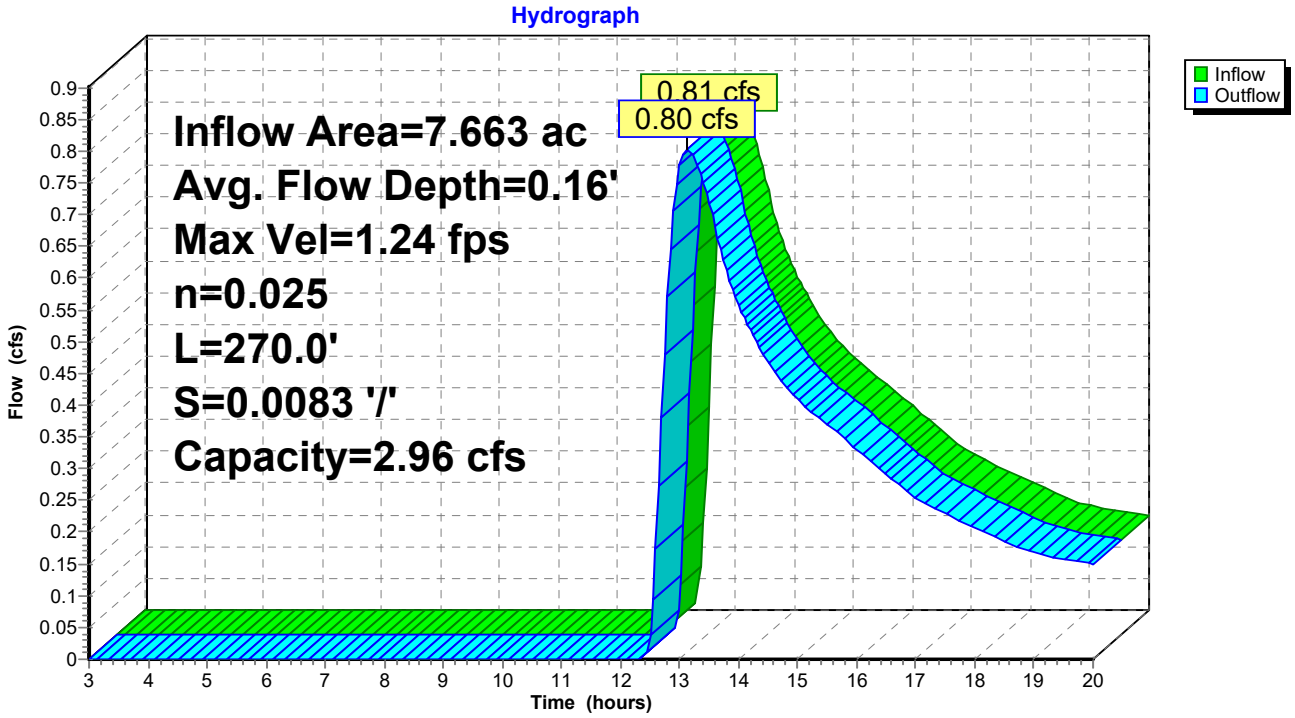
Reach 4R: Existing Drainage Channel



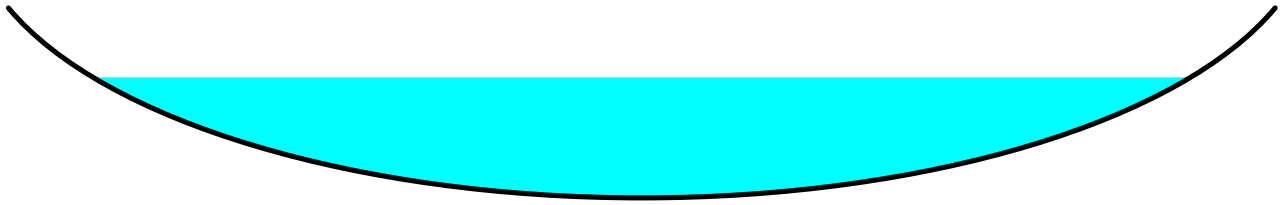
Summary for Reach 5R: Existing Drainage Channel-Woods

Inflow Area = 7.663 ac, 17.74% Impervious, Inflow Depth > 0.34" for 10-year storm event
Inflow = 0.80 cfs @ 13.13 hrs, Volume= 0.218 af
Outflow = 0.80 cfs @ 13.24 hrs, Volume= 0.216 af, Atten= 0%, Lag= 6.6 min

Routing by Stor-Ind+Trans method, Time Span= 3.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 1.49 fps, Min. Travel Time= 3.6 min
Avg. Velocity = 1.09 fps, Avg. Travel Time= 4.9 min

Peak Storage= 172 cf @ 13.18 hrs
Average Depth at Peak Storage= 0.13' , Surface Width= 6.37'
Bank-Full Depth= 0.20' Flow Area= 1.1 sf, Capacity= 2.15 cfs

8.00' x 0.20' deep Parabolic Channel, n= 0.025 Earth, clean & winding
Length= 320.0' Slope= 0.0169 '/'
Inlet Invert= 237.41', Outlet Invert= 232.00'



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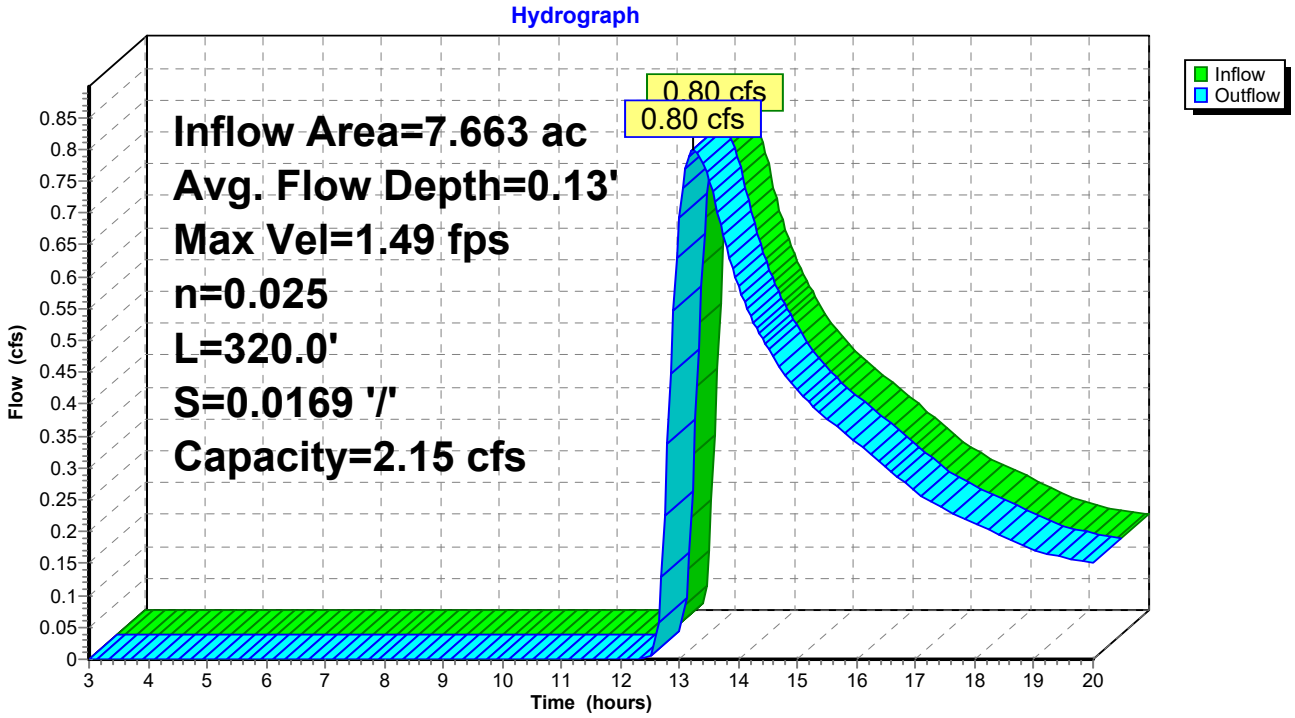
Reach 5R: Existing Drainage Channel-Woods



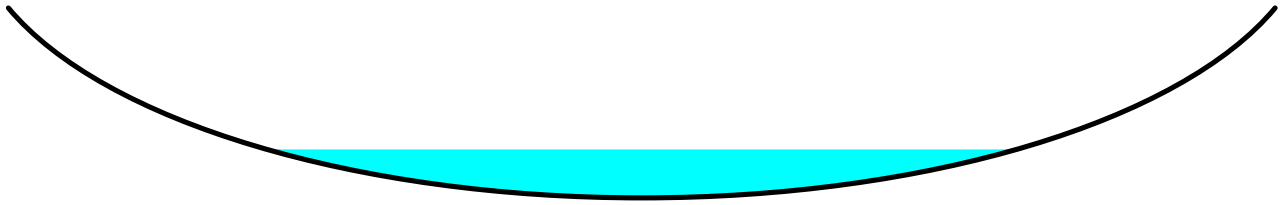
Summary for Reach 6R: Existing Drainage Channel-Woods

Inflow Area = 7.663 ac, 17.74% Impervious, Inflow Depth > 0.34" for 10-year storm event
Inflow = 0.80 cfs @ 13.24 hrs, Volume= 0.216 af
Outflow = 0.80 cfs @ 13.31 hrs, Volume= 0.215 af, Atten= 0%, Lag= 4.2 min

Routing by Stor-Ind+Trans method, Time Span= 3.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 1.86 fps, Min. Travel Time= 2.4 min
Avg. Velocity = 1.38 fps, Avg. Travel Time= 3.2 min

Peak Storage= 114 cf @ 13.27 hrs
Average Depth at Peak Storage= 0.13' , Surface Width= 5.05'
Bank-Full Depth= 0.50' Flow Area= 3.3 sf, Capacity= 15.41 cfs

10.00' x 0.50' deep Parabolic Channel, n= 0.025 Earth, clean & winding
Length= 265.0' Slope= 0.0264 '/'
Inlet Invert= 232.00', Outlet Invert= 225.00'



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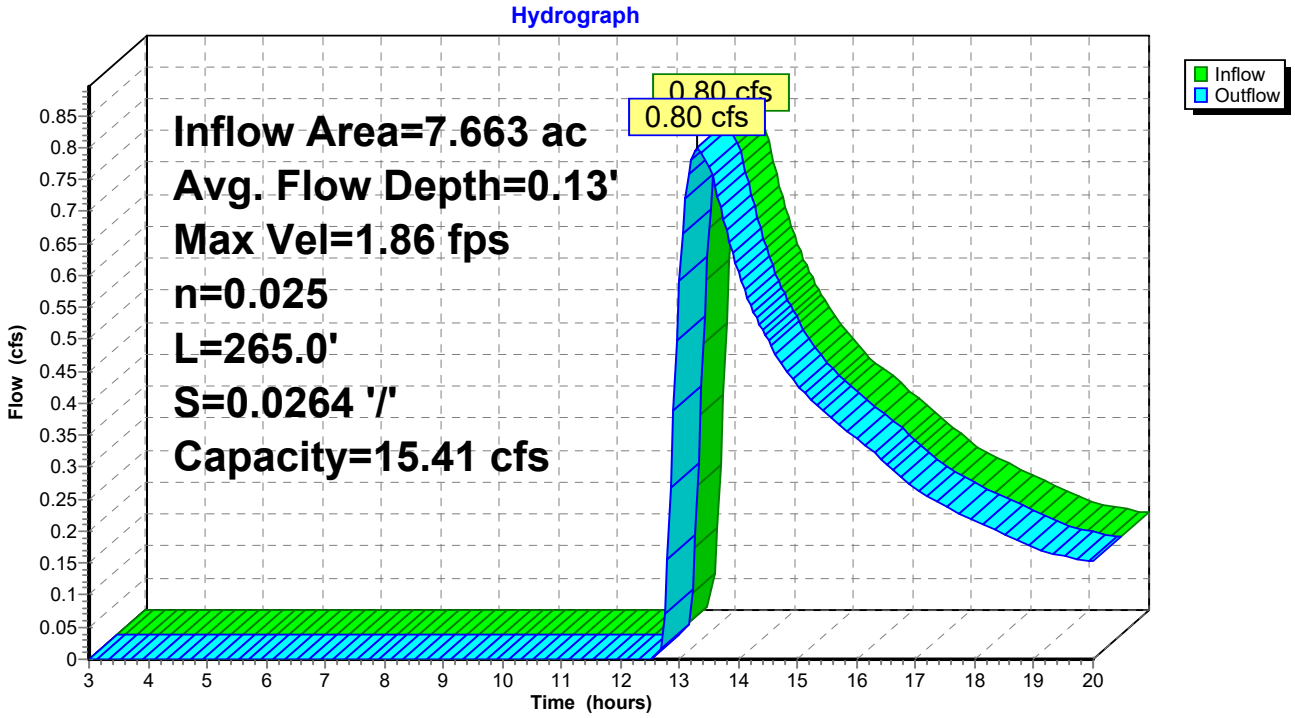
Reach 6R: Existing Drainage Channel-Woods



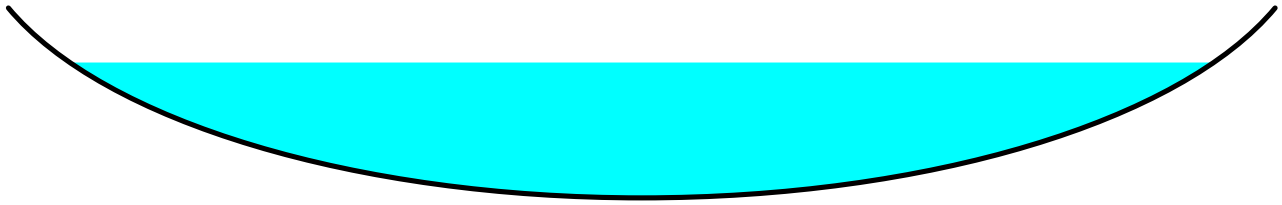
Summary for Reach 7R: Existing Drainage Channel-Woods

Inflow Area = 35.051 ac, 5.20% Impervious, Inflow Depth > 0.74" for 10-year storm event
Inflow = 11.30 cfs @ 12.89 hrs, Volume= 2.147 af
Outflow = 11.27 cfs @ 12.92 hrs, Volume= 2.142 af, Atten= 0%, Lag= 2.1 min

Routing by Stor-Ind+Trans method, Time Span= 3.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.82 fps, Min. Travel Time= 1.3 min
Avg. Velocity = 1.74 fps, Avg. Travel Time= 2.1 min

Peak Storage= 882 cf @ 12.90 hrs
Average Depth at Peak Storage= 0.71' , Surface Width= 8.44'
Bank-Full Depth= 1.00' Flow Area= 6.7 sf, Capacity= 23.43 cfs

10.00' x 1.00' deep Parabolic Channel, n= 0.040 Winding stream, pools & shoals
Length= 220.0' Slope= 0.0159 '/'
Inlet Invert= 225.00', Outlet Invert= 221.50'



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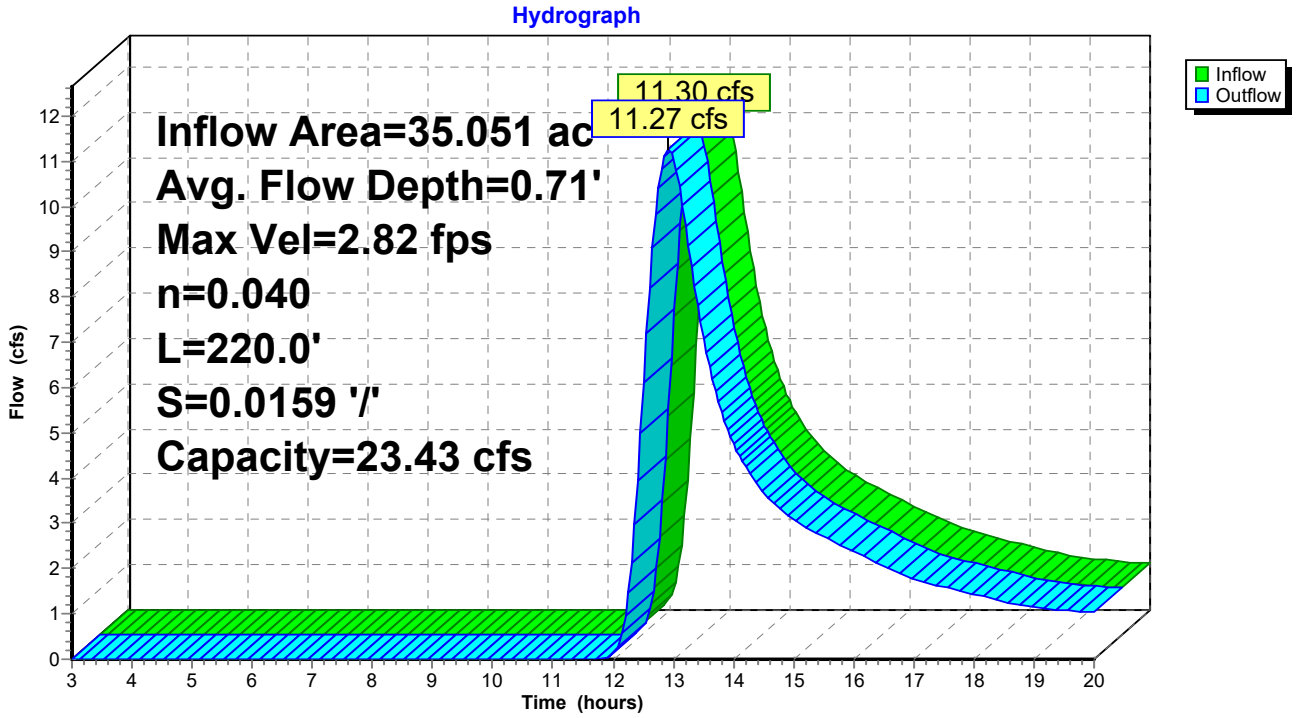
Reach 7R: Existing Drainage Channel-Woods



Summary for Reach 8R: Existing Stream Channel

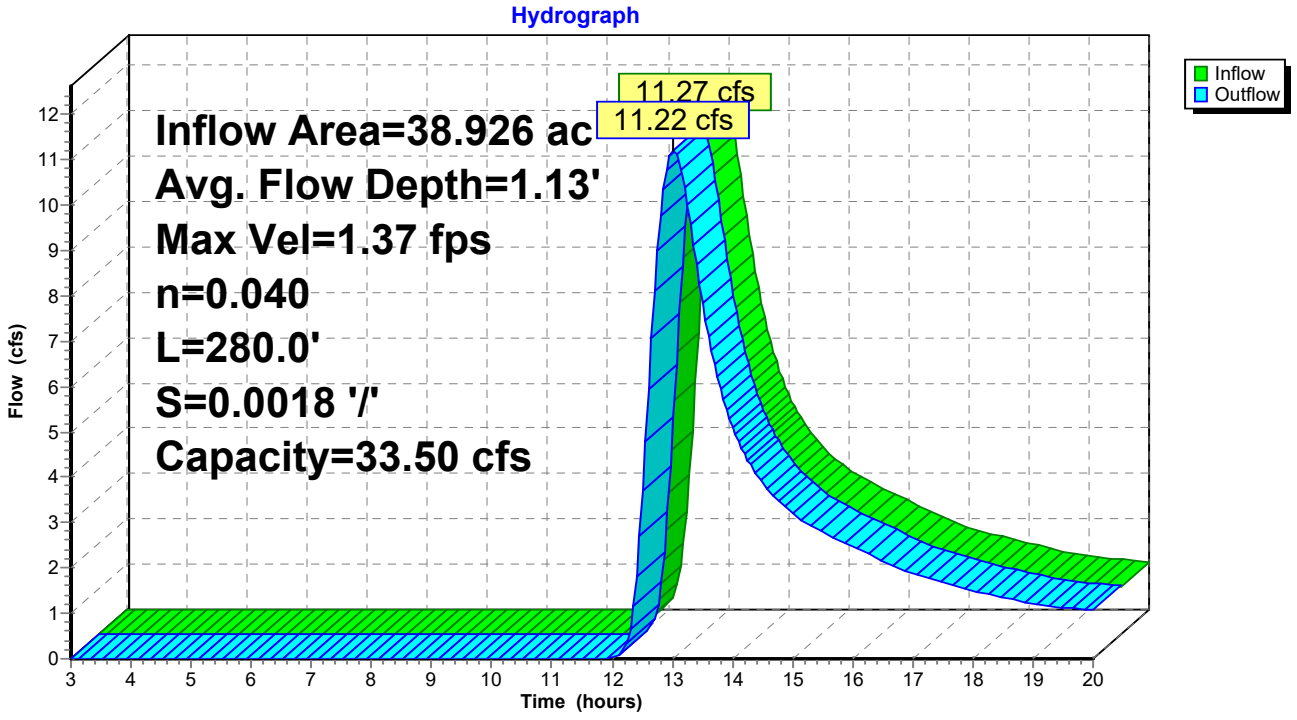
Inflow Area = 38.926 ac, 4.68% Impervious, Inflow Depth > 0.66" for 10-year storm event
Inflow = 11.27 cfs @ 12.92 hrs, Volume= 2.154 af
Outflow = 11.22 cfs @ 13.02 hrs, Volume= 2.138 af, Atten= 1%, Lag= 5.9 min

Routing by Stor-Ind+Trans method, Time Span= 3.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 1.37 fps, Min. Travel Time= 3.4 min
Avg. Velocity = 0.84 fps, Avg. Travel Time= 5.5 min

Peak Storage= 2,294 cf @ 12.96 hrs
Average Depth at Peak Storage= 1.13' , Surface Width= 9.52'
Bank-Full Depth= 2.00' Flow Area= 18.0 sf, Capacity= 33.50 cfs

5.00' x 2.00' deep channel, n= 0.040 Winding stream, pools & shoals
Side Slope Z-value= 2.0 '/' Top Width= 13.00'
Length= 280.0' Slope= 0.0018 '/'
Inlet Invert= 221.50', Outlet Invert= 221.00'

Reach 8R: Existing Stream Channel



Summary for Reach 9R: Existing Stream Channel

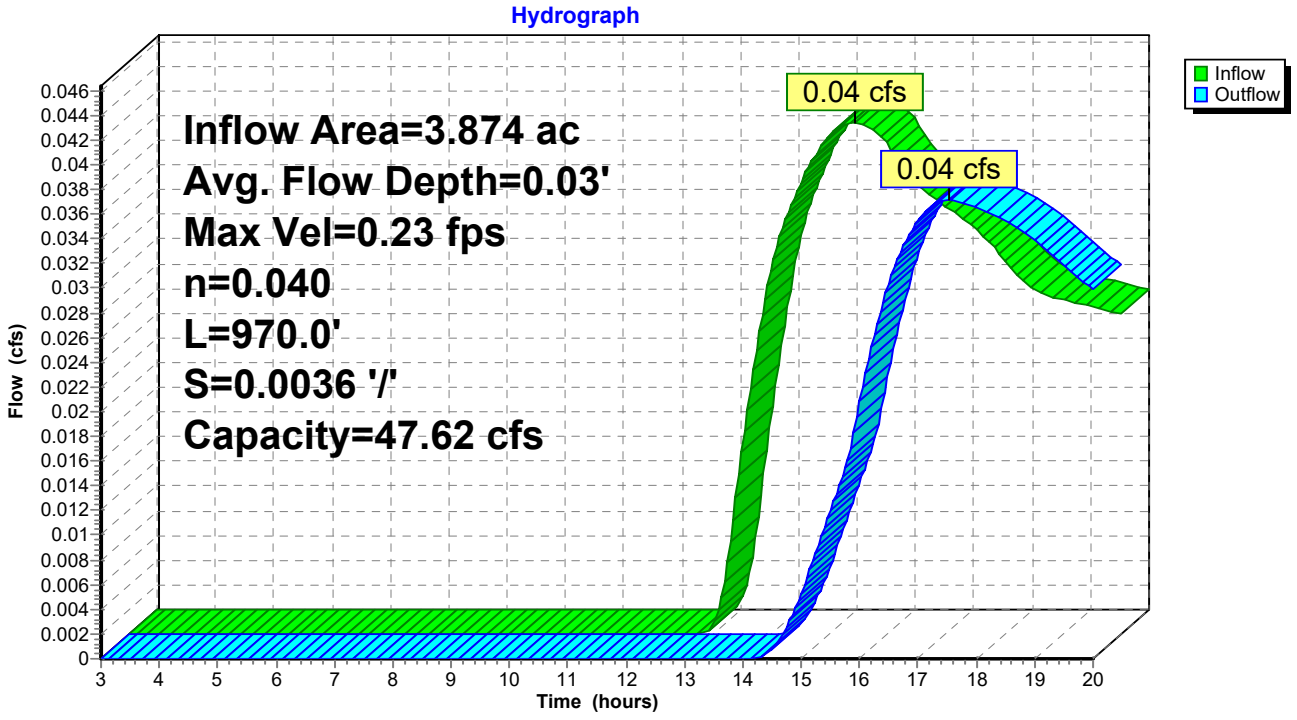
Inflow Area = 3.874 ac, 0.00% Impervious, Inflow Depth > 0.06" for 10-year storm event
Inflow = 0.04 cfs @ 15.44 hrs, Volume= 0.018 af
Outflow = 0.04 cfs @ 17.54 hrs, Volume= 0.012 af, Atten= 10%, Lag= 125.7 min

Routing by Stor-Ind+Trans method, Time Span= 3.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 0.23 fps, Min. Travel Time= 69.6 min
Avg. Velocity = 0.21 fps, Avg. Travel Time= 78.6 min

Peak Storage= 155 cf @ 16.38 hrs
Average Depth at Peak Storage= 0.03' , Surface Width= 5.13'
Bank-Full Depth= 2.00' Flow Area= 18.0 sf, Capacity= 47.62 cfs

5.00' x 2.00' deep channel, n= 0.040 Winding stream, pools & shoals
Side Slope Z-value= 2.0 '/' Top Width= 13.00'
Length= 970.0' Slope= 0.0036 '/'
Inlet Invert= 225.00', Outlet Invert= 221.50'

Reach 9R: Existing Stream Channel

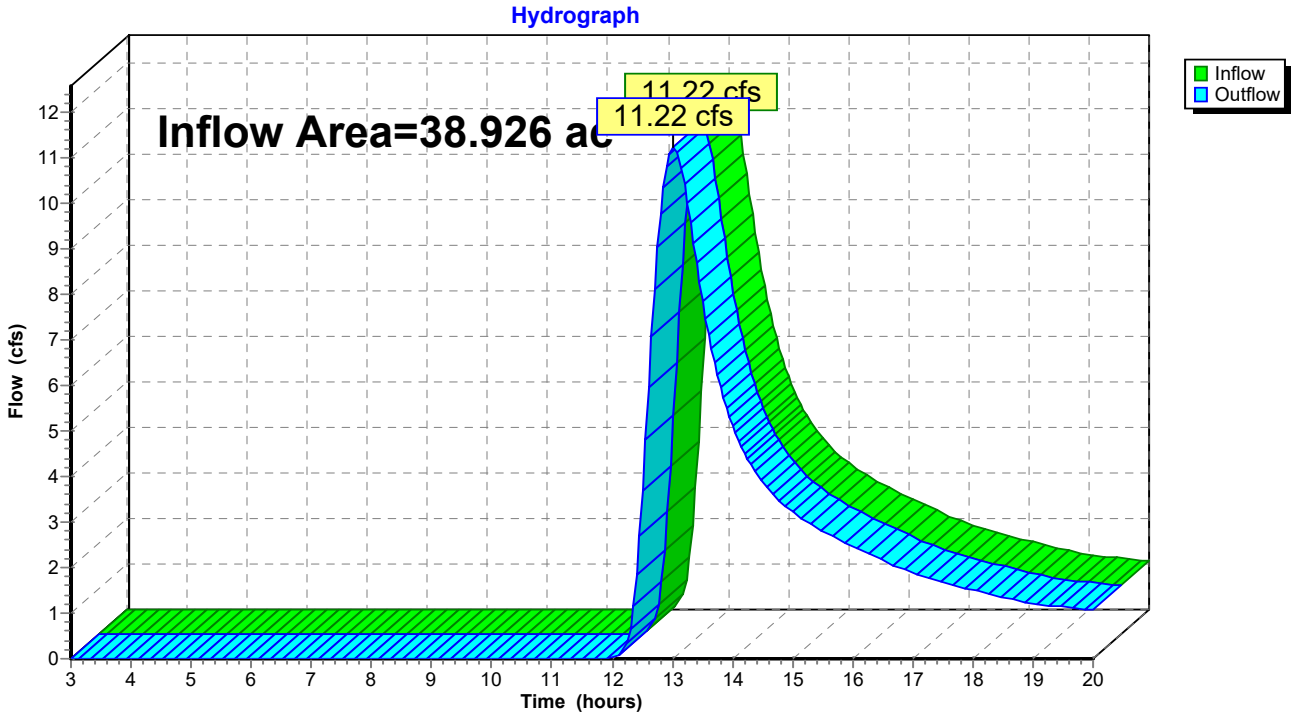


Summary for Reach WAP 1: Water Analysis Point 1

Inflow Area = 38.926 ac, 4.68% Impervious, Inflow Depth > 0.66" for 10-year storm event
Inflow = 11.22 cfs @ 13.02 hrs, Volume= 2.138 af
Outflow = 11.22 cfs @ 13.02 hrs, Volume= 2.138 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 3.00-20.00 hrs, dt= 0.05 hrs

Reach WAP 1: Water Analysis Point 1



Summary for Pond 1P: Sprucewood Rd Culvert

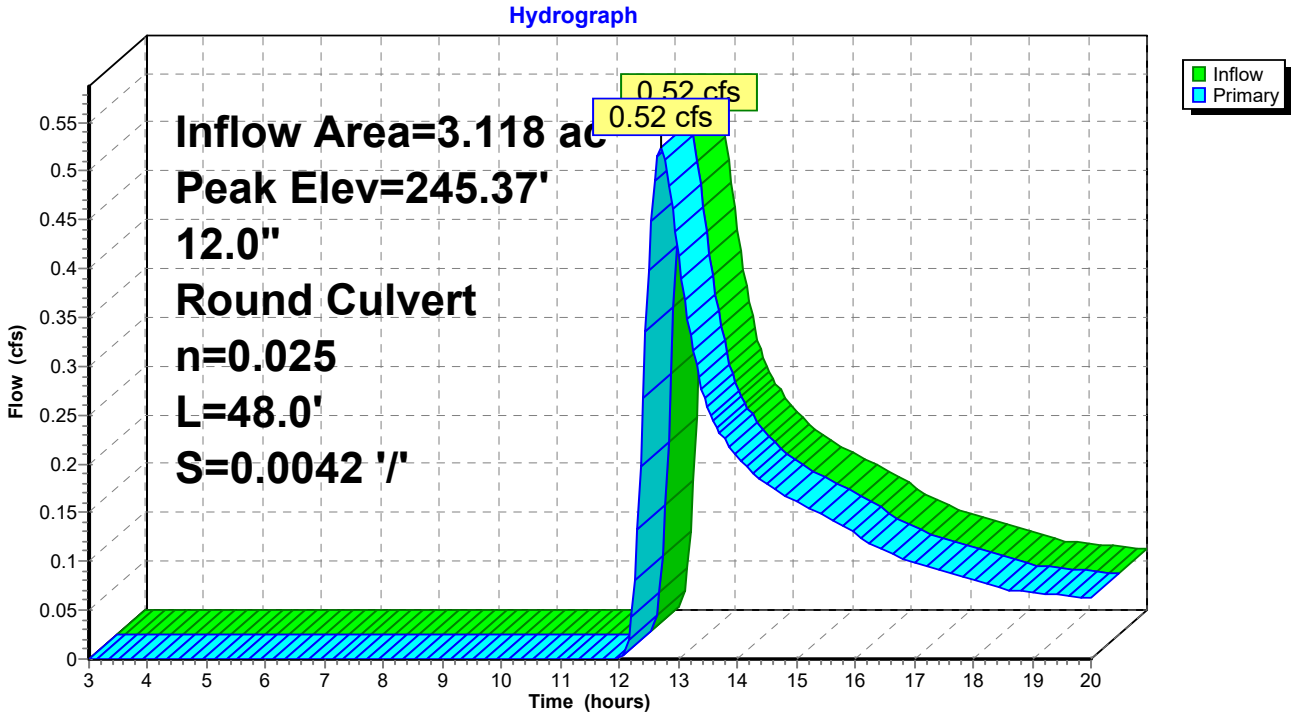
Inflow Area = 3.118 ac, 24.84% Impervious, Inflow Depth > 0.40" for 10-year storm event
Inflow = 0.52 cfs @ 12.71 hrs, Volume= 0.103 af
Outflow = 0.52 cfs @ 12.71 hrs, Volume= 0.103 af, Atten= 0%, Lag= 0.0 min
Primary = 0.52 cfs @ 12.71 hrs, Volume= 0.103 af

Routing by Stor-Ind method, Time Span= 3.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 245.37' @ 12.71 hrs
Flood Elev= 246.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	244.80'	**12.0" Round Culvert** L= 48.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 244.80' / 244.60' S= 0.0042 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 0.79 sf

Primary OutFlow Max=0.52 cfs @ 12.71 hrs HW=245.37' (Free Discharge)
1=Culvert (Barrel Controls 0.52 cfs @ 1.63 fps)

Pond 1P: Sprucewood Rd Culvert



Summary for Pond 2P: Driveway culvert

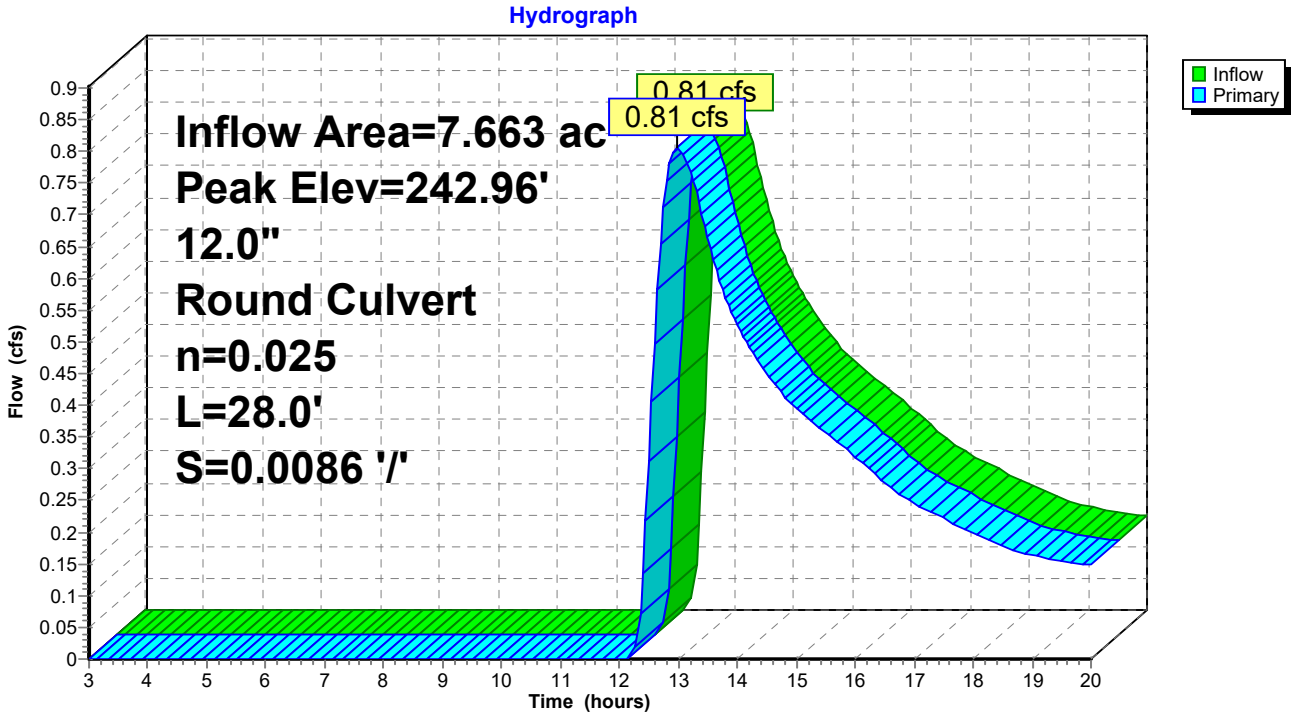
Inflow Area = 7.663 ac, 17.74% Impervious, Inflow Depth > 0.35" for 10-year storm event
Inflow = 0.81 cfs @ 12.98 hrs, Volume= 0.221 af
Outflow = 0.81 cfs @ 12.98 hrs, Volume= 0.221 af, Atten= 0%, Lag= 0.0 min
Primary = 0.81 cfs @ 12.98 hrs, Volume= 0.221 af

Routing by Stor-Ind method, Time Span= 3.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 242.96' @ 12.98 hrs
Flood Elev= 243.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	242.33'	**12.0" Round Culvert** L= 28.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 242.33' / 242.09' S= 0.0086 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 0.79 sf

Primary OutFlow Max=0.81 cfs @ 12.98 hrs HW=242.96' (Free Discharge)
1=Culvert (Barrel Controls 0.81 cfs @ 2.20 fps)

Pond 2P: Driveway culvert



Summary for Pond 3P: Driveway culvert

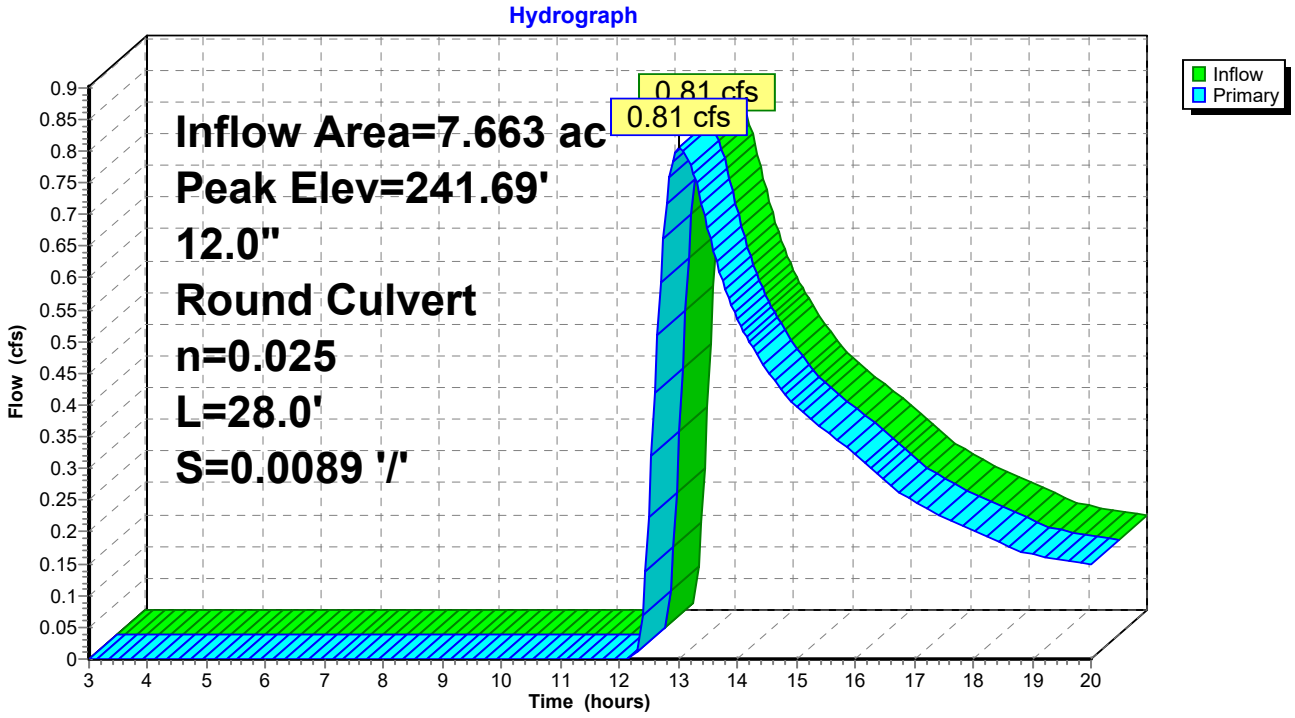
Inflow Area = 7.663 ac, 17.74% Impervious, Inflow Depth > 0.34" for 10-year storm event
Inflow = 0.81 cfs @ 13.02 hrs, Volume= 0.220 af
Outflow = 0.81 cfs @ 13.02 hrs, Volume= 0.220 af, Atten= 0%, Lag= 0.0 min
Primary = 0.81 cfs @ 13.02 hrs, Volume= 0.220 af

Routing by Stor-Ind method, Time Span= 3.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 241.69' @ 13.02 hrs
Flood Elev= 243.16'

Device	Routing	Invert	Outlet Devices
#1	Primary	241.06'	**12.0" Round Culvert** L= 28.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 241.06' / 240.81' S= 0.0089 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 0.79 sf

Primary OutFlow Max=0.80 cfs @ 13.02 hrs HW=241.69' (Free Discharge)
1=Culvert (Barrel Controls 0.80 cfs @ 2.22 fps)

Pond 3P: Driveway culvert



Summary for Pond 4P: Stevens Mill Rd X-Culvert

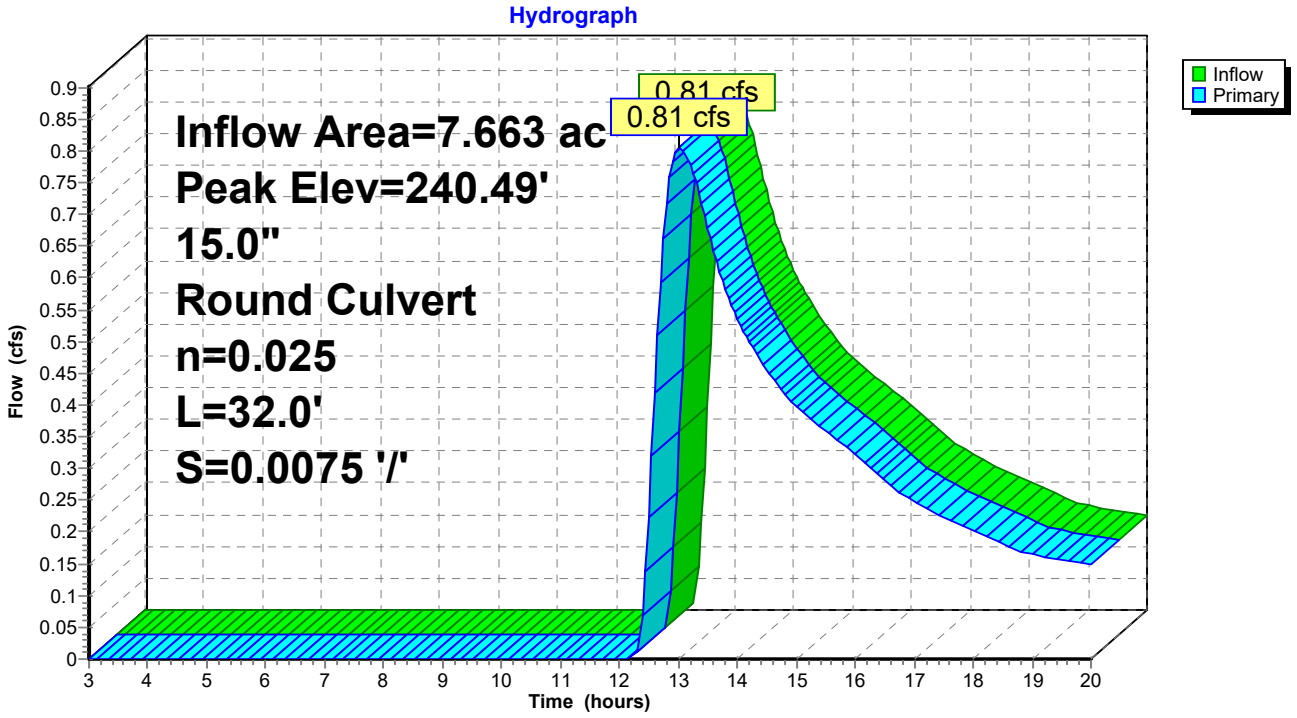
Inflow Area = 7.663 ac, 17.74% Impervious, Inflow Depth > 0.34" for 10-year storm event
Inflow = 0.81 cfs @ 13.02 hrs, Volume= 0.220 af
Outflow = 0.81 cfs @ 13.02 hrs, Volume= 0.220 af, Atten= 0%, Lag= 0.0 min
Primary = 0.81 cfs @ 13.02 hrs, Volume= 0.220 af

Routing by Stor-Ind method, Time Span= 3.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 240.49' @ 13.02 hrs
Flood Elev= 243.16'

Device	Routing	Invert	Outlet Devices
#1	Primary	239.90'	**15.0" Round Culvert** L= 32.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 239.90' / 239.66' S= 0.0075 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 1.23 sf

Primary OutFlow Max=0.80 cfs @ 13.02 hrs HW=240.49' (Free Discharge)
1=Culvert (Barrel Controls 0.80 cfs @ 2.08 fps)

Pond 4P: Stevens Mill Rd X-Culvert



Summary for Subcatchment 1: Pre - 1

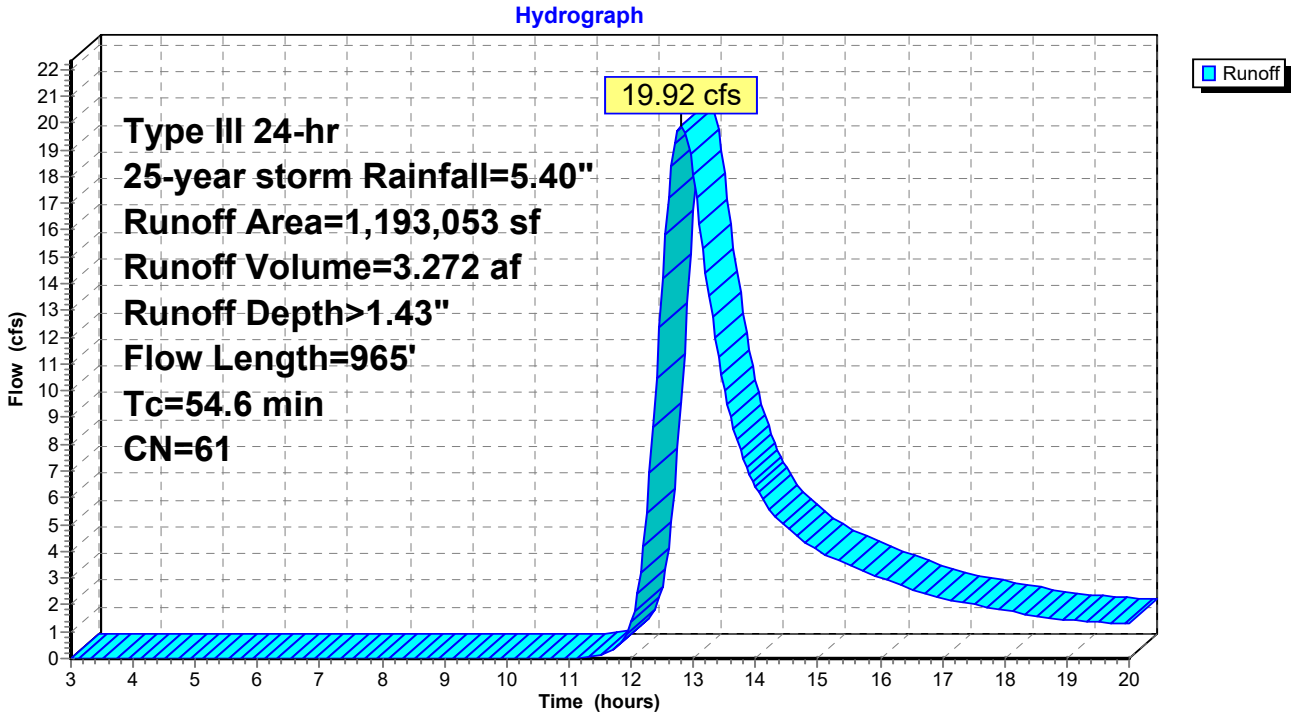
Runoff = 19.92 cfs @ 12.81 hrs, Volume= 3.272 af, Depth> 1.43"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 3.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-year storm Rainfall=5.40"

Area (sf)	CN	Description
11,361	92	Paved roads w/open ditches, 50% imp, HSG C
5,445	83	Paved roads w/open ditches, 50% imp, HSG A
10,970	98	Unconnected pavement, HSG A
818	98	Unconnected pavement, HSG C
343,270	30	Woods, Good, HSG A
454,108	70	Woods, Good, HSG C
367,081	77	Woods, Good, HSG D
1,193,053	61	Weighted Average
1,172,862		98.31% Pervious Area
20,191		1.69% Impervious Area
11,788		58.38% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	14	0.0208	0.91		**Sheet Flow, Stevens Mill Road** Smooth surfaces n= 0.011 P2= 3.00"
2.0	10	0.0083	0.08		**Sheet Flow, Field/Meadow** Range n= 0.130 P2= 3.00"
37.9	126	0.0083	0.06		**Sheet Flow, Woodland** Woods: Light underbrush n= 0.400 P2= 3.00"
13.2	510	0.0167	0.65		**Shallow Concentrated Flow, Woodland** Woodland Kv= 5.0 fps
1.2	305	0.0230	4.31	14.38	**Parabolic Channel, Wooded Channel** W=10.00' D=0.50' Area=3.3 sf Perim=10.1' n= 0.025 Earth, clean & winding
54.6	965	Total			

Subcatchment 1: Pre - 1



Summary for Subcatchment 1.1: Pre - 1.1

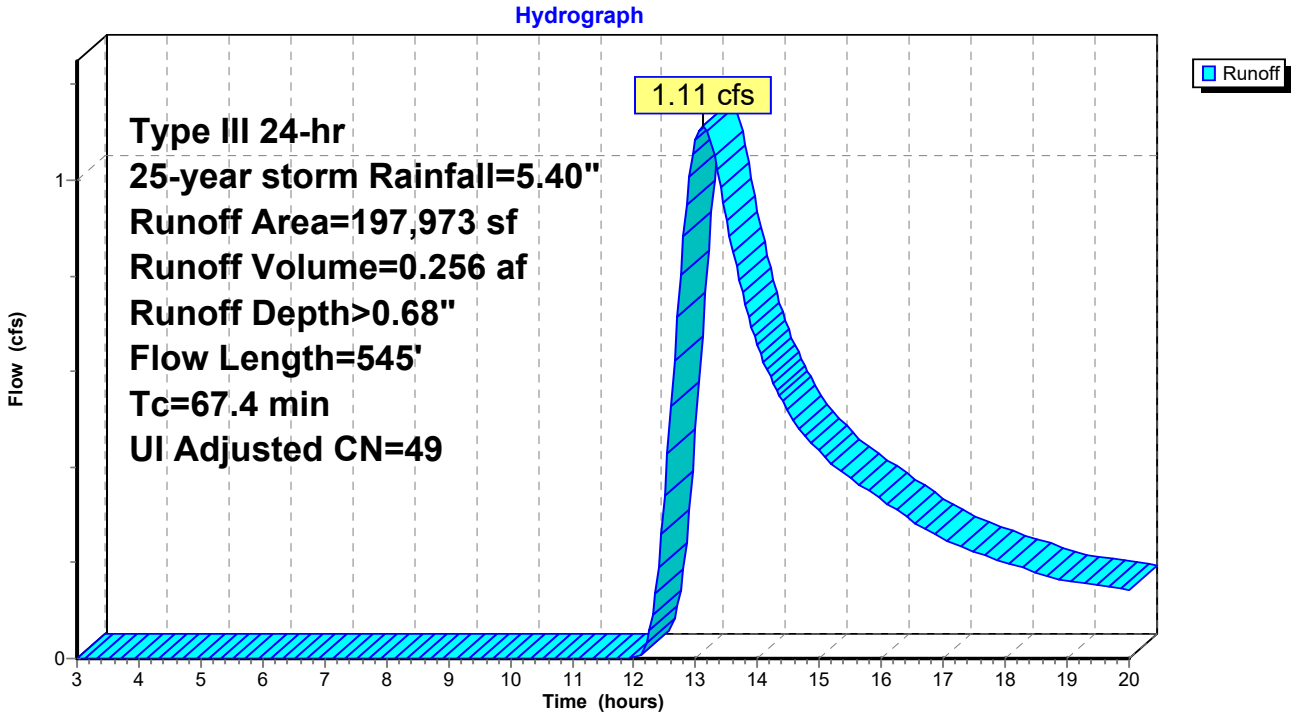
Runoff = 1.11 cfs @ 13.11 hrs, Volume= 0.256 af, Depth> 0.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 3.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-year storm Rainfall=5.40"

Area (sf)	CN	Adj	Description
8,288	92		Paved roads w/open ditches, 50% imp, HSG C
7,140	83		Paved roads w/open ditches, 50% imp, HSG A
471	98		Unconnected pavement, HSG C
7,007	98		Unconnected pavement, HSG C
10,292	98		Unconnected pavement, HSG A
101,459	30		Woods, Good, HSG A
54,560	70		Woods, Good, HSG C
8,756	30		Woods, Good, HSG A
197,973	52	49	Weighted Average, UI Adjusted
172,489			87.13% Pervious Area
25,484			12.87% Impervious Area
17,770			69.73% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.4	30	0.1050	0.11		**Sheet Flow, lawn** Grass: Bermuda n= 0.410 P2= 3.00"
36.2	90	0.0050	0.04		**Sheet Flow, Lawn** Grass: Bermuda n= 0.410 P2= 3.00"
14.7	30	0.0050	0.03		**Sheet Flow, Woods - Good** Woods: Light underbrush n= 0.400 P2= 3.00"
11.3	240	0.0050	0.35		**Shallow Concentrated Flow, Woods** Woodland Kv= 5.0 fps
0.8	155	0.0440	3.15		**Shallow Concentrated Flow, Lawn** Grassed Waterway Kv= 15.0 fps
67.4	545	Total			

Subcatchment 1.1: Pre - 1.1



Summary for Subcatchment 1.2: Pre - 1.2

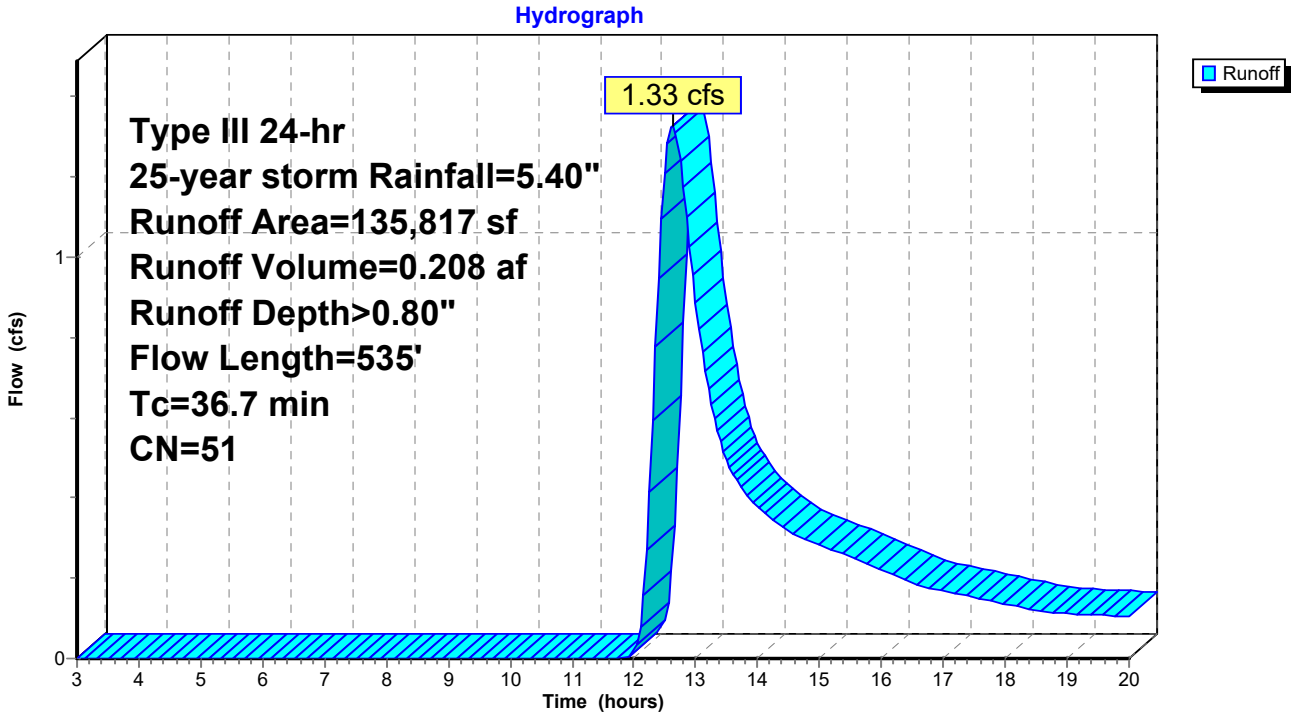
Runoff = 1.33 cfs @ 12.63 hrs, Volume= 0.208 af, Depth> 0.80"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 3.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-year storm Rainfall=5.40"

Area (sf)	CN	Description
10,242	83	Paved roads w/open ditches, 50% imp, HSG A
20,828	98	Paved parking, HSG A
7,787	98	Paved parking, HSG C
88,183	30	Woods, Good, HSG A
8,635	70	Woods, Good, HSG C
142	30	Woods, Good, HSG A
135,817	51	Weighted Average
102,081		75.16% Pervious Area
33,736		24.84% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.8	50	0.0710	0.11		**Sheet Flow, lawn** Grass: Bermuda n= 0.410 P2= 3.00"
25.4	100	0.0150	0.07		**Sheet Flow, lawn** Grass: Bermuda n= 0.410 P2= 3.00"
2.4	225	0.0190	1.56	62.50	**Parabolic Channel, Existing Wooded channel** W=60.00' D=1.00' Area=40.0 sf Perim=60.0' n= 0.100 Heavy timber, flow below branches
0.8	100	0.0125	2.01	3.35	**Parabolic Channel, lawn drainage swale** W=10.00' D=0.25' Area=1.7 sf Perim=10.0' n= 0.025 Earth, clean & winding
0.3	60	0.0100	3.10	12.39	**Parabolic Channel, Sprucewood Road ditch** W=6.00' D=1.00' Area=4.0 sf Perim=6.4' n= 0.035 Earth, dense weeds
36.7	535	Total			

Subcatchment 1.2: Pre - 1.2



Summary for Subcatchment 1.3: Pre 1.3

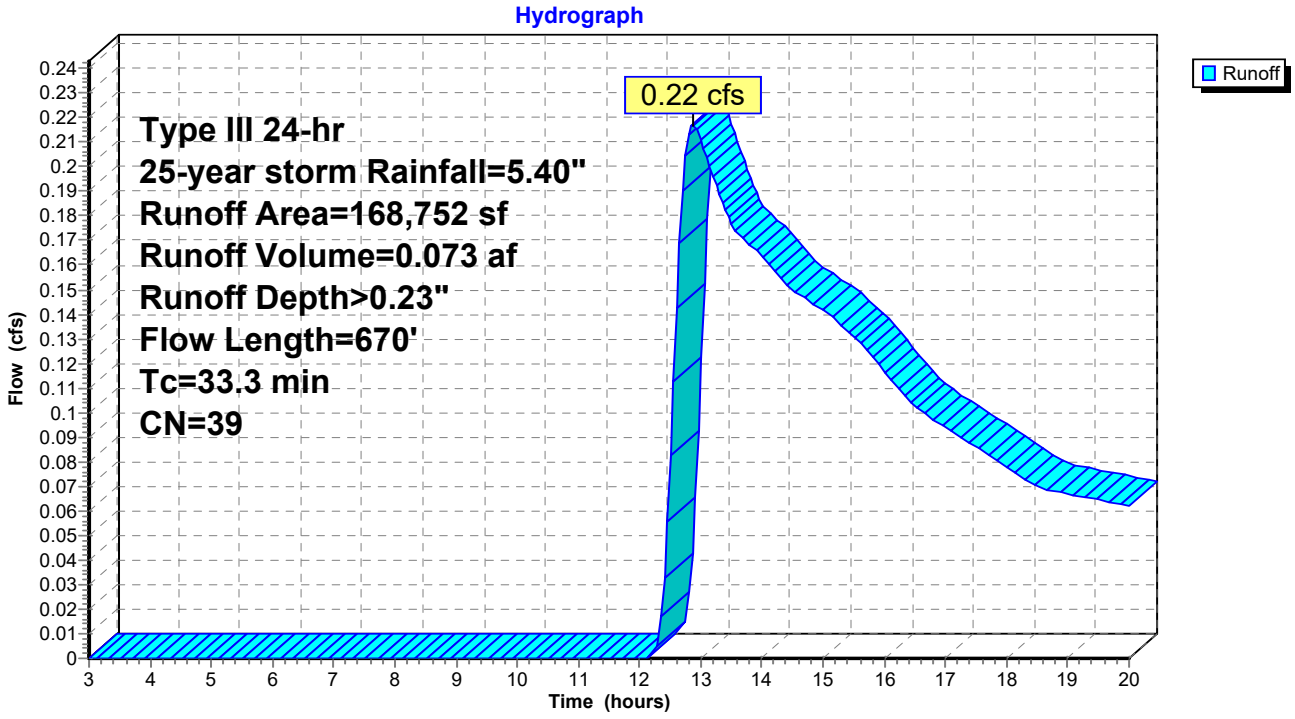
Runoff = 0.22 cfs @ 12.87 hrs, Volume= 0.073 af, Depth> 0.23"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 3.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-year storm Rainfall=5.40"

Area (sf)	CN	Description
136,436	30	Woods, Good, HSG A
32,316	77	Woods, Good, HSG D
168,752	39	Weighted Average
168,752		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.0	150	0.0370	0.10		**Sheet Flow, Woodland** Woods: Light underbrush n= 0.400 P2= 3.00"
9.3	520	0.0346	0.93		**Shallow Concentrated Flow, Woodland** Woodland Kv= 5.0 fps
33.3	670	Total			

Subcatchment 1.3: Pre 1.3



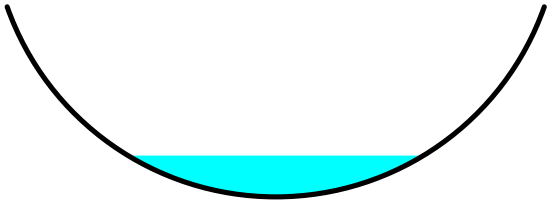
Summary for Reach 1R: Stevens Mill Road Ditch

Inflow Area = 3.118 ac, 24.84% Impervious, Inflow Depth > 0.80" for 25-year storm event
Inflow = 1.33 cfs @ 12.63 hrs, Volume= 0.208 af
Outflow = 1.32 cfs @ 12.68 hrs, Volume= 0.208 af, Atten= 1%, Lag= 3.0 min

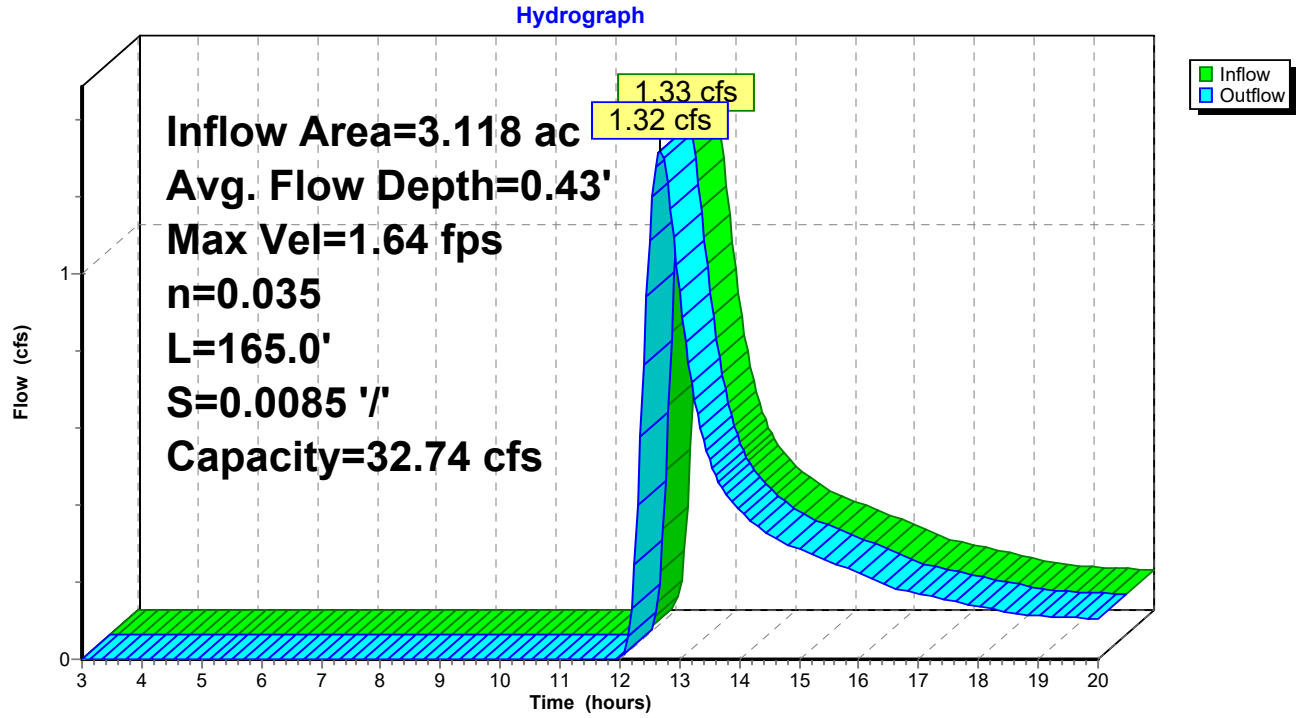
Routing by Stor-Ind+Trans method, Time Span= 3.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 1.64 fps, Min. Travel Time= 1.7 min
Avg. Velocity = 0.98 fps, Avg. Travel Time= 2.8 min

Peak Storage= 133 cf @ 12.65 hrs
Average Depth at Peak Storage= 0.43' , Surface Width= 2.79'
Bank-Full Depth= 2.00' Flow Area= 8.0 sf, Capacity= 32.74 cfs

6.00' x 2.00' deep Parabolic Channel, n= 0.035 Earth, dense weeds
Length= 165.0' Slope= 0.0085 '/'
Inlet Invert= 244.60', Outlet Invert= 243.20'



Reach 1R: Stevens Mill Road Ditch



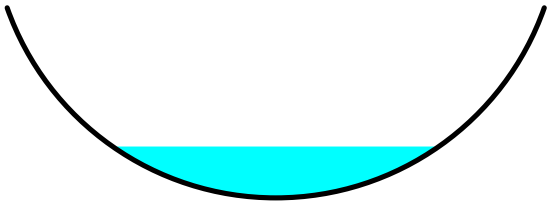
Summary for Reach 2R: Stevens Mill Road Ditch

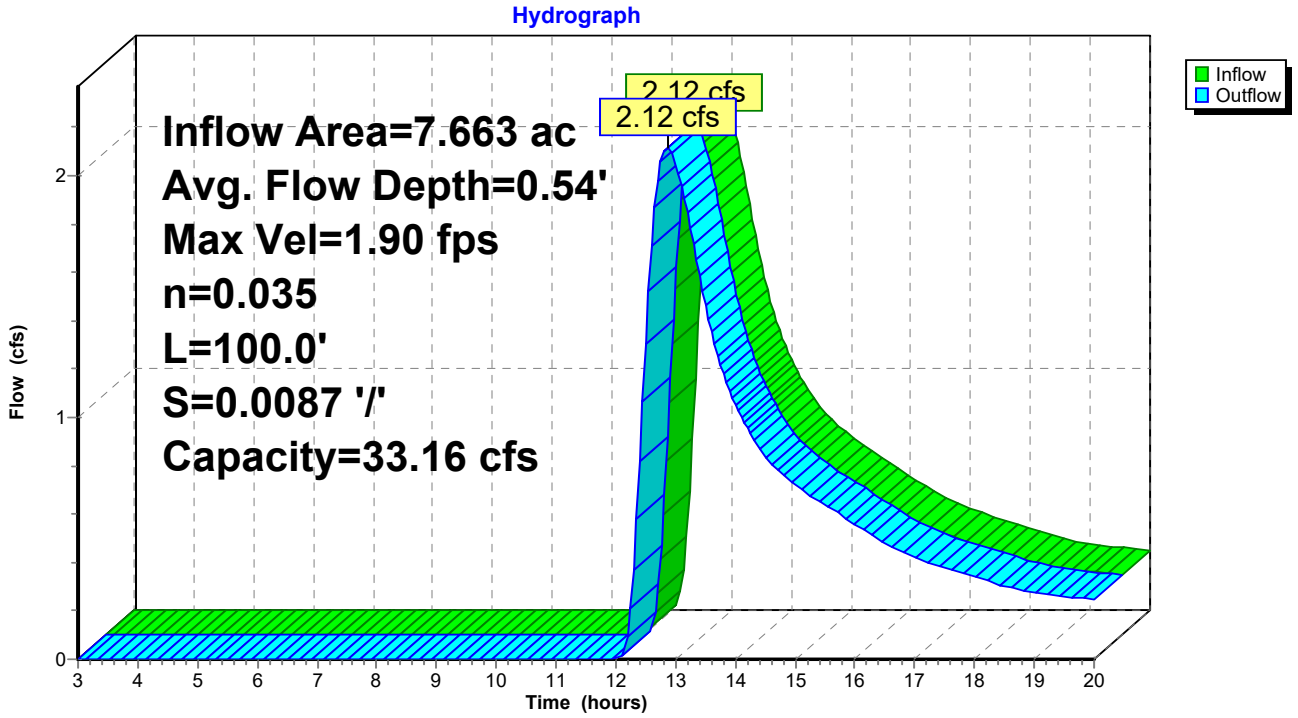
Inflow Area = 7.663 ac, 17.74% Impervious, Inflow Depth > 0.73" for 25-year storm event
Inflow = 2.12 cfs @ 12.83 hrs, Volume= 0.463 af
Outflow = 2.12 cfs @ 12.86 hrs, Volume= 0.463 af, Atten= 0%, Lag= 1.9 min

Routing by Stor-Ind+Trans method, Time Span= 3.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 1.90 fps, Min. Travel Time= 0.9 min
Avg. Velocity = 1.28 fps, Avg. Travel Time= 1.3 min

Peak Storage= 111 cf @ 12.84 hrs
Average Depth at Peak Storage= 0.54' , Surface Width= 3.11'
Bank-Full Depth= 2.00' Flow Area= 8.0 sf, Capacity= 33.16 cfs

6.00' x 2.00' deep Parabolic Channel, n= 0.035 Earth, dense weeds
Length= 100.0' Slope= 0.0087 '/'
Inlet Invert= 243.20', Outlet Invert= 242.33'





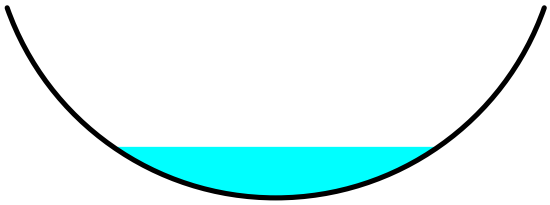
Summary for Reach 3R: Stevens Mill Road Ditch

Inflow Area = 7.663 ac, 17.74% Impervious, Inflow Depth > 0.72" for 25-year storm event
Inflow = 2.12 cfs @ 12.86 hrs, Volume= 0.463 af
Outflow = 2.11 cfs @ 12.89 hrs, Volume= 0.462 af, Atten= 0%, Lag= 1.9 min

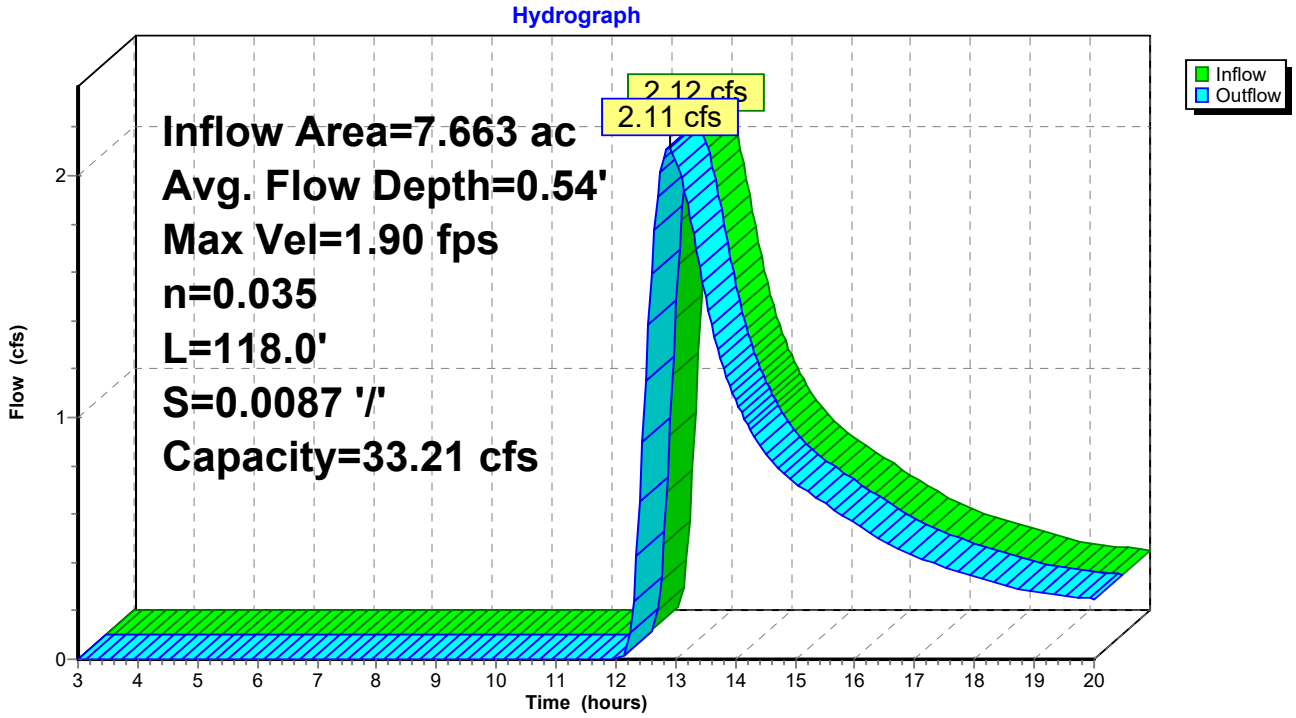
Routing by Stor-Ind+Trans method, Time Span= 3.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 1.90 fps, Min. Travel Time= 1.0 min
Avg. Velocity = 1.29 fps, Avg. Travel Time= 1.5 min

Peak Storage= 131 cf @ 12.87 hrs
Average Depth at Peak Storage= 0.54' , Surface Width= 3.11'
Bank-Full Depth= 2.00' Flow Area= 8.0 sf, Capacity= 33.21 cfs

6.00' x 2.00' deep Parabolic Channel, n= 0.035 Earth, dense weeds
Length= 118.0' Slope= 0.0087 '/'
Inlet Invert= 242.09', Outlet Invert= 241.06'



Reach 3R: Stevens Mill Road Ditch



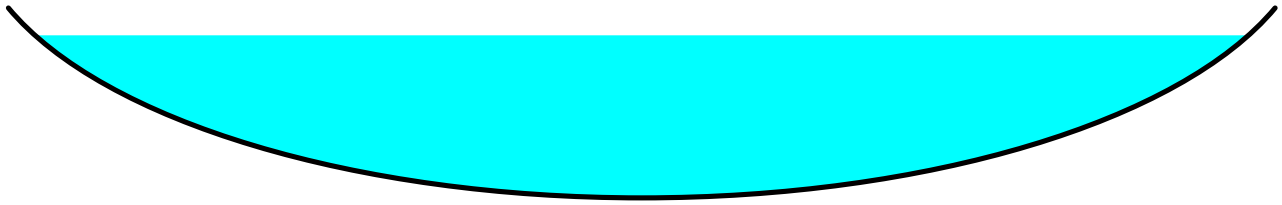
Summary for Reach 4R: Existing Drainage Channel

Inflow Area = 7.663 ac, 17.74% Impervious, Inflow Depth > 0.72" for 25-year storm event
Inflow = 2.11 cfs @ 12.89 hrs, Volume= 0.462 af
Outflow = 2.11 cfs @ 12.97 hrs, Volume= 0.459 af, Atten= 0%, Lag= 4.8 min

Routing by Stor-Ind+Trans method, Time Span= 3.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 1.67 fps, Min. Travel Time= 2.7 min
Avg. Velocity = 1.11 fps, Avg. Travel Time= 4.0 min

Peak Storage= 342 cf @ 12.92 hrs
Average Depth at Peak Storage= 0.26' , Surface Width= 7.40'
Bank-Full Depth= 0.30' Flow Area= 1.6 sf, Capacity= 2.96 cfs

8.00' x 0.30' deep Parabolic Channel, n= 0.025 Earth, clean & winding
Length= 270.0' Slope= 0.0083 '/'
Inlet Invert= 239.66', Outlet Invert= 237.41'



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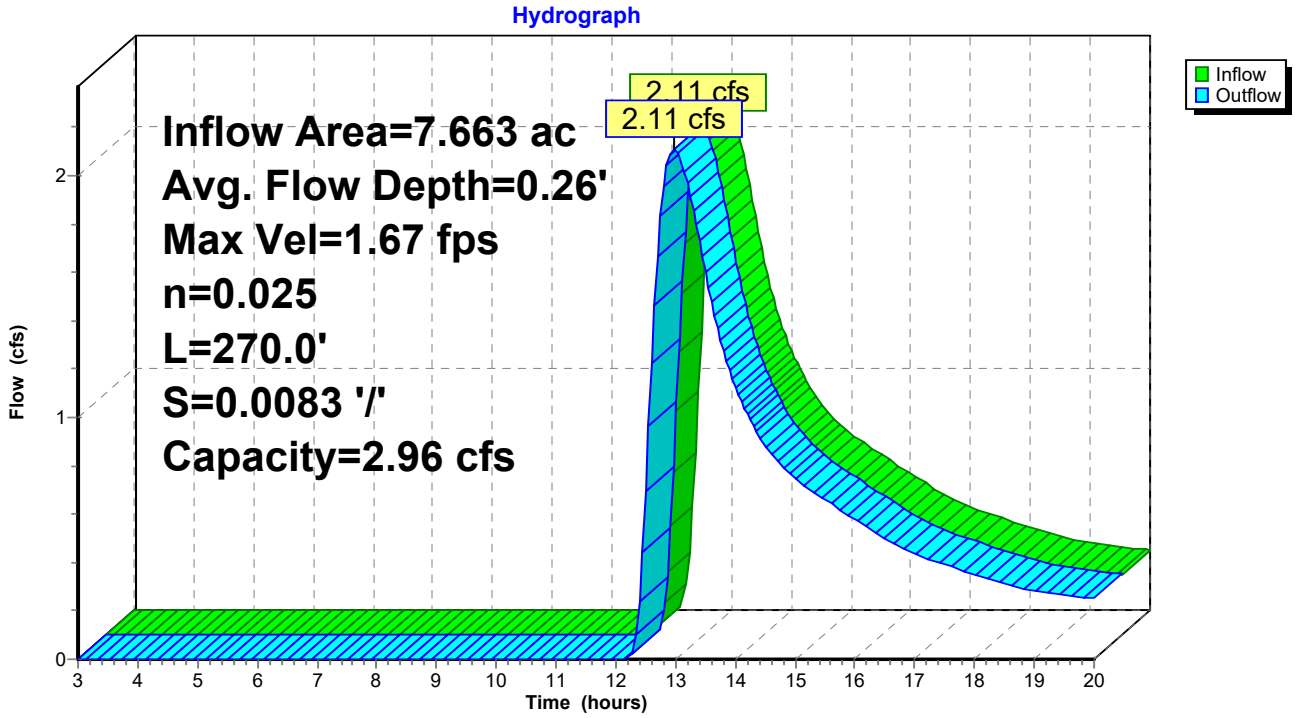
Reach 4R: Existing Drainage Channel



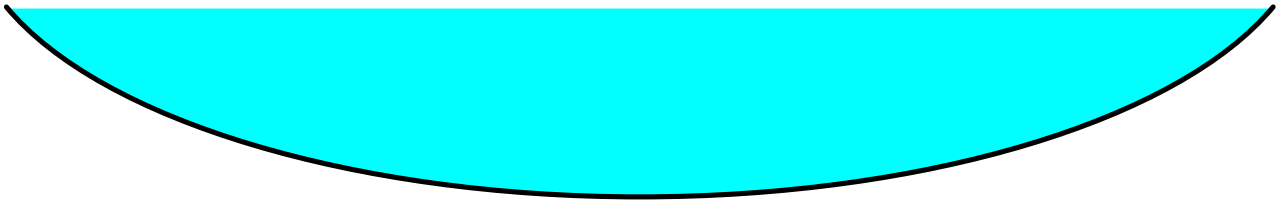
Summary for Reach 5R: Existing Drainage Channel-Woods

Inflow Area = 7.663 ac, 17.74% Impervious, Inflow Depth > 0.72" for 25-year storm event
Inflow = 2.11 cfs @ 12.97 hrs, Volume= 0.459 af
Outflow = 2.11 cfs @ 13.05 hrs, Volume= 0.456 af, Atten= 0%, Lag= 4.8 min

Routing by Stor-Ind+Trans method, Time Span= 3.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.00 fps, Min. Travel Time= 2.7 min
Avg. Velocity = 1.35 fps, Avg. Travel Time= 4.0 min

Peak Storage= 337 cf @ 13.01 hrs
Average Depth at Peak Storage= 0.20' , Surface Width= 7.96'
Bank-Full Depth= 0.20' Flow Area= 1.1 sf, Capacity= 2.15 cfs

8.00' x 0.20' deep Parabolic Channel, n= 0.025 Earth, clean & winding
Length= 320.0' Slope= 0.0169 '/'
Inlet Invert= 237.41', Outlet Invert= 232.00'



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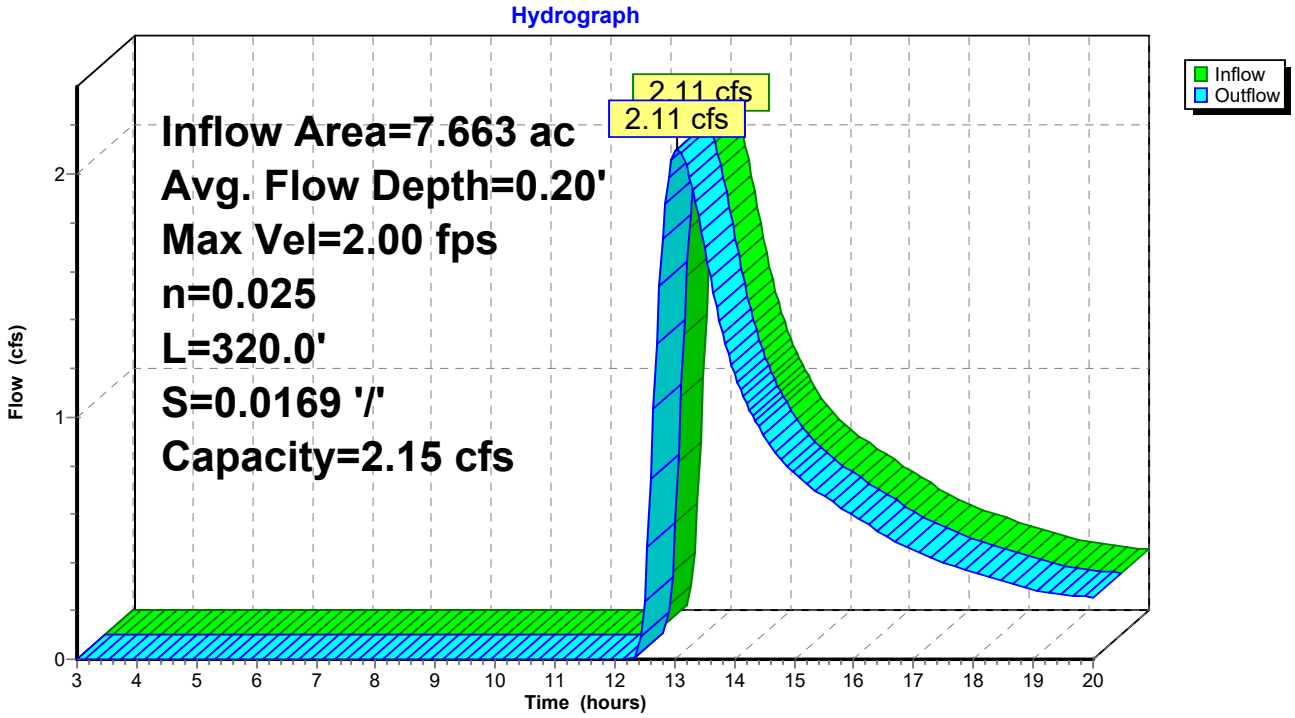
Reach 5R: Existing Drainage Channel-Woods



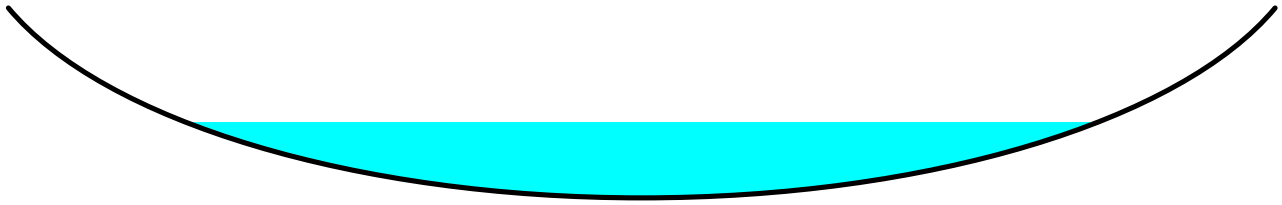
Summary for Reach 6R: Existing Drainage Channel-Woods

Inflow Area = 7.663 ac, 17.74% Impervious, Inflow Depth > 0.71" for 25-year storm event
Inflow = 2.11 cfs @ 13.05 hrs, Volume= 0.456 af
Outflow = 2.10 cfs @ 13.10 hrs, Volume= 0.454 af, Atten= 0%, Lag= 3.2 min

Routing by Stor-Ind+Trans method, Time Span= 3.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.51 fps, Min. Travel Time= 1.8 min
Avg. Velocity = 1.70 fps, Avg. Travel Time= 2.6 min

Peak Storage= 222 cf @ 13.07 hrs
Average Depth at Peak Storage= 0.20' , Surface Width= 6.31'
Bank-Full Depth= 0.50' Flow Area= 3.3 sf, Capacity= 15.41 cfs

10.00' x 0.50' deep Parabolic Channel, n= 0.025 Earth, clean & winding
Length= 265.0' Slope= 0.0264 '/'
Inlet Invert= 232.00', Outlet Invert= 225.00'



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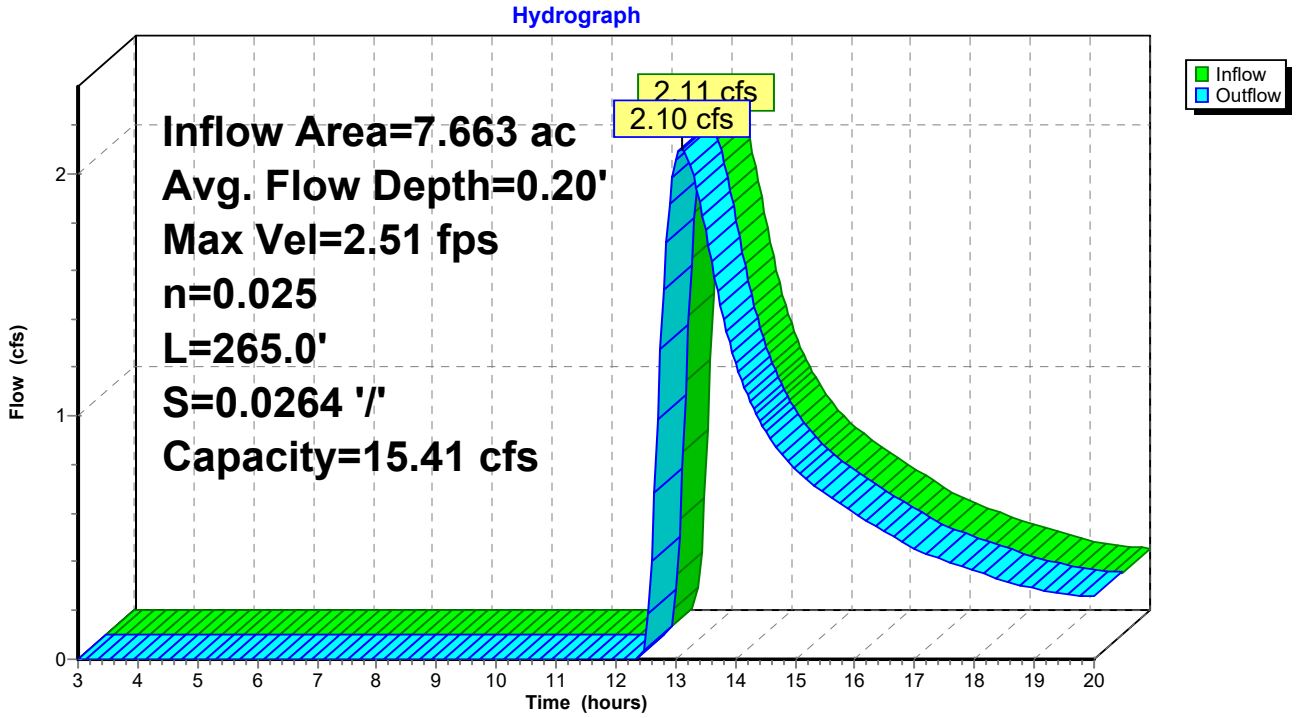
Reach 6R: Existing Drainage Channel-Woods



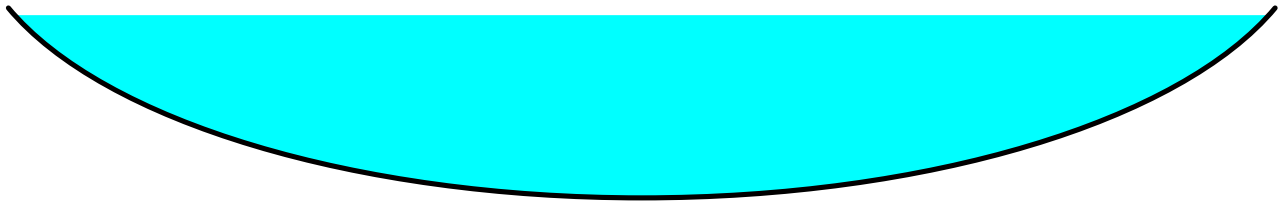
Summary for Reach 7R: Existing Drainage Channel-Woods

Inflow Area = 35.051 ac, 5.20% Impervious, Inflow Depth > 1.28" for 25-year storm event
Inflow = 21.52 cfs @ 12.84 hrs, Volume= 3.727 af
Outflow = 21.48 cfs @ 12.87 hrs, Volume= 3.719 af, Atten= 0%, Lag= 1.9 min

Routing by Stor-Ind+Trans method, Time Span= 3.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.43 fps, Min. Travel Time= 1.1 min
Avg. Velocity = 1.95 fps, Avg. Travel Time= 1.9 min

Peak Storage= 1,382 cf @ 12.85 hrs
Average Depth at Peak Storage= 0.96' , Surface Width= 9.80'
Bank-Full Depth= 1.00' Flow Area= 6.7 sf, Capacity= 23.43 cfs

10.00' x 1.00' deep Parabolic Channel, n= 0.040 Winding stream, pools & shoals
Length= 220.0' Slope= 0.0159 '/'
Inlet Invert= 225.00', Outlet Invert= 221.50'



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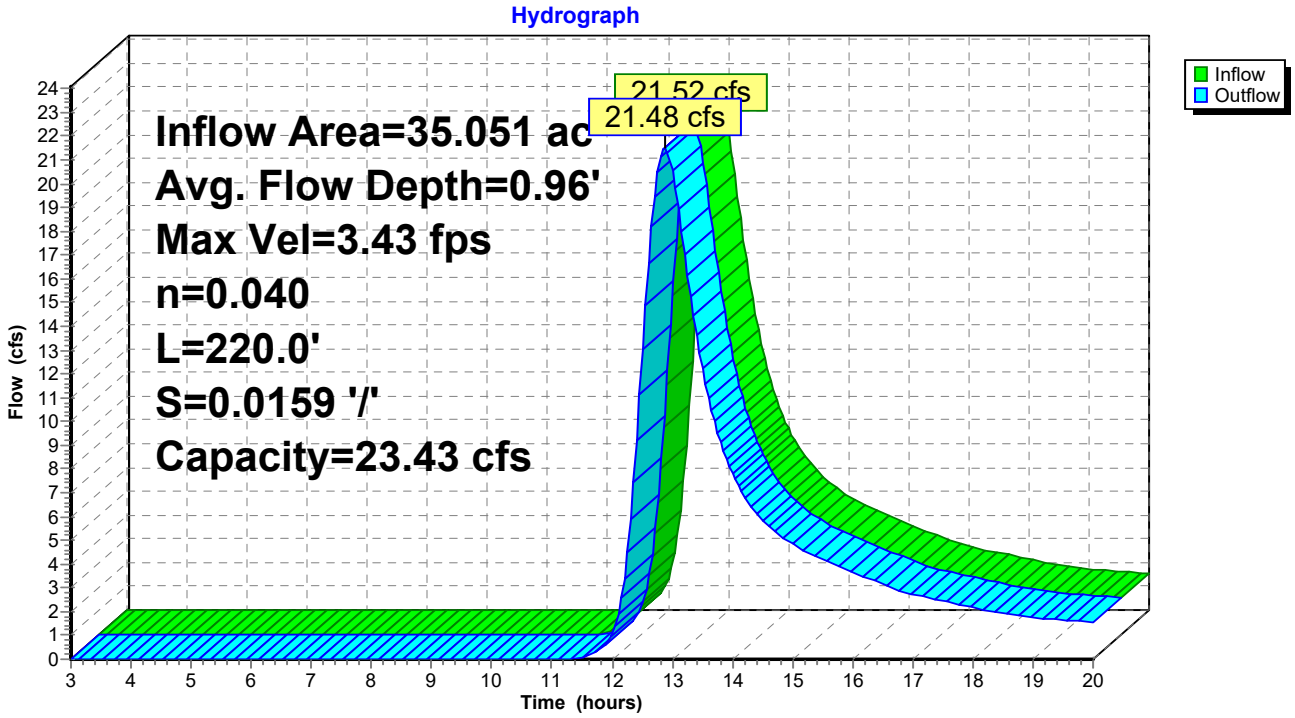
Reach 7R: Existing Drainage Channel-Woods



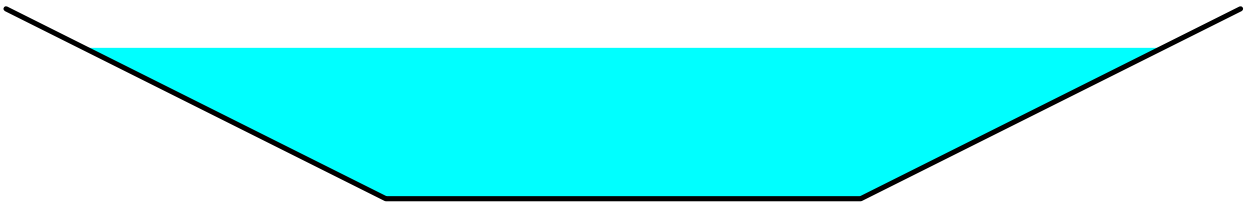
Summary for Reach 8R: Existing Stream Channel

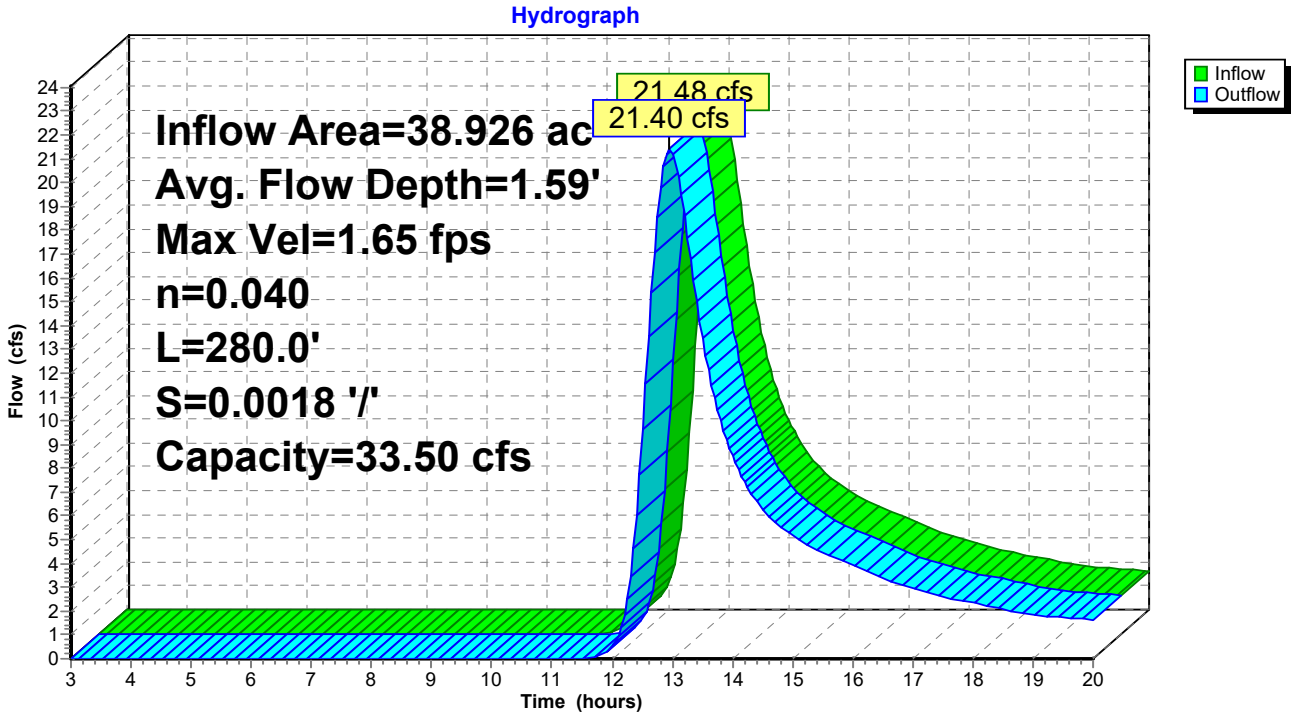
Inflow Area = 38.926 ac, 4.68% Impervious, Inflow Depth > 1.17" for 25-year storm event
Inflow = 21.48 cfs @ 12.87 hrs, Volume= 3.784 af
Outflow = 21.40 cfs @ 12.96 hrs, Volume= 3.764 af, Atten= 0%, Lag= 5.0 min

Routing by Stor-Ind+Trans method, Time Span= 3.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 1.65 fps, Min. Travel Time= 2.8 min
Avg. Velocity = 0.95 fps, Avg. Travel Time= 4.9 min

Peak Storage= 3,641 cf @ 12.91 hrs
Average Depth at Peak Storage= 1.59' , Surface Width= 11.36'
Bank-Full Depth= 2.00' Flow Area= 18.0 sf, Capacity= 33.50 cfs

5.00' x 2.00' deep channel, n= 0.040 Winding stream, pools & shoals
Side Slope Z-value= 2.0 '/' Top Width= 13.00'
Length= 280.0' Slope= 0.0018 '/'
Inlet Invert= 221.50', Outlet Invert= 221.00'





Summary for Reach 9R: Existing Stream Channel

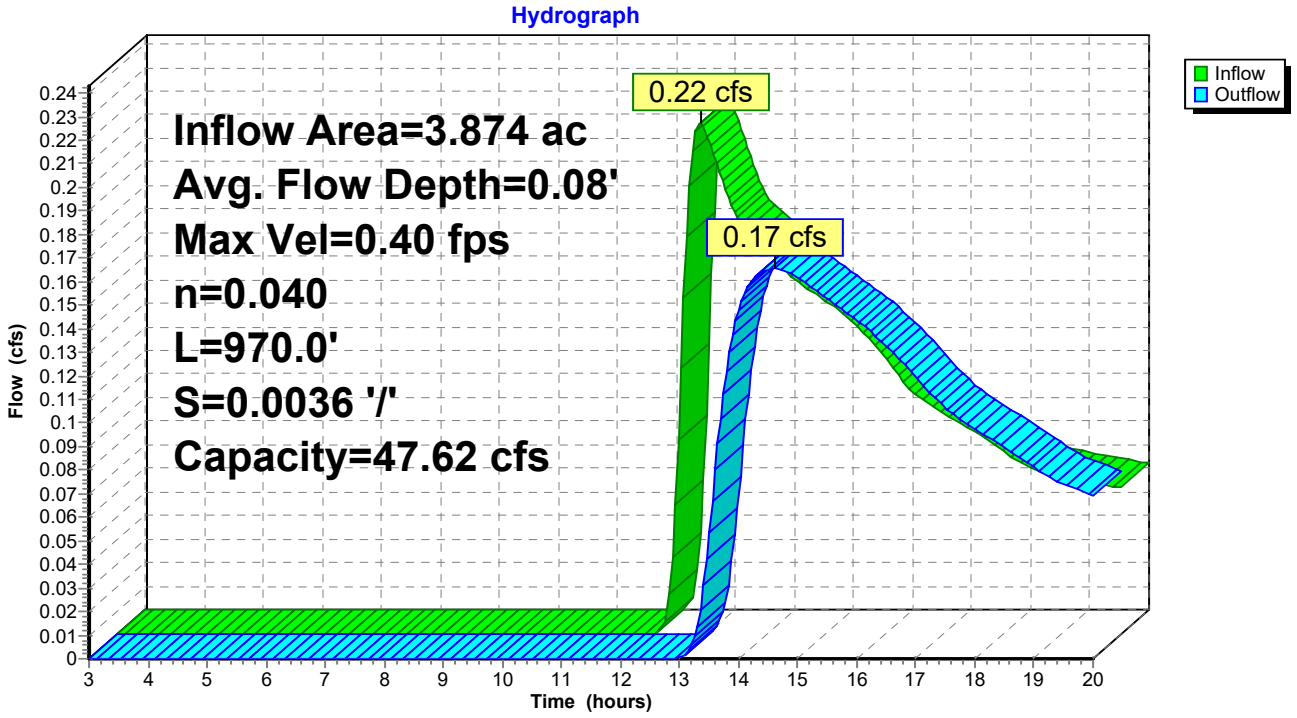
Inflow Area = 3.874 ac, 0.00% Impervious, Inflow Depth > 0.23" for 25-year storm event
Inflow = 0.22 cfs @ 12.87 hrs, Volume= 0.073 af
Outflow = 0.17 cfs @ 14.60 hrs, Volume= 0.065 af, Atten= 24%, Lag= 103.9 min

Routing by Stor-Ind+Trans method, Time Span= 3.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 0.40 fps, Min. Travel Time= 40.1 min
Avg. Velocity = 0.33 fps, Avg. Travel Time= 48.4 min

Peak Storage= 398 cf @ 13.94 hrs
Average Depth at Peak Storage= 0.08' , Surface Width= 5.32'
Bank-Full Depth= 2.00' Flow Area= 18.0 sf, Capacity= 47.62 cfs

5.00' x 2.00' deep channel, n= 0.040 Winding stream, pools & shoals
Side Slope Z-value= 2.0 '/' Top Width= 13.00'
Length= 970.0' Slope= 0.0036 '/'
Inlet Invert= 225.00', Outlet Invert= 221.50'

Reach 9R: Existing Stream Channel

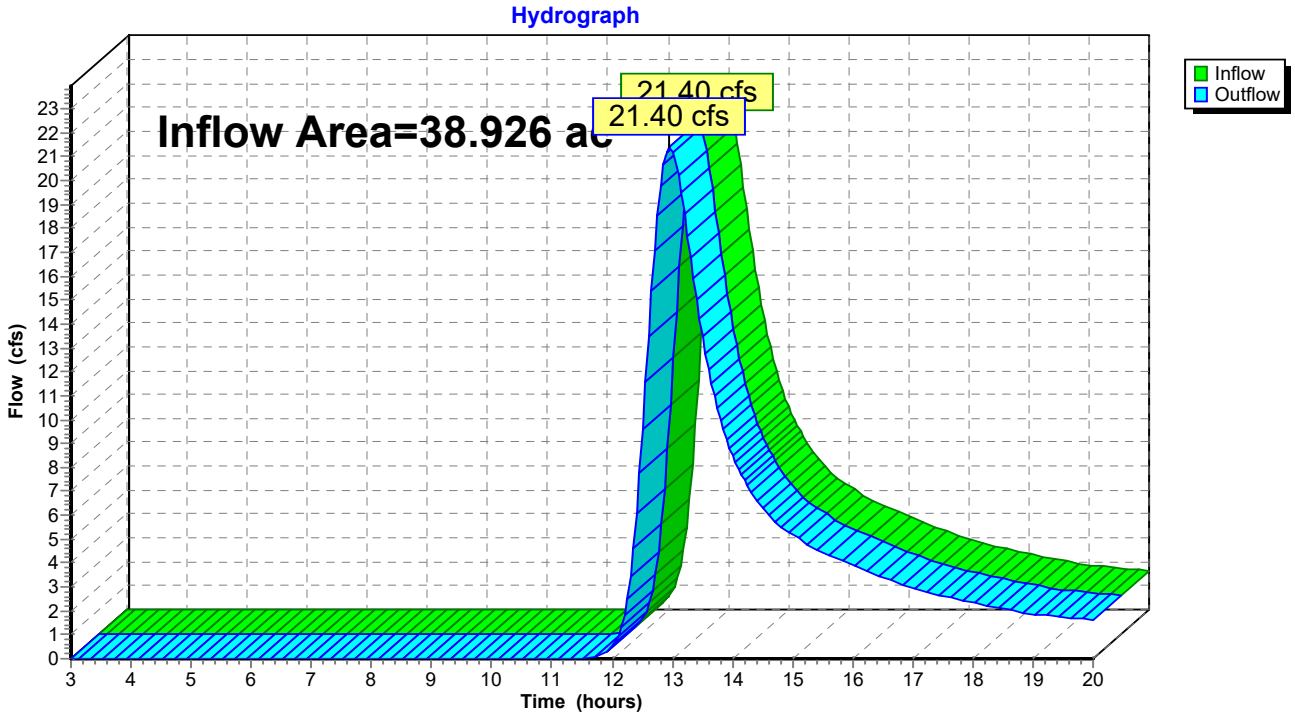


Summary for Reach WAP 1: Water Analysis Point 1

Inflow Area = 38.926 ac, 4.68% Impervious, Inflow Depth > 1.16" for 25-year storm event
Inflow = 21.40 cfs @ 12.96 hrs, Volume= 3.764 af
Outflow = 21.40 cfs @ 12.96 hrs, Volume= 3.764 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 3.00-20.00 hrs, dt= 0.05 hrs

Reach WAP 1: Water Analysis Point 1



Summary for Pond 1P: Sprucewood Rd Culvert

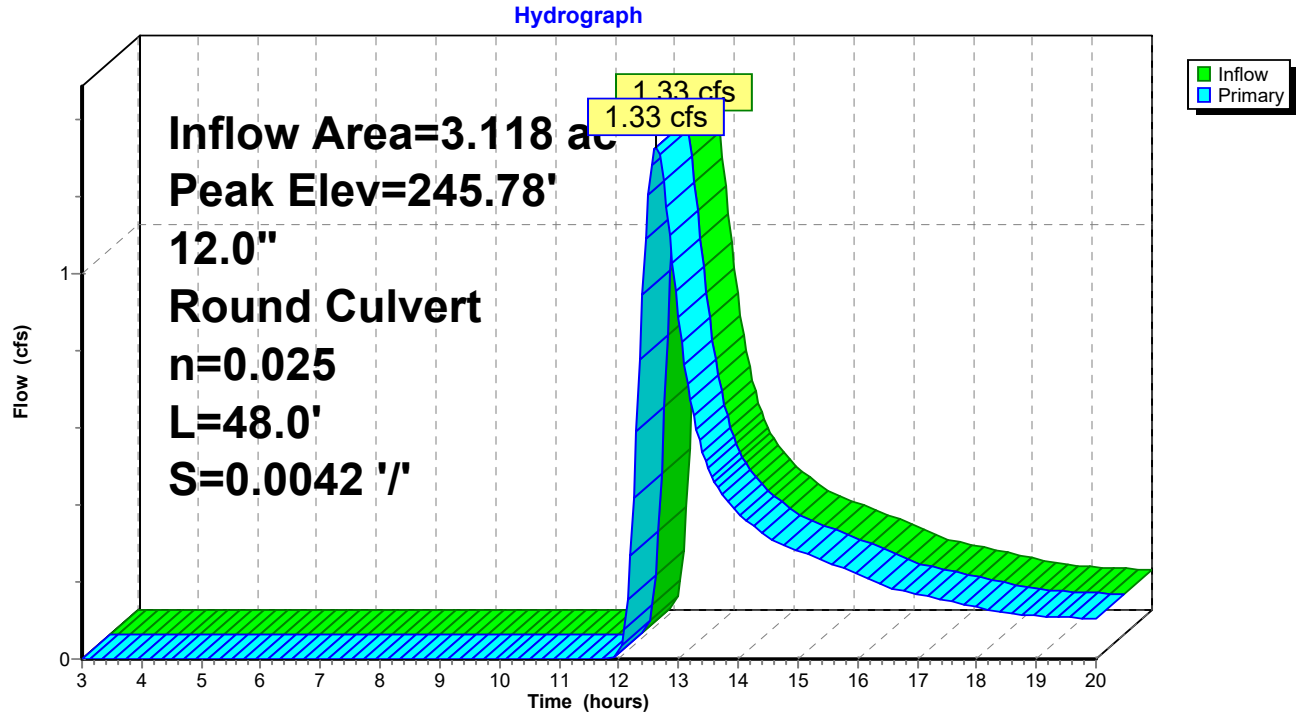
Inflow Area = 3.118 ac, 24.84% Impervious, Inflow Depth > 0.80" for 25-year storm event
Inflow = 1.33 cfs @ 12.63 hrs, Volume= 0.208 af
Outflow = 1.33 cfs @ 12.63 hrs, Volume= 0.208 af, Atten= 0%, Lag= 0.0 min
Primary = 1.33 cfs @ 12.63 hrs, Volume= 0.208 af

Routing by Stor-Ind method, Time Span= 3.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 245.78' @ 12.63 hrs
Flood Elev= 246.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	244.80'	**12.0" Round Culvert** L= 48.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 244.80' / 244.60' S= 0.0042 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 0.79 sf

Primary OutFlow Max=1.32 cfs @ 12.63 hrs HW=245.78' (Free Discharge)
1=Culvert (Barrel Controls 1.32 cfs @ 2.14 fps)

Pond 1P: Sprucewood Rd Culvert



Summary for Pond 2P: Driveway culvert

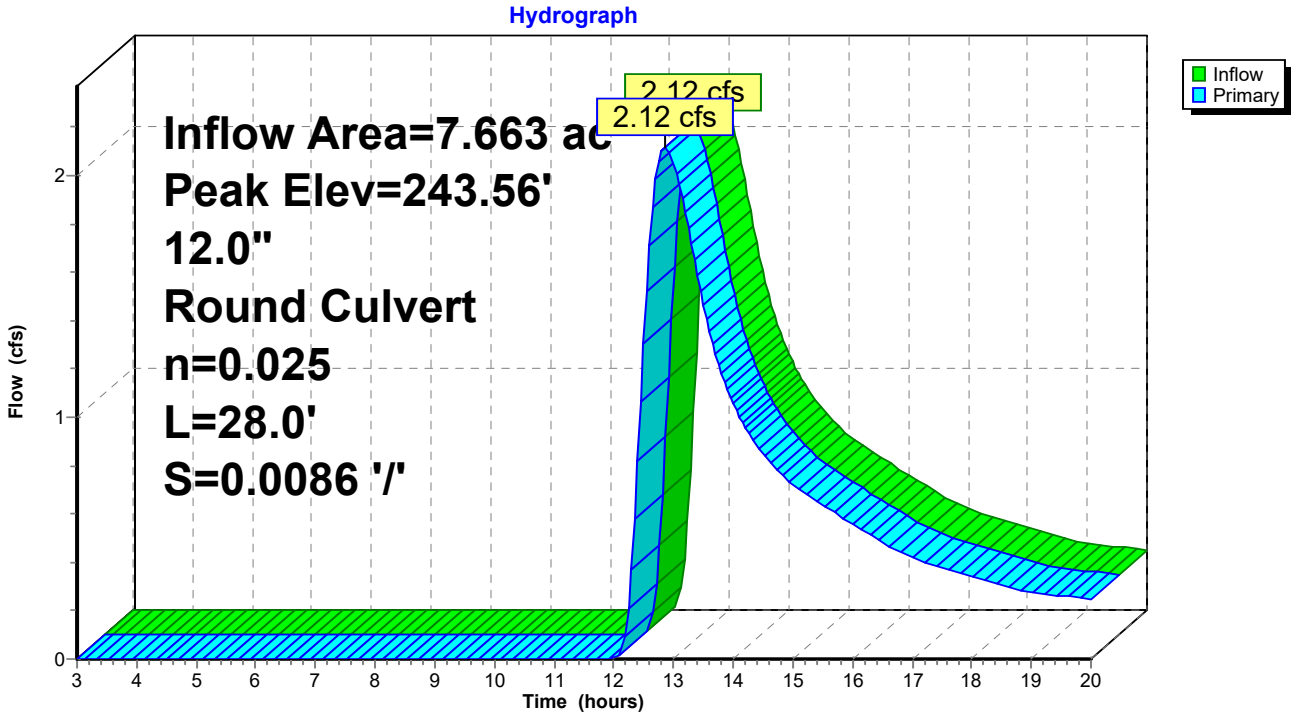
Inflow Area = 7.663 ac, 17.74% Impervious, Inflow Depth > 0.72" for 25-year storm event
Inflow = 2.12 cfs @ 12.86 hrs, Volume= 0.463 af
Outflow = 2.12 cfs @ 12.86 hrs, Volume= 0.463 af, Atten= 0%, Lag= 0.0 min
Primary = 2.12 cfs @ 12.86 hrs, Volume= 0.463 af

Routing by Stor-Ind method, Time Span= 3.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 243.56' @ 12.86 hrs
Flood Elev= 243.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	242.33'	**12.0" Round Culvert** L= 28.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 242.33' / 242.09' S= 0.0086 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 0.79 sf

Primary OutFlow Max=2.12 cfs @ 12.86 hrs HW=243.56' (Free Discharge)
1=Culvert (Barrel Controls 2.12 cfs @ 2.79 fps)

Pond 2P: Driveway culvert



Summary for Pond 3P: Driveway culvert

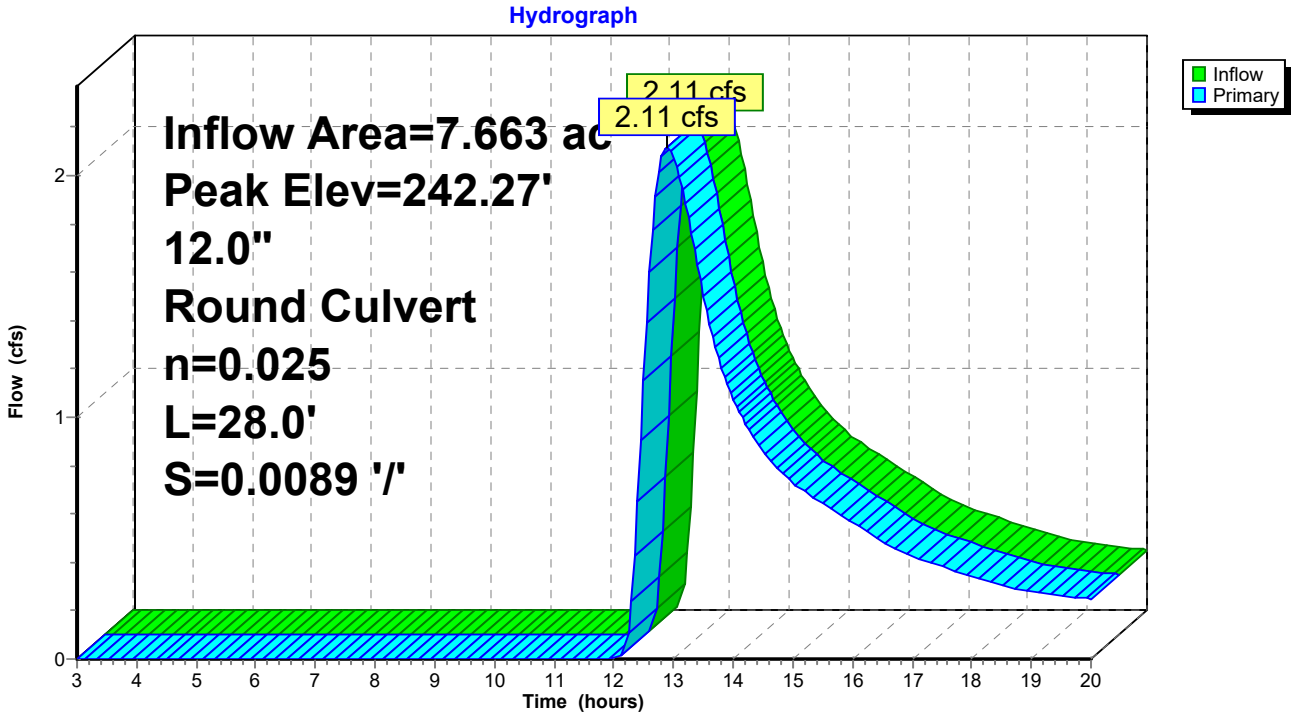
Inflow Area = 7.663 ac, 17.74% Impervious, Inflow Depth > 0.72" for 25-year storm event
Inflow = 2.11 cfs @ 12.89 hrs, Volume= 0.462 af
Outflow = 2.11 cfs @ 12.89 hrs, Volume= 0.462 af, Atten= 0%, Lag= 0.0 min
Primary = 2.11 cfs @ 12.89 hrs, Volume= 0.462 af

Routing by Stor-Ind method, Time Span= 3.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 242.27' @ 12.89 hrs
Flood Elev= 243.16'

Device	Routing	Invert	Outlet Devices
#1	Primary	241.06'	**12.0" Round Culvert** L= 28.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 241.06' / 240.81' S= 0.0089 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 0.79 sf

Primary OutFlow Max=2.11 cfs @ 12.89 hrs HW=242.27' (Free Discharge)
1=Culvert (Barrel Controls 2.11 cfs @ 2.82 fps)

Pond 3P: Driveway culvert



Summary for Pond 4P: Stevens Mill Rd X-Culvert

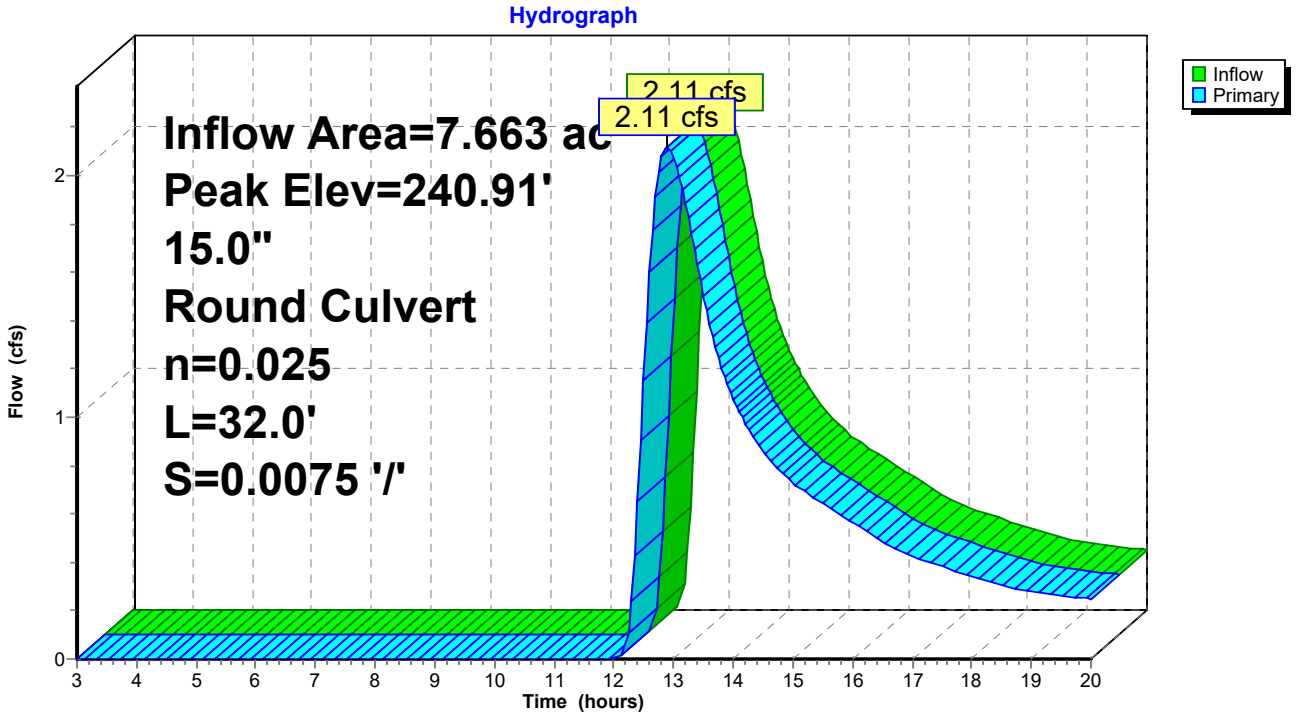
Inflow Area = 7.663 ac, 17.74% Impervious, Inflow Depth > 0.72" for 25-year storm event
Inflow = 2.11 cfs @ 12.89 hrs, Volume= 0.462 af
Outflow = 2.11 cfs @ 12.89 hrs, Volume= 0.462 af, Atten= 0%, Lag= 0.0 min
Primary = 2.11 cfs @ 12.89 hrs, Volume= 0.462 af

Routing by Stor-Ind method, Time Span= 3.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 240.91' @ 12.89 hrs
Flood Elev= 243.16'

Device	Routing	Invert	Outlet Devices
#1	Primary	239.90'	**15.0" Round Culvert** L= 32.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 239.90' / 239.66' S= 0.0075 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 1.23 sf

Primary OutFlow Max=2.11 cfs @ 12.89 hrs HW=240.91' (Free Discharge)
1=Culvert (Barrel Controls 2.11 cfs @ 2.72 fps)

Pond 4P: Stevens Mill Rd X-Culvert



Section 8: Waiver Requests

1. The Applicant has requested a waiver from Sec. 60-607 (12) a.: *All uses containing over five parking and/or loading spaces shall either contain such spaces within structures or be subject to the following requirements: All access drives, parking, loading and service spaces shall be graded and surfaced with a solid paving material that is impermeable to water and to be dust free and properly drained. Materials which satisfy this criterion include but are not limited to bituminous pavement, concrete, geotextiles and brick or cobblestone or other paving block provided that it is mortared*. The waiver has been requested based on the type of traffic anticipated to use the site. The Applicant has proposed to use this site seasonally and there is anticipated to be no winter parking uses.

2. The Applicant has requested a waiver from Sec. 60-607 (16): *A parking lot cluster containing more than 80 stalls shall contain landscaped areas within the perimeter of the overall lot, in the form of landscaped perimeter and islands.* The waiver has been requested based on the type of surface being used for the Parking Area C: gravel. Landscaped perimeters and islands will be difficult to maintain with a graveled surface and lack of curbs. Additionally, Parking Area C (and all other parking areas) will only be used seasonally in the spring, summer, and fall.

Appendices

- Appendix A: Maine Construction General Permit
- Appendix B: DEP and Army Corps. of Engineers Permit Approvals
- Appendix C: HHE-200
- Appendix D: Lighting Details
- Appendix E: Fill Permit
- Appendix F: Traffic Movement Permit Application
- Appendix G: Site Plans

Appendix A: Maine Construction General Permit

DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOTICE OF INTENT TO COMPLY
MAINE CONSTRUCTION GENERAL PERMIT

APPLICANT INFORMATION (Owner)		AGENT INFORMATION (If Applying on Behalf of Owner)	
Name:	Auburn Suburban Baseball and Softball	Name:	Jones Associates, Inc.
Mailing Address:	P.O. Box 1615	Mailing Address:	280 Poland Spring Road
Mailing Address:		Mailing Address:	
Town/State/Zip:	Auburn, Maine 04210	Town/State/Zip:	Auburn, Maine 04210
Daytime Phone #:	207-409-9269 Ext:	Daytime Phone #:	207-241-0235 Ext:
Email Address:	bashaw15@roadrunner.com ; fmkunas@hotmail.com	Email Address:	jray@jonesai.com ; ejones@jonesai.com

PROJECT INFORMATION

Project Town:	Auburn	UTM Northing & Easting (if known):	398691 m East 4882256 m North	Tax Map and Lot Number:	Map 217, Lot 2		
Size of disturbed area proposed:	9.67 acres	Part of a larger project?	☐ Yes ☑ No	Creating a common plan of development or sale?	☐ Yes ☑ No	After the Fact?	☐ Yes ☑ No
Name of waterbody(ies) to which disturbed area would drain (or municipality if area drains to MS4):	unnamed stream unnamed freshwater wetlands	Does the site drain to an Impaired Waterbody? If so, provide name:	No				
Brief Project Description:	Auburn Suburban Baseball and Softball is now proposing a new sports recreation facility on an approximately 30.10-acre property located to the southwest of the intersection between Stevens Mill Road and Hotel Road in Auburn, Maine (Tax Map 217, Lot 2). This new sports recreation facility will consist of three standard-sized ball fields (two little league-sized fields and one Babe Ruth-sized field) and one practice field with batting cages. Other development features include three parking areas, a concession building with restrooms, maintenance and storage garage, and portable bathrooms.						
Project Location & Brief Directions to Site:	From Augusta, take I-95S. Take Exit 75 and head towards Washington Street N. After 1 mile, turn right onto E Hardscrabble Road. After 1.7 miles, take a right onto Hotel Road and Continue onto Manley Road for 225 feet then take a slight left back onto Hotel Road. Turn right onto Stevens Mill Road. Property is southwest of the intersection between Hotel Road and Stevens Mill Road.						

NOTICE OF INTENT (NOI) FORMS CANNOT BE ACCEPTED WITHOUT THE NECESSARY ATTACHMENTS AND FEE

I am filing notice of my intent to carry out work that meets the requirements of the Construction General Permit (effective July 21, 2006). I have a copy of the Construction General Permit and have read and will comply with all of the standards. I have attached all the required submittals.

- ☑ ***Attach*** a U.S.G.S. topo map or Maine Atlas & Gazetteer map with the project site clearly marked.
- ☑ ***Attach*** a drawing or site plan of the proposed activity.
- ☑ ***Attach*** an erosion and sedimentation control (ESC) plan.
- ☑ ***Attach*** photos of the project site that show existing character and topography of the area proposed for development.
- ☑ ***Attach*** if this form is not being signed by the property owner or lessee, documentation showing authorization to sign.
- N/A ☐ ***Attach*** if any construction activity will occur in essential habitat, written approval from the Dept. of Inland Fisheries & Wildlife.
- ☑ ***Attach*** if the applicant is a corporation, LLC, or other legal entity, proof of legal name. Provide a copy of Secretary of State's *registration information* (available at http://icrs.informe.org/nei-sos-icrs/ICRS?MainPage=x). Individuals and municipalities are not required to provide any proof of identity.

FEE: Pay by credit card at the **Payment Portal**. The MCGP fee may be found here https://www.maine.gov/dep/feeschedule.pdf.
☑ ***Attach*** payment confirmation from the Payment Portal when filing this notification form.

Signature & Certification:

- I authorize staff of the Departments of Environmental Protection to access the project site for the purpose of determining compliance with the Construction General Permit**.**
- I understand coverage under the Construction General Permit becomes effective 14 calendar days after receipt by the Department of this completed form, the required submissions, and fee, *unless the Department approves or denies the NOI prior to that date.*

By signing this Notice of Intent, I represent that the project meets all the requirements for coverage under the Construction General Permit and that the project will be completed in compliance with the Construction General Permit. I also represent that the applicant has sufficient title, right, or interest in the property where the construction activity will place.

Signature of Applicant or Agent (may be typed):	Jane Ray	Date:	September 8, 2022

***Keep a copy as a record of permit*.** Email this completed form with attachments to DEP at: DEP.PBRNotification@maine.gov. This email account is used to receive PBRs and NOIs. No further authorization will be issued by DEP after receipt of this notice.
Work carried out in violation of the Construction General Permit is subject to enforcement.

Appendix B: DEP and Army Corps. of Engineers Permit Approvals

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
17 STATE HOUSE STATION AUGUSTA, MAINE 04333-0017

DEPARTMENT ORDER

IN THE MATTER OF

AUBURN SUBURBAN BASEBALL AND SOFTBALL	) NATURAL RESOURCES PROTECTION ACT
	) FRESHWATER WETLAND ALTERATION
Auburn, Androscoggin County	) WATER QUALITY CERTIFICATION
ATHLETIC FACILITY	)
L-30044-TC-A-N (approval)	) FINDINGS OF FACT AND ORDER

Project Description: The applicant proposes to alter 11,822 square feet of forested freshwater wetlands to construct a baseball and softball facility on approximately 30 acres of land. The project includes four ball fields; a 15,000-square-foot access road; associated parking; a concession and restroom building; and a maintenance and storage garage. Wetland impacts will be located in four areas referred to as Wetland Impact Areas A, B, C, and D, as shown on a plan sheet included with the application and titled "Auburn Suburban Baseball and Softball," prepared by Jones Associates, Inc., dated September 8, 2022, with a last revision date of October 26, 2022. The proposed project is exempt from review under the Stormwater Management Law pursuant to 38 M.R.S. §420-D (7)(C).

One large wetland area extends across the center of the parcel, with fingers of wetlands extending across the lot in smaller isolated areas. As a result, wetland impacts are unavoidable. Wetland Impact Area A is associated with the construction of the ball field located at the eastern side of the lot and will result in 347 square feet of wetland alteration. Wetland Impact Areas B and C are associated with the construction of the access road and parking, located at the southwest portion of the lot, with 661 square feet of wetland alteration in Area B and 55 square feet of wetland alteration in Area C. Wetland Impact Area D is associated with the construction of the ball field located at the southwest portion of the lot and will result in 10,759 square feet of wetland impacts.

The applicant has avoided and minimized wetland impacts to the greatest extent practicable by utilizing as much upland as possible while also meeting standardized field dimension requirements and municipal setbacks. The proposed location of the ball fields and associated development avoid two streams and crosses the wetland at Wetland Area Impact B at its narrowest point, with a 36-inch diameter culvert proposed to preserve hydraulic and ecological connectivity. Additionally, the applicant reduced the scope of the project during the design phase to eliminate a proposed soccer field and designed the access drive with 2H:1V side slopes within wetland impact areas to minimize intrusion into the wetland. According to the Department's Geographic Information System (GIS), there are no mapped essential or significant wildlife habitats associated with the project site. The project site is located southwest of the intersection of Stevens Mill Road and Hotel Road off Falmouth Road in the City of Auburn.

The applicant submitted a Permit by Rule notification (PBR #75657) pursuant to Chapter 305 Permit by Rule Standards Section 2 (06-096 Ch. 305, § 2, last amended June 8, 2012) for activities adjacent to a protected natural resource, which the Department accepted on October 31,

2022. The applicant also submitted a Notice of Intent (NOI #75658) to comply with the requirements of the Maine Construction General Permit for the project, which was accepted by the Department on November 7, 2022.

Permit for:	[X]	Tier 1		
DEP Decision:	[X]	Approved	[ ]	Denied (see attached letter)

Please note: A U. S. Army Corps of Engineers permit may also be required for your project. The Corps typically accepts a copy of your Maine DEP NRPA application, but you are responsible for submittal to the Corps. We encourage you to contact them directly at cenae-r-me@usace.army.mil or (207) 623-8367 to discuss their application process. Please note that no regulated work within Corps jurisdiction may be started until you receive a Corps permit.

Standard Conditions:

1) If construction or operation of the activity is not begun within four (4) years from the date signed, this permit shall lapse and the applicant shall reapply to the Department for a new permit. This permit is transferable only with prior approval from the Department. If the activity is associated with a larger project, starting any aspect of that project constitutes start of construction.
2) The project shall be completed according to the plans in the application. Any change in the project plans must be reviewed and approved by the Department.
3) Properly installed erosion control measures shall be installed prior to beginning the project, and all disturbed soil should be stabilized immediately upon project completion.
4) A copy of this approval will be sent to the City of Auburn. Department approval of your activity does not supersede or substitute the need for any necessary local approvals.

THIS APPROVAL DOES NOT CONSTITUTE OR SUBSTITUTE FOR ANY OTHER REQUIRED STATE, FEDERAL OR LOCAL APPROVALS NOR DOES IT VERIFY COMPLIANCE WITH ANY APPLICABLE SHORELAND ZONING ORDINANCES.

DONE AND DATED IN AUGUSTA, MAINE, THIS 10th DAY OF NOVEMBER 2022.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
For: Melanie Loyzim, Commissioner

PLEASE NOTE THE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES.

JS/L30044AN/ATS90046

FILED

November 10, 2022

State of Maine
Board of Environmental Protection

Natural Resources Protection Act (NRPA)
Standard Conditions

THE FOLLOWING STANDARD CONDITIONS SHALL APPLY TO ALL PERMITS GRANTED UNDER THE NATURAL RESOURCES PROTECTION ACT, 38 M.R.S. § 480-A ET SEQ., UNLESS OTHERWISE SPECIFICALLY STATED IN THE PERMIT.

A. Approval of Variations From Plans. The granting of this permit is dependent upon and limited to the proposals and plans contained in the application and supporting documents submitted and affirmed to by the applicant. Any variation from these plans, proposals, and supporting documents is subject to review and approval prior to implementation.

B. Compliance With All Applicable Laws. The applicant shall secure and comply with all applicable federal, state, and local licenses, permits, authorizations, conditions, agreements, and orders prior to or during construction and operation, as appropriate.

C. Erosion Control. The applicant shall take all necessary measures to ensure that his activities or those of his agents do not result in measurable erosion of soils on the site during the construction and operation of the project covered by this Approval.

D. Compliance With Conditions. Should the project be found, at any time, not to be in compliance with any of the Conditions of this Approval, or should the applicant construct or operate this development in any way other the specified in the Application or Supporting Documents, as modified by the Conditions of this Approval, then the terms of this Approval shall be considered to have been violated.

E. Time frame for approvals. If construction or operation of the activity is not begun within four years, this permit shall lapse and the applicant shall reapply to the Board for a new permit. The applicant may not begin construction or operation of the activity until a new permit is granted. Reapplications for permits may include information submitted in the initial application by reference. This approval, if construction is begun within the four-year time frame, is valid for seven years. If construction is not completed within the seven-year time frame, the applicant must reapply for, and receive, approval prior to continuing construction.

F. No Construction Equipment Below High Water. No construction equipment used in the undertaking of an approved activity is allowed below the mean high water line unless otherwise specified by this permit.

G. Permit Included In Contract Bids. A copy of this permit must be included in or attached to all contract bid specifications for the approved activity.

H. Permit Shown To Contractor. Work done by a contractor pursuant to this permit shall not begin before the contractor has been shown by the applicant a copy of this permit.

DEP INFORMATION SHEET

Appealing a Department Licensing Decision

Dated: August 2021 **Contact: (207) 314-1458**

SUMMARY

This document provides information regarding a person's rights and obligations in filing an administrative or judicial appeal of a licensing decision made by the Department of Environmental Protection's (DEP) Commissioner.

Except as provided below, there are two methods available to an aggrieved person seeking to appeal a licensing decision made by the DEP Commissioner: (1) an administrative process before the Board of Environmental Protection (Board); or (2) a judicial process before Maine's Superior Court. An aggrieved person seeking review of a licensing decision over which the Board had original jurisdiction may seek judicial review in Maine's Superior Court.

A judicial appeal of final action by the Commissioner or the Board regarding an application for an expedited wind energy development (35-A M.R.S. § 3451(4)) or a general permit for an offshore wind energy demonstration project (38 M.R.S. § 480-HH(1)) or a general permit for a tidal energy demonstration project (38 M.R.S. § 636-A) must be taken to the Supreme Judicial Court sitting as the Law Court.

I. ADMINISTRATIVE APPEALS TO THE BOARD

LEGAL REFERENCES

A person filing an appeal with the Board should review Organization and Powers, 38 M.R.S. §§ 341-D(4) and 346; the Maine Administrative Procedure Act, 5 M.R.S. § 11001; and the DEP's *Rule Concerning the Processing of Applications and Other Administrative Matters* (Chapter 2), 06-096 C.M.R. ch. 2.

DEADLINE TO SUBMIT AN APPEAL TO THE BOARD

Not more than 30 days following the filing of a license decision by the Commissioner with the Board, an aggrieved person may appeal to the Board for review of the Commissioner's decision. The filing of an appeal with the Board, in care of the Board Clerk, is complete when the Board receives the submission by the close of business on the due date (5:00 p.m. on the 30th calendar day from which the Commissioner's decision was filed with the Board, as determined by the received time stamp on the document or electronic mail). Appeals filed after 5:00 p.m. on the 30th calendar day from which the Commissioner's decision was filed with the Board will be dismissed as untimely, absent a showing of good cause.

HOW TO SUBMIT AN APPEAL TO THE BOARD

An appeal to the Board may be submitted via postal mail or electronic mail and must contain all signatures and required appeal contents. An electronic filing must contain the scanned original signature of the appellant(s). The appeal documents must be sent to the following address.

Chair, Board of Environmental Protection
c/o Board Clerk
17 State House Station
Augusta, ME 04333-0017
ruth.a.burke@maine.gov

The DEP may also request the submittal of the original signed paper appeal documents when the appeal is filed electronically. The risk of material not being received in a timely manner is on the sender, regardless of the method used.

At the time an appeal is filed with the Board, the appellant must send a copy of the appeal to: (1) the Commissioner of the DEP (Maine Department of Environmental Protection, 17 State House Station, Augusta, Maine 04333-0017); (2) the licensee; and if a hearing was held on the application, (3) any intervenors in that hearing proceeding. **Please contact the DEP at 207-287-7688 with questions or for contact information regarding a specific licensing decision.**

REQUIRED APPEAL CONTENTS

A complete appeal must contain the following information at the time the appeal is submitted.

1. *Aggrieved status*. The appeal must explain how the appellant has standing to bring the appeal. This requires an explanation of how the appellant may suffer a particularized injury as a result of the Commissioner's decision.
2. *The findings, conclusions, or conditions objected to or believed to be in error*. The appeal must identify the specific findings of fact, conclusions of law, license conditions, or other aspects of the written license decision or of the license review process that the appellant objects to or believes to be in error.
3. *The basis of the objections or challenge.* For the objections identified in Item #2, the appeal must state why the appellant believes that the license decision is incorrect and should be modified or reversed. If possible, the appeal should cite specific evidence in the record or specific licensing criteria that the appellant believes were not properly considered or fully addressed.
4. *The remedy sought.* This can range from reversal of the Commissioner's decision on the license to changes in specific license conditions.
5. *All the matters to be contested*. The Board will limit its consideration to those matters specifically raised in the written notice of appeal.
6. *Request for hearing.* If the appellant wishes the Board to hold a public hearing on the appeal, a request for hearing must be filed as part of the notice of appeal, and it must include an offer of proof regarding the testimony and other evidence that would be presented at the hearing. The offer of proof must consist of a statement of the substance of the evidence, its relevance to the issues on appeal, and whether any witnesses would testify. The Board will hear the arguments in favor of and in opposition to a hearing on the appeal and the presentations on the merits of an appeal at a regularly scheduled meeting. If the Board decides to hold a public hearing on an appeal, that hearing will then be scheduled for a later date.
7. *New or additional evidence to be offered.* If an appellant wants to provide evidence not previously provided to DEP staff during the DEP's review of the application, the request and the proposed supplemental evidence must be submitted with the appeal. The Board may allow new or additional evidence to be considered in an appeal only under limited circumstances. The proposed supplemental evidence must be relevant and material, and (a) the person seeking to add information to the record must show due diligence in bringing the evidence to the DEP's attention at the earliest possible time in the licensing process; or (b) the evidence itself must be newly discovered and therefore unable to have been presented earlier in the process. Requirements for supplemental evidence are set forth in Chapter 2 § 24.

OTHER CONSIDERATIONS IN APPEALING A DECISION TO THE BOARD

1. *Be familiar with all relevant material in the DEP record.* A license application file is public information, subject to any applicable statutory exceptions, and is made accessible by the DEP. Upon request, the DEP will make application materials available to review and photocopy during normal working hours. There may be a charge for copies or copying services.

2. *Be familiar with the regulations and laws under which the application was processed, and the procedural rules governing the appeal.* DEP staff will provide this information upon request and answer general questions regarding the appeal process.

3. *The filing of an appeal does not operate as a stay to any decision.* If a license has been granted and it has been appealed, the license normally remains in effect pending the processing of the appeal. Unless a stay of the decision is requested and granted, a licensee may proceed with a project pending the outcome of an appeal, but the licensee runs the risk of the decision being reversed or modified as a result of the appeal.

WHAT TO EXPECT ONCE YOU FILE A TIMELY APPEAL WITH THE BOARD

The Board will acknowledge receipt of an appeal, and it will provide the name of the DEP project manager assigned to the specific appeal. The notice of appeal, any materials admitted by the Board as supplementary evidence, any materials admitted in response to the appeal, relevant excerpts from the DEP's administrative record for the application, and the DEP staff's recommendation, in the form of a proposed Board Order, will be provided to Board members. The appellant, the licensee, and parties of record are notified in advance of the date set for the Board's consideration of an appeal or request for a hearing. The appellant and the licensee will have an opportunity to address the Board at the Board meeting. The Board will decide whether to hold a hearing on appeal when one is requested before deciding the merits of the appeal. The Board's decision on appeal may be to affirm all or part, affirm with conditions, order a hearing to be held as expeditiously as possible, reverse all or part of the decision of the Commissioner, or remand the matter to the Commissioner for further proceedings. The Board will notify the appellant, the licensee, and parties of record of its decision on appeal.

II. JUDICIAL APPEALS

Maine law generally allows aggrieved persons to appeal final Commissioner or Board licensing decisions to Maine's Superior Court (see 38 M.R.S. § 346(1); 06-096 C.M.R. ch. 2; 5 M.R.S. § 11001; and M.R. Civ. P. 80C). A party's appeal must be filed with the Superior Court within 30 days of receipt of notice of the Board's or the Commissioner's decision. For any other person, an appeal must be filed within 40 days of the date the decision was rendered. An appeal to court of a license decision regarding an expedited wind energy development, a general permit for an offshore wind energy demonstration project, or a general permit for a tidal energy demonstration project may only be taken directly to the Maine Supreme Judicial Court. See 38 M.R.S. § 346(4).

Maine's Administrative Procedure Act, DEP statutes governing a particular matter, and the Maine Rules of Civil Procedure must be consulted for the substantive and procedural details applicable to judicial appeals.

ADDITIONAL INFORMATION

If you have questions or need additional information on the appeal process, for administrative appeals contact the Board Clerk at 207-287-2811 or the Board Executive Analyst at 207-314-1458 bill.hinkel@maine.gov, or for judicial appeals contact the court clerk's office in which the appeal will be filed.

Note: This information sheet, in conjunction with a review of the statutory and regulatory provisions referred to herein, is provided to help a person to understand their rights and obligations in filing an administrative or judicial appeal. The DEP provides this information sheet for general guidance only; it is not intended for use as a legal reference. Maine law governs an appellant's rights.

DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS
696 VIRGINIA ROAD
CONCORD, MASSACHUSETTS 01742-2751

REPLY TO
ATTENTION OF

MAINE GENERAL PERMITS (GPs)
AUTHORIZATION LETTER AND SCREENING SUMMARY

Travis Bashaw
Auburn Suburban Baseball and Softball
PO Box 1615
Auburn, ME 04210

CORPS PERMIT # NAE-2022-02174
CORPS GP(s) # 8 & 22
STATE ID#

DESCRIPTION OF WORK:
To place permanent fill in freshwater wetlands adjacent to tributaries to Taylor Brook off Stevens Hill Road (44.086574ºN, -70.26654ºW) in Auburn, Maine in order to construct a sports recreational facility. The project will result approximately 11,822sf. of permanent wetland impacts. This work is described on the attached plans entitled "Auburn Suburban Baseball and Softball shown on four (4) sheets dated "09/30/2022" and "09/08/22", respectively. See Conditions

LAT/LONG COORDINATES: 44.086574º N 44.086574º W **USGS QUAD:** MINOT, MAINE

I. CORPS DETERMINATION:
Based on our review of the information you provided, we have determined that your project will have only minimal individual and cumulative impacts on waters and wetlands of the United States. Your work is therefore authorized by the U.S. Army Corps of Engineers under the Federal Permit, the Maine General Permit which can be found at: https://www.nae.usace.army.mil/Missions/Regulatory/State-General-Permits/ Accordingly, we do not plan to take any further action on this project.

You must perform the activity authorized herein in compliance with all the terms and conditions of the GP(s) [including any attached Additional Conditions and any conditions placed on the State 401 Water Quality Certification including any required mitigation]. Please review the GP(s) carefully, including the GP(s) conditions beginning on page 5, to familiarize yourself with its contents. You are responsible for complying with all of the GP(s) requirements; therefore you should be certain that whoever does the work fully understands all of the conditions. You may wish to discuss the conditions of this authorization with your contractor to ensure the contractor can accomplish the work in a manner that conforms to all requirements.

If you change the plans or construction methods for work within our jurisdiction, please contact us immediately to discuss modification of this authorization. This office must approve any changes before you undertake them.

Condition 45 of the GP(s) (page 19) provides one year for completion of work that has commenced or is under contract to commence prior to the expiration of the GP(s) on October 14, 2025. You will need to apply for reauthorization for any work within Corps jurisdiction that is not completed by October 14, 2026.

This authorization presumes the work shown on your plans noted above is in waters of the U.S. Should you desire to appeal our jurisdiction, please submit a request for an approved jurisdictional determination in writing to the undersigned.

No work may be started unless and until all other required local, State and Federal licenses and permits have been obtained. **This includes but is not limited to a Flood Hazard Development Permit issued by the town if necessary.**

II. STATE ACTIONS: PENDING [ ], ISSUED [ ], DENIED [ ] DATE

APPLICATION TYPE: PBR: TIER 1: , TIER 2 : , TIER 3: : INDIV LURC: DMR LEASE: NA:

III. FEDERAL ACTIONS:

JOINT PROCESSING MEETING: N/A LEVEL OF REVIEW: Self-Verification: X Pre-Construction Notification:

AUTHORITY (Based on a review of plans and/or State/Federal applications): SEC 10, 404 X 10/404, 103

EXCLUSIONS: The exclusionary criteria identified in the general permit do not apply to this project.

FEDERAL RESOURCE AGENCY OBJECTIONS: EPA NO, USF&WS NO, NMFS NO

If you have any questions on this matter, please contact my staff at 207-623-8367 at our Augusta, Maine Project Office. In order for us to better serve you, we would appreciate your completing our Customer Service Survey located at https://regulatory.ops.usace.army.mil/customer-service-survey/

HEATHER S. STUKAS
PROJECT MANAGER
MAINE PROJECT OFFICE

For: FRANK J. DEL GIUDICE
CHIEF, PERMITS & ENFORCEMENT BRANCH
REGULATORY DIVISION

US Army Corps of Engineers ®
New England District

PLEASE NOTE THE FOLLOWING GENERAL CONDITIONS FOR DEPARTMENT OF THE ARMY GENERAL PERMIT 8 & 22 NO. NAE-2022-02174

15. Historic Properties.
15(e). If the permittee discovers any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by these permits, the permittee shall immediately notify the district engineer of what was found, and avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

18. Aquatic Life Movements and Management of Water Flows.
18(a). No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. Unless otherwise stated, activities permanently impounding water in a stream require a PCN to ensure impacts to aquatic life species are avoided and minimized. All permanent and temporary crossings of waterbodies and wetlands shall be: (i) Suitably spanned, bridged, culverted, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species; and (ii) Properly aligned and constructed to prevent bank erosion or streambed scour both adjacent to and inside the crossing.
18(d). To the maximum extent practicable, the preconstruction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization, storm water management activities, and temporary and permanent road crossings, except as provided below. The activity must be constructed to withstand expected high flows. The activity shall not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g. stream restoration or relocation activities).

22. Invasive and Other Unacceptable Species.
22(a). The introduction or spread of invasive or other unacceptable plant or animal species on the project site or areas adjacent to the project site caused by the site work shall be avoided to the maximum extent practicable. For example, construction mats and equipment shall be thoroughly cleaned and free of vegetation and soil before and after use. The introduction or spread of invasive plant or animal species on the project site caused by the site work shall be controlled.
22(b). No cultivars, invasive or other unacceptable plant species may be used for any mitigation, bioengineering, vegetative bank stabilization or any other work authorized by these GPs. However, non-native species and cultivars may be used when it is appropriate and specified in a written verification, such as using Secale cereale (Annual Rye) to quickly stabilize a site. All PCNs shall justify the use of non-native species or cultivars.
22(c). For the purposes of these GPs, plant species that are considered invasive and unacceptable are provided in Appendix K "Invasive and Other Unacceptable Plant Species" of the most recent "New England District Compensatory Mitigation Guidance" and is found at: www.nae.usace.army.mil/Missions/Regulatory/Mitigation The June 2009 "U.S. Army Corps of Engineers Invasive Species Policy" provides policy, goals and objectives and is located at www.nae.usace.army.mil/Missions/Regulatory/Invasive-Species If an Invasive Species Control/Management Plan has been prepared it should be included with any SV or PCN.

23. Soil Erosion, Sediment, and Turbidity Controls.
23(a). Adequate sedimentation and erosion control management measures, practices and devices, such as phased construction, installation of sediment control barriers (i.e. silt fence, vegetated filter strips, geotextile silt fences, erosion control mixes, hay bales or other devices) downhill of all exposed areas, retention of existing vegetated buffers, application of temporary mulching during construction, and permanent seeding and stabilization shall be installed and properly maintained to reduce erosion and retain sediment on-site during and after construction. They shall be capable of preventing erosion; of collecting sediment, suspended and floating materials; and of filtering fine sediment**.**
23(b). Temporary sediment control barriers shall be removed upon completion of work, but not until all disturbed areas are permanently stabilized. The sediment collected by these sediment barriers shall be removed and placed at an upland location and stabilized to prevent its later erosion into a waterway or wetland.
23(c). All exposed soil and other fills shall be permanently stabilized at the earliest practicable date.

29. Stream Work and Crossings, and Wetland Crossings.
Additional Conditions for Wetland Crossings:
a. New and replacement wetland crossings that are permanent shall be constructed in such a manner as to preserve hydraulic and ecological connectivity, at its present level, between the wetlands on either side of the road. Crossing structures commonly include but are not limited to spans and culverts. To meet this condition, spans or culverts should be placed at least every 50 feet with an opening at least 2 feet high and 3 feet wide at ground level. Closed bottom culverts should be embedded at least 6 inches and should have a natural bottom substrate within the structure. Alternative crossing designs that preserve wetland hydraulic and ecological connectivity (e.g. "rock sandwiches) may also be considered.
b. Any work that results in flooding, or impacts to wetland drainage from the upgradient side of the wetland crossing does not qualify for SV.
c. In the case of non-compliance, the permittee shall take necessary measures to correct wetland damage due to lack of hydraulic and ecological connectivity.

33. Permit(s)/Authorization Letter On-Site. The permittee shall ensure that a copy of the terms and conditions of these GPs and any accompanying authorization letter with attached plans are at the site of the work authorized by these GPs whenever work is being performed and that all construction personnel performing work which may affect waters of the U.S. are fully aware of the accompanying terms and conditions. The entire permit authorization shall be made a part of any and all contracts and subcontracts for work that affects areas of Corps jurisdiction at the site of the work authorized by these GPs. This shall be achieved by including the entire permit authorization in the specifications for work. The term "entire permit authorization" means all terms and conditions of the GPs, the GPs, and the authorization letter (including its drawings, plans, appendices and other attachments) and subsequent permit modifications as applicable. If the authorization letter is issued after the construction specifications, but before receipt of bids or quotes, the entire permit authorization shall be included as an addendum to the specifications. If the authorization letter is issued after receipt of bids or quotes, the entire permit authorization shall be included in the contract or subcontract. Although the permittee may assign various aspects of the work to different contractors or subcontractors, all contractors and subcontractors shall be obligated by contract to comply with all environmental protection provisions contained within the entire GP authorization, and no contract or subcontract shall require or allow unauthorized work in areas of Corps jurisdiction.

34. Inspections. The permittee shall allow the Corps to make periodic inspections at any time deemed necessary in order to ensure that the work is eligible for authorization under these GPs, is being, or has been performed in accordance with the terms and conditions of these GPs. To facilitate these inspections, the permittee shall complete and return to the Corps the Work-Start Notification Form and the Compliance Certification Form when either is provided with an authorization letter. The Corps may also require post-construction engineering drawings and/or photographs for completed work or post-dredging survey drawings for any dredging work to verify compliance.

US Army Corps of Engineers ®
New England District

WORK-START NOTIFICATION FORM

(Minimum Notice: Two weeks before work begins)

****

EMAIL TO: heather.s.stukas@usace.army.mil or cenae-r@usace.army.mil; or

MAIL TO: Heather Stukas
Regulatory Division
U.S. Army Corps of Engineers, New England District
696 Virginia Road
Concord, Massachusetts 01742-2751

****

Corps of Engineers Permit No. **NAE-2022-02174** was issued to **Auburn Suburban Baseball and Softball c/o Travis Bashaw**. This work authorized the placement of permanent fill in freshwater wetlands adjacent to tributaries to Taylor Brook off Stevens Hill Road (44.086574ºN, -70.26654ºW) in Auburn, Maine in order to construct a sports recreational facility. The project will result approximately 11,822sf. of permanent wetland impacts.

The people (e.g., contractor) listed below will do the work, and they understand the permit's conditions and limitations.

PLEASE PRINT OR TYPE

Name of Person/Firm: _____

Business Address: _____

_____

_____

Phone & email: (___) _____ (___) _____ _____

Proposed Work Dates: **Start:** _____ **Finish:** _____

Permittee/Agent Signature: _____ **Date:** _____

Printed Name: _____ **Title:** _____

Date Permit Issued: _____ **Date Permit Expires:** _____

****

FOR USE BY THE CORPS OF ENGINEERS

PM: Stukas **Submittals Required:** _____

Inspection Recommendation: random compliance inspections

US Army Corps of Engineers ®
New England District

(Minimum Notice: Permittee must sign and return notification within one month of the completion of work.)

COMPLIANCE CERTIFICATION FORM

Permit Number: NAE-2022-02174

Name of Permittee: Auburn Suburban Baseball and Softball c/o Travis Bashaw

Permit Issuance Date: _____

Please sign this certification and return it to the following address upon completion of the activity and any mitigation required by the permit. You must submit this after the mitigation is complete, but not the mitigation monitoring, which requires separate submittals.

****
* MAIL TO: U.S. Army Corps of Engineers, New England District *
* Permits and Enforcement Branch C *
* Regulatory Division *
* 696 Virginia Road *
* Concord, Massachusetts 01742-2751 *
****

Please note that your permitted activity is subject to a compliance inspection by an U.S. Army Corps of Engineers representative. If you fail to comply with this permit you are subject to permit suspension, modification, or revocation.

I hereby certify that the work authorized by the above referenced permit was completed in accordance with the terms and conditions of the above referenced permit, and any required mitigation was completed in accordance with the permit conditions.

_____ _____

Signature of Permittee Date

_____ _____

Printed Name Date of Work Completion

(_____)_____ (_____)_____

Telephone Number Telephone Number

Appendix C - HHE-200

SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

Maine Department of Human Services
Division of Health Engineering, Station 10
(207) 287-5672 FAX (207) 287-4172

PROPERTY LOCATION

City, Town, or Plantation	AUBURN
Street or Road	STEVENS MILL AND HOTEL ROAD
Subdivision, Lot #	MAP 217, LOT 2

OWNER/APPLICANT INFORMATION

Name (last, first, MI) ☐ Owner X Applicant

AUBURN SUBURBAN BASEBALL & SOFTBALL

Mailing Address of ☐ Owner X Applicant	PO BOX1615
	AUBURN, MAINE 04210
Daytime Tel. #	

>> Caution: Approval Required<<

Town/City_____ Permit #_____

Date Permit Issued_____ Fee_____
Double Fee Charged [ ]

_____ LPI #_____
Local Plumbing Inspector signature

The Subsurface Wastewater Disposal System shall not be installed until a Permit is issued by the local Plumbing Inspector. The Permit shall authorize the owner or installer to install the disposal system in accordance with this application and the Maine Subsurface Wastewater Disposal Rules

Municipal Tax Map # 217 Lot # 2

Owner or Applicant Statement

I state that the information submitted is correct to the best of my knowledge and understand that any falsification is reason for the Department and/or Local Plumbing Inspector to deny a Permit.

_____ _____
Signature of Owner or Applicant Date

Caution: Inspection Required

I have inspected the installation authorized above and found it to be in compliance with the Subsurface Wastewater Disposal Rules Application. _____
(1st) Date Approved

_____ _____
Local Plumbing Inspector Signature (2nd) Date Approved

PERMIT INFORMATION

TYPE OF APPLICATION

1. X **First Time System**
2. ☐ Replacement System
   Type Replaced:
   Year Installed: _____
3. ☐ Expanded System
   a. ☐ Minor Expansion
   b. ☐ Major Expansion
4. ☐ Experimental System
5. ☐ Seasonal Conversion

THIS APPLICATION REQUIRES

1. X **No Rule Variance**
2. ☐ First Time System Variance
   a. ☐ Local Plumbing Inspector Approval
   b. ☐ State & Local Plumbing Inspector Approval
3. ☐ Replacement System Variance
   a. ☐ Local Plumbing Inspector Approval
   b. ☐ State & Local Plumbing Inspector Approval
4. ☐ Minimum Lot Size Variance
5. ☐ Seasonal Conversion Permit

DISPOSAL SYSTEM COMPONENT(S)

1. X **Complete Non-engineered System**
2. ☐ Primitive System (graywater & alternative toilet)
3. ☐ Alternative Toilet, specify:
4. ☐ Non-engineered Treatment Tank (only)
5. ☐ Holding Tank, capacity: _____ gallons
6. ☐ Non-engineered Disposal Field (only)
7. ☐ Separated Laundry System
8. ☐ Complete Engineered System (2000 gpd or more)
9. ☐ Engineered Treatment Tank (only)
10. ☐ Engineered Disposal Field (only)
11. ☐ Pre-treatment, specify: _
12. ☐ Misc: **grease intercept if food prep is planned**

SIZE OF PROPERTY

☐ sq. ft.
73.6 X acres

SHORELAND ZONING

☐ Yes X No

DISPOSAL SYSTEM TO SERVE

1. ☐ Single Family Dwelling Units, No. of Bedrooms:
2. ☐ Multiple Family Dwelling, No. of Units:
3. X Other baseball fields restrooms and conc. stand
   current use: ___ seasonal ___ year Round _X_ **Undeveloped**

TYPE OF WATER SUPPLY

1. ☐ Drilled Well 2. ☐ Dug Well
3. ☐ Private 4. X **Public** 5. ☐ Other:

DESIGN DETAILS (SYSTEM LAYOUT SHOWN ON PAGE 3)

TREATMENT TANK

1. X **Concrete**
   a. X **Regular**
   b. ☐ Low Profile

CAPACITY: **two (2) - 1000 gallon tanks in series**

DISPOSAL FIELD TYPE & SIZE

1. ☐ Stone Bed 2. ☐ Stone Trench
3. X **Proprietary Device**
   a. ☐ Cluster array c. X **Linear**
   b. ☐ Regular load d. ☐ H-20 Load
4. ☐ Other: _____

SIZE: **44 Eljen B43 modules**

GARBAGE DISPOSAL UNIT

1. X **No** 2. ☐ Yes 3. ☐ Maybe

>> If yes/maybe, specify one below:

a. ☐ Multi-Compartment Tank
b. ☐ ___ Tanks in Series
c. ☐ Increase in Tank Capacity
d. ☐ Filter on Tank Outlet

DESIGN FLOW

800 gallons-per-day (gpd)

BASED ON:
1. ☐ Table 501.1 (dwelling unit(s)
2. X Table 501.2 (other facilities)

See notes on pg 2

SOIL DATA & DESIGN CLASS

PROFILE	CONDITION	DESIGN
4/5	•	C

at Observation Hole # TB-1
Depth 30"
OF MOST LIMITING SOIL FACTOR

DISPOSAL FIELD SIZING

1. X **Medium -- 2.6 sq. ft./gpd**
2. ☐ Medium-Large -- 3.3 sq. ft./gpd
3. ☐ Large -- 4.1 sq. ft./gpd
4. ☐ Extra Large -- 5.0 sq. ft./gpd

EFFLUENT/EJECTOR PUMP

1. X **Not Required**
2. ☐ May Be Required
3. ☐ Required

Latitude and longitude

Lat **44.0871**
Lon **70.0646**
If gps state margin of error_____

SITE EVALUATOR STATEMENT

I certify that on 8/31/2022 I completed a site evaluation on this property and state that the data reported herein are accurate and that the proposed system is in compliance with the Maine Subsurface Wastewater Disposal Rules (10-144A CMR 241).

Michael Deyling
Site Evaluator Signature

345
SE #

9/1/2022
Date

Michael Deyling
Site Evaluator Name Printed

(207)795-6009
Telephone #

michael.deyling@gmail.com
E-Mail Address

STATE OF MAINE
MICHAEL DEYLING
No. 345
LICENSED SITE EVALUATOR

Note: Changes or deviations from the design should be confirmed with the Site Evaluator.

SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

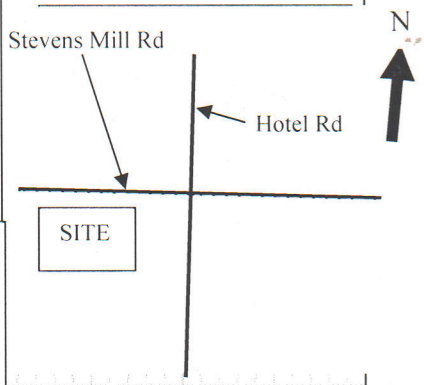
Maine Department of Human Services
Division of Health Engineering, Station 10
(207) 287-5672 FAX (207) 287-4172

Town, City, Plantation	Street, Road, Subdivision	Owner or Applicant Name
AUBURN	STEVENS MILL RD	ASBS

See attached site plan for location information and details.

Note that it is assumed that the concession stand will sell primarily pre-packaged snacks, sodas and dry goods. If on-site food preparation (burgers, pizza, sandwiches, etc.) is planned, a 1,000 gallon external grease interceptor must be installed to accept wastewater from the food preparation area (sink, dishwashing, equipment cleaning) prior to discharge to the septic tank.

SITE LOCATION MAP
(Attach map from Maine Atlas for First Time System Variance)



The facility is planned to be a seasonal use area (May – September) with 3 mens/women restroom stalls (6 total) and sinks

Design flow was estimated based on 2 methods:

1) 150 parking spaces, 2 persons per space = 300 persons @ 2 gpd* each plus 5 concession stand employees @ 12 gpd = **660 gpd** total plus 140 gpd buffer = **800 gpd total**
2) 40 players/coaches plus 80 attendees per field X 3 fields = 360 persons @ 2 gpd plus 5 concession stand employees @ 12 gpd = **780 gpd total**

*Use of low flow fixtures and/or waterless urinals in mens restrooms would lower volume per use estimates.

Also note that the concession stand restrooms will be supplemented by portable toilets located on-site. These portable toilets will likely reduce estimated wastewater generation, especially during high use periods (weekends, tournaments)

SOIL PROFILE DESCRIPTION AND CLASSIFICATION (Location of Observation Holes Shown Above)

Observation Hole # TB-1 ☐ Test Pit ◂ Boring

0 " Depth of organic horizon above mineral soil

Depth below mineral soil surface (inches)

	Texture	Consistency	Color	Mottling
0			DARK	
6	SANDY LOAM	FRIABLE	BROWN	
12	LOAMY SAND AND FINE SAND	LOOSE FRIABLE TO GRANULAR	BROWN	
18				
24				
30				MOIST @ 30 WET @ 32
36				
42				
48				

Soil	Classification	Slope	Limiting Factor	Groundwater
4/5 Profile	C Condition	2 Percent	30 " Depth	☐ restrictive ☐ Bedrock

Observation Hole # _ ☐ Test Pit ☐ Boring

" Depth of organic horizon above mineral soil

Depth below mineral soil surface (inches)

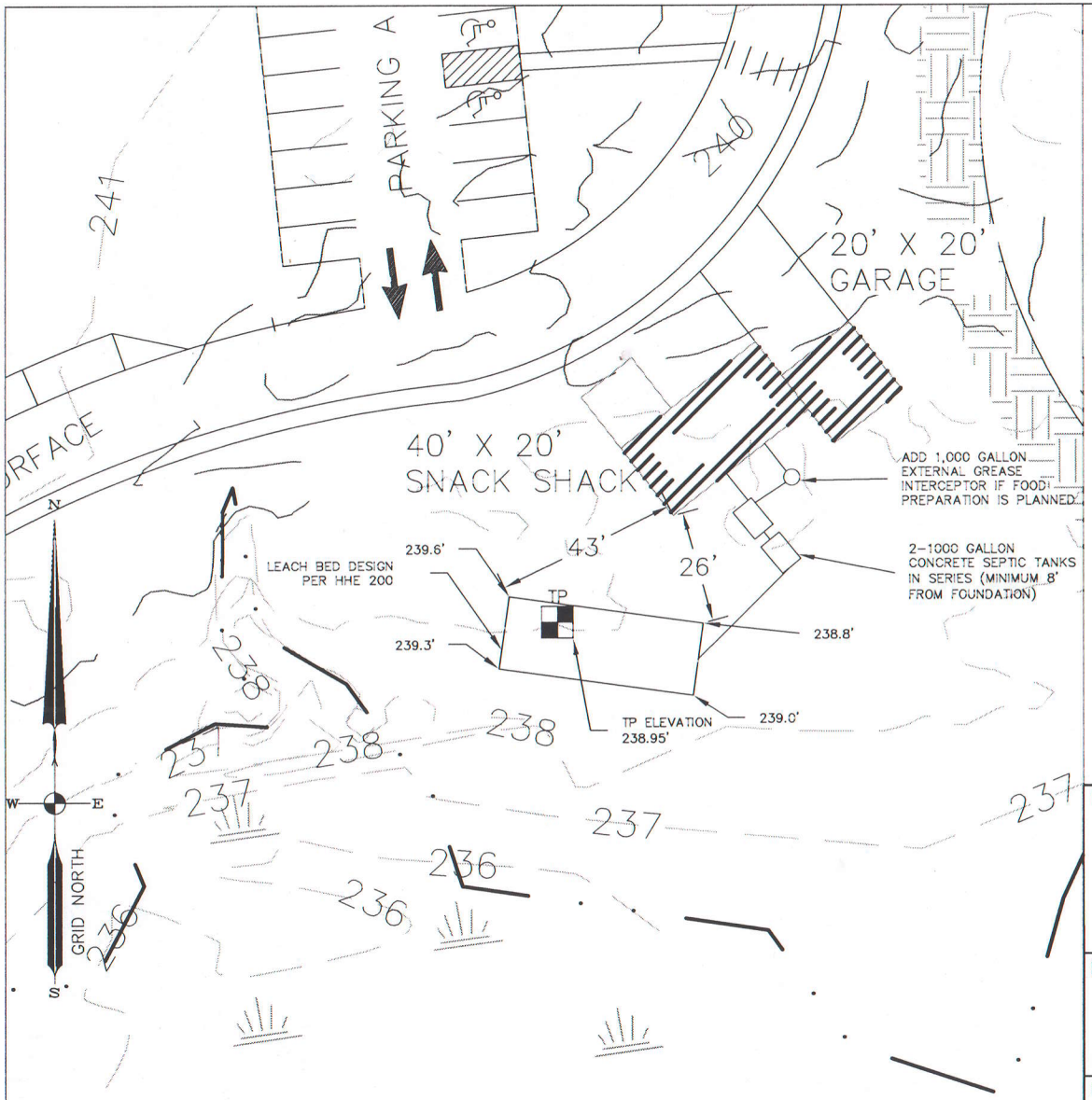
	Texture	Consistency	Color	Mottling
0				
6				
12				
18				
24				
30				
36				
42				
48				

Soil	Classification	Slope	Limiting Factor	Groundwater
Profile	Condition	Percent	" Depth	☐ Groundwater ☐ Restrictive Layer ☐ Bedrock

Michael Dayley
Site Evaluator Signature

345
SE #

9/1/2022
Date



GRAPHIC SCALE

0 20 40 80

1 inch = 40 ft.

REVISIONS			
NO.	DATE	DESCRIPTION	BY

NOTES:

1. RECORD OWNER: AUBURN SUBURBAN BASEBALL AND SOFTBALL
2. PARCEL TAX MAP REFERENCE: CITY OF AUBURN, MAP 217, LOT 2
3. ZONING OF PROPERTY: SR (SUBURBAN–RESIDENTIAL)
4. TOTAL AREA OF PARCEL 30.1 ACRES.
5. ALL BEARINGS ARE REFERENCED TO MAGNETIC NORTH PER PLAN REF. A.
6. ELEVATIONS SHOWN ARE NAVD88 BY OPUS SOLUTION.

PLAN TITLE:

ASBS SEPTIC DESIGN PLAN

STEVENS MILL AND HOTEL ROAD
AUBURN, MAINE

PREPARED FOR:
AUBURN SUBURBAN BASEBALL & SOFTBALL
PO BOX 1615
AUBURN, MAINE

PREPARED BY:

JONES ASSOCIATES INC.
Foresters, Surveyors And Environmental Consultants
280 POLAND SPRING ROAD, AUBURN, MAINE 04210
(207) 241-0235

PLAN DATE: 8/31/22

FIELD WORK DATE: 8/31/22

SCALE: 1"=20'

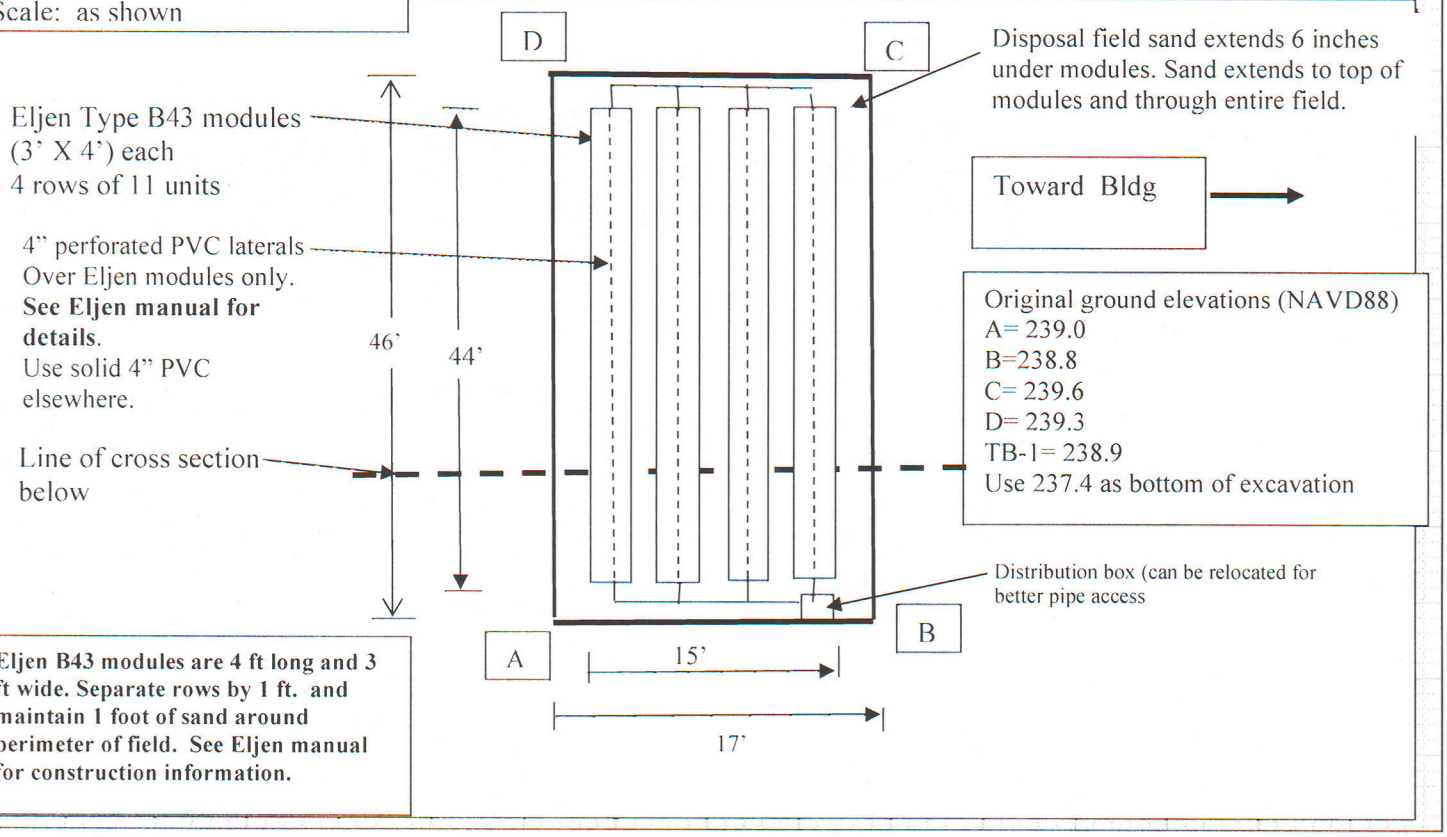
PROJ. #: 21-011AU

SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

Maine Department of Human Services
Division of Health Engineering, Station 10
(207) 287-5672 FAX (207) 287-4172

Town, City, Plantation	Street, Road, Subdivision	Owner or Applicant Name
AUBURN	STEVENS MILL RD	ASBS

Scale: as shown



BACKFILL REQUIREMENTS

Depth of Backfill (upslope) 6-10+/-"
Depth of Backfill (downslope) 16" +/-
Depths at cross section (shown below)

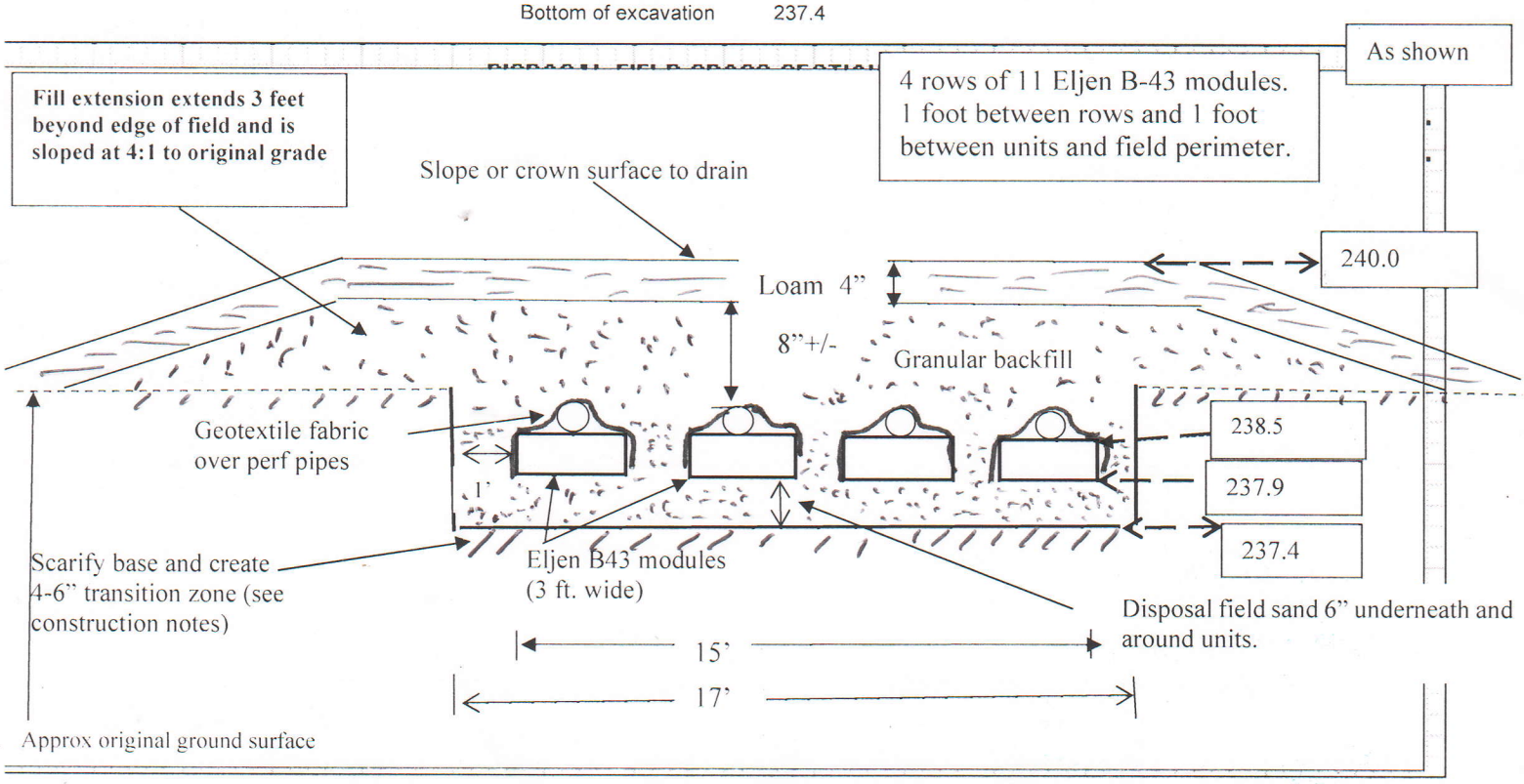
CONSTRUCTION ELEVATIONS (NAVD88)

Finished Grade Elevation	240.0
Top of Eljen	238.5
Bottom of Eljen	237.9
Bottom of excavation	237.4

ELEVATION REFERENCE POINT

Location & Description: See site plan -
Reference Elevation is navd88

As shown



Site Evaluator Signature: Michael Payling
SE #: 345
Date: 9/1/2022

CONSTRUCTION NOTES

1)The disposal field is a 15 X 44' (17' X 46' including 1 foot of perimeter sand) Eljen B43 module system. Installation shall be in accordance with manufacturers recommendations. Installation and design manuals can be found at **eljen.com**. The corners were marked with pin flags at the site as shown on the Site Plan on Page 2 of the HHE-200. Property lines are based on information provided by the applicant and not on a boundary survey completed by the Site Evaluator. See Jones Associates Site Development Plans for additional disposal field location details.

Note that if the concession stand adds food preparation a 1,000 gal external grease interceptor must be added to accept flow from food prep area sinks, dishwashing sinks and equipment wash sinks then routed to the first of 2 – 1,000 gal septic tanks in series. Other fixtures (restrooms, sinks) in facility routed directly to first septic tank. Location of grease interceptor and tanks can be modified, but must be a minimum of 8 ft. from foundation. If the tops of the tanks are located greater than 12 inches below grade, risers are recommended to allow for ease of future maintenance (pumping).

Dairy products (milk, creams) are difficult for septic system bacteria to breakdown. It is recommended that these products not be dumped down drains. To the extent possible these products should be disposed of in trash that is disposed off site.

2) The elevation reference is NAVD88 used for planned Site Development. The septic system elevations are tied to NAVD88 datum.

The bottom of the excavation is at 237.4, the top of the Eljen module is at 238.5. The Eljen modules and the perforated laterals shall be placed level. A slope of up to 0.5 inch in 25 feet is allowable by subsurface wastewater disposal Rules. Cover Eljen modules and perforated laterals with fabric provided by Eljen.

3) The disposal bed shall consist of (44) 3' X 4' Eljen (B43 modules) in 4 rows of 11 modules. The effluent line from the septic tank shall be connected to the distribution box as shown. Flow equalizers shall be installed on each effluent outlet at the distribution box. Solid 4-inch PVC pipe should be used from the distribution box to each row of Eljen modules and 4-inch perforated pipe shall be placed over the Eljen modules. A 1.0-foot spacing shall be maintained between rows and 1.0 foot around perimeter of the Eljen modules.

The Eljens shall be bedded in **clean coarse gravelly sand** (less than 2% silt or clay size particles) in accordance with manufacturers recommendations for backfill. A minimum of 6-inches of sand shall be placed under units and extend to top of Eljen modules.

Backfill used to establish grade shall be a coarse granular backfill with no more than 2% clay sized particles (see Table 11A of Rules for gradation). No stones larger than 3" in diameter shall be present in the backfill.

4) Establish erosion control measures as needed to prevent sediment transport off of the construction Site. Vegetation (including stumps and roots) and loam shall be removed from the disposal field footprint prior to constructing the field. T**he contractor shall establish a 6-inch thick transition zone at the base of the disposal bed.** The transition zone shall consist of clean coarse gravelly sand uniformly mixed into the exposed soil at the base of the disposal bed. The mixing (transition) zone shall be established by rototilling or by use of excavator

bucket teeth to thoroughly mix the gravelly sand into the native soil to a depth of approximately 6 inches. Compaction of the disposal field area shall be avoided. If compaction occurs due to equipment moving across the field, the bottom of the disposal bed shall be scarified to provide a non-compacted transition zone between the disposal bed base and underlying material.

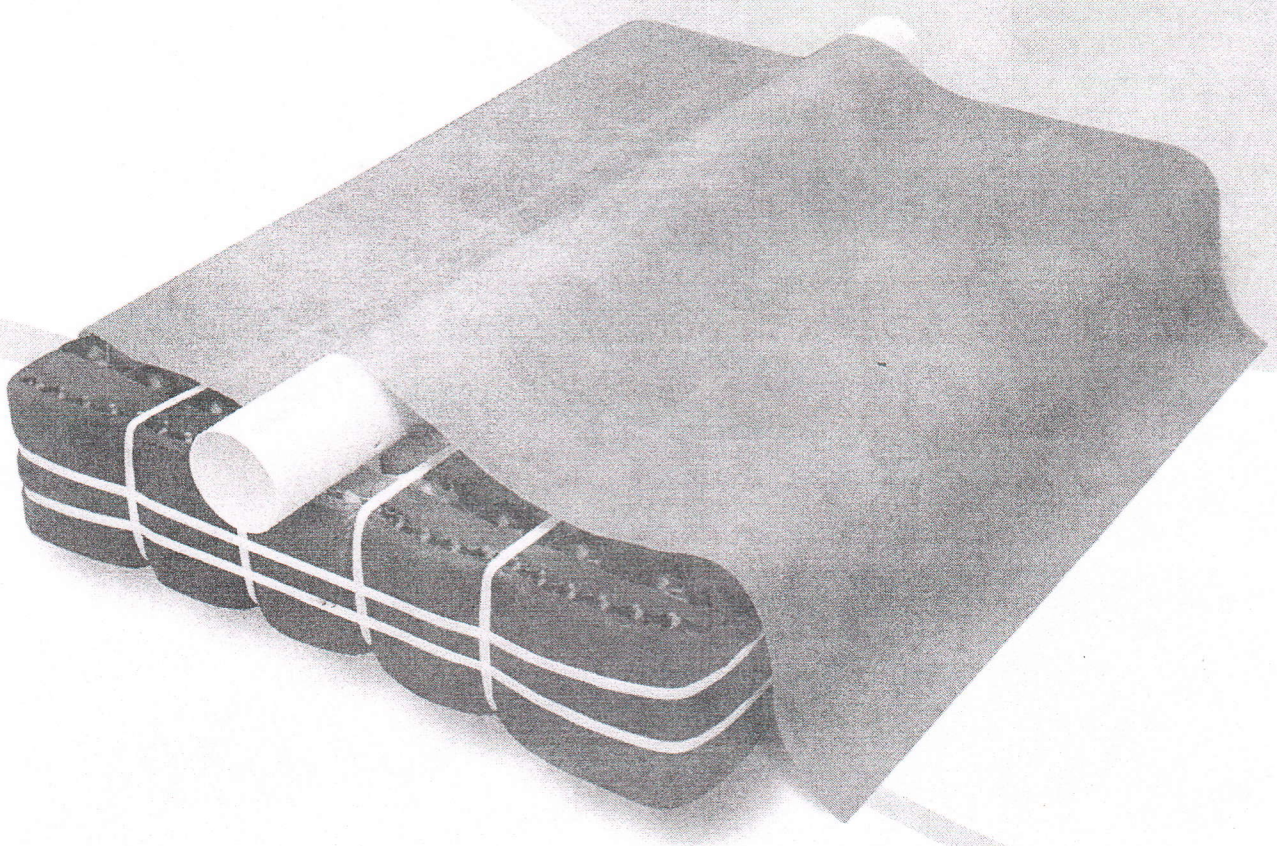
5) Final grades shall be such that surface water (precipitation) will drain away from the disposal area. Upon completion, the area shall be seeded and mulched.

6) Chapter 11 of Subsurface Waste Water Disposal Rules (144 CMR 241) for disposal field construction and installation requirements are to be incorporated in design by reference.

GSF®

Geotextile Sand Filter

Maine
Design & Installation Manual



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eljen CORPORATION

Innovative Onsite Products & Solutions Since 1970

October 2019

www.eljen.com

Top Ten Tips

Ten Tips for Maintaining Your Septic System

1. Pump your septic tank every two to five years, depending how heavily the system is used. Insist that the pumper clean your septic tank through the manhole in the center of the top of your septic tank, rather than the inspection ports above the inlet and outlet baffles.

2. If you use a garbage grinder (a.k.a. "dispose-all"), pump your tank every year. Or, better yet, remove the garbage grinder and compost your kitchen scraps. Garbage grinder use leads to buildups of grease from meat scraps and bones, and insoluble vegetable solids such as cellulose.

3. Keep kitchen grease, such as bacon fat and deep fryer oil, out of your septic system. It is not broken down easily by your system, can clog your drain field, and can not be dissolved by any readily available solvent that is legal to introduce to groundwater.

4. Space out laundry loads over the course of the week and wash only full loads. The average load of laundry uses 47 gallons of water. One load per day rather than 7 loads on Saturday makes a big difference to your septic system. Also, front loading washers use less water than top loading machines.

5. Install low usage water fixtures. By installing low water usage showerheads (2.5 gallons/minute), toilets (1.6 gallons), dishwashers (5.3 gallons) and washing machines (14 gallons) an average family can reduce the amount of water entering the septic system by 20,000 gallons per year! Low flow showerheads and toilets can be purchased at local lumberyards. Water saving dishwashers and washing machines can be purchased at better appliance stores.

6. Install a septic tank outlet filter in your tank. These generally sell for $100 to $200 depending upon brand and model. They catch small floating particles and lightweight solids, such as hair, before they can make it out to the disposal area and cause trouble. Some models are also designed to capture suspended grease.

7. Use liquid laundry detergent. Powered laundry detergents use clay as a "carrier." This clay can hasten the buildup of solids in the septic tank and potentially plug the disposal area.

8. Minimize the amount of household cleaners (bleach, harsh cleaners) and similar potentially toxic substances entering the septic system. Note: some substances are not allowed to be introduced into septic systems or groundwater tables. If in doubt, contact your Local Plumbing Inspector or the Division for more information.

9. Do not use disinfecting automatic toilet bowl cleaners, such as those containing bleach or acid compounds. The continuous slow release of these chemicals into the septic system kills the micro-organisms which treat your waste water.

10. You do not need to put special additives into your septic system. In fact, some can do more harm than good. Those which advertise that they will remove solids from your tank, usually do. The problem is that the solids exit the tank and end up in the disposal field. Once there, the solids seal off the disposal area, and the system malfunctions. Also, although it hurts nothing, it is not necessary to "seed" a new system with yeast, horse manure, and so forth. Normal human waste contains enough bacteria for the septic tank, and other microbes are already present in the soil and stones of the disposal area.

Auburn Suburban Baseball & Softball

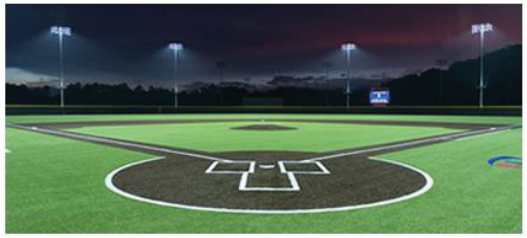
PROJECT LOCATION: Auburn, Maine

Appendix D - Lighting Details

Auburn Suburban

Baseball & Softball

From Hometown to Professional



Lighting System

Pole / Fixture Summary

Pole ID	Pole Height	Mtg Height	Fixture Qty	Luminaire Type	Load	Circuit
A1-A2	70'	70'	4	TLC-LED-1200	4.68 kW	A
		16'	1	TLC-BT-575	0.58 kW	A
B1-B2	70'	70'	5	TLC-LED-1500	7.15 kW	A
		16'	1	TLC-BT-575	0.58 kW	A
C1-C2	70'	70'	3	TLC-LED-1200	3.51 kW	A
		16'	2	TLC-BT-575	1.15 kW	A
6			***32***		***35.28 kW***	

Circuit Summary

Circuit	Description	Load	Fixture Qty
A	Baseball	35.28 kW	32

Fixture Type Summary

Type	Source	Wattage	Lumens	L90	L80	L70	Quantity
TLC-LED-1200	LED 5700K - 75 CRI	1170W	136,000	>81,000	>81,000	>81,000	14
TLC-BT-575	LED 5700K - 75 CRI	575W	52,000	>81,000	>81,000	>81,000	8
TLC-LED-1500	LED 5700K - 75 CRI	1430W	160,000	>81,000	>81,000	>81,000	10

Light Level Summary

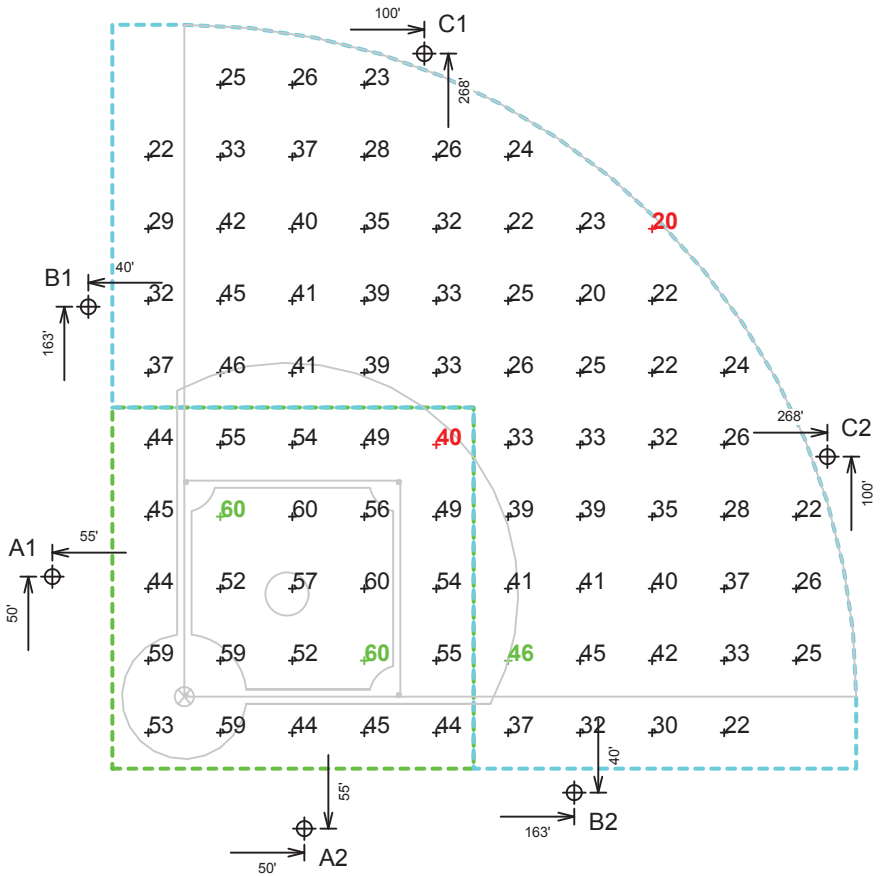
Calculation Grid Summary

Grid Name	Calculation Metric	Illumination					Circuits	Fixture Qty
		Ave	Min	Max	Max/Min	Ave/Min		
150' Spill	Horizontal Illuminance	0.02	0	0.06	85.63	17.60	A	32
150' Spill	Max Candela (by Fixture)	1331	164	3808	23.25	8.13	A	32
150' Spill	Max Vertical Illuminance Metric	0.05	0	0.14	47.41	15.33	A	32
Baseball (Infield)	Horizontal Illuminance	52.4	40.2	60.4	1.50	1.30	A	32
Baseball (Outfield)	Horizontal Illuminance	32	19.5	46.1	2.36	1.64	A	32

We Make It Happen.

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	A1-A2	70'	-	15.5'	TLC-BT-575	1	1	0
				70'	TLC-LED-1200	4	4	0
2	B1-B2	70'	-	15.5'	TLC-BT-575	1	1	0
				70'	TLC-LED-1500	5	5	0
2	C1-C2	70'	-	15.5'	TLC-BT-575	2	2	0
				70'	TLC-LED-1200	3	3	0
6	TOTALS					32	32	0



SCALE IN FEET 1 : 80

0' 80' 160'

Pole location(s) ⊕ dimensions are relative to 0,0 reference point(s) ⊗

ENGINEERED DESIGN By: • File #BB53-282828-1215-6P_C • 31-Jul-19

Auburn Suburban

Baseball & Softball

GRID SUMMARY

Name:	**Baseball**
Size:	280'/280'/280' - basepath 90'
Spacing:	30.0' x 30.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY

MAINTAINED HORIZONTAL FOOTCANDLES

	Infield	Outfield
Guaranteed Average:	**50**	**30**
Scan Average:	52.42	32.02
Maximum:	60.4	46.1
Minimum:	40.2	19.5
Avg / Min:	1.30	1.64
Guaranteed Max / Min:	**2**	**2.5**
Max / Min:	1.50	2.36
UG (adjacent pts):	1.35	1.50
CU:	0.75	
No. of Points:	25	57

LUMINAIRE INFORMATION

Color / CRI:	5700K - 75 CRI
Luminaire Output:	136,000 / 52,000 / 160,000 lumens
No. of Luminaires:	**32**
Total Load:	35.28 kW

Lumen Maintenance

Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-LED-1200	>81,000	>81,000	>81,000
TLC-BT-575	>81,000	>81,000	>81,000
TLC-LED-1500	>81,000	>81,000	>81,000

Reported per TM-21-11. See luminaire datasheet for details.

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

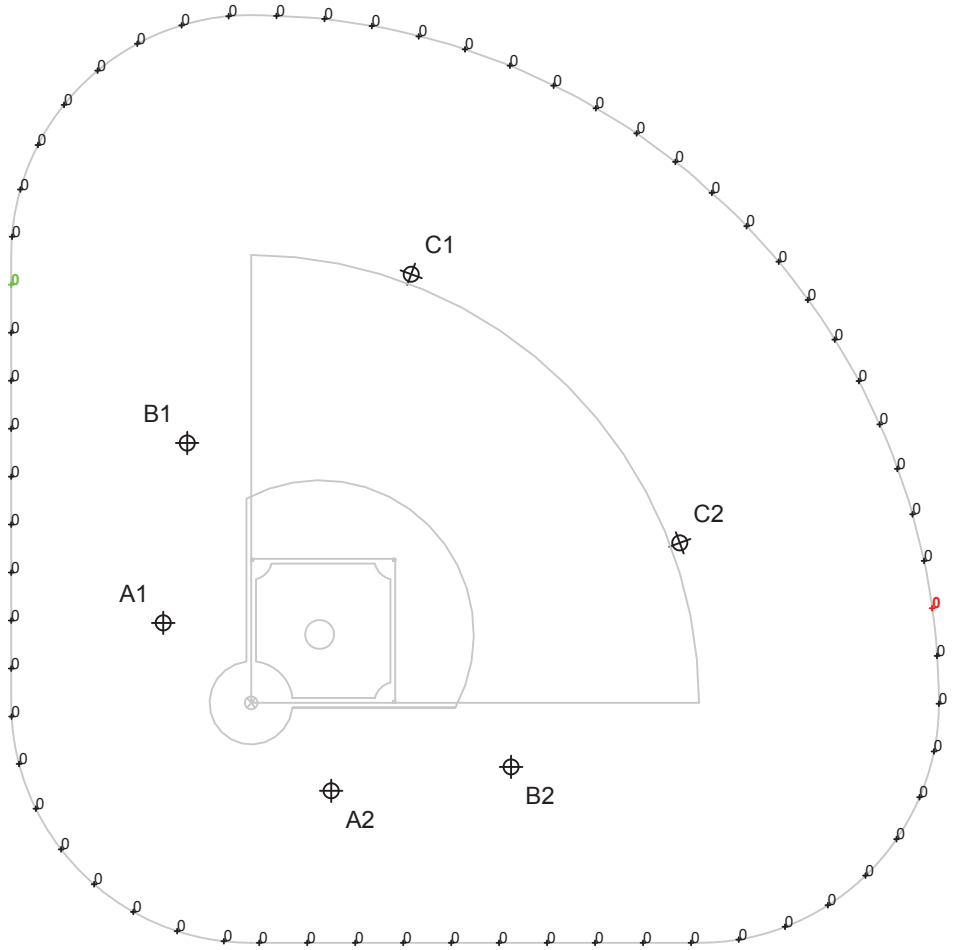
Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

We Make It Happen.

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	A1-A2	70'	-	15.5'	TLC-BT-575	1	1	0
				70'	TLC-LED-1200	4	4	0
2	B1-B2	70'	-	15.5'	TLC-BT-575	1	1	0
				70'	TLC-LED-1500	5	5	0
2	C1-C2	70'	-	15.5'	TLC-BT-575	2	2	0
				70'	TLC-LED-1200	3	3	0
6	TOTALS					32	32	0



SCALE IN FEET 1 : 120

0' 120' 240'

Pole location(s) ⊕ dimensions are relative to 0,0 reference point(s) ⊗

ENGINEERED DESIGN By: • File #BB53-282828-1215-6P_C • 31-Jul-19

Auburn Suburban

Baseball & Softball

GRID SUMMARY

Name:	**150' Spill**
Spacing:	30.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY

HORIZONTAL FOOTCANDLES

	Entire Grid
Scan Average:	**0.0176**
Maximum:	0.056
Minimum:	0.001
No. of Points:	65

LUMINAIRE INFORMATION

Color / CRI:	5700K - 75 CRI
Luminaire Output:	136,000 / 52,000 / 160,000 lumens
No. of Luminaires:	**32**
Total Load:	35.28 kW

Lumen Maintenance

Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-LED-1200	>81,000	>81,000	>81,000
TLC-BT-575	>81,000	>81,000	>81,000
TLC-LED-1500	>81,000	>81,000	>81,000

Reported per TM-21-11. See luminaire datasheet for details.

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

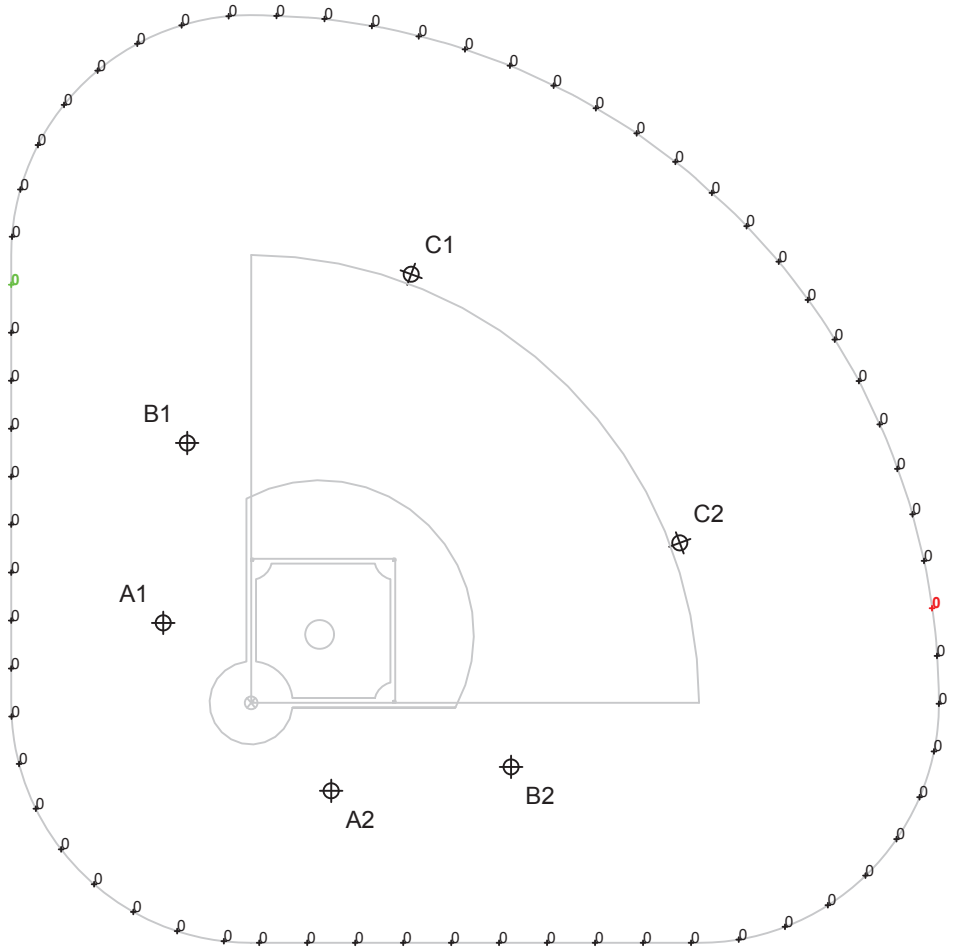
Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

We Make It Happen.

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	A1-A2	70'	-	15.5'	TLC-BT-575	1	1	0
				70'	TLC-LED-1200	4	4	0
2	B1-B2	70'	-	15.5'	TLC-BT-575	1	1	0
				70'	TLC-LED-1500	5	5	0
2	C1-C2	70'	-	15.5'	TLC-BT-575	2	2	0
				70'	TLC-LED-1200	3	3	0
6	TOTALS					32	32	0



SCALE IN FEET 1 : 120

0' 120' 240'

Pole location(s) ⊕ dimensions are relative to 0,0 reference point(s) ⊗

ENGINEERED DESIGN By: • File #BB53-282828-1215-6P_C • 31-Jul-19

Auburn Suburban

Baseball & Softball

GRID SUMMARY

Name:	**150' Spill**
Spacing:	30.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY

MAX VERTICAL FOOTCANDLES

	Entire Grid
Scan Average:	**0.0460**
Maximum:	0.136
Minimum:	0.003
No. of Points:	65

LUMINAIRE INFORMATION

Color / CRI:	5700K - 75 CRI
Luminaire Output:	136,000 / 52,000 / 160,000 lumens
No. of Luminaires:	**32**
Total Load:	35.28 kW

Lumen Maintenance

Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-LED-1200	>81,000	>81,000	>81,000
TLC-BT-575	>81,000	>81,000	>81,000
TLC-LED-1500	>81,000	>81,000	>81,000

Reported per TM-21-11. See luminaire datasheet for details.

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

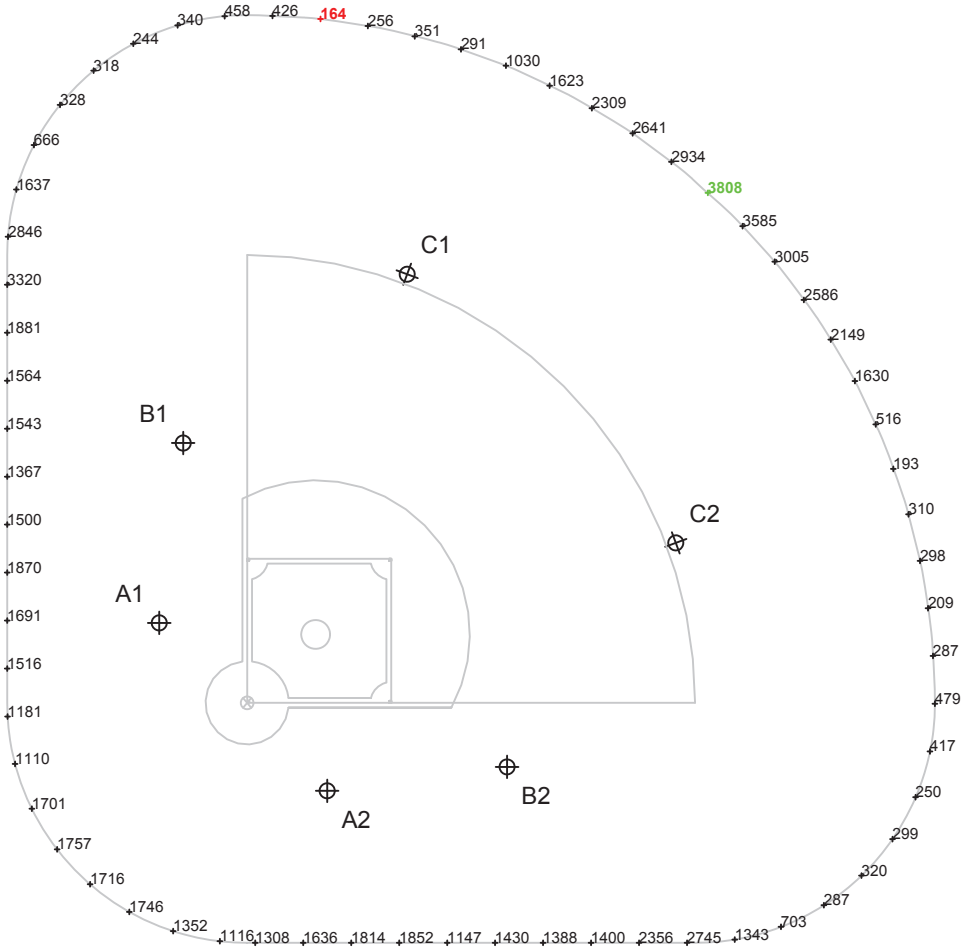
We Make It Happen.

Auburn Suburban

Baseball & Softball

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	A1-A2	70'	-	15.5'	TLC-BT-575	1	1	0
				70'	TLC-LED-1200	4	4	0
2	B1-B2	70'	-	15.5'	TLC-BT-575	1	1	0
				70'	TLC-LED-1500	5	5	0
2	C1-C2	70'	-	15.5'	TLC-BT-575	2	2	0
				70'	TLC-LED-1200	3	3	0
6	TOTALS					32	32	0



SCALE IN FEET 1 : 120

0' 120' 240'

Pole location(s) ⊕ dimensions are relative to 0,0 reference point(s) ⊗

ENGINEERED DESIGN By: • File #BB53-282828-1215-6P_C • 31-Jul-19

GRID SUMMARY

Name:	**150' Spill**
Spacing:	30.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY

CANDELA (PER FIXTURE)

	Entire Grid
Scan Average:	**1331.3749**
Maximum:	3808.248
Minimum:	163.806
No. of Points:	65

LUMINAIRE INFORMATION

Color / CRI:	5700K - 75 CRI
Luminaire Output:	136,000 / 52,000 / 160,000 lumens
No. of Luminaires:	**32**
Total Load:	35.28 kW

Lumen Maintenance

Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-LED-1200	>81,000	>81,000	>81,000
TLC-BT-575	>81,000	>81,000	>81,000
TLC-LED-1500	>81,000	>81,000	>81,000

Reported per TM-21-11. See luminaire datasheet for details.

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

We Make It Happen.

Auburn Suburban

Baseball & Softball

EQUIPMENT LAYOUT

INCLUDES:
· Baseball

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

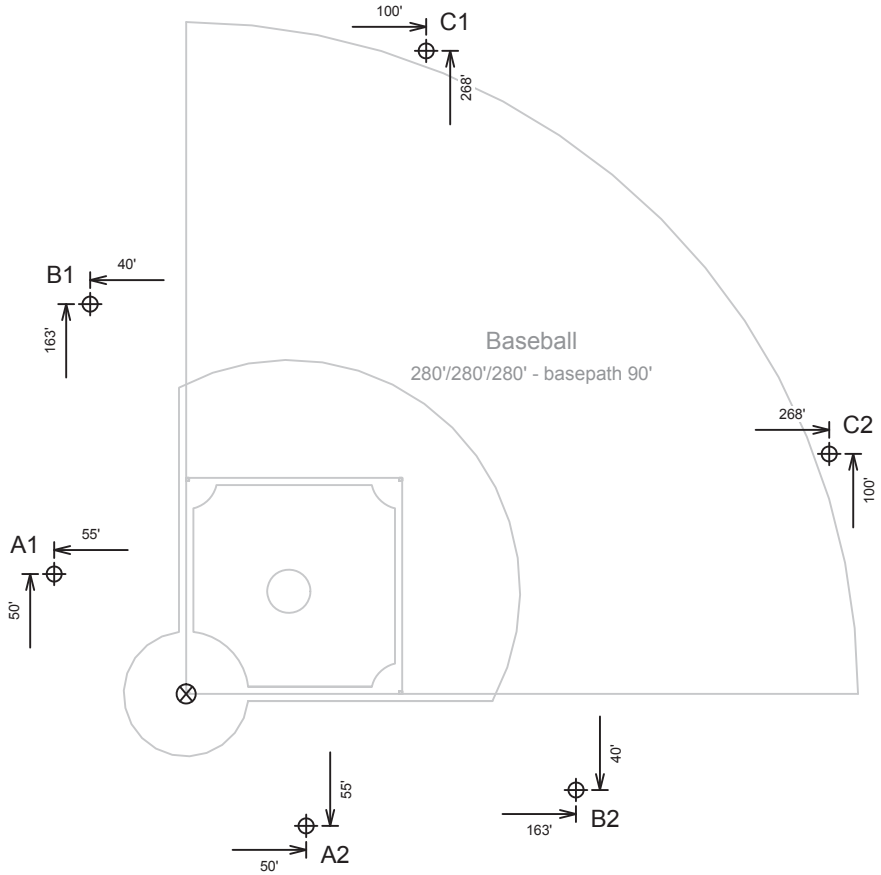
Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires		
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE
2	A1-A2	70'	-	15.5' 70'	TLC-BT-575 TLC-LED-1200	1 4
2	B1-B2	70'	-	15.5' 70'	TLC-BT-575 TLC-LED-1500	1 5
2	C1-C2	70'	-	15.5' 70'	TLC-BT-575 TLC-LED-1200	2 3
6	TOTALS					32

SINGLE LUMINAIRE AMPERAGE DRAW CHART

Ballast Specifications (.90 min power factor)	Line Amperage Per Luminaire (max draw)						
Single Phase Voltage	208 (0)	220 (0)	240 (0)	277 (0)	347 (0)	380 (0)	480 (0)
TLC-LED-1200	7.0	6.6	6.1	5.2	4.2	3.8	3.0
TLC-BT-575	3.4	3.2	2.9	2.5	2.0	1.8	1.5
TLC-LED-1500	8.5	8.1	7.4	6.4	5.1	4.7	3.7



SCALE IN FEET 1 : 80

0' 80' 160'

Pole location(s) ⊕ dimensions are relative to 0,0 reference point(s) ⊗

ENGINEERED DESIGN By: • File #BB53-282828-1215-6P_C • 31-Jul-19

We Make It Happen.

Auburn Suburban Baseball & Softball

PROJECT LOCATION: Auburn, Maine

Lighting System

Pole / Fixture Summary

Pole ID	Pole Height	Mtg Height	Fixture Qty	Luminaire Type	Load	Circuit
A1-A2	60'	60'	2	TLC-LED-1200	2.34 kW	A
		16'	1	TLC-BT-575	0.58 kW	A
B1-B2	70'	70'	5	TLC-LED-1200	5.85 kW	A
		70'	1	TLC-LED-900	0.89 kW	A
		16'	1	TLC-BT-575	0.58 kW	A
4			***20***		***20.46 kW***	

Circuit Summary

Circuit	Description	Load	Fixture Qty
A	Softball	20.46 kW	20

Fixture Type Summary

Type	Source	Wattage	Lumens	L90	L80	L70	Quantity
TLC-LED-1200	LED 5700K - 75 CRI	1170W	136,000	>81,000	>81,000	>81,000	14
TLC-LED-900	LED 5700K - 75 CRI	890W	89,600	>81,000	>81,000	>81,000	2
TLC-BT-575	LED 5700K - 75 CRI	575W	52,000	>81,000	>81,000	>81,000	4

Light Level Summary

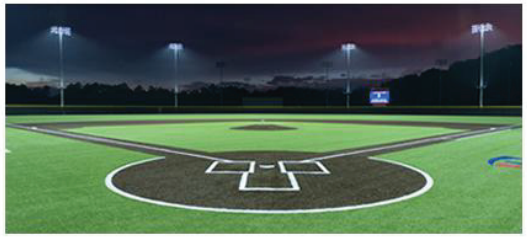
Calculation Grid Summary

Grid Name	Calculation Metric	Illumination					Circuits	Fixture Qty
		Ave	Min	Max	Max/Min	Ave/Min		
Little League (Infield)	Horizontal Illuminance	51.7	37	67	1.81	1.40	A	20
Little League (Outfield)	Horizontal Illuminance	33.4	20.6	47.7	2.31	1.62	A	20
Spill/Glare - 150' Offset	Horizontal Illuminance	0.03	0	0.10	7356.22		A	20
Spill/Glare - 150' Offset	Max Candela (by Fixture)	2060	16.9	5359	317.81	122.20	A	20
Spill/Glare - 150' Offset	Max Vertical Illuminance Metric	0.09	0	0.27	2759.28		A	20

Auburn Suburban

Baseball & Softball

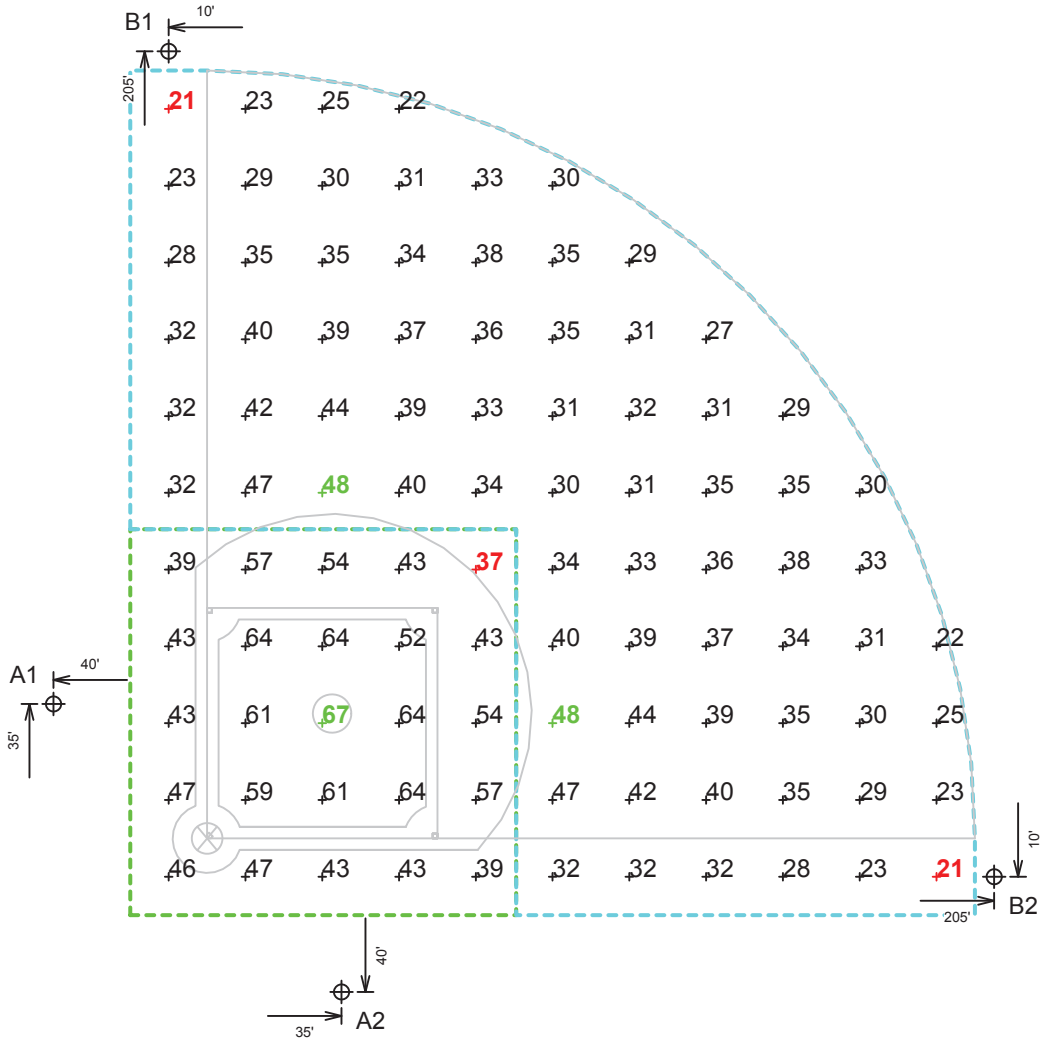
From Hometown to Professional



We Make It Happen.

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	A1-A2	60'	-	15.5'	TLC-BT-575	1	1	0
				60'	TLC-LED-1200	2	2	0
2	B1-B2	70'	-	70'	TLC-LED-900	1	1	0
				15.5'	TLC-BT-575	1	1	0
				70'	TLC-LED-1200	5	5	0
4	TOTALS					20	20	0



SCALE IN FEET 1 : 50

0' 50' 100'

Pole location(s) ⊕ dimensions are relative to 0,0 reference point(s) ⊗

ENGINEERED DESIGN By: • File #LL53-202020-12-4P_B • 11-Jun-19

Auburn Suburban

LL53-202020-12-4P_B

Baseball & Softball

GRID SUMMARY

Name:	**Little League**
Size:	200'/200'/200' - basepath 60'
Spacing:	20.0' x 20.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY

MAINTAINED HORIZONTAL FOOTCANDLES

	Infield	Outfield
Guaranteed Average:	**50**	**30**
Scan Average:	51.66	33.35
Maximum:	67.0	47.7
Minimum:	37.0	20.6
Avg / Min:	1.40	1.62
Guaranteed Max / Min:	**2**	**2.5**
Max / Min:	1.81	2.31
UG (adjacent pts):	1.49	1.48
CU:	0.67	
No. of Points:	25	73

LUMINAIRE INFORMATION

Color / CRI:	5700K - 75 CRI
Luminaire Output:	136,000 / 89,600 / 52,000 lumens
No. of Luminaires:	**20**
Total Load:	20.46 kW

Lumen Maintenance

Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-LED-1200	>81,000	>81,000	>81,000
TLC-LED-900	>81,000	>81,000	>81,000
TLC-BT-575	>81,000	>81,000	>81,000

Reported per TM-21-11. See luminaire datasheet for details.

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

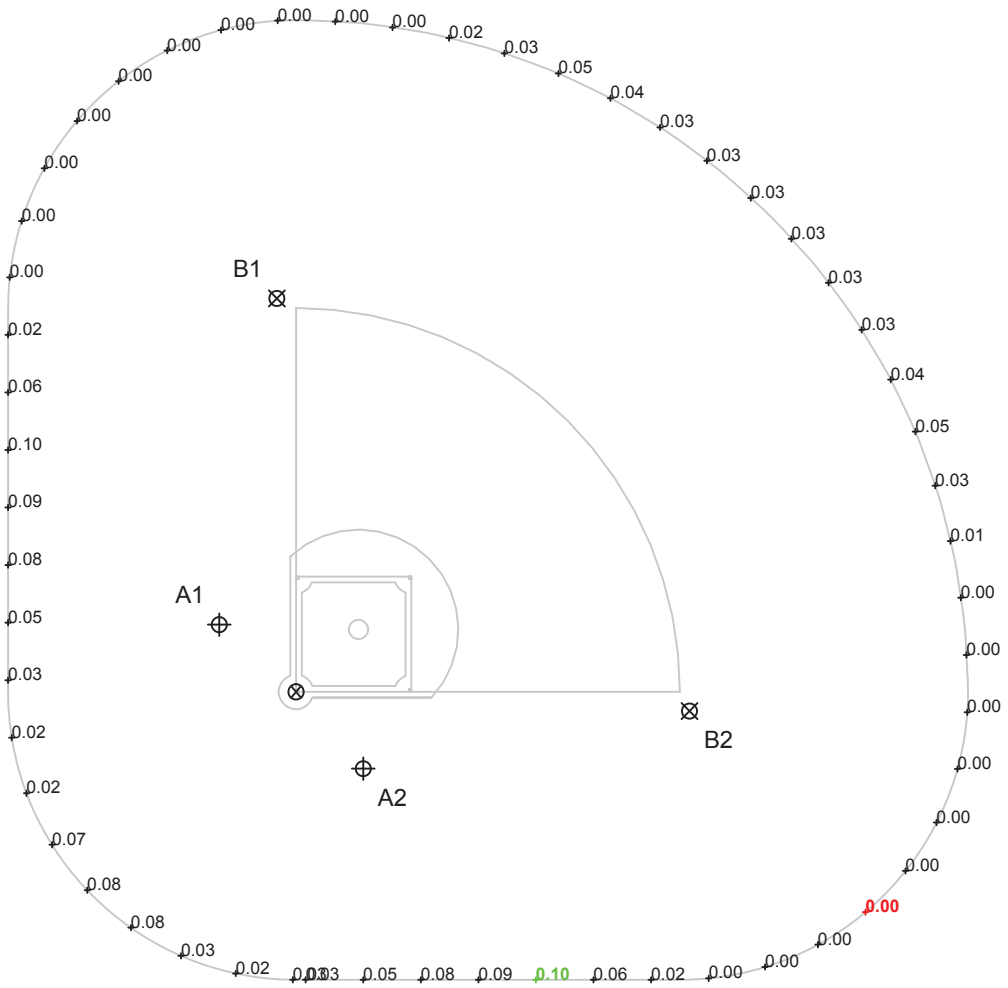
Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

We Make It Happen.

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	A1-A2	60'	-	15.5'	TLC-BT-575	1	1	0
				60'	TLC-LED-1200	2	2	0
2	B1-B2	70'	-	70'	TLC-LED-900	1	1	0
				15.5'	TLC-BT-575	1	1	0
				70'	TLC-LED-1200	5	5	0
4	TOTALS					20	20	0



SCALE IN FEET 1 : 100

0' 100' 200'

Pole location(s) ⊕ dimensions are relative to 0,0 reference point(s) ⊗

ENGINEERED DESIGN By: • File #LL53-202020-12-4P_B • 11-Jun-19

Auburn Suburban

Baseball & Softball

GRID SUMMARY

Name:	**Spill/Glare - 150' Offset**
Spacing:	30.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY

HORIZONTAL FOOTCANDLES

	Entire Grid
Scan Average:	**0.0297**
Maximum:	0.101
Minimum:	0.000
No. of Points:	56

LUMINAIRE INFORMATION

Color / CRI:	5700K - 75 CRI
Luminaire Output:	136,000 / 89,600 / 52,000 lumens
No. of Luminaires:	**20**
Total Load:	20.46 kW

Lumen Maintenance

Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-LED-1200	>81,000	>81,000	>81,000
TLC-LED-900	>81,000	>81,000	>81,000
TLC-BT-575	>81,000	>81,000	>81,000

Reported per TM-21-11. See luminaire datasheet for details.

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

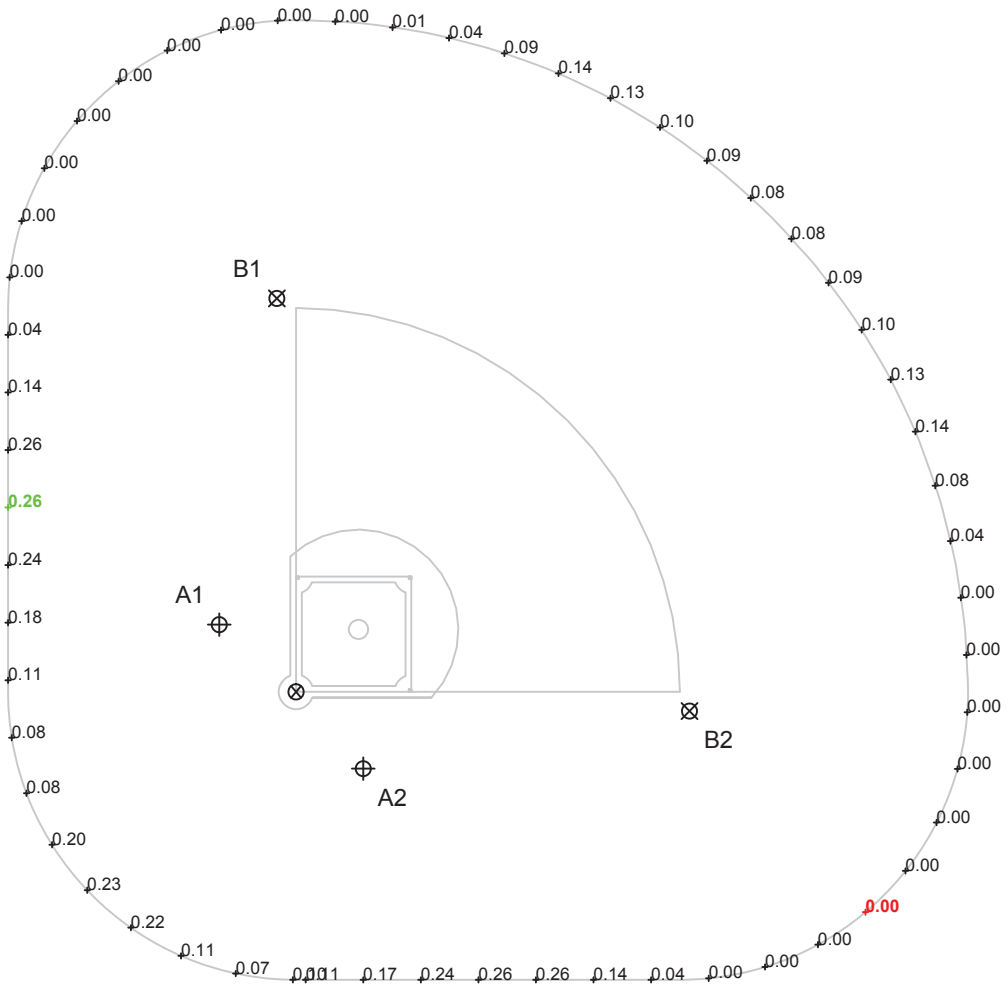
We Make It Happen.

Auburn Suburban

Baseball & Softball

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	A1-A2	60'	-	15.5'	TLC-BT-575	1	1	0
				60'	TLC-LED-1200	2	2	0
2	B1-B2	70'	-	70'	TLC-LED-900	1	1	0
				15.5'	TLC-BT-575	1	1	0
				70'	TLC-LED-1200	5	5	0
4	TOTALS					20	20	0



SCALE IN FEET 1 : 100

0' 100' 200'

Pole location(s) ⊕ dimensions are relative to 0,0 reference point(s) ⊗

ENGINEERED DESIGN By: • File #LL53-202020-12-4P_B • 11-Jun-19

GRID SUMMARY

Name:	**Spill/Glare - 150' Offset**
Spacing:	30.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY

MAX VERTICAL FOOTCANDLES

	Entire Grid
Scan Average:	**0.0877**
Maximum:	0.265
Minimum:	0.000
No. of Points:	56

LUMINAIRE INFORMATION

Color / CRI:	5700K - 75 CRI
Luminaire Output:	136,000 / 89,600 / 52,000 lumens
No. of Luminaires:	**20**
Total Load:	20.46 kW

Lumen Maintenance

Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-LED-1200	>81,000	>81,000	>81,000
TLC-LED-900	>81,000	>81,000	>81,000
TLC-BT-575	>81,000	>81,000	>81,000

Reported per TM-21-11. See luminaire datasheet for details.

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

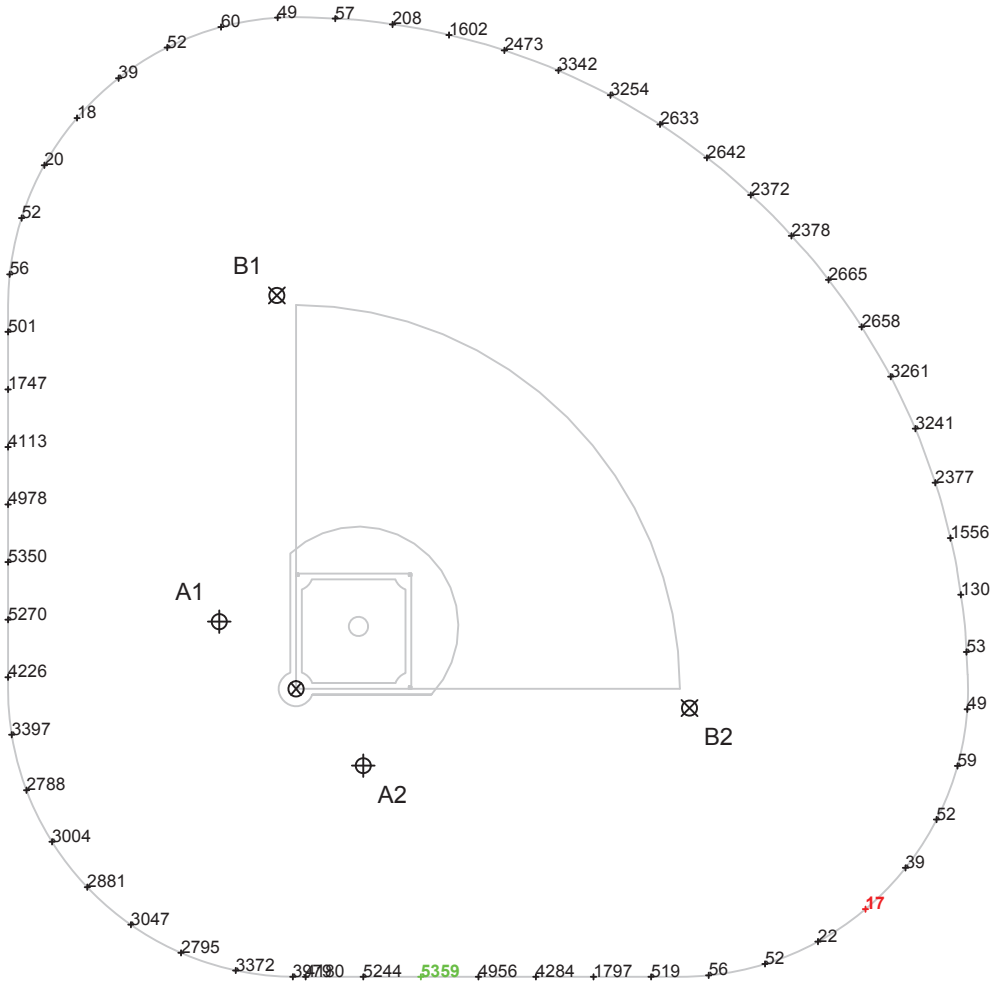
We Make It Happen.

Auburn Suburban

Baseball & Softball

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	A1-A2	60'	-	15.5'	TLC-BT-575	1	1	0
				60'	TLC-LED-1200	2	2	0
2	B1-B2	70'	-	70'	TLC-LED-900	1	1	0
				15.5'	TLC-BT-575	1	1	0
				70'	TLC-LED-1200	5	5	0
4	TOTALS					20	20	0



SCALE IN FEET 1 : 100

0' 100' 200'

Pole location(s) ⊕ dimensions are relative to 0,0 reference point(s) ⊗

GRID SUMMARY

Name:	**Spill/Glare - 150' Offset**
Spacing:	30.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY

CANDELA (PER FIXTURE)

	Entire Grid
Scan Average:	**2060.3840**
Maximum:	5358.506
Minimum:	16.861
No. of Points:	56

LUMINAIRE INFORMATION

Color / CRI:	5700K - 75 CRI
Luminaire Output:	136,000 / 89,600 / 52,000 lumens
No. of Luminaires:	**20**
Total Load:	20.46 kW

Lumen Maintenance

Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-LED-1200	>81,000	>81,000	>81,000
TLC-LED-900	>81,000	>81,000	>81,000
TLC-BT-575	>81,000	>81,000	>81,000

Reported per TM-21-11. See luminaire datasheet for details.

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

ENGINEERED DESIGN By: • File #LL53-202020-12-4P_B • 11-Jun-19

Auburn Suburban

Baseball & Softball

EQUIPMENT LAYOUT

INCLUDES:
· Little League

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

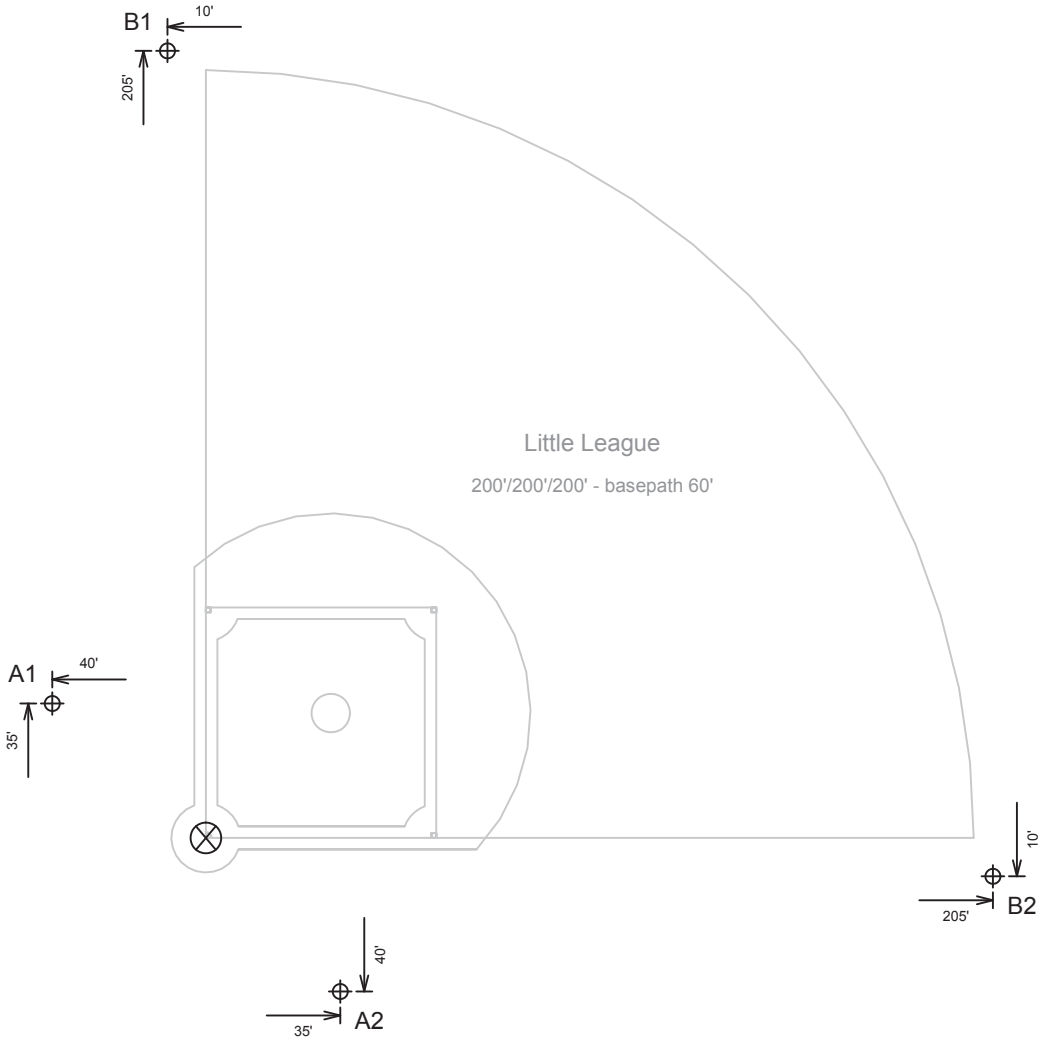
Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires		
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE
2	A1-A2	60'	-	15.5' 60'	TLC-BT-575 TLC-LED-1200	1 2
2	B1-B2	70'	-	70' 15.5' 70'	TLC-LED-900 TLC-BT-575 TLC-LED-1200	1 1 5
4	TOTALS					20

SINGLE LUMINAIRE AMPERAGE DRAW CHART

Ballast Specifications (.90 min power factor)	Line Amperage Per Luminaire (max draw)						
Single Phase Voltage	208 (0)	220 (0)	240 (0)	277 (0)	347 (0)	380 (0)	480 (0)
TLC-LED-1200	7.0	6.6	6.1	5.2	4.2	3.8	3.0
TLC-LED-900-A	5.3	5.0	4.6	4.0	3.2	2.9	2.3
TLC-BT-575	3.4	3.2	2.9	2.5	2.0	1.8	1.5



SCALE IN FEET 1 : 50

0' 50' 100'

Pole location(s) ⊕ dimensions are relative to 0,0 reference point(s) ⊗

ENGINEERED DESIGN By: • File #LL53-202020-12-4P_B • 11-Jun-19

We Make It Happen.

Appendix E: Fill Permit

APPLICATION FOR FILL PERMIT

Public Works Department
60 Court St | Auburn, Maine 04210
207.333.6670 | www.auburnmaine.gov
a nationally-accredited public works agency

$25.00

For Office Use Only	
Fill Permit #:	
Approved Date:	Paid: $
Renewal / By:	

PID #: 217 (Map) 2 (Lot) (Sub Lot)

Property Owners Name (Please Print): Auburn Suburban Baseball and Softball

Mailing Address: 45 Rosewood Road

City: Auburn State: Maine Zip: 04210

Phone: Home: 207-409-9269 Work / Cell:

Date of Application: 10/27/22

Fill Site Address: Stevens Mills and Hotel Road, Auburn, Maine 04210

Fill Area (Dimensions): 9.03 acres Depth: varies throughout site

CY = (Area X Depth) / 27: 8,300 cubic yards

Describe Fill Project Area (Please Circle): Flat / **Gentle Slope** / Steep Slope / Wet / **Wooded** / Field Gravel / Lawn / Other...

If "Other" was chosen - please describe:

Proposed use of Fill Area: Site Preparation to be done by the National Guard

Stabilization Measures (Please Circle): Mulch / **Loam & Seed** / Rip Rap / Sod / Pavement / Other...

If "Other" was chosen - please describe: See Erosion Control

Is the Fill Area within 75 feet of a drainage course, wetland or great pond? ☐ NO ☑ YES

If Yes, Please Explain: obtained NRPA PBR for activities with 75' of a stream, see attached

Is the Fill Area larger than 1 Acre - 43,560 Square Feet? ☐ NO ☑ YES

If Yes, Has a Maine Construction General Permit (MCGP) been acquired? ☐ NO ☑ YES

If Yes - What is the Permit #: no permit # issued, see attached MCGP

Sketch Plan of Fill Site
See attached Sheet E-1, E-2, and E-3

Conditions of Approval

General Conditions:

1. Fill permits expire one (1) Year after the Approved Date. All permanent stabilization measures must be in place prior to the expiration of the permit. Fill permits can be renewed upon request and review prior to expiration date. Additional fill areas will require new applications.
2. All fill material shall be inert fill defined as: Clean Soil Material, Rocks, Bricks, and Cured Concrete which are not mixed with other solid or liquid waste, and which are not derived from an ore mining activity. sStumps, trees and brush may be utilized if they originate from the same parcel and if the fill area is less than one (1) acre. Stumps, trees and Pavement is not an inert fill material.
3. Existing drainage of streets and abutting property must remain unaffected. Existing drainage structures and patterns shall not be changed nor altered unless approved by the City Engineer.
4. All filling, including side slopes must not extend beyond the approved fill area. Side slopes must be graded no steeper than 2.5 horizontal to 1 vertical, anticipating any final settlement or slumping.
5. Temporary erosion control methods, to prevent disturbed soils from leaving the approved fill area, should be placed prior to the filling operation and maintained until the site is stabilized
6. All applicable Federal and State and Local permits need to be secured prior to any fill placement. All applicable Federal, State and Local regulations must be complied with.

Specific Conditions:

☐ **City Fill Disclaimer**
By requesting City Fill, being the owner of this parcel of land located in Auburn, Maine, and having acquired all the necessary Federal, State and Local permits to placed fill material on said land, do hereby accept all responsibilities for said fill materials placed there by the

☐ **Erosion Control Required**
Not to alter drainage to abutting properties. Install silt fence or other stabilization shown on attached map required or other erosion control methods and maintained until site is stabilized to prevent soil migration/erosion. Stabilize site as soon s possible (NOTE: no

☐ **Foundation/In Ground Pool**
All usable fill materials are: Concrete, cement, bricks...are allowed to fill the cellar hold and or pool. Material must be broken up with no rebar exposed. MATERIALS THAT MAY NOT BE USED AS FILL are: Wood, Metal, Steel, Glass, Plastic, Roof Shingles, and

☐ **Standard**
Not to alter drainage to abutting properties. Install Silt Fence as shown on map, if area not stabilized. Stabilized to prevent soil migration. Stabilize site as soon as possible.

Other Conditions:

I agree to comply with the above conditions. Failure to comply with these conditions or any provisions of the Fill Permit Standards Ordinance will subject me to the enforcement procedures defined in the Fill Permit Standards Ordinance.

Signature of Applicant

Signature of Approval

11-1-22
Date:

Date:

Disclaimer of City Placed Fill

TRAFFIC MOVEMENT PERMIT APPLICATION

FOR PROPOSED

Baseball & Softball Fields

Stevens Mill Road, Auburn, Maine

PREPARED FOR: Auburn Suburban Baseball & Softball

PREPARED BY: Barton and Loguidice, LLC

Date: January 11, 2023

Provisionally Adopted 1/10/00

Department of Transportation
Traffic Engineering Division
16 State House Station
Augusta, Maine 04333
Telephone: 207-287-3775

FOR MDOT USE 1/2000
ID #

Total Fees:
Date: Received

****

PERMIT APPLICATION – TRAFFIC
TRAFFIC MOVEMENT PERMIT, 23 M.R.S.A. § 704 – A

Please type or print:

This application is for: Traffic 100-200 PCE's **X**
Traffic 200 + PC-E's _____

Name of Applicant: **Auburn Suburban Baseball and Softball**

Address: **45 Rosewood Road, Auburn ME 04210** Telephone: **(207) 409-9269**

Name of local contact or agent: **William J. Bray, P.E., Barton Loguidice, LLC**

Address**: 383 US Route 1, Suite 2A, Box 4, Scarborough, Maine 04074**

Telephone**: (207) 400-6890**

Name and type of development**: Auburn Baseball & Softball Fields**

Location of development including road, street, or nearest route number: **Stevens Mill Road, Auburn, ME 04210**

City/Town/Plantation: **Auburn** , County: **Androscoggin ,** Tax Map **217** Lot **# 2**

Do you want a consolidated review with DEP pursuant to 23 M.R.S.A. § 704-A (7)? Yes ____ No **X**

Was this development started prior to obtaining a traffic permit? **No**

Is the project located in an area designated as a growth area (as defined in M.R.S.A. title 30 – A, chapter 187)?
Yes, _____ No **X**

Is this project located within a compact area of an urban compact municipality? Yes, _____ No **X**

Is this development or any portion of the site currently subject to state or municipal enforcement action? **No**

Existing DEP or MDOT permit number (if applicable): **N/A**

Name(s) of DOT staff person(s) contacted concerning this application: **N/A**

Name(s) of DOT staff person(s) present at the scoping meeting for 200+ applications: _____

NOTICE OF INTENT TO FILE
Traffic Movement Permit

Please take notice that

Auburn Suburban Baseball & Softball
45 Rosewood Road, Auburn ME 04210
(207) 409-9269

Is intending to file a Traffic Movement Permit application with the Maine Department of Transportation pursuant to the provisions of 23 M.R.S.A. § 704 - A on or about

January 11, 2023

The application is for
A proposed baseball/softball field complex composed of two little league fields, one major league field and one practice field. Construction is expected to start during summer of 2023 with a spring 2024 completion.

The proposed project is expected to generate 146 trips during the Saturday peak hour

At the following location:

Stevens Mill Road, Auburn

Any interested party may request in writing to participate in the MaineDOT scoping meeting for the subject project no later than 20 days after the application is found by the Department to be complete and is accepted for processing. Requests shall be sent to the State Traffic Engineer, 16 State House Station, Augusta, ME 04333. Public comments on the application pertaining to either congestion or safety will be accepted throughout the processing of the application.

The application will be filed for public inspection at the Department of Transportation Region office (Scarborough, Augusta, Wilton, Bangor or Presque Isle) during normal working hours. Addresses may be found at the following website: https://www.maine.gov/mdot/about/regions/ A copy of the application may also be seen at the municipal offices in

Auburn, Maine.

Written public comments concerning congestion or safety only, may be sent to the Department of Transportation, State Traffic Engineer, 16 State House Station, Augusta, Maine 04333.

1/2000

CERTIFICATION

The traffic engineer responsible for preparing this application and/or attaching pertinent site and traffic information hereto, by signing below, certifies that the application for traffic approval is complete and accurate to the best of his/her knowledge.

Signature: _____ Re/Cert/Lic No.: _____

Name (print): William J. Bray

Date: 1-11-2023

If the signature below is not the applicant's signature, attach letter of agent authorization signed by applicant.

"I certify under penalty of law that I have personally examined the information submitted in this document and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the information is true, accurate, and complete. I authorize the Department to enter the property that is the subject of this application, at reasonable hours, including buildings, structures or conveyances on the property, to determine the accuracy of any information provided herein. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

Josie Ray (Agent of Applicant: Jones Associates, Inc.) — December 13th, 2022

Signature of applicant — Date

Letter of Application

Dear City of Auburn Planning Board,

We, Auburn Suburban Baseball and Softball, authorize Jones Associates Inc. to act as our agent in the processing of this application.

Respectfully,

Travis Bashaw
ASBS Past President & POC

ABUTTERS REPORT

Tax Map - Lot Number	Addresses of Adjacent Property Owners	Tax Map - Lot Number	Addresses of Adjacent Property Owners
207 - 55	Timothy and Karen Simpson 57 Rafnell Street Auburn, Maine 04210	217 - 72	David and Jeffrey Cooper 25 Cooper Lane Auburn, Maine 04210
217 - 1	JAM 2, LLC 410 Main Street Lewiston, Maine 04240	217 - 70	Michael Wakefield 1376 Hotel Road Auburn, Maine 04210
217 - 2-1	Ledge Hill Real Estate, LLC 965 Minot Avenue Auburn, Maine 04210	217 - 69	Norman and Diane Marquis 1354 Hotel Road Auburn, Maine 04210
217 - 3	BC1, LLC 410 Main Street Lewiston, Maine 04240	217 - 68	Lyonel Dor 1348 Hotel Road Auburn, Maine 04210
217 - 4	Fleurette Doyon 370 Stevens Mill Road Auburn, Maine 04210	217 - 67	Richard and Pamela Bouchard 1334 Hotel Road Auburn, Maine 04210
217 - 5	William and Velma Adams 400 Stevens Mill Road Auburn, Maine 04210	217 - 66	John F Murphy Homes, Inc. 800 Center Street Auburn, Maine 04210
217 - 29-1	Amanda Tims and Jesse Bolduc 18 Granite Street, Apt. 2 Auburn, Maine 04210	217 - 65	Julie Cook 260 Stevens Mill Road Auburn, Maine 04210
217 - 44	John and Susan Martins 383 Stevens Mill Road Auburn, Maine 04210	217 - 56	Diane Bear 277 Stevens Mill Road Auburn, Maine 04210
217 - 45	John Vigue and Michelle Bilodeau 345 Stevens Mill Road Auburn, Maine 04210	217 - 48	Fiske Properties, LLC 67 Roosevelt Trail Windham, Maine 04062
217 - 47	Leigh and Steven St Pierre 315 Stevens Mill Road Auburn, Maine 04210		

Section 1

SECTION 1

A. SITE PLAN

Auburn Suburban Baseball & Softball is proposing development of four (4) field baseball/softball complex on the 30.1-acre vacant lot located on the southern side of Stevens Mill Road. The site has frontage on Stevens Mill Road. The proposed ballfield complex connects directly to the southern side of Stevens Mill Road 390-feet east of Sprucewood Road. Of the 30.1 acres in the parcel, approximately 17 acres are developable.

The proposed complex features four baseball/softball fields with two little league fields, one practice field and one major league field. In addition, there will be a concession stand located near the little league fields on the northern section of the parcel.

The proposed project will be accessed via a proposed 18-foot-wide bi-directional internal roadway, connecting to the southern side of Stevens Mill Road and extending south along the western portion of the parcel. On-site parking will be provided along the internal roadway, on the western side, via 3 parking lots and 6 additional on-street parking spaces. Access to the ball fields from the parking lots and on street parking spaces will be provided via crosswalks at each of the lots, connecting to a sidewalk which runs adjacent to the internal roadway, down to the major league baseball field. In total, the project proposes 173 on-site parking spaces, 10 of which will be marked as handicapped.

B. EXISTING AND PROPOSED SITE USES

Existing: The existing parcel is presently vacant and undeveloped.

Proposed: Auburn Suburban Baseball & Softball is proposing development of four (4) field baseball/softball complex on the 30.1-acre vacant lot located on the southern side of Stevens Mill Road. The site has frontage on Stevens Mill Road. The proposed ballfield complex connects directly to the southern side of Stevens Mill Road 390-feet east of Sprucewood Road. Of the 30.1 acres in the parcel, approximately 17 acres are developable.

The proposed complex features four baseball/softball fields with two little league fields, one practice field and one major league field. In addition, there will be a concession stand located near the little league fields on the northern section of the parcel.

The proposed project will be accessed via a proposed 18-foot-wide bi-directional internal roadway, connecting to the southern side of Stevens Mill Road and extending south along the western portion of the parcel. On-site parking will be provided along the internal roadway, on the western side, via 3 parking lots and 6 additional on-street parking spaces. Access to the ball fields from the parking lots and on street parking spaces will be provided via crosswalks at each of the lots, connecting to a sidewalk which runs adjacent to the internal roadway, down to the major league baseball field. In total, the project proposes 173 on-site parking spaces, 10 of which will be marked as handicapped.

C. SITE AND VICINITY BOUNDARIES

The Site Plan attached at end of this application depicts the proposed baseball and softball field complex. The site is located on the southern side of Stevens Mill Road opposite Sprucewood Road.

D. PROPOSED USES IN THE GENERAL VICINITY OF THE PROPOSED DEVELOPMENT

Traffic generated by projects that have been approved by the City of Auburn Planning Department and/or the Maine Department of Transportation, yet are not opened, must be included in the estimate of pre-development traffic. The City of Auburn Planning Department has advised that there are no projects being reviewed or approved which will have an impact on the proposed site.

E. TRIP GENERATION

Typically, the standard trip generation calculations are performed using the eleventh (11th) edition of the Institute of Transportation Engineers (ITE) Trip Generation Manual (TGM). The ITE's TGM does not however provide trip generation rates for a recreational ball field, therefore trip generation for the proposed baseball/softball field complex was developed using an "*operational trip generation analysis*" based upon the provided schedule, player and attendance assumptions outlined below in this section.

During the typical weekday, the schedule states that there will only be 2 games each night, each game starting at 6:00 PM. Given that there are 8 games scheduled to be played on the typical Saturday, Saturday will be the highest trip generator. Henceforth, we will be proceeding with the trip generation estimates solely for the Saturday peak hour time period(s). The eight (8) games will be scheduled to occur in sets of two (2) games at a time, resulting in four sets of games throughout the day where two teams are playing at the same time.

Schedule: Auburn Suburban Baseball & Softball has provided a game schedule which utilizes a maximum of two ball fields at one time. Each arrival time, game start time, and departure time occur simultaneously for two games. The schedule for a typical Saturday is as follows in Table 1.1, with each "X" representing two games. The peak hour time periods are highlighted in green, and the player arrival, game start and game end are highlighted blue.

Table 1.1
Baseball/Softball Game Schedule

Time	Enter Trips	Game Start	Exit Trips
8:30	X		
9:00		SET 1	
9:30			
10:00			X
10:30	X		
11:00		SET 2	
11:30			
12:00			X
12:30	X		
1:00		SET 3	
1:30			
2:00			X
2:30	X		
3:00		SET 4	
3:30			
4:00			
4:30			X
5:00			

E. TRIP GENERATION (Continued)

In a summary of the prior table, the players arrive 30 minutes before the start the game, creating entry trips. The average length of a little league game is 1 to 1 ½ hours, therefore we can expect them to leave within that interval after the start of a game. The table shows that an overlap between entry and exit trips occurs during three hours, resulting in the peak hours of the site with vehicles exiting and entering within the same hour.

The peak hours of the site are expected to occur between the hours of 9:30AM and 10:30AM, 11:30 and 12:30, and then lastly between 1:30 and 2:30.

Trip Generation: The Saturday daily and peak hour trip generation estimates are based upon the "*operation trip generation"* assumptions outlined below.

- Two games occur simultaneously on separate fields – 4 teams
- 12 players per team
- 85% of the spectators are to be those who drive the player to the game (parents, etc.) – 12 trips/team
- 15% additional spectators are assumed to be another parent, grandparent, etc. – 2 trips/team
- Half of the 85% of spectators will drop off the player 30 minutes before the game starts and return when game starts – 6 exit trips and 6 entry trips per game.
- 1 Umpire per game – 1 trip
- 3 non-spectator concession stand workers (3 trips for two games).
- No practices on Saturday

The following assumptions are listed in two groups: 1) Start of game trips (*30 minutes before to the start of the game*), and 2) End of game trips (*1 to 1 ½ hours after start of game*).

1. **Start of Game Trips – 2 Games, 4 Teams**
   +48 trips – Players/85% of spectators
   +8 trips – 15% additional spectators
   +24 trips – Half of 85% of home team spectators dropping off player and returning (12 exit/12 enter)
   +2 trips – Umpires
   +3 Trips – Concession stand workers

   Total Trips = 85

2. **End of Game Trips – 2 Games, 4 Teams**
   +48 trips – Players/85% of spectators
   +8 trips – 15% additional spectators
   +2 trips – Umpires
   +3 Trips – Concession stand workers

   Total Trips = 61

In summary, during the Saturday peak hour a maximum of four teams will enter and four teams will leave within the same hour; resulting in **146** peak hour trips.

F. SITE TRIP DISTRIBUTION

Based upon the assumptions outlined out in the prior section, during each of the noted Saturday peak hour's **73** trips will enter and **73** trips will exit the proposed complex.

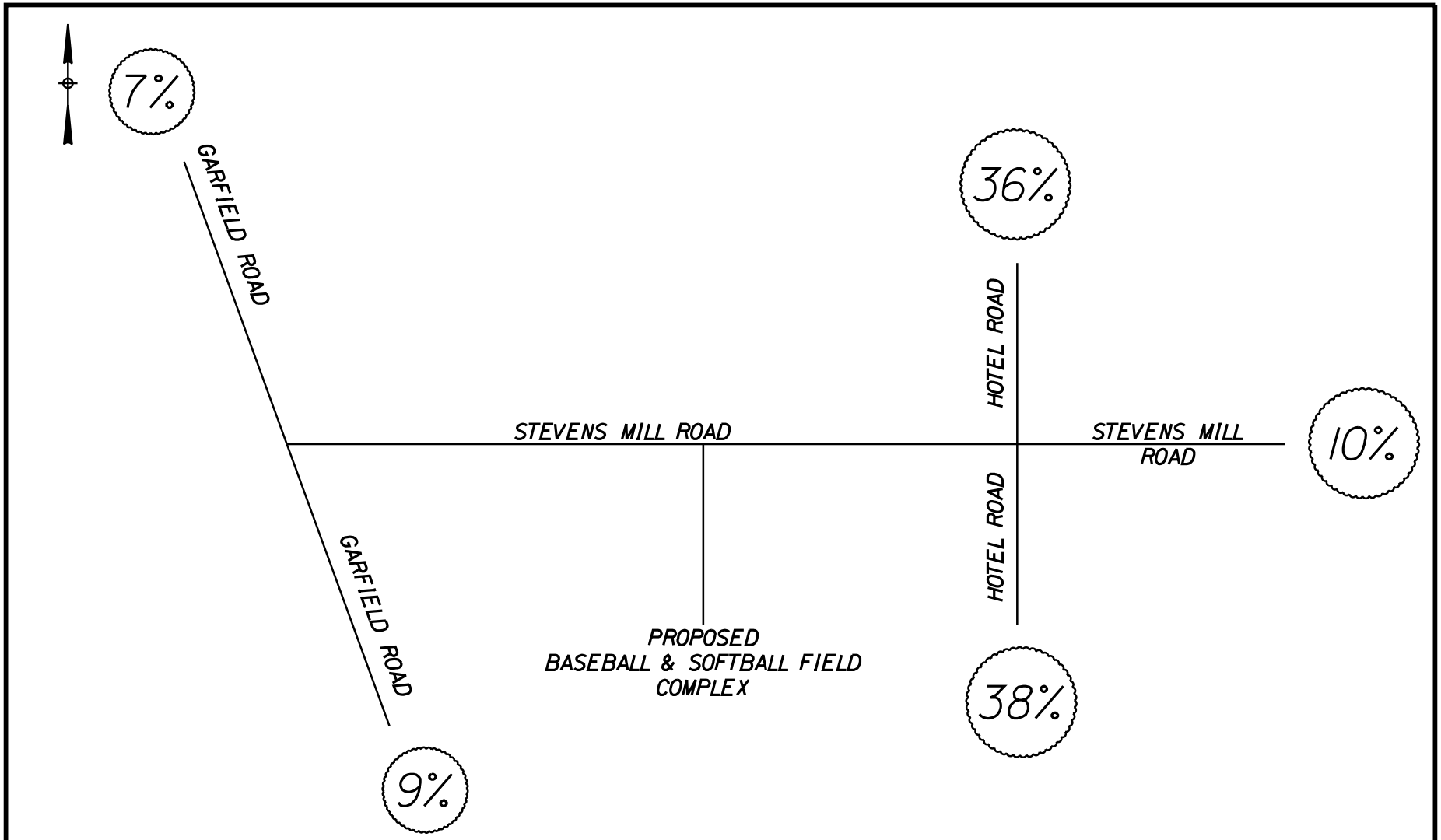
H. TRIP ASSIGNMENT

Preliminary vehicle trip assignment models were prepared for the proposed development based upon annual average daily traffic (AADT) patterns provided by MaineDOT's Public Map Viewer at Hotel Road and Garfield Road at the intersections with Stevens Mill Road. The reported AADT's and segments are as follows:

Average Annual Daily Traffic

Approach	AADT
Hotel Road (South Approach)	**6399**
Hotel Road (North Approach)	**6091**
Stevens Mill Road (East Approach)	**1773**
Garfield Road (North Approach)	**1234**
Garfield Road (South Approach)	**1508**

Applying the AADT's, Figure 1, attached at the end of Section 1 depicts the percentage site trip distribution for trips entering and exiting the proposed development. Figure 2 illustrates the site trip assignment following the defined distribution.

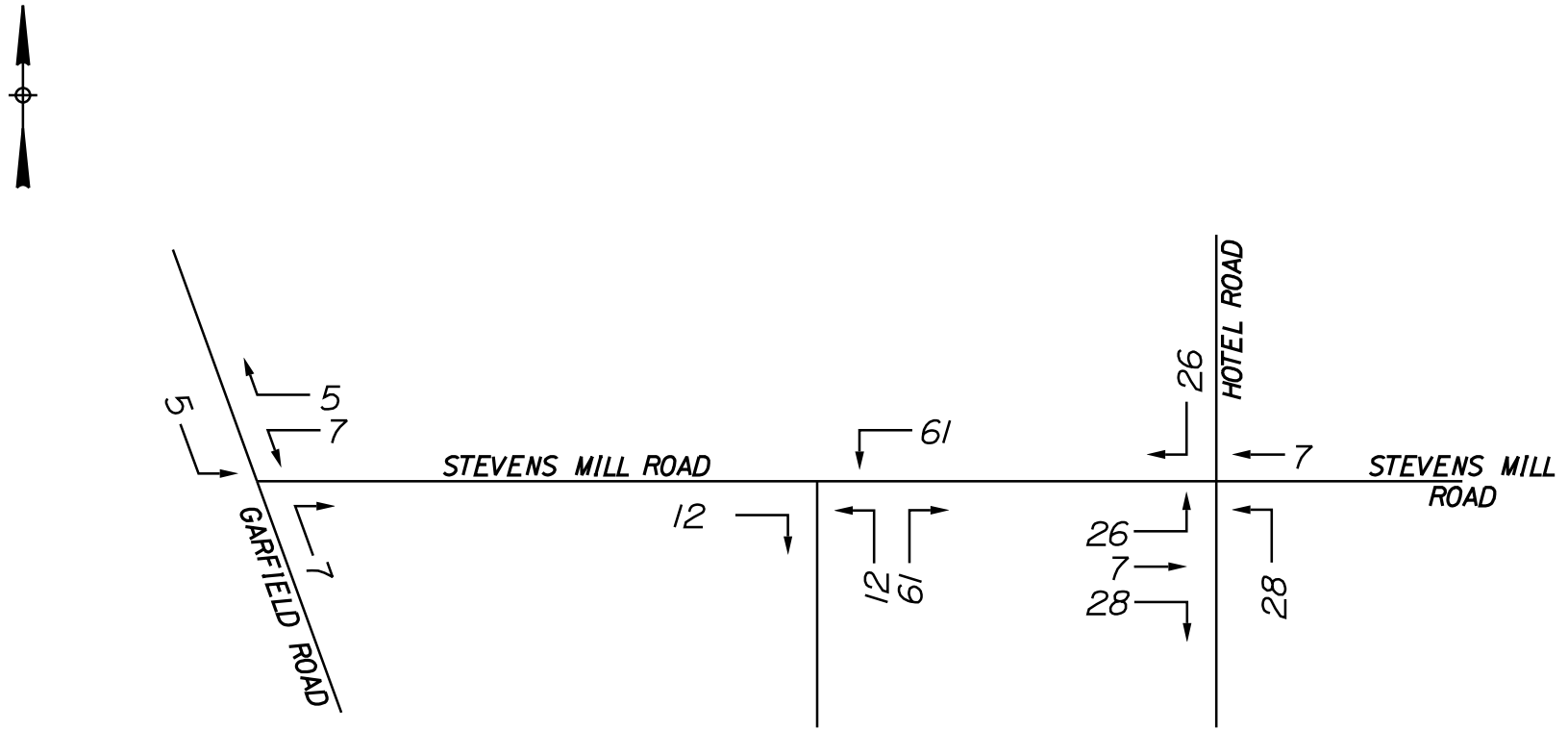


SITE TRIP ASSIGNMENT
(PERCENT DISTRIBUTION)

FIGURE 1

BASEBALL & SOFTBALL FIELD COMPLEX
AUBURN, ME
DATE: DEC., 2022

Barton & Loguidice



SITE TRIP ASSIGNEMENT
SATURDAY PEAK HOUR

FIGURE 2

BASEBALL & SOFTBALL FIELD COMPLEX
AUBURN, ME
DATE: DEC., 2022

Barton & Loguidice

Section 2

SECTION 2

TRAFFIC ACCIDENTS

The Maine Department of Transportation's (MaineDOT) Accident Records Section provided the latest three-year (2019 through 2021) crash data for the section of Stevens Mill Road between and including the intersection at Garfield Road, easterly to the intersection at Hotel Road for a distance of approximately 0.72 miles. Their report is presented as follows.

2019 -2021 Crash Report Summary
(Stevens Mill Road – Garfield Road to Hotel Road)

Location	Total Crashes	Critical Rate Factor
1. Stevens Mill Road @ Hotel Road	**9**	**2.64**
2. Stevens Mill Road @ Cedarwood Road	0	0
3. Stevens Mill Road Non-Intersection	0	0
4. Stevens Mill Road @ Sunderland Drive	0	0
5. Stevens Mill Road @Sprucewood Road	1	1.03
6. Stevens Mill Road @Garfield Road	0	0
7. Stevens Mill Road @Boulder Drive	0	0
8. Stevens Mill Road btw. Garfield Road and Sunderland Drive	0	0
9. Stevens Mill Road btw. Sunderland Drive and Boulder Drive	1	0.57
10. Stevens Mill Road btw. Boulder Drive and Non-Intersection	1	1.21
11. Stevens Mill Road btw. Non-Intersection and Cedarwood Road	1	0
12. Stevens Mill Road btw. Cedarwood Road and Sprucewood Road	1	0.31
13. Stevens Mill Road btw. Sprucewood Road and Hotel Road	0	0

The MDOT considers any roadway intersection or segment a high crash location if both of the following criteria are met:

- ***8 or more accidents and,***
- ***A Critical Rate Factor greater than 1.00***

As the data presented in the chart shows, Location #1, the intersection of Stevens Mill Road and Hotel Road, meets both of MaineDOT's criteria for a high crash location (HCL) with 9 crashes and a critical rate factor (CRF) of 2.64.

At the intersection of Stevens Mill Road and Hotel Road; both Stevens Mill Road approaches are controlled via a stop sign and overhead flashing red beacons on each approach. Hotel Road is free flowing with an overhead flashing yellow beacon.

MaineDOT's Safety Office has prepared a detailed vehicle collision diagram for the HCL, illustrating the cause and location of each crash. The collision diagram shows that out of the 9 total crashes, eight (8) were *"angle crashes"* with the contributing cause being "*failure to yield"*. Six (6) of the "*failure to yield"* angle crashes were caused by vehicles on the free-flowing Hotel Road striking vehicles in the intersection which were exiting or entering the Stevens Mill Road approaches. The remaining 2 "*failure to yield"* crashes were caused by vehicles exiting the western Stevens Mill Road approach and striking vehicles southbound on Hotel Road. The remaining one (1) non- failure to yield crash is attributed to a driver making an "*improper turn"* and striking a stop sign.

TRAFFIC ACCIDENTS (Continued)

The high crash location at the intersection of Stevens Mill Road and Hotel Road was field reviewed to further evaluate the HCL and provide possible mitigation measures. Based upon our observations we are proposing the following reccomendations:

1. Paint 24-inch stop bars on both Stevens Mill Road approaches.

2. Clear trees/shrubbery inside the southeast quadrant of Hotel Road and Stevens Mill Road.

3. If safety conditions persist at this location the Community may want to consider operating the intersection as a “all-way” stop control location.


Search...
2607
GREENWOOD RD
EDGEWOOD RD
3887
HELEN ST
2600
2605
2606
2604
ALDERWOOD RD
2603
COOPER LN
4770
WINDEMERE WAY
4734
SUNDERLAND DR
BOULDER DR
CEDARWOOD RD
SPRUCEWOOD RD
HOWE ST
2593
Stevens Mill
202292
3886
2594
2591
2592
2327
AUBURN
HOTEL RD
2324
2308
MOUNT APATITE RD
4567
ANITA AVE
GARFIELD RD
2300
3885
Scale: 1:5231
300ft

Maine Department Of Transportation - Office of Safety, Crash Records Section

Crash Summary Report

Report Selections and Input Parameters

REPORT SELECTIONS

☑ **Crash Summary I** ☐ **Section Detail** ☑ **Crash Summary II** ☐ **1320 Public** ☐ **1320 Private** ☐ **1320 Summary**

REPORT DESCRIPTION

Auburn
Stevens Mills Rd from Garfield Rd to Hotel Rd

REPORT PARAMETERS

Year 2019, Start Month 1 through Year 2021 End Month: 12

Route: **0110376**	Start Node: **2308**	Start Offset: **0**	☐ **Exclude First Node**
	End Node: **3886**	End Offset: **0**	☐ **Exclude Last Node**

Crash Summary I

Nodes

Node	Route - MP	Node Description	U/R	Total Crashes	Injury Crashes K	A	B	C	PD	Percent Injury	Annual M Ent-Veh	Crash Rate	Critical Rate	CRF
3886	0110376 - 0.89	Int of HOTEL RD STEVENS MILL RD	2	9	0	0	1	2	6	33.3	2.951	1.02	0.39	2.64
											Statewide Crash Rate:	0.13		
2592	0110376 - 0.47	Int of CEDARWOOD RD STEVENS MILL RD	2	0	0	0	0	0	0	0.0	0.568	0.00	0.51	0.00
											Statewide Crash Rate:	0.12		
2591	0110376 - 0.43	Non Int STEVENS MILL RD	2	0	0	0	0	0	0	0.0	0.396	0.00	0.52	0.00
											Statewide Crash Rate:	0.12		
2324	0110376 - 0.23	Int of STEVENS MILL RD SUNDERLAND DR	2	0	0	0	0	0	0	0.0	0.425	0.00	0.52	0.00
											Statewide Crash Rate:	0.12		
2593	0110376 - 0.67	Int of SPRUCEWOOD RD, STEVENS MILL RD	2	1	0	0	0	0	1	0.0	0.645	0.52	0.50	1.03
											Statewide Crash Rate:	0.12		
2308	0110376 - 0.17	Int of GARFIELD RD MOUNT APATITE RD STEVENS MILL	2	0	0	0	0	0	0	0.0	0.722	0.00	0.50	0.00
											Statewide Crash Rate:	0.12		
2327	0110376 - 0.37	Int of BOULDER DR STEVENS MILL RD	2	0	0	0	0	0	0	0.0	0.353	0.00	0.52	0.00
											Statewide Crash Rate:	0.12		
Study Years:	3.00	**NODE TOTALS:**		10	0	0	1	2	7	30.0	6.060	0.55	0.31	1.77

Crash Summary I

Sections

Start Node	End Node	Element	Offset Begin - End	Route - MP	Section Length	U/R	Total Crashes	Injury Crashes K	A	B	C	PD	Percent Injury	Annual HMVM	Crash Rate	Critical Rate	CRF
2308	2324	173693	0 - 0.06	0110376 - 0.17	0.06	2	0	0	0	0	0	0	0.0	0.00024	0.00	1456.69	0.00
Int of GARFIELD RD STEVENS MILL RD				MOUNT APATITE RD RD INV 01 10376											Statewide Crash Rate: 351.28		
2324	2327	5086884	0 - 0.14	0110376 - 0.23	0.14	2	1	0	0	0	0	1	0.0	0.00045	732.94	1291.90	0.00
Int of STEVENS MILL RD				SUNDERLAND DR RD INV 01 10376											Statewide Crash Rate: 351.28		
2327	2591	5086886	0 - 0.06	0110376 - 0.37	0.06	2	1	0	0	0	0	1	0.0	0.00018	1811.99	1500.47	1.21
Int of BOULDER DR				STEVENS MILL RD RD INV 01 10376											Statewide Crash Rate: 351.28		
2591	2592	174422	0 - 0.04	0110376 - 0.43	0.04	2	0	0	0	0	0	0	0.0	0.00019	0.00	1493.23	0.00
Non Int STEVENS MILL RD				RD INV 01 10376											Statewide Crash Rate: 351.28		
2592	2593	174423	0 - 0.20	0110376 - 0.47	0.20	2	1	0	0	0	1	0	100.0	0.00100	332.09	1065.07	0.00
Int of CEDARWOOD RD				STEVENS MILL RD RD INV 01 10376											Statewide Crash Rate: 351.28		
2593	3886	174426	0 - 0.22	0110376 - 0.67	0.22	2	0	0	0	0	0	0	0.0	0.00153	0.00	954.51	0.00
Int of SPRUCEWOOD RD, STEVENS MILL RD				RD INV 01 10376											Statewide Crash Rate: 351.28		
Study Years: 3.00				**Section Totals:**	0.72		3	0	0	0	1	2	33.3	0.00361	277.08	769.09	0.36
				Grand Totals:	0.72		13	0	0	1	3	9	30.8	0.00361	1200.66	914.08	1.31

Crash Summary

Section Details

Start Node	End Node	Element	Offset Begin - End	Route - MP	Total Crashes	Injury Crashes K	A	B	C	PD	Crash Report	Crash Date	Crash Mile Point	Injury Degree
2308	2324	173693	0 - 0.06	0110376 - 0.17	0	0	0	0	0	0				
2324	2327	5086884	0 - 0.14	0110376 - 0.23	1	0	0	0	0	1	2019-60669	08/05/2019	0.35	PD
2327	2591	5086886	0 - 0.06	0110376 - 0.37	1	0	0	0	0	1	2019-3218	01/28/2019	0.42	PD
2591	2592	174422	0 - 0.04	0110376 - 0.43	0	0	0	0	0	0				
2592	2593	174423	0 - 0.20	0110376 - 0.47	1	0	0	0	1	0	2020-11818	05/16/2020	0.63	C
2593	3886	174426	0 - 0.22	0110376 - 0.67	0	0	0	0	0	0				
				Totals:	3	0	0	0	1	2				

Crash Summary II - Characteristics

Crashes by Day and Hour

	AM												PM													
	Hour of Day																									
Day Of Week	**12**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**Un**	**Tot**
SUNDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MONDAY	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	2	0	1	0	0	0	0	0	0	5
TUESDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
WEDNESDAY	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2
THURSDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
FRIDAY	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
SATURDAY	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	3
Totals	0	0	0	0	0	0	0	1	2	0	1	0	0	1	1	0	3	1	1	1	1	0	0	0	0	**13**

Vehicle Counts by Type

Unit Type	Total	Unit Type	Total
1-Passenger Car	11	23-Bicyclist	0
2-(Sport) Utility Vehicle	8	24-Witness	2
3-Passenger Van	0	25-Other	0
4-Cargo Van (10K lbs or Less)	0	26-Construction	0
5-Pickup	3	27-Farm Vehicle	0
6-Motor Home	0	**Total**	**25**
7-School Bus	0		
8-Transit Bus	0		
9-Motor Coach	0		
10-Other Bus	0		
11-Motorcycle	0		
12-Moped	1		
13-Low Speed Vehicle	0		
14-Autocycle	0		
15-Experimental	0		
16-Other Light Trucks (10,000 lbs or Less)	0		
17-Medium/Heavy Trucks (More than 10,000 lbs)	0		
18-ATV - (4 wheel)	0		
20-ATV - (2 wheel)	0		
21-Snowmobile	0		
22-Pedestrian	0		

Crash Summary II - Characteristics

Crashes by Driver Action at Time of Crash

Driver Action at Time of Crash	Dr 1	Dr 2	Dr 3	Dr 4	Dr 5	Other	Total
No Contributing Action	1	8	1	0	0	0	10
Ran Off Roadway	0	0	0	0	0	0	0
Failed to Yield Right-of-Way	9	1	0	0	0	0	10
Ran Red Light	0	0	0	0	0	0	0
Ran Stop Sign	0	0	0	0	0	0	0
Disregarded Other Traffic Sign	0	0	0	0	0	0	0
Disregarded Other Road Markings	0	0	0	0	0	0	0
Exceeded Posted Speed Limit	0	0	0	0	0	0	0
Drove Too Fast For Conditions	0	0	0	0	0	0	0
Improper Turn	1	0	0	0	0	0	1
Improper Backing	1	0	0	0	0	0	1
Improper Passing	0	0	0	0	0	0	0
Wrong Way	0	0	0	0	0	0	0
Followed Too Closely	0	0	0	0	0	0	0
Failed to Keep in Proper Lane	0	0	0	0	0	0	0
Operated Motor Vehicle in Erratic, Reckless, Careless, Negligent or Aggressive Manner	0	0	0	0	0	0	0
Swerved or Avoided Due to Wind, Slippery Surface, Motor Vehicle, Object, Non-Motorist in Roadway	0	0	0	0	0	0	0
Over-Correcting/Over-Steering	0	0	0	0	0	0	0
Other Contributing Action	1	0	0	0	0	0	1
Unknown	0	0	0	0	0	0	0
Total	**13**	**9**	**1**	**0**	**0**	**0**	**23**

Crashes by Apparent Physical Condition And Driver

Apparent Physical Condition	Dr 1	Dr 2	Dr 3	Dr 4	Dr 5	Other	Total
Apparently Normal	13	9	1	0	0	0	23
Physically Impaired	0	0	0	0	0	0	0
Emotional(Depressed, Angry, Disturbed, etc.)	0	0	0	0	0	0	0
Ill (Sick)	0	0	0	0	0	0	0
Asleep or Fatigued	0	0	0	0	0	0	0
Under the Influence of Medications/Drugs/Alcohol	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
Total	**13**	**9**	**1**	**0**	**0**	**0**	**23**

Driver Age by Unit Type

Age	Driver	Bicycle	SnowMobile	Pedestrian	ATV	Total
09-Under	0	0	0	0	0	0
10-14	0	0	0	0	0	0
15-19	4	0	0	0	0	4
20-24	3	0	0	0	0	3
25-29	0	0	0	0	0	0
30-39	2	0	0	0	0	2
40-49	7	0	0	0	0	7
50-59	1	0	0	0	0	1
60-69	5	0	0	0	0	5
70-79	1	0	0	0	0	1
80-Over	0	0	0	0	0	0
Unknown	0	0	0	0	0	0
Total	**23**	**0**	**0**	**0**	**0**	**23**

Crash Summary II - Characteristics

Most Harmful Event

Most Harmful Event	Total	Most Harmful Event	Total
1-Overturn / Rollover	0	38-Other Fixed Object (wall, building, tunnel, etc.)	0
2-Fire / Explosion	0	39-Unknown	1
3-Immersion	0	40-Gate or Cable	0
4-Jackknife	0	41-Pressure Ridge	0
5-Cargo / Equipment Loss Or Shift	0	**Total**	**23**
6-Fell / Jumped from Motor Vehicle	0		
7-Thrown or Falling Object	0		
8-Other Non-Collision	0		
9-Pedestrian	0		
10-Pedalcycle	0		
11-Railway Vehicle - Train, Engine	0		
12-Animal	0		
13-Motor Vehicle in Transport	20		
14-Parked Motor Vehicle	0		
15-Struck by Falling, Shifting Cargo or Anything Set in Motion by Motor Vehicle	0		
16-Work Zone / Maintenance Equipment	0		
17-Other Non-Fixed Object	0		
18-Impact Attenuator / Crash Cushion	0		
19-Bridge Overhead Structure	0		
20-Bridge Pier or Support	0		
21-Bridge Rail	0		
22-Cable Barrier	0		
23-Culvert	0		
24-Curb	0		
25-Ditch	0		
26-Embankment	0		
27-Guardrail Face	0		
28-Guardrail End	0		
29-Concrete Traffic Barrier	0		
30-Other Traffic Barrier	0		
31-Tree (Standing)	0		
32-Utility Pole / Light Support	0		
33-Traffic Sign Support	1		
34-Traffic Signal Support	0		
35-Fence	0		
36-Mailbox	0		
37-Other Post, Pole, or Support	1		

Injury Data

Severity Code	Injury Crashes	Number Of Injuries
K	0	0
A	0	0
B	1	2
C	3	4
PD	9	0
Total	**13**	**6**

Road Character

Road Grade	Total
1-Level	11
2-On Grade	1
3-Top of Hill	1
4-Bottom of Hill	0
5-Other	0
Total	**13**

Traffic Control Devices

Traffic Control Device	Total
1-Traffic Signals (Stop & Go)	0
2-Traffic Signals (Flashing)	1
3-Advisory/Warning Sign	0
4-Stop Signs - All Approaches	0
5-Stop Signs - Other	9
6-Yield Sign	0
7-Curve Warning Sign	0
8-Officer, Flagman, School Patrol	0
9-School Bus Stop Arm	0
10-School Zone Sign	0
11-R.R. Crossing Device	0
12-No Passing Zone	0
13-None	3
14-Other	0
Total	**13**

Light

Light Condition	Total
1-Daylight	11
2-Dawn	0
3-Dusk	0
4-Dark - Lighted	1
5-Dark - Not Lighted	1
6-Dark - Unknown Lighting	0
7-Unknown	0
Total	**13**

Crash Summary II - Characteristics

Crashes by Year and Month

Month	2019	2020	2021	Total
JANUARY	1	0	0	1
FEBRUARY	0	0	0	0
MARCH	0	1	0	1
APRIL	0	1	1	2
MAY	1	2	0	3
JUNE	0	0	0	0
JULY	0	0	0	0
AUGUST	1	0	0	1
SEPTEMBER	1	0	2	3
OCTOBER	0	0	0	0
NOVEMBER	1	0	0	1
DECEMBER	0	1	0	1
Total	**5**	**5**	**3**	**13**

Report is limited to the last 10 years of data.

Crash Summary II - Characteristics

Crashes by Crash Type and Type of Location

Crash Type	Straight Road	Curved Road	Three Leg Intersection	Four Leg Intersection	Five or More Leg Intersection	Driveways	Bridges	Interchanges	Other	Parking Lot	Private Way	Cross Over	Railroad Crossing	Traffic Circle-Roundabout	Total
Object in Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rear End - Sideswipe	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Head-on - Sideswipe	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Intersection Movement	0	0	0	8	0	1	0	0	0	0	0	0	0	0	9
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Train	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Went Off Road	1	0	1	1	0	0	0	0	0	0	0	0	0	0	3
All Other Animal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycle	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jackknife	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rollover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fire	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Submersion	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thrown or Falling Object	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bear	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Deer	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Moose	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Turkey	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	**2**	**0**	**1**	**9**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**13**

Crash Summary II - Characteristics

Crashes by Weather, Light Condition and Road Surface

Weather Light	Dry	Ice/Frost	Mud, Dirt, Gravel	Oil	Other	Sand	Slush	Snow	Unknown	Water (Standing, Moving)	Wet	Total
Blowing Sand, Soil, Dirt												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Blowing Snow												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Clear												
Dark - Lighted	1	0	0	0	0	0	0	0	0	0	0	1
Dark - Not Lighted	1	0	0	0	0	0	0	0	0	0	0	1
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	8	0	0	0	0	0	0	0	0	0	0	8
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Cloudy												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	2	0	0	0	0	0	0	0	0	0	1	3
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0

Crash Summary II - Characteristics

Crashes by Weather, Light Condition and Road Surface

Weather Light	Dry	Ice/Frost	Mud, Dirt, Gravel	Oil	Other	Sand	Slush	Snow	Unknown	Water (Standing, Moving)	Wet	Total
Fog, Smog, Smoke												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Other												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Rain												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Severe Crosswinds												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0

Crash Summary II - Characteristics

Crashes by Weather, Light Condition and Road Surface

Weather / Light	Dry	Ice/Frost	Mud, Dirt, Gravel	Oil	Other	Sand	Slush	Snow	Unknown	Water (Standing, Moving)	Wet	Total
Sleet, Hail (Freezing Rain or Drizzle)												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Snow												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	12	0	0	0	0	0	0	0	0	0	1	13

H. C. L.
CRASH COLLISION DIAGRAM
DATA PACKAGE

COUNTY: **ANDROSCOGGIN** TOWN: **AUBURN**

LOW NODE: **3886** HIGH NODE: **0000** REGION: **1** U/R: **URBAN**

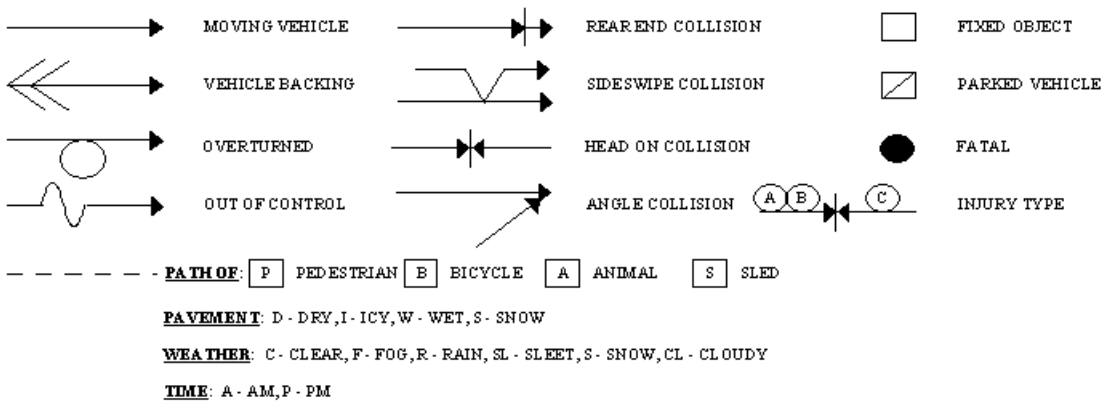
DESCRIPTION: **Jct of Stevens Mills Rd & Hotel Rd**

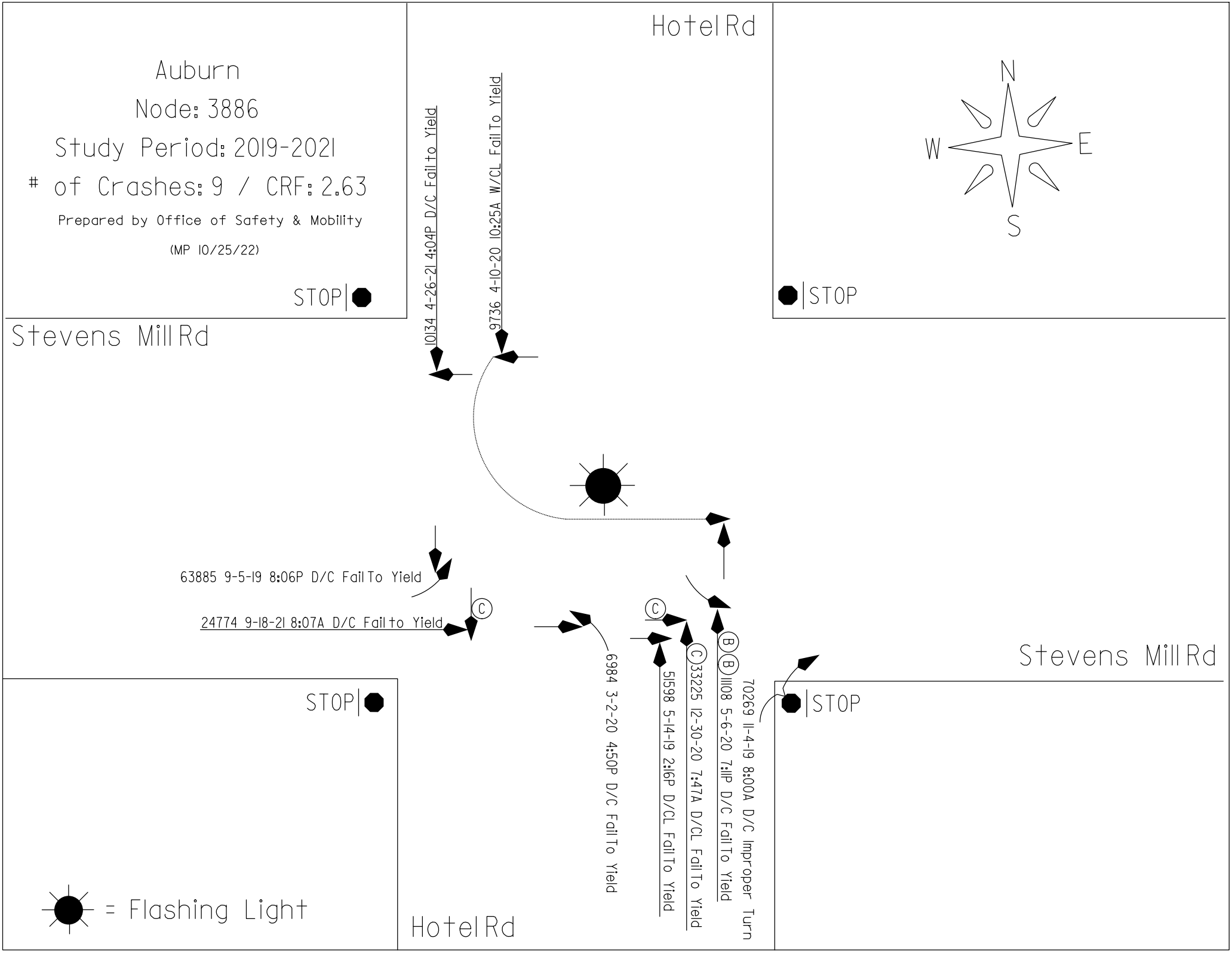
RTE # / RD #: **0110190** DATE DRAWN: **10/25/2022** DRAWN BY: **Michelle**

STUDY FROM: **1/1/2019** STUDY TO: **12/31/2021**

CRASH RATE: **1.02** CRF: **2.63** % INJURY: **33.3** TOTAL CRASHES: **9**

LEGEND




Auburn
Node: 3886
Study Period: 2019-2021
# of Crashes: 9 / CRF: 2.63
Prepared by Office of Safety & Mobility
(MP 10/25/22)
STOP
Hotel Rd
10134 4-26-21 4:04P D/C Fail to Yield
9736 4-10-20 10:25A W/CL Fail To Yield
N
W
E
S
STOP
Stevens Mill Rd
63885 9-5-19 8:06P D/C Fail To Yield
24774 9-18-21 8:07A D/C Fail to Yield
C
6984 3-2-20 4:50P D/C Fail To Yield
C
C
33225 12-30-20 7:47A D/CL Fail To Yield
51598 5-14-19 2:16P D/CL Fail To Yield
B
B
11108 5-6-20 7:11P D/C Fail To Yield
70269 11-4-19 8:00A D/C Improper Turn
Stevens Mill Rd
STOP
STOP
= Flashing Light
Hotel Rd

Section 3

SECTION 3

A. ENTRANCE/EXIT LOCATION

The proposed complex will be accessed via a proposed 18-foot-wide bi-directional internal roadway, connecting to the southern side of Stevens Mill Road, road 390-feet east of Sprucewood Road, and extending south along the western portion of the parcel. On-site parking will be provided along the internal roadway, on the western side, via 3 parking lots and 6 additional on-street parking spaces. Access to the ball fields from the parking lots and on street parking spaces will be provided via crosswalks at each of the lots, connecting to a sidewalk which runs adjacent to the internal roadway, down to the major league baseball field. The proposed site plan and design are illustrated on the plan titled "*Auburn Suburban Baseball & Softball*" prepared by Jones Associates, INC., signed and stamped on January 6, 2023, enclosed at the end of the application.

B. ENTRANCE AND EXIT PLAN VIEW

The site will be accessed via a proposed 18-foot-wide entrance connecting directly onto the southern side of Stevens Mill Road, located approximately 390-feet east of Sprucewood Road.

Sight distance field measurements recorded at the proposed site entrance looking left and right directionally onto Stevens Mill Road indicate that current sight distance exceeds the requirements based on a posted speed limit of 25mph. Looking left, we observed an unobstructed sight distance in excess of 250-feet. Looking right, an unobstructed sight distance was observed to the intersection at Hotel Road for a distance greater than 800-feet.

C. ENTRANCE/EXIT DESIGN

The proposed project, including any required off-site improvements, will be designed, and constructed as directed by the City of Auburn.

Section 4

SECTION 4

TITLE, RIGHT OR INTEREST

A QUITCLAIM DEED, signed and dated December 30th, 2019, provides documentation of Auburn Suburban Baseball and Softball ownership of the property located in the southwest quadrant of Stevens Mill Road and Hotel Road in the City of Auburn.

Bk 10273 Ps149 #133
01-02-2020 @ 02:53p

NOT AN OFFICIAL COPY

QUITCLAIM DEED WITH COVENANT

NOT AN OFFICIAL COPY

HELEN R. FOSS and **ROBERT E. FOSS**, husband and wife, of Auburn, County of Androscoggin, State of Maine, for consideration paid, **grant** to **AUBURN SUBURBAN BASEBALL AND SOFTBALL**, a Maine non-profit corporation with a registered address of 45 Rosewood Road, Auburn, ME 04210, with **quitclaim covenant**, real property situated on **both Hotel and Stevens Mill Road** in the **City of Auburn**, County of Androscoggin, State of Maine, described in "**EXHIBIT A**" attached hereto.

The above-described premises are conveyed **subject to the restriction** that these premises shall be used primarily for youth outdoors recreational purposes including playing, coaching and competing at baseball and softball in the greater community of Auburn, Maine. This restriction shall prohibit the sale of these premises or any portion of it to any person or entity that will not use these premises as required by this paragraph. The grantee, its officers and assigns agree that grantors, their personal representative, heirs and assigns may enforce or modify the terms of this restriction with the grantee, its officers or assigns being liable for all costs of said enforcement or change, including reasonable attorney's fees. By accepting delivery of this deed, Auburn Suburban Baseball and Softball acknowledges, accepts and agrees to the terms of the above-stated restriction.

MAINE REAL ESTATE TRANSFER TAX PAID

WITNESS our hands and seals this 30th day of December, 2019.

Witness

Witness

HELEN R. FOSS

ROBERT E. FOSS

AUBURN SUBURBAN BASEBALL AND SOFTBALL

Witness

By: **Travis Bashaw**, its President

STATE OF MAINE
ANDROSCOGGIN, SS.

December 30, 2019

Then personally appeared before me the above-named **Helen R. Foss** and acknowledged the foregoing instrument to be her free act and deed.

Attorney-at-Law/Notary Public

Printed Name:

ANITA L. DIONNE
Notary Public-Maine
My Commission Expires
October 05, 2021

"EXHIBIT A"

NOT AN OFFICIAL COPY

A certain parcel of land abutting Stevens Mill Road and Hotel Road in the City of Auburn, County of Androscoggin State of Maine, described as follows:

NOT AN OFFICIAL COPY

1. Beginning at an iron pin at the intersection of the southerly line of Stevens Mill Road and the Westerly line of Hotel Road; thence South fourteen degrees fifty-three minutes forty-nine seconds West (S 14° 53' 49" W) along said westerly line of Hotel Road to an iron pin marking the northeasterly corner of land now or formerly of Henry Bellavance as described in a deed recorded in Book 1089, Page 60, in the Androscoggin County Registry of Deeds;

2. Thence North seventy-five degrees six minutes eleven seconds West (N 75° 06' 11" W) along the northerly line of said Henry Bellavance one hundred seventy-three (173') feet to an iron pin;

3. Thence South fourteen degrees fifty-three minutes forty-nine seconds West (S 14° 53' 49" W) along the westerly line of said Henry Bellavance two hundred (200') feet to an iron pin;

4. Thence North seventy-five degrees seven minutes ten seconds West (N 75° 07' 10" W) one thousand twenty-eight and forty-four hundredths (1028.44') feet to an iron pin on the line of William H. Marshall et al;

5. Thence North twenty-one degrees twenty-one minutes eleven seconds West (N 21° 21' 11" W) five hundred fifty and twenty-six hundredths (550.26') feet to an iron pin;

6. Thence North fifty-four degrees twenty-four minutes thirty-seven seconds East (N 54° 24' 37" E) six hundred thirty-five and fifty-seven hundredths (635.57') feet to an iron pin on the line of Roland Houle;

7. Thence South seventy-six degrees eleven minutes East (S 76° 11' E) two hundred thirty-one and ninety-five hundredths (231.95') feet to an iron pin;

8. Thence North thirteen degrees forty-nine minutes East (N 13° 49' E) one hundred fifty-one and eighty-six hundredths (151.86') feet to an iron pin on the southerly line of Stevens Mill Road;

9. Thence South seventy-six degrees eleven minutes East (S 76° 11' E) along said southerly line of Stevens Mill Road ninety-seven and thirty-four hundredths (97.34') feet to an iron pin;

10. Thence South sixty-six degrees forty-three minutes thirteen seconds East (S 66° 43' 13' E) eight hundred four and sixty-six hundredths (804.66') feet along said southerly line of Stevens Mill Road to the point of beginning.

This parcel comprises a total land area of 30.1 acres.

FOR SOURCE OF TITLE see a Quitclaim Deed with Covenant from Land Tree Corp. to Robert E. Foss and Helen R. Foss dated November 21, 2019, recorded in said Registry of Deeds in Book 10243, Page 307.

Section 5

SECTION 5

PUBLIC OR PRIVATE RIGHTS-OF-WAY

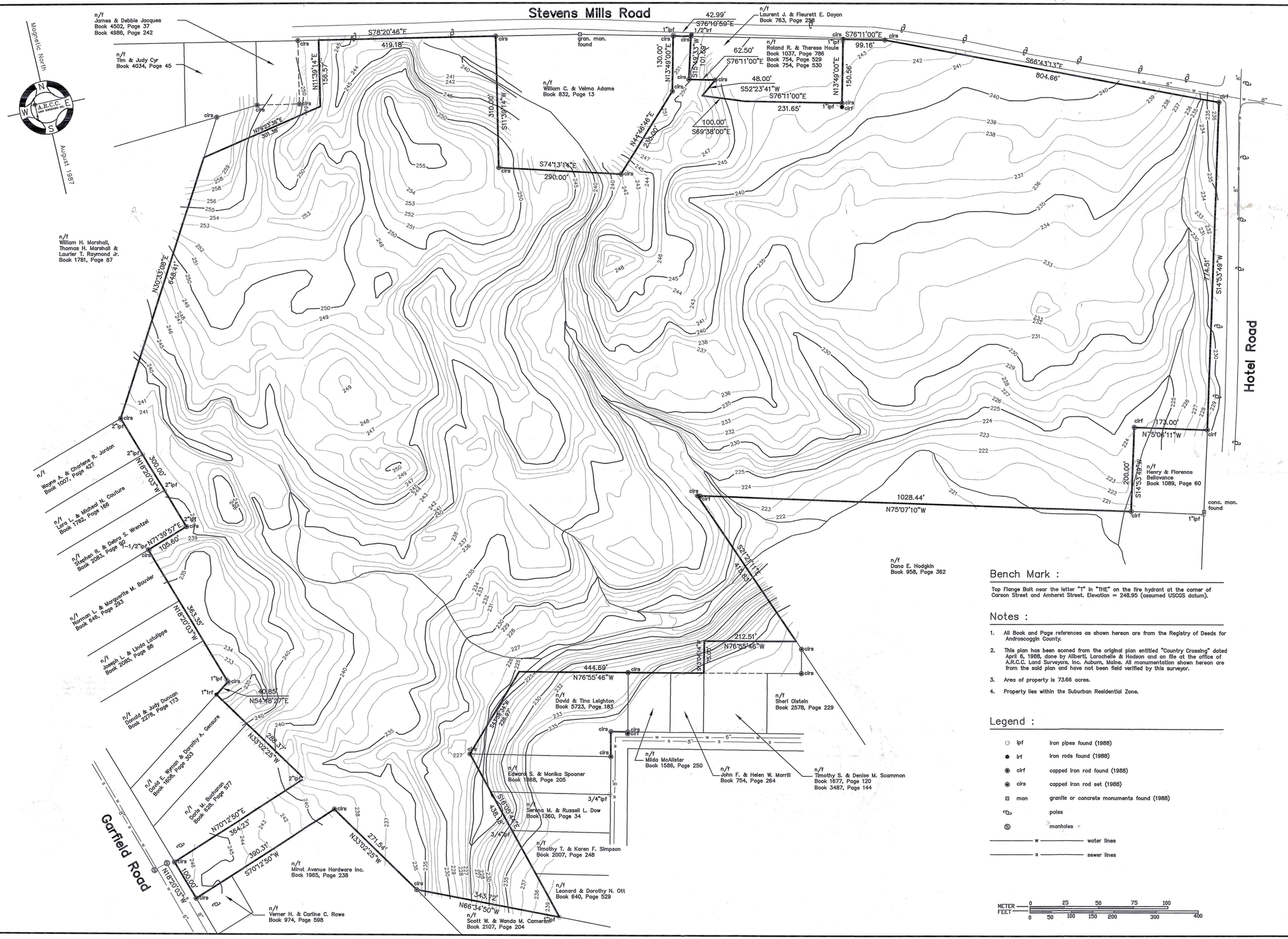
There are no known rights-of-way or easements that encumber the existing property.

Section 6

SECTION 6

SCHEDULE

Auburn Suburban Baseball and Softball, is anticipating start of construction during summer 2023 with a spring 2024 completion.



SEAL: STATE OF MAINE ★ ROBERT W. GAGNON JR. 2177 ★ REGISTERED LAND SURVEYOR

NO.	REVISIONS	DATE	INT.

A.R.C.C. LAND SURVEYORS INC.
P.O. BOX 2294
AUBURN, MAINE 04212-0294
ARTHUR W. MONTANA PLS # 492
ROBERT W. GAGNON PLS # 2177
PHONE 782-3685, FAX 786-2862

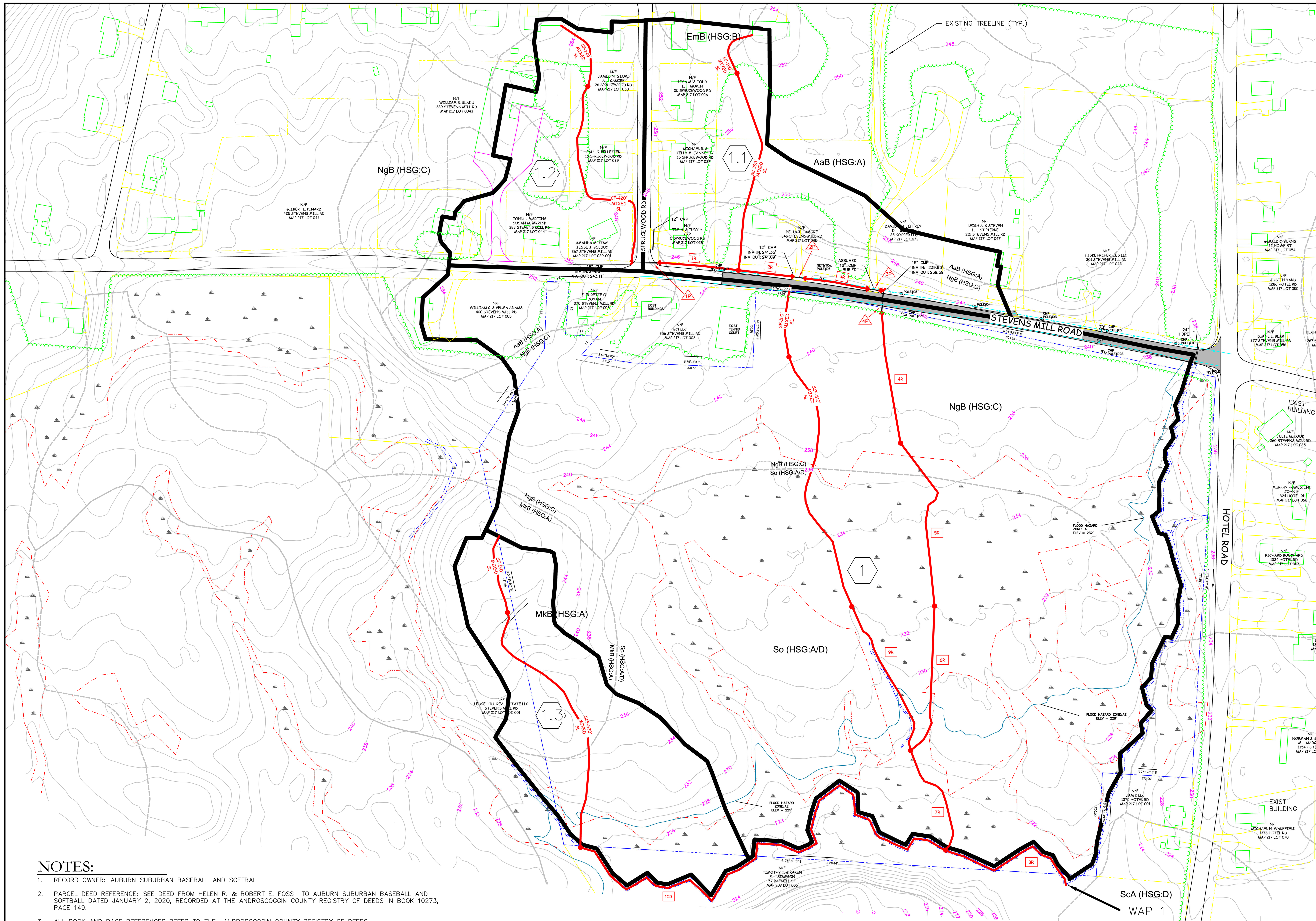
JOB TITLE : **Robert Foss**
Hotel, Garfield, & Stevens Mill Roads
Androscoggin County Auburn, Maine 04210

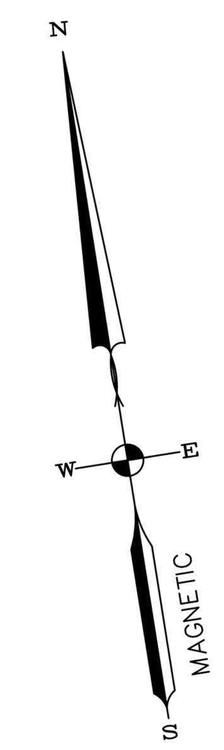
DRAWING TITLE : Property Plan and Topographical Plan of Existing Conditions

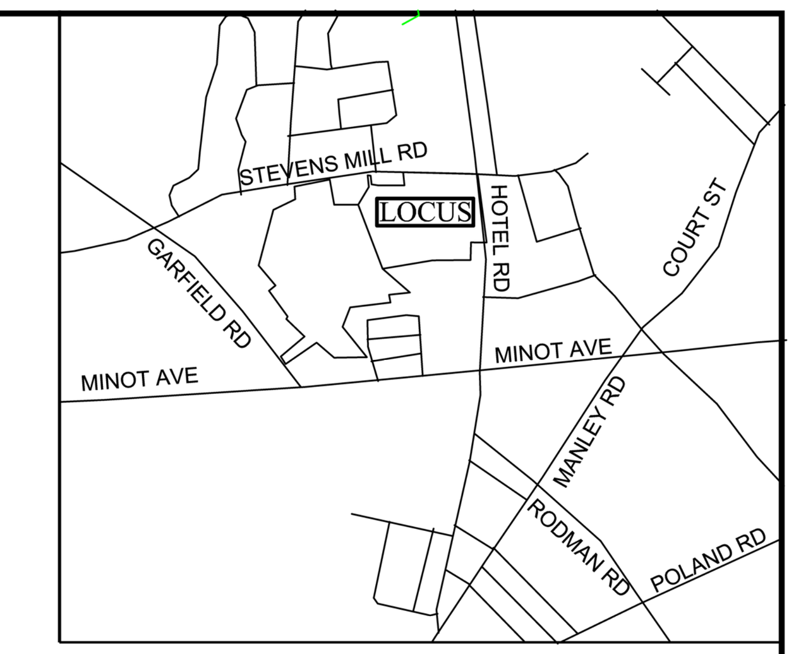
FIELD BK.	JOB DISK :	ROT. ANG.	DRW.BY :	CKD.BY :	SCALE :	DATE :
466	5	12-52-50	R.W.G.	A.W.M.	1"=100'	June 11, 2007

DRAWING NO. One of

JOB NO. 07-019







LOCATION PLAN

SOILS LEGEND

NgB: NINIGRET FINE SANDY LOAM, 0 TO 8 PERCENT
HYDROLOGIC SOIL GROUP:C

So: SCARBORO FINE SANDY LOAM
HYDROLOGIC SOIL GROUP: A/D

MkB:MERRIMAC FINE SANDY LOAM, 0 TO 8 PERCENT SLOPES
HYDROLOGIC SOIL GROUP:A

AaB:ADAMS LOAMY SAND, 0 TO 8 PERCENT SLOPES
HYDROLOGIC SOIL GROUP:A

EmB: ELMWOOD FINE SANDY LOAM, 2 TO 8 PERCENT SLOPES
HYDROLOGIC SOIL GROUP:B

WATERSHED LEGEND

- WATERSHED BOUNDARY
- SOIL BOUNDARY
- FLOWPATH

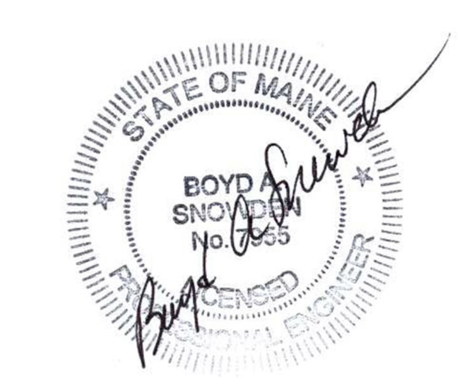
LEGEND

- SUBJECT BOUNDARY LINE
- ABUTTER OR RIGHT OF WAY LINE
- STONE WALL
- WETLANDS
- N/F — NOW OR FORMERLY
- 000/000 — DEED BOOK PAGE REFERENCE
- 000-000 — TAX MAP AND LOT NUMBER
- DECIDUOUS / CONIFEROUS TREE
- MF — GRANITE MONUMENT FOUND
- IPF/IRF/RBF — IRON PIPE/ROD/REBAR FOUND
- DHF — DRILL HOLE FOUND
- CRBS — 5/8" REBAR W/ CAP TO BE SET
- UTILITY POLE
- SEWER MANHOLE
- DRAIN MANHOLE
- CATCH BASINS
- WATER SHUTOFF
- WV — WATER VALVE
- WELL
- GV — GAS VALVE
- HYDRANT
- FENCE – BARBED WIRE
- FENCE – CHAIN LINK
- 240 — EXISTING CONTOURS
- FEMA FLOOD ELEVATION (ZONE AE)
- OVERHEAD WIRES

NOTES:

1. RECORD OWNER: AUBURN SUBURBAN BASEBALL AND SOFTBALL
2. PARCEL DEED REFERENCE: SEE DEED FROM HELEN R. & ROBERT E. FOSS TO AUBURN SUBURBAN BASEBALL AND SOFTBALL DATED JANUARY 2, 2020, RECORDED AT THE ANDROSCOGGIN COUNTY REGISTRY OF DEEDS IN BOOK 10273, PAGE 149.
3. ALL BOOK AND PAGE REFERENCES REFER TO THE ANDROSCOGGIN COUNTY REGISTRY OF DEEDS.
4. PARCEL TAX MAP REFERENCE: CITY OF AUBURN, MAP 217, LOT 2
5. ZONING OF PROPERTY: SR (SUBURBAN–RESIDENTIAL)
6. TOTAL AREA OF PARCEL 29.83 ACRES.
7. ALL BEARINGS ARE REFERENCED TO MAGNETIC NORTH PER PLAN REF. A.
8. ELEVATIONS SHOWN ARE NAVD88 BY OPUS SOLUTION.
9. EXTERIOR BOUNDARY BASED ON PLAN REF. A.
10. WETLAND BOUNDARIES WERE IDENTIFIED AND DELINEATED IN JULY 2007 BY JONES ASSOCIATES INC. ACCORDING TO U.S. ARMY CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL (1987) AND REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHCENTRAL AND NORTHEAST REGION. A DELINEATION REVIEW WAS CONDUCTED BY JONES ASSOCIATES INC. IN APRIL 2018.
11. IN JULY 2007 WETLAND FLAGS WERE LOCATED USING TRIMBLE GLOBAL POSITIONING SYSTEM (GPS) TECHNOLOGY WITH EXPECTED AVERAGE ACCURACY OF SUB–METER. THIS METHOD IS RECOGNIZED BY BOTH STATE AND FEDERAL AGENCIES. HOWEVER, JONES ASSOCIATES INC RECOMMENDS THAT THE WETLAND BOUNDARY BE SURVEYED USING A MORE PRECISE METHOD IF ANY FILL OR REGULATED ACTIVITIES ARE TO BE PERFORMED WITHIN 20 FEET OF THE GPS LOCATED WETLAND. WETLAND FLAGS WERE REMARKED WHERE NEEDED IN APRIL 2018.
12. PLAN REFERENCES:

A.) PROPERTY PLAN AND TOPOGRAPHIC PLAN OF EXISTING CONDITIONS, HOTEL, GARFIELD & STEVENS MILL ROADS, AUBURN, MAINE PREPARED FOR ROBERT FOSS PREPARED BY ARCC LAND SURVEYING INC DATED JUNE 11, 2007



GRAPHIC SCALE
0 50 100 200
1 inch = 100 ft.

EXISTING WATERSHED PLAN

AUBURN SUBURBAN BASEBALL & SOFTBALL

PREPARED FOR:
AUBURN SUBURBAN BASEBALL & SOFTBALL
PO BOX 1615
AUBURN, MAINE

PREPARED BY:
JONES ASSOCIATES INC.
Foresters, Surveyors And Environmental Consultants
280 POLAND SPRING ROAD, AUBURN, MAINE 04210
(207) 241-0235

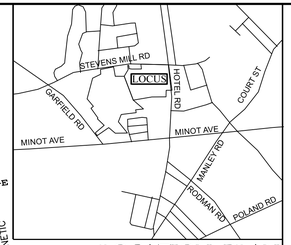
FIELD WORK DATE:
APRIL & MAY 2020

PLAN DATE:
2/6/2023

SCALE: 1"=100'

PROJ. #: 21-011AU

DRAWING INDEX



LOCATION PLAN

LINE	BEARING	DISTANCE
L1	S 52°23'41" W	48.00'
L2	S 76°11'00" E	62.50'
L3	S 15°49'33" W	101.69'
L4	S 76°10'59" E	42.99'
L5	N 13°49'00" E	130.00'

LEGEND

- SUBJECT BOUNDARY LINE
- ABUTTER OR RIGHT OF WAY LINE
- STONE WALL
- STREAM
- STREAM SETBACK
- WETLANDS
- N/F — NOW OR FORMERLY
- 000/000 — DEED BOOK PAGE REFERENCE
- 000-000 — TAX MAP AND LOT NUMBER
- UTILITY POLE
- SEWER MANHOLE
- DRAIN MANHOLE
- CATCH BASINS
- WATER SHUTOFF
- WATER VALVE
- WELL
- GAS VALVE
- HYDRANT
- LIGHT POST
- FENCE – BARBED WIRE
- FENCE – CHAIN LINK
- SETBACK
- PARKING SETBACK
- OVERHEAD WIRES
- FEMA FLOOD ELEVATION
- TREELINE 2021
- PROPOSED WATERLINE
- PROPOSED UNDERGROUND ELECTRIC
- PROPOSED GRAVEL
- PROPOSED PAVEMENT
- PROPOSED ARTIFICIAL FIELD "DIRT"
- PROPOSED ARTIFICIAL FIELD "GRASS"
- PROPOSED ARTIFICIAL FIELD "GRASS"

NOTES:

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12. POSTED SPEED LIMIT ON STEVENS MILL ROAD 25 MPH. SIGHT DISTANCE AS MEASURED BY BARTON & LOGUIDICE BY METHOD OF MEASURING WHEEL.
13. SEPTIC DESIGN BY MICHAEL DEYLING LICENSE SITE EVALUATOR #345 DATED SEPTEMBER 1, 2022.
14. PLAN REFERENCES:

A.) PROPERTY PLAN AND TOPOGRAPHIC PLAN OF EXISTING CONDITIONS, HOTEL, GARFIELD & STEVENS MILL ROADS, AUBURN, MAINE PREPARED FOR ROBERT FOSS PREPARED BY ARCC LAND SURVEYING INC DATED JUNE 11, 2007

GRAPHIC SCALE
0 30 60 120
1 inch = 60 ft.

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	2/9/23	REVISED PARKING D LOCATION	EJ

PROJECT NAME:
SITE PLAN
AUBURN SUBURBAN BASEBALL & SOFTBALL
STEVENS MILL ROAD
AUBURN, MAINE

PREPARED BY:

JONES ASSOCIATES INC.
Foresters, Surveyors And Environmental Consultants
269 POLAND SPRING ROAD, AUBURN, MAINE 04210
(207) 241-0235

PREPARED FOR:
AUBURN SUBURBAN
BASEBALL & SOFTBALL
PO BOX 1615
AUBURN, MAINE

SHEET: S-1

PLAN DATE: FEBRUARY 8, 2023
SCALE: 1"=60'
PROJ. #:21-011AU

SPRUCEWOOD

12" CMP

18" CMP
INV IN: 244.37'
INV OUT: 243.11'

12" CMP
INV IN: 241.35'
INV OUT: 241.09'

ASSUMED
12" CMP
BURIED

15" CMP
INV IN: 239.93'
INV OUT: 239.59'

NET&TCo
POLE#06

POLE#07

POLE#05

POLE#04

POLE#03

POLE#02

POLE#01

24"
HDPE

CMP

STEVENS MILL ROAD

INSTALL STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE DETAIL ON SHEET E-3

INSTALL 4' DIA. PRECAST CATCH BASIN IN ACCORDANCE WITH THE DETAIL IN SHEET E-3
RIM ELEV.: 242.30'
15" CMP INV. IN: 239.66'
15" HDPE INV. OUT: 239.56'

INSTALL 3' DIA. PRECAST CONCRETE OUTLET STRUCTURE IN ACCORDANCE WITH THE DETAIL IN SHEET E-3
RIM ELEV.: 241.00'
15" HDPE INV. IN: 236.60'
6" PVC INV. IN: 236.70'
18" HDPE INV OUT: 236.50'

EXIST
BUILDINGS

EXIST
TENNIS
COURT

INSTALL ~50 LF OF 15" DIA. HDPE SMOOTH BORE CULVERT
INV. IN: 238.00'
INV. OUT: 237.80'

INSTALL RIPRAP PLUNGE POOL SEE DETAIL ON SHEET XX

INSTALL ~50 LF OF 15" DIA. HDPE SMOOTH BORE CULVERT
INV. IN: 238.00'
INV. OUT: 237.80'

INSTALL 200' LINEAR FT OF 15" DIA. HDPE SMOOTH BORE DRAINAGE PIPE AT SLOPE OF 0.0148'/FT

INSTALL APPROX 197' LINEAR FT OF 18" DIA. HDPE SMOOTH BORE DRAINAGE PIPE AT SLOPE OF 0.005'/FT

UGF #1

UGF #2

UGF #3

40' X 20'

20' X 20'
GARAGE

FIELD TURF UNDERDRAIN SEE NOTE 13

+243.5

+243.50

0.5% SLOPE (TYP.)

1' x 12" FLAT DRAIN (TYP.)

+241.78

+243.14

INSTALL 3' DIA. PRECAST CONCRETE OUTLET STRUCTURE IN ACCORDANCE WITH THE DETAIL IN SHEET E-3
RIM ELEV.: 240.5'
12" HDPE INV OUT: 236'

INSTALL APPROX. 132 LF 12" DIA HDPE SMOOTH BORE PIPE SLOPE OF 0.0078'/FT

INSTALL 3' DIA. PRECAST CONCRETE OUTLET STRUCTURE IN ACCORDANCE WITH THE DETAIL IN SHEET E-3
RIM ELEV.: 239.2'
12" HDPE INV OUT: 234.7'

INSTALL 30 FOOT STONE BERM LEVEL SPREADER
ELEV. 238.3', SEE DETAIL SHEET E-2

18" HDPE INV. OUT: 235.5

STABILIZE SLOPES STEEPER THAN 2.5:1 WITH EROSION CONTROL MIX

INSTALL SILT FENCE AT THE LOCATIONS SHOWN IN ACCORDANCE WITH THE DETAIL ON SHEET E-1

REDUCED STREAM SETBACK PER. PBR

WETLAND IMPACT AREA A
347 SQ. FT.

WETLAND IMPACT AREA B
661 SQ. FT.

WETLAND IMPACT AREA C
55 SQ. FT.

WOODS-MEADOW BUFFER

36" CULVERT EMBEDDED 6" MIN.

FLOOD HAZARD ZONE: AE
ELEV = 232'

INSTALL NEW PLUNGE POOL IN ACCORDANCE WITH DETAIL IN SHEET E-1
12" HDPE PIPE OUTLET
FROM UGF #2 INV. 234.00'

INSTALL NEW PLUNGE POOL IN ACCORDANCE WITH DETAIL IN SHEET E-1
12" HDPE PIPE OUTLET
FROM UGF #4 INV. 234.00'

INSTALL 75 LF OF 12" HDPE CULVERT
INV IN: 233.25
INV. OUT: 233.00
WITH PLUNGE POOL IN ACCORDANCE WITH SHEET E-1

STABILIZE SLOPES STEEPER THAN 2.5:1 WITH EROSION CONTROL MIX

WETLAND IMPACT AREA D
10,759 SQ. FT.

12" HDPE INV OUT: 226.00'
INSTALL PLUNGE POOL IN ACCORDANCE WITH DETAIL IN SHEET E-1

INSTALL 3' DIA. PRECAST CONCRETE OUTLET STRUCTURE IN ACCORDANCE WITH THE DETAIL IN SHEET E-3
RIM ELEV.: 232.28'
12" HDPE INV OUT: 227.78'

FLOOD HAZARD ZONE: AE
ELEV = 228'

FLOOD HAZARD ZONE: AE
ELEV = 225'

HOTEL ROAD

GRAPHIC SCALE
0 30 60 120
1 inch = 60 ft.

N

MAGNETIC

STEVENS MILL RD
LOCUS
HOTEL RD
COURT ST
GARFIELD RD
MINOT AVE
MANLEY RD
RODMAN RD
POLAND RD

LOCATION PLAN

LEGEND

- SUBJECT BOUNDARY LINE
- ABUTTER OR RIGHT OF WAY LINE
- STONE WALL
- STREAM
- WETLANDS
- N/F — NOW OR FORMERLY
- 000/000 — DEED BOOK PAGE REFERENCE
- 000-000 — TAX MAP AND LOT NUMBER
- DECIDUOUS / CONIFEROUS TREE
- MF — GRANITE MONUMENT FOUND
- IPF/IRF/RBF — IRON PIPE/ROD/REBAR FOUND
- DHF — DRILL HOLE FOUND
- CRBS — 5/8" REBAR W/ CAP TO BE SET
- UTILITY POLE
- SEWER MANHOLE
- DRAIN MANHOLE
- CATCH BASINS
- WATER SHUTOFF
- WATER VALVE
- WELL
- GAS VALVE
- HYDRANT
- LIGHT POST
- FENCE – BARBED WIRE
- FENCE – CHAIN LINK
- SETBACK
- OVERHEAD WIRES
- 240 — EXISTING CONTOURS
- 240 — PROPOSED CONTOURS
- DOUBLE EROSION CONTROL

NOTES:

1. RECORD OWNER: AUBURN SUBURBAN BASEBALL AND SOFTBALL
2. PARCEL DEED REFERENCE: SEE DEED FROM HELEN R. & ROBERT E. FOSS TO AUBURN SUBURBAN BASEBALL AND SOFTBALL DATED JANUARY 2, 2020, RECORDED AT THE ANDROSCOGGIN COUNTY REGISTRY OF DEEDS IN BOOK 10273, PAGE 149.
3. ALL BOOK AND PAGE REFERENCES REFER TO THE ANDROSCOGGIN COUNTY REGISTRY OF DEEDS.
4. PARCEL TAX MAP REFERENCE: CITY OF AUBURN, MAP 217, LOT 2
5. ZONING OF PROPERTY: SR (SUBURBAN–RESIDENTIAL)
6. TOTAL AREA OF PARCEL 29.83 ACRES.
7. ALL BEARINGS ARE REFERENCED TO MAGNETIC NORTH PER PLAN REF. A.
8. ELEVATIONS SHOWN ARE NAVD88 BY OPUS SOLUTION.
9. EXTERIOR BOUNDARY BASED ON PLAN REF. A.
10. WETLAND BOUNDARIES WERE IDENTIFIED AND DELINEATED IN JULY 2007 BY JONES ASSOCIATES INC. ACCORDING TO U.S. ARMY CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL (1987) AND REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHCENTRAL AND NORTHEAST REGION. A DELINEATION REVIEW WAS CONDUCTED BY JONES ASSOCIATES INC. IN APRIL 2018.
11. IN JULY 2007 WETLAND FLAGS WERE LOCATED USING TRIMBLE GLOBAL POSITIONING SYSTEM (GPS) TECHNOLOGY WITH EXPECTED AVERAGE ACCURACY OF SUB–METER. THIS METHOD IS RECOGNIZED BY BOTH STATE AND FEDERAL AGENCIES. HOWEVER, JONES ASSOCIATES INC RECOMMENDS THAT THE WETLAND BOUNDARY BE SURVEYED USING A MORE PRECISE METHOD IF ANY FILL OR REGULATED ACTIVITIES ARE TO BE PERFORMED WITHIN 20 FEET OF THE GPS LOCATED WETLAND. WETLAND FLAGS WERE REMARKED WHERE NEEDED IN APRIL 2018.
12. PROPOSED PARKING AREA ADHERES TO STANDARDS SET FOR IN CITY OF AUBURN TOWN CODE. PARKING SPACES ARE NINE FEET WIDE AND EIGHTEEN FEET IN LENGTH AND INTERNAL TRAVEL AISLES ARE TWENTY FOUR FEET WIDE.
13. ARTIFICIAL FIELD SURFACES AND UNDER FIELD DRAINAGE DETAILS SHOWN ARE FOR "FIELDTURF" ARTIFICIAL FIELD SURFACES, "FIELDTURF" ARTIFICIAL FIELD SURFACES AND UNDER FIELD DRAINAGE SYSTEMS AS SHOWN SHALL BE INSTALLED BY FIELDTURF OR THEIR APPROVED SUBCONTRACTOR. UNLESS AND ALTERNATIVE IS APPROVED BY THE ENGINEER.
14. PLAN REFERENCES:

A.) PROPERTY PLAN AND TOPOGRAPHIC PLAN OF EXISTING CONDITIONS, HOTEL, GARFIELD & STEVENS MILL ROADS, AUBURN, MAINE PREPARED FOR ROBERT FOSS PREPARED BY ARCC LAND SURVEYING INC DATED JUNE 11, 2007

STATE OF MAINE
BOYD A. SNOW III
No. 2065
REGISTERED PROFESSIONAL LAND SURVEYOR

REVISIONS NO.	DATE	DESCRIPTION	BY

PROJECT NAME:
GRADING/UTILITIES
AUBURN SUBURBAN
BASEBALL & SOFTBALL
STEVENS MILL ROAD
AUBURN, MAINE

PREPARED BY:
JONES ASSOCIATES INC.
Foresters, Surveyors And Environmental Consultants
269 POLAND SPRING ROAD, AUBURN, MAINE 04210
(207) 241-0255

PREPARED FOR:
AUBURN SUBURBAN
BASEBEALL & SOFTBALL
PO BOX 1615
AUBURN, MAINE

SHEET: S-2

PLAN DATE: FEBRUARY 8, 2023

SCALE: 1"=60'

PROJ. #:21-011AU

MAP 217 LOT 045

MAP 217 LOT 072

N/F
FISKE PROPERTIES LLC
301 STEVENS MILL RD
MAP 217 LOT 048

12" CMP
INV IN: 241.35'
INV OUT: 241.09'

ASSUMED
12" CMP
BURIED

15" CMP
INV IN: 239.93'
INV OUT: 239.59'

CMP
POLE#07

NET&TCo.
POLE#06

POLE#05

POLE#04

CMP
POLE#05S

CMP
POLE#03

CMP
POLE#02

CMP
POLE#02S

STEVENS MILL ROAD

INSTALL STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE DETAIL ON SHEET E-3

INSTALL 4' DIA. PRECAST CATCH BASIN IN ACCORDANCE WITH THE DETAIL IN SHEET E-3
RIM ELEV.: 242.30'
15" CMP INV. IN: 239.66'
15" HDPE INV. OUT: 239.56'

INSTALL 3' DIA. PRECAST CONCRETE OUTLET STRUCTURE IN ACCORDANCE WITH THE DETAIL IN SHEET E-3
RIM ELEV.: 241.00'
15" HDPE INV. IN: 236.60'
6" PVC INV. IN: 236.70'
18" HDPE INV OUT: 236.50'

EXIST
TENNIS
COURT

INSTALL ~50 LF OF 15" DIA. HDPE SMOOTH BORE CULVERT
INV. IN: 238.00'
INV. OUT: 237.80'

8" INV.
239.88

UGF #1

12" INV. OUT
239.50'
2' X 2' CONCRETE
SPLASH PAD TYP.

INSTALL 200' LINEAR FT OF 15" DIA. HDPE SMOOTH BORE DRAINAGE PIPE AT SLOPE OF 0.0148'/FT

0.5% SLOPE (TYP.)

FIELD TURF
UNDERDRAIN
SEE NOTE 13

+243.5

1" X 12" FLAT DRAIN (TYP.)

8" INV.
239.60'

INSTALL APPROX 197' LINEAR FT OF 18" DIA. HDPE SMOOTH BORE DRAINAGE PIPE AT SLOPE OF 0.005'/FT

FIELD TURF
UNDERDRAIN
SEE NOTE 13

+243.50

0.5% SLOPE' (TYP.)

1" X 12" FLAT DRAIN (TYP.)

8" INV.
241.59'

MATCHLINE
MATCHLINE

+242.14

+241.78

40' X 20'

20' X 20'
GARAGE

UGF #2

0.5% SLOPE' (TYP.)

8" INV.
240.71'

8" INV.
241.42'

18" HDPE INV.
OUT: 235.5

DOUBLE EROSION CONTROL

REDUCED
STREAM
SETBACK
PER. PBR

8" INV.
240.58'

8" INV.
240.58'

INSTALL 3' DIA. PRECAST CONCRETE OUTLET STRUCTURE IN ACCORDANCE WITH THE DETAIL IN SHEET E-3
RIM ELEV.: 239.2'
12" HDPE INV OUT: 234.7'

WOODED/MEADOW
BUFFER

INSTALL 30 FOOT STONE BERM LEVEL SPREADER ELEV. 238.3', SEE DETAIL SHEET E-2

STABILIZE SLOPES STEEPER THAN 2.5:1 WITH EROSION CONTROL MIX

WETLAND IMPACT AREA A
347 SQ. FT.

INSTALL SILT FENCE AT THE LOCATIONS SHOWN IN ACCORDANCE WITH THE DETAIL ON SHEET E-1

FLOOD HAZARD
ZONE: AE
ELEV = 232'

ALL APPROX, 132 LF
DIA HDPE SMOOTH
PIPE SLOPE OF
78'/FT

IMPACT AREA C

PLUNGE
DANCE WITH
E-1
ITLET
234.00'

GRAPHIC SCALE
0 15 30 60
1 inch = 30 ft.

STATE OF MAINE
BOYD A. SNOW, JR.
No. 10005
REGISTERED LAND SURVEYOR

REVISIONS
NO. | DATE | DESCRIPTION | BY

PROJECT NAME:
GRADING/UTILITIES
AUBURN SUBURBAN
BASEBALL & SOFTBALL
STEVENS MILL ROAD
AUBURN, MAINE

PREPARED BY:
JONES ASSOCIATES INC.
Foresters, Surveyors And Environmental Consultants
280 POLAND SPRING ROAD, AUBURN, MAINE 04210
(207) 241-0235

PREPARED FOR:
AUBURN SUBURBAN
BASEBEALL & SOFTBALL
PO BOX 1615
AUBURN, MAINE

SHEET:
S-3

PLAN DATE:
FEBRUARY 9, 2023

SCALE: 1"=30'

PROJ. #:21-011AU

INSTALL RIPRAP PLUNGE POOL SEE DETAIL ON SHEET XX

INSTALL ~50 LF OF 15" DIA. HDPE SMOOTH BORE CULVERT INV. IN: 238.00' INV. OUT: 237.80'

INSTALL 3' DIA. PRECAST CONCRETE OUTLET STRUCTURE IN ACCORDANCE WITH THE DETAIL IN SHEET E-3 RIM ELEV.: 240.5' 12" HDPE INV OUT: 236'

UGF #2

UGF #4

WETLAND IMPACT AREA B 661 SQ. FT.

INSTALL APPROX. 132 LF 12" DIA HDPE SMOOTH BORE PIPE SLOPE OF 0.0078'/FT

INSTALL 3' DIA. PRECAST CONCRETE OUTLET STRUCTURE IN ACCORDANCE WITH THE DETAIL IN SHEET E-3 RIM ELEV.: 239.2' 12" HDPE INV OUT: 234.7'

WOODED/MEADOW BUFFER

INSTALL 30 FOOT STONE BERM LEVEL SPREADER ELEV. 238.3', SEE DETAIL SHEET E-2

36" CULVERT EMBEDDED 6" MIN.

WETLAND IMPACT AREA C 55 SQ. FT.

INSTALL NEW PLUNGE POOL IN ACORDANCE WITH DETAIL IN SHEET E-1 12" HDPE PIPE OUTLET FROM UGF #2 INV. 234.00'

INSTALL NEW PLUNGE POOL IN ACORDANCE WITH DETAIL IN SHEET E-1 12" HDPE PIPE OUTLET FROM UGF #4 INV. 234.00'

INSTALL 75 LF OF 12" HDPE CULVERT INV IN: 233.25 INV. OUT: 233.00 WITH PLUNGE POOL IN ACCORDANCE WITH SHEET E-1

SEE USGA FIELD LIGHTING PLAN

FIELD TURF UNDERDRAIN SEE NOTE 13

STABILIZE SLOPES STEEPER THAN 2.5:1 WITH EROSION CONTROL MIX

DOUBLE EROSION CONTROL

WETLAND IMPACT AREA D 10,759 SQ. FT.

12" HDPE INV OUT: 226.00' INSTALL PLUNGE POOL IN ACCORDANCE WITH DETAIL IN SHEET E-1

INSTALL 3' DIA. PRECAST CONCRETE OUTLET STRUCTURE IN ACCORDANCE WITH THE DETAIL IN SHEET E-3 RIM ELEV.: 232.28' 12" HDPE INV OUT: 227.78'

12" INV. OUT 230.78 2' X 2' CONCRETE SPLASH PAD TYP.

UGF #3

REDUCED STREAM SETBACK PER. PBR

FLOOD HAZARD ZONE: AE ELEV = 225'

20' X 20' GARAGE

40' X 20'

SLOPE OF 0.014

0.5% SLOPE (TYP.) 1'x12" FLAT DRAIN (TYP.)

0.5% SLOPE (TYP.) 1'x12" FLAT DRAIN (TYP.)

8" INV. 231.44'

8" INV. 231.14'

12" INV. 231.1'

8" INV. 232.2'

N

E

S

W

MAGNETIC

GRAPHIC SCALE

0 20 40 80

1 inch = 40 ft.

STATE OF MAINE
BOYD S. SNOW
No. 10655
REGISTERED PROFESSIONAL ENGINEER

REVISIONS NO.	DATE	DESCRIPTION	BY

PROJECT NAME:
GRADING/UTILITIES
AUBURN SUBURBAN
BASEBALL & SOFTBALL
STEVENS MILL ROAD
AUBURN, MAINE

PREPARED BY:
JONES ASSOCIATES INC.
Foresters, Surveyors And Environmental Consultants
269 POLAND SPRING ROAD, AUBURN, MAINE 04210
(207) 241-0235

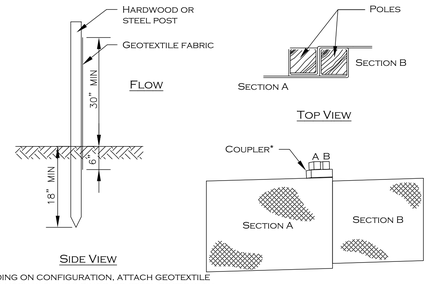
PREPARED FOR:
AUBURN SUBURBAN
BASEBEALL & SOFTBALL
PO BOX 1615
AUBURN, MAINE

SHEET:
S-4

PLAN DATE:
FEBRUARY 9, 2023

SCALE: 1"=40'

PROJ. #:21-011AU



SIDE VIEW

JOINGING SECTIONS

DEPENDING ON CONFIGURATION, ATTACH GEOTEXTILE TO WIRE MESH WITH HOG RINGS, TO STEEL POSTS WITH TIE WIRES AND TO WOOD POSTS WITH STAPLES. POST MAY BE WIRED TOGETHER WHEN JOINING SECTIONS.

* THE COUPLER CAN BE ANY ACCEPTABLE DEVICE USED TO TIE THE POLES TOGETHER.

TEMPORARY SILT FENCE

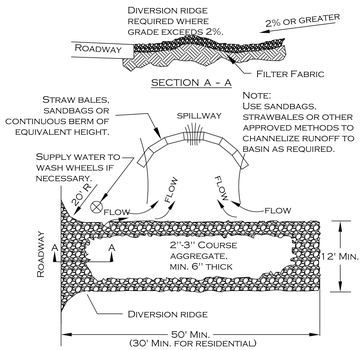
NTS

SLOPE (FT./FT)	LENGTH (FT.)
0.020	100
0.030	66
0.040	50
0.050	40
0.080	25
0.100	20
0.120	17
0.150	13

L = THE DISTANCE SUCH THAT POINTS A AND B ARE OF EQUAL ELEVATION

SPACING BETWEEN CHECK DAMS

NTS



NOTES:

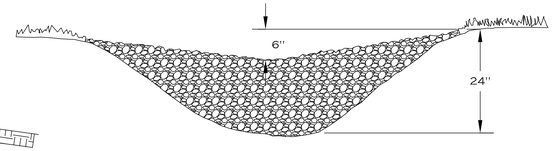
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.

2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.

3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AREA STABLIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OF SEDIMENT BASIN.

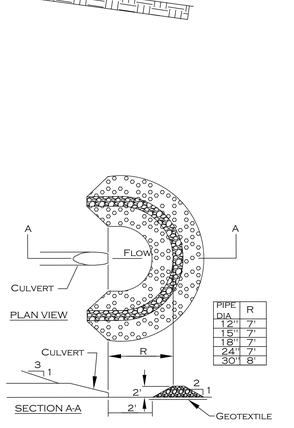
TEMPORARY GRAVEL CONSTRUCTION ENTRANCE

NTS

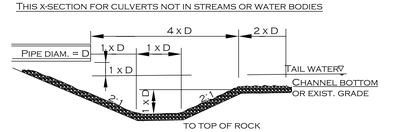


ROCK CHECK DAM

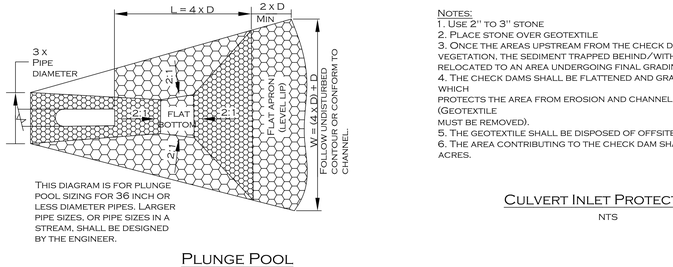
N.T.S.



THIS X-SECTION FOR CULVERTS NOT IN STREAMS OR WATER BODIES



THIS X-SECTION FOR CULVERTS WITH TAIL WATER. NOT FOR FISH PASSAGE



THIS DIAGRAM IS FOR PLUNGE POOL SIZING FOR 36 INCH OR LESS DIAMETER PIPES. LARGER PIPE SIZES, OR PIPE SIZES IN A STREAM, SHALL BE DESIGNED BY THE ENGINEER.

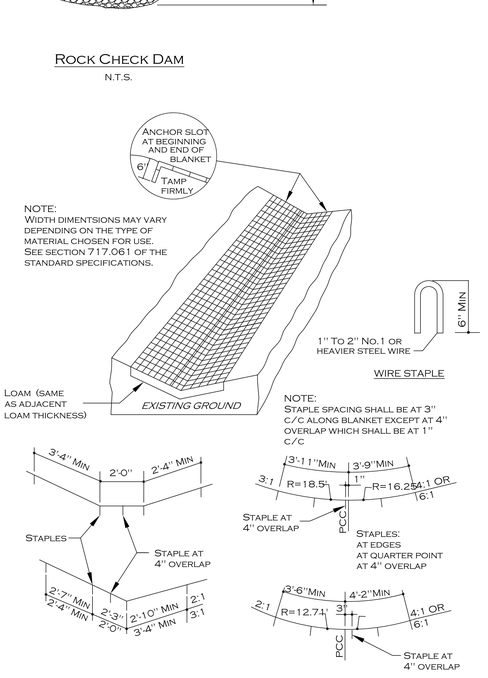
PLUNGE POOL

NTS

NOTES:
1. USE 2" TO 3" STONE
2. PLACE STONE OVER GEOTEXTILE
3. ONCE THE AREAS UPSTREAM FROM THE CHECK DAM ARE STABILIZED BY VEGETATION, THE SEDIMENT TRAPPED BEHIND/WITHIN THE DAM SHALL BE RELOCATED TO AN AREA UNDERGOING FINAL GRADING.
4. THE CHECK DAMS SHALL BE FLATTENED AND GRADED IN A MANNER WHICH PROTECTS THE AREA FROM EROSION AND CHANNEL BLOCKAGE. (GEOTEXTILE MUST BE REMOVED).
5. THE GEOTEXTILE SHALL BE DISPOSED OF OFFSITE.
6. THE AREA CONTRIBUTING TO THE CHECK DAM SHALL NOT EXCEED 10 ACRES.

CULVERT INLET PROTECTION

NTS



TEMPORARY EROSION CONTROL BLANKET

NTS

EROSION AND SEDIMENTATION CONTROL PLAN

PROJECT DESCRIPTION
THIS EROSION AND SEDIMENTATION CONTROL PLAN HAS BEEN PREPARED FOR THE CONSTRUCTION OF THE NEW AUBURN SUBURBAN BASEBALL AND SOFTBALL SPORTS FACILITY. THIS PROJECT INCLUDES APPROXIMATELY 8.69 ACRES OF DISTURBED AREA, WITH ONLY 6.07 ACRES OF NEW IMPERVIOUS AREA. 11,822 SQ. FT. OF WETLAND IMPACTS WILL BE REQUIRED FOR THE PROJECT.

EXISTING DRAINAGE ON THE SITE CURRENTLY FLOWS OVERLAND TOWARDS THE SOUTH INTO AN UNNAMED STREAM.

EXISTING SITE CONDITIONS
THE SITE CURRENTLY CONSISTS OF LOW TO MODERATELY SLOPED TERRAIN WHICH VARIES IN SLOPE FROM 3 TO 15 PERCENT. THE SITE CURRENTLY FLOWS TOWARDS THE SOUTH AS NOTED ABOVE. THE EXISTING PARCEL IS UNDEVELOPED. THE SITE WILL BE PERMITTED THROUGH THE CITY OF AUBURN'S DELEGATED REVIEW PROCESS FOR SITE LOCATION OF DEVELOPMENT PERMIT THROUGH THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

ADJACENT AREAS
ADJACENT PROPERTIES ARE ZONED AS SUBURBAN RESIDENTIAL TO THE NORTH, SOUTH, EAST, AND WEST.

SOILS
SOILS DATA CAN BE FOUND WITHIN THE ANDROSCOGGIN COUNTY MEDIUM INTENSITY SOIL SURVEY MAPS .

CRITICAL AREAS

NECESSARY PERMITS FROM THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION AND THE U.S. ARMY CORPS OF ENGINEERS HAVE BEEN OBTAINED FOR THE 11,822 SQ. FT. OF WETLAND IMPACTS NECESSARY FOR THE PROJECT. DOUBLE EROSION CONTROL SHALL BE USED ADJACENT TO ANY WETLANDS OR STREAMS AS SHOWN ON THE EROSION CONTROL PLANS.

THE EROSION AND SEDIMENTATION CONTROL PRACTICES INCLUDES THE USE OF HDPE SMOOTH BORE STORM DRAIN PIPES, PRECAST CONCRETE DRAINAGE STRUCTURES, VEGETATED DITCHES AND DIVERSION SWALES WITH EROSION FABRIC, GEOTEXTILE FABRIC / RIP RAP PROTECTION, VEGETATIVE SLOPES, INLET AND OUTLET PROTECTION FOR CULVERTS, TEMPORARY HAY MULCH PLACES OVER DISTURBED SOILS AND SILT FENCE.

A. STRUCTURE MEASURES

1 CULVERTS / STORM DRAIN PIPES: SMOOTH BORE HDPE CULVERTS / DRAIN PIPES SHALL BE INSTALLED ACCORDING TO THE SIZE AND LOCATION ON THE DESIGN PLANS. THE CULVERTS / DRAIN PIPES HAVE BEEN DESIGNED TO ACCOMMODATE A 25-YEAR STORM EVENT. ALL CULVERTS ARE TO BE CONSTRUCTED WITH INLET AND OUTLET RIPRAP PROTECTION FOR EROSION CONTROL.
2 WOOD WASTE BERM: WOOD WASTE BERMS MAY BE USED IN LIEU OF SILT FENCE AS LONG AS THE BERM IS INSTALLED IN ACCORDANCE WITH MOST RECENT BEST MANAGEMENT PRACTICES AS OUTLINED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION. EXISTING STUMPS REMOVED DURING GRUBBING OF THE SITE SHALL BE USED FOR WOOD WASTE BERMS AT THE LOCATIONS DEFINED ON THE DESIGN PLANS.
3 SILT FENCE: SILT FENCE SHALL BE CONSTRUCTED AT THE LOCATION SHOWN ON THE PLANS. THE SILT FENCE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DETAIL ON THIS SHEET, AND SHALL BE INSTALLED PRIOR TO THE CONSTRUCTION OF ANY DITCHING OR GRUBBING FOR THE PROJECT AREAS. THE SILT FENCE WILL BE MAINTAINED WEEKLY DURING CONSTRUCTION AND AFTER RAIN EVENTS. THE SILT FENCE WILL REMAIN IN PLACE UNTIL THE SITE AREAS THEY ARE PROTECTING ARE FULLY VEGETATION, AT WHICH TIME THEY SHOULD BE REMOVED.
4 CATCH BASINS / F-STRUCTURES: ALL CATCH BASINS AND F-STRUCTURES INSTALLED AS PART OF THIS PROJECT ARE REQUIRED TO BE INSTALLED WITH DANDY SACK INLET PROTECTION AS MANUFACTURED BY MIRAFI OR APPROVED EQUAL. DANDY SACK SHALL BE INSTALLED BETWEEN FRAME AND GRATE AND SHALL BE MONITORED WEEKLY OR AFTER RAIN EVENTS. DANDY SACK SHALL BE CLEANED WEEKLY TO ENSURE PROPER OPERATION AND TO ENSURE RUNOFF IS ALLOWED TO PASS THROUGH THE SACK AND NOT BYPASS CATCH BASINS.

B. VEGETATIVE MEASURES:

1 TOPSOIL STOCKPILING: TOPSOIL DURING SITE CONSTRUCTION SHALL BE STOCKPILED AND USED IN SITE RECLAMATION. STOCKPILES SHALL BE MULCHED WITH HAY UNTIL IT IS USED. MULCH SHALL BE APPLIED AT A RATE OF 90 LBS / 1000 SQUARE FEET. SILT FENCE SHALL BE INSTALLED ON THE DOWN SLOPE SIDE OF THE TOPSOIL PILE TO PROVIDE A SEDIMENTATION BARRIER.
2 STUMP STOCKPILING: THE STUMPS SHALL BE STOCKPILED DURING THE CONSTRUCTION IN A LOCATION THAT IS EASILY ACCESSIBLE FOR TRUCKS AND EQUIPMENT. THE STOCKPILE SHALL BE MULCHED WITH HAY UNTIL THEY ARE REMOVED FROM THE SITE AND BURIED IN AN APPROVED LOCATION. MULCH SHALL BE APPLIED AT A RATE OF 90 LBS / 1000 SQUARE FEET. SILT FENCE SHALL BE INSTALLED ON THE DOWN SLOPE SIDE OF THE STUMP PILE TO PROVIDE A SEDIMENTATION BARRIER. STUMPS WITHIN THE ROAD RIGHT OF WAY WILL BE GROUND AND USED FOR CONSTRUCTION OF THE WOOD WASTE BERM.
3 PERMANENT SEEDING: ALL DISTURBED AREAS AND AREAS OF EXPOSED SOIL SHALL BE SEEDED WITH CONSERVATION MIX #2 AT A RATE OF 42 LBS/ACRE. THIS SHALL INCLUDE 20 LBS CREEPING RED FESCUE, 2 LBS. REDTOP AND 20 LBS. TALL FESCUE. LIME SHALL BE APPLIED AT A RATE OF 3 TONS/ACRE. HAY MULCH WILL BE APPLIED AT A RATE OF 90 LB/1000 SQUARE FEET. ALL VEGETATION WATERWAYS AND CRITICAL AREAS OF CONCENTRATE FLOW SHALL BE STABILIZED WITH GEOTEXTILE OR SIMILAR. THIS SEEDING MIXTURE SHALL NOT APPLY TO VEGETATION REQUIREMENTS IN THE UNDER DRAINED GRASS FILTER.

SPECIAL PROVISIONS:

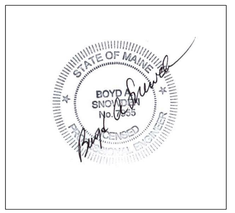
1. ALL DISTURBED AREAS WILL BE MULCHED WITHIN SEVEN DAYS OF INITIAL DISTURBANCE OR PRIOR TO ANY STORM EVENT.
2. ANY AREA TO HAVE A PERMANENT COVER OF VEGETATION SHALL HAVE LOAM, PERMANENT SEEDING, AND MULCH APPLIED WITHIN SEVEN DAYS OF COMPLETING THE FINAL GRADING FOR THAT AREA.
3. VEGETATIVE AND RIP-RAP DITCH INNINGS WILL BE INSTALLED WITH 48 HOURS OF COMPLETING THE FINAL GRADING FOR ANY SECTION OF DITCH.
4. CULVERT/ STORM DRAIN OUTLET PROTECTION WILL BE INSTALLED WITH 24 HOURS OF SETTING CULVERT OR PIPE.
5. LIMIT THE GRUBBED AREA FOR SITE CONSTRUCTION TO THAT WHICH IS MANAGABLE IN ORDER TO REDUCE POTENTIAL FOR HIGH SEDIMENT LOADING FROM RUNOFF. COMPLETE CULVERTS, INLET AND OUTLET PROTECTION AND MULCH AREAS BEFORE MOVING TO A NEW AREA.
6. ALL SLOPES EXCEEDING 15 PERCENT SHALL BE REQUIRED TO HAVE ONE OF THE FOLLOWING CONTROL MEASURES APPLIED TO PREVENT SCOURING AND EROSION:
   a. MULCH SHALL BE APPLIED OVER THE LOAM AND SEED AND SHALL BE ANCHORED BY NETTING, OR
   b. EROSION CONTROL BLANKET SHALL BE APPLIED OVER THE LOAM AND SEED, OR
   c. MULCH SHALL BE APPLIED OVER LOAM AND SEED AND SHALL HAVE TACKIFIER SPRAYED OVER MULCH, OR
   d. HYDROSEEDING ONTO LOAM SURFACE WITH MULCH APPLIED AND TACKIFIER TO STABILIZE THE MULCH.

MAINTENANCE

DURING THE PERIOD OF CONSTRUCTION AND/OR UNTIL LONG TERM PERMANENT VEGETATION HAS BEEN ESTABLISHED, THE SITE WILL BE MAINTAINED IN ACCORDANCE WITH THE FOLLOWING CRITERIA:
A. DISTURBED AREAS SHALL BE RESEEDED AND MULCHED AS NEEDED TO ENSURE ADEQUATE VEGETATION TO STABILIZE THE UNDERLYING SOILS.
B. WATERWAYS AND RIPRAP PLUNGE POOLS SHALL BE VISUALLY INSPECTED WEEKLY AND AFTER RAIN EVENTS DURING CONSTRUCTION PERIOD. THEY WILL BE RESTORED AS REQUIRED. REPAIRS WILL INCLUDE REPAIRS TO JUTE MESH, FILLING IN ERODED AREAS, RESEEDING AND REMULCHING AND PROVIDING ADDITIONAL MULCH.
C. HAY BALE BARRIERS, WOOD WASTE BERM AND SILT FENCE WILL BE INSPECTED WEEKLY AND WILL BE REPAIRED AS NEEDED. SUCH REPAIRS WILL INCLUDE REMOVE OF SEDIMENT TRAPPED AGAINST SILT FENCE / WOOD WASTE BERM WHEN HEIGHT OF SEDIMENT CREATES A LOADING PROBLEM ON THE BARRIER, REPAIR OF WATERWAY AREAS, OR DETERIORATION OF THE BARRIERS.
D. ALL DISTURBED SOILS SHALL HAVE HAY MULCH APPLIED AT A RATE OF 90 LBS. PER 1000 SQUARE FEET WITHIN 48 HOURS OF THE DISTURBANCE OF THE SOIL, AND PRIOR TO ANY PREDICTABLE RAIN EVENT. ALL MEASURES DESCRIBED ABOVE SHALL BE MAINTAINED AS DIRECTED IN THE LATEST EDITION OF BEST MANAGEMENT PRACTICES FOR EROSION AND SEDIMENTATION.

WINTER STABILIZATION

1. STANDARD FOR THE TIMELY STABILIZATION OF DITCHES AND CHANNELS: THE CONTRACTOR WILL CONSTRUCT AND STABILIZE ALL STONE-LINED DITCHES AND CHANNELS ON THE SITE BY SEPTEMBER 15. THE CONTRACTOR WILL CONSTRUCT AND STABILIZE ALL GRASS-LINED DITCHES AND CHANNELS ON THE SITE BY SEPTEMBER 15. IF THE CONTRACTOR FAILS TO STABILIZE A DITCH OR CHANNEL TO BE GRASS-LINED BY SEPTEMBER 15, THEN THE CONTRACTOR WILL TAKE ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE DITCH FOR LATE FALL AND WINTER.
   INSTALL A SOD LINING IN THE DITCH: THE CONTRACTOR WILL LINE THE DITCH WITH PROPERLY INSTALLED SOD BY OCTOBER 1. PROPER INSTALLATION INCLUDES THE CONTRACTOR PINNING THE SOD ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL.
   INSTALL A STONE LINING IN THE DITCH: THE CONTRACTOR WILL LINE THE DITCH WITH STONE RIPRAP BY NOVEMBER 15. THE CONTRACTOR WILL HIRE A REGISTERED PROFESSIONAL ENGINEER TO DETERMINE THE STONE SIZE AND LINING THICKNESS NEEDED TO WITHSTAND THE ANTICIPATED FLOW VELOCITIES AND FLOW DEPTHS WITHIN THE DITCH. IF NECESSARY, THE CONTRACTOR WILL REGRADE THE DITCH PRIOR TO PLACING THE STONE LINING SO TO PREVENT THE STONE LINING, FROM REDUCING THE DITCH'S CROSS-SECTIONAL AREA.
2. STANDARD FOR THE TIMELY STABILIZATION OF DISTURBED SLOPES: THE CONTRACTOR WILL CONSTRUCT AND STABILIZE STONE-COVERED SLOPES BY NOVEMBER 15. THE CONTRACTOR WILL SEED AND MULCH ALL SLOPES TO BE VEGETATED BY SEPTEMBER 15. THE DEPARTMENT WILL CONSIDER ANY AREA HAVING A GRADE GREATER THAN 8% TO BE A SLOPE. IF THE CONTRACTOR FAILS TO STABILIZE ANY SLOPE TO BE VEGETATED BY SEPTEMBER 15, THEN THE CONTRACTOR WILL TAKE ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE SLOPE FOR LATE FALL AND WINTER.
   STABILIZE THE SOIL WITH TEMPORARY VEGETATION AND EROSION CONTROL MATS: BY OCTOBER 1, THE CONTRACTOR WILL SEED THE DISTURBED SLOPE WITH WINTER RYE AT A SEEDING RATE OF 3 POUNDS PER 1000 SQUARE FEET AND APPLY EROSION CONTROL MATS (OR MULCH WITH JUTE NETTING) OVER THE MULCHED SLOPE. THE CONTRACTOR WILL MONITOR GROWTH OF THE RYE OVER THE NEXT 30 DAYS. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR COVER AT LEAST 75% OF THE DISTURBED SLOPE BY NOVEMBER 1, THEN THE CONTRACTOR WILL COVER THE SLOPE WITH AN ADDITIONAL LAYER OF WINTER MULCH APPLICATION, STONE RIPRAP, OR WOODWASTE COMPOST AS DESCRIBED BELOW.
   STABILIZE THE SLOPE WITH SOD: THE CONTRACTOR WILL STABILIZE THE DISTURBED SLOPE WITH PROPERLY INSTALLED SOD BY OCTOBER 1. PROPER INSTALLATION INCLUDES THE CONTRACTOR PINNING THE SOD ONTO THE SLOPE WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL. THE CONTRACTOR WILL NOT USE LATE-SEASON SOD INSTALLATION TO STABILIZE SLOPES HAVING A GRADE GREATER THAN 33%.
   STABILIZE THE SLOPE WITH EROSION CONTROL MIX: THE CONTRACTOR WILL PLACE A SIX-INCH LAYER OF EROSION CONTROL MIX ON THE SLOPE BY NOVEMBER 15. PRIOR TO PLACING THE EROSION CONTROL MIX, THE CONTRACTOR WILL REMOVE ANY SNOW ACCUMULATION ON THE DISTURBED SLOPE. THE CONTRACTOR WILL NOT USE EROSION CONTROL MIX TO STABILIZE SLOPES HAVING GRADES GREATER THAN 50% OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE.
   STABILIZE THE SLOPE WITH STONE RIPRAP: THE CONTRACTOR WILL PLACE A LAYER OF STONE RIPRAP ON THE SLOPE BY NOVEMBER 15. THE CONTRACTOR WILL HIRE A REGISTERED PROFESSIONAL ENGINEER TO DETERMINE THE STONE SIZE NEEDED FOR STABILITY AND TO DESIGN A FILTER LAYER FOR UNDERNEATH THE RIPRAP.
3. STANDARD FOR THE TIMELY STABILIZATION OF DISTURBED SOILS: BY SEPTEMBER 15, THE CONTRACTOR WILL SEED AND MULCH ALL DISTURBED SOILS ON AREAS HAVING A SLOPE LESS THAN 15%. IF THE CONTRACTOR FAILS TO STABILIZE THESE SOILS BY THIS DATE, THEN THE CONTRACTOR WILL TAKE ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE SOIL FOR LATE FALL AND WINTER:
   STABILIZE THE SOIL WITH TEMPORARY VEGETATION: BY OCTOBER 1, THE CONTRACTOR WILL SEED THE DISTURBED SOIL WITH WINTER RYE AT A SEEDING RATE OF 3 POUNDS PER 1000 SQUARE FEET, LIGHTLY MULCH THE SEEDED SOIL WITH HAY OR STRAW AT 75 POUNDS PER 1000 SQUARE FEET, AND ANCHOR THE MULCH WITH PLASTIC OR JUTE NETTING. THE CONTRACTOR WILL MONITOR GROWTH OF THE RYE OVER THE NEXT 30 DAYS. IF THE RYE FAILS GROW AT LEAST THREE INCHES OR COVER AT LEAST 75% OF THE DISTURBED SOIL BEFORE NOVEMBER 15, THEN THE CONTRACTOR WILL MULCH THE AREA FOR OVER-WINTER PROTECTION AS DESCRIBED IN ONE OF THE ITEMS BELOW OF THIS STANDARD.
   STABILIZE THE SOIL WITH SOD: THE CONTRACTOR WILL STABILIZE THE DISTURBED SOIL WITH PROPERLY INSTALLED SOD BY OCTOBER 1. PROPER INSTALLATION INCLUDES THE CONTRACTOR PINNING THE SOD ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL.
   STABILIZE THE SOIL WITH MULCH: BY NOVEMBER 15, THE CONTRACTOR WILL MULCH THE DISTURBED SOIL BY SPREADING HAY OR STRAW AT A RATE OF AT LEAST 150 POUNDS PER 1000 SQUARE FEET ON THE AREA SO THAT NO SOIL IS VISIBLE THROUGH THE MULCH. PRIOR TO APPLYING THE MULCH, THE CONTRACTOR WILL REMOVE ANY SNOW ACCUMULATION ON THE DISTURBED AREA. IMMEDIATELY AFTER APPLYING THE MULCH, THE CONTRACTOR WILL ANCHOR THE MULCH WITH PLASTIC OR JUTE NETTING TO PREVENT WIND FROM MOVING THE MULCH OFF THE DISTURBED SOIL.



REVISIONS

NO.	DATE	DESCRIPTION	BY

PROJECT NAME:
AUBURN SUBURBAN BASEBALL & SOFTBALL
STEVENS MILL ROAD
AUBURN, MAINE

PREPARED BY:
JONES ASSOCIATES INC.
Foresters, Surveyors And Environmental Consultants
298 POLAND SPRING ROAD, AUBURN, MAINE 04210
(207) 241-0235

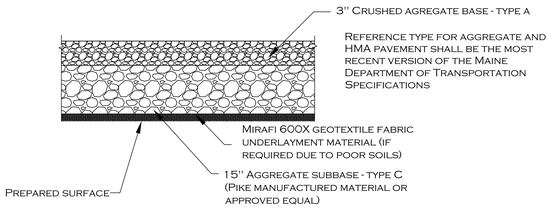
PREPARED FOR:
AUBURN SUBURBAN BASEBALL & SOFTBALL
PO BOX 1615
AUBURN, MAINE

SHEET: E-1

PLAN DATE: FEBRUARY 9, 2023

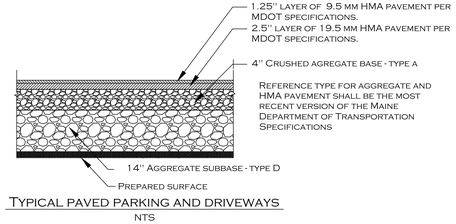
SCALE: N/A

PROJ. #:21-011AU



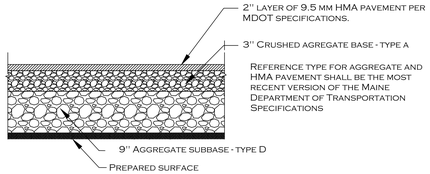
Typical gravel parking and driveways

NTS



Typical paved parking and driveways

NTS



Typical Asphalt walkway detail

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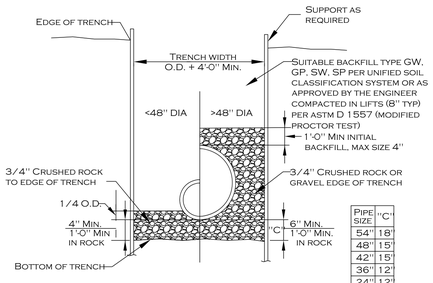


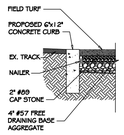
Pipe size	''C''
54''	18''
48''	15''
42''	15''
36''	12''
24''	12''
18''	9''
15''	9''
4-12	6''

Typical HDPE Pipe Bedding Detail

NTS

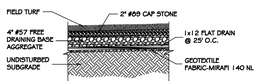
TRANSVERSE SECTION THROUGH FIELD

ARTIFICIAL FIELD SURFACES AND UNDER FIELD DRAINAGE DETAILS SHOWN ARE FOR ''FIELDTURF'' ARTIFICIAL FIELD SURFACES. ''FIELDTURF'' ARTIFICIAL FIELD SURFACES AND UNDER FIELD DRAINAGE SYSTEMS AS SHOWN SHALL BE INSTALLED BY FIELDTURF OR THEIR APPROVED SUBCONTRACTOR. UNLESS AND ALTERNATIVE IS APPROVED BY THE ENGINEER.



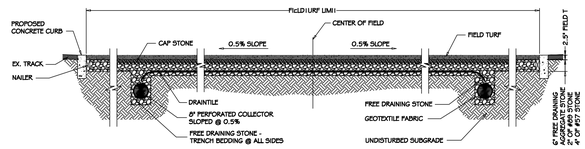
CURB DETAIL

NTS



SUB DRAINAGE SYSTEM

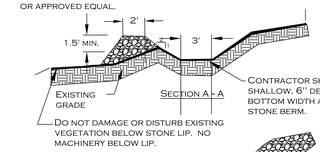
NTS

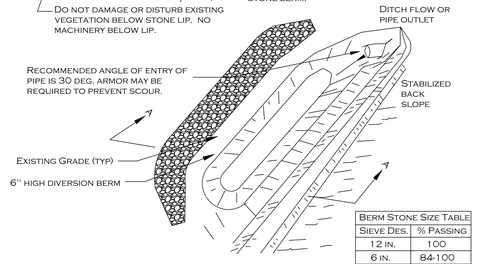


TRANSVERSE SECTION THROUGH FIELD

NTS

Stone level lip spreader shall have stone size in accordance with the table labeled Berm Stone Size. Stone shall be durable rock that will not disintegrate by exposure to water or weather. Stone may be fieldstone, rough quarry stone, blasted ledge, tailings, or approved equal.



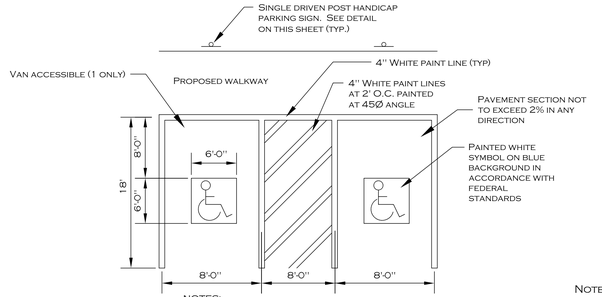


Berm Stone Size Table	
Sieve Des.	% Passing
12 in.	100
6 in.	84-100
3 in.	68-83
1 in.	42-55
No. 4	8-12

Construction Specifications

1. Spreaders shall be installed with a level instrument. Construct level lip to 0% grade to ensure uniform sheet flow. Level spreader shall be constructed on undisturbed soils (not fill)
2. Select geotextile fabric for under rip rap outlet protection of culvert based on undisturbed soils (sand, silts, clays, etc.)
3. Storm run-off converted to sheet flow across outlet apron shall flow onto stabilized areas. Run-off shall not be reconnected immediately below the point of discharge.
4. Periodic inspection and required maintenance shall be provided.
5. Construction of level spreader lip shall be from uphill side only. Level lip and area below spreader shall be at existing grades and undisturbed by earthwork equipment.
6. Construct spreader with lip at existing elevation as specified.
7. Downgradient receiving area must be naturally well vegetated.
8. Discharge is not permitted within 25' of a stream or wetland. Consult DEP if structure must be within 75' of stream or water body.

Stone Berm Level Lip Spreader



NOTES:

1. See site plan for handicap access space locations.
2. Maximum constructed slope along any plane within the handicap access parking areas shall be 1.75 percent.
3. Provide 2 coats of paint on all surfaces.
4. Accessible parking and pathways to meet ''ADA'' requirements.

Handicap Van Accessible Reserved Parking

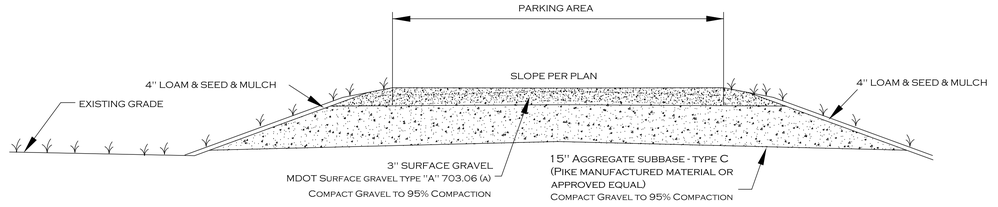
Notes:

1. See U.S. Department of Transportation Manual on Uniform Traffic Control Devices, latest edition.

2. Contractor shall install post and signage as shown on this detail in order to meet ADA requirements.

TYPICAL PARKING AREA CROSS-SECTION

NTS



STATE OF MAINE
BOYD SNOW
No. 8855
REGISTERED PROFESSIONAL ENGINEER

REVISIONS NO.	DATE	DESCRIPTION	BY

PROJECT NAME:
AUBURN SUBURBAN BASEBALL & SOFTBALL
STEVENS MILL ROAD
AUBURN, MAINE

PREPARED BY:
JONES ASSOCIATES INC.
Foresters, Surveyors And Environmental Consultants
298 POD AND SPRING ROAD, AUBURN, MAINE 04210
(207) 241-0235

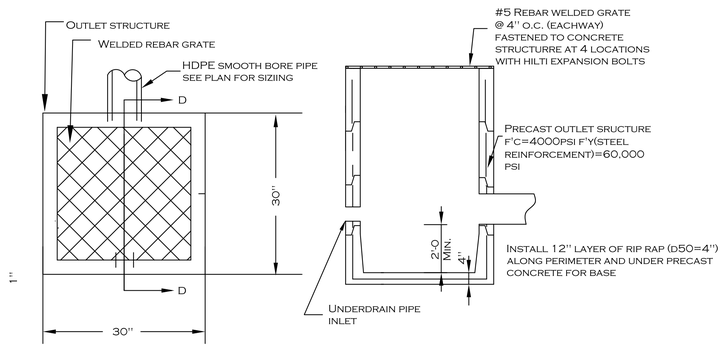
PREPARED FOR:
AUBURN SUBURBAN BASEBALL & SOFTBALL
PO BOX 1615
AUBURN, MAINE

SHEET: E-2

PLAN DATE: FEBRUARY 9, 2023

SCALE: N/A

PROJ. #:21-011AU



BIOFILTER OUTLET STRUCTURE DETAIL

NTS

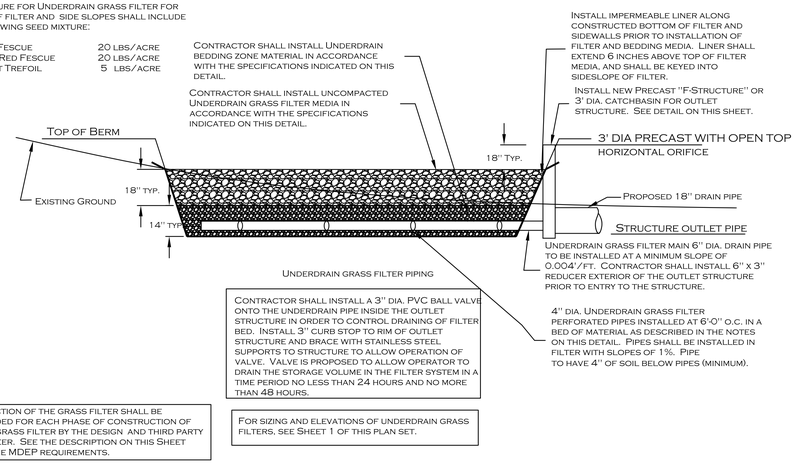
Notes:

1. During excavation for the filter, the Contractor shall be careful not to overexcavate the area under the filter. If filters are on fill sites, Contractor shall ensure that soils below the filters are compacted to a density of 95% of the optimum density for the subgrade soils.
2. The Contractor shall temporarily stabilize the filter sideslopes with geotextile or other approved means to prevent erosion until vegetation has been established.
3. Filter side slopes shall be covered with a 4 inch layer of compacted loam, seeded and mulched (above underdrain grass filter).
4. The soil filter shall be used as a temporary sediment trap during constructuion of the projectand until the area is stabilized. Stabilization is indicated by vegetative cover of at least 75 percent of disturbhe areas.
5. The Contractor shall install a sacrificial layer of sandy loam, 2-3" deep throughout filter area to be left in place for one full year from the date of completion of the site and storm water construction. After this year, assuming all areas are stabilized, the Contractor shall remove the top 2-3 inch layer and spread the disposed material on site outside of the filter, and seed the disposed material.
6. Filter must drain with in 24 and 48 hours.
7. Sediment trap must be installed at the entrance to the grass filter from vegetative ditches or culverts to reduce/eliminate sediment loading to grass filter.
8. If vegetation has not establishing itself within a reasonable growth period, the contractor shall install 2-3 inches of loam (w/less than 1% clay content) on the surface of the grass filter (uncompacted), and reseed wtih underdrain grass filter seed mix. If additional loam will be provided for grass growth, an equal depth of media will need to be removed. Contractor shall seed the filter media according to the specifications listed on this detail and mulch the filter media with straw mulch after seeding is complete. Contractor shall NOT fertilize the filter media area.

Underdrain grass filters must be seeded and mulched to promote grass growth.

Seed mixture for Underdrain grass filter for bottom of filter and side slopes shall include the following seed mixture:

Tall Red Fescue	20 lbs/acre
Creeping Red Fescue	20 lbs/acre
Birdsfoot Trefoil	5 lbs/acre



UNDERDRAIN GRASS FILTER SECTION VIEW (TYP.)

NTS

Grass filter media shall meet the following specifications.

6" thick soil transition zone (between pipe bedding and filter material)

Sieve #	% Passing
1"	90-100
1/2"	75-100
# 4	50-100
# 20	15-80
# 50	0-15
# 200	0-5

Underdrain pipe bedding

Sieve #	% Passing
1"	100
3/4"	90-100
3/8"	0-75
# 4	0-25
# 10	0-5

Soil Filter Media

Soil filter media shall be composed of a thoroughly blended mixture of materials meeting the following specifications:

Silty sand soil or soil mixture combined with 20-25 percent by volume (no less than 10% by dry weight) of moderately fine shredded bark or wood fiber mulch .

Resulting mix of soil filter media must have no less than 8 percent passing the No. 200 Sieve.

Media shall have a maximum clay content less than 2 percent.

All filter bed media materials must be tested by geotechnical laboratory, and approvedby the design engineer prior to use. Contractor shall identify the location of the source of filter media (i.e., self developed, purchased, etc.) . Tests shall include the following:

1. silty/sand component sieve analysis
2. Fine shredded bark or wood fiber mulch sieve analysis
3. Organic material sieve anaysis
4. Hydrometer test (clay content) in mixed material
5. Permeability rate at optimimal laboratory density

All test results shall be submitted to the Design engineer prior to mixing of the material, and also prior to shipping of the material after mixing.

UNDERDRAIN GRASS FILTER CONSTRUCTION OVERSIGHT REQ.

CONSTRUCTION OVERSIGHT

The applicant will retain the services of a professional engineer to inspect the construction and stabilization of all stormwater management structures to be built as part of the project. If necessary, the inspecting engineer will interpret the construction plans for the contractor. Once all stormwater management structures are constructed and stabilized, the inspecting engineer will notify the department in writing within 30 days to state that the structures have been completed. Accompanying the engineer's notification must be a copy of the test results for any soil fill, aggregate, or mulch materials used in the construction of the stormwater management structures and a log of the engineer's inspections giving the date of each inspection, the time of each inspection, and the items inspected on each visit.

VEGETATED UNDERDRAINED SOIL FILTER BASINS

Construction inspections: At a minimum, the professional engineer's inspection will occur after foundation soil preparation but prior to placement of the embankment fill, after any impermeable liner is installed, after the underdrain pipes are installed but not yet backfilled, after the pipe bedding fill is placed but prior to the placement of the transition layer gravel, and after the transition layer and filter media have been placed and the filter surface seeded.

Testing and submittals: All the soil, mulch, and aggregate used for the construction of the vegetated underdrain soil filter basin must be confirmed as suitable by testing. The contractor shall identify the source of each material and obtain samples for each material for testing. All testing must be done by a certified laboratory. All results of field and laboratory testing shall be submitted to the project engineer for confirmation. It shall be the contractor's responsibility to ensure completion of the following sampling and testing before the fill or aggregate is placed as part of the vegetated underdrain soil filter basin's construction.

- Obtain a sample of the filter media consisting of a blend of sand, topsoil, and wood fiber mulch (or other approved organic source). The sample must be a composite of three different locations (grabs) from the stockpile. The sample size required will be determined by the testing laboratory. Perform analyses of the blended filter media showing it has 8% to 12% by weight passing the #200 sieve as determined by ASTM C136 (Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates 1996A), has a clay content of less than 2%, and has an organic matter content of no less than 10% by dry weight.
- Obtain a sample of the transition layer gravel fill to be used above the pipe bedding. The sample must be a composite of three different locations (grabs) from the stockpile or pit face. The sample size required will be determined by the testing laboratory. Perform a sieve analysis conforming to ASTM C136 (Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates 1996A) of the gravel to be used for the underdrain pipe bedding. The gravel fill must conform to MEDOT specification 703.22 Underdrain Type B.
- If the underdrain pipes will be bedded in crushed stone, obtain a sample of the crushed stone to be used for the pipe bedding. The sample must be a composite of three different locations (grabs) from the stockpile. The sample size required will be determined by the testing laboratory. Perform a sieve analysis conforming to ASTM C136 (Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates 1996A) of the crushed stone to be used for the underdrain pipe bedding. The crushed stone fill must conform to MEDOT specification 703.22 Underdrain Type C.

STATE OF MAINE
BOYD SNOW
No. 6665

REVISIONS

NO.	DATE	DESCRIPTION	BY

PROJECT NAME:
AUBURN SUBURBAN BASEBALL & SOFTBALL
STEVENS MILL ROAD
AUBURN, MAINE

PREPARED BY:
JONES ASSOCIATES INC.
Foresters, Surveyors And Environmental Consultants
289 POLAND SPRING ROAD, AUBURN, MAINE 04210
(207) 241-0235

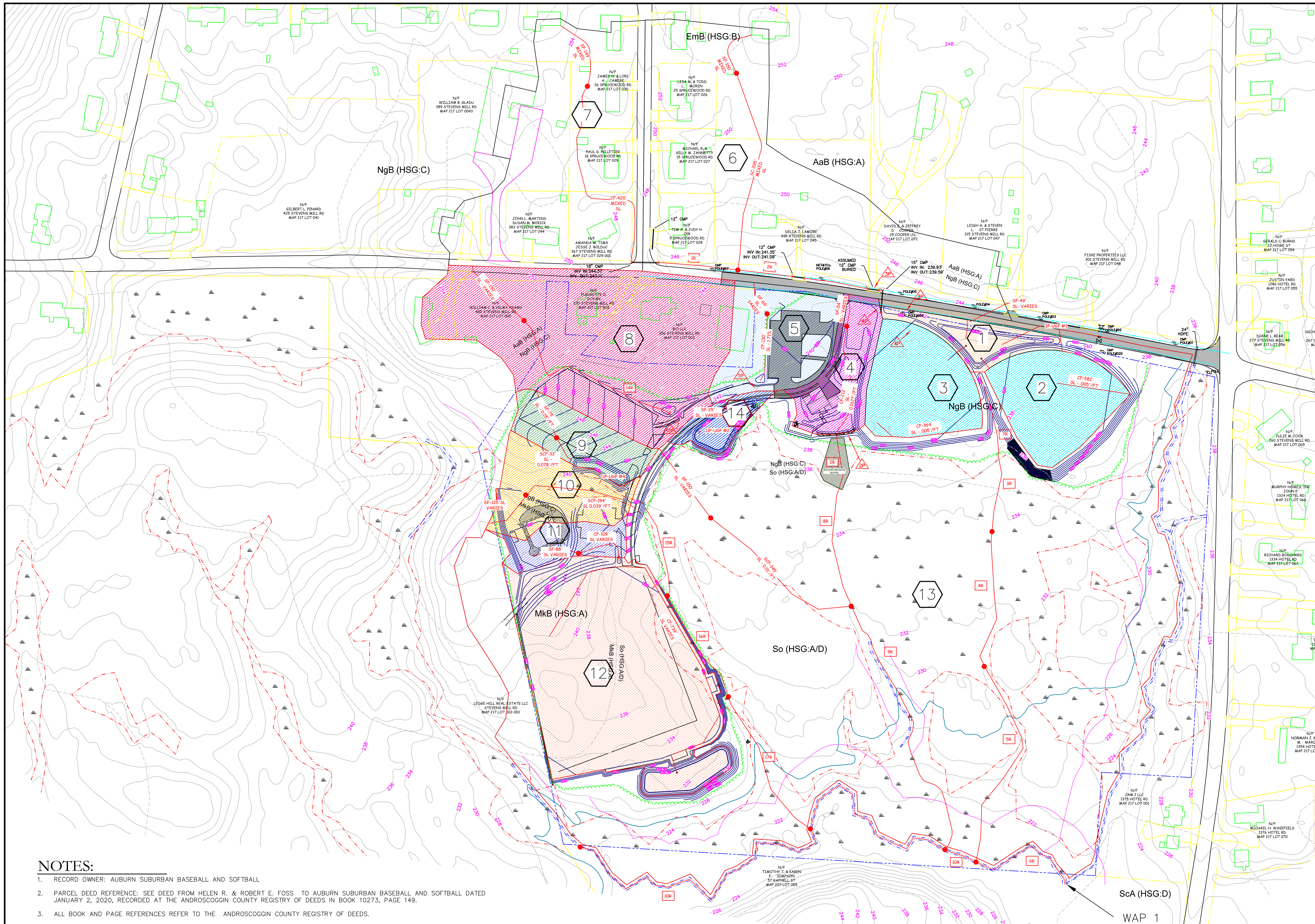
PREPARED FOR:
AUBURN SUBURBAN BASEBALL & SOFTBALL
PO BOX 1615
AUBURN, MAINE

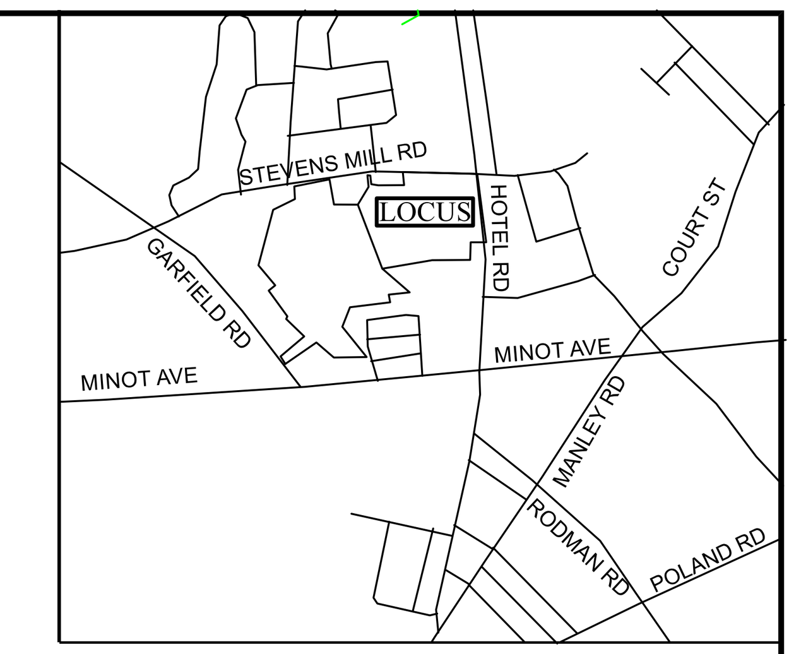
SHEET: E-3

PLAN DATE: FEBRUARY 9, 2023

SCALE: N/A

PROJ. #:21-011AU





LOCATION PLAN

SOILS LEGEND

NgB: NINIGRET FINE SANDY LOAM, 0 TO 8 PERCENT
HYDROLOGIC SOIL GROUP:C

So: SCARBORO FINE SANDY LOAM
HYDROLOGIC SOIL GROUP: A/D

MkB:MERRIMAC FINE SANDY LOAM, 0 TO 8 PERCENT SLOPES
HYDROLOGIC SOIL GROUP:A

AaB:ADAMS LOAMY SAND, 0 TO 8 PERCENT SLOPES
HYDROLOGIC SOIL GROUP:A

EmB: ELMWOOD FINE SANDY LOAM, 2 TO 8 PERCENT SLOPES
HYDROLOGIC SOIL GROUP:B

WATERSHED LEGEND

WATERSHED BOUNDARY
SOIL BOUNDARY
FLOWPATH

LEGEND

SUBJECT BOUNDARY LINE
ABUTTER OR RIGHT OF WAY LINE
STONE WALL
WETLANDS
N/F — NOW OR FORMERLY
000/000 — DEED BOOK PAGE REFERENCE
000-000 — TAX MAP AND LOT NUMBER
DECIDUOUS / CONIFEROUS TREE
MF — GRANITE MONUMENT FOUND
IPF/IRF/RBF — IRON PIPE/ROD/REBAR FOUND
DHF — DRILL HOLE FOUND
CRBS — 5/8" REBAR W/ CAP TO BE SET
UTILITY POLE
SEWER MANHOLE
DRAIN MANHOLE
CATCH BASINS
WATER SHUTOFF
WV — WATER VALVE
WELL
GV — GAS VALVE
HYDRANT
LIGHT POST
FENCE – BARBED WIRE
FENCE – CHAIN LINK
240 — EXISTING CONTOURS
240 — PROPOSED CONTOURS
SETBACK
OVERHEAD WIRES

GRID NORTH

GRAPHIC SCALE
0 50 100 200
1 inch = 100 ft.

NOTES:

1. RECORD OWNER: AUBURN SUBURBAN BASEBALL AND SOFTBALL
2. PARCEL DEED REFERENCE: SEE DEED FROM HELEN R. & ROBERT E. FOSS TO AUBURN SUBURBAN BASEBALL AND SOFTBALL DATED JANUARY 2, 2020, RECORDED AT THE ANDROSCOGGIN COUNTY REGISTRY OF DEEDS IN BOOK 10273, PAGE 149.
3. ALL BOOK AND PAGE REFERENCES REFER TO THE ANDROSCOGGIN COUNTY REGISTRY OF DEEDS.
4. PARCEL TAX MAP REFERENCE: CITY OF AUBURN, MAP 217, LOT 2
5. ZONING OF PROPERTY: SR (SUBURBAN-RESIDENTIAL)
6. TOTAL AREA OF PARCEL 29.83 ACRES.
7. ALL BEARINGS ARE REFERENCED TO MAGNETIC NORTH PER PLAN REF. A.
8. ELEVATIONS SHOWN ARE NAVD88 BY OPUS SOLUTION.
9. EXTERIOR BOUNDARY BASED ON PLAN REF. A.
10. WETLAND BOUNDARIES WERE IDENTIFIED AND DELINEATED IN JULY 2007 BY JONES ASSOCIATES INC. ACCORDING TO U.S. ARMY CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL (1987) AND REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHCENTRAL AND NORTHEAST REGION. A DELINEATION REVIEW WAS CONDUCTED BY JONES ASSOCIATES INC. IN APRIL 2018.
11. IN JULY 2007 WETLAND FLAGS WERE LOCATED USING TRIMBLE GLOBAL POSITIONING SYSTEM (GPS) TECHNOLOGY WITH EXPECTED AVERAGE ACCURACY OF SUB-METER. THIS METHOD IS RECOGNIZED BY BOTH STATE AND FEDERAL AGENCIES. HOWEVER, JONES ASSOCIATES INC RECOMMENDS THAT THE WETLAND BOUNDARY BE SURVEYED USING A MORE PRECISE METHOD IF ANY FILL OR REGULATED ACTIVITIES ARE TO BE PERFORMED WITHIN 20 FEET OF THE GPS LOCATED WETLAND. WETLAND FLAGS WERE REMARKED WHERE NEEDED IN APRIL 2018.
12. PLAN REFERENCES:

A.) PROPERTY PLAN AND TOPOGRAPHIC PLAN OF EXISTING CONDITIONS, HOTEL, GARFIELD & STEVENS MILL ROADS, AUBURN, MAINE PREPARED FOR ROBERT FOSS PREPARED BY ARCC LAND SURVEYING INC DATED JUNE 11, 2007

PROPOSED WATERSHED PLAN

AUBURN SUBURBAN BASEBALL & SOFTBALL

PREPARED FOR:
AUBURN SUBURBAN BASEBALL & SOFTBALL
PO BOX 1615
AUBURN, MAINE

PREPARED BY:
JONES ASSOCIATES INC.
Foresters, Surveyors And Environmental Consultants
280 POLAND SPRING ROAD, AUBURN, MAINE 04210
(207) 241-0235

FIELD WORK DATE: APRIL & MAY 2020

PLAN DATE: 2/8/2023

SCALE: 1"=100'

PROJ. #: 21-011AU