

Alexander Jaegerman, FAICP
Director of Planning & Development
200 Main Street
Yarmouth, ME 04096

April 22, 2019

Subject: Minor Site Plan & Shoreland Zone Permit
Sparhawk Mill, 81 Bridge St.,
Yarmouth ME

Dear Mr. Jaegerman,

At the request of Sparhawk LLC, Acorn Engineering is resubmitting the Minor Site Plan and Shoreland Zone applications for implementing site improvements to the Sparhawk Mill at 81 Bridge Street in Yarmouth. No new buildings or building additions are proposed for this project. The site improvements include:

- Paving the existing gravel driveway and parking lot with hot mix asphalt and striping 60 parking spaces,
- Installing vegetated islands between the upper and lower parking lot areas, a vegetated buffer with trees and shrubs between the parking lot and river and stormwater drip edge filter BMPs to manage runoff from the upper portions of the parking lot,
- Making minor adjustments to grades to ensure proper stormwater drainage and acceptable slopes for vehicle and pedestrian movement, and
- Installing 5 pole-mounted lighting fixtures to illuminate the parking lot.

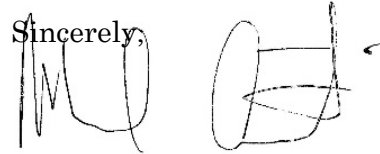
The parking lot construction may be conducted in two phases as shown on the enclosed Site Plan, Drawing C-10. If there are two phases, the west side of the parking lot adjacent to the building, along with all associated stormwater best management practices, will be constructed in the first phase.

The proposed paved driveway and parking footprint is approximately 28,150 ft² vs. the gravel driveway and parking footprint of approximately 33,500 ft² in 2017. The agreed-upon predevelopment condition, based on aerial photos from the 2003-2009 period, shows an impervious area associated with gravel driveway/parking areas and the former barn of approximately 30,050 ft². Current gravel areas that are not paved will be vegetated with grasses, shrubs or trees as indicated on the Site & Landscape Plan. The revegetation of formerly impervious areas combined with the stormwater filter drain units will minimize erosion and improve the quality of stormwater draining into the Royal River. In addition, the setback of the proposed paved parking lot from the Royal River will also increase to 25.2 feet versus the current distance of 22.2 feet.

On a parallel track, renovations are proposed for the existing catering business, Dandelion Catering, to convert a portion of the first floor of the mill building to a 40-seat restaurant. In addition to the interior work, this will include a 720 square foot patio space along the north side of the existing mill building as shown in site plans. Building permits for these renovations have been submitted by Barret Made.

We believe that the proposed site improvements will greatly enhance the existing property, improve stormwater runoff, and are in conformance Yarmouth's Site Plan Review and Zoning Ordinances. Please let us know if you have any comments or questions on this application or the project in general.

Sincerely,



Mark Arienti, P.E.
Senior Environmental Engineer
Acorn Engineering, Inc.

Cc: Allan Jagger
Rob Barrett
Will Savage, PE

Attachments: Site Plan Application Form
Shoreland Zoning Permit Application Form
Project Narrative
Exhibit 1. Project Location
Exhibit 2. Construction Schedule
Exhibit 3. Evidence of Corporation or Partnership
Exhibit 4. Evidence of Right, Title or Interest
Exhibit 5. Existing Property Deed
Exhibit 6. Summary of Easements
Exhibit 7. Articles of incorporation, Covenants and Responsibilities (NA)
Exhibit 8. Financial Capacity
Exhibit 9. Consultants
Exhibit 10. Solid Waste
Exhibit 11. Water
Exhibit 12. Traffic
Exhibit 13. Surface Drainage
Exhibit 14. Stormwater
Exhibit 15. Erosion and Sedimentation Control
Exhibit 16. Soils
Exhibit 17. Approvals
Exhibit 18. Zoning Compliance
Exhibit 19. Summary List of Cessation of Roads/Utilities
Exhibit 20. Waivers
Exhibit 22 Civil Plan Set
Exhibit 23 DEP Permit by Rule

TOWN OF YARMOUTH
Department of Planning and Development
200 Main Street Yarmouth, Maine 04096

(207)846-2401

WWW.YARMOUTH.ME.US

Fax: (207)846-2438

SITE PLAN APPLICATION FORM

☒ **Minor** ☐ **Major**

Date: 4/15/19 **Zoning District** GD **Map** 33 **Lot** 66 **Ext**

Site Location	<u>81 Bridge Street</u>	
Property Owner	<u>Sparhawk LLC c/o Allan Jagger</u>	
Mailing Address	<u>5 Amerescoggin Road, Falmouth, Maine</u>	
E-mail Address	<u>allan.jagger@gmail.com</u>	
Phone	<u>207-939-1730</u>	Fax <u> </u>

Name of Project	<u>Sparhawk Mill Site Improvements</u>
Existing Use	<u>Commercial, Retail & Otherwise</u>
Proposed Use	<u>Same</u>

Amendment to a previously approved site plan? Yes No x
Special exception use? Yes No x

Fee: \$100.00/1000 sq. ft.; up to \$3000.00

The Department of Planning and Development shall send notices to all property owners at a minimum of 500 feet including a description of the proposal. Letters will be at a cost of \$5/letter to the applicant.


The Town will correspond with only one contact person/agent for this project. Please provide the requested information regarding the contact person/agent.

Contact person/agent	<u>Mark Arienti</u>	
Mailing Address	<u>Acorn Engineering, 65 Hanover Street, Portland, Maine 04101</u>	
E-mail Address	<u>marienti@acorn-engineering.com</u>	
Phone	<u>207-775-2655</u>	Fax <u> </u>

I certify that, to the best of my knowledge, all information provided in this application form and accompanying materials is true and accurate.

Signature of Owner
(If signed by Owner's agent, provide written documentation of authority to act on behalf of applicant.)

"I authorize appropriate staff within the Yarmouth Planning Department to enter the property that is the subject of this application, at reasonable hours, including buildings, structures or conveyances on the property, to collect facts pertaining to my application."

Sparhawk LLC c/o Allan Jagger 
Print or type name and title of signer

1. PROJECT DESCRIPTION

A. In a separate document please describe the overall project objectives and proposed uses of property, including quantity and type of residential units (if any).

B. Project details

1. Name and approval date of subdivision this site is in (if applicable)

Subdivision lot numbers (if applicable) _____

2. Assessor's Map number(s) 33 Lot number(s) 66

3. Existing zone(s) of the site

Shoreland Overlay District ☒ Yes ☐ No

Affordable Housing District ☐ Yes ☐ No

Mobile Home Park Overlay ☐ Yes ☐ No

4. a. Total land area of site (all contiguous land in same ownership)

105,237 square feet

b. Total floor area of each proposed building in square feet

Gross living area is 18,656

c. Footprint of each proposed building in square feet

4,968 and 1,400

d. Height of proposed building(s) NA feet stories

e. Total number of proposed parking spaces 60

f. Number of proposed handicap parking spaces 2

C. Existing conditions

1. Existing land use Commercial, offices, catering business

2. Total floor area of each existing building in square feet

Gross living area is 18,656

3. Footprint of each existing building in square feet

4,968 and 1,400

D. Attach as Exhibit #1 a map such as the Maine Atlas and Gazetteer map (clean photocopies are acceptable). Indicate the location of your project on map.

E. Construction sequence

1. Estimated time of start of project Spring 2019

Estimated time of completion of project 6 months

2. Is this to be a phased project? Yes ☒ No ☐

3. Attach as Exhibit #2 a construction schedule outlining the anticipated sequence of construction (beginning and completion) for the major aspects of the proposed project, including roads, erosion control and drainage measures, structures, sewer and water lines, other utilities, paving, landscaping.

2. RIGHT, TITLE, OR INTEREST

A. Name and mailing address of record owner of the site

Sparhawk LLC, c/o Allan Jagger, 5 Amerescoggin Road, Falmouth, Maine 04105

Phone _____ Fax _____

B. Attach as Exhibit #3 evidence of corporate or partnership status, if applicant is not an individual.

- C. Attach as Exhibit #4 evidence of applicant's right, title, or interest in the site. A complete copy of the document must be provided; financial information may be deleted.
- D. Attach as Exhibit #5 a copy of the current owner's existing deed for the site.
- E. Attach as Exhibit #6 summary lists of all existing and all proposed easements or other burdens for this property. More detailed information may be required, depending on the particular circumstances of the site.
- F. If a condominium, homeowners, or property owners association will be established, attach as Exhibit #7 the articles of incorporation, the Declaration of Covenants and Responsibilities, and the proposed by-laws of the organization.

3. FINANCIAL CAPACITY

- A. Estimated cost of the project (including land purchase and development costs)
\$60,000
- B. Attach as Exhibit #8 evidence of your financial capacity to complete the proposed development. Submit one or more of the following (please check as appropriate):
 - ☐ 1. A written statement from the applicant's bank or a certified public accountant who recently has audited the applicant's finances stating that the applicant has cash reserves in the amount of the estimated cost of the project and can devote those reserves to the project.
 - ☒ 2. When the applicant will personally finance the development, provide copies of bank statements or other evidence, which will indicate availability of funds, and evidence that the applicant can devote these funds to the project.
 - ☐ 3. The most recent corporate annual report showing availability of sufficient funds to finance the development, together with a statement from the applicant that the funds are available and will be used for the proposed project.
 - ☐ 4. A letter from a financial institution, governmental agency, or other funding agency, which indicates a timely commitment to provide a specified amount of funds and the uses for which the funds may be utilized.
 - ☐ 5. In cases where outside funding is required, but there can be no commitment of money until regulatory approvals are received, a formal letter of "intent to fund upon approval" from a funding institution indicating the amount of funds it is prepared to provide, their specified uses and the conditions on which funds will be made available.

4. TECHNICAL ABILITY

- A. List all projects undertaken by the applicant within the last five years, beginning with the most recent project:
Applicant has not undertaken projects within the past 5 years, but the technical team Barrett Made as architect and Acorn Engineering as civil engineer
have designed and permitted over 100 million of projects in the greater Portland area in the past 5 years.
- B. Have done no prior projects ☒
- C. Attach as Exhibit #9 a list of all consultants retained for this proposed project, such as engineers, architects, landscape architects, environmental consultants; and those firms or personnel who will be responsible for constructing, operating and maintaining the project.

5. SOLID WASTE

Attach as Exhibit #10 an explanation of the proposed method of collection, removal, and disposal for anticipated solid waste from this project.

6. WATER

Attach as Exhibit #11 written confirmation from the Yarmouth Water District that it can supply the proposed development and that the proposed plan has been approved by the District. If the

applicant proposes a private supply, provide evidence that a sufficient and healthful water supply is available for the proposed development.

7. TRAFFIC

Attach as Exhibit #12 a written evaluation and demonstration of the adequacy and availability of adjacent streets to serve the proposed project. If you must submit a full traffic study to DEP, provide two (2) copies with this application. (see Ch. 702 H.2.)

8. SANITARY SEWERS AND STORM DRAINS

A. Estimated sewage gallons per day for the completed project

Existing food catering business will add a 600 sf restaurant (40 seats, 10 employees) that will displace some of the current catering space. With the 600 sf restaurant plus 3,000 sf of remaining catering space the estimated wastewater increase is 223 gpd based on Maine DHHS Ch. 241.

Please note that the Town Manager must approve new sanitary sewer connections that are considered sewer extensions.

B. Will this project generate industrial or non-sanitary waste that will enter the public sewer or drains? No ___ Yes ___

If yes, please describe proposed types and amounts:

C. If a subsurface wastewater disposal system is proposed, provide evidence that it conforms to the requirements of the State Plumbing Code.

9. SURFACE DRAINAGE AND-RUNOFF, STORMWATER MANAGEMENT

A. Attach as Exhibit #13 a description of any problems of drainage or topography, or a representation that, in the opinion of the applicant, there are none.

B. Attach as Exhibit #14 a complete stormwater management plan, including drainage calculations for pre- and post-development for 2 yr. and 25 yr. storm events, a drainage plan, and an assessment of any pollutants in the stormwater runoff, that meets the requirements of Chapter 702, Review Criteria re Stormwater Management.

10. EROSION AND SEDIMENTATION CONTROL

A. Attach as Exhibit #15 a written description of erosion and sedimentation control measures to be used during and after construction of the proposed project.

B. Show on a plan the proposed location, type, and detail of erosion control devices, unless this information is included on a site plan drawing.

11. SOILS

A. Attach as Exhibit #16 a medium intensity soils classification report, including description of soils and interpretation of engineering properties. Include geotechnical report, if applicable.

B. Show on a plan the existing soil conditions on the site, unless this information is included on a site plan drawing. Include wetlands delineation and report, if applicable.

12. SITE PLAN ORDINANCE REQUIREMENTS

A. Attach as Exhibit #17 list of approvals needed from other agencies, such as the General Board of Appeals, Army Corps of Engineers, and Maine Department of Environmental Protection.

B. Attach as Exhibit #18 a written statement that explains how the project complies with the site plan review criteria and with specific performance standards required in the zoning district, if applicable. If applicable, please note how the proposal specifically complies with the separate components of the Route One Corridor Design Guidelines.

C. Attach as Exhibit #19 a summary list and a written offer of cession to the Town of all proposed streets, utilities and open space proposed for dedication.

D. Attach as Exhibit #20 all requests for waivers including an explanation of the undue hardship or special design requirements, which are the basis for the requests.

E. Attach as Exhibit #21 a written explanation of all potential nuisances associated with this project and how they will be mitigated, or a representation that, in the opinion of the

applicant, there are none.

13. SITE PLAN DRAWINGS, MAPS

- A. Site plan drawings
 - a. paper no larger than 24" x 36", with all drawings in a set the same size
 - b. bound and folded no larger than 9" x 12", with project name shown on front face of folded plan
 - c. number and date drawings, with space for revision dates
 - d. scale of the drawings shall be between 1"=20' and 1"=50'
 - e. show the entire parcel in single ownership, plus off-site easements
- B. Title block shall include:
 - a. identification of plan as "Site Plan"; "Amended" if applicable
 - b. name and address of project
 - c. name(s) and address(es) of site owner and of applicant
 - d. name and address of plan designer(s)
- C. Location map shall include:
 - a. abutting property within one thousand feet of project boundaries
 - b. outline of proposed project
 - c. zoning district(s) of abutting properties
 - d. at least one street intersection
- D. North arrow and scale.
- E. General plan notes shall include:
 - a. zoning district and list of applicable dimensional regulations comparing the required and proposed
 - b. proposed number of units
 - c. required and proposed number of parking spaces
 - d. total square footage of existing and proposed buildings
 - e. square footage of proposed building footprint
 - f. all requested waivers
 - g. indication if proposed structure is to be sprinklered
 - h. total square footage for each use, if applicable
- F. Name, location, width of existing and proposed streets.
- G. A Boundary Survey, Category 1, Condition 2, showing site boundaries.
- H. Setbacks as required by zoning ordinance; zone line if site is transected by a zone line or if zone line is within 30 feet of the boundaries of the site.
- I. Existing and proposed contours at 2' intervals. Show 1' contours and/or spot elevations if sufficient detail cannot be shown with 2' contours.
- J. Buildings, structures, and signs
 - a. location, dimensions, shape, facade elevations, entrances, materials, colors of exterior of proposed buildings, structures, and signs. (see Ch. 701, II, C, E, F)
 - b. description of all finish surface materials
 - c. location, dimensions, shape of existing buildings
 - d. building's setbacks from property line, if different from required yard setbacks
- K. Names of abutting property owners and locations of buildings and curb cuts on abutting properties.
- L. Locations and dimensions of parking areas, loading and unloading facilities, driveways, fire lanes, access points. Give typical parking space dimensions. (see Ch. 701, II H; Ch. 702, J.1, 2, 3)
- M. Location of all existing and proposed easements and rights-of-way, including identification of who has or will receive the easement.

- N. Location, dimensions, materials of existing and proposed pedestrian access ways.
- O. Location and size of existing and proposed utilities, both on-site and in adjoining public ways. Location of nearest existing hydrant. Include installation details for proposed utilities.
- P. Construction drawings showing plans, profiles, cross-sections, and details of appurtenances for sanitary sewer and storm drainage systems.
- Q. Location, height, wattage, bulb type of exterior and building-mounted lighting. Photometric plan consistent with requirements of site plan and zoning ordinances. (See Ch. 701, II X; Ch. 702, J. 4)
- R. Location and description of existing natural features, such as wetlands, watercourses, marshes, rock outcroppings, stands of trees. Natural features to be preserved must be identified on plan.
- S. Existing and proposed landscaping, fencing, screening. Include fence dimensions, location, material, and a table showing number of plants of each species, common and botanical names. Include planting and preservation details, if applicable. Indicate proposed snow storage area, if applicable. (see Ch. 701, II Y, and Ch. 702 J. 5)
- T. Grades, street profiles, typical cross-section, and specifications of proposed streets and sidewalks. These must meet the standards of Ch. 601, Article IV.
- U. A description of any right-of-way, street, sidewalk, open space, or other area the applicant proposes to designate as public.
- V. Name, registration number, seal, and signature of all registered professionals (engineer, land surveyor, architect, landscape architect, etc.) who prepared the plan.
- W. First floor finished floor elevation(s) for all proposed buildings.
- X. If project is within the RP district, extent of floodway and floodway fringe.
- Y. If project is within Shoreland Overlay District, show required setbacks.

Please be advised to keep in touch with the Director of Planning and Development throughout the process, 846-2401; fax 846-2403. Your responsiveness will help the process to run smoothly.

CONDITIONS OF APPROVAL

The property shown on this plan may be developed and used only as depicted on this approved plan. All elements and features of the plan and all representations made by the applicant concerning the development and use of the property which appear in the record of the Planning Board proceedings are conditions of approval. No change from the conditions of approval is permitted unless an amended plan is first submitted to and approved by the Planning Board.

Surface Water and Groundwater: No owner of a lot, his agents, or successors in interest shall alter the natural course of surface water on any lot in a way which would alter the natural flow of such water across any other parcel, unless such alteration is approved by the owners of all parcels affected. No owner of a lot, his agents, or successors in interest shall use blasting chemicals that generate perflorates.

TOWN OF YARMOUTH

200 Main Street

Yarmouth, Maine 04096

(207)846-2401

WWW.YARMOUTH.ME.US

Fax: (207)846-2438

SHORELAND ZONING PERMIT APPLICATION

PERMIT # _____ ISSUE DATE _____ FEE AMOUNT _____
Date: 04/19/19 Zoning District GD Map 33 Lot 66 Ext _____
APPLICANT NAME: SPARHAWK LLC, C/O ALLAN JAGGER PHONE NO: 207-939-1730
MAILING ADDRESS: 5 AMERESCOGIN ROAD FALMOUTH, ME 04105 e-mail allan.jagger@gmail.com
OWNER (other than applicant)
NAME: _____ PHONE NO: _____
MAILING ADDRESS: _____ e-mail _____
CONTRACTOR
NAME: BARRETT MADE PHONE NO: 207-210-4421
MAILING ADDRESS: 65 HANOVER STREET e-mail rob.barrett@barrettmade.com
PROPERTY LOCATION: 81 BRIDGE STREET

Applicant must also include a narrative of the project including a description of all proposed construction, (E.G. Land clearing, road building, septic systems and wells – Please note: A site plan sketch is required on a separate sheet of paper no less than 11" x 17" or greater than 24"x36"

Please note: Plan set must be bound (not rolled) with a cover sheet and index.

Proposed use of project: EXISTING COMMERCIAL USE TO REMAIN

Estimated cost of construction \$60,000

Lot area (sq. ft.) 105,237

Frontage on Road (FT) 347

SQ. FT. of lot to be covered by non-vegetated surfaces 35,649

Elevation above 100 YR Flood Plain 0

Frontage on water body (FT.) 485

Height of proposed structure NA

Existing use of property Commercial

Proposed use of property Same as existing

Note: NEXT Questions apply only to expansions of portions of existing structures that are less than the required setback.

- A) Total building footprint area of portion of structure that is less than required setback as of 1/1/89: 6,668 SQ.FT.
- B) Actual shore setback of existing structure proposed for expansion (measured as required in SOD, e.g.: Highest Annual Tide; Upland Edge of Coastal Wetland; Top of Bank (RP); Normal High Water Line of rivers and streams; as applicable): NA
- C) Building footprint area of expansions of portion of structure that is less than required setback from 1/1/89 to present: NA SQ.FT.
- D) Building footprint area of proposed expansion of portion of structure that is less than required setback: NA SQ.FT.
- E) % Increase of building footprint of previous and proposed expansions of portion of structure that is less than required setback since 1/1/89: % increase = $((C+D) \times 100) / A =$
NA %
- F) Floor Area and Market Value of Structure prior to improvements: (a) Area: _____ Value: _____. Floor Area and Market Value of portions of Structure removed, damaged or destroyed: (b) Area: _____ Value: _____. If the floor area or market value of (b) exceeds 50% of the area or value of (a), then the Relocation provisions of Article IV.R.5.a.(3) and (4) shall apply. **Note: A value appraisal may be required or submitted in close cases where the applicant asserts that that 50% trigger and relocation assessment provision is not met. Any plan revisions after initial approvals to replace rather than renovate building components (foundations, framing, etc.) shall be required to re-calculate the extent of removal, damage or destruction relative to retained structure.**
- ☐ Please provide a site plan to include lot lines, area to be cleared of trees and other vegetation; the exact position of proposed structures, including decks, porches, and out buildings with accurate setback distances from the shoreline, side and rear property lines; the location of proposed wells, septic systems, and driveways; and areas and amounts to be filled or graded. If the proposal is for the expansion of an existing structure, please distinguish between the existing structure and the proposed expansion.
- ☐ Note: For all projects involving filling, grading, or other soil disturbance you must provide a soil erosion control plan describing the measures to be taken to stabilize disturbed areas before, during and after construction.
- ☐ Draw a simple sketch showing both the existing and proposed structures with dimensions.

SHORELAND ZONING PERMIT CHECKLIST

Please note that this checklist is intended to help applicants identify major submittal components but it is the applicant's responsibility to review the SOD/RP provisions outlined in Chapter 701 of the Yarmouth Code and provide all required information as well as conform to all design components. Copies of Chapter 701 are available at the Yarmouth Town Hall or can be downloaded on the Town website which is www.yarmouth.me.us.

- ☒ Complete Shoreland Zoning Permit application including signatures of property owners and agents.
- ☒ Appropriate fee.
- ☒ Square footage of lot area within the 250' SOD
- ☒ Square footage and % of lot covered by non-vegetated surfaces within the SOD
- ☒ Square footage and % of cleared area within lot area within the SOD
- ☒ Delineation of 75' setback from upland edge of the coastal wetland
- ☒ Delineation of 250' SOD line from upland edge of the coastal wetland.
- ☒ Delineation of Resource Protection District
- ☒ Height of any proposed structures as measured between the mean original grade at the downhill side of the structure and the highest point of the structure
- ☒ Building elevations of any proposed structures as viewed from side and rear lot lines
- ☒ % Increase of expansions of portion of structure which is less than the required setback (if applicable)
- ☒ Floor Area and Market Value of Structure prior to improvements: (a) Area: _____ Value: _____. Floor Area and Market Value of portions of Structure removed, damaged or destroyed: (b) Area: _____ Value: _____.
- ☒ Elevation of lowest finished floor to 100 year flood elevation
- ☒ Evidence of submission of the application to the Maine Historic Preservation Commission (MHPC) at least twenty (20) days prior to the Planning Board meeting as required in Article IV.R.O
- ☒ Copy of additional permit(s) if applicable:
 - Planning Board (e.g. Subdivision, Site Plan Review)
 - Board of Appeals
 - Flood Hazard
 - Exterior plumbing permit (Approved HHE 200 Application Form)
 - Interior plumbing permit
 - DEP permit (Site Location, Natural Resources Protection Act)
 - Army Corps of Engineers Permit (e.g. Sec. 404 of Clean Waters Act)
- ☒ Please circle all habitat types, marine organisms and shoreline elements present:
(Sand beach) (boulder/cobble beach) (sand flat) (mixed coarse & fines) (salt marsh) (ledge) (rocky shore) (mudflat) (sediment depth if known) (Bluff/bank) (Mussels) (clams) (marine worms) (rockweed) (eelgrass) (lobsters) (other _____)
- ☒ Signs of intertidal erosion? (Yes) (no)
- ☒ Energy: (protected) (semi-protected) (partially exposed) (exposed)
- ☒ Copy of deed
- ☒ Soil erosion control plan
- ☒ Photographs
- ☒ Plan view

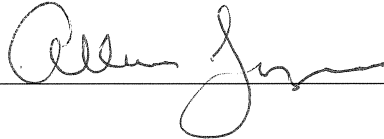
NOTE: Applicant is advised to consult with the CEO and appropriate state and federal agencies to determine whether additional permits, approvals, and reviews are required.

CONDITIONS OF APPROVAL

The property shown on this plan may be developed and used only as depicted on this approved plan. All elements and features of the plan and all representations made by the applicant concerning the development and use of the property which appear in the record of the Planning Board proceedings are conditions of approval. No change from the conditions of approval is permitted unless an amended plan is first submitted to and approved by the Planning Board.

I certify that all information given in this application is accurate. All proposed uses shall be in conformance with this application and the Town of Yarmouth Shoreland Regulations in the Zoning Ordinance. I agree to future inspections by the Code Enforcement Officer / Planning Director / Planning Board members (as applicable) at reasonable hours and with advance notice.

"I authorize appropriate staff within the Yarmouth Planning Department to enter the property that is the subject of this application, at reasonable hours, including buildings, structures or conveyances on the property, to collect facts pertaining to my application."

Applicant Signature  Date 4/22/19

Agent Signature _____ Date _____
(if applicable)

Code Enforcement Officer _____

DATE OF APPROVAL / DENIAL OF APPLICATION _____
(by either staff or planning board)

Project Narrative

Sparhawk Mill
81 Bridge Street

The proposed project consists of improvements to the existing gravel driveway and parking lot that provide access to the Sparhawk Mill. No new buildings are proposed, but a 720 square foot patio is proposed along the north side of the mill building.

The brick Sparhawk Mill building was originally constructed in approximately 1850 and was operated as a textile mill for a number of years with hydropower from the Royal River. A number of years ago the Mill was redeveloped into office suites, which is its current use along with a catering business on the first floor.

This project includes the following proposed improvements to the 2.2-acre site:

- Paving the existing gravel driveway and parking lot with hot mix asphalt,
- Installing vegetated islands between the upper and lower parking lot areas with drip edge filters to manage stormwater from the upper portions of the parking lot,
- Making minor adjustments to grades to ensure proper stormwater drainage and acceptable slopes for vehicle and pedestrian movement,
- Landscaping improvements including a vegetated buffer consisting of shrubs and small trees between the lower parking lot and the river;
- Five pole-mounted lighting fixtures to illuminate the parking lot.

The proposed paved driveway and parking footprint is approximately 28,150 ft² compared to the approximately 33,500 ft² gravel driveway and parking footprint measured by survey in 2017. The predevelopment condition agreed to with the Town, based on aerial photos from the 2003-2009 period, shows an impervious area associated with gravel driveway/parking areas including the former barn of 30,050 ft². Current gravel areas that are not paved will be vegetated with grasses, shrubs or trees as indicated on the Site & Landscape Plan. The revegetation of formerly impervious areas combined with the stormwater filter drain units will minimize erosion and improve the quality of stormwater draining into the Royal River. In addition, the setback of the proposed paved parking lot from the Royal River will also increase to 25.2 feet versus the current distance of 22.2 feet.

On a parallel track, renovations are proposed for the existing catering business, Dandelion Catering, to convert a portion of the first floor of the mill building to a 40-seat restaurant. The 720 square foot patio referenced above will be for the restaurant.

Most of the lot area is within the 250-foot Shoreland Overlay District (SOD), and much of the existing mill building is within 25 feet of the mean high-water line of the Royal River, however as indicated above no building expansion is proposed and the setback to the parking lot will be increased from the existing condition.



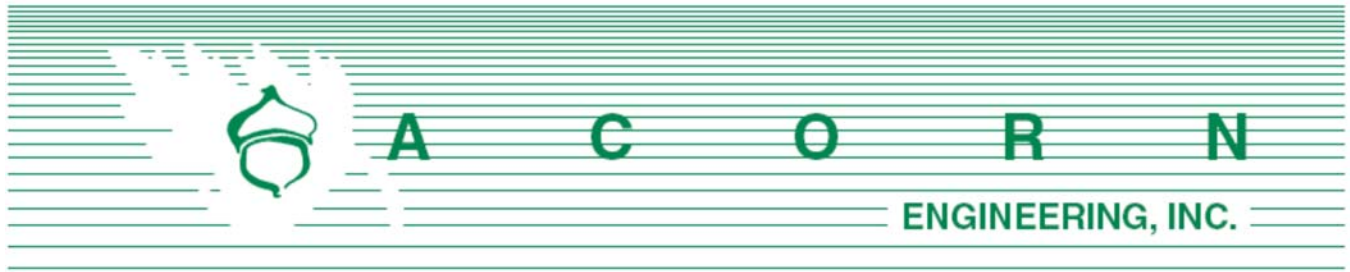
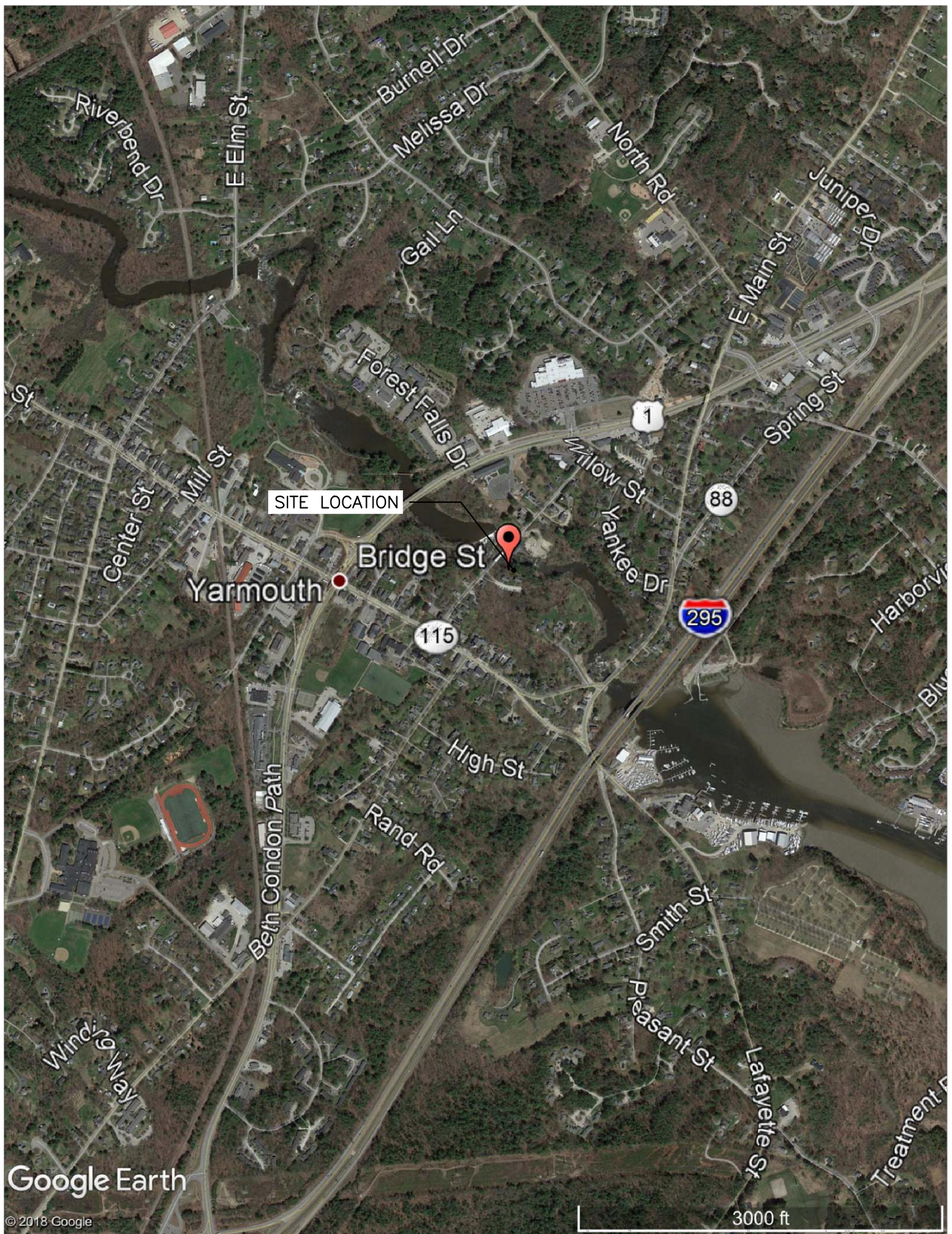


Exhibit 1. Project Location



THIS PLAN SHALL NOT BE MODIFIED
WITHOUT WRITTEN PERMISSION FROM
ACORN ENGINEERING, INC. ANY
ALTERATIONS, AUTHORIZED OR
OTHERWISE, SHALL BE AT THE USER'S
SOLE RISK AND WITHOUT LIABILITY TO
ACORN ENGINEERING, INC.

DRAWING NO.
C-1

FILE: 1114_CIVIL
DATE: 12/21/18
JN: 1114
SCALE:
DESIGN BY: MTA
DRAWN BY: XXX
CHECKED BY: MTA



DRAWING NAME:
SITE LOCATION MAP
PROJECT NAME:
SPARHAWK MILL SITE IMPROVEMENTS
CLIENT:
ALLEN JAGGER
81 BRIDGE STREET YARMOUTH, ME, 04096

ISSUED FOR	BY DATE
	MTA 12/21/18
	REV DATE

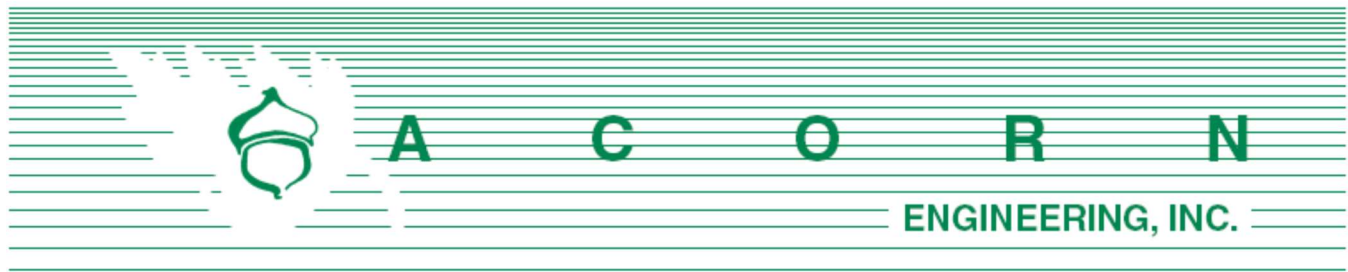


Exhibit 2. Construction Schedule

Activity	Month/Year
Building Renovation (Interior) Work	March 2019 - May 2019
Site Work	
Mobilization	May 1 – May 8, 2019
Site Erosion Controls (construction entrance, perimeter controls)	May 1 – May 10, 2019
Preliminary parking lot grading	May 10 - May 20, 2019
Construct stormwater filter drain BMPs	May 21 – May 31, 2019
Install Parking Lot Lighting	May 21 – May 31. 2019
Place parking lot gravel base and pave with HMA	June 1 – June 15, 2019
Landscaping and Clean Up	June 15 – June 30, 2019

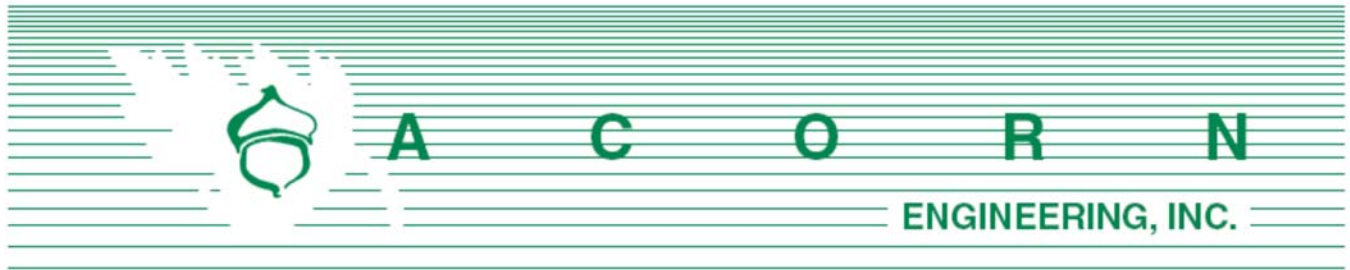


Exhibit 3. Evidence of Business Status

**MAINE**Department of the Secretary of State
Bureau of Corporations, Elections and Commissions**Corporate Name Search**

Information Summary

[Subscriber activity report](#)

This record contains information from the CEC database and is accurate as of: Fri Jan 04 2019 15:33:58. Please print or save for your records.

Legal Name	Charter Number	Filing Type	Status
SPARHAWK, LLC	20150184DC	LIMITED LIABILITY COMPANY (DOMESTIC)	GOOD STANDING

Filing Date	Expiration Date	Jurisdiction
07/17/2014	N/A	MAINE

Other Names (A=Assumed ; F=Former)

NONE

Clerk/Registered Agent

THOMAS F JEWELL
477 CONGRESS STREET

PORTLAND, ME 04101

[Back to previous screen](#)[New Search](#)

Click on a link to obtain additional information.

[List of Filings](#)[View list of filings](#)

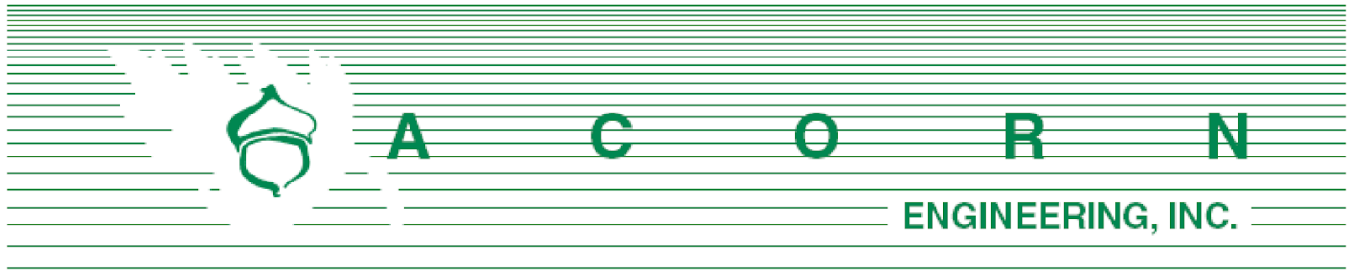


Exhibit 4. Right, Title & Interest

See Attachment 5.

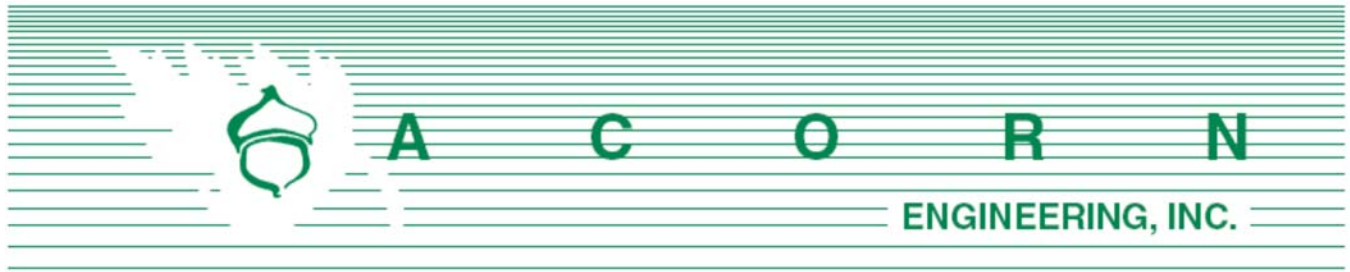
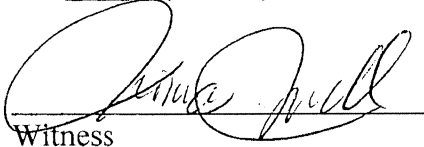


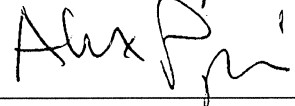
Exhibit 5. Existing Property Deed

QUITCLAIM DEED
(with covenant)

KNOW ALL MEN BY THESE PRESENTS, that, **SPARHAWK PROPERTIES, LLC**, a Maine limited liability company with a mailing address of c/o Herbert A. Piper, 100 Wild Fern Drive, Longwood, Florida 32779 for and in consideration of one dollar and other valuable consideration paid by **SPARHAWK, LLC**, a Maine limited liability company with a mailing address of 40 O'Brion Street, Portland, 04101, ("Grantee"), the receipt whereof is hereby acknowledged, does hereby grant unto the said Grantee, its successors and assigns forever, with *Quitclaim Covenant*, the property more particularly described on Exhibit A attached hereto.

IN WITNESS WHEREOF, the said Grantor has caused this instrument to be signed this 31 day of July, 2014.


Witness

Sparhawk Properties, LLC


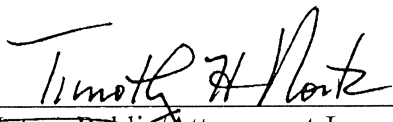
Herbert A. Piper
Its Manager

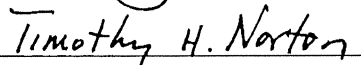
State of Maine
Cumberland (county)

July 31, 2014

Personally appeared the above-named Herbert A. Piper, duly authorized Manager of Sparhawk Properties, LLC and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of the said Sparhawk Properties, LLC.

Before me,



Notary Public/Attorney-at-Law


Printed Name

MAINE REAL ESTATE TAX PAID

EXHIBIT A

(Three parcels)

PARCEL-ONE:

A certain lot or parcel of land with the buildings, boiler house, shed and other buildings thereon, situated in the Town of Yarmouth, County of Cumberland and State of Maine, bounded and described as follows:

Beginning at the intersection of the thread of Royal River and the southwesterly projection of the center line of Bridge Street;

Thence northeasterly by said projection of the center line of Bridge Street to the abutment on the easterly shore of Royal River;

Thence continuing northeasterly with the center line of Bridge Street one hundred thirty-five and thirty-seven hundredths feet (135.37');

Thence South, 29° 25' East by other land now or formerly of Acorn Corp., one hundred ninety-seven and thirty-seven hundredths feet (197.37') to a stake at other land now or formerly of Acorn Corp., which stake is twenty-eight and eighty-eight hundredths feet (28.88') northwesterly of a cement block located near the northwesterly corner of an old wooden shop building;

Thence southwesterly by other land now or formerly of said Acorn Corp. about eighty-one and fifty-nine hundredths feet (81.59') to a stone wall near the northeasterly bank of Royal River;

Thence continuing southwesterly by a projection of the last bound to the thread of Royal River;

Thence northwesterly by the thread of Royal River to the point of beginning; Excepting and reserving that portion of the above-described premises conveyed to the Town of Yarmouth by deed dated March 20, 1974, recorded in said Cumberland County Registry of Deeds, Book 3531, Page 182.

PARCEL TWO:

A certain lot or parcel of land with buildings thereon situated in Yarmouth, in the County of Cumberland and State of Maine, bounded and described as follows:

Beginning at a point in the center line of Bridge Street (formerly known as Kimball Road) which is one hundred thirty-five and thirty-seven hundredths feet (135.37') distant northeasterly from the center of an abutment at the end of said street near the easterly shore of Royal River;

Thence running South 29° 25' East by land conveyed to Suburban Investors, Inc. one hundred ninety-seven and thirty-seven hundredths feet (197.37');

Thence turning and running North 60° 35' East by other land now or formerly of the Acorn Corporation eighty-five and sixty-one hundredths feet (85.61');

Thence turning and running North 29° 25' West by other land now or formerly of the Acorn Corporation one hundred ninety-seven and thirty-seven hundredths feet (197.37') to a point in the center line of said Bridge Street;

Thence turning and running South 60° 35' West by the center line of said street eighty-five and sixty-one hundredths feet (85.61') to the point of beginning.

PARCEL THREE

A certain lot or parcel of land on the southeasterly side of Bridge Street in the Town of Yarmouth, County of Cumberland and State of Maine bounded and described as follows:

Beginning at a point on the southeasterly side of Bridge Street at the northeasterly corner of land conveyed to the Grantee and other by Thomas Payson by warranty deed dated September 3, 1987 and recorded in the Cumberland County Registry of Deeds in Book 7963, Page 340; thence southeasterly by said Payson land one hundred seventy feet (170') more or less to the southeasterly corner thereof; thence southwesterly by said Payson property and property conveyed to the Grantee and other by Phillip E. Stultz, et al. by deed dated June 24, 1974 and recorded in said Registry in Book 3568, Page 115, one hundred sixty-eight feet (168') more or less to the thread of the Royal River; thence southeasterly by the thread of the Royal River four hundred seventy feet (470') more or less to land owned by the Residents of Yankee Drive; thence northeasterly by said Residents land and the rear of lots 15, 14 and 13 as appears on a plan of Yankee Drive, three hundred eighty-six feet (386') more or less to land conveyed to Romeo J. Charron, et al by deed recorded in said Registry in Book 2511, Page 170; thence northwesterly by said Charron land one hundred twenty-nine (129') feet, more or less to land conveyed to Romeo J. Charron, et al, by deed recorded in said Registry in Book 2020, Page 498; thence southwesterly by said last described Charron land and land conveyed to Richard C. Lindahl, et al. by deed recorded in said Registry in Book 9480, Page 19, ninety-seven and nine tenths feet (97.9') more or less to the southerly corner of said Lindahl property; thence northwesterly by said Lindahl property two hundred eighty-two feet (282') more or less to Bridge Street; thence southwesterly by Bridge Street seventy-four feet (74') more or less to said Grantee's land and the point of beginning.

The premises conveyed herein are also described, as Lots 62 and 64 on Map 33 of the Assessor's Maps of the Town of Yarmouth, Maine, revised April 1, 1992, on file at the Yarmouth Town Office, Yarmouth, Maine.

Excepting and reserving that portion of the above described premises conveyed to the Town of Yarmouth, Maine by deed dated November 23, 1994 and recorded in said Cumberland County Registry of Deeds in Book 11731, Page 235.

Being the same premises conveyed to Sparhawk Properties, LLC by Sparhawk Mill Associates, LLC by deed dated November 16, 2012 and recorded in the Cumberland County Registry of Deeds in Book 30141, Page 150.

Also hereby conveying, but without warranty or representation:

1. All of Grantor's right, title and interest in the dam and flowage rights in the Royal River relating to the so-called "Old Sparhawk Mill" and the "Old Sparhawk Mill" hydroelectric facility in the Town of Yarmouth, Maine; and a certain Agreement dated July 19, 1983 as amended by Amendment to Agreement dated February 24, 1992, by and between the "Old

Sparhawk Mill Co.” and the Town of Yarmouth, Maine, relating to such dam and flowage rights in the Royal River, a memorandum of which is recorded in said Registry in Book 6393, Page 94.

2. All of Grantor’s interest in dams, pen stocks, water power, riparian and littoral rights and flowage rights in the Royal River and the land and shores abutting the Royal River.

3. The easement rights granted to Grantor by Michael Wilbur by deed dated May 2, 2008 and recorded in said Registry in Book 26021, Page 313.

This conveyance is subject to and with the benefit of any rights and obligations referred to in a Notice of Assignment of Union Atlantic Electricity Lease between Borrower and Sparhawk Mill Associates, LLC dated August 7, 2012 as recorded in Book 30035, Page 198. Also excepting from this conveyance those rights released by Grantor to Michael Wilbur in deed dated May 2, 2008 and recorded in said Registry in Book 26021, Page 310.

Received
Recorded Register of Deeds
Aug 01, 2014 11:49:15A
Cumberland County
Pamela E. Lovley

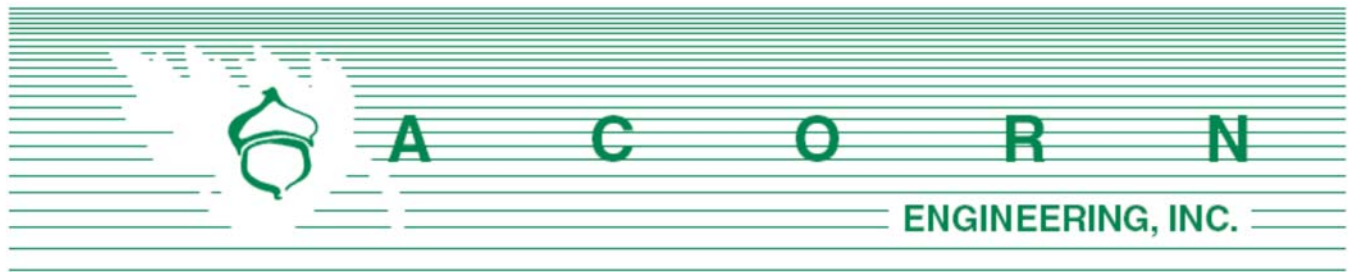


Exhibit 6. Easements

There are no proposed easements. The property is subject to the following existing easements.

- Right, title and interest in the dam and flowage rights in the Royal River relating to the “Old Sparhawk Mill” hydroelectric facility in the Town of Yarmouth; and Agreement dated July 19, 1983 as amended by Amended to Agreement dated February 24, 1992 by and between the “Old Sparhawk Mill Co.” and the Town of Yarmouth, Maine relating to such dam and flowage rights in the Royal River.
- All of Grantor’s (Sparhawk Properties) Interests in dams, pen stocks, water power, riparian and littoral rights and flowage rights in the Royal River and the land and shores abutting the Royal River.
- The easement rights granted to Grantor by Michael Wilbur by deed dated May 2, 2008 and recorded in said Registry in Book 26021, page 313. This easement grants Sparhawk LLC a 10-ft wide right-of-way easement commencing at the intersection of Bridge Street and the southeasterly sideline of Grantor’s (Michael Wilbur) land, then in a northerly direction along the easterly boundary of Grantor’s land and maintaining a distance of 10 feet therefrom to the most northeasterly boundary of Grantor’s property.

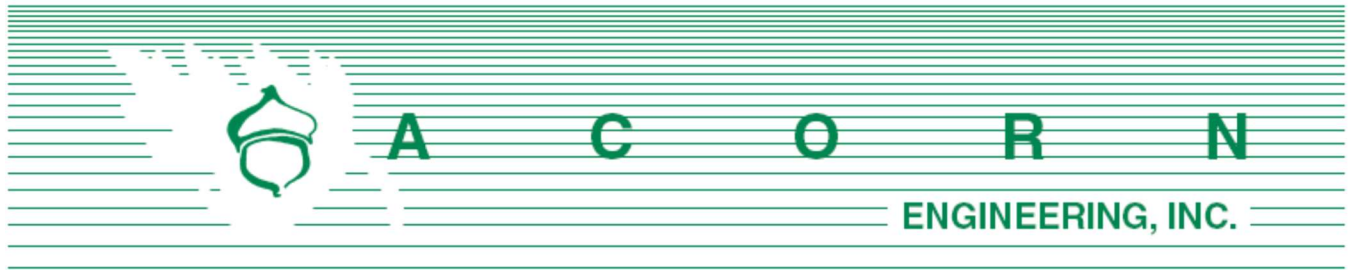


Exhibit 10. Articles of Incorporation

Not Applicable.

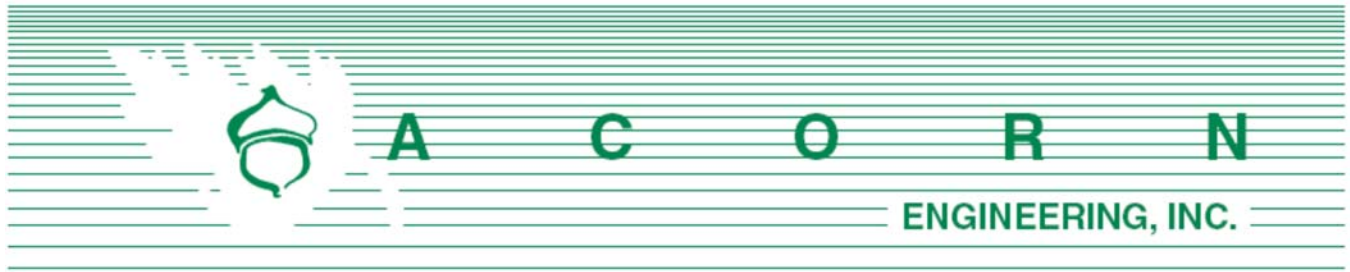


Exhibit 8. Financial Capacity

Evidence of Financial Capacity is attached.



1-800-966-9172
www.androscogginbank.com
PO Box 1407
Lewiston, ME 04243-1407

015 006 02 00431
Line:

Page: 1
75791 01/11/2019

Allan D Jagger
5 Amerescoggin Rd
Falmouth ME 04105



14-101

Loan Billing Statement

=====

DON'T FORGET-AN ANNUAL REVIEW OF YOUR CURRENT FINANCIAL
STATEMENT IS REQUIRED AS PART OF YOUR LOAN AGREEMENT.
PLEASE CONTACT YOUR LOAN OFFICER IF YOU HAVE NOT ALREADY
SUBMITTED COPIES. THANK YOU

=====

COMML REAL ESTATE Loan 5318004149

=====

Date	Description	-----Payment Split----- Principal Interest	Transaction Amount	Principal Balance
12/13/2018	Balance Last Statement			.00
01/11/2019	Balance This Statement			.00

- - - - - L o a n S u m m a r y - - - - -

Credit Limit:	175,000.00	Interest Accrued From:	12/14/2018
Available Credit:	175,000.00	Interest Accrued Thru:	01/11/2019
Maturity Date:	08/03/2019	Principal Due:	.00
		Interest Due:	.00
Interest Accrued:	.00	Total Payment Due:	.00

Next Interest Due:

IRS DEPARTMENT OF THE TREASURY
INTERNAL REVENUE SERVICE
CINCINNATI OH 45999-0023

000239.470860.153255.9869 1 MB 0.435 530



SPARHAWK LLC
ALLAN JAGGER SOLE MBR
66 MONTREAL ST
PORTLAND ME 04101

Date of this notice: 07-28-2014

Employer Identification Number:
47-1407145

Form: SS-4

Number of this notice: CP 575 G

For assistance you may call us at:
1-800-829-4933

IF YOU WRITE, ATTACH THE
STUB OF THIS NOTICE.

WE ASSIGNED YOU AN EMPLOYER IDENTIFICATION NUMBER

Thank you for applying for an Employer Identification Number (EIN). We assigned you EIN 47-1407145. This EIN will identify you, your business accounts, tax returns, and documents, even if you have no employees. Please keep this notice in your permanent records.

When filing tax documents, payments, and related correspondence, it is very important that you use your EIN and complete name and address exactly as shown above. Any variation may cause a delay in processing, result in incorrect information in your account, or even cause you to be assigned more than one EIN. If the information is not correct as shown above, please make the correction using the attached tear-off stub and return it to us.

A limited liability company (LLC) may file Form 8832, Entity Classification Election, and elect to be classified as an association taxable as a corporation. If the LLC is eligible to be treated as a corporation that meets certain tests and it will be electing S corporation status, it must timely file Form 2553, Election by a Small Business Corporation. The LLC will be treated as a corporation as of the effective date of the S corporation election and does not need to file Form 8832.

To obtain tax forms and publications, including those referenced in this notice, visit our Web site at www.irs.gov. If you do not have access to the Internet, call 1-800-829-3676 (TTY/TDD 1-800-829-4059) or visit your local IRS office.

IMPORTANT REMINDERS:

- * Keep a copy of this notice in your permanent records. This notice is issued only one time and IRS will not be able to generate a duplicate copy for you. You may give a copy of this document to anyone asking for proof of your EIN.
- * Use this EIN and your name exactly as they appear at the top of this notice on all your federal tax forms.
- * Refer to this EIN on your tax-related correspondence and documents.
- * Provide future officers of your organization with a copy of this notice.

Your name control associated with this EIN is SPAR. You will need to provide this information, along with your EIN, if you file your returns electronically.

If you have questions about your EIN, you can call us at the phone number or write to us at the address shown at the top of this notice. If you write, please tear off the stub at the bottom of this notice and send it along with your letter. If you do not need to write us, do not complete and return this stub. Thank you for your cooperation.

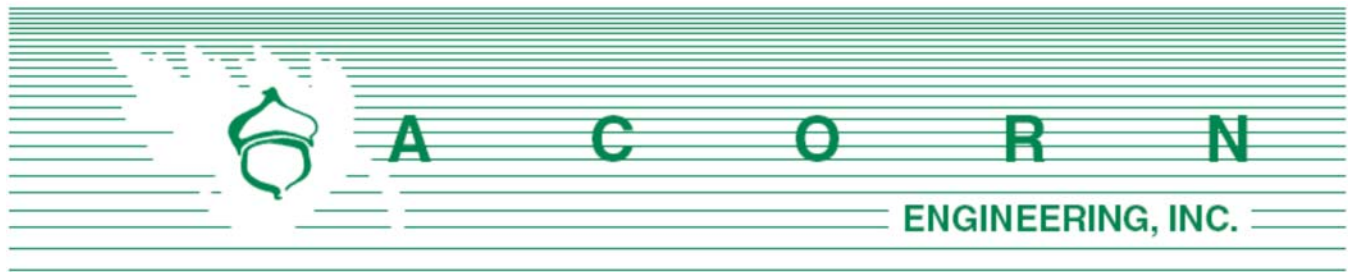


Exhibit 9. Consultants

Consultants and contractors working for Sparhawk LLC on this project are listed below:

Role	Company/Address	Contact
Civil Engineer	Acorn Engineering Inc. 65 Hanover Street Portland, Maine 04101	Mark Arienti, P.E. marienti@acorn-engineering.com 207-775-2655
Architect	Barrett Made 65 Hanover Street Portland, Maine 04101	Matthew Ahlberg, RA matthew.ahlberg@barrettmade.com 207-210-4421
Builder	Barrett Made 65 Hanover Street Portland, Maine 04101	Rob Barrett Rob.Barrett@BarrettMade.com 207-210-4421

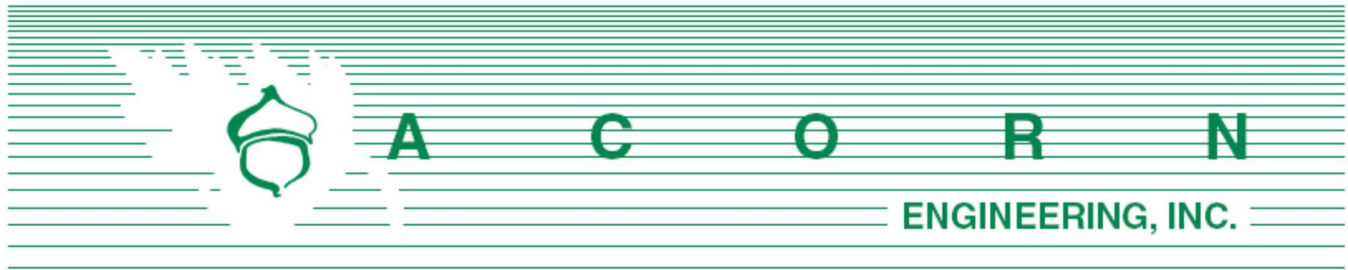


Exhibit 10. Solid Waste

Sparhawk Mill has an existing agreement with Pine Tree Waste to collect and dispose solid waste generated by the businesses in the mill. Two 4-cubic yard dumpsters located behind a fenced area as shown on the attached Site Plan, Sheet C-10. One dumpster will be for refuse and one will be for recyclable materials such as plastic, glass and cardboard. Food waste generated by the catering and restaurant business will be collected inside in a covered plastic container and picked up regularly by the business's waste management vendor.

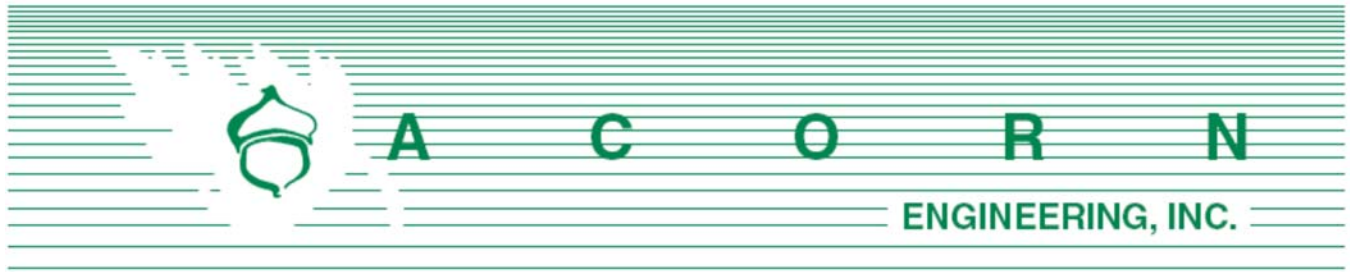


Exhibit 11. Water

The Yarmouth Water District has reviewed the water needs of the proposed project and their confirmation letter is attached.

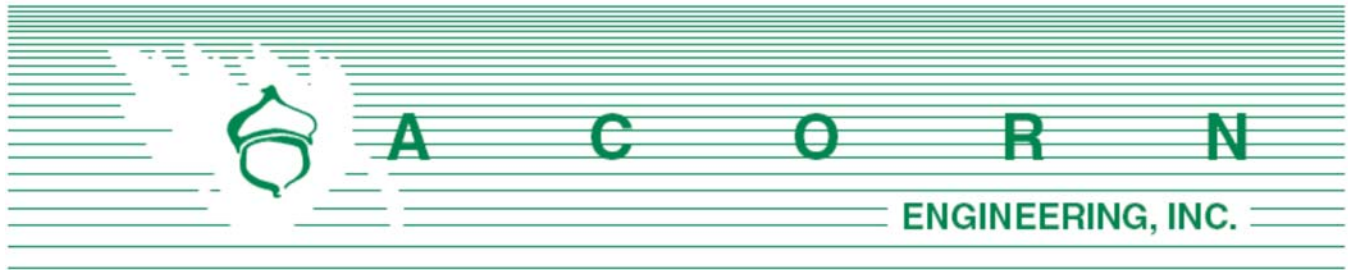
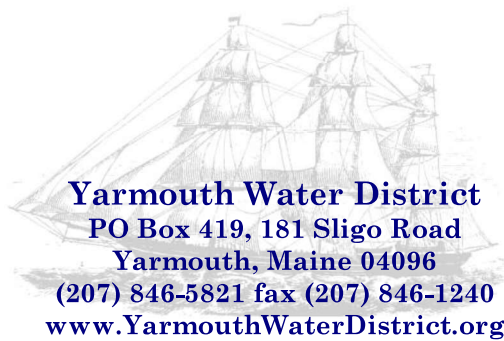


Exhibit 12. Traffic

Sparhawk Mill is currently, and is proposed to be, accessed via Bridge Street. With the proposed site improvements, the adequacy and availability of Bridge Street to serve the proposed project is expected to continue.

Minimal traffic impacts are anticipated by the project; the only change will be during the evening hours when the restaurant will be open. The proposed restaurant will have 40 seats. Proposed on-site parking includes 60 spaces, which includes 2 ADA spaces and a bicycle rack for 8 bicycles as shown on the Site Plan Sheet C-10. Town ordinance requirements for off-street parking are:

Zoning Requirement	Property Data	Require Spaces
Net office area: 3 for every 1000 square foot.	13,872 sq. ft.	42
Restaurants: 1 per 2 ½ seats	40 seats	16
	Total	58



Robert N. MacKinnon, Jr.
Superintendent

Irving C. Felker, Jr.
Chairman, Board of Trustees

January 5, 2019

Mr. Mark Arienti
Senior Environmental Engineer
Acorn Engineering
Via email: marienti@acorn-engineering.com

RE: Ability to Serve for 24 Bridge Street, Yarmouth

Dear Mr. Arienti:

This letter is to inform you that the Yarmouth Water District has the ability to serve the above-referenced project, and will continue to provide service in accordance with Maine Public Utilities Commission and the Yarmouth Water District Terms and Conditions.

In previous correspondence, it was determined that minimal water fixtures will be added to the premises and therefore minimal impact to the residential water service peak flow requirements. The existing residential water service and meter size are sufficient given the minimal changes. If changes are made to the proposed residential water fixtures or fire service requirements we must be notified so we can properly review those changes and determine if additional requirements are necessary.

Please keep us informed as this project progresses. If you have any questions, please call.

Yours truly,

A handwritten signature in black ink, appearing to read "Eric Gagnon", is written over a horizontal line.

Eric Gagnon
Assistant Superintendent

Cc: Bob MacKinnon

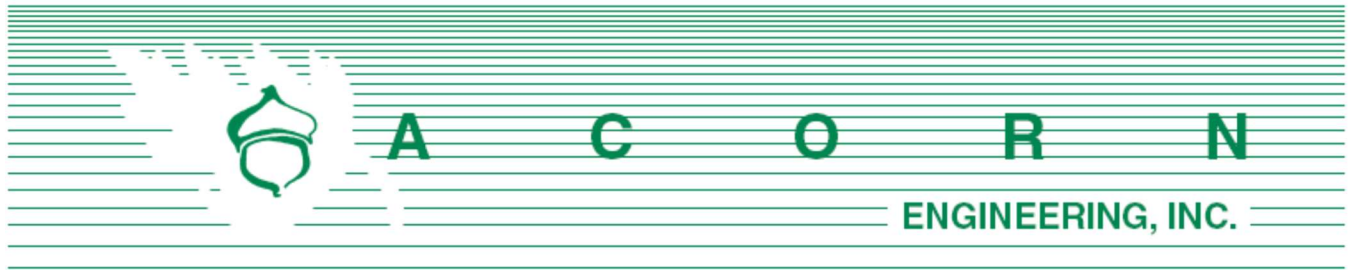


Exhibit 13. Surface Drainage

Surface drainage at the property is generally from north to south into the Royal River reflecting the local topography. Based on reports from Town officials and visual observation, drainage from the eastern side of the existing parking areas does appear to concentrate and produce some erosion in the southeast corner of the parking lot next to the river. The proposed plans are designed to mitigate this by grading to more equally distribute runoff in the lower parking lot across vegetated buffers before reaching the steep slope to the river.

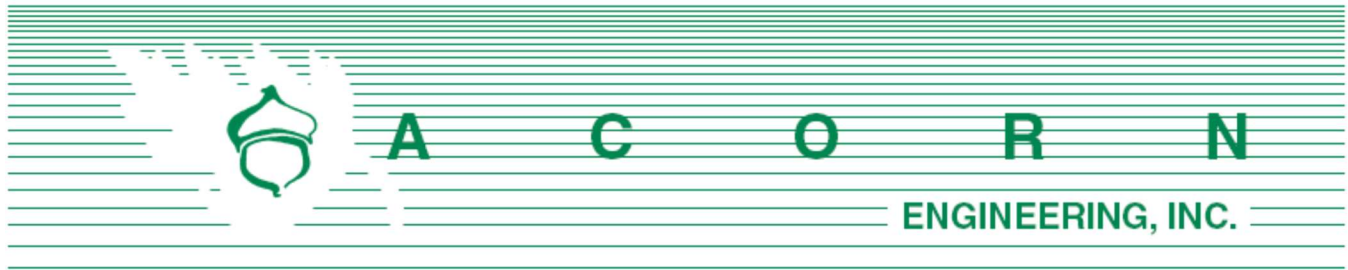


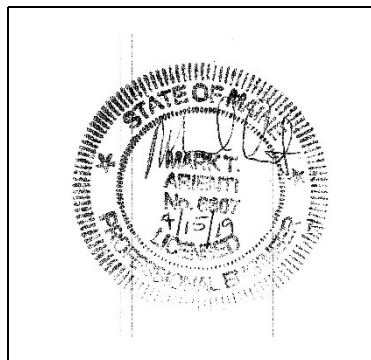
Exhibit 14. Stormwater Management Report

Prepared For:

Sparhawk LLC c/o Allan Jagger
5 Amerescoggin Road
Falmouth, ME

Prepared By:

Acorn Engineering, Inc.
PO Box 3372
Portland, Maine 04104



April 2019

INTRODUCTION

Acorn Engineering, Inc. has been retained by Sparhawk LLC to provide civil engineering services for the proposed development of an asphalt-paved parking lot and driveway the existing Sparhawk Mill building at 81 Bridge Street in Yarmouth.

A stormwater analysis has been prepared to demonstrate that the project will meet the following requirements of the Town of Yarmouth (the Town):

- Town of Yarmouth Site Plan Review Ordinance, Chapter 702 Section I.H.10.
- Town of Yarmouth Post-Construction Stormwater Discharge Ordinance, Chapter 330 Section I.B.2.

The proposed project will provide water quality benefits through the use of low impact design features such as stormwater filtration to treat stormwater runoff from the upper parking lot areas and revegetation with grasses or shrubs and small trees for existing impervious areas. The report and accompanying HydroCAD calculations provide an analysis of the peak runoff rates, which confirm that the post conditions will maintain or will result from the stormwater measures.

The site design includes stormwater filtration trenches following the design of the roof dripline filter, an approved Maine Department of Environmental Protection stormwater Best Management Practice (BMP) along with revegetation of existing gravel parking areas with grasses and trees and shrubs to provide shading and filtering of runoff.

EXISTING CONDITIONS

The proposed redevelopment project is located on Bridge Street and abuts the Royal River. A topographic survey plan has been prepared by Sebago Technics of South Portland, Maine dated November 20, 2017. However, based on discussions with Town of Yarmouth Planning and Engineering staff, changes in surface conditions have occurred over the past 15 years including demolition of a barn with a stone foundation and placement and redistribution of gravel to improve parking and driveway areas. It was agreed with Town staff that an aerial photograph from 2003 showing site conditions at that time should be used as the existing condition for stormwater purposes.

The property is in the GD zone in Yarmouth and in the Shoreland Overlay District– all abutters are residential use.

The existing property consists of a 3.5-story brick building built in 1850 formerly used as a mill, but currently houses a catering business and offices. There is a gravel driveway off Bridge Street that provides access to the site and a gravel parking lot. A portion of the property is in FEMA Flood Zone AE. For modeling purposes, the existing site has been divided into two subcatchments that both drain to the Royal River. Subcatchment 1 includes the upper portions of the driveway, which directs runoff into a ditch and culvert that drains into swale in a wooded area east of the property that flows into the Royal River. The gravel parking lot area and the mill building drain by sheet flow into the Royal River.

The site is comprised primarily of soils in the Hydrologic Soil Group A which represents well-drained



soils. The site is not within a watershed classified as an Urban Impaired Stream.

PROPOSED DEVELOPMENT

The proposed project includes placing hot mix asphalt pavement over the existing existing driveway and parking area. The foot print will stay generally the same as the existing gravel parking with minor changes to create more formal parking spaces and straighten edges and round out curves. The grades will also stay essentially the same with some minor modifications to smooth out topography where necessary and to create a uniform pavement base. Grading will also be adjusted slightly to allow for construction of the parking lot with suitable slopes, to construct the two infiltration trenches to collect and treat stormwater from the upper parking areas, and to produce evenly distributed sheet flow across newly vegetated buffers on the south side of the parking a lot adjacent to the river. These stormwater BMP's will reduce the peak flowrates during storm events and provide treatment for the majority of storm events for portions of the property.

Additionally, as part of the project and application, some interior renovations to the existing building will be conducted in office areas, and the existing catering business will be expanded to include a 40-seat restaurant. A 30-ft by 24-ft patio adjacent to the mill building is also proposed.

GENERAL STANDARDS - WATER QUALITY

Yarmouth's Site Plan Ordinance requires that the plan provides for adequate storm water management facilities so that the post development runoff rate will be no greater than the predevelopment rate or that there is no adverse downstream impact. Proposed storm water detention facilities shall provide for the control of two year and twenty-five-year storm frequency rates.

The MDEP Chapter 500 Stormwater Management apply to projects that disturb one acre or more of land area. The proposed impervious area for this project will be slightly less than the existing impervious area and the total project area will be less than an acre, so this requirement does not apply. However, infiltration trenches following the design of the Roof Dripline Filter, Ch, 7.5 of the Maine DEP Stormwater BMP Manual are proposed for treating stormwater from the upper portions of the parking lot. Vegetated islands and a vegetated buffer strip along the river bank are also proposed as show in the plan set.

FLOODING STANDARD – WATER QUANTITY

The project was modeled using HydroCAD to verify that the post-development conditions would not exceed the pre-development conditions. A 24-hour SCS Type III storm distribution for the 2 and 25-year storm events were used. The corresponding rainfall amounts for these storms are 3.10" and 5.80", respectively. Rainfall amounts are sourced from the Northeast Regional Climate Center website (<http://precip.eas.cornell.edu>), Extreme Precipitation Tables.

Time of Concentration (Tc)

The times of concentration for subcatchments in both the pre and post conditions were calculated by entering the flow path with the associated ground cover and slope. HydroCAD then calculated the Tc's and incorporated the weighted Tc for each subcatchment into the model.

Curve Number (CN)



Curve number runoff values were based upon site observations and the medium intensity soil survey. The lawn area was rated as good and the brush/tree areas as fair. The soil group for all soils used was A.

Pre-development Calculations

The pre-development condition was modeled as two subcatchments:

- Subcatchment 1: the southerly side of the site including the portion of the building roof that drains to the parking lot as well as most of the driveway and parking lot, all of which drain by sheet flow to the Royal River
- Subcatchment 2: the northerly and far easterly portions of the site that drain to a ditch/culvert and then into wooded swales that flow to the Royal River;

A Pre-development Watershed Map developed for this project showing the subcatchments is included as Attachment A.

The peak flow rates for the 2 and 25-year storm events at POI # 1 are presented in Table 1 below, and a full copy of the HydroCAD calculations is included within Attachment D of this report.

Table 1: Pre-Development Flows		
Drainage Area	2-yr Storm (CFS)	25-yr Storm (CFS)
POI #1 (Royal River)	1.57	4.08
POI #2- (Swale to Royal River)	0	0.18

Post-development Calculations

The post-development condition was modeled as four subcatchments including:

- Subcatchment 1: the southerly side of the site and the portion of the building roof that drains to the lower parking lot as well as most of the driveway and parking lot, all of which drain by sheet flow to the Royal River.
- Subcatchment 2A: The northerly section of the upper parking lot that flows to a drip edge filter with a 4" underdrain that outlets to a swale in a wooded area 75 feet from the Royal River.
- Subcatchment 2B: The southerly section of the upper parking lot that flows to a drip edge filter with a 4" underdrain that outlets to a swale in a wooded area 75 feet from the Royal River.
- Subcatchment 3: The northerly and far easterly portions of the site that drain to a swale that flows through a wooded area to the Royal River.

The proposed filters in subcatchments 2A and 2B were modeled as one pond in HydroCAD due to the symmetry of media layers and elevations. Both runs of underdrain will converge and outlet to a rip-rap apron into swale in a wooded area to the east of the parking lot. The drip edge filter was modeled with an overflow field inlet within each filter area that drains into a perforated underdrain pipe.



Post-development peak flow rates for the 2 and 25 storm events are summarized in Table 2 for each of the subcatchments. The HydroCAD calculations are included within Attachment D.

Table 2: Post-Development Flows		
Drainage Area	2-yr Storm (CFS)	25-yr Storm (CFS)
POI #1 (Royal River)	1.19	3.74
POI #2- (Swale to Royal River)	0.0	0.16

The post-development flowrates are then compared to the pre-development flowrates in the table below.

Table 3: Pre- & Post Comparison				
Drainage Area	2-yr Storm Event (CFS)		25-yr Storm Event (CFS)	
	Pre	Post	Pre	Post
POI #1 (Royal River)	1.57	1.19	4.08	3.74
POI #2 (Swale to Royal River)	0.0	0.0	0.18	0.16

As shown in Table 3, the post-development peak flows from the property are at or below the pre-development levels due to the attenuating effect of the drip edge filters. A Post-Development Watershed Map developed for this project is included as Attachment B.

SOILS

Onsite soil information includes the following:

- Soil Conservation Service Medium Intensity Soil Survey for Cumberland County

The majority of the site is comprised of Windsor soils which are in the hydrologic soil group A. The Windsor series consists of very deep, excessively drained soils formed in sandy outwash deposits. They are nearly level through very steep soils on glaciofluvial landforms (USGS).

A small part of the site consists of Suffield soils which are in the hydrologic soil group C. The Suffield series consists of very deep, moderately well-drained soils (Hydrologic Soil Group C) formed in lacustrine or marine sediments. Permeability is moderate near the surface and slow or very slow in the substratum.

These existing soils were modeled in their respective hydrologic groups in both the pre and post conditions.

The susceptibility of soil erosion is indicated on a relative “K” scale of values over a range of 0.02 to 0.69. Higher “K” values indicate more erodible soils.



Table 4: K Value		
Soils Type	Subsurface	Substratum
Windsor Loamy Sand	.17	.17
Suffield Silt Loam	.49	.49

The soil “K” values for the soils, listed above, indicate a low susceptibility to erosion. This data is sourced from the Soil Conservation Service Medium Intensity Soil Survey for Cumberland County and the USDA Soil Survey.

Conclusion

The proposed development was designed to meet the requirements implemented by the MDEP under the Stormwater Management Statute (38 M.R.S.A. § 420-D) as well as the requirements set forth by the Town of Yarmouth. The proposed project as designed is anticipated to improve upon the existing stormwater management by providing significant storage and treatment during significant rain events.

Attachments

Attachment A: Pre – Development Watershed Map

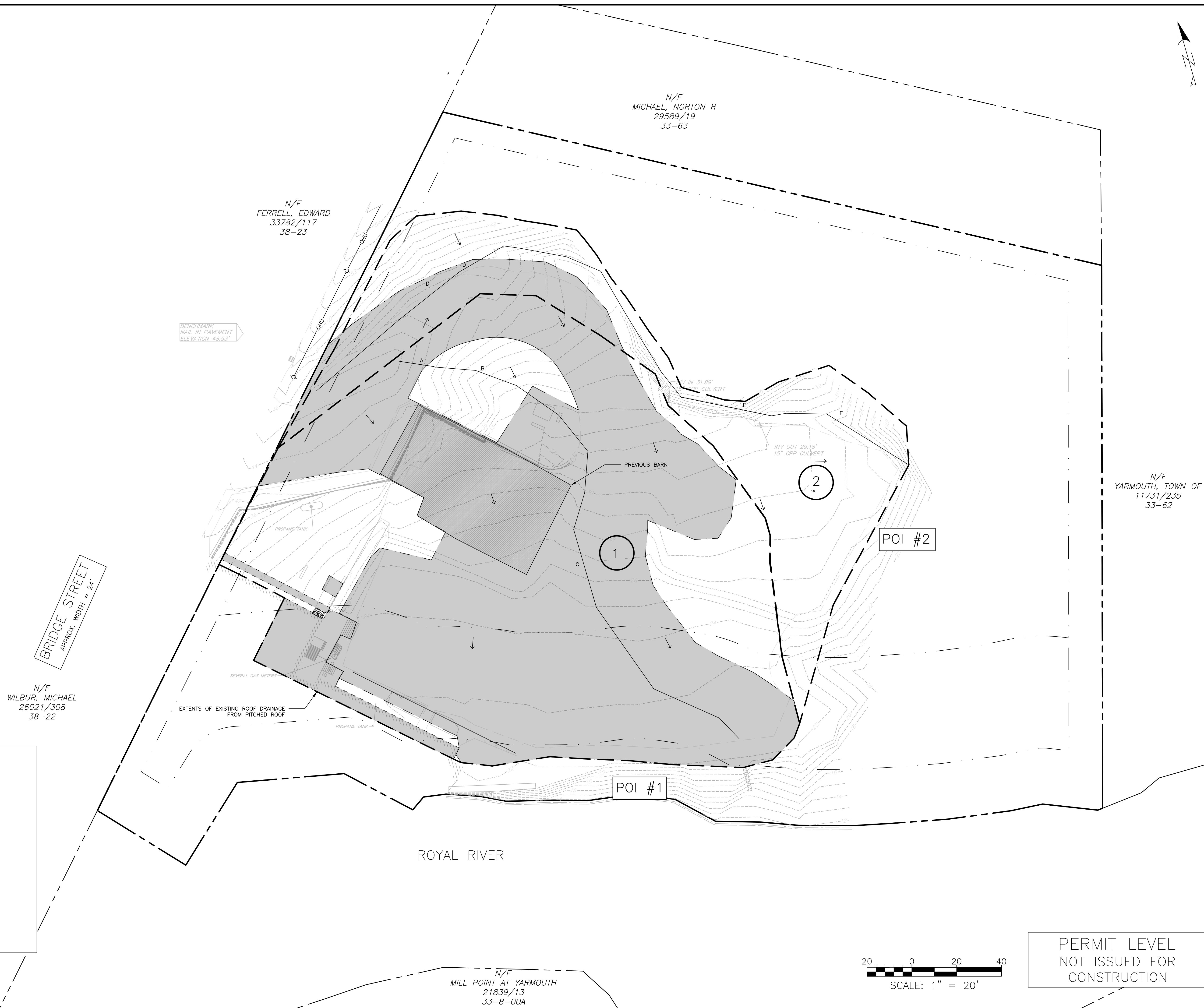
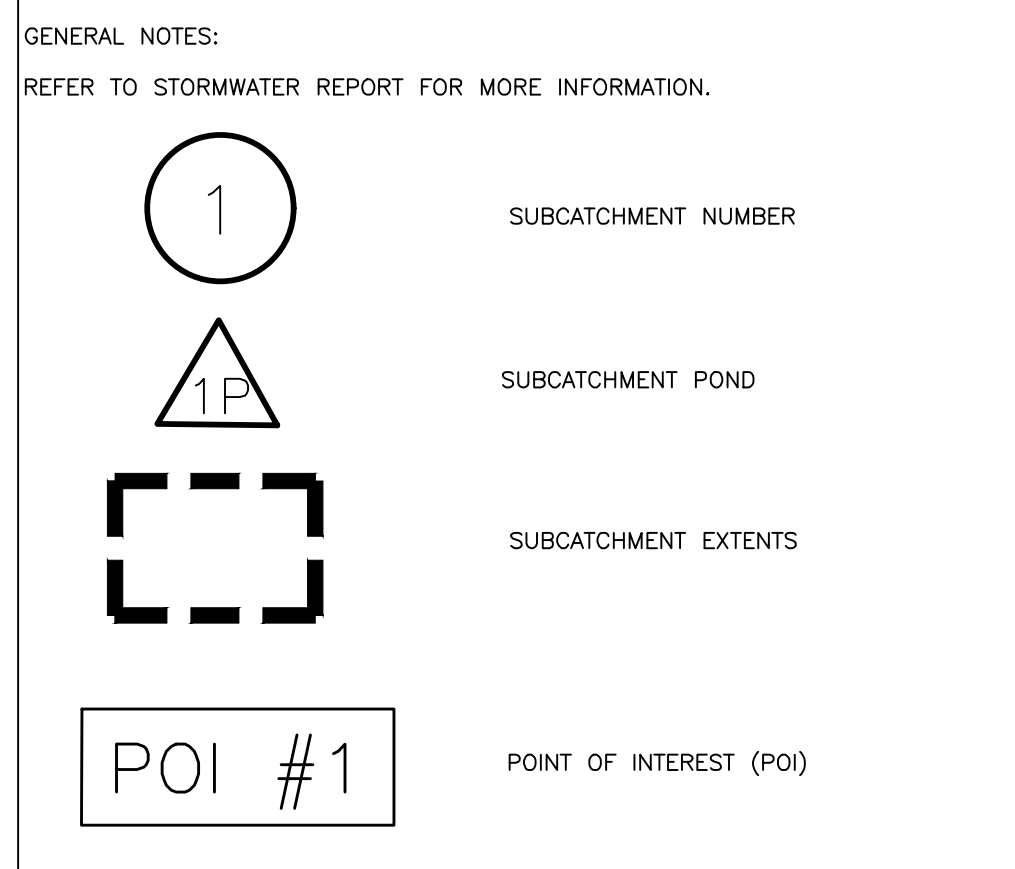
Attachment B: Post – Development Watershed Map

Attachment C: Medium Intensity Soils Map

Attachment D: HydroCAD Calculations

Attachment E: Post Construction - Stormwater Inspection & Maintenance Plan



[illegible]

Soil Map—Cumberland County and Part of Oxford County, Maine





MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

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

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

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

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: Cumberland County and Part of Oxford County, Maine

Survey Area Data: Version 15, Sep 6, 2018

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

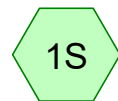
The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
SuE2	Suffield silt loam, 25 to 45 percent slopes, eroded	0.2	15.0%
W	Water	0.0	0.5%
WmB	Windsor loamy sand, 0 to 8 percent slopes	1.0	84.5%
Totals for Area of Interest		1.2	100.0%



Perimeter Area



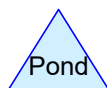
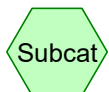
Parking & Driveway



POI #2 - Swale to Royal
River



POI #1(Royal River)



Routing Diagram for stormwater pre-revised_03-27-19

Prepared by {enter your company name here}, Printed 3/28/2019
HydroCAD® 10.00-24 s/n 00620 © 2018 HydroCAD Software Solutions LLC

stormwater pre-revised_03-27-19

Prepared by {enter your company name here}

Printed 3/28/2019

HydroCAD® 10.00-24 s/n 00620 © 2018 HydroCAD Software Solutions LLC

Page 2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.218	39	>75% Grass cover, Good, HSG A (1S)
0.039	98	Decks/entries (1S)
0.076	98	Roofs, HSG A (1S)
0.228	30	Woods, Good, HSG A (2S)
0.070	96	compacted gravel (2S)
0.544	96	compacted gravel, HSG A (1S)
1.174	73	TOTAL AREA

stormwater pre-revised_03-27-19

Prepared by {enter your company name here}

Printed 3/28/2019

HydroCAD® 10.00-24 s/n 00620 © 2018 HydroCAD Software Solutions LLC

Page 3

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
1.065	HSG A	1S, 2S
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
0.109	Other	1S, 2S
1.174		TOTAL AREA

stormwater pre-revised_03-27-19

Prepared by {enter your company name here}

Printed 3/28/2019

HydroCAD® 10.00-24 s/n 00620 © 2018 HydroCAD Software Solutions LLC

Page 4

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.218	0.000	0.000	0.000	0.000	0.218	>75% Grass cover, Good	1S
0.000	0.000	0.000	0.000	0.039	0.039	Decks/entries	1S
0.076	0.000	0.000	0.000	0.000	0.076	Roofs	1S
0.228	0.000	0.000	0.000	0.000	0.228	Woods, Good	2S
0.544	0.000	0.000	0.000	0.070	0.614	compacted gravel	1S, 2S
1.065	0.000	0.000	0.000	0.109	1.174	TOTAL AREA	

stormwater pre-revised_03-27-19

Prepared by {enter your company name here}

Printed 3/28/2019

HydroCAD® 10.00-24 s/n 00620 © 2018 HydroCAD Software Solutions LLC

Page 5

Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	2S	0.00	0.00	40.0	0.0670	0.013	15.0	0.0	0.0

stormwater pre-revised_03-27-19*Type III 24-hr 2-year Rainfall=3.10"*

Prepared by {enter your company name here}

Printed 3/28/2019

HydroCAD® 10.00-24 s/n 00620 © 2018 HydroCAD Software Solutions LLC

Page 6

Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Parking & DrivewayRunoff Area=38,156 sf 13.07% Impervious Runoff Depth=1.46"
Flow Length=262' Tc=4.6 min CN=82 Runoff=1.57 cfs 0.106 af**Subcatchment 2S: Perimeter Area**Runoff Area=12,979 sf 0.00% Impervious Runoff Depth=0.05"
Flow Length=317' Tc=3.5 min CN=46 Runoff=0.00 cfs 0.001 af**Reach 1R: POI #1(Royal River)**Inflow=1.57 cfs 0.106 af
Outflow=1.57 cfs 0.106 af**Reach 2R: POI #2 - Swale to Royal River**Inflow=0.00 cfs 0.001 af
Outflow=0.00 cfs 0.001 af**Total Runoff Area = 1.174 ac Runoff Volume = 0.108 af Average Runoff Depth = 1.10"**
90.25% Pervious = 1.059 ac 9.75% Impervious = 0.115 ac

Summary for Subcatchment 1S: Parking & Driveway

Runoff = 1.57 cfs @ 12.07 hrs, Volume= 0.106 af, Depth= 1.46"

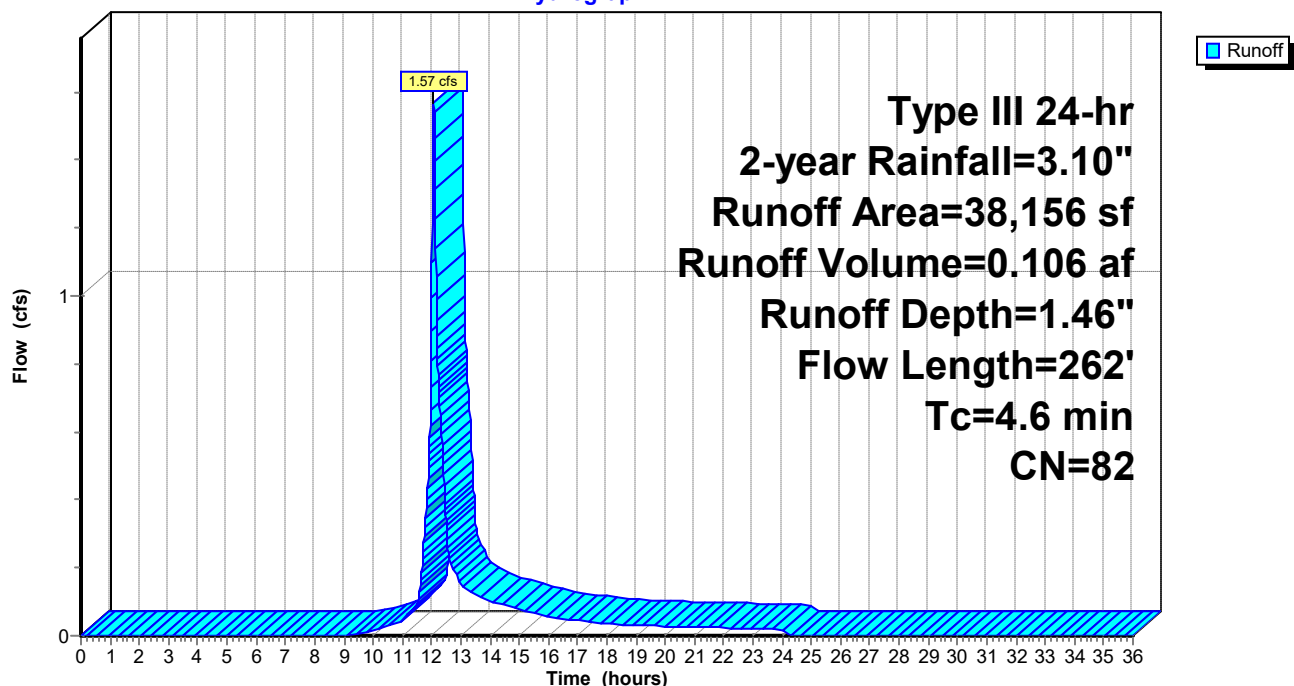
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

Area (sf)	CN	Description
3,310	98	Roofs, HSG A
* 23,687	96	compacted gravel, HSG A
9,481	39	>75% Grass cover, Good, HSG A
* 1,678	98	Decks/entries
38,156	82	Weighted Average
33,168		86.93% Pervious Area
4,988		13.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	20	0.1000	1.87		Sheet Flow, gravel driveway Smooth surfaces n= 0.011 P2= 3.10"
3.9	81	0.1400	0.35		Sheet Flow, Grass Island Grass: Short n= 0.150 P2= 3.10"
0.5	161	0.0700	5.37		Shallow Concentrated Flow, Gravel Parking Lot Paved Kv= 20.3 fps
4.6	262	Total			

Subcatchment 1S: Parking & Driveway

Hydrograph



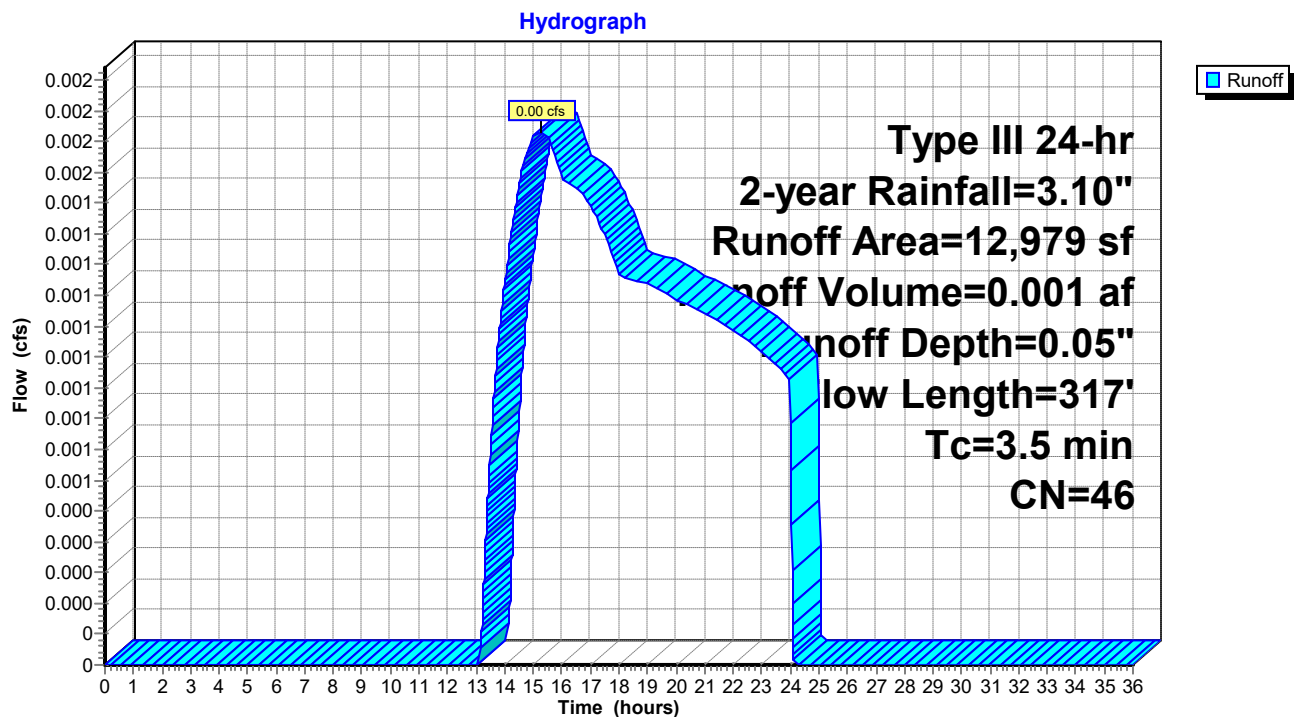
Summary for Subcatchment 2S: Perimeter Area

Runoff = 0.00 cfs @ 15.26 hrs, Volume= 0.001 af, Depth= 0.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
*	3,065	96	compacted gravel
	9,914	30	Woods, Good, HSG A
	12,979	46	Weighted Average
	12,979		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.0	215	0.0560	1.18		Shallow Concentrated Flow, Ditch on Side of Driveway
0.0	40	0.0670	13.63	16.72	Woodland Kv= 5.0 fps Pipe Channel, 15" Culvert
					15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31'
					n= 0.013 Corrugated PE, smooth interior
0.5	62	0.1500	1.94		Shallow Concentrated Flow, Swale thru woods
					Woodland Kv= 5.0 fps
3.5	317	Total			

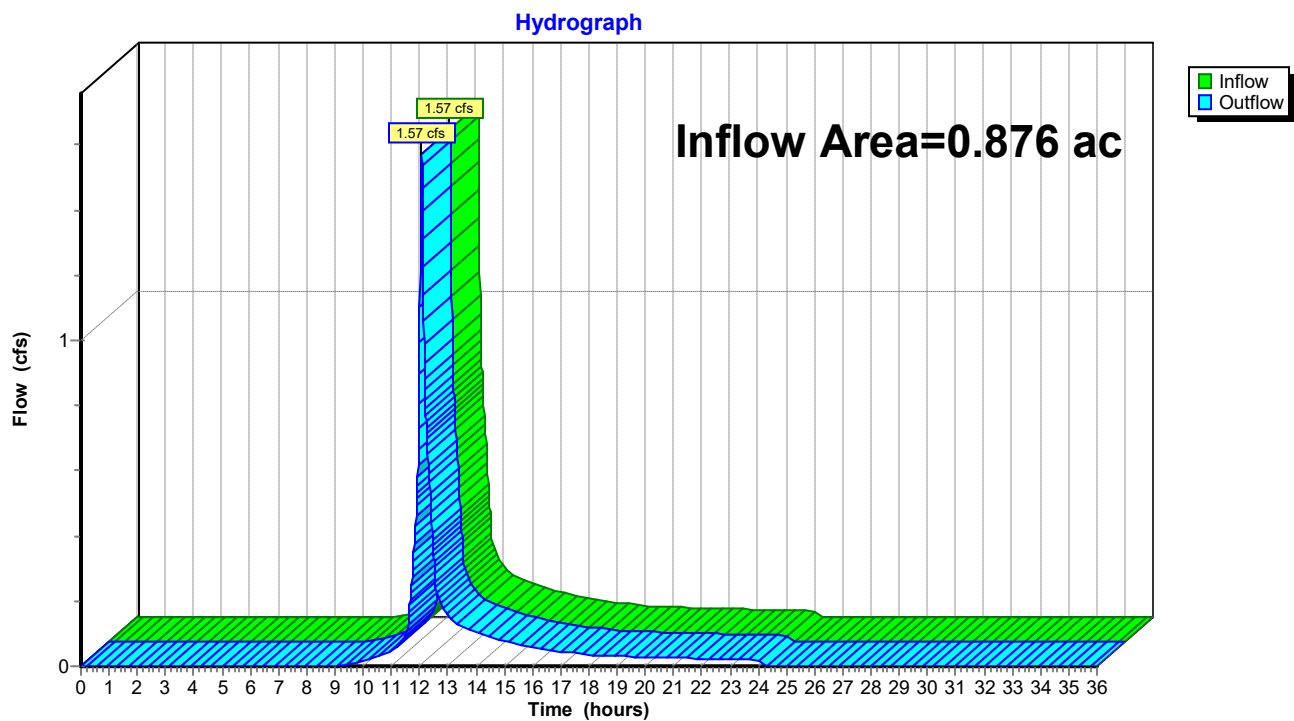
Subcatchment 2S: Perimeter Area

Summary for Reach 1R: POI #1(Royal River)

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.876 ac, 13.07% Impervious, Inflow Depth = 1.46" for 2-year event
Inflow = 1.57 cfs @ 12.07 hrs, Volume= 0.106 af
Outflow = 1.57 cfs @ 12.07 hrs, Volume= 0.106 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

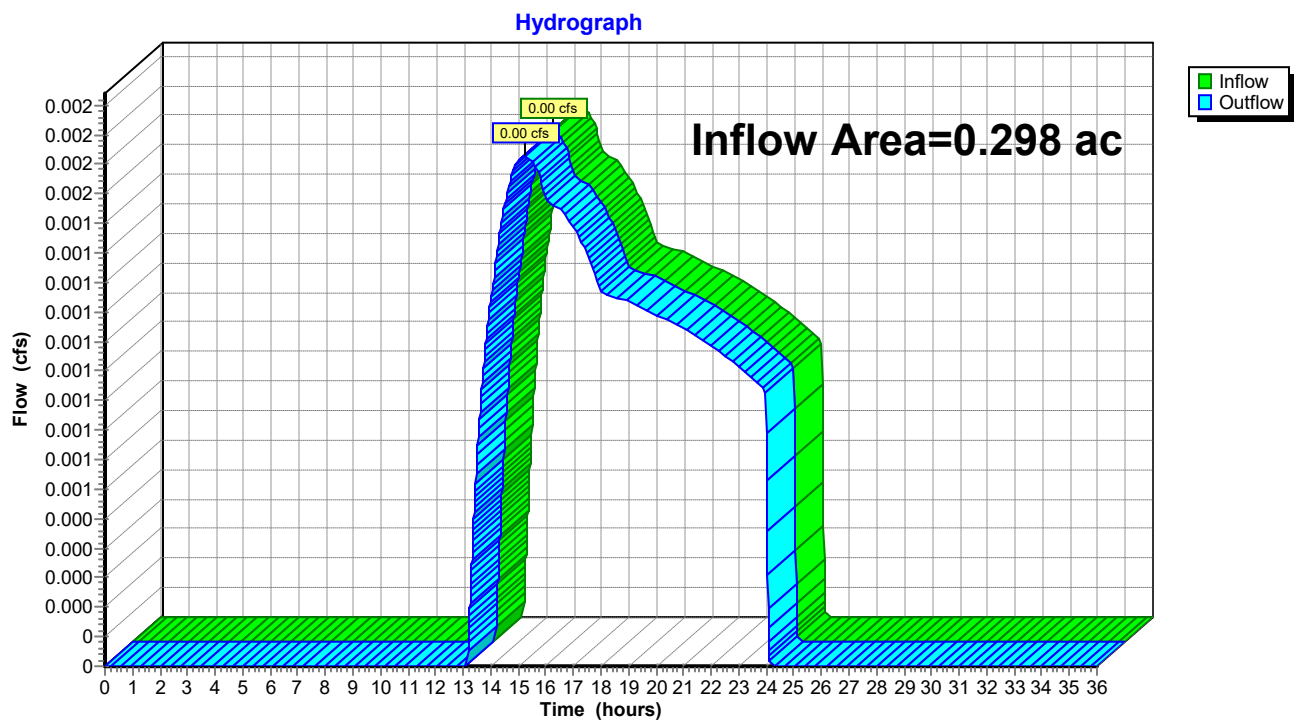
Reach 1R: POI #1(Royal River)

Summary for Reach 2R: POI #2 - Swale to Royal River

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.298 ac, 0.00% Impervious, Inflow Depth = 0.05" for 2-year event
Inflow = 0.00 cfs @ 15.26 hrs, Volume= 0.001 af
Outflow = 0.00 cfs @ 15.26 hrs, Volume= 0.001 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Reach 2R: POI #2 - Swale to Royal River

stormwater pre-revised_03-27-19*Type III 24-hr 25-year Rainfall=5.80"*

Prepared by {enter your company name here}

Printed 3/28/2019

HydroCAD® 10.00-24 s/n 00620 © 2018 HydroCAD Software Solutions LLC

Page 11

Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Parking & DrivewayRunoff Area=38,156 sf 13.07% Impervious Runoff Depth=3.80"
Flow Length=262' Tc=4.6 min CN=82 Runoff=4.08 cfs 0.278 af**Subcatchment 2S: Perimeter Area**Runoff Area=12,979 sf 0.00% Impervious Runoff Depth=0.78"
Flow Length=317' Tc=3.5 min CN=46 Runoff=0.18 cfs 0.019 af**Reach 1R: POI #1(Royal River)**Inflow=4.08 cfs 0.278 af
Outflow=4.08 cfs 0.278 af**Reach 2R: POI #2 - Swale to Royal River**Inflow=0.18 cfs 0.019 af
Outflow=0.18 cfs 0.019 af**Total Runoff Area = 1.174 ac Runoff Volume = 0.297 af Average Runoff Depth = 3.04"**
90.25% Pervious = 1.059 ac 9.75% Impervious = 0.115 ac

Summary for Subcatchment 1S: Parking & Driveway

Runoff = 4.08 cfs @ 12.07 hrs, Volume= 0.278 af, Depth= 3.80"

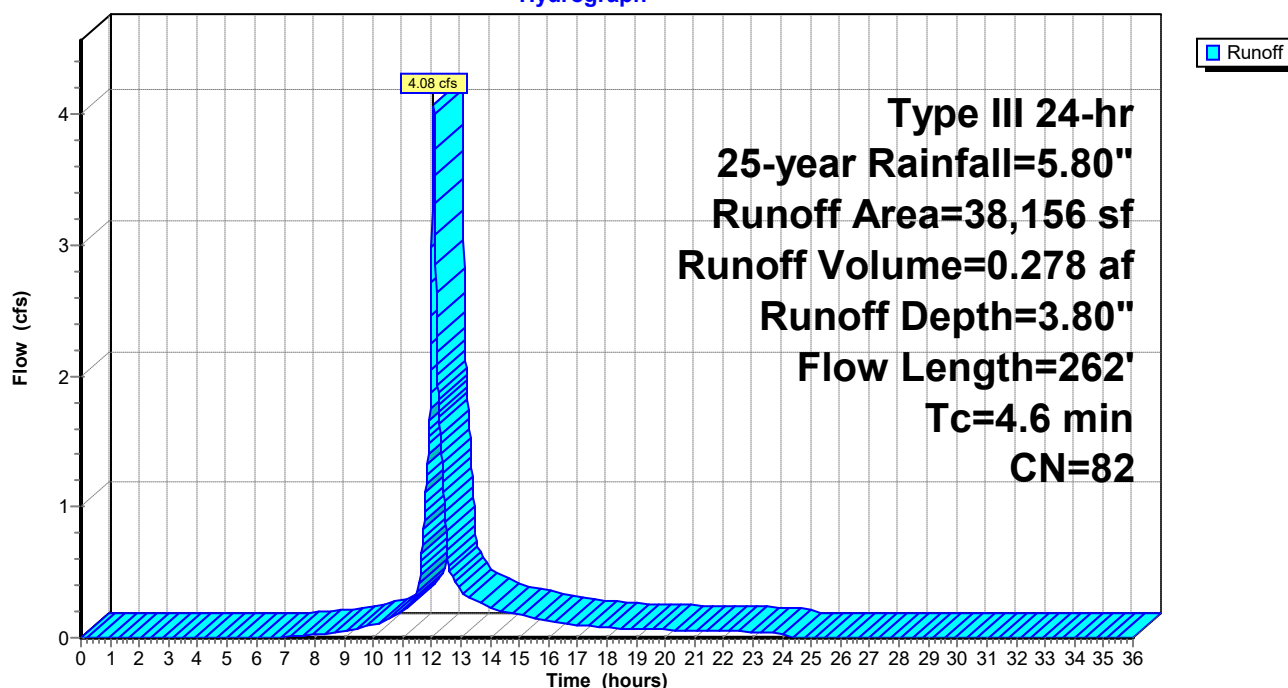
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

Area (sf)	CN	Description
3,310	98	Roofs, HSG A
* 23,687	96	compacted gravel, HSG A
9,481	39	>75% Grass cover, Good, HSG A
* 1,678	98	Decks/entries
38,156	82	Weighted Average
33,168		86.93% Pervious Area
4,988		13.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	20	0.1000	1.87		Sheet Flow, gravel driveway Smooth surfaces n= 0.011 P2= 3.10"
3.9	81	0.1400	0.35		Sheet Flow, Grass Island Grass: Short n= 0.150 P2= 3.10"
0.5	161	0.0700	5.37		Shallow Concentrated Flow, Gravel Parking Lot Paved Kv= 20.3 fps
4.6	262	Total			

Subcatchment 1S: Parking & Driveway

Hydrograph



Summary for Subcatchment 2S: Perimeter Area

Runoff = 0.18 cfs @ 12.09 hrs, Volume= 0.019 af, Depth= 0.78"

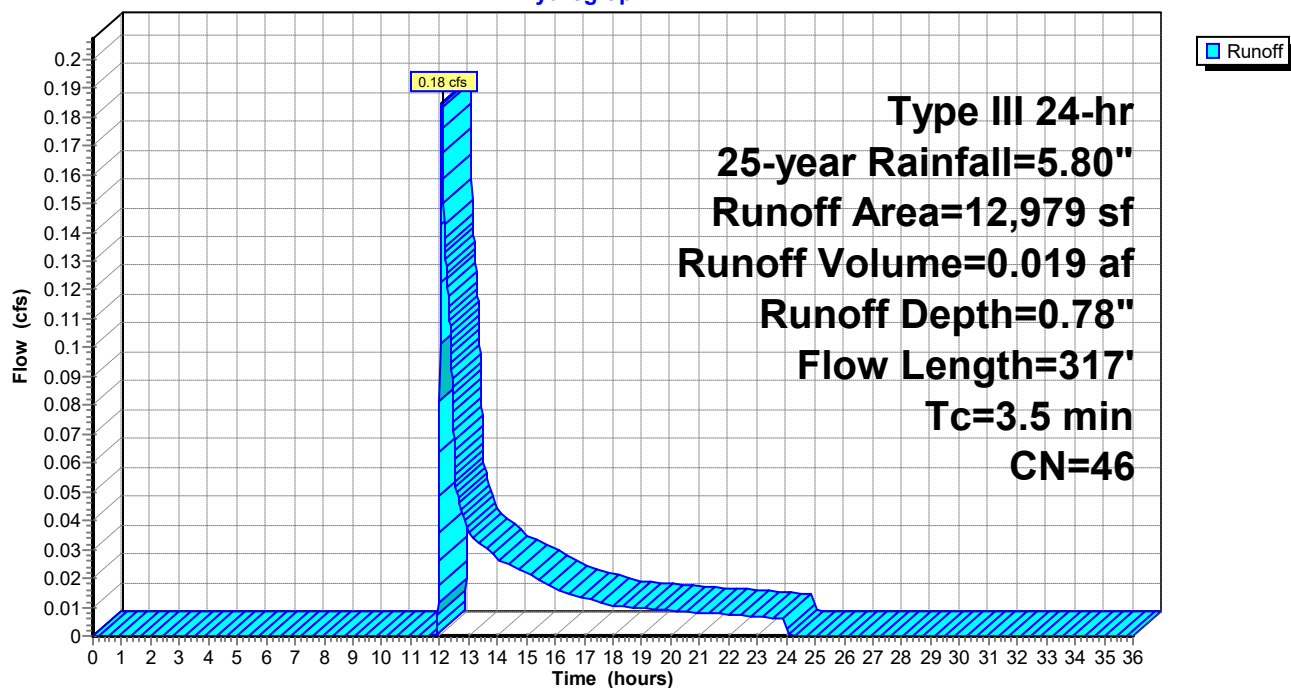
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
*	3,065	96	compacted gravel
	9,914	30	Woods, Good, HSG A
	12,979	46	Weighted Average
	12,979		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.0	215	0.0560	1.18		Shallow Concentrated Flow, Ditch on Side of Driveway
0.0	40	0.0670	13.63	16.72	Woodland Kv= 5.0 fps Pipe Channel, 15" Culvert 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior
0.5	62	0.1500	1.94		Shallow Concentrated Flow, Swale thru woods Woodland Kv= 5.0 fps
3.5	317	Total			

Subcatchment 2S: Perimeter Area

Hydrograph

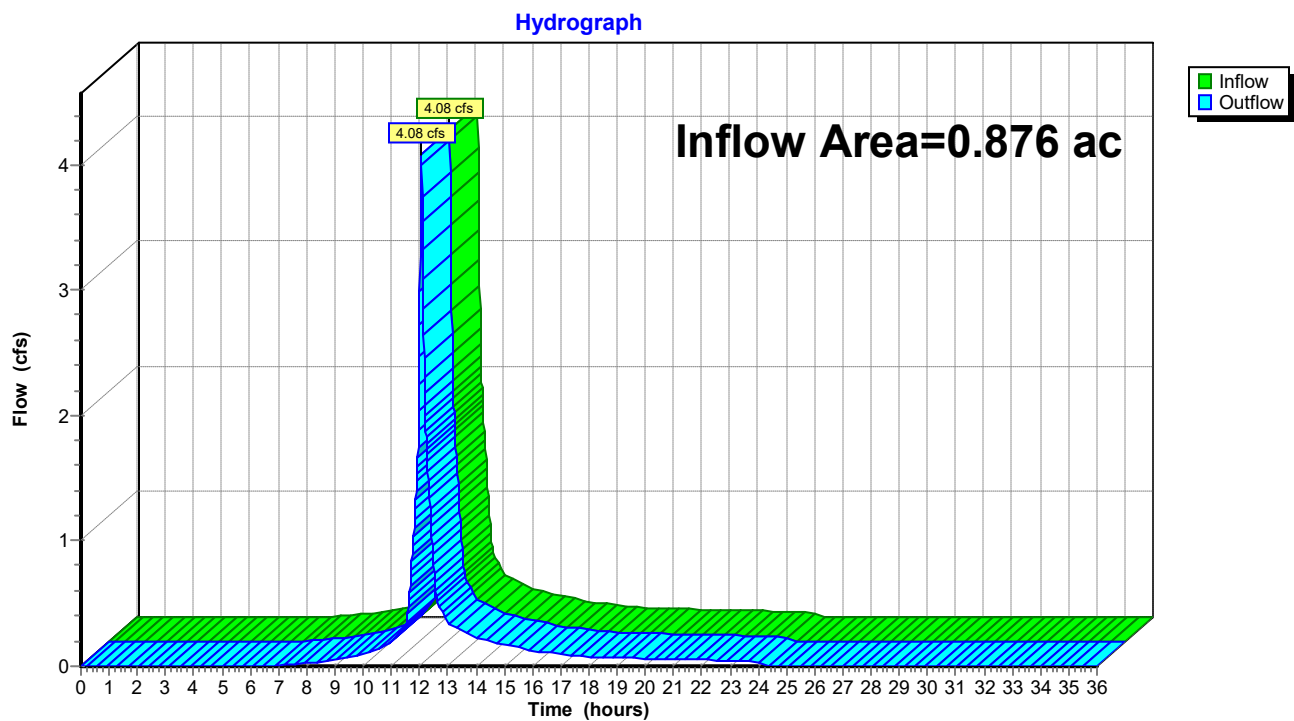


Summary for Reach 1R: POI #1(Royal River)

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.876 ac, 13.07% Impervious, Inflow Depth = 3.80" for 25-year event
Inflow = 4.08 cfs @ 12.07 hrs, Volume= 0.278 af
Outflow = 4.08 cfs @ 12.07 hrs, Volume= 0.278 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Reach 1R: POI #1(Royal River)

Summary for Reach 2R: POI #2 - Swale to Royal River

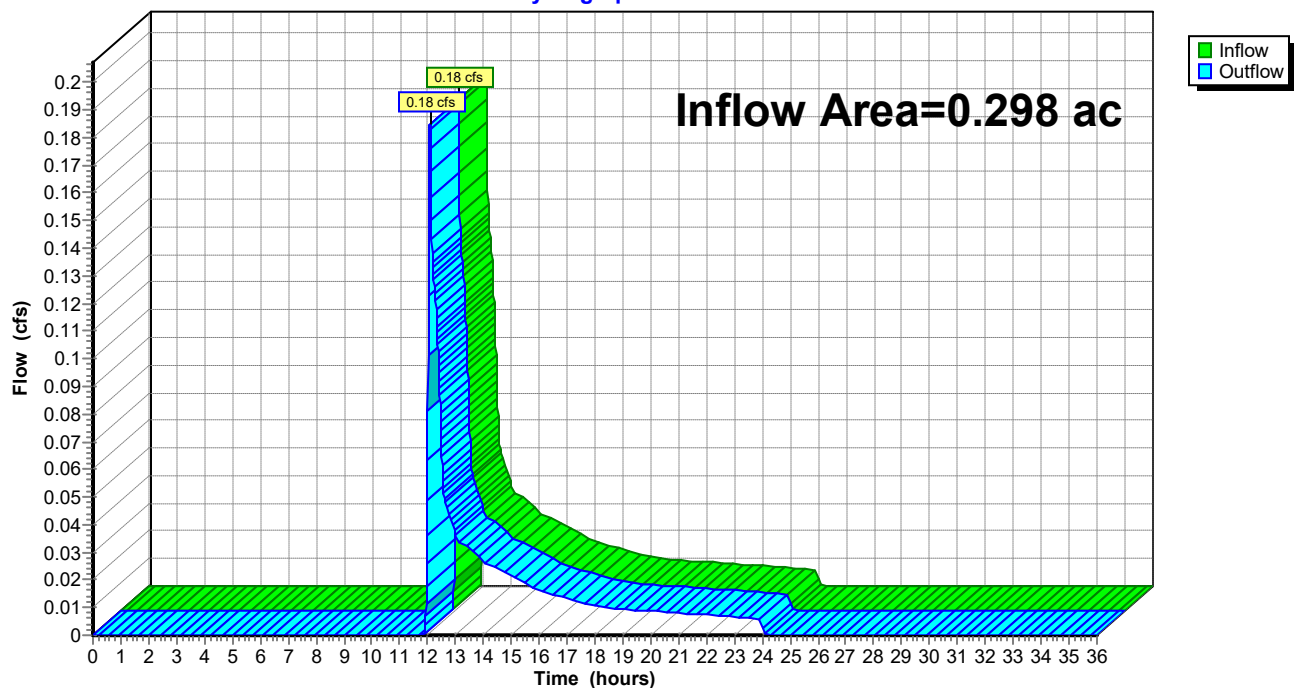
[40] Hint: Not Described (Outflow=Inflow)

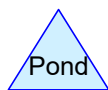
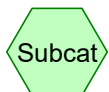
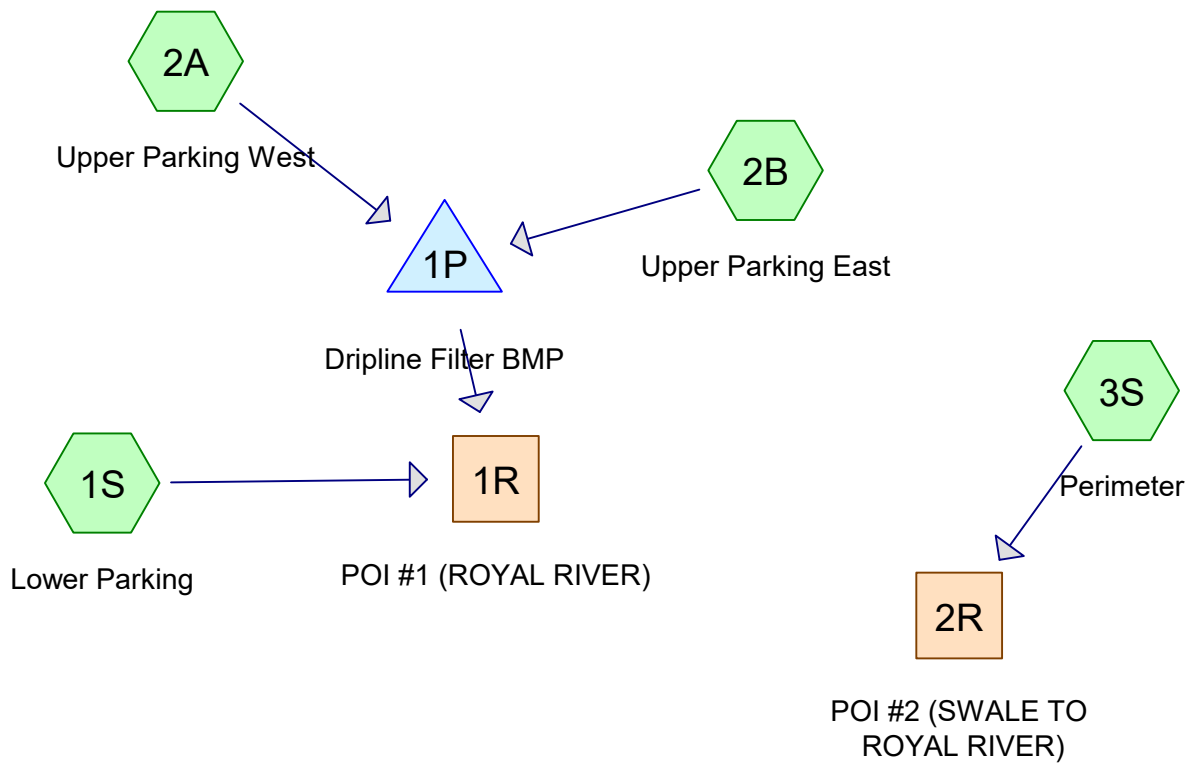
Inflow Area = 0.298 ac, 0.00% Impervious, Inflow Depth = 0.78" for 25-year event
Inflow = 0.18 cfs @ 12.09 hrs, Volume= 0.019 af
Outflow = 0.18 cfs @ 12.09 hrs, Volume= 0.019 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Reach 2R: POI #2 - Swale to Royal River

Hydrograph





Sparhawk Post 03-25-19

Prepared by {enter your company name here}

Printed 3/28/2019

HydroCAD® 10.00-24 s/n 00620 © 2018 HydroCAD Software Solutions LLC

Page 2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.282	39	>75% Grass cover, Good, HSG A (1S, 2A, 2B)
0.033	98	Decks, patio (1S)
0.006	96	Gravel (2A, 2B)
0.164	98	Paved Parking, HSG A (2A, 2B)
0.411	98	Paved parking, HSG A (1S)
0.060	98	Paved roads w/curbs & sewers, HSG A (3S)
0.024	98	Roofs, HSG A (1S)
0.194	30	Woods, Good, HSG A (3S)
1.172	73	TOTAL AREA

Sparhawk Post 03-25-19

Prepared by {enter your company name here}

Printed 3/28/2019

HydroCAD® 10.00-24 s/n 00620 © 2018 HydroCAD Software Solutions LLC

Page 3

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
1.134	HSG A	1S, 2A, 2B, 3S
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
0.038	Other	1S, 2A, 2B
1.172		TOTAL AREA

Sparhawk Post 03-25-19

Prepared by {enter your company name here}

Printed 3/28/2019

HydroCAD® 10.00-24 s/n 00620 © 2018 HydroCAD Software Solutions LLC

Page 4

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.282	0.000	0.000	0.000	0.000	0.282	>75% Grass cover, Good	1S,
							2A,
							2B
0.000	0.000	0.000	0.000	0.033	0.033	Decks, patio	1S
0.000	0.000	0.000	0.000	0.006	0.006	Gravel	2A,
							2B
0.164	0.000	0.000	0.000	0.000	0.164	Paved Parking	2A,
							2B
0.411	0.000	0.000	0.000	0.000	0.411	Paved parking	1S
0.060	0.000	0.000	0.000	0.000	0.060	Paved roads w/curbs & sewers	3S
0.024	0.000	0.000	0.000	0.000	0.024	Roofs	1S
0.194	0.000	0.000	0.000	0.000	0.194	Woods, Good	3S
1.134	0.000	0.000	0.000	0.038	1.172	TOTAL AREA	

Sparhawk Post 03-25-19

Prepared by {enter your company name here}

Printed 3/28/2019

HydroCAD® 10.00-24 s/n 00620 © 2018 HydroCAD Software Solutions LLC

Page 5

Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	2A	0.00	0.00	195.0	0.0075	0.010	6.0	0.0	0.0
2	2B	0.00	0.00	115.0	0.0075	0.010	6.0	0.0	0.0
3	3S	0.00	0.00	40.0	0.0670	0.013	15.0	0.0	0.0
4	1P	20.75	19.75	36.9	0.0271	0.010	6.0	0.0	0.0

Sparhawk Post 03-25-19*Type III 24-hr 25-year Rainfall=5.80"*

Prepared by {enter your company name here}

Printed 3/28/2019

HydroCAD® 10.00-24 s/n 00620 © 2018 HydroCAD Software Solutions LLC

Page 6

Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Lower ParkingRunoff Area=28,140 sf 72.33% Impervious Runoff Depth=3.80"
Flow Length=162' Tc=3.7 min CN=82 Runoff=3.11 cfs 0.205 af**Subcatchment 2A: Upper Parking West**Runoff Area=5,970 sf 51.94% Impervious Runoff Depth=2.74"
Flow Length=350' Tc=6.9 min CN=71 Runoff=0.42 cfs 0.031 af**Subcatchment 2B: Upper Parking East**Runoff Area=5,909 sf 68.32% Impervious Runoff Depth=3.60"
Flow Length=270' Tc=6.5 min CN=80 Runoff=0.56 cfs 0.041 af**Subcatchment 3S: Perimeter**Runoff Area=11,053 sf 23.55% Impervious Runoff Depth=0.78"
Flow Length=317' Tc=3.5 min CN=46 Runoff=0.16 cfs 0.017 af**Reach 1R: POI #1 (ROYAL RIVER)**Inflow=3.74 cfs 0.262 af
Outflow=3.74 cfs 0.262 af**Reach 2R: POI #2 (SWALE TO ROYAL RIVER)**Inflow=0.16 cfs 0.017 af
Outflow=0.16 cfs 0.017 af**Pond 1P: Dripline Filter BMP**Peak Elev=24.97' Storage=770 cf Inflow=0.98 cfs 0.072 af
Outflow=0.88 cfs 0.057 af**Total Runoff Area = 1.172 ac Runoff Volume = 0.293 af Average Runoff Depth = 3.00"**
41.07% Pervious = 0.482 ac 58.93% Impervious = 0.691 ac

Sparhawk Post 03-25-19

Prepared by {enter your company name here}

HydroCAD® 10.00-24 s/n 00620 © 2018 HydroCAD Software Solutions LLC

Type III 24-hr 25-year Rainfall=5.80"

Printed 3/28/2019

Page 7

Summary for Subcatchment 1S: Lower Parking

Runoff = 3.11 cfs @ 12.06 hrs, Volume= 0.205 af, Depth= 3.80"

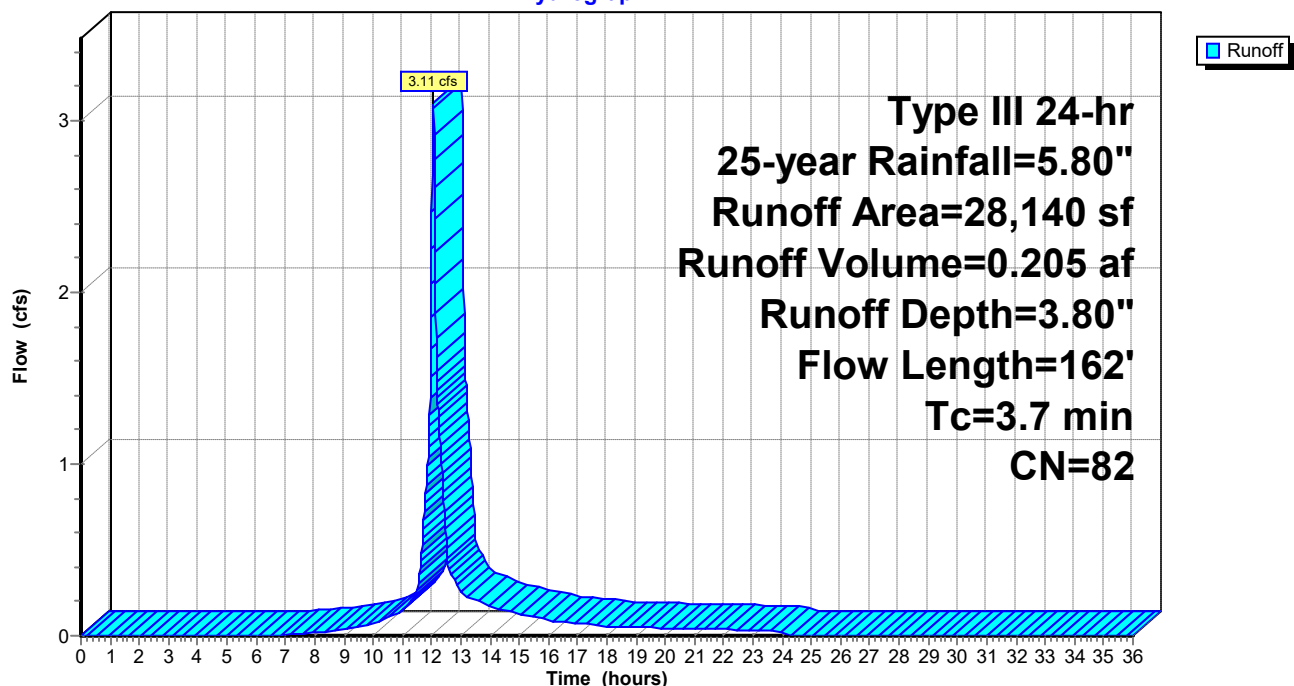
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

Area (sf)	CN	Description
17,900	98	Paved parking, HSG A
* 1,416	98	Decks, patio
1,039	98	Roofs, HSG A
7,785	39	>75% Grass cover, Good, HSG A
28,140	82	Weighted Average
7,785		27.67% Pervious Area
20,355		72.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	18	0.1600	2.21		Sheet Flow, Driveway Smooth surfaces n= 0.011 P2= 3.10"
3.4	77	0.1700	0.37		Sheet Flow, Grass Landscaped Area Above Parking Grass: Short n= 0.150 P2= 3.10"
0.2	67	0.0600	4.97		Shallow Concentrated Flow, Lower Parking Paved Kv= 20.3 fps
3.7	162	Total			

Subcatchment 1S: Lower Parking

Hydrograph



Summary for Subcatchment 2A: Upper Parking West

Runoff = 0.42 cfs @ 12.10 hrs, Volume= 0.031 af, Depth= 2.74"

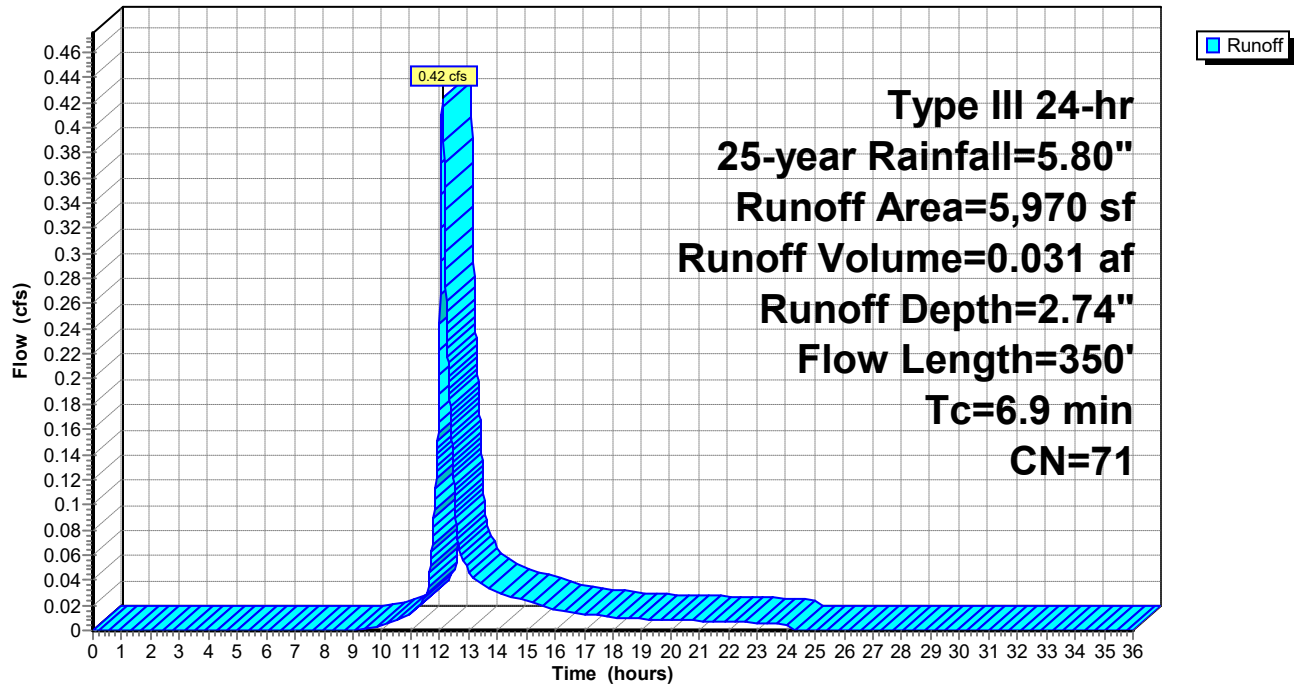
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
*	3,101	98	Paved Parking, HSG A
	2,722	39	>75% Grass cover, Good, HSG A
*	147	96	Gravel
	5,970	71	Weighted Average
	2,869		48.06% Pervious Area
	3,101		51.94% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	15	0.1700	2.18		Sheet Flow, Driveway Smooth surfaces n= 0.011 P2= 3.10"
5.3	80	0.1600	0.25		Sheet Flow, Upper Landscape Area Grass: Dense n= 0.240 P2= 3.10"
0.5	60	0.0670	1.98		Sheet Flow, Parking Area Smooth surfaces n= 0.011 P2= 3.10"
1.0	195	0.0075	3.22	0.63	Pipe Channel, UNDERDRAIN PIPE 6.0" Round Area= 0.2 sf Perim= 1.6' r= 0.13' n= 0.010 PVC, smooth interior
6.9	350	Total			

Subcatchment 2A: Upper Parking West

Hydrograph



Summary for Subcatchment 2B: Upper Parking East

Runoff = 0.56 cfs @ 12.09 hrs, Volume= 0.041 af, Depth= 3.60"

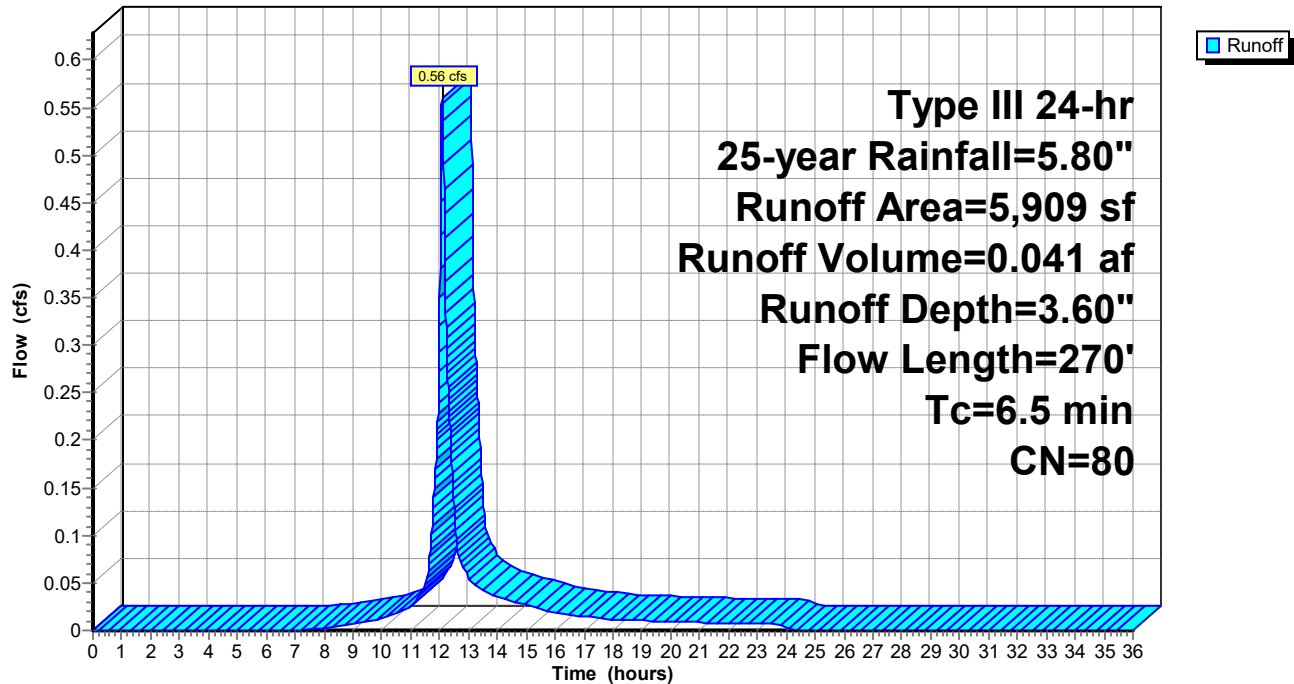
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
*	4,037	98	Paved Parking, HSG A
	1,772	39	>75% Grass cover, Good, HSG A
*	100	96	Gravel
	5,909	80	Weighted Average
	1,872		31.68% Pervious Area
	4,037		68.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	15	0.1700	2.18		Sheet Flow, Driveway Smooth surfaces n= 0.011 P2= 3.10"
5.3	80	0.1600	0.25		Sheet Flow, Upper Landscape Area Grass: Dense n= 0.240 P2= 3.10"
0.5	60	0.0670	1.98		Sheet Flow, Parking Area Smooth surfaces n= 0.011 P2= 3.10"
0.6	115	0.0075	3.22	0.63	Pipe Channel, Underdrain Pipe 6.0" Round Area= 0.2 sf Perim= 1.6' r= 0.13' n= 0.010 PVC, smooth interior
6.5	270	Total			

Subcatchment 2B: Upper Parking East

Hydrograph



Sparhawk Post 03-25-19

Prepared by {enter your company name here}

HydroCAD® 10.00-24 s/n 00620 © 2018 HydroCAD Software Solutions LLC

Type III 24-hr 25-year Rainfall=5.80"

Printed 3/28/2019

Page 12

Summary for Subcatchment 3S: Perimeter

Runoff = 0.16 cfs @ 12.09 hrs, Volume= 0.017 af, Depth= 0.78"

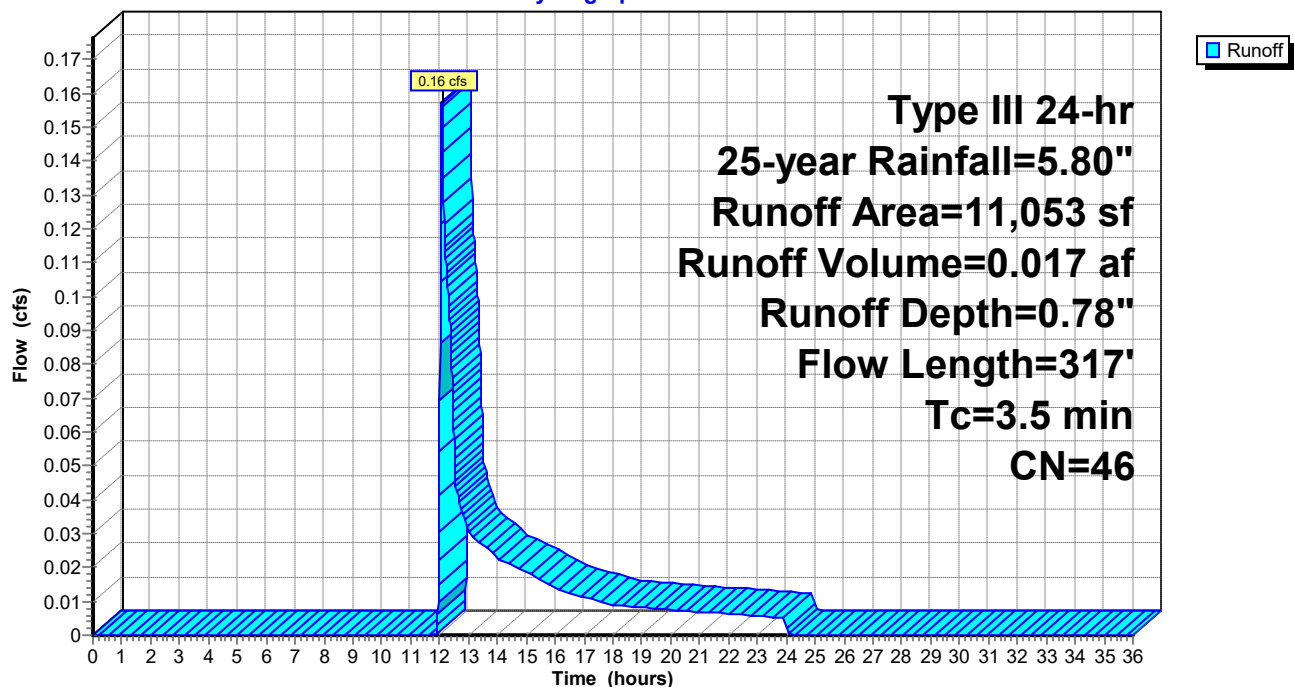
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

Area (sf)	CN	Description
2,603	98	Paved roads w/curbs & sewers, HSG A
8,450	30	Woods, Good, HSG A
11,053	46	Weighted Average
8,450		76.45% Pervious Area
2,603		23.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.0	215	0.0560	1.18		Shallow Concentrated Flow, Swale by Road
					Woodland Kv= 5.0 fps
0.0	40	0.0670	13.63	16.72	Pipe Channel, Culvert
					15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31'
					n= 0.013 Corrugated PE, smooth interior
0.5	62	0.1500	1.94		Shallow Concentrated Flow, Swale in Woods
					Woodland Kv= 5.0 fps
3.5	317	Total			

Subcatchment 3S: Perimeter

Hydrograph

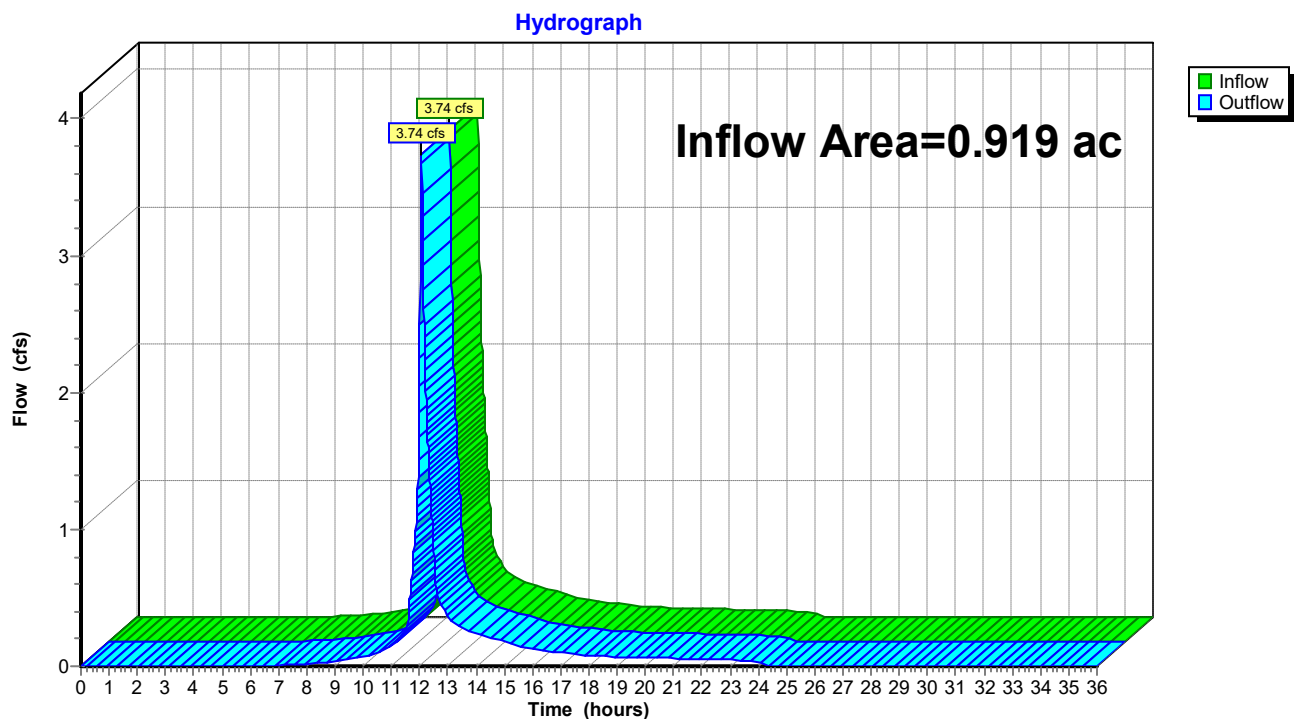


Summary for Reach 1R: POI #1 (ROYAL RIVER)

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.919 ac, 68.70% Impervious, Inflow Depth > 3.43" for 25-year event
Inflow = 3.74 cfs @ 12.07 hrs, Volume= 0.262 af
Outflow = 3.74 cfs @ 12.07 hrs, Volume= 0.262 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

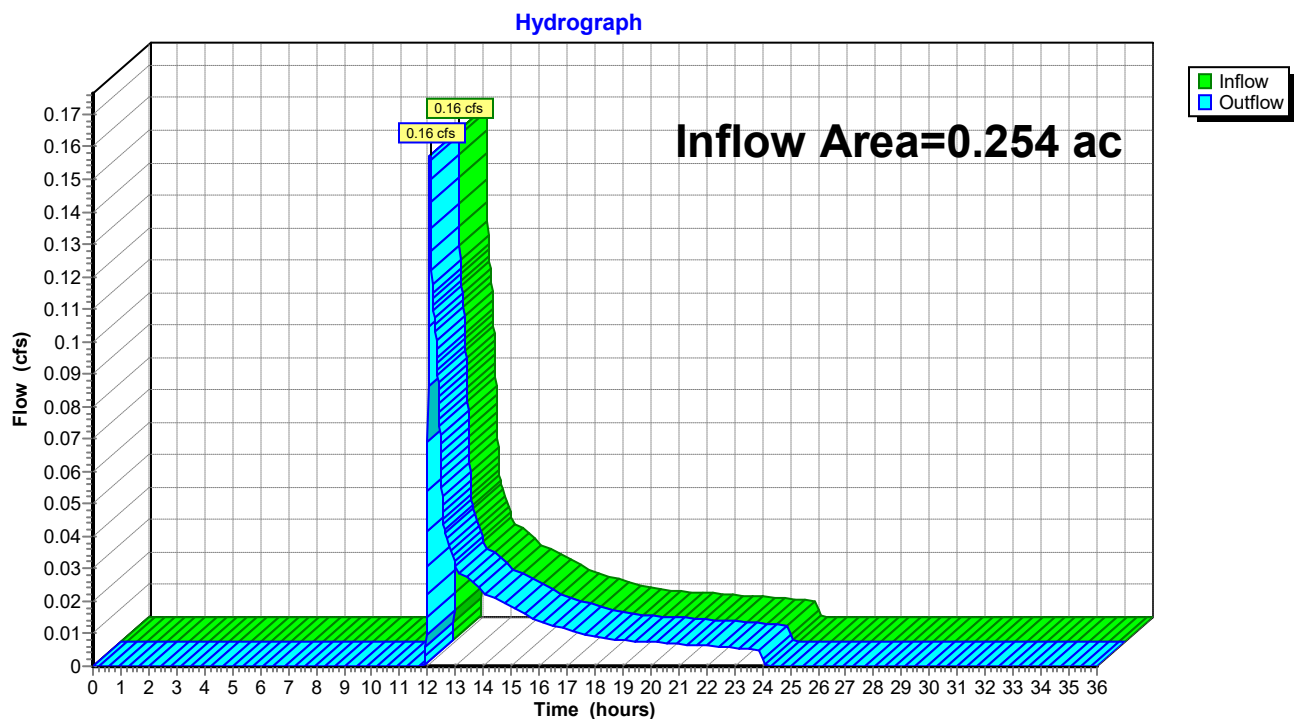
Reach 1R: POI #1 (ROYAL RIVER)

Summary for Reach 2R: POI #2 (SWALE TO ROYAL RIVER)

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.254 ac, 23.55% Impervious, Inflow Depth = 0.78" for 25-year event
Inflow = 0.16 cfs @ 12.09 hrs, Volume= 0.017 af
Outflow = 0.16 cfs @ 12.09 hrs, Volume= 0.017 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Reach 2R: POI #2 (SWALE TO ROYAL RIVER)

Sparhawk Post 03-25-19

Type III 24-hr 25-year Rainfall=5.80"

Prepared by {enter your company name here}

Printed 3/28/2019

HydroCAD® 10.00-24 s/n 00620 © 2018 HydroCAD Software Solutions LLC

Page 15

Summary for Pond 1P: Dripline Filter BMP

Inflow Area = 0.273 ac, 60.09% Impervious, Inflow Depth = 3.17" for 25-year event
 Inflow = 0.98 cfs @ 12.10 hrs, Volume= 0.072 af
 Outflow = 0.88 cfs @ 12.14 hrs, Volume= 0.057 af, Atten= 10%, Lag= 2.5 min
 Primary = 0.88 cfs @ 12.14 hrs, Volume= 0.057 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs / 2
 Peak Elev= 24.97' @ 12.14 hrs Surf.Area= 650 sf Storage= 770 cf

Plug-Flow detention time= 127.8 min calculated for 0.057 af (80% of inflow)
 Center-of-Mass det. time= 49.5 min (875.2 - 825.7)

Volume	Invert	Avail.Storage	Storage Description
#1	20.25'	404 cf	Bottom Layer Stone Listed below 1,050 cf Overall - 40 cf Embedded = 1,010 cf x 40.0% Voids
#2	20.75'	40 cf	6.0" Round Pipe Storage Inside #1 L= 203.0' S= 0.0050 '/'
#3	22.75'	42 cf	Filter Layer Listed below 420 cf Overall x 10.0% Voids
#4	23.75'	168 cf	3/4 Stone Listed below 420 cf Overall x 40.0% Voids
#5	24.75'	391 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
		1,044 cf	Total Available Storage

Elevation (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
20.25	0	0
22.75	1,050	1,050

Elevation (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
22.75	0	0
23.75	420	420

Elevation (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
23.75	0	0
24.75	420	420

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
24.75	420	0	0
25.30	1,000	391	391

Device	Routing	Invert	Outlet Devices
#1	Device 3	24.75'	6.0" Horiz. Beehive Overflow X 2.00 C= 0.600 Limited to weir flow at low heads
#2	Device 3	20.85'	0.1" Vert. WQV C= 0.600
#3	Primary	20.75'	6.0" Round 6" UD L= 36.9' Ke= 0.700 Inlet / Outlet Invert= 20.75' / 19.75' S= 0.0271 '/' Cc= 0.900

Sparhawk Post 03-25-19

Prepared by {enter your company name here}

HydroCAD® 10.00-24 s/n 00620 © 2018 HydroCAD Software Solutions LLC

Type III 24-hr 25-year Rainfall=5.80"

Printed 3/28/2019

Page 16

$n = 0.010$ PVC, smooth interior, Flow Area= 0.20 sf

Primary OutFlow Max=0.88 cfs @ 12.14 hrs HW=24.97' (Free Discharge)

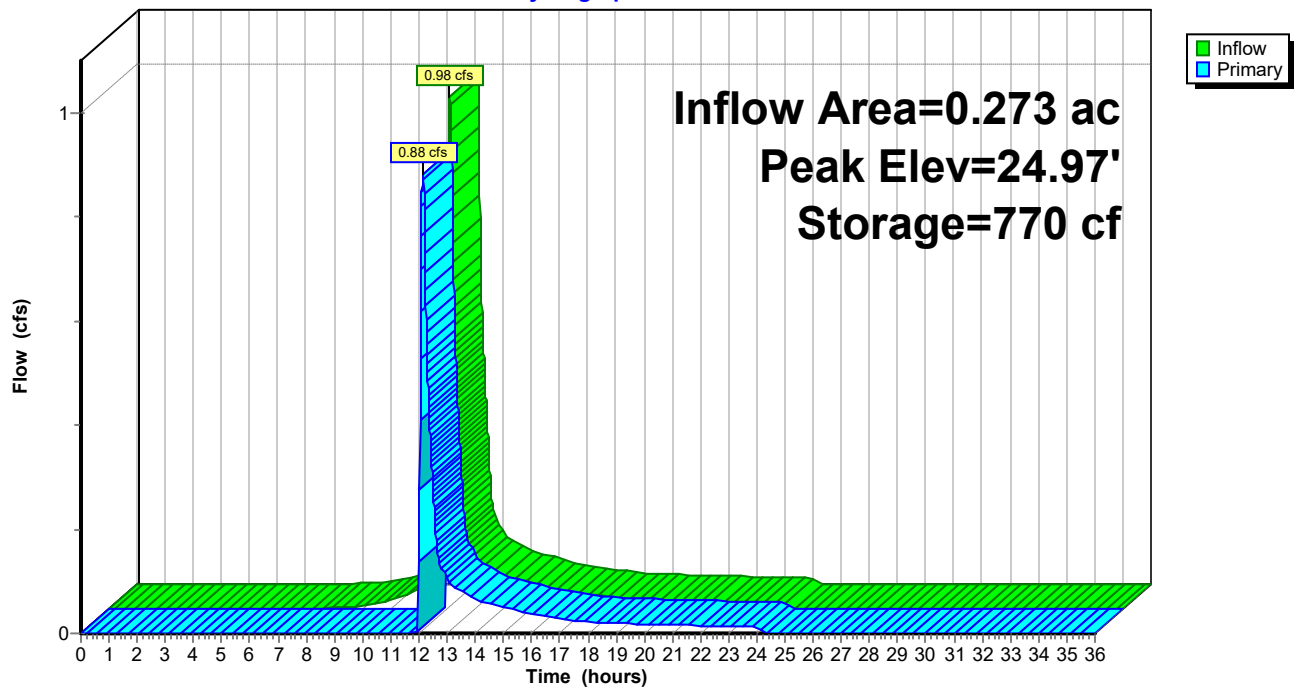
3=6" UD (Passes 0.88 cfs of 1.66 cfs potential flow)

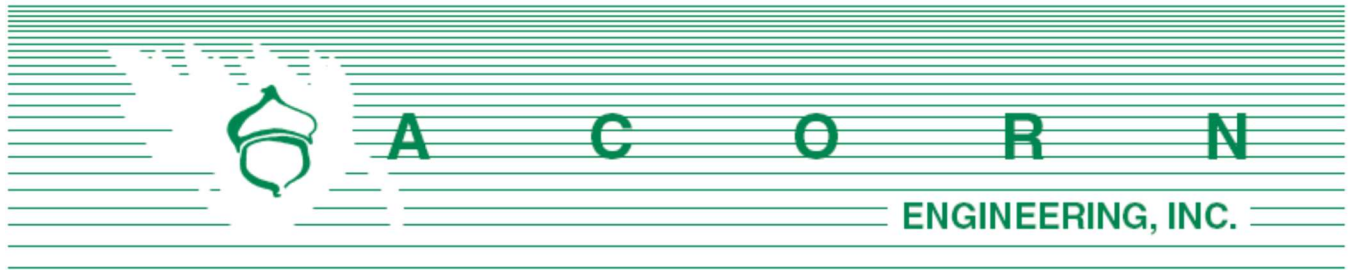
1=Beehive Overflow (Orifice Controls 0.88 cfs @ 2.25 fps)

2=WQV (Orifice Controls 0.00 cfs @ 9.77 fps)

Pond 1P: Dripline Filter BMP

Hydrograph





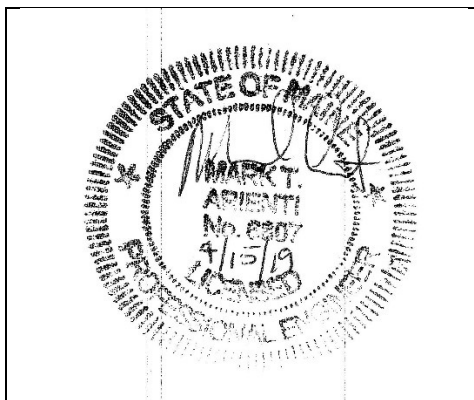
POST CONSTRUCTION - STORMWATER INSPECTION & MAINTENANCE PLAN

Prepared For:

**Sparhawk LLC c/o Allan Jagger
5 Amerescoggin Road
Falmouth, ME**

Prepared By:

**Acorn Engineering, Inc.
158 Danforth Street
Portland, Maine 04102**



March 2019

RESPONSIBLE PARTY

The owner, Sparhawk LLC, and or their successor shall be responsible for contracting with a qualified stormwater professional to implement the Inspection and Maintenance Plan. The qualified stormwater professional shall maintain a stormwater log (report) summarizing inspections, maintenance, and corrective action taken. The Qualified Stormwater Professional shall annually submit the Stormwater Log and Certification to the Enforcement Authority on or by March 1st.

The following is an example of a qualified stormwater professional that the landowner may contract through.

Organization: Mark Arienti, PE
Acorn Engineering, Inc
Portland, Maine

Phone: (207) 775-2655

Qualifications:

- Maine Professional Engineering License #6807
- Maine DEP - Certified in Maintenance & Inspection of Stormwater BMP's Cert #73

The inspection and maintenance criteria is based upon the Maine DEP - Stormwater Management for Maine, Volume III: BMPs Technical Design Manual. Refer to the Grading and Drainage Plan for the location of the BMPs

PURPOSE

This Inspection and Maintenance Plan has been individually tailored to this parcel's stormwater infrastructure, site characteristics, and their respective opportunities and limitations related to reducing the pollutant load on the receiving watershed. The maintenance of a parcel's impervious surfaces and stormwater infrastructure is critical to extending the long-term performance and effectiveness of Best Management Practices (BMPs). The Inspection and Maintenance Plan represents the parcel's minimum activities to meet the permit requirements. The parcel shall still be subject to any applicable Civil Site Plans, Permit Applications, Erosion and Sedimentation Control Plans Reports, Stormwater Management Plans, Inspection and Maintenance Manuals, and all Municipal, State, and Federal rules.

OPERATION AND MAINTENANCE ACTIVITY

Drip Edge Filters:

The maintenance of the drip edge filters shall be in accordance with the following activities identified below and the most recent version of the Maine DEP Volume III BMPs Technical Design Manual Ch, 7.5 Roof Dripline Filter.



- The soil filter shall be inspected after the first three major storm within the first year to ensure the filter area is draining appropriately. Thereafter, the filter should be inspected annually to remove and legally dispose of accumulated sediment and debris.
- If the project is conducted in phases and some of the parking lot tributary to the filter remains with a gravel surface, a non-woven geotextile fabric shall be placed over the surface to prevent sediment from entering the filter media.

Underdrain Outlet:

The drip edge filter underdrain outlet shall be annually inspected for the presence of accumulated sediment or debris. Any sediment shall be removed as required.

- Inspect and legally dispose of debris that has accumulated on the filter area.

Landscaped and Vegetated Areas

Inspect all landscaped and or vegetated slopes and embankments on an annual basis. Vegetated areas with bare areas or sparse growth (<90% coverage) shall be revegetated. Mulch shall be applied to landscaped areas, as necessary. Dead or decaying landscaping (ground cover, shrubs, trees etc.) shall be replanted in accordance with the approved Site & Landscape Plan.

INSPECTION AND MAINTENANCE TABLE

Inspection and Maintenance Frequency	Spring or Yearly	Summer	Fall	As Necessary
Drip Edge Filters	X	X		X
Outlet pipe	X			X
Landscaped/Vegetated Areas	X			X



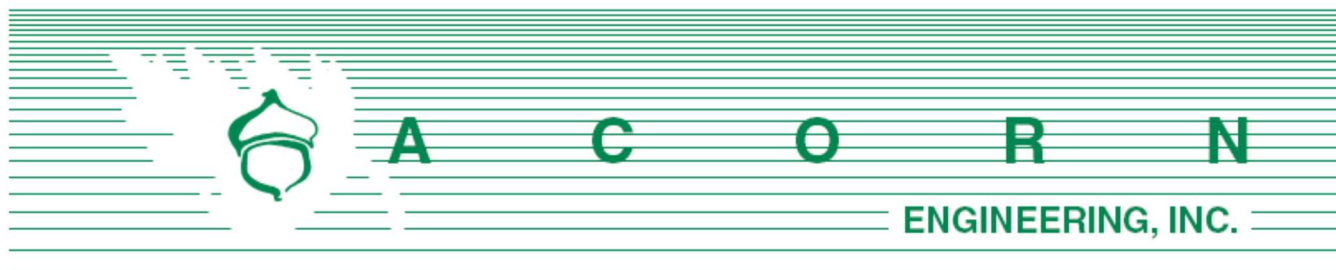


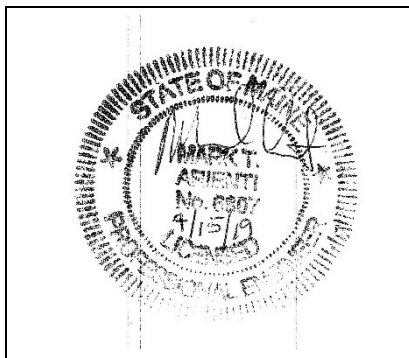
Exhibit 15. Erosion & Sedimentation Control Report

Prepared For:

Sparhawk Mill
81 Bridge Street
Yarmouth, Maine 04096

Prepared By:

Acorn Engineering, Inc.
65 Hanover Street
Portland, Maine 04102



March 2019

INTRODUCTION

Acorn Engineering, Inc. has been retained by Mr. Alan Jagger to provide civil engineering services for the improvement of the existing driveway and parking lot at 81 Bridge Street. The parking is for the existing commercial building and will include approximately 60 spaces including 2 handicap spots.

EXISTING CONDITIONS

The proposed project is located where Bridge St. crosses the Royal River. A boundary and topographic plan has been prepared by Sebago Technics of South Portland, Maine, dated 11/20/2017.

The property is in the General Development (GD) Zoning District as well the Shoreland Overlay District (SOD) Zoning District; all abutters are residential use.

The existing 2.2-acre property consists of 3-story-high brick building, built in 1850, that was historically used as a mill. It has a footprint of 6368 square feet. There is a gravel driveway that provides access off Bridge St. to a compacted gravel parking area for customers and employees of the businesses in the building with total existing gravel surface area of approximately 33,500 ft².

Portions of the site are located within FEMA flood zone A. The grades direct runoff from the parking area to the Royal River as sheet flow.

1.1 Existing Soils

Onsite soil information includes the following:

- Soil Conservation Service Medium Intensity Soil Survey for Cumberland County

The majority of the site is comprised of Windsor soils which are in the hydrologic soil group A. The Windsor series consists of very deep, well drained soils formed in sandy outwash deposits. They are nearly level through very steep soils on glaciofluvial landforms (USGS).

A small part of the site consists of Suffield soils. The Suffield series consists of very deep, moderately well-drained soils (Hydrologic Soil Group C) formed in lacustrine or marine sediments. Permeability is moderate near the surface and slow or very slow in the substratum.

The susceptibility of soil erosion is indicated on a relative “K” scale of values over a range of 0.02 to 0.69. Higher “K” values indicate more erodible soils.

Table 1: K Value		
Soils Type	Subsurface	Substratum
Windsor Loamy Sand	.17	.17
Suffield Silt Loam	.49	.49

The soil “K” values for the soils, listed above, indicate a low susceptibility to erosion. The site’s susceptibility to erosion is sourced from the Soil Conservation Service Medium Intensity Soil Survey



for Cumberland County and the USDA Soil Survey.

1.2 Existing Erosion Problems

There is no evidence of significant erosion on site.

1.3 Critical Areas

There were no critical wildlife areas identified, but the project is partially located within FEMA Flood Hazard Zone, AE.

1.4 Protected Natural Resource

The project is located within the Shoreland Overlay District but not within the Shoreland Protection Zone.

The project is not located within a watershed classified as an Urban Impaired Stream.

1.5 Previous Construction Activity (5 years)

Acorn Engineering, Inc. is not aware of any construction related activities within the project limits within the past 5 years.

1.6 Timber Harvesting

Acorn Engineering, Inc. is not aware of any timber harvesting within the past five years. Some clearing has occurred within the site.

2.0 EROSION CONTROL MEASURES AND SITE STABILIZATION

As part of the site development, the following temporary and permanent erosion and sedimentation control devices shall be implemented. Devices shall be installed as described in this report or within the plan set. See the Maine Erosion and Sediment Control Handbook for Construction: Best Management Practices for further reference.

2.1 Temporary Erosion Control Measures

The following temporary erosion and sedimentation control measures are planned for the project's construction period:

2.1.1 Crushed stone stabilized construction entrances shall be placed at all access points to the project site where there are disturbed areas. The following specifications shall be followed at a minimum:

- Stone size shall be 2-3 inches, or reclaimed or recycled concrete equivalent.



- The thickness of the entrance stone layer shall be no less than 6 inches.
 - The entrance shall not be less than 20 feet wide; however, not less than the full width of points where ingress or egress occurs. The length shall not be less than 50 feet in length.
 - Geotextile fabric (woven or non-woven) shall be placed over the entire entrance area.
 - The entrance/exit shall be maintained to the extent that it will prevent the tracking of sediment onto public road ways.
- 2.1.2 Siltation fence, erosion control berm or equivalent shall be installed down gradient of any disturbed areas to trap runoff borne sediments until permanent stabilization is achieved. The silt fence or erosion control berm shall be installed per the details provided in the plan set and inspected before and immediately after each rainfall and at least daily during prolonged rainfall. Repairs shall be made if there are any signs of erosion or sedimentation below the fence line or berm. If there are signs of undercutting at the center or the edges, or impounding of large volumes of water behind the fence or berm, the barrier shall be replaced with a stone check dam.
- 2.1.3 Hay mulch including hydro seeding is intended to provide cover for denuded or seeded areas until revegetation is established. Mulch placed between April 15th and November 1st on slopes of less than 15 percent shall be covered by fabric netting and anchored with staples in accordance with the manufacturer's recommendation. Mulch placed between November 1st and April 15th on slopes equal to or steeper than 8 percent and equal to or flatter than 2:1 shall use mats or fabric netting and anchored with staples in accordance with the manufacturer's recommendation.
- 2.1.4 At any time of the year, all slopes greater than 3:1 shall be stabilized with Double Net Erosion Control Blanket Bionet SC150BN by North American Green or Approved Equal, or Erosion Control Mix Slope Protection as detailed within the plans.
- 2.1.5 Bridge Street shall be swept to control mud and dust from the construction site as necessary. Add additional stone to the stabilized construction entrance to minimize the tracking of material off the site and onto the surrounding roadways.
- 2.1.6 During demolition, clearing and grubbing operations, stone check dams shall be installed at any areas of concentrated flow. The maximum height of the check dam shall not exceed 2 feet. The center of the check dam shall be 6 inches below the outer edges of the dam. The contractor shall mulch the side slopes and install stone check dams for all newly excavated ditch lines within 24 hours of their creation.
- 2.1.7 Silt fence stake spacing shall not exceed 6 feet unless the fence is supported with 14 gauge wire in which case the maximum spacing shall not exceed 10 feet. The silt fence shall be "toed" into the ground.



- 2.1.8 Storm drain inlet protection shall be provided to storm drains through the use of any of the following: hay bale drop inlet structures, silt fence drop inlet sediment filter, gravel and wire mesh drop inlet sediment filter, or curb inlet sediment filter. Barriers shall be inspected after every rainfall event and repaired as necessary. Sediments shall be removed when accumulation has reached 1/2 the design height.
- 2.1.9 Dust control shall be accomplished by the use of any of the following: water, calcium chloride, stone, or an approved MDEP product. Dust control shall be applied as needed to accomplish dust control.
- 2.1.10 Temporary loam, seed, and mulching shall be used in areas where no other erosion control measure is used. Application rates for seeding are provided at the end of this report.
- 2.1.11 Stockpiles shall be stabilized within 7 days of formation unless a scheduled rain event occurs prior to the 7-day window, in which case the stockpile shall be stabilized prior to the rain event. Methods of stabilization shall be mulch, erosion control mix, or erosion control blankets/mats. Silt fence or a wood waste compost filter berm shall be placed downhill of any soil stockpile location.
- 2.1.12 For disturbance between November 1 and April 15, please refer to winter stabilization plan in this report and the Maine Erosion and Sediment Control BMP manual for further information.
- 2.1.13 It is of the utmost importance that stormwater runoff and potential sediment from the construction site be diverted around the proposed underdrains until the trench is backfilled.

2.2 Permanent Erosion Control Measures

The following permanent erosion control measures are intended for post disturbance areas of the project:

- 2.2.1 All disturbed areas during construction, not subject to other proposed conditions, shall receive a minimum 4" of loam, limed, and mulched. Erosion control blankets or mats shall be placed over the mulch in areas noted in paragraph 4.1 of this report.
- 2.2.2 All stormwater devices shall be installed and tributary areas stabilized prior to receiving stormwater.
- 2.2.3 Refer to the Maine Erosion and Sediment Control BMP manual for additional information.



3.0 EROSION AND SEDIMENTATION CONTROL PLAN

3.1 The Erosion and Sedimentation Control Plan is included within the plan set.

4.0 DETAILS AND SPECIFICATIONS

4.1 Erosion Control Details and Specifications are included in the plan set.

5.0 STABILIZATION PLAN FOR WINTER CONSTRUCTION

Winter Construction consists of earthwork disturbance between the dates of November 1 and April 15. If a construction site is not stabilized with pavement, a road gravel base, 75% mature vegetation cover or riprap by November 15, then the site shall be protected with over-winter stabilization. Any area not stabilized with pavement, vegetation, mulching, erosion control mix, erosion control mats, riprap, or gravel base on a road shall be considered open.

The contractor shall limit the work area to areas that work will occur in during the subsequent 15 days and so that it can be mulched one day prior to a snow event. The contractor shall stabilize work areas prior to opening additional work areas to minimize areas without erosion control measures.

The following measures shall be implemented during winter construction periods:

5.1 Sediment Barriers

During frozen conditions, sediment barriers may consist of erosion control mix berms or any other recognized sediment barriers as frozen soil prevents the proper installation of hay bales or silt fences.

5.2 Mulching

All areas shall be considered denuded until seeded and mulched. Hay and straw mulch shall be applied at a rate of 150 lb. per 1,000 square feet or 3 tons/acre (twice the normal accepted rate of 75-lbs./1,000 s.f. or 1.5 tons/acre) and shall be properly anchored. Erosion control mix must be applied with a minimum 4-inch thickness. Mulch shall not be spread on top of snow. The snow shall be removed down to a one-inch depth or less prior to application. After each day of final grading, the area shall be properly stabilized with anchored hay or straw or erosion control matting. An area shall be considered to have been stabilized when exposed surfaces have been either mulched or adequately anchored so that ground surface is not visible through the mulch. Between the dates of November 1 and April 15, all mulch shall be anchored by either mulch netting, tracking or wood cellulose fiber. The cover will be considered sufficient when the ground surface is not visible through the mulch. After November 1st, mulch and anchoring of all exposed soil shall occur at the end of each final grading workday.



5.3 Soil Stockpiling

Stockpiles of soil or subsoil shall be mulched for over winter protection with hay or straw at twice the normal rate or with a four-inch layer of erosion control mix. This shall be done within 24 hours of stocking and re-established prior to any rainfall or snowfall.

5.4 Seeding

Between the dates of October 15th and April 1st, loam or seed shall not be required. During periods of above freezing temperatures finished areas shall be fine graded and either protected with mulch or temporarily seeded and mulched until the final treatment can be applied. If the date is after November 1st and if the exposed area has not been loamed, final grading with a uniform surface, then the area may be dormant seeded at a rate of 3 times higher than specified for permanent seed and then mulched.

Dormant seeding may be placed prior to the placement of mulch or erosion control blankets. If dormant seeding is used for the site, all disturbed areas shall receive 4" of loam and seed at an application rate of 5 lbs./1,000 s.f. All areas seeded during the winter shall be inspected in the spring for adequate catch. All areas insufficiently vegetated (less than 75% catch) shall be revegetated by replacing loam, seed and mulch. If dormant seeding is not used for the site, all disturbed areas shall be revegetated in the spring.

5.5 Over winter stabilization of disturbed soils

By September 15th, all disturbed soils on areas having a slope less than 15% shall be seeded and mulched. If the disturbed areas are not stabilized by this date, then one of the following actions shall be taken to stabilize the soil for late fall and winter:

- Stabilize the soil with temporary vegetation – By October 1st, seed the disturbed soil with winter rye at a seeding rate of 3lbs per 1,000 s.f., lightly mulch the seeded soil with hay or straw at 75 lbs. per 1,000 s.f., and anchor the mulch with plastic netting. Monitor growth of the rye over the next 30 days. If the rye fails to grow at least three inches or fails to cover at least 75% of the disturbed soil before November 1st, then mulch the area for over-winter protection.
- Stabilize the soil with sod – Stabilize the disturbed soil with properly installed sod by October 1st. Proper installation includes 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 15th, mulch the disturbed soil by spreading hay or straw at a rate of at least 150 lbs. per 1,000 s.f. on the area so that no soil is visible through the mulch. Immediately after applying the mulch, anchor the mulch with plastic netting to prevent wind from moving the mulch off the disturbed soil.



5.6 Over winter stabilization of disturbed slopes

All stone-covered slopes shall be constructed and stabilized by November 15th. All slopes to be vegetated shall be seeded and mulched by September 1st. A slope is considered a grade greater than 15%. If a slope to be vegetated is not stabilized by September 1st, then one of the following action shall be taken to stabilize the slope for late fall and winter:

- Stabilize the soil with temporary vegetation and erosion control mats – By October 1st the disturbed slope shall be seeded with winter rye at a seeding rate of 3 lbs. per 1,000 s.f. and then install erosion control mats or anchored mulch over the seeding. If the rye fails to grow at least three inches or fails to cover at least 75% of the slope by November 1st, then the contractor shall cover the slope with a layer of erosion control mix or with stone riprap.
- Stabilize the soil with sod – The disturbed slope shall be stabilized with properly installed sod by October 1st. 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 shall not use late-season sod installation to stabilize slopes having a grade greater than 3H:1V or having groundwater seeps on the slope face.
- Stabilize the soil with erosion control mix – Erosion control mix shall be properly installed by November 15th. The contractor shall not use erosion control mix to stabilize slopes having grades greater than 2H:1V or having groundwater seeps on the slope face.
- Stabilize the soil with stone riprap – Place a layer of stone riprap on the slope by November 15th. A registered professional engineer shall be hired to determine the stone size needed for stability on the slope and to design a filter layer for underneath the riprap.

6.0 INSPECTION AND MAINTENANCE

A person with knowledge of erosion and stormwater control, including the standards and conditions in the permit, shall conduct periodic visual inspections of installed erosion control measures. The frequency of inspection shall occur at least once every two weeks, as well as after a “storm event”. A “storm event” shall consist 0.5 inches of rain within a 24 hour period. The following Erosion and Sediment Control - Best Management Practices (BMP's) shall inspected in the manner as described.

6.1 Sediment Barriers

Hay bale barriers, silt fences and filter berms shall be inspected and repaired for the following if there are any signs of erosion or sedimentation below them. If there are



signs of undercutting at the center or the edges of the barrier, or impounding of large volumes of water behind them, sediment barriers shall be replaced with a temporary check dam. Should the fabric on a silt fence or filter barrier decompose or become ineffective prior to the end of the expected usable life and the barrier is still necessary, the fabric shall be replaced promptly. Sediment deposits should be removed when deposits reach approximately one-half the height of the barrier. Filter berms should be reshaped as needed. Any sediment deposits remaining in place after the silt fence or filter barrier is no longer required should be dressed to conform to the existing grade, prepared and seeded.

6.2 Sedimentation Basin

The sedimentation basin and outlet culvert shall be inspected and maintained during construction. If embankments show signs of erosion or settlement, it will be necessary to repair or replace the erosion control device. Culvert should be checked for debris and other clogs. Inspect riprap outlet for signs of erosion and increase the length of the outlet apron if signs of erosion are present. In the spring, basin should be monitored for high flows of runoff.

6.3 Stabilized Stone Construction Entrances

The exit shall be maintained in a condition that will prevent tracking of sediment onto public rights-of-way. When the control pad becomes ineffective, the stone shall be removed along with the collected soil material and redistributed on site in a stable manner. The entrance should then be reconstructed. The contractor shall sweep or wash pavement at exits, which have experienced mud-tracking on to the pavement or traveled way. When washing is required, it shall be done on an area stabilized with aggregate, which drains into an approved sediment trapping device. All sediment shall be prevented from entering storm drains, ditches, or waterways.

6.4 Mulched Areas

All mulches must be inspected periodically, especially after rainstorms, to check for rill erosion. If less than 90% of the soil surface is covered by mulch, additional mulch shall be immediately applied. Nets must be inspected after rain events for dislocation or failure. If washouts or breakage occur, re-install the nets as necessary after repairing damage to the slope. Where mulch is used in conjunction with ornamental plantings, inspect periodically throughout the year to determine if mulch is maintaining coverage of the soil surface. Repair as needed.

6.5 Dust Control

When temporary dust control measures are used, repetitive treatment shall be applied as needed to accomplish control.

6.6 Stormwater Appurtenances

All underdrains, storm drains, and catch basins need to be operating effectively and free of debris.



6.7 Erosion and Sedimentation Control Inspections:

Acorn Engineering has personnel qualified to conduct Erosion and Sedimentation Control Inspections. For further information contact:

Contact: Will Savage, PE
Telephone: (207) 775-2655

Qualifications:

- Maine Professional Engineering License #11419
- Maine DEP - Certified in Maintenance & Inspection of Stormwater BMP's Cert. #14
- Certified Erosion, Sediment and Storm Water Inspector (CESSWI) Cert. #0293
- Certified Professional in Erosion and Sediment Control (CPESC) Cert. #4620

The Contractor has sole responsibility for complying with the Erosion and Sedimentation Report/Plan, including control of fugitive dust. The Contractor shall be responsible for any monetary penalties resulting from failure to comply with these standards.



7.0 IMPLEMENTATION SCHEDULE

The following implementation sequence is intended to maximize the effectiveness of the above described erosion control measures. Contractors should avoid overexposing disturbed areas and limit the amount of stabilization area.

1. Install a stabilized construction entrance in all locations where earthwork construction traffic will enter and exit the site.
2. Install downgradient perimeter silt fence, erosion control berm or equivalent.
3. Install all other erosion control devices as necessary throughout the remainder of this schedule.
4. Trench the filter areas to act as a temporary sedimentation trap for the upper parking area per MDEP requirements during construction. Install permanent outlet to the ditch along the wooded buffer with temporary sediment control with a Dirt Bag. Do not install filter media until all final earthwork, grading, and slope stabilization has been completed.
5. Commence earthwork operations.
6. Commence installation of utilities.
7. Continue earthwork and grading to subgrade as necessary for construction.
8. Complete installation of drainage infrastructure, as well as other utility work.
9. Complete remaining earthwork operations.
10. Install sub-base and base gravels in paved areas.
11. Install paving and curbing.
12. Loam, lime, fertilize, seed and mulch disturbed areas and complete all landscaping.
13. Once the site is stabilized, 90% catch of grass has been obtained, or mulching of landscape areas is complete remove all temporary erosion control measures.
14. Touch up areas without a vigorous catch of grass with loam and seed.
15. Complete site signage and striping.
16. Execute proper maintenance of all temporary and permanent erosion control measures throughout the project.

The above implementation sequence should be generally followed by the site contractor. However, the contractor may construct several items simultaneously. The contractor shall submit to the owner a schedule of the completion of the work. If the contractor is to commence the construction of more than one item above, they shall limit the amount of exposed areas to those areas in which work is expected to be undertaken during the following 30 days.

The contractor shall re-vegetate disturbed areas as rapidly as possible. All areas shall be permanently stabilized within 7 days of final grading or before a storm event. The contractor shall incorporate planned inlets and drainage systems as early as possible into the construction phase.

8.0 CONCLUSION

The above erosion control narrative is intended to minimize the development impact by implementing temporary and permanent erosion control measures. The contractor shall also refer to the Maine Erosion and Sediment Control BMP manual for additional information.



9.0 ATTACHMENTS

- Temporary Seeding Plan
- Permanent Seeding Plan



TEMPORARY SEEDING PLAN

Site Preparation

The seeded areas shall be feasibly graded out to provide the use of equipment for seedbed preparation, seeding, mulch application, and mulch anchoring. If necessary, the site may require additional temporary erosion control measures outlined in the Erosion Control report.

Seedbed Preparation

Fertilizer shall be applied to the site at a rate of 13.8 pounds per 1,000 square feet. The composition of the fertilizer shall be 10-10-10 (N-P₂O₅-K₂O) or equivalent.

Limestone shall be applied to the site at a rate of 138 pounds per 1,000 square feet.

Seeding

The composition and amount of temporary seed applied to a site shall be determined by the following table:

Seed	Pounds / 1,000 S.F.	Recommended Seeding Dates
Winter Rye	2.57	Aug-15 to Oct-1
Oats	1.84	Apr-1 to Jul-1 Aug-15 to Sep-15
Annual Ryegrass	0.92	Apr-1 to Jul-1
Sudangrass	0.92	May-15 to Aug-15
Perennial	0.92	Aug-15 to Sep-15

Mulching

Mulch shall be applied at a rate of 70 lbs. – 90 lbs. per 1,000 square feet. The mulch shall be installed at a minimum depth of 4 inches. The seeded area shall be mulched immediately after seed is applied. Mulching during the winter season shall be double the normal amount.

Conclusion

Please refer to the Maine Erosion and Sediment Control BMP manual for additional information pertaining to temporary seeding and mulching.



PERMANENT SEEDING PLAN

Site Preparation

The seeded areas shall be feasibly graded out to provide the use of equipment for seedbed preparation, seeding, mulch application, and mulch anchoring. If necessary, the site may require additional temporary erosion control measures outlined in the Erosion Control report.

Seedbed Preparation

Fertilizer shall be applied to the site at a rate of 13.8 pounds per 1,000 square feet. The composition of the fertilizer shall be 10-10-10 (N-P₂O₅-K₂O) or equivalent.

Limestone shall be applied to the site at a rate of 138 pounds per 1,000 square feet.

Seeding

The composition and amount of permanent seed applied to a site shall be determined by the following table:

Seed	Pounds / 1,000 S.F.
Kentucky Bluegrass	0.46
Creeping Red Fescue	0.46
Perennial Ryegrass	0.11
Total	1.03

Mulching

Mulch shall be applied at a rate of 70 lbs. – 90 lbs. per 1,000 square feet. The mulch shall be installed at a minimum depth of 4 inches. The seeded area shall be mulched immediately after seed is applied. Mulching during the winter season shall be double the normal amount.

Recommendations

Permanent seeding is recommended to be completed in the spring. Later summer seeding is allowed if completed prior to September 1st. If seeding cannot be accomplished during the periods recommended for permanent seeding, then the contractor shall perform temporary seeding per the temporary seeding plan.

Conclusion

Please refer to the Maine Erosion and Sediment Control BMP manual for additional information pertaining to permanent seeding and mulching.



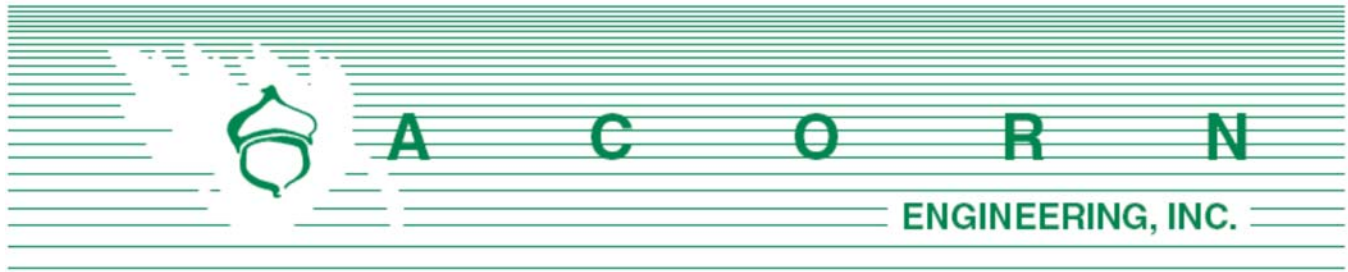


Exhibit 16. Soils Overview

Onsite soil information includes the following:

- Soil Conservation Service Medium Intensity Soil Survey for Cumberland County

The majority of the site is comprised of Windsor soils which are in the hydrologic soil group A. The Windsor series consists of very deep, well drained soils formed in sandy outwash deposits. They are nearly level through very steep soils on glaciofluvial landforms (USGS).

A small part of the site consists of Suffield soils. The Suffield series consists of very deep, moderately well-drained soils (Hydrologic Soil Group C) formed in lacustrine or marine sediments. Permeability is moderate near the surface and slow or very slow in the substratum.

The susceptibility of soil erosion is indicated on a relative “K” scale of values over a range of 0.02 to 0.69. Higher “K” values indicate more erodible soils.

Table 1: K Value		
Soils Type	Subsurface	Substratum
Windsor Loamy Sand	.17	.17
Suffield Silt Loam	.49	.49


The soil “K” values for the soils, listed above, indicate a low susceptibility to erosion. The site’s susceptibility to erosion is sourced from the Soil Conservation Service Medium Intensity Soil Survey for Cumberland County and the USDA Soil Survey.

Soil Map—Cumberland County and Part of Oxford County, Maine





MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

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

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

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

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: Cumberland County and Part of Oxford County, Maine

Survey Area Data: Version 15, Sep 6, 2018

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 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
SuE2	Suffield silt loam, 25 to 45 percent slopes, eroded	0.2	15.0%
W	Water	0.0	0.5%
WmB	Windsor loamy sand, 0 to 8 percent slopes	1.0	84.5%
Totals for Area of Interest		1.2	100.0%

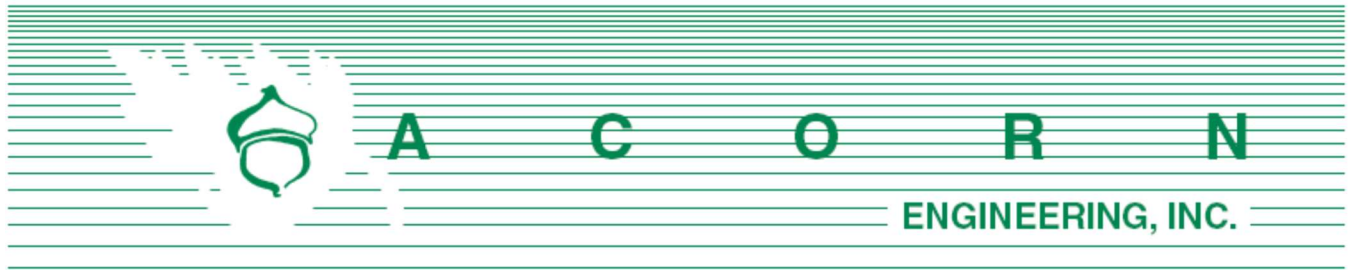


Exhibit 18. Zoning Compliance

A comparison of the existing and proposed conditions with respect to the zoning standard for the GD zone in the Shoreland Overlay District is presented below. The setbacks presented below are measure relative to the existing Sparhawk Mill building. No new buildings are proposed and therefore the set backs are shown to be equal in the existing and proposed condition.

With respect to the site improvements, namely the setback of the proposed asphalt-surface parking lot, the setback from the Royal River high water line will be greater (25.2 feet) than in the existing gravel parking lot (22.2 feet).

Parameter	Required	Existing	Proposed
Area	20,000 square feet	105,237 square feet	105,237 square feet
Lot Width	75 feet	226	226
Shoreland Setback	25 feet	0 feet	0 feet
Front Yard	10 feet	0	0
Side Yard	10 feet	0	0
Rear Yard	15 feet	285 feet	285 feet
Lot Coverage (by impervious surfaces)	70%	35%	34%

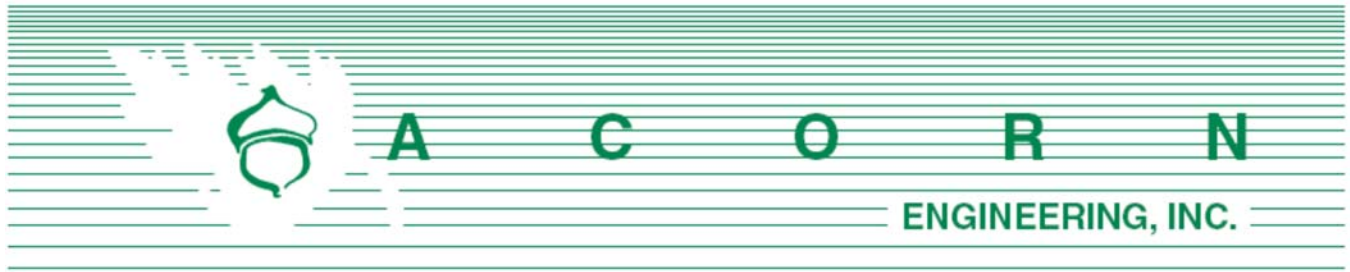


Exhibit 19. Summary List and Written Offer of Cession of Street/Utilities

Not Applicable.

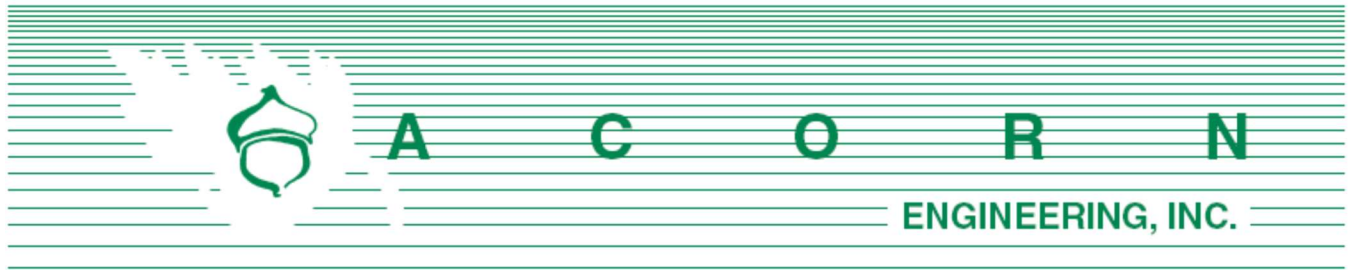


Exhibit 20. Waivers

There are two waivers requested as part of this project:

1. Drive aisle width of 24' in most areas (Technical Standard specifies 25').
 - This waiver is being requested in order to stay as much as possible within the existing impervious gravel footprint and away from the River. The circulation was confirmed to be functional with a turning template program.
2. Parking stall length of 18' for all of the spaces instead of 19' as specified in the Technical Standard.
 - This waiver is being requested for similar reasons as Waiver 1.

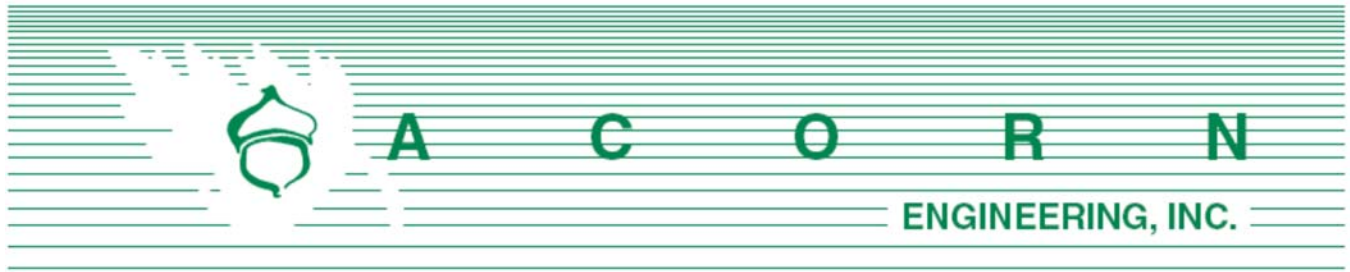


Exhibit 21. Potential Nuisances

There are no anticipated nuisances anticipated as part of this project.

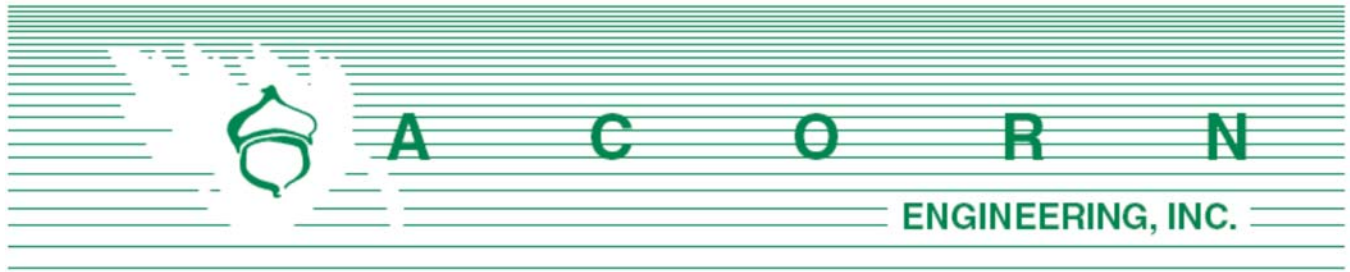


Exhibit 22. Civil Plan Set

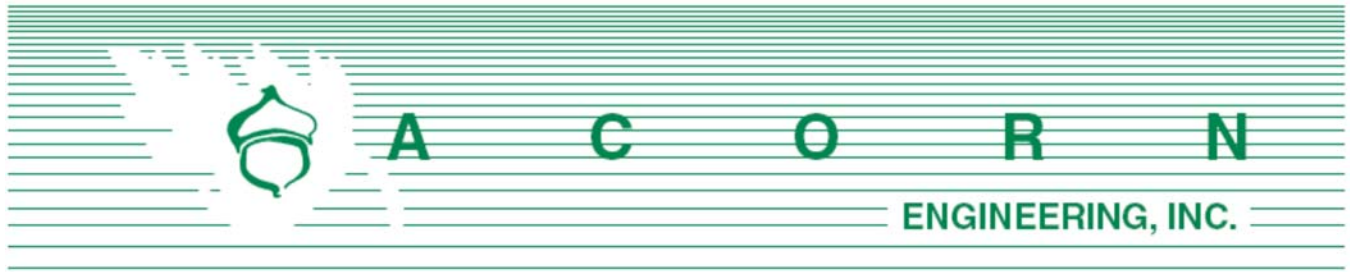


Exhibit 23. Permit by Rule

04/06/2017

DEPARTMENT OF ENVIRONMENTAL PROTECTION
PERMIT BY RULE NOTIFICATION FORM
 (For use with DEP Regulation, Natural Resources Protection Act- Permit by Rule Standards, Chapter 305)
 PLEASE TYPE OR PRINT IN BLACK INK ONLY

APPLICANT INFORMATION (Owner)				AGENT INFORMATION (If Applying on Behalf of Owner)			
Name:	Sparhawk LLC c/o Allan Jagger			Name:	Acorn Engineering, Mark Arienti		
Mailing Address:	5 AMERESCOGIN ROAD			Mailing Address:	65 Hanover Street		
Town:	FALMOUTH			Town:	Portland		
State and Zip Code:	Maine 04105			State and Zip Code:	Maine 04101		
Daytime Phone #:				Daytime Phone #:	207-775-2655		
Email Address:				Email Address:	marienti@acorn-engineering.com		
PROJECT INFORMATION							
Part of a larger project? (check one):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	After the Fact? (check one):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Project involves work below mean low water? (check one):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Name of waterbody:	Royal River
Project Town:	Yarmouth		Project Location (Address):	81 Bridge Street		Map & Lot Number:	33/66
Brief Project Description:	Pave existing gravel driveway and parking lot with hot mix asphalt						
Brief Directions to Site:	Follow I-295 N to US-1 N in Yarmouth. Take exit 15 from I-295 N, Take exit 15 for US-1 toward Yarmouth, Continue on US-1 N. Take Portland St to Bridge St						

PERMIT BY RULE (PBR) SECTIONS (Check at least one): I am filing notice of my intent to carry out work which meets the requirements for Permit By Rule (PBR) under DEP Rules, Chapter 305. I and my agents, if any, have read and will comply with all of the standards in the Sections checked below.

- | | | |
|--|---|--|
| <input checked="" type="checkbox"/> Sec. (2) Act. Adj. to Protected Natural Res. | <input type="checkbox"/> Sec. (10) Stream Crossing | <input type="checkbox"/> Sec. (17) Transfers/Permit Extension |
| <input type="checkbox"/> Sec. (3) Intake Pipes | <input type="checkbox"/> Sec. (11) State Transportation Facil. | <input type="checkbox"/> Sec. (18) Maintenance Dredging |
| <input type="checkbox"/> Sec. (4) Replacement of Structures | <input type="checkbox"/> Sec. (12) Restoration of Natural Areas | <input type="checkbox"/> Sec. (19) Activities in/on/over significant vernal pool habitat |
| <input type="checkbox"/> Sec. (5) REPEALED | <input type="checkbox"/> Sec. (13) F&W Creation/Enhance/Water Quality Improvement | <input type="checkbox"/> Sec. (20) Activities located in/on/over high or moderate value inland waterfowl & wading bird habitat or shorebird feeding & roosting areas |
| <input type="checkbox"/> Sec. (6) Movement of Rocks or Vegetation | <input type="checkbox"/> Sec. (14) REPEALED | |
| <input type="checkbox"/> Sec. (7) Outfall Pipes | <input type="checkbox"/> Sec. (15) Public Boat Ramps | |
| <input type="checkbox"/> Sec. (8) Shoreline stabilization | <input type="checkbox"/> Sec. (16) Coastal Sand Dune Projects | |
| <input type="checkbox"/> Sec. (9) Utility Crossing | | |

NOTE: Municipal permits *may* also be required. Contact your local code enforcement office for more information. Federal permits may be required for stream crossings and for projects involving wetland fill. Contact the Army Corps of Engineers at the Maine Project Office for more information.

NOTIFICATION FORMS CANNOT BE ACCEPTED WITHOUT THE NECESSARY ATTACHMENTS

- ☒ **Attach** all required submissions for the PBR Section(s) checked above. The required submissions for each PBR Section are outlined in Chapter 305 and may differ depending on the Section you are submitting under.
- ☒ **Attach** a check for the correct fee made payable to: "Treasurer, State of Maine". The current fee for NRPA PBR Notifications can be found at the Department's website: <http://www.maine.gov/dep/feesched.pdf>
- ☒ **Attach** a location map that clearly identifies the site (U.S.G.S. topo map, Maine Atlas & Gazetteer, or similar).
- ☒ **Attach Proof of Legal Name** if applicant is a corporation, LLC, or other legal entity. 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.

I authorize staff of the Departments of Environmental Protection, Inland Fisheries & Wildlife, and Marine Resources to access the project site for the purpose of determining compliance with the rules.

I also understand that this PBR becomes effective 14 calendar days after receipt by the Department *unless the Department approves or denies the PBR prior to that date.*

By signing this Notification Form, I represent that the project meets all applicability requirements and standards in the rule and that the applicant has sufficient title, right, or interest in the property where the activity takes place.

Signature of Agent or Applicant:	Date: 1/22/19
----------------------------------	---------------

Keep a copy as a record of permit. Send the form with attachments via certified mail or hand deliver to the Maine Dept. of Environmental Protection at the appropriate regional office listed below. The DEP will send a copy to the Town Office as evidence of the DEP's receipt of notification. No further authorization by DEP will be issued after receipt of notice. Permits are valid for two years. **Work carried out in violation of any standard is subject to enforcement action.**

AUGUSTA DEP
17 STATE HOUSE STATION
AUGUSTA, ME 04333-0017
(207)287-7688

PORTLAND DEP
312 CANCO ROAD
PORTLAND, ME 04103
(207)822-6300

BANGOR DEP
106 HOGAN ROAD
BANGOR, ME 04401
(207)941-4570

PRESQUE ISLE DEP
1235 CENTRAL DRIVE
PRESQUE ISLE, ME 04769
(207)764-0477

OFFICE USE ONLY	Ck.#	Date	Staff	Staff	After Photos
PBR #	FP		Acc. Date	Def. Date	



Figure 1: Driveway Looking South Toward River



Figure 2: Sparhawk Mill Building Viewed toward Southwest from Parking Area





Figure 3: Royal River from the Southeast Edge of Parking Area



Figure 4: Royal River Looking East from Sparhawk Mill Rock Retaining Wall

