Plymouth Engineering, Inc.

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October 10, 2023 Project No. 22098

Mr. Bub Fournier
City of Belfast
131 Church Street
Belfast, Maine 04915

B&B Midcoast Properties, LLC Proposed Subdivision – Little River Drive, Belfast
Final Application Submittal

Dear Mr. Fournier:

Plymouth Engineering, Inc. is pleased to submit the attached information as final plan submittal for the Little River Subdivision on Little River Drive in Belfast. We have been working with the Maine DEP as you are well aware, and believe that permit is soon to be issued.

This final submittal takes into account the City's comments and memo of findings from the Preliminary submittal, and all DEP comments. Regarding the issue of storm water, this package includes updated information that meets the DEP requirements from correspondence with their engineer in a summary form. We have submitted the same package to Olver Associates for their information. We have also sent Mandy the voluminous calculations that were performed for storm water management.

We believe the above addresses all comments received previously. We stand ready to discuss and respond to comments from the City's contracted engineering firm. Once we have final comments, if any, we will submit the formal subdivision plan from the project's surveyor that will be used for signatures. It will be essentially the same plan as contained herein without the building envelopes that are shown herein for the DEP submittal.

We look forward to meeting with the Planning Board to discuss the project. The applicant is anxious to move forward with this exciting new project for them and the City of Belfast.

Sincerely,
PLYMOUTH ENGINEERING, INC.

Scott E. Braley, PE
President

Enc.
CC B&B Midcoast Properties

Section VIII – Final Plan

Following notification from the Planning Board of its findings, the sub divider may proceed with the development of a final plan as outlined below and shall include any other specific information requested by the Planning board. This final plan must be submitted within ninety (90) days after the Planning Board has granted preliminary approval and at least fourteen (14) days prior to a regular planning board meeting. The Planning Board may grant an extension of up to 90 days.

All of the following information is shown on the plans attached at the end of this application package in Appendix G.

1. The final plan submitted for review shall consist of 12 prints of the final plan with a scale of not less than 100 feet to the inch and contained on prints which are 24" x 36" and containing the following:
   A. Name of subdivision
      Little River Subdivision
   B. Name of City
      Belfast, Maine
   C. Name of owner
      B&B Midcoast Properties, LLC
   D. Name of engineer and/or land surveyor with license number and seal of each.
      Engineer:
      Plymouth Engineering, Inc.
      Scott Braley, PE# 6227
      Surveyor:
      Good Deeds, Inc
      Soils Investigation:
      Mark Hampton Associates, Inc.
      Wetland Delineation
      Mark Hampton Associates, Inc.
   E. Map & lot number reference to Assessor's tax map and lot number
      Map 4 Lot 62-G
   F. Book & page number from Waldo County Registry of Deeds of the property within the subdivision
      Book 4781 Page 182
   G. Boundaries of entire tract from which the subdivision is or was a part within 2 years next prior to filling the subdivision application.
      Shown on the attached plans.
   H. Name of abutting and owners.
      Appendix B
   I. Scale

Shown on each of the attached plans.

J. Date
Shown on the attached plans.

K. Designation of true north or magnetic north.
Shown on the attached plans.

L. Lines, dimensions, area and designation of each proposed lot and any public or common area within the subdivision and those areas, title to which, is reserved by the subdivider.
Shown on the attached plans.

M. Sufficient data to determine readily the location, bearing and length of every lot line, street & way line, boundary line and to reproduce such lines upon the ground. Where applicable, these should be referred to monuments included in the state system of plan coordinates, and in any event should be ties to reference points previously established by a public authority (e.g., a street)
Shown on the attached plans.

N. Name, location, width, radius of curves of all proposed and existing highways, roads and streets. All dimensions shall be shown in feet and decimals of a foot.
Shown on the attached plans.

O. Location of features, natural and man made, affecting the subdivision, such as water bodies, streams, swamps, wooded area, railroads, ditches, buildings, wetlands, freshwater wetlands, etc.
Shown on the attached plans.

P. Location of utilities – water, sewer, electric, telephone, etc., with description of each.
Shown on the attached plans.

Q. Any covenants or deed restrictions intended to cover all of part of the subdivision.
Appendix B.

R. Permanent reference markers set at all corners and angle points of the boundaries of the original tract to be subdivider. All lot corner markers shall be permanently located and shall be in compliance with Chapter One Section IX, E, @ of this ordinance.
Shown on the attached plans.

S. List any subdivision restrictions.
Appendix B

T. Suitable space to record, on the plan, final approval by this Planning Board, with conditions if any, and the date of such approval as follows:
Shown on the attached plans.

U. Road names require approval of City.
Shown on the attached plans.

V. The final plan must be recorded by the applicant at the Waldo County Registry of Deeds within 30 days of final plan approval or prior to the sale of any lot.
The plans will be recorded upon approval by the City of Belfast.

W. In addition to the 12 copies submitted the applicant shall being the following copies signature:

All of the following copies will be submitted for final approval by the City of Belfast.

- 2 mylar (1 for registry 1 for City)
- 4 paper prints (1 for assessor, 1 counter file, 1 subdivision file, and 1 for registry)

Chapter Two

General Standards

In reviewing applications for a subdivision, the Planning Board shall consider the following general standards and make findings that each has been met prior to the approval of a Final Plan. In all instances the burden of proof shall be upon the applicant.

Section I. Conformance with Comprehensive Plan

All proposed subdivision shall be in conforming with the Comprehensive Plan of the City of Belfast and with the provisions of all pertinent federal, state and local codes, ordinances, rules and/or regulations.

The proposed subdivision is a residential subdivision that meets the goals set forth by the City of Belfast Comprehensive Plan.

Section II. Land Not Suitable for Development

The following lands shall not be included in the calculations of lot area for the purpose of meeting the requirements of the Minimum Lot Size Law.

1. Land which is situated below the normal high water mark of any water body.
   All lot areas are calculated based on upland areas. The wetlands have been delineated on the entire parcel, by Mark Hampton Associates, Inc. of Portland, Maine.
2. Land which is located within 100 year frequency flood plains as identified by the Federal Emergency Management Agency or the Department of Housing and Urban Development, Flood Insurance Administration, unless the subdivider shows proof through the submittal of materials prepared by a Registered Land Surveyor which show that the property in question lies at least two feet above the 100 year flood level. The elevation of filled or made land shall not be considered. See City of Belfast Flood Management Ordinance.
   None of the land within the subdivision is classified as a flood hazard zone by FEMA. A copy of the FEMA FIRM map is attached in Appendix C.
3. Land which is part of a right-of-way, or easement, including utility easements.
   The roadway rights of way and stormwater easements are shown on the plans.
4. Land which has a water table within ten inches of the surface for at least three months of the year as identified by the County Soil Survey. The Board may use such lands in the lot area calculations if municipal sewage collection and treatment is provided and if the lot(s) are to be deed restricted to prohibit buildings with basements or required basement floor elevations one foot above the seasonal water table.
   The attached soils delineation, in Appendix D, shows that none of the test pits that were investigated on the site have a high ground water table.

5. Land that has been created by filling or draining a pond or wetland.
   No land has been altered to meet the minimum lot standards.
6. Land meeting the definition of wetland or freshwater wetland as defined in this ordinance.
   No land that has been delineated as wetland counts toward the total usable lot area.

Section III. Lots

1. All lots shall meet the minimum requirements of the Belfast Zoning Ordinance for the zoning district in which they are located. The lot configuration should be designed to allow maximum access to solar energy on building sites with suitable orientation.
   All of the proposed residential lots within the proposed subdivision have an adequate size to meet the standards of the zoning and subdivision ordinance of the City of Belfast.
2. Lot configuration and area shall be designed to provide for adequate off-street parking and service facilities based upon the type of development contemplated. Wherever practicable parking areas shall be laid out to coincide with building locations to maximize solar energy gain of the building.
   The lots all have sufficient area for vehicle storage. As part of the Maine DEP Site Location of Development Act permit application process, development envelopes were required to be shown on each lot. As such each lot has a proposed building envelope, driveway, and landscaping area shown on the attached plans.
3. Lots with multiple frontages shall be avoided wherever reasonably practicable.
   The only lots with multiple frontages are located at the intersections of the proposed rights-of-way. The frontages are adjacent to each other, no opposing frontages.
4. The subdivision of tracts into parcels with more than twice the required minimum lot size shall be laid out in such a manner as either to provide for the preclude future re-subdivision.
   There are proposed lots with twice the required lot area that can feasibly be re-subdivided. However, presence of wetlands, easements, and limited frontages preclude further division. As an approved subdivision any further division would required City of Belfast Planning board approval.
5. Where public utilities could be extended to the subdivision in the foreseeable future, the subdivision shall be designed to accommodate the extensions of utilities.
   The proposed subdivision will be served by public water, sewer, and electric. All of the utilities are being incorporated into the development of the subdivision.
6. No re-subdivision of any lot in an approved subdivision or change in boundary of any lot in an approved subdivision shall be permitted without Planning Board approval.
   There is no proposal to change any of the lot boundaries. If changes are made in the future, they will be presented to the City of Belfast Planning Board for approval prior to any changes being made.

7. If a lot on one side of a stream, tidal water, road or other similar barrier fails to meet he minimum requirements for lot size, it may not be combined with a lot on the other side of the stream, tidal water or road to meet the minimum lot size.
   No lots are bisected by any barriers that diminish the overall or usable lot area of any of the proposed lots within the subdivision.
8. The ratio of lot length to width shall not be more than five to one. Flag lots and other odd shaped lots on which narrow strips are joined to other parcels in order to meet minimum lot size requirements or to defeat the intent of this ordinance are prohibited.
   There are no flag lots proposed within the subdivision.

Section IV Electrical Utilities

Electrical Utilities must be notes on the plan and installed at the expense of the developer.

The electrical service will be installed underground within the subdivision. The final location of the services will be within the rights-of-way, but the ultimate final location will be at the determination of the power company.

Section V Water Supply

1. When a subdivision is to be served by a public water system, the complete supply system, including fire hydrants, shall be installed at the expense of the subdivider.
   The installation of the water service is part of the construction budget, and process of constructing the road.
   a. The subdivider shall provide a written statement from the Belfast Water District that adequate water for both domestic and fire fighting purposes can be provided without placing an undue burden on the source, facilities or distribution system involved. The subdivider shall be responsible for paying the costs of system improvements necessary to serve the subdivision. The subdivider shall also supply the Planning Board with design plans for the construction of water service to and with the subdivision and also the design plans for a water supply line from the existing terminus of a public water supply to the connection of the subdivision water supply on premises. No subdivision shall be approved unless the Planning Board determines from submission made by the developer that the system will be adequate to provide for the criteria above referenced.
      Attached in Appendix E at the end of this application is a correspondence between the developer and the Superintendent of the Belfast water District, Keith Pooler, verifying that there is sufficient water to serve the proposed subdivision. He also informed the developer of the existing available main at the end of the existing Little River Business Park, in anticipation of extending the existing main.
   b. The size and location of mains, gate valves, hydrants and service connections shall be reviewed and approved in writing by the Belfast Water District and the Fire Chief.

The following is from the findings from the City Planner following the preliminary meeting with the City of Belfast Planning Board in May of 2023. "The Board found the applicant plans to have all the lots connected to public water and that the Water District has the capacity to serve the development. The Fire Chief has also reviewed the development and has provided his comments about the identified location of the fire hydrants."

c. Fire hydrants shall be installed as determined by the Planning Board following consultation with the Fire Chief.
The plans attached in Appendix G show the locations of the proposed fire hydrants within the proposed subdivision.

2. When the location of a subdivision does not allow for a financially reasonable connection to a public water supply system, the Board may allow the use of individual wells or a private community water system.
The subdivision will be served by the public water supply, this standard is not applicable.
   a. Dug wells shall be permitted only it is demonstrated to be not feasible to develop other ground water sources, and shall be constructed so as to prevent infiltration o surface water into the well. Unless otherwise permitted by the Board, the subdivider shall prohibit dug wells be deed restrictions and a note on the plans.
   b. If a central water system is provided by the subdivider, the location and protection of the source, and the design, construction and operation of the system and shall conform to the standards of the Maine Rules Relating to Drinking Water(10-144 ACME 231 as from time to time amended or recodified).
   c. The subdivider may be required to construct ponds and dry hydrants to provide for adequate water storage for fire fighting purposes. An easement shall be granted to the municipality granting access to and maintenance of the dry hydrants where necessary.
3. The Planning Board may authorize the Belfast Water District's Engineer to review and report on the water supply system submitted by the subdivider.
The plans have been submitted to the City of Belfast's Engineer for review for water service construction.

Section VI Sewage Disposal

1. Public System
The majority of the subdivision is being served by the City of Belfast's Wastewater system. A few of the lots, due to existing topography will need to utilize on site subsurface wastewater disposal fields. Those lots are shown on the attached plans in Appendix G. Those lots have passing test pits for onsite disposal. The soils report is attached in Appendix D.
   a. A sanitary sewer system shall be installed at the expense of the subdivider when there is a public sanitary sewer line located within 1,000 feet of the proposed

subdivision at its nearest point. The applicant shall provide the Planning Board with certificate from the Belfast Wastewater Treatment Plant Supervisor that there is currently sufficient capacity to services the subdivision as proposed. In addition, the applicant shall provide the Planning Board with a certificate from the Belfast Highway Department Superintendent, that in the opinion of the Belfast Highway Department, the collection and transmission facilities proposed to be constructed and utilized in providing service to the subdivision, as adequate for the proposed subdivision. Prior to obtaining the certification aforementioned the applicant shall provide the Planning Board and parties required to make certification as above provided, with construction plans showing installation of the sewer lines and all related facilities that will need to be installed to service the proposed subdivision. This submission shall initially be made to the Planning Board or to the Code Enforcement Officer. No certification as above provided shall be considered by the Planning Board unless the certification has been made subsequent to review by the Plant Supervisor and Belfast Highway Department Supervisor of said plans.

The subdivider will be installing a pump station within the subdivision. Attached in Appendix E is a letter from the City of Belfast's engineer, Olver Associates, verifying that the existing system will meet the demand of the proposed development.

b. The Planning Board may have an independent engineer review and approve in writing the construction drawings for the sewage system. These plans shall also be subject to the review of the Supt. Of the Highway Department.

The plans have been reviewed by the Citty of Belfast's engineer, Olver Associates, with no comments.

2. Private System

a. The developer shall submit evidence of soil suitability for sub-surface sewage disposal prepared by a Maine Licensed Site Evaluator in full compliance with the requirements of the State of Maine Subsurface Wastewater Disposal Riles. In addition, on lots in which the limited factor has been identified as being within 24 inches of the surface, a second site with suitable soils shall be shown as a reserve area for future replacement of the disposal area. The reserve are shall be shown on the plan and restricted so as not to be built upon. No subsurface wastewater disposal sewer system shall be permitted off the lot.

The lots that will have on-site septic disposal have passing test pits, as shown in the soils report and map in Appendix D.

b. In no instance shall a disposal area be permitted on soils or on a lot which requires a New Surface Variance from the Subsurface Wastewater Dispoaal Rules.

None proposed

c. Separation distance between all wells and subdivision wastewater disposal system shall be a minimum of 100 feet.

All setbacks will be met.

Section VII Surface Drainage

The stormwater management plan submitted in accordance with Chapter Three, Section IV shall be installed.

The subdivision is currently under review by the Maine DEP for Site Location of Development Act. The proposed stormwater management structures will meet the standards of Chapter 500. The DEP engineer has commented and the applicant has responded. The engineer has signed off showing the system meets the DEP requirements.

Section VIII Land Features

1. Topsoil shall be considered part of the subdivision and shall not be removed from the site except for surplus topsoil from roads, parking area, and building excavation.
   The topsoil that is removed from the road construction, and stormwater management structures will be utilized on site as much as possible for the construction of the homes, and development of the lots.
2. To prevent soil erosion in shoreline areas, tree cutting in the strip extending one hundred feet inland from any such areas or boundaries be limited in accordance with the following:
   There will be no development in the shoreland zone.
   a. The Belfast Shoreland Zoning Ordinance and applicable Maine State Statutes.

Section IX Construction in Flood Hazard Areas

When any part of a subdivision is located in a special flood hazard area as identified by the Federal Emergency Management Agency, the plan shall indicate that all principal structures on lots in the subdivision shall be constructed with their lowest floor, including the basement two feet above the 100 year flood elevation. Such a restriction shall be included in the deed to any lot which is included or partially included in the flood hazard area.

The site is not located in a flood prone area, a copy of a FEMA FIRM for the area is attached in Appendix C.

Section X Impact on Ground Water

1. When a hydrogeologic assessment is submitted or requested the assessment shall contain at least the following information.
   There is no plan to with draw from or discharge to the ground water within the subdivision. A hydrogeologic assessment is not necessary.

Section XI Access Control and Traffic Impacts.

1. General. Provision shall be made for vehicular access to the subdivision and circulation within the subdivision in such a manner as to safeguard against hazards to traffic and pedestrians in existing streets and within the subdivision, to avoid traffic congestion on

any street and to provide safe and convenience circulation on public streets and within the subdivision. More specifically, access and circulation shall also conform to the following standards and the design criteria below.

The subdivision will be accessed through a continuation of the existing Little River Drive. There are several streets proposed within the subdivision that will allow for alternative means of traversing through the subdivision.

A. The vehicular access to the subdivision shall be arranged to avoid traffic use of existing local residential streets.
   The existing Little River Drive is through a business park.
B. Where a lot has frontage on two or more streets the access to the lot shall be provided to the lot across the from to the street where there is less potential for traffic congestion and for hazards to traffic and pedestrian.
   Lots with more than one frontage are located at the intersections of proposed streets within the intersection. As shown on the plans, the proposed houses with driveways focus on maintaining the most separation from any potential hazards.
C. The street giving access to the subdivision and neighboring streets which can be expected to carry traffic to and from the subdivision shall have traffic carrying capacity and be suitably improved to accommodate the amount and types of traffic generated by the proposed subdivision. No subdivision shall increase the volume capacity ratio to any street above 0.9 nor reduce the street's Level of Service to "D" or below. (see Belfast Zoning Ordinance Appendix Guidelines for Traffic "A".)
   The existing Little River Drive is not proposed for any upgrade. It has been mentioned by City of Belfast staff that there is a possible off site upgrade of a light being added to the Route 1 & Lower Congress Street intersection that will ease the left turning traffic congestion that may arise.
D. Where necessary the safeguard hazards to traffic and pedestrians and/or to avoid traffic congestion, provision shall be made for tuning lanes, traffic directional islands, frontage roads, and traffic controls within public streets.
   The road to exit the subdivision is a continuation of an existing road, so no intersection. All intersections within the proposed subdivision will have stop signs, but the volume will not require additional traffic management devices.
E. Assess ways shall be of a design and have sufficient capacity to avoid queuing of entering vehicles on any street.
   The proposed roads will all be designed to meet the standards of the City of Belfast. There is no anticipation of queuing within the subdivision.
F. Where topographic and other conditions allow, provision shall be made for circulation access connections to adjoining lots of similar existing or potential use:
   The existing Little River Drive will be the access to the new subdivision, utilizing the existing end of the road.
   a. When such access connection will facilitate fire protection services as approved by the fire chief; or

b. When such access will enable the public to travel between two existing or potential uses, generally open to the public, without need to travel upon a street.

2. Subdivision Access Design for Subdivisions entering onto Arterial Streets.
   This subdivision is not entering an arterial street.
   When access to a subdivision is a street, the street design and construction standards of chapter three shall be met. Where there is a conflict between the standards in this section and the standards of chapter three the stricter or more stringent shall apply.
   A. General. Access design shall be based on the estimated volume using the access classification defined below. (Trips per day shall be determined in conjunction with trip general rates for common land use categories. See Belfast Zoning Ordinance Appendix "Guidelines for Traffic, Section A).
      According to the current edition of the ITE manual, this is a medium volume access.
      a. Low Volume Access: Less than 25 vehicle trips per day.
      b. Medium Volume Access: Any access that not a low volume or high volume access.
      c. High volume access: Peak hour volume of 400 vehicles or greater.
   B. Sight distances. Aceesesses shall be designed in profile and grading and located to provide the required sight distance measured in each direction. Sight distances shall be measured fromt eh driver's seat of a vehicle standing on that portion of the exist with the front of the vehicle minimum of 10 feet behind the curb line or edge of shoulder, with the height of the eye 3 ½ feet, to the top of an object 4 ½ feet above the pavement. The required sight distances are listed below for various posted speed limits.
      a. Two lane Roads. A sight distance of ten feet for each mile per hour of posted speed limit shall be maintained or provided.
         The proposed road is 25 miles per hour. There is a minimum of 250 feet of sight distance at each intersection, if the road is that long, in each direction.

Medium Volume Access

a. Skew angle. Medium volume accesses shall be either one way or two way operation and shall intersection the road at an angle at nearly 90 degrees as site conditions permit, but in not case less than 60 degrees.
   All of the proposed intersections within the subdivision are as close to 90º as possible.
b. Curb radius. Curb radii will vary depending if the access is one way or two way operation. On a two way access the curb radii shall be between 25 feet and 40 feet, with a preferred radius of 30 feet. On one way accesses, the curb radii shall be 30 feet for right turns into and out of the site, with a 5 foot radius on the opposite curb.
   See the attached plans in Appendix G for curb radii and layouts.
c. Width. On a two way access the width shall be between 24 and 26 feet, with a preferred width of 26 feet, however where truck traffic is anticipated the width may be not more

than 30 feet. On a one way access the width shall be between 16 feet and 20, with a preferred width of 16 feet.
The proposed roads are all two way accesses, that are all within the standards set by the City of Belfast.

d. Curb-cut width. On a two way access the curb cut width shall be 35 feet unless the curb cut servicing the subdivision with the intention of the road to be taken over by the City, the curb cut shall be determined by the Belfast City Council.
The access to the subdivision is a continuation of Little River Drive, a curb cut is not required. The roads within the subdivision will have the required openings for curb cuts set by the City of Belfast.

Access Location and Spacing.

A. Minimum Corner Clearance. Corner clearance shall be measured from the point of tangency (PT) for the corner to the point of tangency for the access. In general the maximum corner clearance should be provided as practical based on site constraints. Minimum corner clearances are listed based upon access or minor street volume and intersection type.
The proposed subdivision is not creating an intersection with an existing street. The corner clearances within the proposed subdivision will meet the standards of the City of Belfast.
Where the minimum standard for a full access drive cannot be met, only special case access shall be permitted. If based on the above criteria, full access to the site cannot be provided on either the major or minor streets, the site shall be restricted to partial access. Alternately, construction of shared drive with an adjacent parcel is recommended.

B. Access Spacing. Access and street intersections shall be separated from adjacent accesses, street and property lines in the table, in order to allow major through routes to effectively serve their primary function of conducting through traffic. This distance shall be measured from access point of tangency to the access point of tangency for spacing between accesses and from the access point of tangency to a projection of the property line at the edge of the roadway for access spacing to the property line.
The proposed subdivision will be accessed through the continuation of the existing Little River Drive. That is the sole access available to the site.

Number of Accesses. The number of accesses into a single street is controlled by the available site frontage and the table. In addition, the following criteria shall limit the number of accesses independent of frontage length.

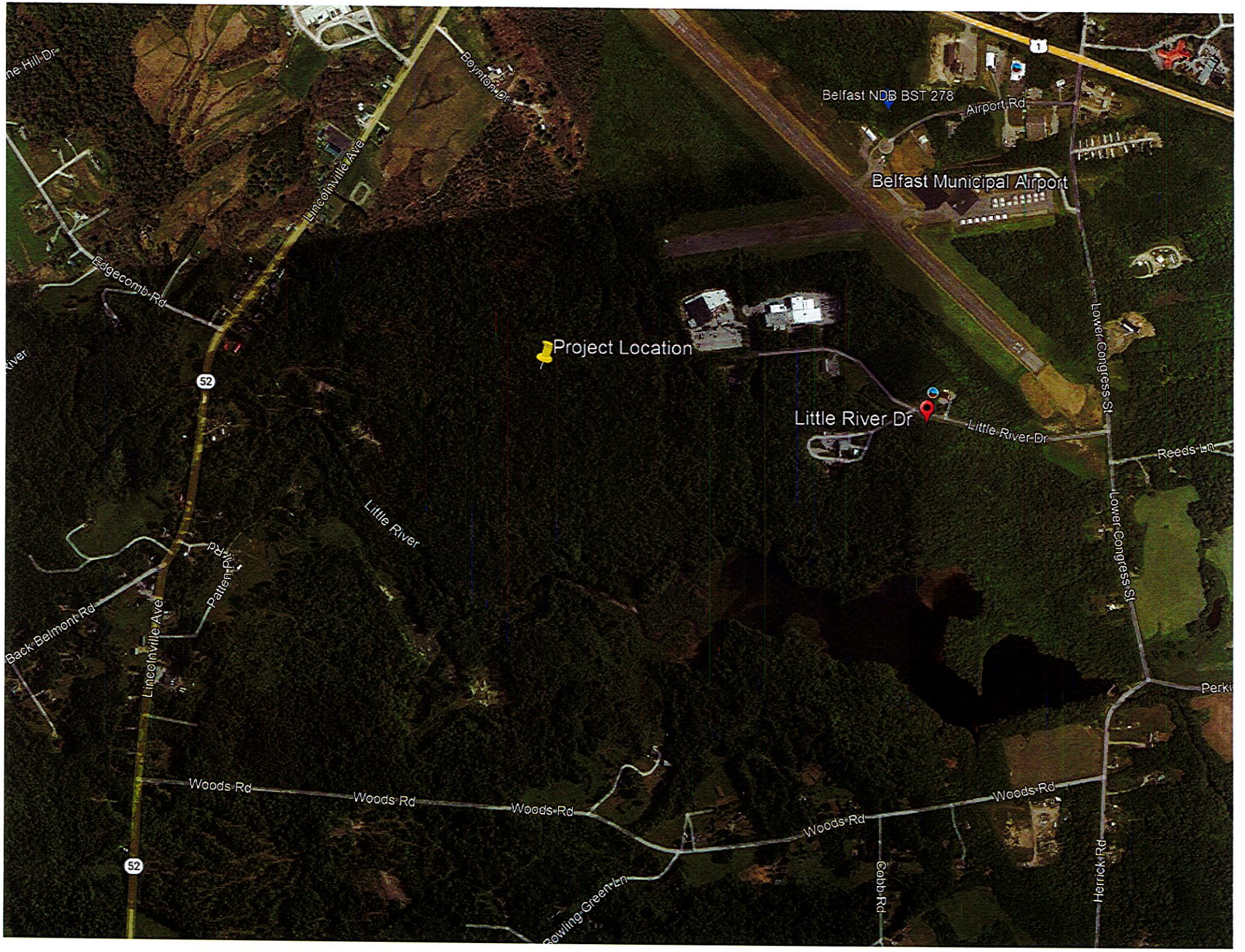
The proposed subdivision will be accessed through the continuation of the existing Little River Drive. That is the sole access available to the site.

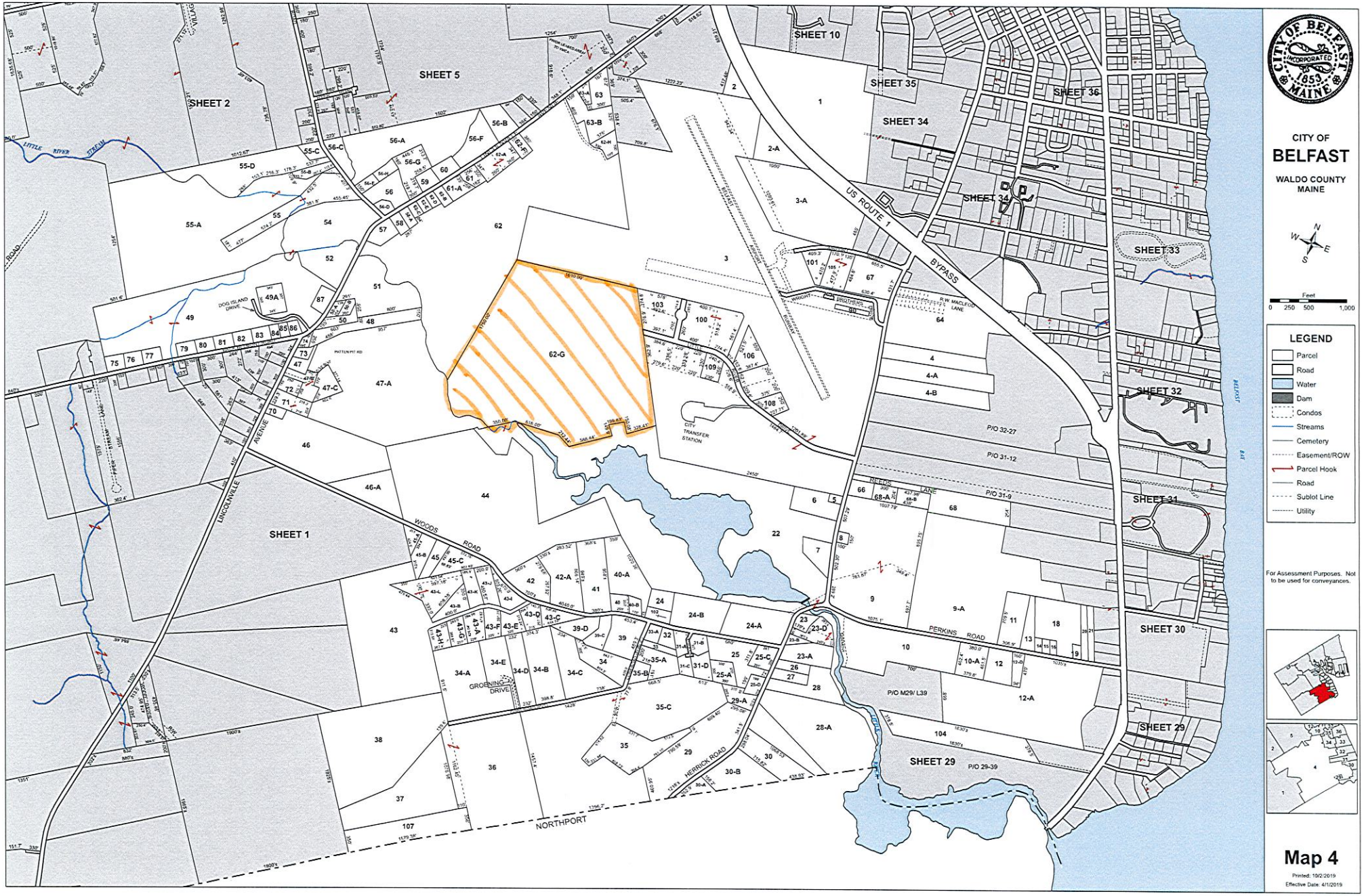
A. No low volume traffic generator shall have more than one two way access into a single roadway.
B. No medium or high volume traffic generator shall have more than two two way accesses or three accesses in total onto a single roadway.

APPENDIX A

SITE LOCATION

CITY OF BELFAST TAX MAP


Belfast NDB BST 278
Airport Rd
Belfast Municipal Airport
Project Location
Little River Dr
Little River Dr
Lower Congress St
Reeds Ln
Lower Congress St
Boynton Dr
Lincolnville Ave
Edgecomb Rd
52
Little River
Patten Rd
Back Belmont Rd
Lincolnville Ave
Woods Rd
Woods Rd
Woods Rd
Woods Rd
Woods Rd
52
Cobb Rd
Herrick Rd


CITY OF BELFAST
WALDO COUNTY
MAINE
SHEET 1
SHEET 2
SHEET 5
SHEET 10
SHEET 29
SHEET 30
SHEET 31
SHEET 32
SHEET 33
SHEET 34
SHEET 35
SHEET 36
US ROUTE 1 BYPASS
LINCOLNVILLE AVENUE
WOODS ROAD
PERKINS ROAD
GROENING DRIVE
HERRICK ROAD
NORTHPORT
LITTLE RIVER STREAM
DOG ISLAND DRIVE
PATTEN PIT RD
CITY TRANSFER STATION
62-G
P/O 32-27
P/O 31-12
P/O 31-9
P/O M29/ L39
P/O 29-39
Feet
0 250 500 1,000
LEGEND
Parcel
Road
Water
Dam
Condos
Streams
Cemetery
Easement/ROW
Parcel Hook
Road
Sublot Line
Utility
For Assessment Purposes. Not to be used for conveyances.
Map 4
Printed: 10/2/2019
Effective Date: 4/1/2019

APPENDIX B

ABUTTERS

DEED

COVENANTS

Map 4 Lot 22
Belfast Water District
285 Northport Avenue
PO Box 506
Belfast, Maine 04915

Map 4 Lot 47-A
Fineline Enterprises
49 Patten Pit Road
Belfast, Maine 04915

Map 4 Lot 62
John Boynton
Gloria Brown
4 Boynton Drive
Belfast, Maine 04915

Map 4 Lot 3
City of Belfast
131 Church Street
Belfast, Maine 04915

Map 4 Lot 103
MOWI Ducktrap, LLC
FKA Ducktrap River of Maine, LC
57 Little River Drive
Belfast, Maine 04915

Receipt # 164192 WALDO SS: RECEIVED
VOL 4781 PG 182
Instr # 2022-2596
03/25/2022 03:01:05 PM
4 Pages

WARRANTY DEED ATTEST: Stacy L Grant, Waldo Co Registry of Deeds

KNOW ALL PERSONS BY THESE PRESENTS, THAT the **COUNTY OF WALDO**, a Maine governmental entity having its principal offices in the County of Waldo, State of Maine,

in consideration of one dollar and other valuable considerations,

paid by **B&B MIDCOAST PROPERTIES, LLC**, a Maine limited liability company with an address of 856 Back Brooks Road, Monroe, ME 04951

the receipt whereof it does hereby acknowledge, does hereby **give, grant, bargain, sell and convey** unto the said **B&B MIDCOAST PROPERTIES, LLC** its successors and assigns forever,

That certain lot or parcel of land, together with any improvements thereon, situated in the City of Belfast, County of Waldo, State of Maine, more particularly bounded and described in Schedule A, attached hereto and made a part hereof.

"MAINE REAL ESTATE TRANSFER TAX PAID"

TO HAVE AND TO HOLD the aforegranted and bargained premises, with all the privileges and appurtenances thereof, to the said **B&B MIDCOAST PROPERTIES, LLC** its successors and assigns, to its own use and behoof forever.

AND the said Grantor does hereby **covenant** with the said Grantee, its successors and assigns, that it is lawfully seized in fee of the premises, that they are free of all encumbrances; that it has good right to sell and convey the same to the said Grantee, their heirs and assigns forever, against the lawful claims and demands of all persons.

IN WITNESS WHEREOF, the said **COUNTY OF WALDO** has caused this instrument to be sealed with its entity seal and signed in its entity name by Betty I. Johnson, William D. Shorey and Amy R. Fowler, its Commissioners, thereunto duly authorized, this 24 day of the month of March, A.D., 2022.

Signed, Sealed and Delivered
in presence of

Karen J. Russell
Karen J. Russell
Karen J. Russell

COUNTY OF WALDO

By: _____
Betty I. Johnson, Commissioner

By: _____
William D. Shorey, Commissioner

By: _____
Amy R. Fowler, Commissioner

State of Maine
County of Waldo, ss. 3.24 ,2022

Then personally appeared the above named Betty I. Johnson, Commissioner of said County of Waldo, and acknowledged the foregoing instrument to be her free act and deed in her said capacity, and the free act and deed of said County of Waldo.

Before me,
Karen J. Trussell
Notary Public
Printed Name: Karen J. Trussell
My commission expires: 4-30-24

State of Maine
County of Waldo, ss. 3.24 ,2022

Then personally appeared the above named William D. Shorey, Commissioner of said County of Waldo, and acknowledged the foregoing instrument to be his free act and deed in his said capacity, and the free act and deed of said County of Waldo.

Before me,
Karen J. Trussell
Notary Public
Printed Name: Karen J. Trussell
My commission expires: 4-30-24

State of Maine
County of Waldo, ss. 3.24 ,2022

Then personally appeared the above named Amy R. Fowler, Commissioner of said County of Waldo, and acknowledged the foregoing instrument to be her free act and deed in her said capacity, and the free act and deed of said County of Waldo.

Before me,
Karen J. Trussell
Notary Public
Printed Name: Karen J. Trussell
My commission expires: 4-30-24

Schedule A

That certain lot or parcel of land together with any improvements thereon situated at the terminus of Little River Drive in the City of Belfast, County of Waldo, State of Maine, and being more particularly bounded and described in a Warranty Deed from Charles L. Boynton to the County of Waldo dated April 12, 2004, recorded in Waldo County Registry of Deeds Book 2583, Page 194 as follows:

A certain lot or parcel of land with the buildings thereon, situated at the terminus of Little River Drive in the City of Belfast, County of Waldo, and State of Maine:

Beginning at a 5/8" capped steel rod set in the northwesterly corner of land now or formerly of Group Home Foundation, Inc. described in a deed recorded in Book 1797, Page 57 at the Waldo County Registry of Deeds, being the northwesterly corner of Lot 10 of the Airport Industrial Park, Phase 2 (see plan recorded in Plan Drawer 16, Pg. 6), said rod situated 524.82 feet northerly of the northerly line of little River Drive;

Thence N 79°-05'-40" W along the southerly line of land of the City of Belfast described in a deed recorded in the Waldo County Registry of Deeds in Bk. 438, Pg. 122 a distance of 1610.00 feet to a 5/8" capped steel rod set;

Thence S 27°-25'-59" W along land to be retained by the within Grantor, Charles L. Boynton, a distance of 1750.00 feet to a 5/8" capped steel rod set;

Thence continuing S 27°-25'-59" W along land to be retained by the within Grantor, Charles L. Boynton, a distance of 68 feet, more or less, to the thread of Little River, so called;

Thence southeasterly in the thread of said Little River a distance of 807 feet, more or less, to a point situated S 73°-40'-51" W 21 feet, more or less, from a 5 / 8" capped steel rod set, said point being in the northerly bound of land of the Belfast Water District, described in Bk. 313, Pg. 285;

Thence N 73°-40'-51" E along land of said Belfast Water District 21 feet, more or less, to a 5/8" capped steel rod set;

Thence N 73°-40'-51" E along land of said Belfast Water District 350.00 feet to a 5/8" capped steel rod set;

Thence S 75°-09'-09" E along land of said Belfast Water District described in a deed recorded in Bk. 313, Pg. 180, Paragraph 2, a distance of616.00 feet to a 5" X 5" concrete monument found;

Thence S 42°-03'-30" E along land of said Belfast Water District described in a deed recorded in Bk. 313, Pg. 180, Paragraph 2, a distance of 212.44 feet a 5/8" capped steel rod set;

Thence N 77°-20'-51" E along land of said Belfast Water District described in a deed recorded in Bk. 309, Pg. 462, a distance of 588.44 feet to a 5" X 5" concrete monument found;

Thence N 13°-13'-14" W along land of said Belfast Water District described in a deed recorded in Bk. 313, Pg. 180, Paragraph 1, a distance of 149.90 feet to a 5" X 5" concrete monument found;

Thence N 77° -21'-37" E along land of said Belfast Water District described in a deed recorded in Bk. 313, Pg. 180, Paragraph 1, a distance of 197.93 feet to a 5" X 5" concrete monument found;

Thence S 11 °-26'-55" E along land of said Belfast Water District described in a deed recorded in Bk. 313, Pg. 180, Paragraph 1, a distance of 155.08 feet to a 5" X 5" concrete monument found;

Thence N 76°-26'-27" E along land of said Belfast Water District described in a deed recorded in Bk. 309, Pg. 462, a distance of 328.41 feet to a 5" X 5" concrete monument found in the Northerly bound of land now or formerly of Belfast Water District described in a deed recorded in the Waldo County Registry of Deeds in Bk. 309, Pg. 462, and depicted upon a plan recorded in said Registry in Plan Drawer 1, Pg. 32;

Thence N 7°-48'-23" W along the westerly bound of land of the City of Belfast described in Bk. 438, Pg. 122, the westerly bound of Lot 8 of the Airport Industrial Park, Phase 2 (see plan recorded in Plan Drawer 16, Pg. 6), the westerly terminus of Little River Drive and along the westerly line of land now or formerly of said Group Home Foundation, Inc, a total distance of 1772.94 feet to the point of beginning, containing 100.0 acres, more or less.

Bearings and distances given herein are based upon a boundary survey by Good Deeds, Inc. dated January 2, 2004, revised April 5, 2004.

The above described premises a portion of the property described in a deed from Gladys Eastman, et als to Charles L. Boynton dated June 18, 1973 and recorded in Bk. 707, Pg.100 in the Waldo County Registry of Deeds.

It is meant and intended to describe and convey and does hereby convey that premises conveyed in a Warranty Deed from Charles L. Boynton to the County of Waldo dated April 12, 2004, recorded in Waldo County Registry of Deeds Book 2583, Page 194.

Interactive Corporate Services

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: Wed Apr 19 2023 07:28:28. Please print or save for your records.

Legal Name	Charter Number	Filing Type	Status
B&B MIDCOAST PROPERTIES, LLC	20230121DC	LIMITED LIABILITY COMPANY (DOMESTIC)	GOOD STANDING

Filing Date	Expiration Date	Jurisdiction
02/22/2022	N/A	MAINE

Other Names **(A=Assumed ; F=Former)**

NONE

Clerk/Registered Agent

JEREMY M. MARDEN, ESQ.
151 HIGH STREET
BELFAST, ME 04915

New Search

Click on a link to obtain additional information.

List of Filings	View list of filings	
Obtain additional information:		
Certificate of Existence (more info)	Short Form without amendments ($30.00)	Long Form with amendments ($30.00)

You will need Adobe Acrobat version 3.0 or higher in order to view PDF files.
If you encounter problems, visit the troubleshooting page.

Get Acrobat Reader

If you encounter technical difficulties while using these services, please contact the Webmaster. If you are unable to find the information you need through the resources provided on this web site, please contact the Division of Corporations, UCC & Commissions Reporting and Information

Camden
NATIONAL BANK

March 28, 2023

B&B Midcoast LLC

Benjamin Hooper

Brad Lindelof

68 Little River Drive

Belfast, ME 04915

Dear Ben & Brad,

I am pleased to inform you that based on the information provided that you appear to qualify for the necessary financing required to complete the infrastructure for the 100 acre development at Little River Drive in Belfast.

The approval is conditional upon full underwriting and any additional documentation required.

If you have any questions, I can be contacted at 930-3909 or by email at pdoody@camdennational.bank

Sincerely,

Paul Doody

Vice President

DRAFT

COVENANTS, CONDITIONS AND RESTRICTIONS
for
Little River Subdivision
Belfast, Maine

THESE COVENANTS, CONDITIONS AND RESTRICTIONS are made by B&B Midcoast LLC

(hereafter the "Subdivider") effective upon the date of recordation of this signed document

RECITALS

A. Subdivider is B&B Midcoast, LLC and is the owner of all real property described in the attached Exhibit "A" (Copy of Belfast Lot Plan - hereafter the "property"). Subdivider intends to improve, subdivide and sell real property lots in progressive phases, which shall be referred to henceforth as "subdivision" consistent with the development plan.

B. In order to provide for the orderly development of the property and provide for consistent development and construction within the subdivision, the Subdivider hereby adopts these Covenants, Conditions and Restrictions to apply to all development, construction, inhabitation and tenancy upon this property. The Covenants, Conditions and Restrictions of Little River Subdivision, Belfast Maine must be agreed to in signature by initial lot purchaser and all subsequent sales and resales.

C. "Lot(s)" shall refer to the parcels numbered 1-,49 in Exhibit A of the approved subdivision plan for Little River Subdivision.

Covenants, Conditions and Restrictions

1. Recitals: The recitals set forth above are incorporated herein by this reference.
2. COVENANTS RUN WITH THE LAND: All the covenants; conditions and restrictions contained in this instrument shall run with the land described in the attached Exhibit ((A". No land, parcel or lot upon the property shall be conveyed, except subject to these covenants, conditions and restrictions. Each of these covenants, conditions a.nd, restrictions are declared inserted by reference in any and all deeds to any part of the subdivision. The covenants, conditions and restrictions are for the mutual benefit of the· owners/subdividers and lot purchasers to protect property values and community interests.

3. Architectural Control:

   Architectural control in the development of this subdivision
   belongs solely to the subdivider and their ensigns. Basic architectural requirements for each lot must meet the following minimum requirements:

   a. Each lot will have one single-family dwelling.
   b. Each lot will have at least a 1 car garage, attached or separate.
   c. Each Single story home will have a minimum living space of 1,200 square feet.
   d. Each 2-story home will have a minimum living space of 1,600 square feet.

e. Basement or cellar areas (including dayfight basement areas) shall not be included in the calculations of livable floor area.
f. Unless topographically hindered by the lot, house footprints on each lot will parallel the road the front of the house facing the road directly, not eschewed or sideways.
g. Roof pitch to be 6/12 or steeper on the main structure including garages. Single pitch roofs over decks, carports etc., can be less but not flat.

4. Building And Structures:

a. No single-wide or double wide mobile homes shall be permitted on any lot
b. No Unusual architectural styles, such as Quonset huts, geodesic domes, sod houses, underground houses "tiny" houses, or the like are not permitted, All driveways shall be paved and each home or unit is required to have a 1-car garage.
c. All buildings, drives and walks shall be erected, completed and landscaped within one year of the building permit issuance date. No building shall be allowed to remain that does not have a finished exterior of vinyl or clapboard siding, stone, masonry, or similar, surface. (i.e. sheathing board or paper, insulation board, house wrap and other unfinished materials are not acceptable) All disturbed soil areas must be paved, finish graded, seeded, planted, mulched or otherwise
restored within one year as well.
d. Accessory buildings or structures (i.e., sheds, greenhouses, playhouse, pools, pool houses, etc.) are permitted upon any Lot providing they are aesthetically situated. on the rear side of the lot, behind the primary residence and garage. Structures for the purpose of operating a commercial business in this residential community are prohibited.

5. Setback Lines, Buffers and Green Spaces:

Building setbacks are the current setbacks required in the Town of Belfast City Codes are to be verified and followed at the time of construction. There are areas designated Green Space along little River including the Little River Walking Trail. These areas shall remain free from further development. The greenspace will be owned by B&B Midcoast whom reserves the right to convey this property to a NON-Profit or organization that manages green space, in the future. All property owners within the subdivision will have access to this greenspace and the Little River waterfront.

6. Encouraged Landscaping Choices:

As Little River Subdivision is being developed as an ecofriendly, minimal carbon footprint neighborhood certain landscaping product is
recommended as more conducive to this end goal. For trees, it is strongly recommended that owners plant fruit bearing trees, Maples, Linden, Locust and nut bearing types. For shrubbery, Spirea, Lilacs, Butterfly Bush, Viburnum,. Hydrangea, Rose of Sharon and Clethera are top choices. For perennials, environmentally and aesthetically, it is recommended that owners plant Coreopsis, Lavender, Russian Sage, Shasta Daisies, Echinacea, Peonies, Phlox, Nepeta, Hyssop and the like.

7. Livestock and Exotics:

No livestock, poultry, exotic. or other animals/reptiles shall be
raised, bred, or kept on any lot, except for dogs, cats and. similar household pets, which may be kept, but not bred or maintained for commercial purposes. No animal of any kind, including dogs and cats, shall be allowed to interfere with the quiet enjoyment of the other residents in the subdivision or permitted untended upon the streets or upon the premises of other occupants of the subdivision. Dogs, cats or similar household pets

shall be limited to a maximum of three.

8. Signs:

No sign, billboard, or advertisement of any kind shall be displayed on or about any Lot to public **view** except for street numbers and the surnames of residents. Exceptions would include temporary signs like garage/yard sale, signs advertising the property for sale or rent, and signs used by the declarant to advertise or promote the subdivision.

9. Garbage and Refuse Disposal:

No Lot shall be used or maintained as a dumping ground for rubbish. Trash, garbage, scrap metal, old appliances, old mattresses or other waste shall not be kept except in sanitary containers which must be stored within a permitted structure. It is the Resident's responsibility to keep their Lot free from garbage trash, refuse, or other waste on their property whether their own or discarded by others and to make use of the regular/weekly disposal services provided by the Town of Belfast.

10. Grounds:

The grounds, lawn and shrubs shall be kept and maintained in a neat and orderly condition at all times as determined by the Subdivider's standards. No unregistered, junked or "project" vehicles may be stored on the premises except a true restoration project vehicle that is kept inside the garage.

11. Restricted Activities:

Industry, business, trade, occupation, profession, and commercial activities, whether for profit or non-profit purposes, are restricted to those traditional home businesses or work from home scenarios that do not require more than 1 or 2 non-resident's vehicle in attendance at any one time. This language applies to regular businesses and not to the infrequent family yard/garage sale. Signage for any home based business in HHE shall not exceed 12"x 20", can be connected to the house, garage or mailbox but are restricted from the use of any independent, freestanding sign supports.

12. Municipal Rights:

The Town of Belfast shall have the right to enter upon the easement areas as shown with maintenance vehicles as necessary to maintain stormwater drainage flow patterns, Utility systems (Sewer, Water, Power and communications). Lot owners shall not disturb easement areas without agreement between the lot owner and the Town of Belfast.

APPENDIX C

FEMA FIRM

National Flood Hazard Layer FIRMette

FEMA

69°1'32"W 44°24'32"N

0 250 500 1,000 1,500 2,000 Feet 1:6,000

69°0'55"W 44°24'6"N

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Area of 1% annual chance flood with average depth less than one foot or with drainag areas of less than one square mile *Zone*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represe an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 4/3/2023 at 2:30 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

APPENDIX D

SOILS REPORT

Nov 01, 2022 - 11:06am
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C3 SHEET 4 OF 5	DRAWINGS NOT SCALED ARE FOR PLANNING PURPOSES ONLY AND ARE NOT INTENDED FOR PERMITTING, BIDDING OR CONSTRUCTION	FOR REVIEW 10-20-22	**Plymouth Engineering, Inc.** 8 Main St. Ste. C Plymouth, Maine 04969 Tel: (207) 257-2071 Fax: (207) 257-2130 info@plymouthengineering.com www.plymouthengineering.com

DESIGNED:		PROJECT NO. 22098	
DRAWN:		DRAWING NO.	
CHECKED:		FIELDBOOK:	
APPROVED:		SCALE:	
PLAN DATE:		DATE ISSUED:	
CLIENT & OWNER: B&B Midcoast Properties 856 Bock Brooks Rd. Monroe, ME 04951			

PROJECT NAME:
LITTLE RIVER SUBDIVISION
LITTLE RIVER DR., BELFAST, WALDO CNTY MAINE 04915
SHEET NAME:
GRADING PLAN

REVISIONS				
NO.	DATE	DESCRIPTION	DRAWN	APPD.

Legend for Soil Maps

1. Drainage Class

Excessively Well Drained	EWD
Well Drained	WD
Moderately Well Drained	MWD
Somewhat Poorly Drained	SPD
Poorly Drained	PD
Very Poorly Drained	VPD

2. Slope Designation

0-3%	A
3-8%	B
8-15%	C
15-25%	D
>25%	E

3. Note: High Intensity Soil Survey has been prepared by Mark Hampton Associates, Inc. in accordance with the standards adopted by the Maine Association of Professional Soil Scientists, and the Maine Board of Certification of Geologists and Soil Scientists.

MARK HAMPTON ASSOCIATES, INC.

SOIL EVALUATION • WETLAND DELINEATIONS • SOIL SURVEYS • WETLAND PERMITTING

7095

Little River Subdivision
Little River Drive
Belfast, ME
B&B Midcoast Properties

Soil Narrative Report

DATE:	Soil Profiles observed on August 23, 2022
BASE MAP:	Base plan provided by Plymouth Engineering, Inc. Scale 1 inch equals 150 feet and two foot contours.
GROUND CONTROL:	Soil survey boundaries located by Mark Hampton Associates, Inc. for Class B Soil Survey

Class B-High Intensity Soil Survey (Minimum Standards)

Mapping units of 1 acre or less.
Scale of 1"= 200 feet or larger.
Up to 25% inclusions in mapping units of which no more than 15% may be dissimilar soils.
Ground Control – test pits located by means of compass by chaining, pacing or taping from know survey control points
Base Map –2 foot contour intervals

Provided:

Mapping units of 1/2 acre or larger
Base map scale of 1"= 150 feet.
Up to 25 percent inclusions in mapping units of which no more than 15 percent is dissimilar soils.
Baseline information and test pits located by pacing and taping from know survey control points.
Ground topographic survey with two foot contours and ground control provided.

The accompanying soil profile descriptions, soil map, and this soil narrative report were done in accordance with the standards adopted by the Maine Association of Professional Soil Scientists, and the Maine Board of Certification of Geologists and Soil Scientists.

C.S.S. #216, L.S.E. #263 Nov. 10, 2022

Mark J. Hampton Date

MARK HAMPTON ASSOCIATES, INC.

SOIL EVALUATION • WETLAND DELINEATIONS • SOIL SURVEYS • WETLAND PERMITTING

7095

Little River Subdivision
Little River Drive
Belfast, ME
B&B Midcoast Properties

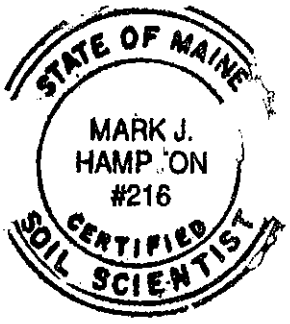
Peru
(Aquic Haplorthods)

SETTING

PARENT MATERIAL:	Derived from lodgment till
LANDFORM:	Glaciated uplands on hills and mountains
POSITION IN LANDSCAPE:	Mid-positions on landform
SLOPE GRADIENT RANGES:	(A) 0-3%, (B) 3-8%,(C) 8-15%

COMPOSITION AND SOIL CHARACTERISTICS

DRAINAGE CLASS:	Modertatley Well-Drained	
TYPICAL PROFILE:	Surface Layer:	Dark brown, fine sandy loam 0-8"
	Subsurface Layer:	Dark Yellow brown, fine sandy loam, 8-15"
	Subsoil Layer:	Olive Brown, fine sandy loam, 15-26"
	Substratum:	Olive gray fine sandy loam, 26-65"
HYDROLOGIC GROUP:	Group C	
SURFACE RUNOFF:	Medium to Rapid	
PERMEABILITY:	Slow or very Slow	
DEPTH TO BEDROCK:	Greater than 65 inches	
HAZARD TO FLOODING:	None	



INCLUSIONS
(Within Mapping Unit)

CONTRASTING: Swanville, Boothbay

USE AND MANAGEMENT

Development: The limiting factor for building site development is wetness due to the presence of a high watertable for a portion of the year. Proper foundation drainage or site modification is recommended.

MARK HAMPTON ASSOCIATES, INC.

SOIL EVALUATION • WETLAND DELINEATIONS • SOIL SURVEYS • WETLAND PERMITTING

7095

Little River Subdivision
Little River Drive
Belfast, ME
B&B Midcoast Properties

Boothbay
(Aquic Dystric Eutrudepts)

SETTING

PARENT MATERIAL:	Glaciolacustrine and glaciomarine deposits
LANDFORM:	Lake plains and river terraces
POSITION IN LANDSCAPE:	Plains and lower levels.
SLOPE GRADIENT RANGES:	(C) 8-15%, (D) 15-25%, (E) >25%

COMPOSITION AND SOIL CHARACTERISTICS

DRAINAGE CLASS: Moderately and somewhat poorly drained, depth to seasonal high watertable ranges from 0.5 to 1.5 feet below the surface at some time from November to May.

TYPICAL PROFILE:

Surface Layer:	Dark Reddish Brown, silt loam, 0-7"
Subsurface Layer:	Dark Brown silt loam, 7-15"
Subsoil Layer:	Lt Olive Brown, silt loam 15-20"
Substratum:	Olive, Gravelly silt loam, 20-65"

HYDROLOGIC GROUP:	Group C
SURFACE RUNOFF:	Slow to moderate
PERMEABILITY:	Moderate in solum, slow to very slow in substratum
DEPTH TO BEDROCK:	Greater than 65 inches
HAZARD TO FLOODING:	None

INCLUSIONS
(Within Mapping Unit)

CONTRASTING: Peru, Swanville

USE AND MANAGEMENT

Development: The limiting factor for building site development is wetness due to the presence of a high watertable for a portion of the year. Proper foundation drainage or site modification is recommended.

MARK HAMPTON ASSOCIATES, INC.

SOIL EVALUATION • WETLAND DELINEATIONS • SOIL SURVEYS • WETLAND PERMITTING

7095

Little River Subdivision
Little River Drive
Belfast, ME
B&B Midcoast Properties

Swanville
(Aeric Epiaquepts)

SETTING

PARENT MATERIAL:	Glaciolacustrine or glaciomarine deposits
LANDFORM:	Lake and marine plains, deltas
POSITION IN LANDSCAPE:	Intermediate positions on landform
SLOPE GRADIENT RANGES:	(A) 0-3%, (B) 3-8%

COMPOSITION AND SOIL CHARACTERISTICS

DRAINAGE CLASS: Poorly drained with a perched watertable from 0 to 1.5 feet below the surface at some time from November to May or during periods of heavy precipitation.

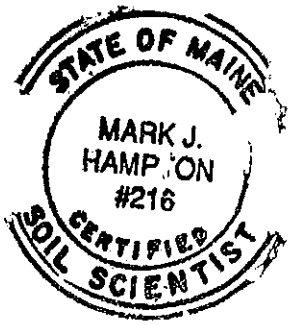
TYPICAL PROFILE:

Surface Layer:	Dark Brown silt loam 0-6"
Subsurface Layer:	Olive gray silt loam 6-15"
Subsoil Layer:	Olive silt loam, 15-22"
Substratum:	Olive silt loam, 22-65"

HYDROLOGIC GROUP:	Group D
SURFACE RUNOFF:	Moderate to moderately slow
PERMEABILITY:	Slow to very slow
DEPTH TO BEDROCK:	Greater than 65 inches
HAZARD TO FLOODING:	None

INCLUSIONS
(Within Mapping Unit)

CONTRASTING: Boothbay, Peru



USE AND MANAGEMENT

Development: The limiting factor for building site development is wetness due to the presence of a high watertable for a portion of the year. Proper foundation drainage or site modification is recommended. This soil is hydric in the poorly drained phase.

MARK HAMPTON ASSOCIATES, INC.

SOIL EVALUATION • WETLAND DELINEATIONS • SOIL SURVEYS • WETLAND PERMITTING

7095

Little River Subdivision
Little River Drive
Belfast, ME
B&B Midcoast Properties

Made Land

SETTING

PARENT MATERIAL:	Derived from various materials found onsite.
LANDFORM:	N/A
POSITION IN LANDSCAPE:	N/A
SLOPE GRADIENT RANGES:	(D) 15-25%

COMPOSITION AND SOIL CHARACTERISTICS

DRAINAGE CLASS:	Generally moderately well drained.
TYPICAL PROFILE:	Varies in profile and onsite from fine sandy loam to coarse sandy loam.
HYDROLOGIC GROUP:	Group C
SURFACE RUNOFF:	Usually very slow due to compaction
PERMEABILITY:	Slow to very slow
DEPTH TO BEDROCK:	Greater than 65 inches
HAZARD TO FLOODING:	None

INCLUSIONS
(Within Mapping Unit)

CONTRASTING: Peru, Boothbay, Swanville

USE AND MANAGEMENT

Development: There may be limiting factors for building site development.

P.O. BOX 1931 • PORTLAND, ME 04104-1931 • 207-756-2900 • mhampto1@maine.rr.com

Quality services that meet your deadline

7095

FORM F (SS1) Rev. 7/21

SOIL PROFILE / CLASSIFICATION INFORMATION

SOIL SCIENTIST DESCRIPTION OF SOIL CONDITIONS AT PROJECT SITES

Project Name:	Applicant Name:	Project Location (municipality):
Little River Subdivision	B & B Midcoast Properties	Belfast

Exploration Symbol # SS-1 ☐ Test Pit ☒ Boring ☐ Probe

____" Organic horizon thickness Ground surface elev. ____

____" Depth: ☐ of exploration, or ☐ to refusal

Depth below mineral soil horizon (inches)

Horizon	Color	Texture	Structure	Consistence	Redox
A/O	Dark Brown	F. Sandy Loam	Weak Fine Grand	Very Friable	
Bs1	Brown	F. Sandy Loam	Weak Fine Ang	Friable	
Bs2	Olive Brown	Fine Sandy Loam	Weak Fine Grand	Firm	Common and Distinct
Cd	Olive Gray	Fine Sandy Loam	Platy	Firm	

Soil Details

Soil Series/Phase Name:	Limiting Factor	Drainage Class	Slope	Hydric Soil	Hydrologic
Peru	16" Depth; ☒ Groundwater ☒ Restrictive Layer ☐ Bedrock	☐ ED ☐ SED ☐ WD ☒ MWD ☐ SPD ☐ PD ☐ VPD	2 Percent	☒ No ☐ Yes	____ Soil Group

Exploration Symbol # SS-2 ☐ Test Pit ☒ Boring ☐ Probe

____" Organic horizon thickness Ground surface elev. ____

____" Depth: ☐ of exploration, or ☐ to refusal

Depth below mineral soil horizon (inches)

Horizon	Color	Texture	Structure	Consistence	Redox
Ap	Dark Brown	F. Sandy Loam	Weak Angular	Very Friable	
Bg	Brown	F. Sandy Loam	Weak Fin Ang	Friable	
Bg	Olive Brown	Fine Sandy Loam	Weak Fine Grand	Firm	Common and Distinct
Cd	Olive	Fine Sandy Loam	Medium Platy	Very Firm	

Soil Details

Soil Series/Phase Name:	Limiting Factor	Drainage Class	Slope	Hydric Soil	Hydrologic
Peru	15" Depth; ☒ Groundwater ☒ Restrictive Layer ☐ Bedrock	☐ ED ☐ SED ☐ WD ☒ MWD ☐ SPD ☐ PD ☐ VPD	4 Percent	☒ No ☐ Yes	____ Soil Group

Exploration Symbol # SS-3 ☐ Test Pit ☒ Boring ☐ Probe

____" Organic horizon thickness Ground surface elev. ____

____" Depth: ☐ of exploration, or ☐ to refusal

Depth below mineral soil horizon (inches)

Horizon	Color	Texture	Structure	Consistence	Redox
	Varies	Varies	Varies	Varies	

Soil Details

Soil Series/Phase Name:	Limiting Factor	Drainage Class	Slope	Hydric Soil	Hydrologic
Made Land	NA" Depth; ☐ Groundwater ☒ Restrictive Layer ☐ Bedrock	☐ ED ☐ SED ☐ WD ☒ MWD ☐ SPD ☐ PD ☐ VPD	12 Percent	☐ No ☒ Yes	____ Soil Group

Exploration Symbol # SS-4 ☐ Test Pit ☒ Boring ☐ Probe

____" Organic horizon thickness Ground surface elev. ____

____" Depth: ☐ of exploration, or ☐ to refusal

Depth below mineral soil horizon (inches)

Horizon	Color	Texture	Structure	Consistence	Redox
Ap	Dark Brown	Silt Loam	Grand	Friable	
Bw	Olive	Silt Loam	Fine Grandul	Friable	Common and Distinct
Bg	Olive Gray	Silt Loam	Fine Grandul	Firm	
C1	Olive Gray	Silt Loam	Platy	Very Firm	

Soil Details

Soil Series/Phase Name:	Limiting Factor	Drainage Class	Slope	Hydric Soil	Hydrologic
Swanville	[illegible]	☐ ED ☐ SED ☐ WD ☐ MWD ☐ SPD ☒ PD ☐ VPD	3 Percent	☒ Yes	Soil Group

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SOIL PROFILE / CLASSIFICATION INFORMATION

SOIL SCIENTIST DESCRIPTION OF SOIL CONDITIONS AT PROJECT SITES

Project Name:	Applicant Name:	Project Location (municipality):
Little River Subdivision	B & B Midcoast Properties	Belfast

Exploration Symbol # SS-5 ☐ Test Pit ☒ Boring ☐ Probe

_____" Organic horizon thickness Ground surface elev. _____

_____" Depth: ☐ of exploration, or ☐ to refusal

Depth below mineral soil horizon (inches)

Horizon	Color	Texture	Structure	Consistence	Redox
A/O	Dark Brown	F. Sandy Loam	Weak Fine Grand	Very Friable	
Bs1	Brown	F. Sandy Loam	Weak Fine Ang	Friable	
Bs2	Olive Brown	Fine Sandy Loam	Weak Fine Grand	Firm	Common and Distinct
Cd	Olive Gray	Fine Sandy Loam	Platy	Firm	

Soil Details

Soil Series/Phase Name: Peru

Limiting Factor: 16" Depth ☒ Groundwater ☒ Restrictive Layer ☐ Bedrock

Drainage Class: ☐ ED ☐ SED ☐ WD ☒ MWD ☐ SPD ☐ PD ☐ VPD

Slope: 6 Percent

Hydric Soil: ☒ No ☐ Yes

Hydrologic Soil Group:

Exploration Symbol # SS-6 ☐ Test Pit ☒ Boring ☐ Probe

_____" Organic horizon thickness Ground surface elev. _____

_____" Depth: ☐ of exploration, or ☐ to refusal

Depth below mineral soil horizon (inches)

Horizon	Color	Texture	Structure	Consistence	Redox
Ap	Dark Brown	F. Sandy Loam	Weak Angular	Very Friable	
Bg	Brown	F. Sandy Loam	Weak Fin Ang	Friable	
Bg	Olive Brown	Fine Sandy Loam	Weak Fine Grand	Firm	Common and Distinct
Cd	Olive	Fine Sandy Loam	Medium Platy	Very Firm	

Soil Details

Soil Series/Phase Name: Peru

Limiting Factor: 15" Depth ☒ Groundwater ☒ Restrictive Layer ☐ Bedrock

Drainage Class: ☐ ED ☐ SED ☐ WD ☒ MWD ☐ SPD ☐ PD ☐ VPD

Slope: 4 Percent

Hydric Soil: ☒ No ☐ Yes

Hydrologic Soil Group:

Exploration Symbol # SS-7 ☐ Test Pit ☒ Boring ☐ Probe

_____" Organic horizon thickness Ground surface elev. _____

_____" Depth: ☐ of exploration, or ☐ to refusal

Depth below mineral soil horizon (inches)

Horizon	Color	Texture	Structure	Consistence	Redox
Ap	Dark Brown	Silt Loam	Grand	Friable	
Bw	Olive	Silt Loam	Fine Grand	Friable	Common and Distinct
Bg	Olive Gray	Silt Loam	Fine Grand	Firm	
C1	Olive Gray	Silt Loam	Platy	Very Firm	

Soil Details

Soil Series/Phase Name: Swanville

Limiting Factor: 6" Depth ☒ Groundwater ☒ Restrictive Layer ☐ Bedrock

Drainage Class: ☐ ED ☐ SED ☐ WD ☐ MWD ☐ SPD ☒ PD ☐ VPD

Slope: 2 Percent

Hydric Soil: ☐ No ☒ Yes

Hydrologic Soil Group:

Exploration Symbol # SS-8 ☐ Test Pit ☒ Boring ☐ Probe

_____" Organic horizon thickness Ground surface elev. _____

_____" Depth: ☐ of exploration, or ☐ to refusal

Depth below mineral soil horizon (inches)

Horizon	Color	Texture	Structure	Consistence	Redox
A/O	Dark Brown	F. Sandy Loam	Weak Fine Gran	Friable	
Bs1	Brown	F. Sandy Loam	Weak Fine Ang	Friable	
Bs2	Olive Brown	F. Sandy Loam	Weak Fine Grandul	Firm	Common and Distinct
Cd	Olive Gray	F. Sandy Loam	Platy	Very Firm	

Soil Details

Soil Series/Phase Name: Peru

Limiting Factor: ☒ Groundwater ☐ Restrictive Layer ☐ Bedrock

Drainage Class: ☐ ED ☐ SED ☐ WD ☒ MWD ☐ SPD ☐ PD ☐ VPD

Slope: 13 Percent

Hydric Soil: ☒ No ☐ Yes

Hydrologic Soil Group:

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SOIL PROFILE / CLASSIFICATION INFORMATION

SOIL SCIENTIST DESCRIPTION OF SOIL CONDITIONS AT PROJECT SITES

Project Name:	Applicant Name:	Project Location (municipality):
Little River Subdivision	B & B Midcoast Properties	Belfast

Exploration Symbol # SS-9 ☐ Test Pit ☒ Boring ☐ Probe

____" Organic horizon thickness Ground surface elev. ____

____" Depth: ☐ of exploration, or ☐ to refusal

Depth below mineral soil horizon (inches)

Horizon	Color	Texture	Structure	Consistence	Redox
Ap	Dark Brown	Silt Loam	Grand	Friable	
Bw	Olive	Silt Loam	Fine Grand	Friable	Common and Distinct
Bg	Olive Brown	Silt Loam	Fine Grand	Firm	
C1	Olive Gray	Silt Loam	Platy	Very Firm	

Soil Details

Soil Series/Phase Name: Swanville

Limiting Factor: 6" Depth ☒ Groundwater ☒ Restrictive Layer ☐ Bedrock

Drainage Class: ☐ ED ☐ SED ☐ WD ☐ MWD ☐ SPD ☒ PD ☐ VPD

Slope: 2 Percent

Hydric Soil: ☐ No ☒ Yes

Hydrologic Soil Group:

Exploration Symbol # SS-10 ☐ Test Pit ☒ Boring ☐ Probe

____" Organic horizon thickness Ground surface elev. ____

____" Depth: ☐ of exploration, or ☐ to refusal

Depth below mineral soil horizon (inches)

Horizon	Color	Texture	Structure	Consistence	Redox
Ap	Dark Brown	F. Sandy Loam	Weak Angular	Very Friable	
Bg	Brown	F. Sandy Loam	Weak Fin Ang	Friable	
Bg	Olive Brown	Fine Sandy Loam	Weak Fine Grand	Firm	Common and Distinct
Cd	Olive	Fine Sandy Loam	Medium Platy	Very Firm	

Soil Details

Soil Series/Phase Name: Peru

Limiting Factor: 16" Depth ☒ Groundwater ☒ Restrictive Layer ☐ Bedrock

Drainage Class: ☐ ED ☐ SED ☐ WD ☒ MWD ☐ SPD ☐ PD ☐ VPD

Slope: 4 Percent

Hydric Soil: ☒ No ☐ Yes

Hydrologic Soil Group:

Exploration Symbol # SS-11 ☐ Test Pit ☒ Boring ☐ Probe

____" Organic horizon thickness Ground surface elev. ____

____" Depth: ☐ of exploration, or ☐ to refusal

Depth below mineral soil horizon (inches)

Horizon	Color	Texture	Structure	Consistence	Redox
Ap	Dark Brown	Silt Loam	Grand	Friable	
Bw	Olive	Silt Loam	Fine Grand	Friable	Common and Distinct
Bg	Olive Gray	Silt Loam	Fine Grand	Firm	
C1	Olive Gray	Silt Loam	Platy	Very Firm	

Soil Details

Soil Series/Phase Name: Swanville

Limiting Factor: 6" Depth ☒ Groundwater ☒ Restrictive Layer ☐ Bedrock

Drainage Class: ☐ ED ☐ SED ☐ WD ☐ MWD ☐ SPD ☒ PD ☐ VPD

Slope: 2 Percent

Hydric Soil: ☐ No ☒ Yes

Hydrologic Soil Group:

Exploration Symbol # SS-12 ☐ Test Pit ☒ Boring ☐ Probe

____" Organic horizon thickness Ground surface elev. ____

____" Depth: ☐ of exploration, or ☐ to refusal

Depth below mineral soil horizon (inches)

Horizon	Color	Texture	Structure	Consistence	Redox
A/O	Dark Brown	F. Sandy Loam	Weak Fine Gran	Friable	
Bs1	Brown	F. Sandy Loam	Weak Fine Ang	Friable	
Bs2	Olive Brown	F. Sandy Loam	Weak Fine Grandul	Firm	Common and Distinct
Cd	Olive Gray	F. Sandy Loam	Platy	Very Firm	

Soil Details

Soil Series/Phase Name: Peru

Limiting Factor: 16" Depth ☒ Groundwater ☒ Restrictive Layer ☐ Bedrock

Drainage Class: ☐ ED ☐ SED ☐ WD ☒ MWD ☐ SPD ☐ PD ☐ VPD

Slope: 13 Percent

Hydric Soil: ☒ No

Hydrologic Soil Group:

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SOIL PROFILE / CLASSIFICATION INFORMATION

SOIL SCIENTIST DESCRIPTION OF SOIL CONDITIONS AT PROJECT SITES

Project Name:	Applicant Name:	Project Location (municipality):
Little River Subdivision	B & B Midcoast Properties	Belfast

Exploration Symbol # SS-13 ☐ Test Pit ☒ Boring ☐ Probe

____" Organic horizon thickness Ground surface elev. ____

____" Depth: ☐ of exploration, or ☐ to refusal

Depth below mineral soil horizon (inches)

Horizon	Color	Texture	Structure	Consistence	Redox
Ap	Dark Brown	Silt Loam	Grand	Friable	
Bw	Yellow Brown	Silt Loam	Ang Blocky	Friable	
BC	Olive Brown	Silt Loam	Ang Blocky	Friable	Common and Distinct
C1	Olive Gray	Silt Loam	Platy	Very Firm	

Soil Details

Soil Series/Phase Name: Boothbay

Limiting Factor: 12" Depth ☒ Groundwater ☒ Restrictive Layer ☐ Bedrock

Drainage Class: ☐ ED ☐ SED ☐ WD ☐ MWD ☒ SPD ☐ PD ☐ VPD

Slope: 18 Percent

Hydric Soil: ☒ No ☐ Yes

Hydrologic Soil Group:

Exploration Symbol # SS-14 ☐ Test Pit ☒ Boring ☐ Probe

____" Organic horizon thickness Ground surface elev. ____

____" Depth: ☐ of exploration, or ☐ to refusal

Depth below mineral soil horizon (inches)

Horizon	Color	Texture	Structure	Consistence	Redox
Ap	Dark Brown	Silt Loam	Fine Grand	Friable	
Bw	Olive	Silt Loam	Fine Grand	Friable	Common and Distinct
Bg	Olive Gray	Silt Loam	Weak Fine Grand	Firm	
C1	Olive Gray	Silt Loam	Medium Platy	Very Firm	

Soil Details

Soil Series/Phase Name: Swanville

Limiting Factor: 6" Depth ☒ Groundwater ☒ Restrictive Layer ☐ Bedrock

Drainage Class: ☐ ED ☐ SED ☐ WD ☐ MWD ☐ SPD ☒ PD ☐ VPD

Slope: 4 Percent

Hydric Soil: ☐ No ☒ Yes

Hydrologic Soil Group:

Exploration Symbol # SS-15 ☐ Test Pit ☒ Boring ☐ Probe

____" Organic horizon thickness Ground surface elev. ____

____" Depth: ☐ of exploration, or ☐ to refusal

Depth below mineral soil horizon (inches)

Horizon	Color	Texture	Structure	Consistence	Redox
Ap	Dark Brown	Silt Loam	Grand	Friable	
Bw	Yellow Brown	Silt Loam	Ang Blocky	Friable	Common and Distinct
BC	Olive Brown	Silt Loam	Ang Blocky	Friable	
C1	Olive Gray	Silt Loam	Platy	Very Firm	

Soil Details

Soil Series/Phase Name: Boothbay

Limiting Factor: 11" Depth ☒ Groundwater ☒ Restrictive Layer ☐ Bedrock

Drainage Class: ☐ ED ☐ SED ☐ WD ☐ MWD ☒ SPD ☐ PD ☐ VPD

Slope: 16 Percent

Hydric Soil: ☒ No ☐ Yes

Hydrologic Soil Group:

Exploration Symbol # SS-16 ☐ Test Pit ☒ Boring ☐ Probe

____" Organic horizon thickness Ground surface elev. ____

____" Depth: ☐ of exploration, or ☐ to refusal

Depth below mineral soil horizon (inches)

Horizon	Color	Texture	Structure	Consistence	Redox
Ap	Dark Brown	Silt Loam	Weak Fine Grand	Friable	
Bw	Olive	Silt Loam	Weak Fine Ang	Friable	Common and Distinct
Bg	Olive Brown	Silt Loam	Weak Fine Grandul	Firm	
C1	Olive Gray	Silt Loam	Platy	Very Firm	

Soil Details

Soil Series/Phase Name: Swanville

Limiting Factor: ____" Depth ☒ Groundwater ☒ Restrictive Layer ☐ Bedrock

Drainage Class: ☐ ED ☐ SED ☐ WD ☐ MWD ☐ SPD ☒ PD ☐ VPD

Slope: 2 Percent

Hydric Soil: ☐ No ☒ Yes

Hydrologic Soil Group:

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SOIL PROFILE / CLASSIFICATION INFORMATION

SOIL SCIENTIST DESCRIPTION OF SOIL CONDITIONS AT PROJECT SITES

Project Name:	Applicant Name:	Project Location (municipality):
Little River Subdivision	B & B Midcoast Properties	Belfast

Exploration Symbol # SS-17 ☐ Test Pit ☒ Boring ☐ Probe

____" Organic horizon thickness Ground surface elev. ____

____" Depth: ☐ of exploration, or ☐ to refusal

Depth below mineral soil horizon *(inches)*

Horizon	Color	Texture	Structure	Consistence	Redox
A/O	Dark Brown	F. Sandy Loam	W. Fine Grand	Friable	
Bs1	Yellow Brown	F. Sandy Loam	W. Fine Ang	Friable	
Bs2	Olive Brown	Fine Sandy Loam	Weak Fine Grand	Firm	Common and Distinct
Cd	Olive Gray	Fine Sandy Loam	Platy	Very Firm	

Soil Details

Soil Series/Phase Name: Peru

Limiting Factor: 17" Depth ☒ Groundwater ☒ Restrictive Layer ☐ Bedrock

Drainage Class: ☐ ED ☐ SED ☐ WD ☒ MWD ☐ SPD ☐ PD ☐ VPD

Slope: 4 Percent

Hydric Soil: ☒ No ☐ Yes

Hydrologic Soil Group:

Exploration Symbol # SS-18 ☐ Test Pit ☒ Boring ☐ Probe

____" Organic horizon thickness Ground surface elev. ____

____" Depth: ☐ of exploration, or ☐ to refusal

Depth below mineral soil horizon *(inches)*

Horizon	Color	Texture	Structure	Consistence	Redox
A/O	Dark Brown	F. Sandy Loam	Fine Grand	Friable	
Bs1	Yellow Brown	F. Sandy Loam	Fine Grand	Friable	
Bs2	Olive Brown	F. Sandy Loam	Weak Fine Grand	Firm	Common and Distinct
Cd	Olive Gray	F. Sandy Loam	Medium Platy	Very Firm	

Soil Details

Soil Series/Phase Name: Peru

Limiting Factor: 15" Depth ☒ Groundwater ☒ Restrictive Layer ☐ Bedrock

Drainage Class: ☐ ED ☐ SED ☐ WD ☒ MWD ☐ SPD ☐ PD ☐ VPD

Slope: 10 Percent

Hydric Soil: ☒ No ☐ Yes

Hydrologic Soil Group:

Exploration Symbol # SS-19 ☐ Test Pit ☒ Boring ☐ Probe

____" Organic horizon thickness Ground surface elev. ____

____" Depth: ☐ of exploration, or ☐ to refusal

Depth below mineral soil horizon *(inches)*

Horizon	Color	Texture	Structure	Consistence	Redox
Ap	Dark Brown	Silt Loam	Grand	Friable	
Bw	Yellow Brown	Silt Loam	Ang Blocky	Friable	Common and Distinct
BC	Olive Brown	Silt Loam	Ang Blocky	Friable	
C1	Olive Gray	Silt Loam	Platy	Very Firm	

Soil Details

Soil Series/Phase Name: Boothbay

Limiting Factor: 11" Depth ☒ Groundwater ☒ Restrictive Layer ☐ Bedrock

Drainage Class: ☐ ED ☐ SED ☐ WD ☐ MWD ☒ SPD ☐ PD ☐ VPD

Slope: 18 Percent

Hydric Soil: ☒ No ☐ Yes

Hydrologic Soil Group:

Exploration Symbol # SS-20 ☐ Test Pit ☒ Boring ☐ Probe

____" Organic horizon thickness Ground surface elev. ____

____" Depth: ☐ of exploration, or ☐ to refusal

Depth below mineral soil horizon *(inches)*

Horizon	Color	Texture	Structure	Consistence	Redox
A/O	Dark Brown	F. Sandy Loam	Weak FineGran	Friable	
Bs1	Yellow Brown	F. Sandy Loam	Weak Fine Ang	Friable	
Bs2	Olive Brown	F. Sandy Loam	Weak Fine Grandul	Firm	Common and Distinct
Cd	Olive Gray	F. Sandy Loam	Platy	Very Firm	

Soil Details

Soil Series/Phase Name: Peru

Limiting Factor: 17" Depth ☒ Groundwater ☒ Restrictive Layer ☐ Bedrock

Drainage Class: ☐ ED ☐ SED ☐ WD ☒ MWD ☐ SPD ☐ PD ☐ VPD

Slope: Percent

Hydric Soil: ☒ No ☐ Yes

Hydrologic Soil Group:

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SOIL PROFILE / CLASSIFICATION INFORMATION

SOIL SCIENTIST DESCRIPTION OF SOIL CONDITIONS AT PROJECT SITES

Project Name:	Applicant Name:	Project Location (municipality):
Little River Subdivision	B & B Midcoast Properties	Belfast

Exploration Symbol # SS-21 ☐ Test Pit ☒ Boring ☐ Probe

____" Organic horizon thickness Ground surface elev. ____

____" Depth: ☐ of exploration, or ☐ to refusal

Depth below mineral soil horizon (inches)

Horizon	Color	Texture	Structure	Consistence	Redox
Ap	Dark Brown	Silt Loam	Grand	Friable	
Bw	Yellow Brown	Silt Loam	Ang Blocky	Friable	
BC	Olive Brown	Silt Loam	Ang Blocky	Firm	Common and Distinct
C1	Olive Gray	Silt Loam	Platy	Very Firm	

Soil Details

Soil Series/Phase Name:	Limiting Factor	Drainage Class	Slope	Hydric Soil	Hydrologic
Boothbay	12" Depth; ☒ Groundwater ☒ Restrictive Layer ☐ Bedrock	☐ ED ☐ SED ☐ WD ☐ MWD ☒ SPD ☐ PD ☐ VPD	18 Percent	☒ No ☐ Yes	____ Soil Group

Exploration Symbol # SS-22 ☐ Test Pit ☒ Boring ☐ Probe

____" Organic horizon thickness Ground surface elev. ____

____" Depth: ☐ of exploration, or ☐ to refusal

Depth below mineral soil horizon (inches)

Horizon	Color	Texture	Structure	Consistence	Redox
Ap	Dark Brown	Silt Loam	Fine Grand	Friable	
Bw	Olive	Silt Loam	Fine Grand	Friable	Common and Distinct
Bg	Olive Gray	Silt Loam	Weak Fine Grand	Firm	
C1	Olive Gray	Silt Loam	Medium Platy	Very Firm	

Soil Details

Soil Series/Phase Name:	Limiting Factor	Drainage Class	Slope	Hydric Soil	Hydrologic
Swanville	6" Depth; ☒ Groundwater ☒ Restrictive Layer ☐ Bedrock	☐ ED ☐ SED ☐ WD ☒ MWD ☐ SPD ☒ PD ☐ VPD	4 Percent	☐ No ☒ Yes	____ Soil Group

Exploration Symbol # SS-23 ☐ Test Pit ☒ Boring ☐ Probe

____" Organic horizon thickness Ground surface elev. ____

____" Depth: ☐ of exploration, or ☐ to refusal

Depth below mineral soil horizon (inches)

Horizon	Color	Texture	Structure	Consistence	Redox
Ap	Dark Brown	Silt Loam	Grand	Friable	
Bw	Yellow Brown	Silt Loam	Ang Blocky	Friable	Common and Distinct
BC	Olive Brown	Silt Loam	Ang Blocky	Friable	
C1	Olive Gray	Silt Loam	Platy	Very Firm	

Soil Details

Soil Series/Phase Name:	Limiting Factor	Drainage Class	Slope	Hydric Soil	Hydrologic
Boothbay	11" Depth; ☒ Groundwater ☒ Restrictive Layer ☐ Bedrock	☐ ED ☐ SED ☐ WD ☐ MWD ☒ SPD ☐ PD ☐ VPD	18 Percent	☒ No ☐ Yes	____ Soil Group

Exploration Symbol # SS-24 ☐ Test Pit ☒ Boring ☐ Probe

____" Organic horizon thickness Ground surface elev. ____

____" Depth: ☐ of exploration, or ☐ to refusal

Depth below mineral soil horizon (inches)

Horizon	Color	Texture	Structure	Consistence	Redox
A/O	Dark Brown	F. Sandy Loam	Weak FineGran	Friable	
Bs1	Yellow Brown	F. Sandy Loam	Weak Fine Ang	Friable	
Bs2	Olive Brown	F. Sandy Loam	Weak Fine Grandul	Firm	Common and Distinct
Cd	Olive Gray	F. Sandy Loam	Platy	Very Firm	

Soil Details

Soil Series/Phase Name:	Limiting Factor	Drainage Class	Slope	Hydric Soil	Hydrologic
Peru	17" Depth; ☒ Groundwater ☒ Restrictive Layer ☐ Bedrock	☐ ED ☐ SED ☐ WD ☒ MWD ☐ SPD ☐ PD ☐ VPD	3 Percent	☐ No ☒ Yes	____ Soil Group

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SOIL PROFILE / CLASSIFICATION INFORMATION

SOIL SCIENTIST DESCRIPTION OF SOIL CONDITIONS AT PROJECT SITES

Project Name:	Applicant Name:	Project Location (municipality):
Little River Subdivision	B & B Midcoast Properties	Belfast

Exploration Symbol # SS-25 ☐ Test Pit ☒ Boring ☐ Probe

____" Organic horizon thickness Ground surface elev. ____

____" Depth: ☐ of exploration, or ☐ to refusal

Depth below mineral soil horizon (inches)

Horizon	Color	Texture	Structure	Consistence	Redox
A/O	Dark Brown	F. Sandy Loam	Weak F. Grand	Friable	
Bs1	Brown	F. Sandy Loam	Weak F. Ang	Friable	
Bs2	Olive Brown	F. Sandy Loam	Weak Fine Grand	Firm	Common and Distinct
Cd	Olive Gray	F. Sandy Loam	Platy	Firm	

Soil Details

Soil Series/Phase Name:	Limiting Factor		Drainage Class	Slope	Hydric Soil	Hydrologic
Peru	15" Depth	☒ Groundwater ☒ Restrictive Layer ☐ Bedrock	☐ ED ☐ SED ☐ WD ☒ MWD ☐ SPD ☐ PD ☐ VPD	15 Percent	☒ No ☐ Yes	Soil Group

Exploration Symbol # SS-26 ☐ Test Pit ☒ Boring ☐ Probe

____" Organic horizon thickness Ground surface elev. ____

____" Depth: ☐ of exploration, or ☐ to refusal

Depth below mineral soil horizon (inches)

Horizon	Color	Texture	Structure	Consistence	Redox
A/O	Dark Brown	F. Sandy Loam	W. Fine Grand	Friable	
Bs1	Brown	F. Sandy Loam	Weak F. Ang.	Friable	
Bs2	Olive Brown	F. Sandy Loam	Weak Fine Grand	Firm	Common and Distinct
Cd	Olive Gray	F. Sandy Loam	Medium Platy	Firm	

Soil Details

Soil Series/Phase Name:	Limiting Factor		Drainage Class	Slope	Hydric Soil	Hydrologic
Peru	16" Depth	☒ Groundwater ☒ Restrictive Layer ☐ Bedrock	☐ ED ☐ SED ☐ WD ☒ MWD ☐ SPD ☐ PD ☐ VPD	12 Percent	☐ No ☒ Yes	Soil Group

Exploration Symbol # SS-27 ☐ Test Pit ☒ Boring ☐ Probe

____" Organic horizon thickness Ground surface elev. ____

____" Depth: ☐ of exploration, or ☐ to refusal

Depth below mineral soil horizon (inches)

Horizon	Color	Texture	Structure	Consistence	Redox
Ap	Dark Brown	Silt Loam	Grand	Friable	
Bw	Yellow Brown	Silt Loam	Ang Blocky	Friable	Common and Distinct
BC	Olive Brown	Silt Loam	Ang Blocky	Friable	
C1	Olive Gray	Silt Loam	Platy	Very Firm	

Soil Details

Soil Series/Phase Name:	Limiting Factor		Drainage Class	Slope	Hydric Soil	Hydrologic
Boothbay	11" Depth	☒ Groundwater ☒ Restrictive Layer ☐ Bedrock	☐ ED ☐ SED ☐ WD ☐ MWD ☒ SPD ☐ PD ☐ VPD	18 Percent	☒ No ☐ Yes	Soil Group

Exploration Symbol # SS-28 ☐ Test Pit ☒ Boring ☐ Probe

____" Organic horizon thickness Ground surface elev. ____

____" Depth: ☐ of exploration, or ☐ to refusal

Depth below mineral soil horizon (inches)

Horizon	Color	Texture	Structure	Consistence	Redox
Ap	Dark Brown	Silt Loam	Grand	Friable	
Bw	Olive	Silt Loam	Fine Grand	Friable	Common and Distinct
Bg	Olive Gray	Silt Loam	Weak Fine Grandul	Firm	
C1	Olive Gray	Silt Loam	Platy	Very Firm	

Soil Details

Soil Series/Phase Name:	Limiting Factor		Drainage Class	Slope	Hydric Soil	Hydrologic
Swanville	6" Depth	☒ Groundwater ☒ Restrictive Layer ☐ Bedrock	☐ ED ☐ SED ☐ WD ☐ MWD ☐ SPD ☒ PD ☐ VPD	2 Percent	☐ No ☒ Yes	Soil Group

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#216
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FORM F (SS1) Rev. 7/21

SOIL PROFILE / CLASSIFICATION INFORMATION

SOIL SCIENTIST DESCRIPTION OF SOIL CONDITIONS AT PROJECT SITES

Project Name:	Applicant Name:	Project Location (municipality):
Little River Subdivision	B & B Midcoast Properties	Belfast

Exploration Symbol # SS-29 ☐ Test Pit ☒ Boring ☐ Probe

____" Organic horizon thickness Ground surface elev. ____

____" Depth: ☐ of exploration, or ☐ to refusal

Depth below mineral soil horizon (inches)

Horizon	Color	Texture	Structure	Consistence	Redox
Ap	Dark Brown	Silt Loam	Grand	Friable	
Bw	Yellow Brown	Silt Loam	Ang Blocky	Friable	Common and Distinct
BC	Olive Brown	Silt Loam	Ang Blocky	Friable	
C1	Olive Gray	Silt Loam	Platy	Firm	

Soil Details

Soil Series/Phase Name: Boothbay

Limiting Factor: 10" Depth — ☒ Groundwater ☒ Restrictive Layer ☐ Bedrock

Drainage Class: ☐ ED ☐ SED ☐ WD ☐ MWD ☒ SPD ☐ PD ☐ VPD

Slope: 18 Percent

Hydric Soil: ☒ No ☐ Yes

Hydrologic Soil Group:

Exploration Symbol # SS-30 ☐ Test Pit ☒ Boring ☐ Probe

____" Organic horizon thickness Ground surface elev. ____

____" Depth: ☐ of exploration, or ☐ to refusal

Depth below mineral soil horizon (inches)

Horizon	Color	Texture	Structure	Consistence	Redox
A/O	Dark Brown	F. Sandy Loam	W. Fine Grand	Friable	
Bs1	Brown	F. Sandy Loam	Weak F. Ang.	Friable	
Bs2	Olive Brown	F. Sandy Loam	Weak Fine Grand	Firm	Common and Distinct
Cd	Olive Gray	F. Sandy Loam	Medium Platy	Firm	

Soil Details

Soil Series/Phase Name: Peru

Limiting Factor: 16" Depth — ☒ Groundwater ☒ Restrictive Layer ☐ Bedrock

Drainage Class: ☐ ED ☐ SED ☐ WD ☒ MWD ☐ SPD ☐ PD ☐ VPD

Slope: 6 Percent

Hydric Soil: ☐ No ☒ Yes

Hydrologic Soil Group:

Exploration Symbol # SS-31 ☐ Test Pit ☒ Boring ☐ Probe

____" Organic horizon thickness Ground surface elev. ____

____" Depth: ☐ of exploration, or ☐ to refusal

Depth below mineral soil horizon (inches)

Horizon	Color	Texture	Structure	Consistence	Redox
Ap	Dark Brown	Silt Loam	Grand	Friable	
Bw	Yellow Brown	Silt Loam	Ang Blocky	Friable	
BC	Olive Brown	Silt Loam	Ang Blocky	Friable	Common and Distinct
C1	Olive Gray	Silt Loam	Platy	Very Firm	

Soil Details

Soil Series/Phase Name: Boothbay

Limiting Factor: 11" Depth — ☒ Groundwater ☒ Restrictive Layer ☐ Bedrock

Drainage Class: ☐ ED ☐ SED ☐ WD ☐ MWD ☒ SPD ☐ PD ☐ VPD

Slope: 18 Percent

Hydric Soil: ☒ No ☐ Yes

Hydrologic Soil Group:

Exploration Symbol # SS-32 ☐ Test Pit ☒ Boring ☐ Probe

____" Organic horizon thickness Ground surface elev. ____

____" Depth: ☐ of exploration, or ☐ to refusal

Depth below mineral soil horizon (inches)

Horizon	Color	Texture	Structure	Consistence	Redox
Ap	Dark Brown	Silt Loam	Grand	Friable	
Bw	Olive	Silt Loam	Ang Blocky	Friable	
Bg	Olive Gray	Silt Loam	Ang Blocky	Firm	Common and Distinct
C1	Olive Gray	Silt Loam	Platy	Very Firm	

Soil Details

Soil Series/Phase Name: Boothbay

Limiting Factor: 12" Depth — ☒ Groundwater ☒ Restrictive Layer ☐ Bedrock

Drainage Class: ☐ ED ☐ SED ☐ WD ☐ MWD ☐ SPD ☒ PD ☐ VPD

Slope: 30 Percent

Hydric Soil: ☐ No ☒ Yes

Hydrologic Soil Group:

SOIL SCIENTIST INFORMATION AND SIGNATURE

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SOIL PROFILE / CLASSIFICATION INFORMATION

SOIL SCIENTIST DESCRIPTION OF SOIL CONDITIONS AT PROJECT SITES

Project Name:	Applicant Name:	Project Location (municipality):
Little River Subdivision	B & B Midcoast Properties	Belfast

Exploration Symbol # SS-33 ☐ Test Pit ☒ Boring ☐ Probe

____" Organic horizon thickness Ground surface elev. ____

____" Depth: ☐ of exploration, or ☐ to refusal

Depth below mineral soil horizon (inches)

Horizon	Color	Texture	Structure	Consistence	Redox
A/O	Dark Brown	Sandy Loam	Grand	Friable	
Bs1	Brown	F. Sandy Loam	Weak Fine Ang	Friable	
Bs2	Olive Brown	F. Sandy Loam	Weak Fine Grand	Firm	Common and Distinct
Cd	Olive Gray	F. Sandy Loam	Platy	Firm	

Soil Details

Soil Series/Phase Name:	Limiting Factor	Drainage Class	Slope	Hydric Soil	Hydrologic
Peru	18" Depth; ☒ Groundwater ☒ Restrictive Layer ☐ Bedrock	☐ ED ☐ SED ☐ WD ☒ MWD ☐ SPD ☐ PD ☐ VPD	5 Percent	☒ No ☐ Yes	Soil Group

Exploration Symbol # SS-34 ☐ Test Pit ☒ Boring ☐ Probe

____" Organic horizon thickness Ground surface elev. ____

____" Depth: ☐ of exploration, or ☐ to refusal

Depth below mineral soil horizon (inches)

Horizon	Color	Texture	Structure	Consistence	Redox
Ap	Dark Brown	Silt Loam	W. Fine Grand	Friable	
Bw	Yellow Brown	Silt Loam	Weak F. Ang.	Friable	
BC	Olive Brown	Silt Loam	Weak Fine Grand	Firm	Common and Distinct
C1	Olive Gray	Silt Loam	Medium Platy	Firm	

Soil Details

Soil Series/Phase Name:	Limiting Factor	Drainage Class	Slope	Hydric Soil	Hydrologic
Boothbay	13" Depth; ☒ Groundwater ☒ Restrictive Layer ☐ Bedrock	☐ ED ☐ SED ☐ WD ☐ MWD ☒ SPD ☐ PD ☐ VPD	26 Percent	☒ No ☐ Yes	Soil Group

Exploration Symbol # SS-35 ☐ Test Pit ☒ Boring ☐ Probe

____" Organic horizon thickness Ground surface elev. ____

____" Depth: ☐ of exploration, or ☐ to refusal

Depth below mineral soil horizon (inches)

Horizon	Color	Texture	Structure	Consistence	Redox
Ap	Dark Brown	Silt Loam	Grand	Friable	
Bw	Olive	Silt Loam	Ang Blocky	Friable	Common and Distinct
Bg	Olive Gray	Silt Loam	Ang Blocky	Friable	
C1	Olive Gray	Silt Loam	Platy	Very Firm	

Soil Details

Soil Series/Phase Name:	Limiting Factor	Drainage Class	Slope	Hydric Soil	Hydrologic
Swanville	6" Depth; ☒ Groundwater ☒ Restrictive Layer ☐ Bedrock	☐ ED ☐ SED ☐ WD ☐ MWD ☐ SPD ☒ PD ☐ VPD	4 Percent	☐ No ☒ Yes	Soil Group

Exploration Symbol # SS-36 ☐ Test Pit ☒ Boring ☐ Probe

____" Organic horizon thickness Ground surface elev. ____

____" Depth: ☐ of exploration, or ☐ to refusal

Depth below mineral soil horizon (inches)

Horizon	Color	Texture	Structure	Consistence	Redox
Ap	Dark Brown	Silt Loam	Grand	Friable	
Bw	Olive	Silt Loam	Ang Blocky	Friable	Common and Distinct
Bg	Olive Gray	Silt Loam	Ang Blocky	Firm	
C1	Olive Gray	Silt Loam	Platy	Very Firm	

Soil Details

Soil Series/Phase Name:	Limiting Factor	Drainage Class	Slope	Hydric Soil	Hydrologic
Swanville	6" Depth; ☒ Groundwater ☒ Restrictive Layer ☐ Bedrock	☐ ED ☐ SED ☐ WD ☐ MWD ☐ SPD ☒ PD ☐ VPD	4 Percent	☐ No ☒ Yes	Soil Group

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SOIL PROFILE / CLASSIFICATION INFORMATION

SOIL SCIENTIST DESCRIPTION OF SOIL CONDITIONS AT PROJECT SITES

Project Name: Little River Subdivision

Applicant Name: B & B Midcoast Properties

Project Location (municipality): Belfast

Exploration Symbol # SS-37 ☐ Test Pit ☒ Boring ☐ Probe

____" Organic horizon thickness Ground surface elev. ____

____" Depth: ☐ of exploration, or ☐ to refusal

Depth below mineral soil horizon (inches)

Horizon	Color	Texture	Structure	Consistence	Redox
Ap	Dark Brown	Silt Loam	Grand	Friable	
Bw	Olive	Silt Loam	Ang Blocky	Friable	
Bg	Olive Gray	Silt Loam	Ang Blocky	Firm	Common and Distinct
C1	Olive Gray	Silt Loam	Platy	Very Firm	

Soil Details

Soil Series/Phase Name: Boothbay

Limiting Factor: 11" Depth ☒ Groundwater ☒ Restrictive Layer ☐ Bedrock

Drainage Class: ☐ ED ☐ SED ☐ WD ☐ MWD ☒ SPD ☐ PD ☐ VPD

Slope: 25 Percent

Hydric Soil: ☒ No ☐ Yes

Hydrologic Soil Group:

Exploration Symbol # SS-38 ☐ Test Pit ☒ Boring ☐ Probe

____" Organic horizon thickness Ground surface elev. ____

____" Depth: ☐ of exploration, or ☐ to refusal

Depth below mineral soil horizon (inches)

Horizon	Color	Texture	Structure	Consistence	Redox
A/O	Dark Brown	F. Sandy Loam	W. Fine Grand	Friable	
Bs1	Brown	F. Sandy Loam	Weak F. Ang.	Friable	
Bs2	Olive Brown	F. Sandy Loam	Weak Fine Grand	Firm	Common and Distinct
Cd	Olive Gray	F. Sandy Loam	Medium Platy	Firm	

Soil Details

Soil Series/Phase Name: Peru

Limiting Factor: 17" Depth ☒ Groundwater ☒ Restrictive Layer ☐ Bedrock

Drainage Class: ☐ ED ☐ SED ☐ WD ☒ MWD ☐ SPD ☐ PD ☐ VPD

Slope: 6 Percent

Hydric Soil: ☒ No ☐ Yes

Hydrologic Soil Group:

Exploration Symbol # SS-39 ☐ Test Pit ☒ Boring ☐ Probe

____" Organic horizon thickness Ground surface elev. ____

____" Depth: ☐ of exploration, or ☐ to refusal

Depth below mineral soil horizon (inches)

Horizon	Color	Texture	Structure	Consistence	Redox
Ap	Dark Brown	Silt Loam	Grand	Friable	
Bw	Yel. Brwn	Silt Loam	Ang Blocky	Friable	
BC	Olive Brown	Silt Loam	Ang Blocky	Friable	Common and Distinct
C1	Olive Gray	Silt Loam	Platy	Very Firm	

Soil Details

Soil Series/Phase Name: Boothbay

Limiting Factor: 10" Depth ☒ Groundwater ☒ Restrictive Layer ☐ Bedrock

Drainage Class: ☐ ED ☐ SED ☐ WD ☐ MWD ☒ SPD ☐ PD ☐ VPD

Slope: 24 Percent

Hydric Soil: ☒ No ☐ Yes

Hydrologic Soil Group:

Exploration Symbol # SS-40 ☐ Test Pit ☒ Boring ☐ Probe

____" Organic horizon thickness Ground surface elev. ____

____" Depth: ☐ of exploration, or ☐ to refusal

Depth below mineral soil horizon (inches)

Horizon	Color	Texture	Structure	Consistence	Redox
A/O	Dark Brown	F. Sandy Loam	Weak F. Grand	Friable	
Bs1	Yellow Brown	F. Sandy Loam	Weak Fine Ang	Friable	
Bs2	Olive Brown	F. Sandy Loam	Weak Fine Grand	Firm	Common and Distinct
Cd	Olive Gray	F. Sand Loam	Platy	Very Firm	

Soil Details

Soil Series/Phase Name: Peru

Limiting Factor: 18" Depth ☒ Groundwater ☒ Restrictive Layer ☐ Bedrock

Drainage Class: ☐ ED ☐ SED ☐ WD ☒ MWD ☐ SPD ☐ PD ☐ VPD

Slope: 4 Percent

Hydric Soil: ☒ No ☐ Yes

Hydrologic Soil Group:

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SOIL PROFILE / CLASSIFICATION INFORMATION

SOIL SCIENTIST DESCRIPTION OF SOIL CONDITIONS AT PROJECT SITES

Project Name:	Applicant Name:	Project Location (municipality):
Little River Subdivision	B & B Midcoast Properties	Belfast

Exploration Symbol # SS-41 ☐ Test Pit ☒ Boring ☐ Probe

_____" Organic horizon thickness Ground surface elev. _____

_____" Depth: ☐ of exploration, or ☐ to refusal

Depth below mineral soil horizon (inches)

Horizon	Color	Texture	Structure	Consistence	Redox
Ap	Dark Brown	Silt Loam	Grand	Friable	
Bw	Olive	Silt Loam	Ang Blocky	Friable	
Bg	Olive Gray	Silt Loam	Ang Blocky	Firm	Common and Distinct
C1	Olive Gray	Silt Loam	Platy	Very Firm	

Soil Details

Soil Series/Phase Name: Boothbay

Limiting Factor: 11" Depth ☒ Groundwater ☒ Restrictive Layer ☐ Bedrock

Drainage Class: ☐ ED ☐ SED ☐ WD ☐ MWD ☒ SPD ☐ PD ☐ VPD

Slope: 25 Percent

Hydric Soil: ☒ No ☐ Yes

Hydrologic Soil Group:

Exploration Symbol # SS-42 ☐ Test Pit ☒ Boring ☐ Probe

_____" Organic horizon thickness Ground surface elev. _____

_____" Depth: ☐ of exploration, or ☐ to refusal

Depth below mineral soil horizon (inches)

Horizon	Color	Texture	Structure	Consistence	Redox
Ap	Dark Brown	Silt Loam	Grand	Friable	
Bw	Olive	Silt Loam	Fine Grand	Friable	Common and Distinct
Bg	Olive Gray	Silt Loam	Fine Grand	Firm	
C1	Olive Gray	Silt Loam	Medium Platy	Firm	

Soil Details

Soil Series/Phase Name: Swanville

Limiting Factor: 6" Depth ☒ Groundwater ☒ Restrictive Layer ☐ Bedrock

Drainage Class: ☐ ED ☐ SED ☐ WD ☐ MWD ☐ SPD ☒ PD ☐ VPD

Slope: 2 Percent

Hydric Soil: ☐ No ☒ Yes

Hydrologic Soil Group:

Exploration Symbol # SS-43 ☐ Test Pit ☒ Boring ☐ Probe

_____" Organic horizon thickness Ground surface elev. _____

_____" Depth: ☐ of exploration, or ☐ to refusal

Depth below mineral soil horizon (inches)

Horizon	Color	Texture	Structure	Consistence	Redox
Ap	Dark Brown	Silt Loam	Grand	Friable	
Bw	Yel. Brwn	Silt Loam	Ang Blocky	Friable	
BC	Olive Brown	Silt Loam	Ang Blocky	Friable	Common and Distinct
C1	Olive Gray	Silt Loam	Platy	Very Firm	

Soil Details

Soil Series/Phase Name: Boothbay

Limiting Factor: 10" Depth ☒ Groundwater ☒ Restrictive Layer ☐ Bedrock

Drainage Class: ☐ ED ☒ SED ☐ WD ☐ MWD ☒ SPD ☐ PD ☐ VPD

Slope: 24 Percent

Hydric Soil: ☒ No ☐ Yes

Hydrologic Soil Group:

Exploration Symbol # SS-44 ☐ Test Pit ☒ Boring ☐ Probe

_____" Organic horizon thickness Ground surface elev. _____

_____" Depth: ☐ of exploration, or ☐ to refusal

Depth below mineral soil horizon (inches)

Horizon	Color	Texture	Structure	Consistence	Redox
Ap	Dark Brown	Silt Loam	Grand	Friable	
Bw	Olive	Silt Loam	Fine Grand	Friable	Common and Distinct
Bg	Olive Gray	Silt Loam	Fine Grand	Firm	
C1	Olive Gray	Silt Loam	Platy	Very Firm	

Soil Details

Soil Series/Phase Name: Swanville

Limiting Factor: 6" Depth ☒ Groundwater ☒ Restrictive Layer ☐ Bedrock

Drainage Class: ☐ ED ☐ SED ☐ WD ☐ MWD ☐ SPD ☒ PD ☐ VPD

Slope: 4 Percent

Hydric Soil: ☐ No ☒ Yes

Hydrologic Soil Group:

SOIL SCIENTIST INFORMATION AND SIGNATURE

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SOIL PROFILE / CLASSIFICATION INFORMATION

SOIL SCIENTIST DESCRIPTION OF SOIL CONDITIONS AT PROJECT SITES

Project Name:	Applicant Name:	Project Location (municipality):
Little River Subdivision	B & B Midcoast Properties	Belfast

Exploration Symbol # SS-45 ☐ Test Pit ☒ Boring ☐ Probe

_____" Organic horizon thickness Ground surface elev. _____

_____" Depth: ☐ of exploration, or ☐ to refusal

Depth below mineral soil horizon *(inches)*

Horizon	Color	Texture	Structure	Consistence	Redox
Ap	Dark Brown	Silt Loam	Grand	Friable	
Bw	Olive	Silt Loam	Ang Blocky	Friable	
Bg	Olive Gray	Silt Loam	Ang Blocky	Firm	Common and Distinct
C1	Olive Gray	Silt Loam	Platy	Very Firm	

Soil Details

Soil Series/Phase Name:	Limiting Factor	Drainage Class	Slope	Hydric Soil	Hydrologic
Boothbay	11" Depth ☒ Groundwater ☒ Restrictive Layer ☐ Bedrock	☐ ED ☐ SED ☐ WD ☐ MWD ☒ SPD ☐ PD ☐ VPD	25 Percent	☒ No ☐ Yes	Soil Group

Exploration Symbol # SS-46 ☐ Test Pit ☒ Boring ☐ Probe

_____" Organic horizon thickness Ground surface elev. _____

_____" Depth: ☐ of exploration, or ☐ to refusal

Depth below mineral soil horizon *(inches)*

Horizon	Color	Texture	Structure	Consistence	Redox
A/O	Dark Brown	F. Sandy Loam	Weak F. Grand	Friable	
Bs1	Brown	F. Sandy Loam	Weak Fine Ang	Friable	
Bs2	Olive Brown	F. Sandy Loam	Weak Fine Grand	Firm	Common and Distinct
Cd	Olive Gray	F. Sandy Loam	Medium Platy	Firm	

Soil Details

Soil Series/Phase Name:	Limiting Factor	Drainage Class	Slope	Hydric Soil	Hydrologic
Peru	16" Depth ☒ Groundwater ☒ Restrictive Layer ☐ Bedrock	☐ ED ☐ SED ☐ WD ☒ MWD ☐ SPD ☐ PD ☐ VPD	8 Percent	☒ No ☐ Yes	Soil Group

Exploration Symbol # SS-47 ☐ Test Pit ☒ Boring ☐ Probe

_____" Organic horizon thickness Ground surface elev. _____

_____" Depth: ☐ of exploration, or ☐ to refusal

Depth below mineral soil horizon *(inches)*

Horizon	Color	Texture	Structure	Consistence	Redox
Ap	Dark Brown	Silt Loam	Grand	Friable	
Bw	Yel. Brwn	Silt Loam	Ang Blocky	Friable	
BC	Olive Brown	Silt Loam	Ang Blocky	Friable	Common and Distinct
C1	Olive Gray	Silt Loam	Platy	Very Firm	

Soil Details

Soil Series/Phase Name:	Limiting Factor	Drainage Class	Slope	Hydric Soil	Hydrologic
Boothbay	12" Depth ☒ Groundwater ☒ Restrictive Layer ☐ Bedrock	☐ ED ☐ SED ☐ WD ☐ MWD ☒ SPD ☐ PD ☐ VPD	28 Percent	☒ No ☐ Yes	Soil Group

Exploration Symbol # SS-48 ☐ Test Pit ☒ Boring ☐ Probe

_____" Organic horizon thickness Ground surface elev. _____

_____" Depth: ☐ of exploration, or ☐ to refusal

Depth below mineral soil horizon *(inches)*

Horizon	Color	Texture	Structure	Consistence	Redox
A/O	Dark Brown	F. Sandy Loam	W. Fine Gran	Friable	
Bs1	Brown	F. Sandy Loam	W. Fine Ang	Friable	
Bs2	Olive Brown	F. Sandy Loam	Weak Fine Grand	Firm	Common and Distinct
Cd	Olive Gray	F. Sandy Loam	Platy	Firm	

Soil Details

Soil Series/Phase Name:	Limiting Factor	Drainage Class	Slope	Hydric Soil	Hydrologic
Peru	15" Depth ☒ Groundwater ☒ Restrictive Layer ☐ Bedrock	☐ ED ☐ SED ☐ WD ☒ MWD ☐ SPD ☐ PD ☐ VPD	4 Percent	☒ No ☐ Yes	Soil Group

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SOIL PROFILE / CLASSIFICATION INFORMATION

SOIL SCIENTIST DESCRIPTION OF SOIL CONDITIONS AT PROJECT SITES

Project Name:	Applicant Name:	Project Location (municipality):
Little River Subdivision	B & B Midcoast Properties	Belfast

Exploration Symbol # SS-49 ☐ Test Pit ☒ Boring ☐ Probe

____" Organic horizon thickness Ground surface elev. ____

____" Depth: ☐ of exploration, or ☐ to refusal

Depth below mineral soil horizon (inches)

Horizon	Color	Texture	Structure	Consistence	Redox
Ap	Dark Brown	Silt Loam	Grand	Friable	
Bw	Olive	Silt Loam	Ang Blocky	Friable	
Bg	Olive Gray	Silt Loam	Ang Blocky	Firm	Common and Distinct
C1	Olive Gray	Silt Loam	Platy	Very Firm	

Soil Details

Soil Series/Phase Name: Boothbay

Limiting Factor: 11" Depth ☒ Groundwater ☒ Restrictive Layer ☐ Bedrock

Drainage Class: ☐ ED ☐ SED ☐ WD ☐ MWD ☒ SPD ☐ PD ☐ VPD

Slope: 25 Percent

Hydric Soil: ☒ No ☐ Yes

Hydrologic Soil Group:

Exploration Symbol # SS-50 ☐ Test Pit ☒ Boring ☐ Probe

____" Organic horizon thickness Ground surface elev. ____

____" Depth: ☐ of exploration, or ☐ to refusal

Depth below mineral soil horizon (inches)

Horizon	Color	Texture	Structure	Consistence	Redox
Ap	Dark Brown	Silt Loam	Grand	Friable	
Bw	Olive	Silt Loam	Fine Grand	Friable	Common and Distinct
Bg	Olive Gray	Silt Loam	Fine Grand	Firm	
C1	Olive Gray	Silt Loam	Medium Platy	Firm	

Soil Details

Soil Series/Phase Name: Swanville

Limiting Factor: 6" Depth ☒ Groundwater ☒ Restrictive Layer ☐ Bedrock

Drainage Class: ☐ ED ☐ SED ☐ WD ☐ MWD ☐ SPD ☒ PD ☐ VPD

Slope: 2 Percent

Hydric Soil: ☐ No ☒ Yes

Hydrologic Soil Group:

Exploration Symbol # SS-51 ☐ Test Pit ☒ Boring ☐ Probe

____" Organic horizon thickness Ground surface elev. ____

____" Depth: ☐ of exploration, or ☐ to refusal

Depth below mineral soil horizon (inches)

Horizon	Color	Texture	Structure	Consistence	Redox
Ap	Dark Brown	Silt Loam	Grand	Friable	
Bw	Olive	Silt Loam	Ang Blocky	Friable	
Bg	Olive Gray	Silt Loam	Ang Blocky	Firm	Common and Distinct
C1	Olive Gray	Silt Loam	Platy	Firm	

Soil Details

Soil Series/Phase Name: Boothbay

Limiting Factor: 12" Depth ☒ Groundwater ☒ Restrictive Layer ☐ Bedrock

Drainage Class: ☐ ED ☐ SED ☐ WD ☐ MWD ☒ SPD ☐ PD ☐ VPD

Slope: 20 Percent

Hydric Soil: ☒ No ☐ Yes

Hydrologic Soil Group:

Exploration Symbol # SS-52 ☐ Test Pit ☒ Boring ☐ Probe

____" Organic horizon thickness Ground surface elev. ____

____" Depth: ☐ of exploration, or ☐ to refusal

Depth below mineral soil horizon (inches)

Horizon	Color	Texture	Structure	Consistence	Redox
Ap	Dark Brown	Silt Loam	Grand	Friable	
Bw	Olive	Silt Loam	Ang Blocky	Friable	Common and Distinct
Bg	Olive Gray	Silt Loam	Ang Blocky	Firm	
C1	Olive Gray	Silt Loam	Platy	Firm	

Soil Details

Soil Series/Phase Name: Swanville

Limiting Factor: 6" Depth ☒ Groundwater ☒ Restrictive Layer ☐ Bedrock

Drainage Class: ☐ ED ☐ SED ☐ WD ☐ MWD ☐ SPD ☒ PD ☐ VPD

Slope: 2 Percent

Hydric Soil: ☐ No ☒ Yes

Hydrologic Soil Group:

SOIL SCIENTIST INFORMATION AND SIGNATURE

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SOIL PROFILE / CLASSIFICATION INFORMATION

SOIL SCIENTIST DESCRIPTION OF SOIL CONDITIONS AT PROJECT SITES

Project Name: Little River Subdivision

Applicant Name: B & B Midcoast Properties

Project Location (municipality): Belfast

Exploration Symbol # SS-53 ☐ Test Pit ☒ Boring ☐ Probe

____" Organic horizon thickness Ground surface elev. ____

____" Depth: ☐ of exploration, or ☐ to refusal

Depth below mineral soil horizon (inches)

Horizon	Color	Texture	Structure	Consistence	Redox
Ap	Dark Brown	Silt Loam	Grand	Friable	
Bw	Olive	Silt Loam	Ang Blocky	Friable	
Bg	Olive Gray	Silt Loam	Ang Blocky	Firm	Common and Distinct
C1	Olive Gray	Silt Loam	Platy	Very Firm	

Soil Details

Soil Series/Phase Name: Boothbay

Limiting Factor: 10" Depth ☒ Groundwater ☒ Restrictive Layer ☐ Bedrock

Drainage Class: ☐ ED ☐ SED ☐ WD ☐ MWD ☒ SPD ☐ PD ☐ VPD

Slope: 30 Percent

Hydric Soil: ☒ No ☐ Yes

Hydrologic Soil Group:

Exploration Symbol # SS-54 ☐ Test Pit ☒ Boring ☐ Probe

____" Organic horizon thickness Ground surface elev. ____

____" Depth: ☐ of exploration, or ☐ to refusal

Depth below mineral soil horizon (inches)

Horizon	Color	Texture	Structure	Consistence	Redox
A/O	Dark Brown	F. Sandy Loam	Weak F. Grand	Friable	
Bs1	Brown	F. Sandy Loam	Weak F. Ang	Friable	
Bs2	Olive Brown	F. Sandy Loam	Weak Fine Grand	Firm	Common and Distinct
Cd	Olive Gray	F. Sandy Loam	Platy	Firm	

Soil Details

Soil Series/Phase Name: Peru

Limiting Factor: 18" Depth ☒ Groundwater ☒ Restrictive Layer ☐ Bedrock

Drainage Class: ☐ ED ☐ SED ☐ WD ☒ MWD ☐ SPD ☐ PD ☐ VPD

Slope: 6 Percent

Hydric Soil: ☒ No ☐ Yes

Hydrologic Soil Group:

Exploration Symbol # ____ ☐ Test Pit ☐ Boring ☐ Probe

____" Organic horizon thickness Ground surface elev. ____

____" Depth: ☐ of exploration, or ☐ to refusal

Depth below mineral soil horizon (inches)

Horizon	Color	Texture	Structure	Consistence	Redox

Soil Details

Soil Series/Phase Name:

Limiting Factor: ____" Depth ☐ Groundwater ☐ Restrictive Layer ☐ Bedrock

Drainage Class: ☐ ED ☐ SED ☐ WD ☐ MWD ☐ SPD ☐ PD ☐ VPD

Slope: ____ Percent

Hydric Soil: ☐ No ☐ Yes

Hydrologic Soil Group:

Exploration Symbol # ____ ☐ Test Pit ☐ Boring ☐ Probe

____" Organic horizon thickness Ground surface elev. ____

____" Depth: ☐ of exploration, or ☐ to refusal

Depth below mineral soil horizon (inches)

Horizon	Color	Texture	Structure	Consistence	Redox

Soil Details

Soil Series/Phase Name:

Limiting Factor: ____" Depth ☐ Groundwater ☐ Restrictive Layer ☐ Bedrock

Drainage Class: ☐ ED ☐ SED ☐ WD ☐ MWD ☐ SPD ☐ PD ☐ VPD

Slope: ____ Percent

Hydric Soil: ☐ No ☐ Yes

Hydrologic Soil Group:

SOIL SCIENTIST INFORMATION AND SIGNATURE

Signature

Mark J. Hampton

Name Printed

11/10/2022

Date

216

SS License No.

STATE OF MAINE
MARK J. HAMPTON
#216
affix professional seal
CERTIFIED SOIL SCIENTIST

APPENDIX E

DEPARTMENT CORRESPONDENCE

Scott Braley

From: Annaleis Hafford <annaleis@olverassociatesinc.com>
Sent: Monday, July 17, 2023 1:32 PM
To: Scott Braley
Subject: FW: Little River Subdivision

We just completed the Mayo Street Project for CSO removal – This project was expected to reduce infiltration by about 65,000 GPD and inflow by about 35,000 GPD per inch of rainfall. This project alone would remove sufficient flows for the new development. The pahses you refer to below are not completed or constructed which is why I would like to use the Mayo Street removal project as that has just been completed and is also a CSO removal project.

Please let me know if you need additional information.

From: Scott Braley <scott@plymouthengineering.com>
Sent: Monday, July 17, 2023 1:28 PM
To: Annaleis Hafford <annaleis@olverassociatesinc.com>
Subject: RE: Little River Subdivision

Annaleis and Mandy,
The DEP project manager left last week for a new job. The new project manager has not been assigned, but we received a copy of the memo that was left for the new manager, so we're gathering all things in one package to make the transition quicker. If you want to send me your response, I'll be happy to just put it into our overall response that you'll get a copy of.

Scott

Scott E. Braley, PE
President
Plymouth Engineering, Inc.
8 Main Street, Unit C
Newport, ME 04953
Office: (207) 257-2071
Cell: (207) 332-7343
Email: scott@plymouthengineering.com

From: Annaleis Hafford <annaleis@olverassociatesinc.com>
Sent: Monday, July 17, 2023 1:11 PM
To: Scott Braley <scott@plymouthengineering.com>
Subject: RE: Little River Subdivision

Note I did send this comment to DEP but it came back as undeliverable.

From: Scott Braley <scott@plymouthengineering.com>
Sent: Monday, July 17, 2023 1:09 PM
To: Annaleis Hafford <annaleis@olverassociatesinc.com>

Keith Pooler

Water Capacity at Lower Industrial Park

From keith@belfastwater.org
To lindelofbrad@yahoo.com & 2 more
Apr 14, 2022 at 11:44 AM

Brad,

This email is to follow up on the conversation we had on 4/14/22, concerning the needed water capacity to serve your proposed development off the Lower Industrial Park in Belfast.
Belfast Water has the capacity to serve this development, and there is a 12" water main in the Park, the main presently stops at the driveway of Trillium caterers, but is set to be hooked onto and extended in the future.
We look forward to working with you on your development and serving the customers of it in the future.
Let me now if you need anymore information at this time.

Regards

Keith

Keith H. Pooler
Superintendent
Belfast Water District
207-338-1200
207-338-0444 Fax
keith@belfastwater.org

STATE OF MAINE
DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY
177 STATE HOUSE STATION
AUGUSTA, MAINE 04333

JANET T. MILLS
GOVERNOR

AMANDA E. BEAL
COMMISSIONER

November 29, 2022

Aimee Young
Plymouth Engineering
8 Main Street Unit C
Newport, ME 04953

Via email: aimee@plymouthengineering.com

Re: Rare and exemplary botanical features in proximity to: #22233, Little River Subdivision, Little River Drive, Belfast, Maine

Dear Ms. Young:

I have searched the Maine Natural Areas Program's Biological and Conservation Data System files in response to your request received November 23, 2022 for information on the presence of rare or unique botanical features documented from the vicinity of the project in Belfast, Maine. Rare and unique botanical features include the habitat of rare, threatened, or endangered plant species and unique or exemplary natural communities. Our review involves examining maps, manual and computerized records, other sources of information such as scientific articles or published references, and the personal knowledge of staff or cooperating experts.

Our official response covers only botanical features. For authoritative information and official response for zoological features you must make a similar request to the Maine Department of Inland Fisheries and Wildlife, 284 State Street, Augusta, Maine 04333.

According to the information currently in our Biological and Conservation Data System files, there are no rare botanical features documented specifically within the project area. This lack of data may indicate minimal survey efforts rather than confirm the absence of rare botanical features. You may want to have the site inventoried by a qualified field biologist to ensure that no undocumented rare features are inadvertently harmed.

If a field survey of the project area is conducted, please refer to the enclosed supplemental information regarding rare and exemplary botanical features documented to occur in the vicinity of the project site. The list may include information on features that have been known to occur historically in the area as well as recently field-verified information. While historic records have not been documented in several years, they may persist in the area if suitable habitat exists. The enclosed list identifies features with potential to occur in the area, and it should be considered if you choose to conduct field surveys.

This finding is available and appropriate for preparation and review of environmental assessments, but it is not a substitute for on-site surveys. Comprehensive field surveys do not exist for all natural areas in Maine, and in the absence of a specific field investigation, the Maine Natural Areas Program cannot provide a definitive statement on the presence or absence of unusual natural features at this site.

MOLLY DOCHERTY, DIRECTOR
MAINE NATURAL AREAS PROGRAM
BLOSSOM LANE, DEERING BUILDING

DEPARTMENT OF Agriculture Conservation & Forestry

PHONE: (207) 287-804490
WWW.MAINE.GOV/DACF/MNAP

The Maine Natural Areas Program (MNAP) is continuously working to achieve a more comprehensive database of exemplary natural features in Maine. We would appreciate the contribution of any information obtained should you decide to do field work. MNAP welcomes coordination with individuals or organizations proposing environmental alteration or conducting environmental assessments. If, however, data provided by MNAP are to be published in any form, the Program should be informed at the outset and credited as the source.

The Maine Natural Areas Program has instituted a fee structure of $75.00 an hour to recover the actual cost of processing your request for information. You will receive an invoice for $150.00 for two hours of our services.

Thank you for using MNAP in the environmental review process. Please do not hesitate to contact me if you have further questions about the Natural Areas Program or about rare or unique botanical features on this site.

Sincerely,

Lisa St. Hilaire

Lisa St. Hilaire | Information Manager | Maine Natural Areas Program
207-287-8044 | lisa.st.hilaire@maine.gov

Rare and Exemplary Botanical Features within 4 miles of
Project: #22233, Little River Subdivision, Little River Drive, Belfast, ME

Common Name	State Status	State Rank	Global Rank	Date Last Observed	Occurrence Number	Habitat
American Chestnut						
	SC	S4	G3	2001-02-13	3	Hardwood to mixed forest (forest, upland)
Bog Bedstraw						
	SC	S2	G5	1940-07-23	3	Conifer forest (forest, upland)
	SC	S2	G5	1964-08-30	4	Conifer forest (forest, upland)

Date Exported: 2022-11-29 11:48

Conservation Status Ranks

State and Global Ranks: This ranking system facilitates a quick assessment of a species' or habitat type's rarity and is the primary tool used to develop conservation, protection, and restoration priorities for individual species and natural habitat types. Each species or habitat is assigned both a state (S) and global (G) rank on a scale of critically imperiled (1) to secure (5). Factors such as range extent, the number of occurrences, intensity of threats, etc., contribute to the assignment of state and global ranks. The definitions for state and global ranks are comparable but applied at different geographic scales; something that is state imperiled may be globally secure.

The information supporting these ranks is developed and maintained by the Maine Natural Areas Program (state ranks) and NatureServe (global ranks).

Rank	Definition
S1 G1	**Critically Imperiled** – At very high risk of extinction or elimination due to very restricted range, very few populations or occurrences, very steep declines, very severe threats, or other factors.
S2 G2	**Imperiled** – At high risk of extinction or elimination due to restricted range, few populations or occurrences, steep declines, severe threats, or other factors.
S3 G3	**Vulnerable** – At moderate risk of extinction or elimination due to a fairly restricted range, relatively few populations or occurrences, recent and widespread declines, threats, or other factors.
S4 G4	**Apparently Secure** – At fairly low risk of extinction or elimination due to an extensive range and/or many populations or occurrences, but with possible cause for some concern as a result of local recent declines, threats, or other factors.
S5 G5	**Secure** – At very low risk of extinction or elimination due to a very extensive range, abundant populations or occurrences, and little to no concern from declines or threats.
SX GX	**Presumed Extinct** – Not located despite intensive searches and virtually no likelihood of rediscovery.
SH GH	**Possibly Extinct** – Known from only historical occurrences but still some hope of rediscovery.
S#S# G#G#	**Range Rank** – A numeric range rank (e.g., S2S3 or S1S3) is used to indicate any range of uncertainty about the status of the species or ecosystem.
SU GU	**Unrankable** – Currently unrankable due to lack of information or due to substantially conflicting information about status or trends.
GNR SNR	**Unranked** – Global or subnational conservation status not yet assessed.
SNA GNA	**Not Applicable** – A conservation status rank is not applicable because the species or ecosystem is not a suitable target for conservation activities (e.g., non-native species or ecosystems.
Qualifier	**Definition**
S#? G#?	**Inexact Numeric Rank** – Denotes inexact numeric rank.
Q	**Questionable taxonomy that may reduce conservation priority** – Distinctiveness of this entity as a taxon or ecosystem type at the current level is questionable. The "Q" modifier is only used at a global level.
T#	**Infraspecific Taxon (trinomial)** – The status of infraspecific taxa (subspecies or varieties) are indicated by a "T-rank" following the species' global rank.

State Status: Endangered and Threatened are legal status designations authorized by statute. Please refer to MRSA Title 12, §544 and §544-B.

Status	Definition
E	**Endangered** – Any native plant species in danger of extinction throughout all or a significant portion of its range within the State or Federally listed as Endangered.
T	**Threatened** – Any native plant species likely to become endangered within the foreseeable future throughout all or a significant portion of its range in the State or Federally listed as Threatened.
SC	**Special Concern** – A native plant species that is rare in the State, but not rare enough to be considered Threatened or Endangered.
PE	**Potentially Extirpated** – A native plant species that has not been documented in the State in over 20 years, or loss of the last known occurrence.

Element Occurrence (EO) Ranks: Quality assessments that designate viability of a population or integrity of habitat. These ranks are based on size, condition, and landscape context. Range ranks (e.g., AB, BC) and uncertainty ranks (e.g., B?) are allowed. The Maine Natural Areas Program tracks all occurrences of rare plants and natural communities/ecosystems (S1-S3) as well as exemplary common natural community types (S4-S5 with EO ranks A/B).

Rank	Definition
A	**Excellent** – Excellent estimated viability/ecological integrity.
B	**Good** – Good estimated viability/ecological integrity.
C	**Fair** – Fair estimated viability/ecological integrity.
D	**Poor** – Poor estimated viability/ecological integrity.
E	**Extant** – Verified extant, but viability/ecological integrity not assessed.
H	**Historical** – Lack of field information within past 20 years verifying continued existence of the occurrence, but not enough to document extirpation.
X	**Extirpated** – Documented loss of population/destruction of habitat.
U	**Unrankable** – Occurrence unable to be ranked due to lack of sufficient information (e.g., possible mistaken identification).
NR	**Not Ranked** – An occurrence rank has not been assigned.

Visit the Maine Natural Areas Program website for more information
http://www.maine.gov/dacf/mnap

maine Department of Agriculture Conservation & Forestry
NATURAL AREAS

Plymouth Engineering, Inc.

8 Main Street – Unit C
Newport, Maine 04953
info@plymouthengineering.com
tel: (207) 257-2071 fax: (207) 257-2130

November 17, 2022 Job No. 22098

Department of Inland Fisheries and Wildlife
41 State House Station
Augusta, Maine 04333-0041

Application for Site Law Review ~ Litte River Subdivision ~ Belfast

To Whom it May Concern:

Plymouth Engineering is in the process of preparing a Site Law application for the Little River Residential Subdivision as a continuation of Little River Drive in Belfast. GPS coordinates: 44.405436, -69.018525

Enclosed is a site location map to assist you in locating the property. We are requesting your agency's review of the area proposed for this development for the potential of issues relating to the Department of Inland Fisheries and Wildlife.

We appreciate your help in reviewing the proposed project to determine whether there are any concerns or issues relative to the Department of Inland Fisheries and Wildlife.

Sincerely,

Aimee S Young

Aimee S Young
Project Engineer

Enclosure: Site Location Map
Site Plan

Plymouth Engineering, Inc.
8 Main Street Unit C
Newport, Maine 04953
info@plymouthengineering.com
tel: (207) 257-2071 fax: (207) 257-2130

May 9, 2023 Job No.22098

RSU #71
PO Box 325
Belfast, ME 04915

Application for Subdivision Approval ~ Litte River Subdivision ~ Belfast

To Whom it May Concern:

Plymouth Engineering is in the process of preparing a Subdivision Application to the City of Belfast for the Little River Residential Subdivision as a continuation of Little River Drive in Belfast. GPS coordinates: 44.405436, -69.018525

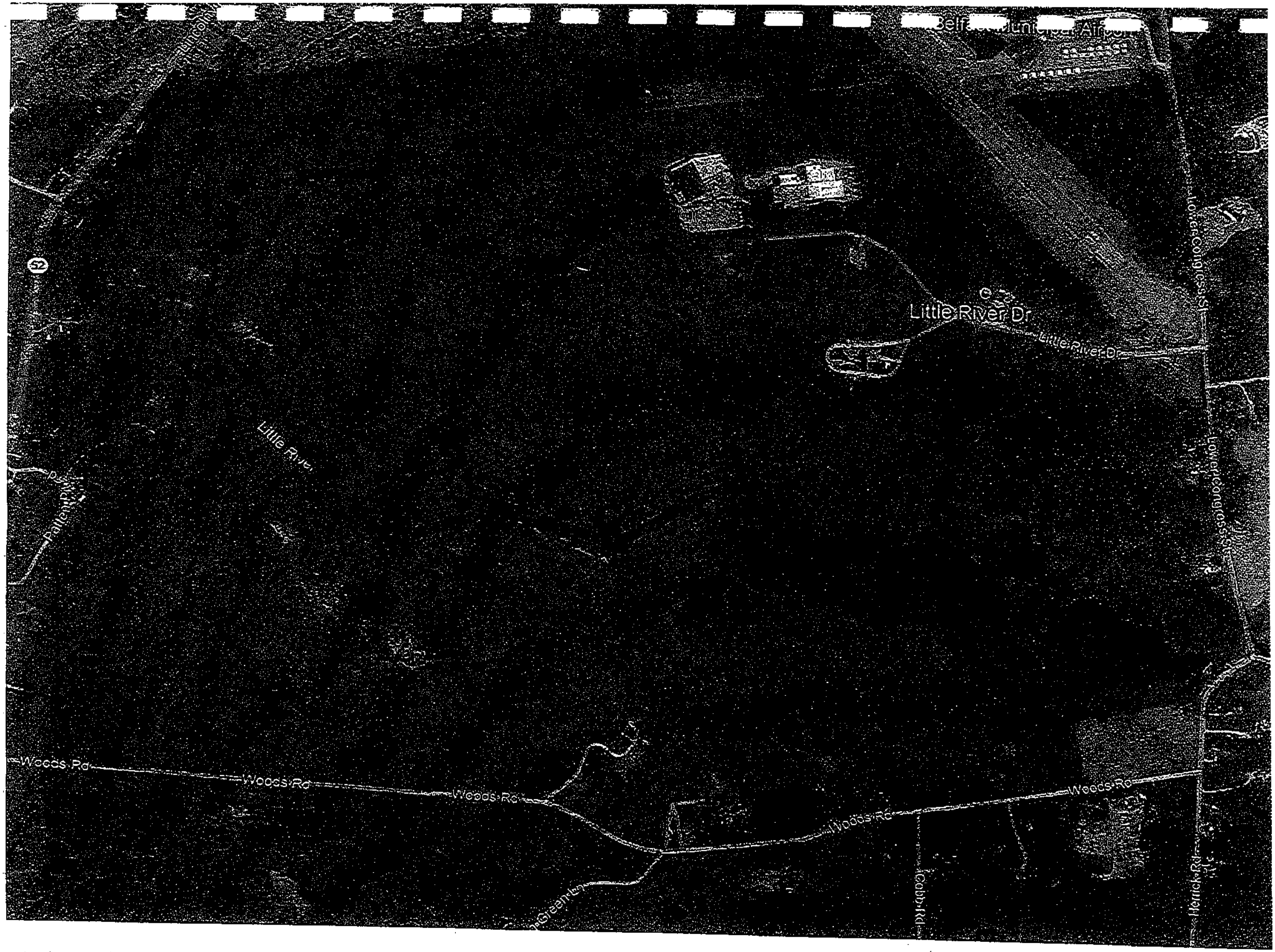
Part of the application process is to contact the school district to inform them of the proposed development. The application is for a 48-lot residential subdivision.

Sincerely,

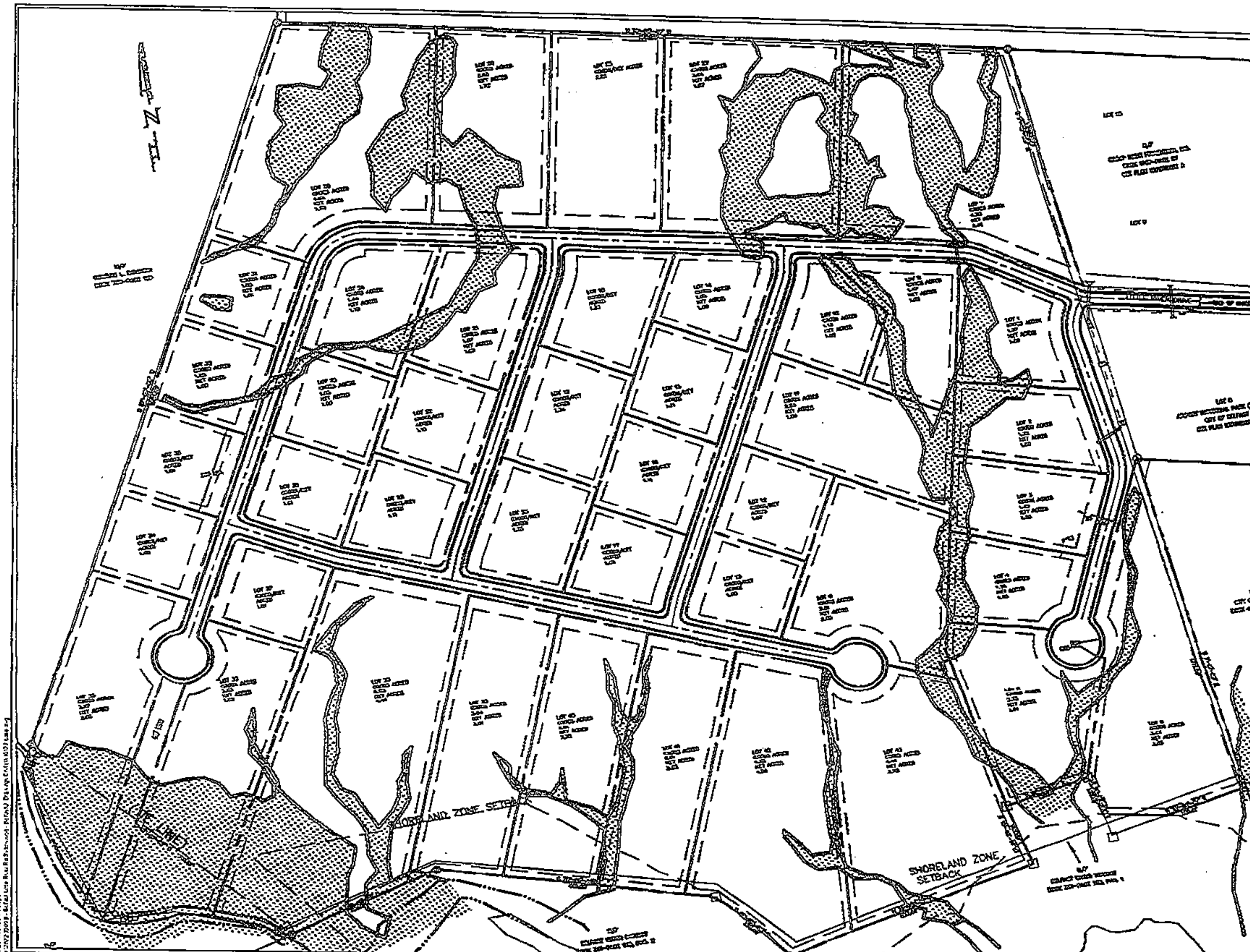
Aimee S Young

Aimee Young
Project Engineer

Enclosure: Site Location Map
Site Plan



Little River Dr
Little River Dr
Little River
Woods Rd
Woods Rd
Woods Rd
Woods Rd
Woods Rd
Cobb Rd
Herrick Rd
Lower Congress St
Lower Congress St
Patten Rd
52



GENERAL NOTES:

1. BOUNDARY AND SURVEY INFORMATION PROVIDED BY GOOD DEEDS INC., BELFAST, ME., AND CLIENT.

2. TOPOGRAPHY INFORMATION AND EXISTING PROPERTY FEATURES PROVIDED BY GOOD DEEDS INC., BELFAST, ME., AND CLIENT.

3. THE LOCATION SHOWN ON THIS PLAN FOR ABOVE AND UNDERGROUND UTILITIES, INCLUDING WATER, ELECTRICITY, TELEPHONE AND SANITARY SEWER ARE APPROXIMATE AND SHOULD BE VERIFIED BEFORE ANY EXCAVATION.

4. OVERHEAD UTILITY POLE LOCATIONS TO BE ESTABLISHED BY VERSANT POWER ALONG WITH TRANSFORMER PADS IF NEEDED FOR POWER TO UNITS.

5. FEDERAL, STATE, AND MUNICIPAL LAWS AND REGULATIONS REQUIRE ANY ONE PERFORMING ANY SORT OF EXCAVATION, INCLUDING DIGGING, BORING, BACKFILLING, OR ROUGH GRADING TO NOTIFY "DIG-SAFE" (1-800-344-7233) AND ANY APPLICABLE UTILITY THAT IS NOT A PARTICIPANT IN "DIG-SAFE", AT LEAST 72 HOURS PRIOR TO COMMENCING WORK.

6. FINAL LOCATION OF UTILITIES TO MEET APPLICABLE UTILITY STANDARDS.

7. WETLAND INFORMATION PROVIDED BY, MARK HAMPTON, CSS, PORTLAND, ME.

8. BOUNDARY SURVEY OF A PORTION OF THE PROPERTY OF COUNTY OF WALDO, WALDO COUNTY REGISTRY OF DEEDS, BOOK 2563-PAGE, LITTLE RIVER DRIVE, BELFAST, WALDO COUNTY, MAINE.

9. PLAN REFERENCES:
a. THE PLAN OF THE BELFAST WATER COMPANY DATED DECEMBER 1913 AND RECORDED AT THE WALDO COUNTY REGISTRY OF DEED IN PLAN DRAWER 1, PAGE 32.

b. REVISED SUBDIVISION PLAN OF THE AIRPORT INDUSTRIAL PARK (PHASE II) DATED DECEMBER 17, 1960 AND REVISED FEBRUARY 4, 1991 BY GOOD DEEDS, INC., RECORDED IN THE WALDO COUNTY REGISTRY OF DEEDS IN PLAN DRAWER 16, PAGE 6.

10. CERTIFICATION:
THIS SURVEY CONFORMS TO STANDARDS SET FORTH BY THE STATE BOARD OF LICENSURE FOR PROFESSIONAL LAND SURVEYORS WITH THE FOLLOWING EXCEPTIONS.

a. A SURVEYOR'S REPORT OF FINDINGS AND OPINIONS WAS NOT PREPARED.

LEGEND

- EXISTING CONTOUR MAJOR LINE
- EXISTING CONTOUR MINOR LINE
- EXISTING PROPERTY LINE
- PROPOSED SETBACK LINE
- ROAD CENTERLINE
- EXISTING EDGE OF PAVEMENT
- PROPOSED EDGE OF PAVEMENT
- WETLANDS
- WETLAND AREA
- EXISTING SHORELAND ZONE

GRAPHIC SCALE

LITTLE RIVER SUBDIVISION

LITTLE RIVER DR., BELFAST, WALDO CNTY MAINE 04915

Plymouth Engineering, Inc.

C1

APPENDIX F

STORMWATER

EROSION AND SEDIMENTATION CONTROL

EROSION AND SEDIMENT CONTROL PLAN

Pre-Construction Phase

A person who conducts, or causes to be conducted, an activity that involves filling, displacing or exposing soil or other earthen materials shall take measures to prevent unreasonable erosion of soil or sediment beyond the project site or into a protected natural resource as defined in 38 MRSA § 480-B. Erosion control measures must be in place before the activity begins. Measures must remain in place and functional until the site is permanently stabilized. Adequate and timely temporary and permanent stabilization measures must be taken. The site must be maintained to prevent unreasonable erosion and sedimentation. Minimize disturbed areas and protect natural downgradient buffer areas to the extent practicable.

BMP Construction Phase

A. Sediment barriers. Prior to the beginning of any construction, properly install sediment barriers at the edge of any downgradient disturbed area and adjacent to any drainage channels within the proposed disturbed area. Maintain the sediment barriers until the disturbed area is permanently stabilized.

B. Construction entrance: Prior to any clearing or grubbing, a construction entrance shall be constructed at the intersection with the proposed access drive and the existing roadway to avoid tracking of mud, dust and debris from the site.

C. Riprap: Since riprap is used where erosion potential is high, construction must be sequenced so that the riprap is put in place with the minimum delay. Disturbance of areas where riprap is to be placed should be undertaken only when final preparation and placement of the riprap can follow immediately behind the initial disturbance. Where riprap is used for outlet protection, the riprap should be placed before or in conjunction with the construction of the pipe or channel so that it is in place when the pipe or channel begins to operate. Maintain temporary riprap, such as temporary check dams until the disturbed area is permanently stabilized.

D. Temporary stabilization. Stabilize with temporary seeding, mulch, or other non-erodable cover any exposed soils that will remain unworked for more than 14 days except, stabilize areas within 100 feet of a wetland or waterbody within 7 days or prior to a predicted storm event, whichever comes first. If hay or straw mulch is used, the application rate must be 2 bales (70-90 pounds) per 1000 sf or 1.5 to 2 tons (90-100 bales) per acre to cover 75 to 90% of the ground surface. Hay mulch must be kept moist or anchored to prevent wind blowing. An erosion control blanket or mat shall be used at the base of grassed waterways, steep slopes (15% or greater) and on any disturbed soil within 100 feet of lakes, streams and wetlands. Grading shall be planned so as to minimize the length of time between initial soil exposure and final grading. On large projects this should be accomplished by phasing the operation and completing the first phase up to final grading and seeding before starting the second phase, and so on.

E. Vegetated waterway. Upon final grading, the disturbed areas shall be immediately seeded to permanent vegetation and mulched and will not be used as outlets until a dense, vigorous vegetative cover has been obtained. Once soil is exposed for waterway construction, it should be immediately shaped, graded and stabilized. Vegetated waterways need to be stabilized early during the growing season (prior to September 15). If final seeding of waterways is delayed past September 15, emergency provisions such as sod or riprap may be required to stabilize the channel. Waterways should be fully stabilized prior to directing runoff to them.

Permanent Stabilization Defined

A. Seeded areas. For seeded areas, permanent stabilization means an 90% cover of the disturbed area with mature, healthy plants with no evidence of washing or rilling of the topsoil.

B. Sodded areas. For sodded areas, permanent stabilization means the complete binding of the sod roots into the underlying soil with no slumping of the sod or die-off.
C. Permanent mulch. For mulched areas, permanent mulching means total coverage of the exposed area with an approved mulch material. Erosion control mix may be used as mulch for permanent stabilization according to the approved application rates and limitations.
D. Riprap. For areas stabilized with riprap, permanent stabilization means that slopes stabilized with riprap have an appropriate backing of a well-graded gravel or approved geotextile to prevent soil movement from behind the riprap. Stone must be sized appropriately. It is recommended that angular stone be used.
E. Agricultural use. For construction projects on land used for agricultural purposes (E.G., pipelines across crop land), permanent stabilization may be accomplished by returning the disturbed land to agricultural use.
F. Paved areas. For paved areas, permanent stabilization means the placement of the compacted gravel subbase is completed.
G. Ditches, channels, and swales. For open channels, permanent stabilization means the channel is stabilized with mature vegetation at least three inches in height, with well-graded riprap, or with another non-erosive lining capable of withstanding the anticipated flow velocities and flow depths without reliance on check dams to slow flow. There must be no evidence of slumping of the lining, undercutting of the banks, or down-cutting of the channel.

General Construction Phase
The following erosion control measures shall be followed by the contractor throughout construction of this project:

A. All topsoil shall be collected, stockpiled, seeded with rye at 3 pounds/1,000 sf and mulched, and reused as required. Silt fencing shall be placed down gradient from the stockpiled loam. Stockpile to be located by designation of the owner and inspecting engineer.
B. The inspecting engineer at his/her discretion, may require additional erosion control measures and/or supplemental vegetative provisions to maintain stability of earthworks and finish graded areas. The contractor shall be responsible for providing and installing any supplemental measures as directed by the inspecting engineer. Failure to comply with the engineer's directions will result in discontinuation of construction activities.
C. Erosion control mesh shall be applied in accordance with the plans over all finish seeded areas as specified on the design plans.
D. All graded or disturbed areas including slopes shall be protected during clearing and construction in accordance with the approved erosion and sediment control plan until they are adequately stabilized.
E. All erosion, and sediment control practices and measures shall be constructed, applied and maintained in accordance with the approved erosion and sediment control plan.
F. Areas to be filled shall be cleared, grubbed and stripped of topsoil to remove trees, vegetation, roots or other objectionable materials.
G. Areas shall be scarified to a minimum depth of 3 inches prior to placement of topsoil.
H. All fills shall be compacted as required to reduce erosion, slippage, settlement, subsidence or other related problems. Fill intended to support buildings, structures and conduits, etc., shall be compacted in accordance with local requirements or codes.
I. All fills shall be placed and compacted in layers not to exceed 8 inches in thickness.

J. Except for approved landfills or non-structural fills, fill material shall be free of brush, rubbish, rocks, logs, stumps, building debris and other objectionable materials that would interfere with or prevent construction of satisfactory lifts.
K. Frozen material or soft, mucky or highly compressible materials shall not be incorporated into fill slopes or structural fills.
L. Fill shall not be placed on a frozen foundation.
M. Seeps or springs encountered during construction shall be handled appropriately.
N. All graded areas shall be permanently stabilized immediately following finished grading.
O. Remove any temporary control measures, such as silt fence, within 30 days after permanent stabilization is attained. Remove any accumulated sediments and stabilize.

Permanent Vegetation

Permanent vegetative cover should be established on disturbed areas where permanent, long lived vegetative cover is needed to stabilize the soil, to reduce damages from sediment and runoff, and to enhance the environment.

Seedbed Preparation

A. Grade as feasible to permit the use of conventional equipment for seedbed preparation, seeding, mulch application and anchoring, and maintenance.
B. Apply limestone and fertilizer according to soil tests such as those offered by the University of Maine soil testing laboratory. Soil sample mailers are available from the local cooperative extension service office. If soil testing is not feasible on small or variable sites, or where timing is critical, fertilizer may be applied at the rate of 800 pounds per acre or 18.4 pounds per 1,000 square feet using 10-20-20 (n-p2o5-k2o) or equivalent. Apply ground limestone (equivalent to 50% calcium plus magnesium oxide) at a rate of 3 tons per acre (138 lb. Per 1,000 sq. Ft).
C. Work lime and fertilizer into the soil as nearly as practical to a depth of 4 inches with a disc, spring tooth harrow or other suitable equipment. The final harrowing operation should be on the general contour. Continue tillage until a reasonably uniform, fine seedbed is prepared. All but clay or silty soils and coarse sands should be rolled to firm the seedbed wherever feasible.
D. Remove from the surface all stones 2 inches or larger in any dimension. Remove all other debris, such as wire, cable, tree roots, concrete, clods, lumps or other unsuitable material.
E. Inspect seedbed just before seeding. If traffic has left the soil compacted; the area must be tilled and firmed as above.
F. Permanent seeding should be made 45 days prior to the first killing frost or as a dormant seeding with mulch after the first killing frost and before snowfall. When crown vetch is seeded in later summer, at least 35% of the seed should be hard seed (unscarified). If seeding cannot be done within the seeding dates, mulch according to the temporary mulching BMP and overwinter stabilization and construction to protect the site and delay seeding until the next recommended seeding period.
G. Following seed bed preparation, swale areas, fill areas and back slopes shall be seeded at a rate of 3 lbs./1,000 s.F. With a mixture of 35% creeping red Fescue, 6% red top, 24% Kentucky bluegrass, 10% perennial ryegrass, 20% annual ryegrass and 5% white Dutch clover.
H. Areas which have been temporarily or permanently seeded shall be mulched immediately following seeding.
I. Areas which cannot be seeded within the growing season shall be mulched for over-winter protection and the area should be seeded at the beginning of the growing season.

Winter Construction Phase

If an area is not stabilized with temporary or permanent measures by November 15, then the site must be protected with additional stabilization measures.

A. Permanent stabilization consists of at least 90% vegetation, pavement/gravel base or riprap.
B. Do not expose slopes or leave slopes exposed over the winter or for any other extended time of work suspension unless fully protected with mulch.
C. Apply hay mulch at twice the standard rate (150 lbs. Per 1,000 sf). The mulch must be thick enough such that the ground surface will not be visible and must be anchored.
D. Use mulch and mulch netting or an erosion control mulch blanket or all slopes greater than 8 % or other areas exposed to direct wind.
E. Install an erosion control blanket in all drainageways (bottom and sides) with a slope greater than 3 %.
F. See the vegetation measures for more information on seeding dates and types.
G. Winter excavation and earthwork shall be completed so that no more than 1 acre of the site is without stabilization at any one time.
H. An area within 100 feet of a protected natural resource must be protected with a double row of sediment barrier.
I. Temporary mulch must be applied within 7 days of soil exposure or prior to any storm event, but after every workday in areas within 100 feet from a protected natural resource.
J. Areas that have been brought to final grade must be permanently mulched that same day.
K. If snowfall is greater than 1 inch (fresh or cumulative), the snow shall be removed from the areas due to be seeded and mulched.
L. Loam shall be free of frozen clumps before it is applied.
M. All vegetated ditch lines that have not been stabilized by November 1, or will be worked during the winter construction period, must be stabilized with an appropriate stone lining backed by an appropriate gravel bed or geotextile unless specifically released from this standard by the department.

Maintenance and Inspection Phase

A. Contractor shall inspect disturbed and impervious areas, and erosion and stormwater control measures, areas used for storage that are exposed to precipitation, and locations where vehicles enter or exit the parcel at least once a week and before and after a storm event, prior to completion of permanent stabilization. A person with knowledge of erosion and stormwater must conduct the inspection. This person must be identified in the inspection log. If best management practices (BMPs) need to be modified or if additional BMPs are necessary, implementation must be completed within 7 calendar days and prior to any storm event (rainfall). All measures must be maintained in effective operating condition until areas are permanently stabilized.
B. A log (report) must be kept summarizing the scope of the inspection, name(s) and qualifications of the personnel making the inspection, the date(s) of the inspection, and major observations relating to operation of erosion and sedimentation controls and pollution prevention measures. Major observations must include: BMPs that need to be maintained; location(s) of BMPs that failed to operate as designed or proved inadequate for a particular location; and location(s) where additional BMPs are needed that did not exist at the time of inspection. Follow-up to correct deficiencies or enhance controls must also be indicated in the log and dated, including what action was taken and when.

STORMWATER MANAGEMENT PLAN

Little River Subdivision
Hermon, Maine

The following Stormwater Management Plan has been prepared for B&B Midcoast Properties, LLC to evaluate stormwater runoff and erosion control for the proposed development at the end of Little River Road in Belfast, Maine.

B&B Midcoast Properties, LLC (Applicant) proposes to develop a 100-acre, 48-lot residential subdivision in a PUD format in Belfast off the end of Little River Road. The project will be an extension of Little River Road's public way and public infrastructure. The proposed subdivision will include 6,927 feet of roadway, and public utilities for electric, communications, sewer, and water. The impervious area related to roadway construction is approximately 3.23 acres. The 48 total lots will be developed at an anticipated 2,848 sf impervious (house, garage and driveway) and 1096 sf landscaped (lawn approximately 30' surrounding the buildings and driveway) for an anticipated impervious area of 3.14 acres. The total anticipated impervious area is thus 6.37 acres. The total landscaped area is 5.98 acres for a total project developed area of 12.35 acres. This acreage of impervious area, used for storm water calculations, will likely never be reached, but is being used to be conservative. The be clear, the impervious areas and landscaped areas on the lots are included in the storm water treatment calculations.

Each lot has been designed, and will be constructed, to minimize impact to the surrounding area and existing natural resources.

Site Calculations

Total Lot Area	100 acres
Existing Impervious Area	0 acres
Total New Impervious Area	3.14 acres
Total Landscaped Area	5.98 acres
Total Developed Area	12.35 Ac

Existing Conditions

The site was forested, with no existing development, but has been recently harvested, as such has not had an opportunity to revegetated.

Proposed Development

The proposed development will include 3.14 acres of new impervious area. 3.23 acres will encompass the proposed 6,927 linear feet of road being proposed. The remaining 3.14 acres will be 48 new lots for residential development. The lots are being designed under the assumption of 2,848 square feet of impervious area and 1,096 square feet of landscaping per lot. The remainder of the lots will be left undeveloped. The project will temporarily disturb approximately 15 acres during construction and result in a total of 3.14 acres of impervious area and 12.35 acres of total developed land upon full build out.

Drainage Pattern

The applicant is proposing to use five properly sized wet ponds on the site to treat 95% of the non-liner impervious area on the site, and 75% of the linear impervious area on the site. As well as meeting the development standards of the Maine DEP. The existing topography on the site slopes in many different directions, but ultimately ends up on the agricultural drainage swales on the site. The applicant is proposing roadside ditching and surface flow to transport the water to the wetponds from the different areas on the site.

The stormwater ultimately ends up in the agricultural drainage swales, then more roadside ditches, then to the Shaw Brook.

Flooding

There is no known historically flooding on the site.

Soils

The soils within the project area are shown on the Web Soil Survey Map attached.

Water Quantity (Flooding)

	2 year	10 year	25 year	50 year
Pre-Development 1	19.20	34.80	47.28	58.65
Post-Development 1	15.56	27.96	37.53	40.65
Pre-Development 2	22.62	41.12	55.93	69.43
Post-Development 2	14.98	27.67	37.96	47.35
Pre-Development 3	35.65	64.63	87.82	108.95
Post-Development 3	22.96	43.55	71.43	100.99

The HydroCAD attached shows the post-development areas broken into the equivalent areas of the pre-development for comparison.

Water Quality (BMP Standard)

The water quality requirements will be met by wet ponds.

The structure will provide the required level of treatment for the project.

Attached is a spreadsheet showing the sizing.

Summary

Based on the results of this evaluation and verification, the proposed stormwater design is not expected to cause flooding, erosion or other significant adverse effects downstream of the site.

Prepared by:
PLYMOUTH ENGINEERING, INC.

Scott E. Braley, PE
President, Project Manager

STORM WATER TREATMENT CALCULATIONS

Project Name	Little River Subdivision
Project Number	22098
Date	3/22/2023

Total LINEAR impervious area for project =	140842	sq ft	3.23
Total LINEAR landscaped area for project =	207686	sq ft	4.77
Total LINEAR area of project =	348528	sq ft	
Total NONLINEAR impervious area for project =	136704	sq ft	3.14
Total NONLINEAR landscaped area for project =	52608	sq ft	1.21
Total NONLINEAR area of project =	189312	sq ft	
Total Impervious area for project =	**277546**	**sq ft =**	**6.37 acres**
Total developed area for project =	**537840**	**sq ft =**	**12.35 acres**

Linear Area Treatment

IMPERVIOUS AREA

Required area to be treated= 105631.50 sq ft

Treatment Area (#)	Area treated Imp (sq ft)	Description of treatment area Description		
WS1	0	USF		
WS2	6190	USF		
WS3	0	FORESTED BUFFER		
WS4	0	FORESTED BUFFER		
WS5	0	FORESTED BUFFER		
WS6	0	FORESTED BUFFER		
WS7	74879	WET POND		
WS8	28159	WET POND		
WS9	0	FORESTED BUFFER		
WS10	0	FORESTED BUFFER		
WS11	0	FORESTED BUFFER		
WS12	10366	USF		
WS13	0	FORESTED BUFFER		
Total A Treated =	**119594**	**sq ft**	**84.91%**	**≥ 75%**

DEVELOPED AREA

Required area to be treated= 174264.00 sq ft

Treatment Area (#)	Area treated Imp (sq ft)	Area treated Land (sq ft)	Description of treatment area Description
WS1	0	0	USF
WS2	6190	7560	USF
WS3	0	0	FORESTED BUFFER
WS4	0	0	FORESTED BUFFER
WS5	0	0	FORESTED BUFFER
WS6	0	0	FORESTED BUFFER
WS7	74879	107536	WET POND
WS8	28159	32272	WET POND
WS9	0	0	FORESTED BUFFER
WS10	0	0	FORESTED BUFFER
WS11	0	0	FORESTED BUFFER
WS12	10366	8845	USF
WS13	0	0	FORESTED BUFFER
Total	119594	156213	
Total Area Treated =		**275807**	**79.13%** **≥ 50%**

Nonlinear Area Treatment

IMPERVIOUS AREA

Required area to be treated= 129868.80 sq ft

Treatment Area (#)	Area treated Imp (sq ft)	Description of treatment area Description
WS1	5696	USF
WS2	8544	USF
WS3	5696	FORESTED BUFFER
WS4	2848	FORESTED BUFFER
WS5	2848	FORESTED BUFFER
WS6	2848	FORESTED BUFFER

WS7	68352	WET POND		
WS8	14240	WET POND		
WS9	2848	FORESTED BUFFER		
WS10	2848	FORESTED BUFFER		
WS11	2848	FORESTED BUFFER		
WS12	8544	USF		
WS13	2848	FORESTED BUFFER		
Total A Treated =	131008	**sq ft**	**95.83%**	**≥ 95%**

DEVELOPED AREA

Required area to be treated= 151449.60 sq ft

Treatment Area (#)	Area treated Imp (sq ft)	Area treated Land (sq ft)	Description of treatment area Description
WS1	5696	2192	USF
WS2	8544	3288	USF
WS3	5696	2192	FORESTED BUFFER
WS4	2848	1096	FORESTED BUFFER
WS5	2848	1096	FORESTED BUFFER
WS6	2848	1096	FORESTED BUFFER
WS7	68352	26304	WET POND
WS8	14240	5480	WET POND
WS9	2848	1096	FORESTED BUFFER
WS10	2848	1096	FORESTED BUFFER
WS11	2848	1096	FORESTED BUFFER
WS12	8544	3288	USF
WS13	2848	1096	USF
Total	131008	50416	
Total Area Treated =		**181424**	**95.83%** **≥ 80%**

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Vegetated Buffers

Name	Little River
Job Number	22098
Town	Belfast
Date	28-Mar-23

Description	Impervious Area	Landscaped Area	Soil Type	Flow Length	Flow width per acre (impervious)	Flow width per acre (landscaped)	Flow Width	Provided
WS3	5696	2192	C - sandy loam	100	150	45	22	22
WS4	2848	1096	C - sandy loam	100	150	45	11	11
WS5	2848	1096	C - sandy loam	100	150	45	11	11
WS6	2848	1096	C - sandy loam	100	150	45	11	11
WS9	2848	1096	C - sandy loam	100	150	45	11	11
ws10	2848	1096	C - sandy loam	100	150	45	11	11
WS11	2848	1096	C - sandy loam	100	150	45	11	11
WS13	2848	1096	C - sandy loam	100	150	45	11	11

sizing: impervious area (acres) * flow width per acre (impervious) + landscaped area (acres) * flow width per acre (lanscaped)

Project Name Little River Subdivision
Project Number 22098
Date 3/22/2023

WET POND CALCULATIONS

Treatment Area (#)	Area treated Imp (sq ft)	Area treated Land (sq ft)	Volume req'd (cubic feet)
WS7	143231	133840	32795

PERMANENT POOL

ELEV	AREA (Sq Ft)	STORAGE #	STORAGE (Ft^3)	CUMM. STORAGE (Ft^3)		
91	10769	0	0	0		
92	12206	1	11488	11488		
93	13700	2	12953	24441		
94	15252	3	14476	38917		
95	16858	4	16055	54972		
96	18521	5	17690	72661		
97	20242	6	19382	92043		4.55 mean depth
98	22018	7	21130	113173	≥	32795

Permanent Pool: 2" per sq ft of impervious area + 0.8" per sq ft of landscaped area

Treatment Area (#)	Area treated Imp (sq ft)	Area treated Land (sq ft)	Volume req'd (cubic feet)
WS7	143231	133840	16397

Channel Protection

ELEV	AREA (Sq Ft)	STORAGE #	STORAGE (Ft^3)	CUMM. STORAGE (Ft^3)		
98	27032	0	0	0		
99	29016	1	28024	28024		
100	31057	2	30037	58060.5	≥	16397
101	33154	3	32106	90166		
102	35308	4	34231	124397		

Channel Protection: 1" per sq ft of impervious area + 0.4" per sq ft of landscaped area

Gravel Trench

3' for every 1000' cf of channel protection — 58060.5 cubic feet provided

174 feet — **length of gravel trench**

Project Name Little River Subdivision
Project Number 22098
Date 3/22/2023

WET POND CALCULATIONS

Treatment Area (#)	Area treated Imp (sq ft)	Area treated Land (sq ft)	Volume req'd (cubic feet)
WS8	42399	37752	9583

PERMANENT POOL

ELEV	AREA (Sq Ft)	STORAGE #	STORAGE (Ft^3)	CUMM. STORAGE (Ft^3)		
108	4769	0	0	0		
109	5726	1	5248	5248		
110	6740	3	6233	11481		
111	7811	4	7276	18756		
112	8938	5	8375	27131		3.04 mean depth
113	10121	6	9530	36660	≥	9583

Permanent Pool: 2" per sq ft of impervious area + 0.8" per sq ft of landscaped area

Treatment Area (#)	Area treated Imp (sq ft)	Area treated Land (sq ft)	Volume req'd (cubic feet)
WS8	42399	37752	4792

Channel Protection

ELEV	AREA (Sq Ft)	STORAGE #	STORAGE (Ft^3)	CUMM. STORAGE (Ft^3)		
113	13554	0	0	0		
114	14945	1	14250	14249.5		
115	16392	2	15669	29918	≥	4792

Channel Protection: 1" per sq ft of impervious area + 0.4" per sq ft of landscaped area

3' for every 1000' cf of channel protection

90 feet **length of gravel trench**

29918 cubic feet provided

Little River
22098
3/28/2023

UNDERDRAIN SOIL FILTER CALCULATIONS

Treatment Area (#)	Area treated Imp (ft^2)	Area treated Land (ft^2)	Volume req'd (ft^3)	Depth of cell (in)	Area Required	Area Provided	5% - 2% rule	Volume prov. (ft^3)	Outlet Rate (gpm)
WS1	5696	2192	548	18	365	554	329	831	2.88
WS2	14734	10848	1589	18	1060	1217	954	1826	6.32
WS12	18910	12133	1980	18	1320	1413	1188	2120	7.34

Area Treated Imp = the impervious in the watershed treated by the USF
Area treated Land = the landscaped area in the watershed treated by the USF
Volume required = (impervious area * 1" of rainfall per square foot) + (landscaped area * 0.4" of rainfall per quare foot)
Depth of cell = design depth of storage
Area required = Volume required / Depth of cell
Area Provided = the average area of the USF shown on the plan
5% - 2% rule = the size of the USF must exceed 5% of the impervious area + 2% of the landscaped area
Volume provided = the "Depth of cell" * area provided * "depth of cell"
Outlet Rate = the rate of release for the USF to ensure complete drainage in 24 tyo 36 hours after a rainfall event

APPENDIX G

PLANS