CES INC Engineers ◆ Environmental Scientists ◆ Surveyors

LETTER OF TRANSMITTAL

Date: July 2, 2019 **JN:** 12340.002

To: Maine Department of Environmental Protection
ATTN: Jim Beyer
106 Hogan Road
Bangor, Maine 04401

Re: Whole Oceans, LLC
Bucksport, Maine

WE ARE SENDING YOU

☒ ATTACHED ☐ BY EMAIL ☐ UNDER SEPARATE COVER _____

COPIES	DATE	DESCRIPTION
2	July 2, 2019	Site Location of Development Act Permit Application / Transfer Application
1	July 2, 2019	Application Fee (Check #1324507860 - $5,405.50)

THESE ARE TRANSMITTED AS CHECKED BELOW:

☐ For Approval
☒ For Your Use
☐ As Requested
☐ For Review and Comment
☐ Other

☐ Approved as Submitted
☐ Approved as Noted
☐ Returned for Corrections
☐ For Bids Due_____20____

☐ Resubmit___Copies for Approval
☐ Submit___Copies for Distribution
☐ Return___Corrected Prints
☐ Prints Returned After Loan to CES

Remarks:

Copy To: Town of Bucksport (1)
Whole Oceans, LLC (1)

Signed: Jon Whitten

465 South Main Street
PO Box 639
Brewer, Maine 04412
T 207.989.4824
F 207.989.4881

Bank of America

Cashier's Check

No. 1324507860

Notice to Purchaser - In the event that this check is lost, misplaced or stolen, a sworn statement and 90-day waiting period will be required prior to replacement. This check should be negotiated within 90 days.

Void After 90 Days

30-1/1140
NTX

Date 06/27/19 02:20:45 PM

ONE CITY CENTER
0001 0002311 0122

Pay BANK OF AMERICA 5 FIVE 4 FOUR 0 ZERO 4 FOUR 50 CTS/CTS

$5,404.50

Five Thousand Four Hundred Four and 50/100 Dollars

To The Order Of TREASURER, STATE OF MAINE

Remitter (Purchased By): WHOLE OCEANS, LLC

Bank of America, N.A.
SAN ANTONIO, TX

AUTHORIZED SIGNATURE

00-53-3364B 11-2010

COPYBAN.CAPTURE® ANTI-FRAUD PROTECTION

⑈1324507860⑈ ⑆114000019⑆ 001641005065⑈

THE ORIGINAL DOCUMENT HAS A REFLECTIVE WATERMARK ON THE BACK. HOLD AT AN ANGLE TO VIEW WHEN CHECKING THE ENDORSEMENTS.

SITE LOCATION OF DEVELOPMENT ACT PERMIT APPLICATION

FOR

WHOLE OCEANS, LLC
BUCKSPORT, MAINE

WHOLE OCEANS™
MAINE SUSTAINABLE SALMON

Applicant: Whole Oceans, LLC
Attn: Jason Mitchell, President
PO Box 7561
Portland, ME 04112

JULY 2, 2019
JN: 12340.002

Application Prepared By:
CES, Inc.
465 South Main Street
P.O. Box 639
Brewer, ME 04412
207.989.4824

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G0 Cover Sheet
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C501 Site Details
C502 Site Details
C503 Site Details
C701 Stormwater Treatment Plan

Department of Environmental Protection
Bureau of Land & Water Quality
17 State House Station
Augusta, Maine 04333
Telephone: 207-287-3901
***

FOR DEP USE
ATS #_____
L- _____
Total Fees: _____
Date: Received _____

FORM A PAGE 1 **04/08**

SITE LOCATION OF DEVELOPMENT PERMIT APPLICATION 38 M.R.SA. §§481-490

PLEASE TYPE OR PRINT IN *INK ONLY*

This application is for: (CHECK THE ONE THAT APPLIES)	☐ 20 acre development ☒ Planning Permit ☐ Metallic Mining	☐ Marine Oil Terminal ☒ **Structure** ☐ Subdivision	☒ Major Amendment ☐ Minor Amendment
1. Name of Applicant:	**WHOLE OCEANS, LLC ATTN: JASON MITCHELL**	**6. Name of Agent: (if applicable)**	**CES, INC. ATTN: JON WHITTEN, JR. PE**
2. Applicant's Mailing Address:	**PO BOX 7561 PORTLAND, ME 04112**	**7. Agent's Mailing Address:**	**P.O. BOX 639 BREWER, ME 04412**
3. Applicant's Daytime Phone #:	**207-747-1400**	**8. Agent's Daytime Phone #:**	**207-989-4824**
4. Applicant's Fax #: (if available)	**NA**	**9. Agent's Fax #:**	**207-989-4881**
5. Applicant's *e-mail address*: (license will be sent via e-mail)	**jmitchell@wholeoceans.com**	**10. Agent's *e-mail address* (license will be sent via e-mail**	**jwhitten@cesincusa.com**

PROJECT INFORMATION

11. Name of Development:	**WHOLE OCEANS**						
12. Map and Lot #'s:	**Map #: 1**	**Lot #: 10-2, 89**	**13. Deed Reference #'s:**		**Book #: 6951**	**Page #: 556**	
14. Location of Project City/Town:	**BUCKSPORT**	**15. County:**	**HANCOCK**	**16. UTM Northing**	**44.57691**	**17. UTM Easting**	**-68.80373**
18. Brief Description of Project including total parcel size:	**REDEVELOPMENT CONSTRUCTION TO SUPPORT A LAND-BASED RECIRCULATING AQUACULTURE SYSTEM (RAS) FACILITY TO FARM ATLANTIC SALMON**						
19. Type of Direct Watershed: (Check all that apply)	☐ Lake not most at risk ☐ Lake most at risk ☐ Lake most at risk, severely blooming	☒ River, stream or brook ☐ Urban impaired stream ☐ Freshwater wetland	☐ Coastal wetland ☐ Wellhead or public water				
20. Name of Waterbody Project Site drains to:	**PENOBSCOT RIVER**						
21. Amount of Developed Area:	Total acres:**55.29**	Existing Developed area: **53.8 acres**	New Developed area: 1.49 acres				
22. Amount of Impervious Area:	Total acres:**41.15**	Existing Impervious area: 39.66 **acres**	New Impervious area: 1.49 acres				
23. Development started prior to obtaining a license?:	☐ **Yes** ☒ **No**						
24. Development or any portion of the site subject to enforcement action?	☐ **Yes** ☒ **No**	**If yes**, name of enforcement staff involved?					
25. Common scheme of development?:	☐ **Yes** ☒ **No**	**26. Title, Right or Interest:**	☒ **own** ☐ **lease**	☐ **purchase option** ☐ **written agreement**			
27. Natural Resources Protection Act permit required?:	☒ **Yes** ☐ **No**	**If yes:**	☒ **PBR**	☐ **Tier 2**	☐ **Tier**	☐ **Full Permit**	
28. Existing DEP Permit number (if applicable):	**L-07713-20-AF-A**						
29. Names of DEP staff person(s) present at the pre-application meeting:	**JAMES BEYER, KEN LIBBEY**						
30. Does agent have an interest in project? If yes, what is the interest?	☐ **Yes** ☒ **No**						

CERTIFICATIONS AND SIGNATURES LOCATED ON PAGE 2

08/08

IMPORTANT: IF THE SIGNATURE BELOW IS NOT THE APPLICANT'S SIGNATURE, ATTACH LETTER OF AGENT AUTHORIZATION SIGNED BY THE APPLICANT.

By signing below the applicant (or authorized agent), certifies that he or she has read and understood the following:

CERTIFICATIONS / SIGNATURES

"I certify under penalty of law that I have personally examined the information submitted in this document and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the information is true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment. I authorize the Department to enter the property that is the subject of this application, at reasonable hours, including buildings, structures or conveyances on the property, to determine the accuracy of any information provided herein.

Signed:_____ **Title** **Agent** **Date:** **July 1, 2019**

Notice of Intent to Comply with Maine Construction General Permit	**With this Site Law application form and my signature, I am filing notice of my intent to carry out work which meets the requirements of the Maine Construction General Permit (MCGP). I have read and will comply with all of the MCGP standards.** **If this form is not being signed by the landowner or lessee of the property, attach documentation showing authorization to sign.** **Signed**_____**(Agent)**_____ **Date** **July 1, 2019**

NOTE: You must file a MCGP Notice of Termination (Form K) within 20 days of completing permanent stabilization of the project site.

CERTIFICATION

The person responsible for preparing this application and/or attaching pertinent site and design information hereto, by signing below, certifies that the application for development approval is complete and accurate to the best of his/her knowledge.

Signature: _____

Name (print): Jon H. Whitten, Jr., PE

Date: July 1, 2019

Re/Cert/Lic No.: 10414

Engineer X

Geologist _____

Soil Scientist _____

Land Surveyor _____

Site Evaluator _____

Active Member of the Maine Bar _____

Professional Landscape Architect _____

Other _____

*"I hereby authorize the DEP to send me an electronically signed decision on the license I am applying for with this application by emailing the decision to the address located on the front page of this application (see #5 for the applicant and #10 for the agent)**. Do not sign if you elect to "opt out" or receive the decision via regular mail.***

Signed (Applicant)_____ ***Date:***_____

and/or

Signed (Agent)_____ ***Date:*** ***July 1, 2019***

DEPARTMENT OF ENVIRONMENTAL PROTECTION
Bureau of Land and Water Quality

FOR DEP USE

#L- _____
Fees Paid _____
Date Received _____

TRANSFER APPLICATION

For Site Location and Stormwater Projects

This form shall be used for the transfer of a Site Location permit or a Stormwater permit. All required fees **MUST** be paid when the transfer application is submitted to the Department. Please contact DEP for current fee schedule information. The fee schedule is updated every November 1. The fee is payable to "Treasurer, State of Maine".

Please type or print in black ink only

1. New Applicant Name:	Whole Oceans, LLC	**4. Name of Agent:**	CES, Inc. attn. Jon Whitten, Jr.
2. New Applicant's Mailing Address:	PO Box 7561 Portland, ME 04112	**5. Agent's Mailing Address:**	PO Box 639 Brewer, ME 04412
3. New Applicant's Phone # and Fax #:	207-747-1400	**6. Agent's Phone # and Fax #:**	207-989-4824
4. New Applicant e-mail address (REQUIRED):	jmitchell@wholeoceans.com	**7. Agent *e-mail address* REQUIRED)**	jwhitten@cesincusa.com
CURRENT PERMIT HOLDER			
8. Current Permittee Name:	Bucksport Mill, LLC	**10. Current Permittee Contact:**	Jeff McGlin
9. Current Permittee Address:	2 River Road Bucksport, ME	**11. Contact's Telephone Number:**	920-470-1061
12. Existing DEP Permit Number:		L-07713-20-AF-A	
LOCATION OF ACTIVITY			
13. Name of Project:	Whole Oceans, Bucksport, ME		
14. Name of Town where project is located:	Bucksport	**15. County:**	Hancock

All supporting documentation, outlined below, must be attached to this form and sent to the appropriate DEP office in Augusta, Portland or Bangor.

Bureau of Land and Water Quality 17 State House Station Augusta, ME 04333 Tel: (207) 287-3901	Bureau of Land and Water Quality 312 Canco Road Portland, ME 04103 Tel: (207) 822-6300	Bureau of Land and Water Quality 106 Hogan Road Bangor, ME 04401 (207) 941-4570

REQUIRED INFORMATION

1. Provide a breakdown of costs for any unfinished construction and for project operation. These must include costs resulting from compliance with the Board or Department Order.

2. Provide evidence of the availability and commitment of funds sufficient to complete any unfinished project construction and to operate the project as approved. Submit one of the following three:
   a. a letter of commitment from a financial institution or funding agency for a specified amount of funds and their use, or
   b. the most recent corporate annual report and supporting documents indicating sufficient funds to finance the development, or

c. copies of bank statements or other evidence indicating availability of the unencumbered funds, when the developer will personally finance the project.

3. Provide a narrative describing the new applicant's technical ability to complete or maintain this development.

4. Provide a complete copy of the deed, lease, purchase option or other documented evidence of the new applicant's title, right or interest in the development.

5. If the new applicant is a registered corporation, provide either a *Certificate of Good Standing* (available from the Secretary of State) or a statement signed by a corporate officer affirming that the corporation is in good standing.

6. Provide evidence of compliance with all public notice requirements (see attached Public Notice Requirements and Certification of Publication).

CERTIFICATIONS / SIGNATURES

Current Permittee Signature. By signing below the current permittee, certifies that he or she agrees to the transfer of the specified permit(s) to the new applicant named on this form.

Signed:_____ **Title**_____ **Date:**_____

Print or Type Name:_____

New Applicant Signature. By signing below the new applicant certifies that he or she is familiar with the DEP project file and will comply with the Board or Department Order being transferred, including all exisiting minor revisions and amendments to the Order and all attached conditions.

"I certify under penalty of law that I have personally examined the information submitted in this document and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the information is true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Further, I hereby authorize the DEP to send me an electronically signed decision on the license I am applying for with this application by e-mailing the decision to the electronic address located on the front page of this application (see #4 and #7)"
"

Signed: Jason P. Mitchell **Title** President **Date:** 7/1/19

Print or Type Name: JASON MITCHELL

WHOLE OCEANS™
MAINE SUSTAINABLE SALMON

RE: Letter of Agent Authorization: Whole Oceans, Bucksport, Maine

To Whom it May Concern:

Jon Whitten, Jr., P.E. of CES, Inc. is an authorized agent on behalf of Whole Oceans, in connection with any permit applications being submitted to the Maine Department of Environmental Protection and/or the Town of Bucksport for our proposed Whole Oceans aquaculture facility project in Bucksport, Maine.

Signed,

Jason Mitchell
Whole Oceans
President & Chief Operating Officer

PUBLIC NOTICE FILING AND CERTIFICATION

The DEP Rules, Chapter 2, require an applicant to provide public notice for all Site Location projects with the exception of minor revisions and condition compliance applications. In the notice, the applicant must describe the proposed activity and where it is located. **"Abutter"** for the purposes of the notice provision means any person who owns property that is BOTH (1) adjoining and (2) within one mile of the delineated project boundary, including owners of property directly across a public or private right of way.

1. **Newspaper:** You must publish the Notice of Intent to File in a newspaper circulated in the area where the activity is located. The notice must appear in the newspaper within 30 days prior to the filing of the application with the Department. You may use the attached Notice of Intent to File form, or one containing identical information, for newspaper publication and certified mailing.

2. **Abutting Property Owners:** You must send a copy of the Notice of Intent to File by certified mail to the owners of the property abutting the activity. Their names and addresses can be obtained from the town tax maps or local officials. They must receive notice within 30 days prior to the filing of the application with the Department.

3. **Municipal Office:** You must send a copy of the Notice of Intent to File and a **duplicate of the entire application** to the Municipal Office.

   ATTACH a list of the names and addresses of the owners of abutting property.

CERTIFICATION

By signing below, the applicant or authorized agent certifies that:

1. A Notice of Intent to File was published in a newspaper circulated in the area where the project site is located within 30 days prior to filing the application;
2. A certified mailing of the Notice of Intent to File was sent to all abutters within 30 days of the filing of the application;
3. A certified mailing of the Notice of Intent to File, and a duplicate copy of the application was sent to the town office of the municipality in which the project is located; and
4. Provided notice of, if required, and held a public informational meeting in accordance with Chapter 2, Rules Concerning the Processing of Applications, Section 14, prior to filing the application. Notice of the meeting was sent by certified mail to abutters and to the town office of the municipality in which the project is located at least ten days prior to the meeting. Notice of the meeting was also published once in a newspaper circulated in the area where the project site is located at least seven days prior to the meeting.

The Public Informational Meeting was held on **NOT APPLICABLE**.
Date

Approximately 0 members of the public attended the Public Informational Meeting.

Signature of Applicant or authorized agent

July 1, 2019
Date

PUBLIC NOTICE:
NOTICE OF INTENT TO FILE

Please take notice that Whole Oceans LLC, PO Box 7561, Portland, Maine 04112, 207-747-1400, is intending to file an application with the Maine Department of Environmental Protection pursuant to the Site Location of Development Act under the provisions of 38 M.R.S.A. §§ 481 thru 490 on or about July 1, 2019. The application is for the transfer of a portion of the existing Site Law permit for the property, located at 2 River Road in Bucksport, Maine, and an amendment of that permit for a long-term construction project that will redevelop the site with a new, land-based aquaculture facility.

A request for a public hearing or that the Board of Environmental Protection assume jurisdiction over this application must be received by the Department in writing, no later than 20 days after the application is found by the Department to be complete and is accepted for processing. A public hearing may or may not be held at the discretion of the Commissioner or Board of Environmental Protection. Public comment on the application will be accepted throughout the processing of the application.

The application will be filed for public inspection at the Department of Environmental Protection's office in Bangor during normal working hours. The application will also be available for inspection at the Bucksport Town Office, 50 Main Street, in Bucksport.

Written public comments on the application may be sent to the Department's regional office in Bangor where it is filed for public inspection: MDEP, Eastern Maine Regional Office, 106 Hogan Road, Bangor, Maine 04401.

FORM D

SUBMISSIONS CHECKLIST

If a provision is not applicable, put "NA"

Section 1. Development description

A. Narrative

X 1. Objectives and details

X 2. Existing facilities (with dates of construction)

B. Topographic map

X 1. Location of development boundaries

X 2. Quadrangle name

C. Construction plan

X 1. Outline of construction sequence (major aspects)

2. Dates

D. Drawings

X 1. Development facilities

X a. Location, function and ground area

X b. Length/cross-sections for roads

X 2. Site work (nature and extent)

X 3. Existing facilities (location, function ground area and floor area)

4. Topography

X a. Pre- and post-development (contours 2 ft or less)

X b. Previous construction, facilities and lot lines

X **Section 2. Title, right or interest** (copy of document)

Section 3. Financial capacity

X A. Estimated costs

B. Financing

____ 1. Letter of commitment to fund

2. Self-financing

____ a. Annual report

____ b. Bank statement

3. Other

____ a. Cash equity commitment

____ b. Financial plan

X c. Letter

____ 4. Affordable housing information

Section 4. Technical ability (description)

X A. Prior experience (statement)

X B. Personnel (documents)

Section 5. Noise

X A. Developments producing a minor noise impact (statement)

____ 1. Residential developments

____ 2. Certain non-residential subdivisions

____ 3. Schools and hospitals

X 4. Other developments

X a. Type, source and location of noise

X b. Uses, zoning and plans

____ c. Protected locations

X d. Minor nature of impact

____ e. Demonstration
____ B. Developments producing a major noise impact (full noise study)
____ 1. Baseline
____ a. Uses, zoning and plans
____ b. Protected locations
____ c. Quiet area
____ 2. Noise generated by the development
____ a. Type, source and location of noise
____ b. Sound levels
____ c. Control measures
____ d. Comparison with regulatory limits
____ e. Comparison with local limits

X **Section 6. Visual quality and scenic character**(narrative, description, visual impact analysis)

X **Section 7. Wildlife and fisheries** (narrative)

X **Section 8. Historic sites** (narrative)

X **Section 9. Unusual natural areas** (narrative)

Section 10. Buffers
X A. Site plan and narrative

Section 11. Soils
____ A. Soil survey map and report
____ 1. Soil investigation narrative
____ 2. Soil survey map
____ B. Soil survey intensity level by development type
1. Class A (High Intensity) Soil Survey
2. Class B (High Intensity) Soil Survey
3. Class C (Medium High-Intensity) Soil Survey
4. Class D (Medium Intensity) Soil Survey
X C. Geotechnical Investigation
____ D. Hydric soils mapping

Section 12. Stormwater management
____ A. Narrative
X 1. Development location
X 2. Surface water on or abutting the site
X 3. Downstream ponds and lakes
X 4. General topography
N/A 5. Flooding
X 6. Alterations to natural drainage ways
X 7. Alterations to land cover
X 8. Modeling assumptions
X 9. Basic standard
N/A 10. Flooding standard
X 11. General standard
X 12. Parcel size
X 13. Developed area
X 14. Disturbed area
X 15. Impervious area
____ B. Maps
X 1. U.S.G.S. map with site boundaries
X 2. S.C.S. soils map with site boundaries
X C. Drainage Plans (a pre-development plan and a post-development plan)

X 1. Contours
X 2. Plan elements
X 3. Land cover types and boundaries
X 4. Soil group boundaries
5. Stormwater quantity subwatershed boundaries
X 6. Stormwater quality subwatershed boundaries
7. Watershed analysis points
8. Hydrologic flow lines (w/flow types and flow lengths labeled)
X 9. Runoff storage areas
X 10. Roads and drives
X 11. Buildings, parking lots, and other facilities
X 12. Drainage system layout for storm drains, catch basins, and culverts
X 13. Natural and man-made open drainage channels
N/A 14. Wetlands
N/A 15. Flooded areas
N/A 16. Benchmark
X 17. Stormwater detention, retention, and infiltration facilities
X 18. Stormwater treatment facilities
N/A 19. Drainage easements
N/A 20. Identify reaches, ponds, and subwatersheds matching stormwater model
N/A 21. Buffers
N/A D. Runoff analysis (pre-development and post development)
1. Curve number computations
2. Time of concentration calculations
3. Travel time calculations
4. Peak discharge calculations
5. Reservoir routing calculations
X E. Flooding Standard
X 1. Variance submissions (if applicable)
X a. Submissions for discharge to the ocean, great pond, or major river
X i. Map
X ii. Drainage plan
X iii. Drainage system design
X iv. Outfall design
N/A v. Easements
b. Insignificant increase
i. Downstream impacts
c. Submissions for discharge to a public stormwater system
i. Letter of permission
ii. Proof of capacity
ii. Outfall analysis and design (pictures)
2. Sizing of storm drains and culverts
3. Stormwater ponds and basins
a. Impoundment sizing calculations
b. Inlet calculations
c. Outlet calculations
d. Emergency spillway calculations
e. Subsurface investigation report
f. Embankment specifications
g. Embankment seepage controls
h. Outlet seepage controls
i. Detail sheet
j. Basin cross sections
k. Basin plan sheet
4. Infiltration systems
a. Well locations map
b. Sand and gravel aquifer map
c. Subsurface investigation report with test pit or boring logs

____	d. Permeability analysis
____	e. Infiltration structure design
____	f. Pollutant generation and transport analysis
____	g. Monitoring and operations plan
____	i. Locations of storage points of potential contaminants
____	ii. Locations of observation wells and infiltration monitoring plan
____	iii. Groundwater quality monitoring plan
____	5. Drainage easement declarations.
X	F. Stormwater quality treatment plan peak discharge calculations
X	1. Basic stabilization plan
X	a. Ditches, swales, and other open channel stabilization
X	b. Culvert and storm-drain outfall stabilization
X	c. Earthen slope and embankment stabilization
X	d. Disturbed area stabilization
X	e. Gravel roads and drives stabilization
X	2. General Standard
X	a. Calculations for sizing BMP
X	b. Impervious area calculation
X	c. Developed area calculation
X	d. Summary spreadsheet of calculations
N/A	3. Phosphorus control plan
____	a. Calculations for the site's allowable phosphorus export
____	b. Calculations for determining the developed site's phosphorus export
____	c. Calculations for determining any phosphorus compensation fees
N/A	4. Offset Credits
____	a. Urban impaired stream
____	Offset credit calculation
____	b. Phosphorus credit determination
____	i. Location map
____	ii. Scaled plan
____	iii. Title and right
____	iv. Demolition plan
____	v. Vegetation plan
____	vi. Offset credit calculation
____	vii. Calculation for the new allowable export
X	5. Runoff treatment measures
X	a. structural measures
X	i. Design drawings and specifications
X	ii. Design calculations
X	iii. Maintenance plan
N/A	iv. TSS removal or phosphorus treatment factor determinations
X	v. Stabilization plan
____	b. Vegetated buffers
____	i. Soil survey
____	ii. Buffer plan
____	iii. Turnout and level spreader designs
____	iv. Deed restrictions
X	6. Control plan for thermal impacts to coldwater fisheries
X	7. Control plan for other pollutants
X	8. Engineering inspection of stormwater management facilities
X	G. Maintenance of common facilities or property
X	1. Components of the maintenance plan
X	A. Maintenance of facilities by owner or operator
X	1. Site owner or operator (name legally responsible party)
X	2. Contact person responsible for maintenance
X	3. Transfer mechanism

X 4. List of facilities to be maintained
X 5. List of inspection and maintenance tasks for each facility
X 6. Identifications of any deed covenants, easements, or restrictions
X 7. Sample maintenance log
N/A 8. Copies of any third-party maintenance contracts
N/A B. Maintenance of facilities by homeowner's association
1. Incorporation documents for the association
2. Membership criteria
3. Association officer responsible for maintenance
4. Establishment of fee assessment for maintenance work
5. Establishment of lien system
6. Reference to department order(s) in association charter
7. Transfer mechanism from developer to association
8. List of facilities to be maintained
9. Identification of any deed covenants, easements, or restrictions
10. Renewal of covenants and leases
11. List of inspection and maintenance tasks for each facility
12. Sample maintenance log
13. Copies of any third-party maintenance contracts
N/A C. Maintenance of facilities by municipality or municipal district
1. Identification of the municipal department or utility district
2. Contact person responsible for maintenance
3. Evidence of acceptance of maintenance responsibility
4. Transfer mechanism from developer
5. List of facilities to be maintained
6. List of inspection and maintenance tasks for each facility
7. Identifications of any deed covenants, easements, or restrictions
8. Sample maintenance log
X 2. General inspection and maintenance requirements
N/A a. Drainage easements
X b. Ditches, culverts, and catch-basin systems
X c. Roadways and parking surfaces
X d. Stormwater detention and retention facilities
X 1. Embankment inspection and maintenance
X 2. Outlet inspection and clean-out
X 3. Spillway maintenance
X 4. Sediment removal and disposal
N/A e. Stormwater infiltration facilities
1. Sediment protection plan
2. Infiltration rehabilitation plan
3. Sediment removal and disposal
4. Groundwater monitoring plan
N/A f. Proprietary treatment devices
N/A g. Buffers
N/A h. Other practices and measures

Section 13. Urban Impaired Stream Submissions

N/A 1. Off-site credits
N/A 2. Compensation fees (Urban Impaired Stream/Phosphorus)
N/A 3. Development impacts

Section 14. Basic Standards

X A. Narrative
X 1. Soil types
X 2. Existing erosion problems
X 3. Critical areas
N/A 4. Protected natural resources
X 5. Erosion control measures

X 6. Site stabilization
X B. Implementation schedule
X C. Erosion and sediment control plan
X 1. Pre-development and post-development contours
X 2. Plan scale and elements
X 3. Land cover types and boundaries
X 4. Existing erosion problems
X 5. Critical areas
X 6. Protected natural resources
X 7. Locations (general)
X 8. Locations of controls
X 9. Disturbed areas
X 10. Stabilized construction entrance
X D. Details and specifications (for both temporary and permanent measures)
X E. Design calculations
X F. Stabilization plan
X 1. Temporary seeding
X 2. Permanent seeding
X 3. Sodding
X 4. Temporary mulching
X 5. Permanent mulching
X G. Winter construction plan
X 1. Dormant seeding
X 2. Winter mulching
N/A H. Third-party inspections
____ 1. Inspector's name, address, and telephone number
____ 2. Inspector's qualifications
____ 3. Inspection schedule
____ 4. Contractor contact
____ 5. Reporting protocol

Section 15. Groundwater

X A. Narrative
____ 1. Location and maps
____ 2. Quantity
____ 3. Sources
____ 4. Measures to prevent degradation
X B. Groundwater protection plan
N/A C. Monitoring plan
____ 1. Monitoring points
____ 2. Monitoring frequency
____ 3. Background conditions
____ 4. Monitoring parameters
____ 5. Personnel qualifications
____ 6. Proof of training
____ 7. Equipment and methods
____ 8. Quality assurance/quality control
____ 9. Reporting requirements
____ 10. Remedial action plan
N/A D. Monitoring well installation report
____ 1. Well location map
____ 2. Elevation data
____ 3. Well installation data
____ 4. Well construction details
____ 5. Borehole logs
____ 6. Summary of depth measurements
____ 7. Characteristics of subsurface strata
____ 8. Well installation contract

____ 9. Schematic cross-sections
____ 10. Monitoring point summary table
____ 11. Protective casing
____ 12. On-site well identification

Section 16. Water supply

X A. Water supply method
N/A 1. Individual wells (evidence of sufficient/healthful supply)
____ a. Support of findings by well drillers
____ b. Support of findings by geologist
N/A 2. Common well(s) (reports)
____ a. Hydrogeology report
____ b. Engineering report
____ c. Well installation report
____ d. Long-term safe yield and zone of influence determination
____ e. Public water supply
____ i. Proposed well or wells
____ ii. Existing well or wells
____ iii. Water quality analysis
N/A 3. Well construction in shallow-to-bedrock areas
X 4. Additional information
X 5. Off-site utility company or public agency
X 6. Other sources
N/A B. Subsurface wastewater disposal systems (locations of systems and wells)
X C. Total usage (statement re: total anticipated water usage)

Section 17. Wastewater disposal (SEE WDL #W009190-6F-A-N & MEPDES PERMIT #ME0037478)

N/A A. On-site subsurface wastewater disposal systems (investigation results)
____ 1. Site plan
2. Soil conditions summary table
____ 3. Logs of subsurface explorations
4. Additional test pits, borings or probes
____ a. Soil conditions A
____ b. Soils with Profiles 8 and 9 parent material
____ c. Soil conditions D
____ d. Disposal field length 60 feet or greater
____ 5. 3-bedroom design
____ 6. Larger disposal systems
a. System design details
____ b. Plan view
____ c. Cross sections
____ d. Test pit data
____ e. Mounding analysis
N/A B. Nitrate-nitrogen impact assessment
____ 1. When required
____ a. Exempted____
i. Conventional systems meeting certain setbacks
____ ii. Denitrification systems
____ b. Special conditions and other exemptions
____ 2. Assumptions
____ a. Initial concentration
____ b. Background concentration
____ c. Contribution from development
____ d. Mixing and dilution
____ e. Severe-drought scenario
____ f. Wastewater flow to subsurface wastewater disposal fields

N/A 3. Assessment report minimum requirements
____ a. Narrative and calculations
____ b. Site plan
____ i. Well locations
____ ii. 10 mg/l and 8 mg/l isocons
____ iii. Groundwater contours and groundwater flow divides
____ c. References
N/A 4. Denitrification systems
____ a. Design plans and specifications
____ b. Installation information
____ c. Monitoring plan
____ d. Maintenance
____ e. Backup system
X D. Municipal facility or utility company letter
X E. Storage or treatment lagoons

X **Section 18. Solid waste** (list: type, quantity, method of collection and location)
X A. Commercial solid waste facility (final disposal location)
X B. Off-site disposal of construction/demolition debris (final disposal location)
C. On-site disposal of woodwaste/land clearing debris
N/A 1. Applicability of rules (evidence re: applicability of rules)
2. Burning of wood wastes
____ a. Delineation on site plan
____ b. Plans for handling unburned woodwaste and woodash
____ c. Evidence of capacity to accept waste (approved facility)
____ d. Usage of materials
____ e. Data on mixing ratios and application rates
X D. Special or Hazardous Waste

Section 19. Flooding
X A. Explanation of flooding impact
X B. Site plan showing 100-year flood elevation
____ C. Hydrology analysis
X D. FEMA flood zone map with site boundaries

Section 20. Blasting
X A. Site Plan or map
X B. Report
1. Assessment
2. Blasting plan

Section 21. Air emissions (narrative and summary)
X A. Point and non-point sources identified
X B. Emission components (point sources)

Section 22. Odors
X A. Identification of nature/source
X B. Estimate of areas affected
X C. Methods of control)

X **Section 23. Water vapor** (narrative)

X **Section 24. Sunlight** (statement and drawing, if required)

Section 25. Notices
X A. Evidence that notice sent
X B. List of abutters for purposes of notice

Supplemental requirements for Wind Energy Developments only:

Section 26. Shadow flicker

N/A A. A copy of the Windpro Analysis and associated narrative

Section 27. Public Safety

N/A A. Design safety certifications or other documents attesting to the safety of the wind turbine equipment.
N/A B. Evidence pertaining to overspeed controls
N/A C. Site plan documenting safety setbacks zones for each wind turbine
N/A D. Other documents as necessary to demonstrate safety considerations

Section 28. Tangible Benefits

N/A A. Narrative demonstration of tangible benefits

Section 29. Decommissioning

N/A A. Description of implementation trigger for decommissioning
N/A B. Description of extent of decommissioning
N/A C. Itemization of total cost to complete decommissioning
N/A D. Demonstration of financial assurance for completeness of decommissioning plan

Section 30. Generating Facility-visual Quality and Scenic Character

N/A A. (narrative, description, visual impact analysis)

SECTION 1

DEVELOPMENT DESCRIPTION

Narrative

Whole Oceans, LLC (Whole Oceans) plans to develop a portion of the site of the former Bucksport Mill (Mill) located on Main Street (Route 15), just north of the Town center. The Mill was first opened in 1930 and produced pulp and paper for over 80 years. A Site Location of Development Act (SLODA) permit (#L-1415-26-A-X) was issued on February 12, 1975 for an expansion of the Mill complex. The Mill continued to operate until it was permanently closed in late 2014. At that time the property was purchased by American Iron and Metal (AIM) with a plan to recycle a majority of the existing site. AIM received a SLODA Permit Amendment (#L-07713-20-AF-A) to demolish existing buildings on the site and later amended the permit to allow for a subdivision of the land. Whole Oceans purchased a majority of the property recently subdivided by AIM to develop a state-of-the-art, land-based Recirculating Aquaculture System (RAS) Facility (Facility) to produce Atlantic Salmon. An amendment and permit transfer of the SLODA Permit, as well as a NRPA Permit by Rule, will be required for this project. To that end, Whole Oceans is applying for a SLODA Long-term Construction Project Permit for a Phased Project under Chapter 380 (Planning Permit) and a NRPA Permit-by-Rule for soil disturbance within 75-feet of the Penobscot River.

As a whole, the project will include changes in land elevation and the construction of buildings, underground utilities, paved accessways and maneuvering areas, stormwater management facilities, etc. The project will also include water supply and wastewater treatment systems that will include new connections to domestic water and sewer lines, upgrades to a raw freshwater supply line from Silver Lake, upgrades to the salt water intake/pump system, re-connection to existing discharge pipe(s) in the Penobscot River, new water treatment system, new wastewater treatment system, etc. All of this will be broken out into a series of construction phases, as it is anticipated that full build out may take 10 years or more. Permitting design drawings illustrating details of the proposed Facility are included at the back of this application.

Because aspects of the project are expected to take at least ten years for substantial completion, it qualifies as a long-term construction project under Chapter 380. Descriptions of each construction Phase, which will be built in the order presented, are included below:

Earthwork Development Stage:

- **Earthwork Phase** – This phase will include demolition of existing underground foundations and piping, demolition of existing water storage tanks, removal of ledge and other native soils and grading of the site in preparation for the Freshwater Building and South Grow-out Building Phases (see below). It is expected that excavation within the proposed building foundation areas will be brought down to elevation 41 feet. Other areas will likely remain higher in elevation, depending on final utility piping locations and elevations. Low-point sedimentation basins will be installed within the excavation areas

and other erosion control measures will be installed around the site to control erosion during construction (see Section 14). Parking and staging for construction will be located easterly of Route 15 on an existing paved area, formerly used for parking by the Mill. This Phase will result in approximately:

- **22 acres (958,320 square feet (S.F.)) of total disturbance area.**

Aquaculture Development Phase:
This development stage, which consists of several parts, represents the construction of the facilities that will support the aquaculture use of the property. It is expected the Facility will employ approximately 150 people once this development phase is complete. This development stage is broken out as follows:

- **Freshwater Building Phase** – The Freshwater Building will house aquaculture systems to support the hatching of fish eggs and a series of freshwater and saltwater systems to support fish growth for approximately the first 10 months of their life. It is also expected that administration and operational office space will be in this building. This phase will include installation, connection to, and construction of:

  - Underground utilities (domestic water, domestic sewer, raw freshwater, saltwater, power and communications wiring, natural gas lines, etc.),
  - Improvements to the north and south accessways,
  - Conversion of the existing stormwater pond to a wet pond,
  - Freshwater Building and related aquaculture systems,
  - Water Treatment System,
  - Wastewater Treatment System,
  - Water Storage Tank re-conditioning, and
  - Power Generation pads, buildings and equipment.
  - This Phase will result in approximately:
    - **282,000 S.F. of total impervious area (90,000 S.F. of building area), and**
    - **340,000 S.F. of total redeveloped area.**

- **South Grow-out Building Phase** – The South Grow-out Building will house large RAS units and supporting infrastructure to raise the salmon to a size suitable for processing. Warehouse space for fish feed and other operational support items, as well as a processing area, are expected to also be located in this building. This phase will include the construction of the South Grow-out building and related aquaculture systems, a continuation of utility installation, and a paved accessway around the building. This Phase will result in approximately:
  - **460,000 S.F. of total impervious area and redeveloped area (350,000 S.F. of building area).**

- **North Grow-out Building Phase** – The North Grow-out Building will house additional RAS units and supporting infrastructure and will be very similar to the South Grow-out Building, minus any redundant areas, such as warehouse space. This phase will include additional earthwork in the northern woodyard area, the construction of the North Grow-out Building, North Support Functions Building, and related aquaculture systems, as well as continuation of utilities, and paved maneuvering areas. This Phase will result in approximately:
    - **520,000 S.F. of total impervious area and redeveloped area (430,000 S.F. of building area)**

Ancillary Buildings Development Phase:

- **Ancillary Buildings Phase** – This Phase will include the construction of buildings that will support the aquaculture use in the future. These buildings are proposed to be located northerly of the North Grow-out Building and easterly of Route 15. Although the specific use of each building is not defined at this point, it is expected that this Phase will result in approximately:
    - **110,000 S.F. of total impervious area and redevelopment area (75,000 S.F. of building area), and**
    - **100 additional people working on and visiting the facility.**

Summation of Development Phasing:
The applicant is seeking a phased approach approval for an aquaculture facility ultimately requiring at full build-out:

- 945,000 S.F. (21.69 acres) of building area,
- 1,372,000 S.F. (31.50 acres) of total impervious area,
- 1,430,000 S.F. (32.83 acres) of total developed area, and
- Additional infrastructure to support approximately 200 employees/visitors on land owned by the applicant.

Stormwater Management and Erosion Control:
Because the majority of the project is to be constructed on land that is currently developed, it is considered a redevelopment project by the MDEP. According to the Redevelopment Calculation Table located within MDEP's Chapter 500, this project is required to treat 50% of the impervious area over the redevelopment area and 95% of the new imperious area over previously undeveloped land. Only approximately 65,000 S.F. of new impervious area is to be located on previously undeveloped land. This area is associated with Ancillary Buildings 2 and 3, , which is part of the Ancillary Buildings Phase, located adjacent to the North Access Drive into the site.

A wetpond will be constructed during the Freshwater Building Phase to treat stormwater runoff for the majority of the total development. The proposed wetpond is located to the west of the development, in the location of an existing stormwater pond. The intent of the stormwater management treatment system and wetpond is to collect runoff from the impervious and developed areas associated with the Freshwater Building and South Grow-out Building Phases, to the greatest extent possible. This will mean that little to no additional stormwater treatment will be required for development associated with the other Phases of the Planning Permit.

Erosion control measures will be in place prior to the start of any construction phase. Earthwork contractors will keep open working areas to a minimum by establishing semi-permanent stabilization in disturbed areas that will not be actively worked for an extended period of time. These erosion control measures will be installed in accordance with the Erosion Control Plan enclosed in Section 14 of this application. Once construction is complete and permanent stabilization of disturbed areas has occurred, the erosion control measures will be removed.

Topographic Map and Plans

A copy of a U.S.G.S. 7.5-minute topographic map of the area is included in this section. Also included in this section is an 11x17 plan that shows the extent of the applicant's property. Site plans and details are included at the end of the application, and a stormwater treatment plan is located in Section 12.

Construction Plan:

Earthwork Development Phase:

1. Install erosion control measures	November 2019
2. Retrofit Sediment Basin	November 2019
3. Foundation and Utility Demolition	November – December 2019
4. Excavation, Blasting, Processing	December 2019 – March 2020
5. Semi-Permanent Erosion Control	April 2020

Aquaculture Development Phase:

Freshwater Building Phase: April 2020 through October 2020

1. Erosion Control Installation
2. Raw Freshwater Utility Installation
3. Saltwater Pump House Upgrade
4. Saltwater/Wastewater Utility Installation
5. Domestic Water/Sewer Utility Installation
6. Miscellaneous Utility Installation
7. Foundation Footings/Wall construction
8. RAS Piping installation
9. Stormwater Pond Construction
10. Stormdrain Piping and Catch Basin Installation
11. Water Treatment System Installation
12. Wastewater Treatment System Installation

13. Water Storage Tank upgrades/piping
14. Power generation installation
15. Concrete Pad/Wall Construction
16. Finish Grading
17. Building Construction
18. Base course of pavement
19. Semi-Permanent Erosion Control

South Grow-Out Building Phase: October 2020 through October 2021.

1. Erosion Control Installation
2. Miscellaneous Utility Installation
3. Foundation Footings/Wall construction
4. RAS Piping installation
5. Stormdrain Piping and Catch Basin Installation
6. Power Generation Expansion
7. Concrete Pad/Wall Construction
8. Finish Grading
9. Building Construction
10. Base course of pavement
11. Semi-Permanent Erosion Control

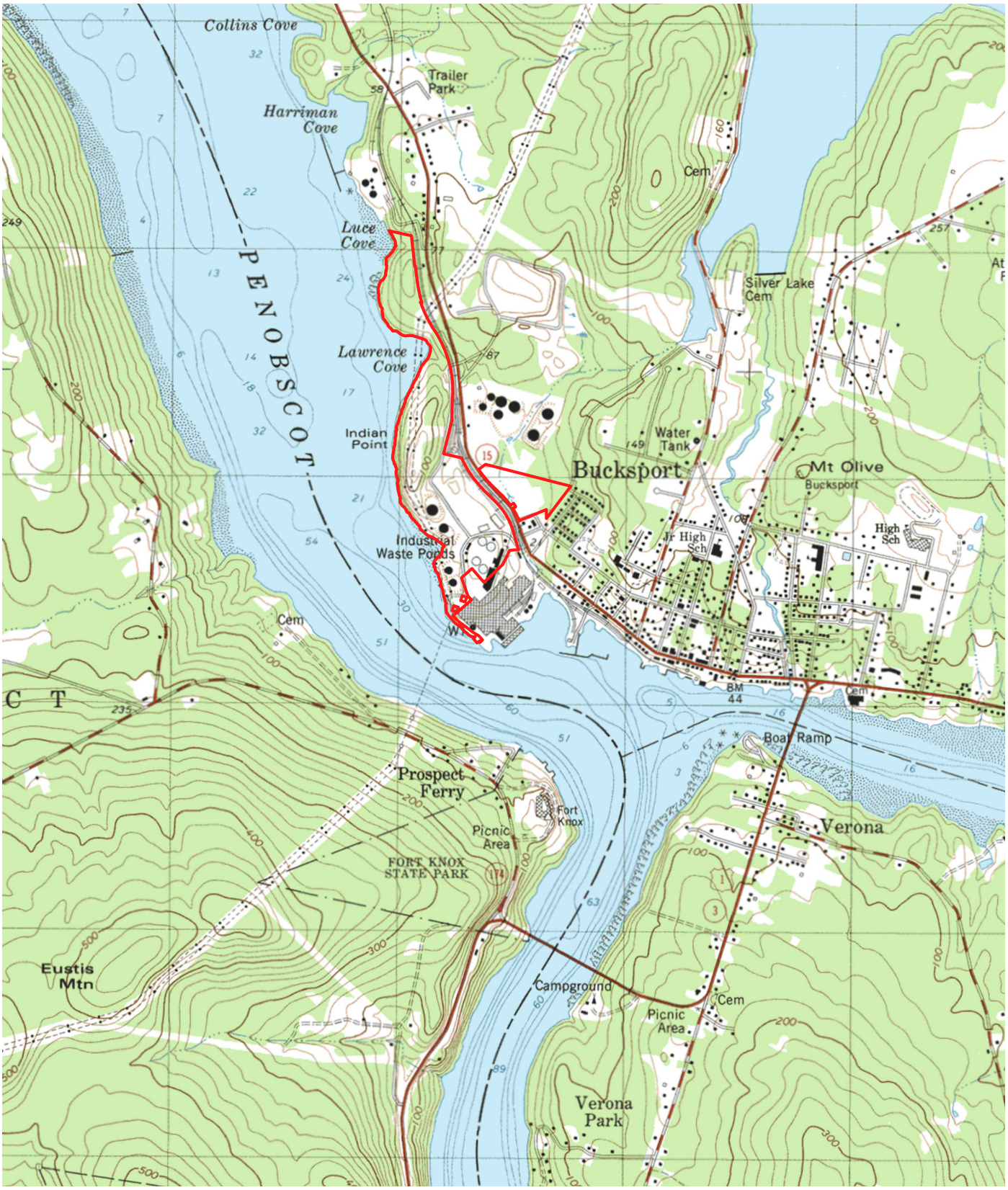
North Grow-Out Building Phase: To be determined, but currently anticipated to be 2025 - 2026.

1. Erosion Control Installation
2. Excavation, blasting, processing
3. Miscellaneous Utility Installation
4. Foundation Footings/Wall construction
5. RAS Piping installation
6. Stormdrain Piping and Catch Basin Installation
7. Power Generation Expansion
8. Concrete Pad/Wall Construction
9. Finish Grading
10. Building Construction
11. Base course of pavement
12. Semi-Permanent Erosion Control

Ancillary Building Development Phase: To be determined, but currently anticipated to be:

Building #1	2028
Building #2	2029
Building #3	2030

Terrain Navigator.© Maptech 800-627-7236



SOURCE:
U.S.G.S. TOPOGRAPHIC QUADRANGLE
BUCKSPORT
@ 1:24,000

CES INC

WHOLE OCEANS LLC
BUCKSPORT, MAINE
LOCATION MAP

2019-06-12
12340.002

Figure 1: Property Boundary

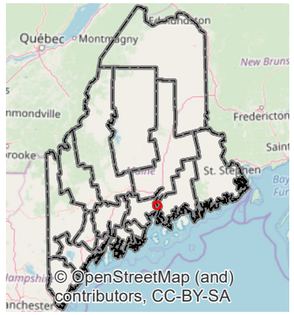
W
S
N
E

500 250 0 500
Feet

Legend

Property Boundary

MAINE



Project Title: Whole Oceans, LLC
Project Description: Figure 1
Address: Bucksport, Maine

Project No.: 12340.002
By: NAI
Date: 2/13/19
Updated: 7/1/2019
By: [jszillery]

MAP NOTES:

1. AERIAL PHOTO BASE MAP FROM IMAGERY IS 1-M 2013 NAIP IMAGERY BY USDA, FSA, TOPOGRAPHIC QUAD FROM ESRI, 2015.

2. FEATURES DEPICTED ON THIS PLAN WERE LOCATED USING A MAPPING GRADE SUB-METER CAPABLE GPS/GNSS RECIEVER.

3. MAP IS PROJECTED USING UTM ZONE19 COORDINATES, AND REFERENCES THE NORTH AMERICAN DATUM OF 1983 (NAD83).

4. NORTH ARROW IS ORIENTED TO GRID NORTH IN ALL MAP EXTENTS DEPICTED HEREIN.

CES INC
Engineers • Environmental Scientists • Surveyors

MXD: P:\12340-Whole Oceans LLC\002-Bucksport Task Orders-MET\07-GIS_Data\MXD\All Maps\Figure 1 - Property Boundary.mxd

SECTION 2

TITLE, RIGHT OR INTEREST

Please refer to the attached Quitclaim Deed and Release and Cross Easement Indenture documents provided by Whole Oceans, LLC.

BOOK: OR 6951 PAGE:556, # OF PGS: 61
05/21/2019 03:22:15 PM INSTR#: 2019005787
JULIE A. CURTIS, REGISTER OF DEEDS
HANCOCK COUNTY MAINE
MAINE REAL ESTATE TRANSFER TAX PAID
eRecorded Document

DLN: 1001940057946

QUITCLAIM DEED WITH COVENANT

BUCKSPORT MILL LLC, a Delaware limited liability company, f/k/a Verso Bucksport LLC, f/k/a CMP Bucksport LLC, with a mailing address of 2 River Road, Bucksport, Maine 04416 ("Mill" or "Grantor"), for consideration paid, grants to **WHOLE OCEANS, LLC**, a Delaware limited liability company, with a mailing address of P.O. Box 7561, Portland, Maine 04112 ("WO" or "Grantee"), with Quitclaim Covenant, certain real property and easements, together with any improvements appertaining thereto, located in the Towns of Bucksport and Orland, Hancock County, Maine, more particularly described on **Exhibits A and B** attached hereto and made a part hereof.

[Signature Pages Follow]

IN WITNESS WHEREOF, Mill has caused this instrument to be executed and sealed in its name by Jeff McGlin, its Authorized Signatory, duly authorized, as of this 21st day of May, 2019.

WITNESS:

BUCKSPORT MILL LLC, a Delaware limited liability company f/k/a Verso Bucksport LLC f/k/a CMP Bucksport LLC

By: _____
Jeff McGlin, Authorized Signatory

STATE OF MAINE
COUNTY OF CUMBERLAND, ss.:

On May 21st, 2019, personally appeared the above-named Jeff McGlin, Authorized Signatory of the said Bucksport Mill LLC, and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of said limited liability company.

Before me,

_____
~~Notary Public~~/Attorney at Law
Print Name: Bonnie L. Martindick
My Commission Expires:

LIMITED JOINDER

The undersigned, Whole Oceans, LLC, for itself and its successors and assigns, hereby joins in this Deed for the purpose of confirming its acceptance to the terms and conditions applicable to the easement described as Parcel 4 on Exhibit A attached hereto.

WHOLE OCEANS, LLC, a Delaware limited liability company

Witness

By: Dale Reicks
Name: DALE REICKS
Its: MANAGER

STATE OF Iowa
COUNTY OF Cerro Gordo, ss

On May 20, 2019, personally appeared before me the above-named Dale Re, as Manager of Whole Oceans, LLC, a Delaware limited liability company, and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of said limited liability company.

Name:
Notary Public
my commission expires 8-15-21

LIMITED JOINDER

The undersigned, Bucksport Generation LLC, a Delaware limited liability company, hereby joins in this Deed for the limited purpose of joining in the grant of the water supply easement described as Parcel 4 herein, to the extent, if any, of the undersigned's interest in and to the Easement Areas described as said Parcel 4, without any representation or warranty of any kind.

BUCKSPORT GENERATION LLC, a Delaware limited liability company

Witness

By: _____
Jeff McGlin, Authorized Signatory

STATE OF MAINE
COUNTY OF CUMBERLAND, ss.:

On May 20, 2019, personally appeared the above-named Jeff McGlin, Authorized Signatory of the said Bucksport Generation LLC, and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of said limited liability company.

Before me,

_____
~~Notary Public~~/Attorney at Law
Print Name: Bonnie L. Martindale
My Commission Expires:

EXHIBIT A

LEGAL DESCRIPTION OF THE REAL PROPERTY

The following lots or parcels of land, with the buildings and improvements thereon, and the following easement rights, situated in the Towns of Bucksport and Orland, County of Hancock, and State of Maine, being more particularly described as follows:

PARCEL 1: LOT 2

A certain lot or parcel of land with the improvements thereon situate in the Town of Bucksport, County of Penobscot, State of Maine, more particularly described as follows:

beginning at a pavement nail set flush in 2018 at the intersection of the westerly sideline of the Maine Central Railroad right of way, and the centerline of the paved entrance gate to the former Bucksport Mill, which pavement nail is also the northeast corner of Lot 4 as shown on a plan entitled "Amended Subdivision Plan for Bucksport Mill, LLC Bucksport Generation LLC 2 River Road – Bucksport, Hancock County, Maine," sheet 1 of 3, dated March 19, 2019, and recorded in the Hancock County Registry of Deeds as Mapfile 46, Number 11 (the "Subdivision Plan Amended Sheet 1"), which pavement nail is located with reference to the Maine Coordinate System of 1983, East Zone, with a Northing of 331,742.24 U.S. Survey Feet and an Easting of 905,065.76 U.S. Survey Feet;

thence along the north line of said Lot 4 along the following courses and distances:

- S 85°29'02" W a distance of 126.21 feet to an iron railroad spike set in 2018;
- S 25°47'02" W a distance of 226.65 feet to a pavement nail set in 2018;
- S 46°39'50" W a distance of 141.79 feet to the northeast corner of Lot 3 as shown on the Subdivision Plan Amended Sheet 1, which corner was witnessed by a wooden grade stake set in 2018 and said corner is located with reference to the Maine Coordinate System of 1983, East Zone, with a Northing of 331,430.91 U.S. Survey Feet and an Easting of 904,738.22 U.S. Survey Feet;

Thence along the north line of said Lot 3 S 46°39'50" W a distance of 234.48 feet to an iron rod set in 2018 in the southeast corner of land known as the CMP Substation Lot being described in the following deeds to Central Maine Power recorded in the Hancock County Registry of Deeds Book 640, Page 464 and Book 908, Page 113;

Thence along the CMP Substation Lot along the following courses and distances:

- N 40°54'45" W a distance of 264.27 feet to a point;
- S 48°35'13" W a distance of 202.89 feet to a point;
- S 19°24'47" E a distance of 274.90 feet to a point;
- S 40°54'47" E a distance of 78.75 feet to a point in the northwest line of said Lot 3;

thence along northwest and southwest lines of said Lot 3 the following courses and distances:

- S 49°05'15" W a distance of 353.45 feet to an iron spike set in 2018 with washer;
- S 44°02'15" E a distance of 107.10 feet to an iron spike set in 2018 with washer;
- S 53°02'05" E a distance of 284.33 feet to an iron spike set in 2018 with washer;
- S 61°33'45" E a distance of 78.59 feet to a pavement nail set in 2018;
- S 41°10'05" E a distance of 86.00 feet to a pavement nail set in 2018, which pavement nail is located with reference to the Maine Coordinate System of 1983, East Zone, with a

Northing of 330,435.10 U.S. Survey Feet and an Easting of 904,545.63 U.S. Survey Feet;

- S 48°49'55" W a distance of 52.66 feet to an iron rod set drilled into rock in 2018;
- N 0°00'00" W a distance of 12.01 feet to a point;
- N 20°29'11" W a distance of 9.44 feet to a point;
- S 49°22'23" W a distance of 8.67 Feet, more or less, to a point in the high water line of the Penobscot River, which point is located with reference to the Maine Coordinate System of 1983, East Zone, with a Northing of 330,415.64 U.S. Survey Feet and an Easting of 904,496.11 U.S. Survey Feet;
- Continuing on the same course S 49°22'23" W to the low water line of the Penobscot River;

Thence northerly along the low water line of the Penobscot River 7,500 feet more or less to a point in the south line, or an extension thereof, of land described in a deed from Elden Corporation to A. Johnson Energy Marketing, Inc., dated December 15, 1987, recorded in the Hancock County Registry of Deeds Book 1674, Page 251;

Thence along the south line, or an extension thereof, of said A. Johnson Energy Marketing, Inc. lot S 77°19'21" E to an iron rod set drilled into rock in 2018, which iron rod is located with reference to the Maine Coordinate System of 1983, East Zone, with a Northing of 336,351.63 U.S. Survey Feet and an Easting of 903,200.73 U.S. Survey Feet;

Thence continuing along the south line of said A. Johnson Energy Marketing, Inc. lot S 77°19'21" E a distance of 321.40 feet to a point located N 77°19'21" W a distance of 2.47 feet from a bolt, which bolt is located with reference to the Maine Coordinate System of 1983, East Zone, with a Northing of 336,280.54 U.S. Survey Feet and an Easting of 903,516.70 U.S. Survey Feet, said point being in the west sideline of the Maine Central Railroad right of way;

thence along the west sideline of the Maine Central Railroad right of way by the following arcs, courses and distances:

- with a CURVE turning to the RIGHT with an arc length of 107.55 feet, with a radius of 1391.44 feet, with a chord bearing of S 08°37'11" E, with a chord length of 107.54 feet to a point;
- S 06°24'18" E a distance of 338.06 feet to a point;
- S 75°03'54" E a distance of 8.86 feet to a point;
- S 06°24'18" E a distance of 229.61 feet to a point;
- with a CURVE turning to the LEFT with an arc length of 302.57 feet, with a radius of 1465.69 feet, with a chord bearing of S 12°19'12" E, with a chord length of 302.09 feet to a point;
- N 76°40'20" W a distance of 19.32 feet to a point;
- with a CURVE turning to the LEFT with an arc length of 394.71 feet, with a radius of 1482.19 feet, with a chord bearing of S 25°28'28" E, with a chord length of 393.62 feet to a point;
- S 33°06'18" E a distance of 75.80 feet to a point;
- with a CURVE turning to the RIGHT with an arc length of 997.93 feet, with a radius of 1587.78 feet, with a chord bearing of S 15°05'48" E, with a chord length of 981.74 feet to a point;
- S 02°54'42" W a distance of 198.31 feet to a point;
- S 02°54'42" W a distance of 22.39 feet to a point;
- with a CURVE turning to the LEFT with an arc length of 124.80 feet, with a radius of 1482.19 feet, with a chord bearing of S 00°29'57" W, with a chord length of 124.79 feet

to a point;

- S 13°49'28" W a distance of 492.28 feet to a point;
- S 76°40'14" E a distance of 263.65 feet to a point;
- with a CURVE turning to the LEFT with an arc length of 556.04 feet, with a radius of 1465.68 feet, with a chord bearing of S 34°32'05" E, with a chord length of 552.82 feet to a point;
- S 45°24'18" E a distance of 251.40 feet to a point;
- with a CURVE turning to the RIGHT with an arc length of 547.54 feet, with a radius of 1009.14 feet, with a chord bearing of S 29°51'18" E, with a chord length of 541.06 feet to a point;
- S 14°18'18" E a distance of 119.40 feet to a point
- with a CURVE turning to the LEFT with an arc length of 112.91 feet, with a radius of 1091.16 feet, with a chord bearing of S 17°16'19" E, with a chord length of 112.86 feet to the point of beginning;

enclosing an area computed using the high water line of the Penobscot River, of 89.3 acres, more or less, not including the area between the high water line and the low water line of the Penobscot River.

TOGETHER WITH lands of the intertidal zone that exist between the low and high water lines in the tidal region adjoining the above-described parcel. The high water line referenced herein above was computed holding the highest annual tide (HAT) published by the Maine Department of Environmental Protection with an elevation of 7.5 feet referenced to the North American Vertical Datum of 1988 and computed herein using LIDAR derived elevation data obtained from the Maine Office of GIS.

EXCEPTING from the above-described Parcel 1:

a. That certain parcel of land conveyed to Central Maine Power Company by deed dated October 9, 1974, and recorded in the Hancock County Registry of Deeds in Book 1201, Page 632; and

b. That portion of the parcel of land described in paragraph numbered (2) of a deed to Central Maine Power Company dated July 12, 1932, and recorded in the Hancock County Registry of Deeds in Book 640, Page 464 lying northwesterly of a line described as follows:

> Beginning at a point at the northwesterly corner of Parcel No. 2 as described in a deed from Central Maine Power Company to St. Regis Paper Company dated October 11, 1974, and recorded in the Hancock County Registry of Deeds in Book 1201, Page 634, thence running southerly along the northwesterly line of said Parcel No. 2 a distance of 73 feet to the southwesterly corner of said Parcel No. 2 and being a point in the southwesterly boundary of the land described in paragraph numbered (2) of said deed recorded in the Hancock County Registry of Deeds in Book 640, Page 464,

being the northwesterly half of the parcel of land described in paragraph numbered (2) of said deed recorded in the Hancock County Registry of Deeds in Book 640, Page 464.

Meaning and intending to describe and convey Lot 2, as shown on that certain plan entitled "Subdivision Plan Showing Lands Bucksport Mill, LLC Bucksport Generation, LLC 2 River Road-Bucksport Hancock County, Maine" Sheets 1 through 3, dated July 6, 2018, recorded in the Hancock County Registry of Deeds as Mapfile 45, Number 29, Mapfile 45, Number 30 and Mapfile 45, Number 31, as amended by that certain subdivision plan entitled "Amended Mapfile 45, No. 29 Subdivision Plan Showing Lands

Bucksport Mill, LLC, Bucksport Generation, LLC" dated December 28, 2018, and recorded in said Registry of Deeds on February 11, 2019 in File 45, No. 96, as further amended by that certain subdivision plan entitled "Amended Mapfile 45, No. 96 Amended Mapfile 45, Nos. 29, 30, & 31 Amended Subdivision Plan Showing Lands Bucksport Mill, LLC, Bucksport Generation, LLC" dated March 19, 2019, and recorded in said Registry of Deeds on April 8, 2019 in File 46, No. 11 (collectively the "West Subdivision Plan").

The above-described property being a portion of the property described in that certain corrective deed from International Paper Company to CMP Bucksport LLC, n/k/a Bucksport Mill LLC, dated September 11, 2006, and recorded in the Hancock County Registry of Deeds in Book 4588, Page 26, correcting a deed from SP Forest, L.L.C. to CMP Bucksport LLC dated July 28, 2006, and recorded in Book 4558, Page 148.

Iron rods set in 2018 are three-quarter inch reinforcing rods with a cap marked "Plisga & Day PLS 2327". Pavement nails and iron spikes set in 2018 were marked with an aluminum washer stamped "Plisga & Day PLS 2327."

Bearings referenced herein are oriented to Grid North referencing the Maine Coordinate System of 1983, East Zone, NAD83_2011, as determined by a survey conducted by Plisga & Day, Land Surveyors in 2010 (reference project number: 98079). Coordinate values are provided as an aid in location of the property and are not intended to control bearings, distances or the positions marked by monuments defining the property boundaries.

TOGETHER WITH the right and easement, in common with others, to construct, maintain, and use a roadway over and across the railroad tracks within the right of way for the "first roadway" as set forth in the certain deed from Maine Central Railroad Company to St. Regis Paper Company dated January 15, 1980, and recorded in the Hancock County Registry of Deeds in Book 1369, Page 208, and to which reference is hereby made for a more particular description of the said right and easement.

TOGETHER WITH the right and easement to construct, maintain, and use a roadway over and across the railroad tracks within the area of the right of way for the "second roadway" as set forth in the certain deed from Maine Central Railroad Company to St. Regis Paper Company dated January 15, 1980, and recorded in the Hancock County Registry of Deeds in Book 1369, Page 208, and to which reference is hereby made for a more particular description of the said right and easement.

TOGETHER WITH and SUBJECT TO that certain Release and Cross Easement Indenture of even date herewith, by and among WO, Mill, and Bucksport Generation LLC, to be recorded in the Hancock County Registry of Deeds herewith, for a further description of rights and easements burdening, benefitting and appurtenant to the above-described Parcel 1.

TOGETHER WITH all right, title, and interest in and to all buildings, structures and improvements, and other fixtures located on Parcel 1 and systems attached thereto and/or serving such parcel, including without limitation (a) the existing pump house for water intake from the Penobscot River, generally depicted on the Subdivision Plan Amended Sheet 1, together with all water intake facilities and equipment whether within or outside of the pump house and used in connection with pumping water from the Penobscot River, including the piping from the pump house to the Penobscot River, and (b) the existing discharge facilities for discharging water, wastewater leachate and stormwater into the Penobscot River, together with all water discharge facilities and equipment used in connection with discharging water and wastewater into the Penobscot River, including the diffuser systems and piping extending into the river, including without limitation the outfall pipes commonly known as #001B and #003.

PARCEL 2: LAND EASTERLY OF ROUTE 15

Lot 1 as shown on a Subdivision Plan entitled "Town Lots East of 15" Bucksport Mill, LLC dated March 20, 2019, and recorded in Plan File 46, No. 10 (the "East Subdivision Plan"). TOGETHER WITH all right, title and interest, if any, of Mill in and to Thomas Street Extension and Spring Street Extension, both, so-called.

TOGETHER WITH all right, title, and interest, if any, in and to any improvements located on that portion of said Lot 1 depicted on the East Subdivision Plan labelled "Tax Map 1 Lot 87-ON."

PARCEL 3: LAND BETWEEN ROUTE 15 AND RAILROAD

Beginning at a point in the westerly line of State Route 15 and the southeasterly corner of land described as Tract II in a deed to Sprague International Properties LLC recorded in Hancock County Registry of Deeds, Book 6137, Page 22;

Thence westerly along the southerly line of said Tract II to the easterly line of the Maine Central Railroad right of way;

Thence southerly along the easterly line of said right of way to a point;

Thence along the easterly line of said right of way, North 74 degrees, 56 minutes, 30 seconds West, a distance of 8.9 feet;

Thence along the easterly line of said right of way, South 6 degrees, 16 minutes, 45 seconds East, a distance of 136.4 feet to a point of curve;

Thence along the easterly line of said right of way, following a curve concave easterly with a radius of 1399.68 feet, an arc distance of 329.91 feet;

Thence along the easterly line of said right of way, South 76 degrees, 32 minutes, 45 seconds East, a distance of 19.8 feet;

Thence along the easterly line of said right of way, following a curve concave easterly with a radius of 1383.18 feet, an arc distance of 307.70 feet to a point of tangency;

Thence along the easterly line of said right of way, South 32 degrees, 58 minutes, 45 seconds East, a distance of 75.8 feet to a point of curve;

Thence along the easterly line of said right of way, following a curve concave westerly with a radius of 1686.78 feet, an arc distance of 320.95 feet to the westerly line of State Route 15;

Thence along the westerly line of State Route 15 North 18 degrees, 22 minutes, 30 seconds West, a distance of 721.9 feet;

Thence along the westerly line of State Route 15, North 15 degrees, 54 minutes, 30 seconds West, a distance of 223.5 feet;

Thence along the westerly line of State Route 15, North 12 degrees, 49 minutes, 0 seconds West, a distance of 300.5 feet;

Thence northerly along the westerly line of State Route 15 to the point of beginning.

Bearings referenced herein are oriented to Grid North, Maine State Coordinate System of 1927, East Zone.

The above-described Parcel 1, Parcel 2, and Parcel 3 (collectively, the "Premises") are conveyed TOGETHER WITH (i) all infrastructure located on or under, or used exclusively to service, the Premises; (ii) all rights, privileges, easements and appurtenances to the Premises; and (iii) air rights, appurtenant water rights, including riparian water rights and any intertidal water rights appurtenant to the Premises, and any easements, rights-of-way, or other interests in, on, under, or to any land, highway, alley, street, or right-of-way abutting or adjoining the Premises. The pipelines and electrical lines and related equipment located within the easement areas reserved below are hereby excluded from this conveyance.

RESERVING to Mill, its successors and assigns a temporary easement over Parcel 1 to maintain the existing leachate pipeline in its current location and in its present configuration within a 30-foot wide area centered on the existing leachate pipe as depicted on the West Subdivision Plan for the purpose of allowing Mill time to relocate said leachate pipeline (the "Temporary Leachate Easement"). This temporary easement shall terminate 90 days after the date of this Deed, provided however that if Mill is still working diligently to complete relocation after 90 days, WO shall extend the date for the termination of this easement, but in no event shall this easement be extended longer than 120 days from the date of this Deed. The termination provision set forth above shall be effective without any further action by WO or Mill and by which time Mill shall have discontinued use of the leachate pipe on or under Lot 2 and Mill may abandon the pipe in place. Upon request, Mill shall execute an instrument in recordable form confirming the termination of the Temporary Leachate Easement.

RESERVING to Mill, its successors and assigns, the following rights and easements, appurtenant to the remaining land of Mill, to patrol, monitor, manage, operate, maintain, repair, replace, improve, expand and use pipes, lines, wires, conduits, valves, meters, pumps and appurtenances thereto associated with or in conjunction with:

1. An underground leachate pipeline to be located under Parcel 1 within a 50-foot wide strip of land running generally southeasterly along a portion of the easterly boundary of Parcel 1, the easterly line of said strip of land being described as follows:

   Beginning at a point on the easterly sideline of Parcel 1 where the existing leachate pipeline enters Parcel 1 from under the Maine Central Railroad right of way; thence in a generally southerly direction along the easterly sideline of Parcel 1 to the southeasterly corner of Parcel 1.

   Upon the relocation of the leachate pipeline within the above-described 50-foot strip of land, at the request of either WO or Mill, WO and Mill shall enter into a modification of said leachate pipeline easement confirming its location;

2. An underground leachate pipeline under Parcel 2 within a 30-foot wide corridor centered on the existing leachate pipe as depicted on the East Subdivision Plan;

3. An existing raw water pipeline over Parcel 2 within a 30-foot wide corridor centered on the existing raw water pipe as depicted on the East Subdivision Plan; and

4. Overhead electrical poles and wires over Parcel 2 within a 30-foot wide corridor centered on the

existing electric line serving the filter house, which overhead electrical poles and wires are as depicted on the East Subdivision Plan.

5. An existing underground oil pipeline under Parcel 2 within a 30-foot wide corridor centered on the existing 12" underground pipeline as depicted on the East Subdivision Plan.

The five easements set forth above are collectively referred to herein as the "Permanent Easements".

To the extent necessary to exercise the Temporary Leachate Easement and the Permanent Easements reserved above, Mill shall have access to the above-described 30-foot strips, subject to the following conditions:

(a) Any such access shall be during normal business hours and after reasonable notice to WO, except in case of emergency;

(b) Any entry onto land of WO shall be at Mill's own risk and Mill shall release and indemnify WO from any damage to the WO's property or personal injury or claim to the extent related to such entry or any lien against WO's property resulting from any such entry; and

(c) Prior to any such entry, Mill shall provide evidence of insurance naming WO as additional insured.

The Temporary Leachate Easement and the Permanent Easements reserved above are subject to the following conditions:

(a) Mill shall not suffer or permit any mechanic's or materialmen's lien to attach to WO's land by virtue of Mill's exercise of its rights under the Temporary Leachate Easement and the Permanent Easements. In the event any such lien shall be filed and recorded, Mill shall promptly take steps to remove such lien in any lawful manner.

(b) Mill shall promptly restore all areas of the WO parcels affected by any work, as near as reasonably possible to its or their immediately prior condition; provided that such obligation to restore shall expressly exclude any obligation to restore vegetation.

(c) Mill shall indemnify and hold harmless WO from and against any and all damages, liabilities, losses, expenses, claims, and suits (including reasonable attorneys' fees) incurred or suffered as a consequence of or arising in any manner out of the Mill's exercise of the Temporary Leachate Easement and the Permanent Easements by Mill or its officers, employees, agents, contractors, or invitees, or the breach or violation of the terms of the Temporary Leachate Easement and the Permanent Easements by Mill, except to the extent caused by the negligence or intentional misconduct of WO.

(d) WO shall have all rights to use the areas encumbered by the Temporary Leachate Easement and the Permanent Easements in any manner that is not inconsistent with the rights granted to Mill hereunder and does not interfere with the use and enjoyment by Mill of the Temporary Leachate Easement and the Permanent Easements. The foregoing notwithstanding, WO covenants and agrees that it will not (i) construct any buildings or other permanent structures within the area of the Permanent Easements; or (ii) conduct any excavation or utility work within the area of the Permanent Easements, without first affording Mill thirty (30) days prior written notice of such intent, said notice to include reasonably detailed engineering plans of such work.

PARCEL 4: EASEMENT OVER FRESH WATER SUPPLY SYSTEM

Together with non-exclusive perpetual rights and easements in and to the "Fresh Water Supply System" (as such term is defined herein) and in and to the "**Easement Areas**" (as such term is defined herein), for the following purposes:

(1) for the transmission of water in, over, and through the Fresh Water Supply System situated within the Easement Areas (the "**Water Transmission Easement**"); and

(2) to draw, take, use, and divert water in, over, from and through the Fresh Water Supply System and Easement Areas for the operation of Grantee's business and activities located on, and directly related to and supporting its operation at the "**Whole Oceans Parcels**" (as defined herein) and for no other purpose (the "**Water Use Easement**"); and

(3) to access, by persons and equipment, over lands located easterly of Route 15 adjacent to the Fresh Water Supply System owned or controlled by Grantor as needed to exercise Grantee's rights hereunder, including access through and upon any structures within the Easement Areas (the "**Access Easement**").

To the extent necessary to exercise the Access Easement granted above, Grantee shall have access to the Easement Areas, subject to the following conditions:

(a) Any such access shall be during normal business hours and after reasonable notice to Mill, except in case of emergency;

(b) Any entry onto land of Grantor shall be at Grantee's own risk and Grantee shall release and indemnify Grantor from any damage to the Grantor's property or personal injury or claim to the extent related to such entry or any lien against Grantor's property resulting from any such entry; and

(c) Prior to any such entry, Grantee shall provide evidence of insurance naming Grantor as additional insured.

The Access Easement granted above is subject to the following conditions:

(a) Grantee shall not suffer or permit any mechanic's or materialmen's lien to attach to Grantor's land by virtue of Grantee's exercise of its rights under the Access Easement. In the event any such lien shall be filed and recorded, Grantee shall promptly take steps to remove such lien in any lawful manner.

(b) Grantee shall promptly restore all areas of the Grantor's parcels affected by any work, as near as reasonably possible to its or their immediately prior condition; provided that such obligation to restore shall expressly exclude any obligation to restore vegetation.

(c) Grantee shall indemnify and hold harmless Grantor from and against any and all damages, liabilities, losses, expenses, claims, and suits (including reasonable attorneys' fees) incurred or suffered as a consequence of or arising in any manner out of the Grantee's exercise of the Access Easement by Grantee or its officers, employees, agents, contractors, or invitees, or the breach or violation of

the terms of the Access Easement by Grantee, except to the extent caused by the negligence or intentional misconduct of Grantor.

(d) Grantor shall have all rights to use the areas encumbered by the Access Easement in any manner that is not inconsistent with the rights granted to Grantee hereunder and does not interfere with the use and enjoyment by Grantee of the Access Easement. The foregoing notwithstanding, Grantor covenants and agrees that it will not (i) construct any buildings or other permanent structures within the area of the Access Easement; or (ii) conduct any excavation or utility work within the area of the Access Easement, without first affording Grantee thirty (30) days prior written notice of such intent, said notice to include reasonably detailed engineering plans of such work.

The foregoing easements are conveyed upon the following terms and conditions:

1. **Certain Definitions**: In addition to terms defined elsewhere in this instrument, the following terms shall have the following meanings when used herein:

"Easements" means collectively the Water Transmission Easement, the Water Use Easement and the Access Easement.

"Easement Areas" means certain lands and rights in land located in the Towns of Bucksport and Orland, in Hancock County, Maine, including:

(i) Toddy Pond in Orland and extending from Toddy Pond to and through Alamoosook Lake,
(ii) further extending from Alamoosook Lake to and through Silver Lake in Bucksport including the bed of Silver Lake,
(iii) further extending from Silver Lake to the Mill Property, and
(iv) also extending from the West Bank of the Eastern or Narramissic River in Orland at the lower dam or "Hutchins Mill Privilege" to Pond Street in Bucksport,

all as more particularly described in, and in the deeds referenced in, **Exhibit B** attached hereto.

"Fresh Water Supply System" means the lakes and ponds, the dams, and all water control equipment and pumps and structures associated with the lakes and ponds included in the Easement Area, including the aqueducts, pipelines, pumps, filters, communication equipment, structures, and all facilities used or useful in connection with any of the foregoing; together with the infrastructure through and pursuant to which water is delivered from Silver Lake to the Mill Property over, across and through the Easement Area, including without limitation an intake structure situated in Silver Lake, a pipeline running from Silver Lake to the Mill Property and a filter house, together with such water control equipment and structures associated with such intake, pipeline and filter house and all aqueducts, pipelines, pumps, filters, communication equipment, structures, overhead electric lines and poles, and all facilities used or useful in connection with the delivery of water from Silver Lake to the Mill Property.

"Mill Property" means Parcels 1 and 3 conveyed by this Deed to Grantee, plus Lots 1, 3 and 4 as depicted on the Subdivision Plan Amended Sheet 1.

"Whole Oceans Parcels" means Parcels 1, 2 and 3 conveyed by this Deed to Grantee, as set forth above, plus such additional land that Grantee may acquire in the future, the use of which is directly related to, or supporting its operation at said Parcels 1, 2 or 3.

2. **Reserved Rights.** Grantor reserves the following rights with respect to the Fresh Water Supply System and the Easement Areas:

(a) perpetual, non-exclusive right to use the Easement Areas for all purposes that do not unreasonably interfere with the exercise of the rights granted herein to Grantee. In the event that the Grantor shall grant rights to third parties within the Easement Area, such rights shall be subject to the rights granted to Grantee herein.

(b) Grantor reserves fee title in and to the Fresh Water Supply System, and the right to use the Fresh Water Supply System together with Grantee and others entitled to use the same, together with the rights to convey these rights and easements to other parties, subject to the rights granted to Grantee herein and further subject to the limitations set forth in Exhibit C attached hereto.

(c) Grantor reserves the exclusive right to operate, manage, control, patrol, monitor, maintain, repair, replace, improve and expand the Fresh Water Supply System, except as otherwise provided herein, including Exhibit C attached hereto.

(d) Grantor reserves the right to relocate, at its sole cost and expense, any portion(s) of the Fresh Water Supply System so long as the Easements continue in full force and effect as to the relocation and so long as there is no interruption of the availability of Water from the Fresh Water Supply System. Once any such relocation is complete, the parties agree to execute and deliver, and record in the Registry of Deeds, such reasonable instruments as may be necessary or requested terminating the Easements as to the pre-relocation area, and granting the Easements as to the post-relocation area, all in form and substance reasonably acceptable to Grantor and Grantee.

3. **Access.** In connection with the exercise by Grantee of any of its rights granted hereunder, Grantee agrees to adhere to Grantor's (a) reasonable access protocol concerning access to the Easement Areas, and (b) all reasonable security, fire protection, safety rules and regulations, and all applicable life-safety codes adopted by Grantor, or imposed by governmental authority. Grantee shall enter the Easement Areas at its own risk.

4. **Successors and Assigns and Runs with the Land.** The easements and rights, including but not limited to the Easements, and the obligations granted, reserved or otherwise referenced in or in connection with this Parcel 4 shall run with the land and shall burden, benefit and are appurtenant to, as applicable, the real estate of Grantor and Grantee, and shall be binding upon and shall burden Grantor and Grantee and their respective successors and assigns.

5. **No Waiver.** No failure or delay by any party in exercising any right, power or privilege under this Deed, and no lack of use of the Easements, including right to divert water, will operate as a waiver thereof, nor will any single or partial exercise thereof preclude any other or further exercise thereof or the exercise of any other right, power or privilege.

6. **Water Related Easements.** Grantee's exercise of its rights under the easements granted in this Parcel 4 and any rights appurtenant to the Whole Oceans' Property to take water from or use and transmit water through the Fresh Water Supply System are subject to and governed by the terms and

conditions set forth in Exhibit C, all of which shall be deemed to be incorporated herein as if set forth in full in this text of this instrument.

EXCEPTIONS

The real property conveyed in this Deed is SUBJECT TO the rights, easements, covenants, restrictions, encumbrances, terms and conditions set forth in the instruments referenced in this Deed, including but not limited to the following:

Schedule B-1 Easements and Permits - Bucksport, Hancock County

1. Rights, terms and conditions contained in the agreement between St. Regis Paper Company and Central Maine Power Company, dated as of July 12, 1932, recorded in Book 640, Page 464.
2. Rights, terms and conditions contained in the agreement between St. Regis Paper Company and Central Maine Power Company, dated as of May 14, 1947, acknowledged August 5, 1947, recorded in Book 724, Page 44.
3. Easements, terms and conditions contained in the Indenture by and between Central Maine Power Company and St. Regis Paper Company, dated as of March 1, 1957, recorded April 6, 1957, recorded in Book 798, Page 126.
4. Easements, terms and conditions contained in the Indenture by and between Central Maine Power Company and St. Regis Paper Company, dated as of August 15, 1957, recorded October 17, 1957, recorded in Book 803, Page 546.
5. Easements, terms and conditions contained in the Indenture by and between Central Maine Power Company and St. Regis Paper Company, dated as of April 20, 1962, recorded May 10, 1962, recorded in Book 907, Page 466.
6. Easements, reservations, terms and conditions contained in the deed from Central Maine Power Company to St. Regis Paper Company, dated April 20, 1962, recorded in Book 907, Page 485.
7. Easements, reservations, terms and conditions contained in the deed from Central Maine Power Company to St. Regis Paper Company, dated March 15, 1965, recorded in Book 979, Page 129.
8. Rights, terms and conditions contained in the easement deed from St. Regis Paper Company to Central Maine Power Company, dated March 10, 1965, recorded in Book 979, Page 156.
9. Terms and conditions contained in a letter agreement by and between Central Maine Power Company and St. Regis Paper Company, dated October 25, 1972, recorded in Book 1162, Page 255.
10. Easements, reservations, terms and conditions contained in the deed from St. Regis Paper Company to Central Maine Power Company, dated October 9, 1974, recorded in Book 1201, Page 632.
11. Easements, reservations, covenants, terms and conditions contained in the deed from Central Maine Power Company to St. Regis Paper Company, dated October 11, 1974, recorded in Book 1201, Page 634.
12. Easement from St. Regis Paper Company to Central Maine Power Company and New England Telephone and Telegraph Company, dated March 8, 1976, recorded in Book 1257, Page 637.
13. Easement from St. Regis Paper Company to Central Maine Power Company and New England Telephone and Telegraph Company, dated August 20, 1979, recorded in Book 1360, Page 127.
14. Easement from St. Regis Corporation to New England Telephone and Telegraph Company, dated July 27, 1984, recorded in Book 1509, Page 169.
15. Easement from Champion International Corporation to Central Maine Power Company and New England Telephone and Telegraph Company, dated December 2, 1991, recorded February 14,

1992, in Book 1911, Page 166.

16. Easement from Champion International Corporation to Central Maine Power Company and New England Telephone and Telegraph Company, dated December 2, 1991, recorded February 14, 1992, in Book 1911, Page 168.

17. Pipeline easement and agreement by and between Champion International Corporation and Webber Tanks, Inc., dated December 17, 1999, recorded in Book 2914, Page 300; as affected by the Rights-of-Way Agreement by and between Champion International Corporation and Webber Tanks, Inc., dated July 15, 1999, a memorandum of which is recorded in Book 2929, Page 261, and the Project Storage and Pipeline Delivery Agreement, by and between Webber Tanks, Inc., and Bucksport Energy, LLC, dated July 15, 1999.

18. Easements, restrictions, conditions and covenants contained in the agreement by and between Champion International Corporation and Webber Tanks, Incorporated, a memorandum of which is dated as of July 15, 2000, recorded in Book 2929, Page 261.

19. Terms and conditions contained in the agreement by and between Bucksport Water Company and Maine Seaboard Paper Company, dated November 30, 1935, recorded in Book 648, Page 556, as amended by the agreement by and between Bucksport Water Company and Champion International Corporation, dated October 16, 1989, recorded in Book 1779, Page 89.

20. Utility easement from St. Regis Paper Company to New England Telephone and Telegraph Company, dated May 7, 1976, recorded in Book 1259, Page 338.

21. Easement, restrictions, conditions and covenants contained in the deed from Maine Central Railroad Company to St. Regis Paper Company, dated January 15, 1980, recorded in Book 1369, Page 208.

22. Easement deed from St. Regis Paper Company to Dead River Company, dated March 16, 1984, recorded in Book 1493, Page 148.

23. Easements, terms and conditions contained in the easement deed and agreement for gas line by and between Champion International Corporation and Bangor Gas Company, LLC, dated May 24, 2000, acknowledged on May 22, 2000, recorded in Book 2919, Page 354.

24. Easements, terms and conditions contained in the easement deed and agreement for meter site by and between Champion International Corporation and Bangor Gas Company, LLC, dated May 24, 2000, acknowledged May 22, 2000, recorded in Book 2919, Page 365.

25. Easements, terms and conditions contained in the easement deed and agreement by and between Champion International Corporation and Bangor Gas Company, LLC, dated May 24, 2000, recorded in Book 2919, Page 377.

Schedule B-2 Environmental Matters - Bucksport, Hancock County

26. Department of the Army Permit from U.S. Army Engineer Division, New England, Corps of Engineers to St. Regis Paper Company, dated July 31, 1973, recorded in Book 1205, Page 206.

27. Department of the Army Permit to St. Regis Paper Company, dated November 18, 1974, recorded in Book 1205, Page 212.

28. Department of the Army Permit to St. Regis Paper Company, dated July 16, 1975, recorded in Book 1229, Page 198.

29. Department of the Army Permit to St. Regis Paper Company, dated July 9, 1975, recorded in Book 1229, Page 205.

30. Department of Environmental Protection Order Condition Removal Site Location, dated May 12,

1976, recorded in Book 1258, Page 695.

31. Department of Environmental Protection Order Condition Removal Site Location, dated June 9, 1976, recorded in Book 1262, Page 118.

32. Department of Environmental Protection Site Location of Development Amendment of Findings of Fact and Order, dated March 21, 1997, recorded in Book 2644, Page 418.

33. Department of Environmental Protection Site Location of Development Findings of Fact and Order, dated August 7, 1998, recorded in Book 2761, Page 216.

34. Department of Environmental Protection Site Location of Development Modification Findings of Fact and Order, dated July 22, 1999, recorded in Book 2858, Page 209.

35. Department of Environmental Protection Condition Compliance #L-7713-20-U-C, Special Condition #3, dated July 21, 1999, recorded in Book 2858, Page 214.

36. Department of Environmental Protection Condition Compliance, dated June 20, 2000, recorded in Book 2932, Page 312.

37. Department of Environmental Protection Site Location of Development, Findings of Fact and Order, dated August 7, 1998, recorded in Book 2945, Page 166.

38. Department of Environmental Protection Site Location of Development Renewal Findings of Fact and Order, dated January 27, 1999, recorded in Book 2809, Page 523.

39. Department of Environmental Protection Site Location of Development Modification Findings of Fact and Order, dated August 5, 2004, recorded in Book 3998, Page 188.

40. Department of Environmental Protection Site Location of Development Minor Revision/Modification Findings of Fact and Order, dated July 12, 2005, recorded in Book 4253, Page 267.

Schedule B-3 Takings - Bucksport, Hancock County

41. Easements contained in the deed from St. Regis Paper Company to State of Maine, dated December 12, 1972, recorded in Book 1159, Page 489, as same may affect the easement over Fresh Water Supply System.

42. Easements contained in the deed from Champion International Corporation to State of Maine, dated February 14, 1995, recorded in Book 2382, Page 240.

43. Easements contained in the deed from Champion International Corporation to State of Maine, Department of Transportation, dated May 28, 1999, recorded in Book 2850, Page 217, as same may affect the easement over Fresh Water Supply System.

Schedule B-4 PLANS - Bucksport, Hancock County

44. Encroachments, easements, reservations, rights of way, terms and conditions depicted on plan entitled Plan Showing Lot Leased to Eastern Corporation by St. Regis Paper Company for Oil Storage Tank in Bucksport, Maine, dated August 1948, recorded in Plan Book 6, Page 31.

45. Encroachments, easements, reservations, rights of way, terms and conditions depicted on plan entitled Survey for Relocating C.M.P. supply to Town of Bucksport (Sec. K-10), dated December 20, 1956, recorded in Plan Book 7, Page 118.

46. Encroachments, easements, reservations, rights of way, terms and conditions depicted on plan entitled Approx. Loc.-Eastern Corp. Fuel Oil Lines-St. Regis Paper Co.-Bucksport, dated July 22, 1948, recorded in Plan Book 6, Page 33.

47. Encroachments, easements, reservations, rights of way, terms and conditions depicted on plan

entitled Relocated Oil Trench and Underground Piping at the Southwest Corner of the Coater-Supercalender Building, dated April 11, 1963, recorded in Plan Book 9, Page 61.

48. Encroachments, easements, reservations, rights of way, terms and conditions depicted on plan entitled Land Title Survey, Portion of Property of Champion International Corporation, State Route 15-Bucksport, Maine for Multinational Electricity and Gas Corporation, dated April 7, 1999, revised July 13, 1999, recorded in File 29, No. 83.

49. Encroachments, easements, reservations, rights of way, terms and conditions depicted on plan entitled Easement Plan, Portion of Property of Champion International Corporation, State Route 15-Bucksport, Maine, for Multinational Electricity and Gas Corporation, dated May 3, 1999, revised July 13, 1999, recorded in File 29, No. 84.

Schedule B-5 Energy Plant Site - Bucksport, Hancock County (Energy Plant Site)

50. Easement, restrictions, conditions and covenants contained in the deed from Maine Central Railroad Company to St. Regis Paper Company, dated January 15, 1980, recorded in Book 1369, Page 208.

51. Department of Environmental Protection Site Location of Development Modification Findings of Fact and Order, dated July 22, 1999, recorded in Book 2858, Page 209.

52. Department of Environmental Protection Condition Compliance #L-7713-20-U-C, Special Condition #3, dated July 21, 1999, recorded in Book 2858, Page 214.

53. Pipeline easement and agreement by and between Champion International Corporation and Webber Tanks, Inc., dated December 17, 1999, recorded in Book 2914, Page 300; as affected by the Rights-of-Way Agreement by and between Champion International Corporation and Webber Tanks, Inc., dated July 15, 1999, a memorandum of which is recorded in Book 2929, Page 261, and the Project Storage and Pipeline Delivery Agreement, by and between Webber Tanks, Inc., and Bucksport Energy, LLC, dated July 15, 1999.

54. Department of Environmental Protection Site Location of Development, Findings of Fact and Order, dated August 7, 1998, recorded in Book 2945, Page 166.

Schedule B-6 Orland - Orland, Hancock County

55. Easements, terms and conditions contained in the deed from Bucksport Water Company to Maine Seaboard Paper Company, recorded in Book 648, Page 556.

56. Easements, terms and conditions to install, maintain, repair and replace a one (1) inch diameter water pipe, contained in the Waterline Easement from Champion International Corporation to John M. MacBrayne III and Bonita E. MacBrayne, dated December 17, 1986, recorded in Book 1619, Page 522.

57. Easements contained in the Notice of Layout and Taking, State of Maine Department of Transportation, dated May 21, 2003, recorded in Book 3631, Page 341.

Schedule B-7 - Additional Exceptions – Orland and Bucksport, Hancock County

58. Rights and easements set forth in Deed from Verso Paper Company, LLC to Central Maine Power Company and New England Telephone & Telegraph Company dated November 30, 2007 and recorded in said Registry of Deeds in Book 4921, Page 293.

59. Temporary Construction Rights acquired from Verso Paper LLC described in the Notice of Layout and Taking by the State of Maine Department of Transportation dated March 11, 2009 and recorded in said Registry of Deeds in Book 5174, Page 9.

60. Rights set forth in Termination of a Right of Way Agreement by and between Verso Bucksport

LLC and Webber Tanks, Incorporated dated as of January 1, 2010 and recorded in said Registry of Deeds in Book 5402, Page 263, terminating the Right of Way Agreement dated July 15, 1999 and recorded in said Registry of Deeds in Book 2929, Page 261.

61. Lease by and between Verso Bucksport LLC (Landlord) and Webber Tanks, Incorporated (Tenant) dated January 1, 2010; as evidenced by the Memorandum of Lease recorded in said Registry of Deeds in Book 5402, Page 265.

62. Rights and easements set forth in Easement Deed from CMP Bucksport LLC to Central Maine Power Company and Northern New England Telephone Operations, LLC dated June 2, 2010 and recorded in said Registry of Deeds in Book 5445, Page 88.

63. Department of Environmental Protection Department Order/Site Location of Development Act/Water Quality Certification for Verso Paper/Boiler Upgrade dated December 21, 2010 and recorded in said Registry of Deeds in Book 5553, Page 289; correcting an Order dated November 17, 2010.

64. Rights and easements set forth in deed from Verso Bucksport LLC to the Inhabitants of the Town of Bucksport dated January 19, 2011 and recorded in said Registry of Deeds in Book 5568, Page 333 conveying property on Silver Lake Road, Bucksport.

65. Department of Environmental Protection Department Order/Site Location of Development Act/Water Quality Certification for Verso Paper/Boiler Upgrade dated May 24, 2011and recorded in said Registry of Deeds in Book 5630, Page 200.

66. Indenture by and between Verso Bucksport LLC, f/k/a CMP Bucksport LLC and Central Maine Power Company dated as of January 30, 2012 and recorded in said Registry of Deeds in Book 5766, Page 151 regarding access over two locations on the Mill property.

67. Fuel Storage and Sales Agreement, dated as of November 7, 2014, between VB and Dead River Company.

68. Terms and conditions of a Maine Department of Environmental Protection Site Location of Development Act, Amendment Findings of Fact and Order dated September 2, 2015 and recorded in Book 6459, Page 85.

69. Terms and provisions and rights of lessee under a Ground Lease between Bucksport Mill LLC, Landlord, and Bucksport Generation LLC, Lessee, dated January 29, 2015 as evidenced by a Memorandum of Ground Lease September 28, 2015 and recorded in Book 6464, Page 130.

70. Terms and conditions of a Maine Department of Environmental Protection Site Location of Development Act, Minor Amendment, Findings of Fact and Order dated September 9, 2016 and recorded in Book 6634, Page 190.

71. Rights, easements, terms, and conditions contained in the deed to Bucksport Generation LLC from Bucksport Mill LLC dated December 21, 2016 and recorded in Book 6702, Page 172, as same may be affected by Release and Cross Easement Indenture to be recorded.

72. Such state of facts as set forth on plans entitled "Working Plan showing Land and Easements of Bucksport Generation LLC, AIM Development, Whole Oceans LLC" by Plisga & Day Land Surveyors, consisting of an index and 9 numbered sheets, the Index Sheet and Sheets 1 through 7 dated February 14, 2018 and Sheets 8 & 9 dated January 29, 2015, Project/Drawing No. 98079, and any revisions thereto.

73. Such state of facts as set forth on plan entitled "Subdivision Plan Showing Lands Bucksport Mill LLC, Bucksport Generation, LLC", prepared by Plisga & Day dated July 6, 2018, and recorded in the Hancock County Registry of Deeds in Plan File 45, Nos. 29-31.

74. Such state of facts as set forth on plan entitled "Amended Mapfile 45, No. 29, Subdivision Plan Showing Lands Bucksport Mill LLC, Bucksport Generation, LLC" prepared by Plisga & Day dated December 28, 2018 and recorded in Plan File 45, No. 96.

75. Such state of facts as set forth on plan entitled "Amended Mapfile 45, No 96 Amended Mapfile 45, No. 29, Amended Subdivision Plan for Bucksport Mill LLC Bucksport Generation, LLC" prepared by Plisga & Day dated March 19, 2019 and recorded in Plan File 46, No. 11.

76. Such state of facts as set forth on plan entitled "Subdivision Plan "Town Lots East of 15" Bucksport Mill LLC" prepared by Plisga & Day dated March 20, 2019 and recorded in Plan File No. 46, No. 10.

77. Rights and easements for ingress and egress granted to Bucksport United Methodist Church in a deed from Bucksport Mill LLC dated March 6, 2019 and recorded in Book 6939, Page 523.

78. Rights and easements, including flowage rights granted by Verso Bucksport LLC to the Inhabitants of the Town of Orland by deed recorded May 23, 2011 in Book 5621, Page 174.

79. Rights and easements granted to Verso Androscoggin LLC by Verso Bucksport LLC in deed dated as of January 29, 2015 and recorded in Book 6345, Page 257.

80. Terms and conditions of a Maine Department of Environmental Protection Site Location of Development Act, Minor Amendment, Findings of Fact and Order dated September 3, 2018 and recorded in Book 6910, Page 704.

EXHIBIT B

DESCRIPTION OF THE EASEMENT AREAS
(Parcel 4: Easement over Fresh Water Supply System)
Water Supply Land & Rights in Land Reserved and Acquired

Maine Seaboard Paper Company ("MSPC"); Central Securities Corporation ("CSC")
St. Regis Paper Company ("SRPC)
Hancock County Registry of Deeds

Lower Pipe Line –from the West Bank of the Eastern of Narramissic River in Orland at the lower dam or "Hutchins Mill Privilege" to Pond Street in Bucksport

Upper Pipe-Line - from Alamoosook Lake in Orland to Silver Lake in Bucksport

Parcel Number in 1946 Deed Book 711 Page 434	Grantor	Grantee	Date	Hancock County Registry of Deeds Book	Page	Parcel Number in 2006 Deed Book 4588, Page 26
	East Maine Conference Seminary Fee	MSPC	12/3/1929	628	144	Part of Schedule A-1 (Parcel 26)
29, 30 and 31	Georgia M. Bridges Fee	MSPC	02/27/1930	629	87	Part of Schedule A-1 (Parcels 29, 30 and 31)
	Albion R. Soper Hallie Soper Fee	MSPC	3/10/1930	629	285	
35	Roscoe E. Dorr Fee	MSPC	4/23/1930	629	284	Part of Schedule A-1 (Parcel 35)
27	G. Colby Wardwell Harvey Leach	MSPC	5/1930	629	404	Part of Schedule A-1 (Parcel 27)
27	Janet D. Harrison	MSPC	5/1930	630	142	Part of Schedule A-1 (Parcel 27)
27	Harry L. White	MSPC	5/5/1930	629	284	Part of Schedule A-1 (Parcel 27)
27	Harry B. Small	MSPC	5/8/1930	629	405	Part of Schedule A-1 (Parcel 27)
27	E. H. Cunningham	MSPC	5/8/1930	629	407	Part of Schedule A-1 (Parcel 27)

Parcel Number in 1946 Deed Book 711 Page 434	Grantor	Grantee	Date	Hancock County Registry of Deeds Book	Page	Parcel Number in 2006 Deed Book 4588, Page 26
27	James Hutchins	MSPC	5/8/1930	630	141	Part of Schedule A-1 (Parcel 27)
27	Eva C. Stubbs	MSPC	5/9/1930	630	142	Part of Schedule A-1 (Parcel 27)
27	Ernest Hutchins	MSPC	5/10/1930	630	140	Part of Schedule A-1 (Parcel 27)
27	H. Frances Page	MSPC	5/10/1930	630	143	Part of Schedule A-1 (Parcel 27)
27	F. Homer Hutchings	MSPC	5/12/1930	629	403	Part of Schedule A-1 (Parcel 27)
27	Louisa Wasson	MSPC	5/14/1930	629	405	Part of Schedule A-1 (Parcel 27)
27	Loring Robbins	MSPC	5/15/1930	629	408	Part of Schedule A-1 (Parcel 27)
27	Louis H. Chandler	MSPC	5/15/1930	630	141	Part of Schedule A-1 (Parcel 27)
27	Beatrice H. Moore and Earl B. Wasson	MSPC	5/22/1930	629	406	Part of Schedule A-1 (Parcel 27)
27	Fred L. Kenney Annie G. Kenney	MSPC	5/26/1930	630	256	Part of Schedule A-1 (Parcel 27)
27	Bertha Dubois	MSPC	5/27/1930	629	407	Part of Schedule A-1 (Parcel 27)
32	Abbie M. Buck, et al. Fee	MSPC	06/04/1930	629	554	Part of Schedule A-1 (Parcel 32)
	Albert C. Swazey Fee	MSPC	06/05/1930	630	144	
27	William T. Chandler	MSPC	6/7/1930	630	159	Part of Schedule A-1 (Parcel 27)
	Gladys Tarr Anderson	MSPC	6/9/1930	629	413	

Parcel Number in 1946 Deed Book 711 Page 434	Grantor	Grantee	Date	Hancock County Registry of Deeds Book	Page	Parcel Number in 2006 Deed Book 4588, Page 26
28	Seth R. Hutchins	MSPC	6/11/1930	632	578	Part of Schedule A-1 (Parcel 27 and 28)
27, 28	Seth R. Hutchins Fee	MSPC	6/11/1930	630	158	Part of Schedule A-1 (Parcel 27 and 28)
33	Margaretha A. Wharton Fee	MSPC	6/12/1930	629	515	Part of Schedule A-1 (Parcel 33)
37	Alice J. Clements	MSPC	6/18/1930	630	243	Part of Schedule A-1 (Parcel 37)
37	Clara Russell William O. Russell	MSPC	6/18/1930	630	241	Part of Schedule A-1 (Parcel 37)
37	Isaac F. Dorr	MSPC	6/18/1930	630	240	Part of Schedule A-1 (Parcel 37)
37	Carrie M. Buck, et al	MSPC	6/18/1930	630	242	Part of Schedule A-1 (Parcel 37)
37	A. R. Soper Hallie Soper	MSPC	6/18/1930	629	484	Part of Schedule A-1 (Parcel 37)
37	James Holt	MSPC	6/18/1930	629	536	Part of Schedule A-1 (Parcel 37)
37	H. H. Dunbar	MSPC	6/18/1930	630	244	Part of Schedule A-1 (Parcel 37)
37	Rising Sun Lodge 71 F.&A.M.	MSPC	6/18/1930	629	482	Part of Schedule A-1 (Parcel 37)
37	Alvin E. Gowen	MSPC	6/18/1930	630	237	Part of Schedule A-1 (Parcel 37)
37	Carrie A. Staples	MSPC	6/18/1930	629	481	Part of Schedule A-1 (Parcel 37)
37	A. R. Soper	MSPC	6/18/1930	629	485	Part of Schedule A-1 (Parcel 37)

Parcel Number in 1946 Deed Book 711 Page 434	Grantor	Grantee	Date	Hancock County Registry of Deeds Book	Page	Parcel Number in 2006 Deed Book 4588, Page 26
37	Emma A. Cotton	MSPC	6/18/1930	629	535	Part of Schedule A-1 (Parcel 37)
37	Alice P. Gray	MSPC	6/18/1930	630	282	Part of Schedule A-1 (Parcel 37)
37	A. R. Soper Hallie Soper	MSPC	6/20/1930	629	483	Part of Schedule A-1 (Parcel 37)
37	A. R. Soper	MSPC	6/20/1930	629	485	Part of Schedule A-1 (Parcel 37)
37	Percy F. Moore	MSPC	6/23/1930	630	238	Part of Schedule A-1 (Parcel 37)
37	A. R. Soper Hallie Soper	MSPC	6/23/1930	629	483	Part of Schedule A-1 (Parcel 37)
37	Lysle P. Saunders	MSPC	6/23/1930	629	487	Part of Schedule A-1 (Parcel 37)
37	Llewellyn Harriman	MSPC	6/23/1930	629	486	Part of Schedule A-1 (Parcel 37)
37	Byron E. Colby	MSPC	6/23/1930	629	487	Part of Schedule A-1 (Parcel 37)
37	Albert H. Eldridge	MSPC	6/23/1930	630	239	Part of Schedule A-1 (Parcel 37)
37	Russell E. Grey	MSPC	6/23/1930	630	239	Part of Schedule A-1 (Parcel 37)
37	Homer H. Mooney	MSPC	6/23/1930	630	243	Part of Schedule A-1 (Parcel 37)
37	G. H. Randall	MSPC	6/23/1930	630	241	Part of Schedule A-1 (Parcel 37)
37	Ella M. Saunders	MSPC	6/23/1930	629	495	Part of Schedule A-1 (Parcel 37)
34	Alvin E. Gowen Augusta J. Gowen Fee	MSPC	7/9/1930	630	284	Part of Schedule A-1 (Parcel 34)

Parcel Number in 1946 Deed Book 711 Page 434	Grantor	Grantee	Date	Hancock County Registry of Deeds Book	Page	Parcel Number in 2006 Deed Book 4588, Page 26
37	Walter L. Brewster	MSPC	7/9/1930	629	515	Part of Schedule A-1 (Parcel 37)
37	Homer H. Dunbar	MSPC	7/9/1930	630	284	Part of Schedule A-1 (Parcel 37)
7	Charles E. Pickering, et al Fee	MSPC	07/11/1930	629	534	Part of Schedule A-1 (Parcel 7)
	Alice M. Buck, et al Fee	MSPC	7/15/1930	631	175	
8	George R. Emerton Fee	MSPC	07/17/1930	630	328	Part of Schedule A-1 (Parcel 8)
9	Nyada Colby & Helen Chipman Fee	MSPC	07/17/1930	630	327	Part of Schedule A-1 (Parcel 9)
26	Melvin H. Harriman	MSPC	7/18/1930	629	555	Part of Schedule A-1 (Parcel 26)
26	Bert H. Bennett	MSPC	7/18/1930	630	329	Part of Schedule A-1 (Parcel 26)
26	Bert H. Bennett	MSPC	7/18/1930	630	328	Part of Schedule A-1 (Parcel 26)
26	Evvie L. Lowell	MSPC	7/18/1930	630	329	Part of Schedule A-1 (Parcel 26)
10	Adelbert E. Peavey Fee	MSPC	07/24/1930	630	350	Part of Schedule A-1 (Parcel 10)
25	Mattie M. Gray	MSPC	7/25/1930	630	398	Part of Schedule A-1 (Parcel 25)
25	Percy F. Moore	MSPC	7/26/1930	630	397	Part of Schedule A-1 (Parcel 25)
25	Mildred B. Soper	MSPC	7/26/1930	631	17	Part of Schedule A-1 (Parcel 25)
25	Byron E. Colby	MSPC	7/26/1930	631	17	Part of Schedule A-1 (Parcel 25)

Parcel Number in 1946 Deed Book 711 Page 434	Grantor	Grantee	Date	Hancock County Registry of Deeds Book	Page	Parcel Number in 2006 Deed Book 4588, Page 26
25	Melvin H. Harriman	MSPC	7/26/1930	630	398	Part of Schedule A-1 (Parcel 25)
25	John E. Grindle	MSPC	7/26/1930	631	19	Part of Schedule A-1 (Parcel 25)
25	Alice J. Clement	MSPC	7/28/1930	630	395	Part of Schedule A-1 (Parcel 25)
25	Albert H. Eldridge	MSPC	7/28/1930	631	18	Part of Schedule A-1 (Parcel 25)
25	Russell E. Grey	MSPC	7/28/1930	631	18	Part of Schedule A-1 (Parcel 25)
	Bert H. Bennett Fee	**Buckspor t Water Company**	7/29/1930	631	15	
	Percival A. Stubbs	MSPC	7/31/1930	631	102	
	Joshua L. Smith J. E. Witham	MSPC	8/1930	631	173	
22	Fred S. Blodgett, et al. Fee	MSPC	08/1930	631	175	Part of Schedule A-1 (Parcel 22)
	Melvin H. Harriman Fee	**Buckspor t Water Company**	8/2/1930	631	15	
25	Lysle P. Saunders	MSPC	8/2/1930	630	397	Part of Schedule A-1 (Parcel 25)
11	Walter H. Gardner Augusta S. Gardner Fee	MSPC	8/6/1930	631	26	Part of Schedule A-1 (Parcel 11)
	Frank W. Beale Fee	MSPC	8/6/1930	631	25	Part of Schedule A-1 (Parcel 12)
	F. Elliott Bridges Fee	MSPC	8/6/1930	630	406	Part of Schedule A-1 (Parcel 14)
	Joshua L. Smith	MSPC	8/6/1930	630	405	
	Harry A. Bridges	MSPC	8/6/1930	630	406	
	Arthur E. Smith Annie L. Smith	MSPC	8/6/1930	630	404	

Parcel Number in 1946 Deed Book 711 Page 434	Grantor	Grantee	Date	Hancock County Registry of Deeds Book	Page	Parcel Number in 2006 Deed Book 4588, Page 26
	William O. DePray	MSPC	8/6/1930	631	26	
	Charles E. Cole	MSPC	8/6/1930	630	405	
	Stanley D. Gray	MSPC	8/7/1930	631	172	
19	Edith L. Grindle Fee	MSPC	8/13/1930	631	105	Part of Schedule A-1 (Parcel 19)
18	Arthur L. Grindle Fee	MSPC	8/13/1930	631	103	Part of Schedule A-1 (Parcel 18)
	Daniel Courcy Fee	MSPC	8/13/1930	631	104	Part of Schedule A-1 (Parcel 17)
6	Silver Lake Cemetery Corporation Fee	MSPC	08/13/1930	631	106	Part of Schedule A-1 (Parcel 6)
22	Harry G. West Fee	MSPC	8/14/1930	631	101	Part of Schedule A-1 (Parcel 22)
	Reuben R. Simpson	MSPC	8/14/1930	631	106	
	Flora M. Grindle	MSPC	8/15/1930	631	102	
20	Roy H. Ferris Fee	MSPC	9/2/1930	631	174	Part of Schedule A-1 (Parcel 20)
	Bert H. Bennett Fee	MSPC	9/5/1930	631	173	Part of Schedule A-1 (Parcel 21)
22	Wallace Heath Fee	MSPC	9/19/1930	631	380	Part of Schedule A-1 (Parcel 22)
22	Wallace Heath Fee	MSPC	9/19/1930	631	380	Part of Schedule A-1 (Parcel 22)
22	Augustine L. Heywood S. Leo Heywood Fee	MSPC	9/20/1930	631	381	Part of Schedule A-1 (Parcel 22)
22	Edith L. Grindle Fee	MSPC	10/10/1930	632	169	Part of Schedule A-1 (Parcel 22)
22	Flora M. Grindle Fee	MSPC	10/10/1930	632	168	Part of Schedule A-1 (Parcel 22)

Parcel Number in 1946 Deed Book 711 Page 434	Grantor	Grantee	Date	Hancock County Registry of Deeds Book	Page	Parcel Number in 2006 Deed Book 4588, Page 26
22	Arthur L. Grindle Fee	MSPC	10/10/1930	632	168	Part of Schedule A-1 (Parcel 22)
22	Joshua L. Smith Fee	MSPC	10/10/1930	632	167	Part of Schedule A-1 (Parcel 22)
22	Fred L. Jones Albert P. Jones Fee	MSPC	10/10/1930	632	170	Part of Schedule A-1 (Parcel 221
22	Harry G. West Fee	MSPC	10/10/1930	632	170	Part of Schedule A-1 (Parcel 22)
22	Fred L. Jones Albert P. Jones Fee	MSPC	10/14/1930	631	104	Part of Schedule A-1 (Parcel 22)
37	Howard Johnson	MSPC	10/16/1930	632	454	Part of Schedule A-1 (Parcel 37)
20	Roy H. Ferris Fee	MSPC	10/16/1930	632	166	Part of Schedule A-1 (Parcel 20)
22	Harry A. Bridges Fee	MSPC	10/16/1930	632	166	Part of Schedule A-1 (Parcel 22)
15	Wm. O. DePray Fee	MSPC	10/24/1930	631	437	Part of Schedule A-1 (Parcel 15)
22	Charles E. Cole Fee	MSPC	10/24/1930	631	433	Part of Schedule A-1 (Parcel 22)
22	Charles E. Pickering Fee	MSPC	10/24/1930	631	434	Part of Schedule A-1 (Parcel 22)
22	Arthur E. Smith Annie L. Smith Fee	MSPC	10/24/1930	631	434	Part of Schedule A-1 (Parcel 22)
22	Percival A. Stubbs Fee	MSPC	10/30/1930	631	438	Part of Schedule A-1 (Parcel 22)
22	Arthur E. Bragdon Fee	MSPC	11/4/1930	631	436	Part of Schedule A-1 (Parcel 22)
22	Reuben R. Simpson Fee	MSPC	11/04/1930	631	435	Part of Schedule A-1 (Parcel 22)

Parcel Number in 1946 Deed Book 711 Page 434	Grantor	Grantee	Date	Hancock County Registry of Deeds Book	Page	Parcel Number in 2006 Deed Book 4588, Page 26
22	Percival A. Stubbs Fee	MSPC	11/5/1930	632	237	Part of Schedule A-1 (Parcel 22)
22	Fred S. Blodgett, et al. Fee	MSPC	11/5/1930	631	436	
16	Joshua L. Smith Charles T. Simmons Fee	MSPC	11/12/1930	632	236	Part of Schedule A-1 (Parcel 16)
22	Stanley D. Gray Fee	MSPC	11/13/1930	632	235	Part of Schedule A-1 (Parcel 22)
37	Elizabeth E. Sawyer, a/k/a Lizzie McDonald	MSPC	12/11/1930	633	88	Part of Schedule A-1 (Parcel 37)
36	Perpitia L. Emerson Fee	MSPC	12/13/1930	675	482	Part of Schedule A-1 (Parcel 36)
23c	Edwin C. Jones Fee	**CSC**	1/14/1931	632	492	Part of Schedule A-1 (Parcel 23)
23c	Elliott A. Quimby Fee	**CSC**	1/14/1931	633	87	Part of Schedule A-1 (Parcel 23)
23c	Margie A. Cunningham Fee	**CSC**	1/14/1931	632	579	Part of Schedule A-1 (Parcel 23)
37	Sewall C. Ginn	MSPC	1/19/1931	633	87	Part of Schedule A-1 (Parcel 37)
37	Flora F. Dorr	MSPC	1/20/1931	632	493	Part of Schedule A-1 (Parcel 37)
	E. Earl Herrick Fee	MSPC	2/5/1931	632	580	Part of Schedule A-1 (Parcel 13)
23c	Melvin Harriman Fee	**CSC**	2/13/1931	632	579	Part of Schedule A-1 (Parcel 23)
23c	Wiley C. Conary Fee	**CSC**	3/14/1931	633	262	Part of Schedule A-1 (Parcel 23)
23c	Louis Rapaport Fee	**CSC**	4/11/1931	634	132	Part of Schedule A-1 (Parcel 23)

Parcel Number in 1946 Deed Book 711 Page 434	Grantor	Grantee	Date	Hancock County Registry of Deeds Book	Page	Parcel Number in 2006 Deed Book 4588, Page 26
23c	John Bolduc Fee	CSC	4/11/1931	634	133	Part of Schedule A-1 (Parcel 23)
23c	Frank G. Bridges Fee	CSC	4/11/1931	634	133	Part of Schedule A-1 (Parcel 23)
23c	Reuben R. Simpson Fee	CSC	4/27/1931	633	445	Part of Schedule A-1 (Parcel 23)
23c	Edwin R. Witham, et al. Fee	CSC	5/20/1931	633	443	Part of Schedule A-1 (Parcel 23)
23c	Agnes Bridges, et al. Fee	CSC	5/25/1931	633	444	Part of Schedule A-1 (Parcel 23)
23c	Frederic W. Smith Fee	CSC	5/28/1931	633	445	Part of Schedule A-1 (Parcel 23)
	Alton N. Hutchins Fee	CSC	6/18/1931	633	484	Part of Schedule A-1 (Parcel 23)
	Albert B. Willins	CSC	6/18/1931	633	484	Part of Schedule A-1 (Parcel 23)
23c	Mary C. Horan Fee	CSC	6/25/1931	633	519	Part of Schedule A-1 (Parcel 23)
23c	George C. Bickford, et al. Fee	CSC	6/25/1931	633	520	Part of Schedule A-1 (Parcel 23)
40	Prentice E. Soper	MSPC	7/29/1931	635	345	Part of Schedule A-1 (Parcel 40)
40	Robert B. Randall	MSPC	7/29/1931	635	351	Part of Schedule A-1 (Parcel 40)
40	Richard G. Tunison	MSPC	7/29/1931	635	355	Part of Schedule A-1 (Parcel 40)
40	William P. Wharton	MSPC	7/29/1931	635	365	Part of Schedule A-1 (Parcel 40)
40	Clement R. Lee, et al	MSPC	7/29/1931	635	366	Part of Schedule A-1 (Parcel 40)

Parcel Number in 1946 Deed Book 711 Page 434	Grantor	Grantee	Date	Hancock County Registry of Deeds Book	Page	Parcel Number in 2006 Deed Book 4588, Page 26
40	Joseph B. Patterson	MSPC	7/30/1931	635	364	Part of Schedule A-1 (Parcel 40)
40	Paul Nolan	MSPC	7/30/1931	635	365	Part of Schedule A-1 (Parcel 40)
40	Gertrude M. Emery	MSPC	7/30/1931	635	370	Part of Schedule A-1 (Parcel 40)
40	Evelyn M. Buck	MSPC	7/31/1931	635	356	Part of Schedule A-1 (Parcel 40)
40	Nellie H. Atkins	MSPC	7/31/1931	635	356	Part of Schedule A-1 (Parcel 40)
40	Alvah G. Auchu	MSPC	7/31/1931	635	363	Part of Schedule A-1 (Parcel 40)
40	Eleanor Campbell French	MSPC	7/31/1931	635	372	Part of Schedule A-1 (Parcel 40)
40	Walter H. Gardner	MSPC	8/1/1931	635	368	Part of Schedule A-1 (Parcel 40)
40	Augusta H. Gardner	MSPC	8/1/1931	635	368	Part of Schedule A-1 (Parcel 40)
40	Fred S. Blodgett	MSPC	8/1/1931	635	369	Part of Schedule A-1 (Parcel 40)
40	Thomas F. Mason, et al	MSPC	8/4/1931	635	358	Part of Schedule A-1 (Parcel 40)
40	Abbie C. Jordan Homer H. Dunbar	MSPC	8/4/1931	635	359	Part of Schedule A-1 (Parcel 40)
40	Walter F. Gilliland	MSPC	8/4/1931	635	360	Part of Schedule A-1 (Parcel 40)
40	Carl D. Buck	MSPC	8/4/1931	635	361	Part of Schedule A-1 (Parcel 40)
40	Hermine Ehlers	MSPC	8/4/1931	635	362	Part of Schedule A-1 (Parcel 40)

Parcel Number in 1946 Deed Book 711 Page 434	Grantor	Grantee	Date	Hancock County Registry of Deeds Book	Page	Parcel Number in 2006 Deed Book 4588, Page 26
23c	Wilbrod Bouchard, et al. Fee	CSC	8/4/1931	635	329	Part of Schedule A-1 (Parcel 23)
40	Viola Brownelle	MSPC	8/5/1931	635	348	Part of Schedule A-1 (Parcel 40)
40	Caroline S. Otis	MSPC	8/5/1931	635	349	Part of Schedule A-1 (Parcel 40)
40	Ethel B. Snow	MSPC	8/5/1931	635	359	Part of Schedule A-1 (Parcel 40)
40	Nora I. Leach	MSPC	8/6/1931	635	346	Part of Schedule A-1 (Parcel 40)
40	Everett P. Wilder	MSPC	8/6/1931	635	347	Part of Schedule A-1 (Parcel 40)
40	Lauriston G. Leach	MSPC	8/6/1931	635	349	Part of Schedule A-1 (Parcel 40)
40	Dennis R. Soper	MSPC	8/6/1931	635	362	Part of Schedule A-1 (Parcel 40)
40	Frances C. Homer	MSPC	8/11/1931	635	367	Part of Schedule A-1 (Parcel 40)
40	Leslie E. Little	MSPC	8/12/1931	635	371	Part of Schedule A-1 (Parcel 40)
40	Stella G. Streeter	MSPC	8/13/1931	635	357	Part of Schedule A-1 (Parcel 40)
40	Will L. White	MSPC	8/14/1931	635	350	Part of Schedule A-1 (Parcel 40)
40	Albion R. Soper	MSPC	8/14/1931	635	352	Part of Schedule A-1 (Parcel 40)
40	J. E. Soper, et al	MSPC	8/14/1931	635	354	Part of Schedule A-1 (Parcel 40)
40	F. M. Pierce	MSPC	8/15/1931	635	346	Part of Schedule A-1 (Parcel 40)

Parcel Number in 1946 Deed Book 711 Page 434	Grantor	Grantee	Date	Hancock County Registry of Deeds Book	Page	Parcel Number in 2006 Deed Book 4588, Page 26
40	Joseph Buck	MSPC	8/18/1931	635	352	Part of Schedule A-1 (Parcel 40)
40	John A. Soper	MSPC	8/29/1931	635	353	Part of Schedule A-1 (Parcel 40)
40	Frances S. Keener	MSPC	8/29/1931	635	372	Part of Schedule A-1 (Parcel 40)
23c	Horace L. Gould Fee	**CSC**	9/24/1931	635	567	Part of Schedule A-1 (Parcel 23)
23c	Eliza P. Swazey Fee	**CSC**	10/8/1931	635	568	Part of Schedule A-1 (Parcel 23)
23c	Nellie M. Franklin Fee	**CSC**	10/10/1931	635	568	Part of Schedule A-1 (Parcel 23)
23c	Frank E. Baldwin Fee	**CSC**	11/2/1931	637	182	Part of Schedule A-1 (Parcel 23)
	Henry A. Buck Fee	**CSC**	2/25/1932	637	183	Part of Schedule A-1 (Parcel 23)
39	Central Maine Power Company Fee	MSPC	2/26/1934	643	224	Part of Schedule A-1 (Parcel 39)
38	MSPC	David C. Buck	6/27/1934	645	444	Part of Schedule A-1 (Parcel 38)
38	MSPC	Annie E. Ames	6/27/1934	645	194	Part of Schedule A-1 (Parcel 38)
38	MSPC	C. L. Far mer	6/27/1934	649	5	Part of Schedule A-1 (Parcel 38)
38	MSPC	J. Frank Ames	6/27/1934	646	268	Part of Schedule A-1 (Parcel 38)
38	MSPC	Russell Johnson	6/27/1934	658	334	Part of Schedule A-1 (Parcel 38)
	Central Maine Power Company Fee	**CSC**	7/31/1935	648	332	Part of Schedule A-1 (Parcel 23)

Parcel Number in 1946 Deed Book 711 Page 434	Grantor	Grantee	Date	Hancock County Registry of Deeds Book	Page	Parcel Number in 2006 Deed Book 4588, Page 26
38	MSPC	Guy C. Emerson	8/31/1935	648	243	Part of Schedule A-1 (Parcel 28) and Part of Schedule A-1 (Parcel 38)
38	MSPC	C. L. Farmer	9/18/1935	648	299	Part of Schedule A-1 (Parcel 38)
24	Bucksport Water Company Fee	MSPC	11/30/1935	648	556	Part of Schedule A-1 (Parcel 24)
23a, 23b and 23c	Central Maine Power Company Fee	MSPC	12/30/1935	650	467	Part of Schedule A-1 (Parcel 23)
	Leslie E. Little	SRPC	8/17/1951	749	115	Schedule A-82 (See Deed 635/371)
	Robert B. Randall	SRPC	8/18/1951	749	100	Schedule A-68 (See Deed 635/351)
	Nathan P. Walton, Jr. Josephine R. Walton	SRPC	8/18/1951	749	105	Schedule A-72
	Sarah S. Bauman	SRPC	8/18/1951	749	106	Schedule A-73
	Ruth Millspaugh, et al	SRPC	8/18/1951	749	106	Schedule A-73
	Richard W. Estabrook Elizabeth P. Estabrook	SRPC	8/18/1951	749	108	Schedule A-75
	Harold S. Chase	SRPC	8/18/1951	749	109	Schedule A-76
	Walter S. Jones	SRPC	8/18/1951	749	110	Schedule A-77
	Ernest E. Baker Agnes M. Baker	SRPC	8/18/1951	749	111	Schedule A-78
	Ann R. Breen	SRPC	8/18/1951	749	112	Schedule A-79 (see prior deed 635/363)
	Jessie N. Blodgett	SRPC	8/21/1951	749	114	Schedule A-81 (See Deed 635/369)
	Vivian V. Rockwood Hine	SRPC	8/23/1951	749	103	Schedule A-70 (See prior deed 635/356)
	Granville H. Doughty	SRPC	8/23/1951	749	125	Schedule A-84
	Stella G. Streeter	SRPC	8/31/1951	749	104	Schedule A-71 (See prior deed 635/357)

Parcel Number in 1946 Deed Book 711 Page 434	Grantor	Grantee	Date	Hancock County Registry of Deeds Book	Page	Parcel Number in 2006 Deed Book 4588, Page 26
	Cynthia H. Sumner	SRPC	8/31/1951	749	116	Schedule A-83
	Edith O. Tunison	SRPC	9/5/1951	749	102	Schedule A-69 (See deed 635/355)
	Ella E. Page	SRPC	9/14/1951	749	113	Schedule A-80
	Central Maine Power Company	SRPC	4/2/1952	749	107	?
	Central Maine Power Company	SRPC	4/2/1952	749	107	Schedule A-74
	George D. Bearce	SRPC	7/18/1952	749	201	Schedule A-85
	Everett P. Wilder	SRPC	7/21/1952	747	301	Schedule A-61 (See prior deed 635/347)
	Arthur G. Dunbar	SRPC	7/21/1952	747	304	Schedule A-64 (See deed 635/372)
	Stephen A. Barry and Marvia P. Barry	SRPC	7/23/1952	747	305	Schedule A-65
	Herbert M. Soper Mildred B. Soper	SRPC	7/23/1952	747	307	Schedule A-67 (see deed 635/353)
	Joseph E. Soper	SRPC	7/26/1952	747	300	Schedule A-60 (See deed 635/345 and deed 635/352)
	Charlton P. Stubbs and Pearl D. Stubbs	SRPC	7/30/1952	747	306	Schedule A-66 (See deed 635/365-2)
	Owen L. Gray	SRPC	8/10/1952	747	302	Schedule A-62
	Hazel E. Woodworth Edna B. Woodworth	SRPC	8/12/1952	747	303	Schedule A-63 (Possibly the s/a 635/357)
	Gertrude M. Emery	SRPC	8/12/1952	751	124	Schedule A-88 (See Book 635/370)
	J. Albert Giard Blanche E. Giard	SRPC	8/14/1952	751	122	Schedule A-860 (See prior deed 635/345)
	Doris L. Nowland Stella G. Streeter	SRPC	9/11/1952	751	123	Schedule A-87 (Possibly Book 635/357)
	Owen L. Gray	SRPC	9/7/1957	802	584	Schedule A-89

Parcel Number in 1946 Deed Book 711 Page 434	Grantor	Grantee	Date	Hancock County Registry of Deeds Book	Page	Parcel Number in 2006 Deed Book 4588, Page 26
	Silver Lake Cemetery Corporation Fee	SRPC	9/18/1957	804	447	Schedule A-12 (Remaining land of 631/106)
	Vera F. Roberts Reginald V. Roberts	SRPC	9/26/1957	806	78	Schedule A-90
	Joseph T. Stockbridge, Jr.	SRPC	11/13/1957	807	485	Schedule A-91 (see deed 635/366)
	Robert W. Baker	SRPC	11/13/1957	807	487	Schedule A-92
	Helen C. Lynch	SRPC	11/25/1957	808	7	Schedule A-93
	Lucile K. Buck Clarinda D. Buck	SRPC	4/21/1958	815	334	Schedule A-94
	E. L. Goodwin	SRPC	4/23/1958	820	260	Schedule A-96
	Henry G. Saumsiegle Alice L. Saumsiegle	SRPC	6/25/1958	820	177	Schedule A-95
	Helen P. Chipman Fee	SRPC	7/31/1959	844	484	Schedule A-13
	Winston C. Ferris	SRPC	12/10/1960	877	234	Schedule A-97
	Central Maine Power Company Fee	SRPC	3/15/1965	979	144	Schedule A-98
	Bucksport Water Company	Champion International Corporation	10/16/1989	1779	89	

TOGETHER WITH the land and rights reserved in the deed to the Inhabitants of the Town of Orland dated March 21, 2011 and recorded in the Hancock County Registry of Deeds in Book 5621, Page 174, all rights to divert the water of the Eastern or Narramissic River by pipe or otherwise, and all riparian rights acquired by the Maine Seaboard Paper Company, including without limitation the rights acquired from the following parties by deeds dated and recorded in said Hancock Registry of Deeds as follows, namely:

	Grantor		Date	Book	Page
	Alice J. Clements		June 18, 1930	630	243
	Percy F. Moore		June 23, 1930	630	238
	A. R. Soper et al.		June 20, 1930	629	483
	Lysle P. Saunders		June 23, 1930	629	487
	A. R. Soper et al.		June 20, 1930	629	483
	Llewellyn Harriman		June 23, 1930	629	486
	Byron E. Colby		June 23, 1930	629	487
	Clara Russell et al.		June 18, 1930	630	241
	Albert H. Eldridge		June 23, 1930	630	239
	Russell E. Grey		June 23, 1930	630	239
	Isaac F. Dorr		June 18, 1930	630	240
	Carrie M. Buck et al		June 18, 1930	630	242
	A. R. Soper et al.		June 18, 1930	629	484
	James Holt		June 18, 1930	629	536
	H. H. Dunbar		June 18, 1930	630	244
	Rising Sun Lodge 71 F. & A. M.		June 18, 1930	629	482
	A. R. Soper		June 20, 1930	629	485
	Homer H. Mooney		June 23, 1930	630	243
	Elizabeth E. Sawyer		Dec. 11, 1930	633	88
	Carrie A. Staples		June 18, 1930	629	481
	G. H. Randall		June 23, 1930	630	241
	Alvin E. Gowen		June 18, 1930	630	237
	Walter L. Brewster		July 9, 1930	629	515
	A. R. Soper		June 18, 1930	629	485
	Emma A. Cotton		June 18, 1930	629	535
	Alice P. Gray		June 18, 1930	630	282
	Flora F. Dorr		Jan. 20, 1931	632	493
	Homer H. Dunbar		July 9, 1930	630	284
	Howard Johnson		Oct. 16, 1930	632	454
	Ella M. Saunders		June 23, 1930	629	495
	Sewall C. Ginn		Jan. 19, 1931	633	87

TOGETHER WITH the land and rights reserved in the deed to the Inhabitants of the Town of Orland dated March 21, 2011 and recorded in the Hancock County Registry of Deeds in Book 5621, Page 174, all rights to divert the water of the Eastern or Narramissic River by pipe or otherwise, and all riparian rights reserved by the Maine Seaboard Paper Company, including without limitation the rights reserved from the following parties by deeds dated and recorded in said Hancock Registry of Deeds as follows, namely:

	Grantee		Date	Book	Page
	C. L. Farmer		Sept. 18, 1935	648	299
	Annie E. Ames		June 27, 1934	645	194
	David C. Buck		June 27, 1934	645	444
	Russell Johnson		June 27, 1934	658	334
	C. L. Farmer		June 27, 1934	649	5
	J. Frank Ames		June 27, 1934	646	268
	Guy C. Emerson		Aug. 31, 1935	648	243

TOGETHER WITH all riparian rights reserved to the waters of the Eastern or Narramissic River, so far as the same are appurtenant to or are included with the ownership of the land and rights conveyed in the deed to the Inhabitants of the Town of Orland dated March 21, 2011, and recorded in the Hancock County Registry of Deeds in Book 5621, Page 174, including the right to divert the waters of the Eastern or Narramissic River away from said conveyed premises, by pipe or otherwise.

TOGETHER WITH Grantor's Unlimited Water Use Rights reserved in the deed to the Inhabitants of the Town of Orland dated March 21, 2011 and recorded in the Hancock County Registry of Deeds in Book 5621, Page 174, in which the Town of Orland acknowledged that Grantor has in the past and will continue in the future to divert the water of the Eastern or Narramissic River for use at Grantor's property in the Town of Bucksport, and hereby covenants and agrees that Grantor, its successors and assigns forever, may continue so to divert said water without limitation and regardless of whether said water is detained or unreasonably diminished in volume, at Grantor's sole discretion.

TOGETHER WITH:

a. The 10-foot strip described in the Release Deed from Verso Bucksport LLC to the Inhabitants of the Town of Bucksport dated January 19, 2011 and recorded in said Registry of Deeds in Book 5568, Page 333.

b. The Aqueduct Easement area and the fifteen-foot right of way described in Release Deed from Verso Bucksport LLC to Verso Androscoggin LLC dated as of January 29, 2015 and recorded in said Registry of Deeds in Book 6345, Page 257.

c. The rights reserved in the Quitclaim Deed with Covenant from Bucksport Mill LLC to Bucksport United Methodist Church dated March 6, 2019 and recorded in Book 6939, Page 523.

EXCEPTING from the property described in this Exhibit B:

a. Property on Silver Lake Road, Bucksport conveyed by deed from Verso Bucksport LLC to the Inhabitants of the Town of Bucksport dated January 19, 2011 and recorded in said Registry of Deeds in Book 5568, Page 333.

b. The fee title to the land and rights and easements granted in the deed from Bucksport Verso LLC to the Inhabitants of the Town of Orland dated March 21, 2011 and recorded in the Hancock County Registry of Deeds in Book 5621, Page 174.

c. The land conveyed by deed from Verso Bucksport LLC to Verso Androscoggin LLC dated as of January 29, 2015 and recorded in said Registry of Deeds in Book 6345, Page 257.

d. The fee title to the land granted in the Quitclaim Deed with Covenant from Bucksport Mill LLC to Bucksport United Methodist Church dated March 6, 2019 and recorded in Book 6939, Page 523.

EXHIBIT C

TERMS AND CONDITIONS APPLICABLE TO THE WATER TRANSMISSION EASEMENT, WATER EASEMENT AND ACCESS EASEMENT

Section 1. **Certain Definitions**. In addition to other defined terms set forth in this Exhibit C and elsewhere in this Deed, the following terms as used in this Exhibit C will each have the meaning assigned in this Section 1:

(a) "**Available Water**" means the volume of Water defined below as available for delivery from Silver Lake through the Downstream Infrastructure each day that corresponds the following water elevations at Silver Lake, all as measured at the Silver Lake Gauge:

(i) whenever the water level at Silver Lake is within the Standard Range of Water Elevation, the "Available Water" is 12.5 MGD;
(ii) whenever the water level at Silver Lake is lower than 124 feet above MSL but higher than 122 feet above MSL, the "Available Water" is 8.5 MGD;
(iii) whenever the water level at Silver Lake is lower than 122 feet above MSL but higher than 120 feet above MSL, the "Available Water" is 4.5 MGD;
(iv) whenever the water level at Silver Lake is lower than 120 feet above MSL but higher than 118 feet above MSL, the "Available Water is 2.0 MGD; and
(v) whenever the water level at Silver Lake is at or below 118 feet above MSL, the "Available Water" is zero (0) MGD.

(b) "**BuckGen**" means Bucksport Generation LLC, a Delaware limited liability company.

(c) **"BuckGen Parcel"** means Lot 1 depicted on the Subdivision Plan and all easements and rights appurtenant to Lot 1.

(d) **"BuckGen Water Supply Easement"** means that certain Water Supply Easement dated on or about the date hereof from Grantor to BuckGen and recorded in the Registry of Deeds herewith.

(e) **"Business Day"** means a day other than a Saturday, Sunday or other day on which commercial banks in Portland, Maine, are authorized or required by law to be closed.

(f) "**Commencement of Commercial Operations**" means the earlier of (i) the date that the first salmon are at the facility to be constructed on the Whole Oceans Parcels, and (ii) the date the cohort of eggs intended for hatching and commercial sale are delivered to the facility to be constructed on the Whole Oceans Parcels.

(g) "**Consumer Price Index**" means the Consumer Price Index, All Urban Consumers (CPI-U), All Items, U.S. City Average (1982 - 84 = 100), prepared by the United States Department of Labor, Bureau of Labor Statistics; or if such index is no longer prepared, another comparable index prepared by the United States Department of Labor, Bureau of Labor Statistics or by other governmental agencies as the parties shall mutually agree.

(h) "**Downstream Infrastructure**" means that portion of the Fresh Water Supply System running from Silver Lake to the Mill Property, for the delivery of water from Silver Lake to the Total Property, including without limitation an intake structure in Silver Lake, a pipeline and a filter house, certain water control equipment and structures associated with such intake, pipeline and filter house and

all aqueducts, pipelines, pumps, filters, communication equipment, structures, and all facilities used or useful in connection with the delivery of water from Silver Lake to the Total Property.

(i) "**Fiscal Year**" means the 12-month period beginning on each July 1.

(j) **"Grantor Retained Parcels"** shall mean Lots 3 and 4 depicted on the Subdivision Plan.

(k) **"Lake Management Plan"** means that certain management plan adopted by Grantor entitled "Verso Paper Corp. Lake Level Management Plan", last revised March, 2015.

(l) "**MGD**" means million gallons per day

(m) "**MSL**" means mean sea level as established by the United States Geodetic Survey Datum.

(n) "**Registry of Deeds**" means the Hancock County (Maine) Registry of Deeds.

(o) "**Silver Lake Gauge**" means the existing measurement point in Silver Lake to which the intake pipe to the filter house is connected.

(p) "**Silver Lake Indenture**" means that certain Indenture between Bucksport Water Company and Maine Seaboard Paper Company, dated November 30, 1935 and recorded in the Hancock County Registry of Deeds in Book 648, Page 556, as amended by that certain Indenture between Bucksport Water Company and Champion International Corporation (successor in interest to Maine Seaboard Paper Company), dated October 16, 1989 and recorded in said Registry of Deeds in Book 1779, Page 89.

(q) "**Standard Range of Water Elevation**" shall mean the water level in Silver Lake being between 124 feet and 128 feet above MSL, measured at the Silver Lake Gauge.

(r) "**Subdivision Plan**" shall mean that certain Subdivision Plan entitled "Amended Subdivision Plan for Bucksport Mill, LLC Bucksport Generation LLC 2 River Road – Bucksport, Hancock County, Maine," sheet 1 of 3, dated March 19, 2019, and recorded in the Hancock County Registry of Deeds as Mapfile 46, Number 11.

(s) "**Total Property**" means the Whole Oceans Parcels, the Grantor Retained Parcels, and Lot 1 as depicted on the Subdivision Plan.

(t) "**Upstream Water System**" means that portion of the Fresh Water Supply System, including Toddy Pond and extending from Toddy Pond in Orland to and through Alamoosook Lake, and further extending from Alamoosook Lake to Silver Lake in Bucksport, together with the Silver Lake Dam, and together with all of Grantor's rights in and to such lakes and ponds, the dams, and all water control equipment and structures associated with such lakes and ponds, and the aqueducts, pipelines, pumps, filters, communication equipment, structures, and all facilities used or useful in connection with such dams, water control equipment and structures, aqueducts, pipelines, pumps, filters, communication equipment, and structures.

(u) "**Water**" means water delivered from Silver Lake in Bucksport, Maine through the Fresh Water Supply System to all or any portion of the Total Property,

Section 2. Water Management.

(a) In order to increase the likelihood of sufficient water in the Fresh Water Supply System for itself, Grantee, BuckGen and other users of water from the Fresh Water Supply System as provided in this Exhibit C, Grantor agrees to use its good faith efforts to maintain the water elevation at Silver Lake within the Standard Range of Water Elevation. In so doing, Grantor agrees to operate the Silver Lake Water System as provided in the Lake Management Plan, as the same may be amended from time to time. Grantor shall periodically measure the water level at the Silver Lake Gauge (the **"Water Level Measurement"**) and provide to Grantee and BuckGen a report of such measurement. So long as the water levels at Silver Lake, measured at the Silver Lake Gauge, are within the Standard Range of Water Elevation, such reports shall be made no less often than once a month.

(b) If at any time the water level at Silver Lake should fall below the Standard Range of Water Elevation, i.e., 124 feet above MSL (i) the allocation provisions of Section 3(a) shall apply; (ii) Grantor shall use its good faith efforts to raise such water level back to within the Standard Range of Water Elevation, consistent with the Lake Management Plan; (iii) the sale pursuant to Section 3(c) of any water from the Fresh Water Supply System to any "Outside User" (as defined below) shall be suspended; (iv) Grantor shall make Water Level Measurements no less frequently than once per week and report the same to the parties hereto at or before the end of the day; and (v) the parties hereto shall promptly meet and work in good faith to coordinate efforts to minimize the impact of the reduced water level, given the nature of their respective operations and need for Water, and to determine what, if any, steps can be taken to reduce water usage or defer anticipated heavy water usage, given the nature of their respective operations and need for Water.

(c) If at any time the water level at Silver Lake should fall below 122 feet above MSL, Grantor's obligation to make and report Water Level Measurements pursuant to Section 2(b)(iv) above shall be increased in frequency to no less than once per day.

Section 3. <u>Allocation of Water</u>.

(a) During any period of time when the water elevation at Silver Lake is below the Standard Range of Water Elevation, and subject in all respects to (i) the limitations imposed on Grantor under the Silver Lake Indenture, (ii) all applicable laws, rules, regulations, ordinances and orders of any governmental authority or court of competent jurisdiction, (iii) the terms and conditions set forth in this Deed, and (iv) the amount of Available Water, Water shall be allocated among Grantor, Grantee and BuckGen with the following priority:

(A) Subject to clauses (C) and (D) below, each of BuckGen and Grantee shall have the right each day to use fifty-percent (50%) of the Available Water.

(B) Subject to clauses (C) and (D) below, in the event that on any day either BuckGen or Grantee does not use all of the Water it is entitled to pursuant to Clause (A) above, then the other party may request from the first party the right to use the first party's unused allocation of Water, assent to which request shall be granted except to the extent that the first party reasonably determines that it will need additional Water that day.

(C) Notwithstanding Clauses (A) and (B) above and Clause (D) below, on any day when BuckGen is required by ISO New England, Inc. (or similar successor and/or replacement entity) to operate the energy-producing equipment located on the BuckGen Parcel, then BuckGen shall have the first priority right to use the first 2.5 MGD of Available Water from and after the receiving of a notice to operate and each day thereafter until such time

as it is no longer required to operate such equipment. The next 2.5 MGD of Available Water shall be allocated to Grantee. All Available Water in excess of such 5 MGD shall be shared in accordance with Clauses (A) and (B) above and Section 3(b) below. BuckGen shall promptly provide notice to Grantee and Grantor in the event it is taking Water pursuant to the priority afforded to it by this Clause (C), it being understood that BuckGen may not be able to provide such notice in advance of so using Water.

(D) Grantor reserves the right to (i) utilize for itself and its successor owners of the Fresh Water Supply System or (ii) sell to third-parties who purchase all or any portion of the Grantor Retained Parcels (collectively, "**Third Party Mill Property Users**" and each individually a "**Third Party Mill Property User**"), up to one (1) MGD of Available Water in the aggregate for use in connection with all or any portion of the Total Property. Such right to use or purchase water shall be allocated among all parties entitled to use or purchase Available Water under this Clause D such that the total of all Available Water used or sold under this Clause D shall not exceed 1 MGD. In order to exercise this right Grantor or any Third Party User must:

(i) if Grantor is the party utilizing such Water, it shall provide Grantee and BuckGen at least 90 days written notice of its intent to begin utilizing such Water; or

(ii) if the user will be a Third Party Mill Property User (and not Grantor), such party shall enter into an agreement reasonably acceptable to Grantee and BuckGen prior to utilizing any Water and will be subject to the notice provisions set forth in clause (i) above and will, among other things acknowledge the rights of Grantee hereunder and BuckGen under the BuckGen Water Supply Easement.

(b) If Grantor or a Third Party Mill Property User who has executed an agreement as outlined in Section 3(a)(D)(ii) above provides notice contemplated by Clause (D), as applicable, then clause (A) above shall be deemed to be modified during such time as Grantor or such Third Party Mill Property User has rights to the Water to provide for sharing of Available Water 40% to each of Grantee and BuckGen, and 20% to Grantor and/or such Third Party Mill Property User, until such time as Grantor and/or such Third-Party User has reached its or their aggregate limit of one (1) MGD, at which time the allocation of Available Water shall revert back to the 50/50 sharing agreement between Grantee and BuckGen as described in Clause A above. For clarification, Clause (D) shall not modify BuckGen's priority right to the first 2.5 MGD of Available Water from and after the receiving of a notice to operate described in Clause (C), which right shall have priority over any such use by Grantor or any such Third Party Mill Property User.

(c) During any period of time when the water elevation at Silver Lake is at or above the lower end of the Standard Range of Water Elevation, up to 1 MGD of Water may be sold by Grantor to a third party other than a Third Party Mill Property User (an "**Outside User**") so long as it does not affect or reduce the availability of Water below the lower end of the Standard Range of Water Elevation, subject to the user covenants in Section 6(b) below.

Section 4. **<u>Sale; Water Consumption Fee</u>.**

(a) Subject to the terms and conditions set forth in this Deed, Grantor hereby agrees in accordance with the priorities and allocation set forth in Section 3 above that Grantee shall have the right to withdraw Water from the Fresh Water Supply System. The foregoing notwithstanding, Grantee shall have no right to withdraw and Grantor has no obligation to permit Grantee to take, more than eight (8) MGD of Water (the "**Maximum Daily Amount**") on any given day. Grantee will from time to time give

Grantor not less than five (5) days written notice if it anticipates requiring more than five (5) MGD on any given day.

(b) In consideration of Whole Oceans' rights under this Exhibit C, beginning on the date that is the earlier of (x) the date of Commencement of Commercial Operations and (y) the date that is three (3) years from the Effective Date of this Deed, Grantee will pay to Grantor a fee (the "**Water Consumption Fee**") in accordance with the schedule below. The Water Consumption Fee shall be calculated in accordance with the schedule below and will be payable quarterly on July 15, October 15, January 15 and April 15 (each, a "**Payment Date**") of each year after Grantee first becomes obligated to pay the Water Consumption Fee:

(i) If Grantee's withdrawal of the Water from the Fresh Water Supply System for the preceding three-month period was at or below an average of one (1) MGD, the Water Consumption Fee payable by Grantee to Grantor is a flat fee of $25,000 for such three-month period (based on an annualized rate of $100,000), payable on the applicable Payment Date;

(ii) If Grantee's withdrawal of the Water from the Fresh Water Supply System for the preceding three-month period was above an average of one (1) MGD but at or below an average of two (2) MGD, the Water Consumption Fee payable by Grantee to Grantor is a flat fee of $50,000 for such three-month period (based on an annualized rate of $200,000), payable on the applicable Payment Date;

(iii) If Whole Oceans' withdrawal of the Water from the Fresh Water Supply System for the preceding three-month period was above an average of two (2) MGD up to a maximum of an average of five (5) MGD, the Water Consumption Fee payable by Grantee to Grantor is a flat fee of $87,500 for such three-month period (based on an annualized rate of $350,000), payable on the applicable Payment Date; and

(iv) If Whole Oceans' withdrawal of the Water from the Fresh Water Supply System for the preceding three-month period was above an average of five (5) MGD, the Water Consumption Fee for such three-month period payable by Grantee to Grantor is a flat fee of $87,500 plus $20,000 for each MGD of Water used by Grantee in average in excess of five (5) average MGD during such three-month period, payable on the applicable Payment Date. By way of illustration only, if the average MGD of Water withdrawn by Grantee during such three-month period was 6.2 MGD, the Water Consumption Fee for that three month period would be $127,000 ($87,500, plus $20,000 plus $20,000).

(c) The Water Consumption Fee shall increase by the higher of (x) 5%, and (y) the percentage increase in the Consumer Price Index from the applicable base year to the measurement date 5 years later, provided that there will be no downward adjustment, with the first base year being the twelve-month period beginning on the Commencement of Commercial Operation and the first such adjustment to take place on the fifth anniversary of the Commencement of Commercial Operation, with subsequent increases on each fifth anniversary thereafter.

(d) On or before each Payment Date, Grantee shall submit to Grantor a certification of the amount of Water withdrawn during the preceding three-month period, along with payment for such Water based on the above payment schedule. Grantor will have the right to contest any such certification delivered by or on behalf of Grantee and to inspect any books and records of Grantee and its advisors to confirm the amount set forth in each such certification. Any amounts due under this Section and not paid within ten (10) days when due shall accrue interest at the "WSJ Prime Rate" (as defined below) plus 100

basis points (the "**Default Interest Rate**"). The WSJ Prime Rate shall mean the rate of interest published in The Wall Street Journal from time to time as the "**U.S. Prime Rate**". If more than one Prime Rate is published in The Wall Street Journal for a day, the average of the Prime Rates shall be used, and such average shall be rounded up to the nearest one–quarter of one percent (.25%). If The Wall Street Journal ceases to publish the "U.S. Prime Rate", Grantor shall select a comparable publication that publishes such "U.S. Prime Rate", and if such prime rates are no longer generally published, then Grantor shall select a comparable interest rate index, at its reasonable discretion.

Section 5. **No Warranty as to Quality or Availability of Water.** Grantee acknowledges and agrees that Grantor is selling the Water without any covenants or warranties of any kind whatsoever, including, without limitation, no covenants or warranties about the quality of the Water or the availability of the Water. GRANTOR EXPRESSLY DISCLAIMS ANY AND ALL WARRANTIES INCLUDING, WITHOUT LIMITATION, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Section 6. **User Covenants.**

(a) Grantee hereby covenants and agrees as follows:

(i) Grantee will timely pay all amounts due under this Exhibit C, including, without limitation, its annual "R&M Fee", as defined in Section 8, and the Water Consumption Fee, in each case in accordance with this Exhibit C and will otherwise comply in all material respects with its obligations under this Exhibit C including, without limitation, the priority and allocation of Water set forth in Section 3, when applicable.

(ii) Grantee will not sell the Water to any third party.

(iii) Grantee will use the Water solely for the operation of its business and activities located on, and directly related to and supporting operation at, the Whole Oceans Parcels (the "**Business**") and such additional land that Grantee may acquire in the future, the use of which is directly related to, or supporting operation at, the Whole Oceans Parcels and for no other purpose. For the avoidance of doubt, there shall be no residential, municipal or domestic use of the Water.

(iv) Grantee will install, maintain, test and repair, and is solely responsible for, the installation, maintenance, repairing and testing of a meter in the Whole Oceans Connector Water Pipe and its related appurtenances (collectively, the "**Whole Oceans Meter**") to measure the quantities of the Water withdrawn by Whole Oceans. The Whole Oceans Meter, its location and installation process, shall be subject to the review and approval of Grantor, which approval will not be unreasonably withheld. Grantor and BuckGen will have the right to have the Grantee Meter tested from time to time to ensure its accuracy and Grantor and BuckGen, together with their respective agents, consultants and other representatives, shall have access to the Whole Oceans Meter at all times. Grantee shall install the Whole Oceans Meter prior to withdrawing any Water.

(v) Grantee will promptly, and in any event within thirty (30) days, provide Grantor written notice of the occurrence of the Commencement of Commercial Operations.

(b) If Grantor elects to sell Water to an Outside User, as provided in Section 3(c) above, such sale shall be pursuant to a written agreement wherein the Outside User agrees, among other things as Grantor shall require, that:

(i) it will comply with the priority and allocation of Water set forth in Section 3 of this Exhibit C, including a provision that its right to obtain Water will be suspended during any period of time when the water level in Silver Lake falls below the lower end of the Standard Range of Water Elevation;

(ii) it will not resell the Water to any third party;

(iii) the Water shall be used solely for the operation of its business and activities located on, and directly related to and supporting its operation at the Outside User's property specified in such written agreement, and shall specifically prohibit any residential, municipal or domestic use of the Water;

(iv) such Outside User shall install, maintain, test and repair, and be solely responsible for, the installation, maintenance, repairing and testing of a meter (the "**Outside User Meter**") to measure the quantities of the Water used by such Outside User, which Outside User Meter, and its location and installation process, shall be subject to the review and approval of Grantor, which approval will not be unreasonably withheld, which meter shall be installed and approved prior to accessing any Water;

(v) Grantee will have the right to have the Outside User Meter tested from time to time to ensure its accuracy and Grantee, together with its agents, consultants and other representatives, shall have access to the Outside User Meter at all times; and

(vi) That no modifications shall be made to the Downstream Infrastructure without the prior approval of Grantee, and that the installation and construction of any such approved modifications as well as any additional infrastructure required to provide Water to such Outside User, together with any repair, maintenance or replacement of the same, shall be paid for solely by such Outside User; and

(vii) That Grantee will be third-party beneficiaries of such written agreement to enforce the covenants and agreements of the Outside User set forth therein.

Grantor shall use commercially reasonable efforts to enforce such written agreement.

Section 7. **<u>Maintenance Budgets and Capital Expenditure Plans</u>.**

(a) Downstream Maintenance.

(i) Not less than once every three (3) years, Grantor shall engage a qualified third party engineer to assess and provide a written evaluation of the condition of the Downstream Infrastructure with respect to the integrity of the components and performance of the filtering process (each, a "**Downstream Engineering Assessment**"), who shall identify, and make recommendations for, required maintenance and capital repairs and/or replacements, if any, and proposed preventative maintenance and capital repairs and/or replacements, if any, that in the professional opinion of the engineer are reasonably required in order to provide for the reliable delivery of Water to the Total Property in quantities to satisfy the needs of Grantor, Whole Oceans, BuckGen under the BuckGen Water Supply Easement, any Third Party Mill Property

User, and any Outside User, if any, subject to limitations set forth herein, and to cause the filter station to operate at design standards, subject to customary wear and tear (the "**Baseline Operating Standards**") for the next five (5) Fiscal Years. A copy of each such Downstream Engineering Assessment shall be promptly shared with Grantee and BuckGen. The costs and expenses of such third party engineer shall be deemed maintenance costs and expenses and shall be paid from the "R&M Account" pursuant to Section 8 below.

(ii) On or before May 1 of each year, Grantor shall prepare and deliver to Grantee and BuckGen with respect to the Downstream Infrastructure: (i) a maintenance plan and budget (the "**Downstream Infrastructure Maintenance Budget**") for the next Fiscal Year in order to ensure that the Downstream Infrastructure can operate consistent with Baseline Operating Standards; (ii) a budget for anticipated capital repairs or improvements (the "**Downstream Infrastructure Capital Expenditure Plan**") for the next Fiscal Year and estimated to be incurred over the next five (5) Fiscal Years in order to ensure that the Downstream Infrastructure can operate consistent with Baseline Operating Standards; (iii) a proposed timeline for expenditures for the next Fiscal Year; (iv) a summary of maintenance and capital repairs and/or improvements that were performed with respect to the Downstream Infrastructure for the then ending Fiscal Year and costs incurred in connection therewith; and (v) an accounting of the expenditure of funds from the "R&M Account" (as defined below) during the then ended Fiscal Year, and any balance remaining. Grantor will share with Whole Ocean and BuckGen a draft of the Downstream Infrastructure Maintenance Budget and a draft of the Downstream Infrastructure Capital Expenditure Plan. Grantee will have the right to approve the Downstream Infrastructure Maintenance Budget and the Downstream Infrastructure Capital Expenditure Plan, but such approval shall be limited to whether or not such budget and plan is consistent with the recommendations of the engineer as set forth in the most recent Downstream Engineering Assessment.

(iii) If the parties cannot agree as to whether the Downstream Infrastructure Maintenance Budget or a Downstream Infrastructure Capital Expenditure Plan is consistent with the recommendations of the engineer as set forth in the most recent Downstream Engineering Assessment, the parties agree to negotiate with each other, in good faith, acting reasonably, to resolve any such disagreement. If such disagreement is not resolved by the parties, it shall be submitted to and decided by arbitration, as provided in Section 13 below.

(b) Upstream Maintenance.

(i) Simultaneously with the engagement of the engineer to provide the Downstream Engineering Assessment as provided above, Grantor shall engage the same engineer to assess and provide a written evaluation of the condition of the Upstream Water System with respect to the integrity of the components and performance of the pumping process (each, an "**Upstream Engineering Assessment**"), who shall identify, and make recommendations for, required maintenance and capital repairs and/or replacements, if any, and proposed preventative maintenance and capital repairs and/or replacements, if any, that in the professional opinion of the engineer are reasonably required in order to meet the "Upstream Baseline Standard" (as defined in Section 8(b) hereof) for the next five (5) Fiscal Years. A copy of each such Upstream Engineering Assessment shall be promptly shared with Grantee and BuckGen. The costs and expenses of such third party engineer shall be shared equally by Grantor and Grantee.

(ii) Simultaneously with the delivery of the Downstream Infrastructure Maintenance Budget as provided above, Grantor shall prepare and deliver to Grantee and BuckGen with respect to the Upstream Water System (i) a proposed maintenance plan and budget (the

"**Upstream Maintenance Budget**") for the next Fiscal Year; and (ii) a budget for anticipated capital repairs or improvements (the "**Upstream Water System Capital Expenditure Plan**") for the next Fiscal Year and estimated to be incurred over the next five (5) Fiscal Years, in both cases taking into account the recommendations set forth in the Upstream Engineering Assessment. Grantee shall have the right to review and propose, with a copy to BuckGen, commercially reasonable changes to the Upstream Water System Maintenance Budget and the Upstream Water System Capital Expenditure Plan, which proposed changes Grantor agrees to review and consider in good faith. Whether or not to undertake any such repairs and maintenance or capital expenditure as set forth in such budget and plan, and the method for paying for any such repairs and maintenance are governed by Section 8(b) hereof.

Section 8. **Fees for Repair and Maintenance; Pumping; Insurance Proceeds.**

(a) Downstream Infrastructure. On or before July 1 of each year during which the Easements shall be in effect, Grantor and Grantee shall each deposit the annual "**R&M Fee**" (as defined below), adjusted proportionately for any partial year that the Easements are in effect, in a separate bank account under the control of Grantor (the "**R&M Account**") to be withdrawn and used only for the costs and expenses related to the repair, maintenance, replacement and other improvements to the Downstream Infrastructure as needed to comply with the Baseline Operating Standards. If the cost of any such repair, maintenance, replacement or improvement exceeds the funds in the R&M Account ("**Excess Costs**"), the parties shall meet to determine if any of such work can be delayed until the next Fiscal Year, without jeopardizing the integrity of the Downstream Infrastructure, so as to eliminate the Excess Costs for that Fiscal Year. Without limiting the foregoing, if the existing filter house included in the Downstream Infrastructure requires any material repairs or replacements, unless both Grantor and Grantee agree to fund the cost of such material repairs and replacements, any repairs and replacements not agreed to by Grantor and Grantee shall be deferred and the parties shall negotiate in good faith to determine if some or any portion of the filter house functions should be by-passed, rather than performing such material repairs or replacements. If on July 1 of any Fiscal Year the balance in the R&M Account is at the "**R&M Fund Cap**" (as defined below) or above, the obligations of Grantee and Grantor to deposit their respective R&M Fee shall be suspended for that Fiscal Year. The R&M Fund Cap shall initially be $300,000, but will increase every five (5) years by the greater of (a) 5% and (b) the percentage increase in the Consumer Price Index from the applicable base year to the measurement date 5 years later, provided that there will be no downward adjustment, with the first base year being the twelve-month period beginning on the Commencement of Commercial Operation and the first such adjustment to take place on the fifth anniversary of the Commencement of Commercial Operations, with subsequent increases on every five (5) years thereafter. If on July 1 of any Fiscal Year the difference between the balance in the R&M Account and the R&M Fund Cap is less than the combined total of the annual R&M Fees for Grantor and Grantee for that Fiscal Year, the obligations of Grantee and Buck Mill to deposit their respective R&M Fee for that Fiscal Year shall be reduced such that each party shall deposit one-half of the amount necessary to bring the balance of the R&M Account up to the R&M Fund Cap. All funds in the R&M Account at any given time are referred to herein as the "**R&M Funds**". The R&M Funds shall be held by Grantor in a separate account and not co-mingled with other funds of Grantor and shall be released and used exclusively for the purposes set forth in this Section and Section 11(b). Such R&M Funds shall be accounted for annually as provided in Section 7(b) above. The annual R&M Fee payable by each of Grantee and Grantor shall initially be $50,000, but will increase every five (5) years by the greater of (a) 5% and (b) the percentage increase in the Consumer Price Index from the applicable base year to the measurement date 5 years later, provided that there will be no downward adjustment, with the first base year being the twelve-month period beginning on the Commencement of Commercial Operation and the first such adjustment to take place on the beginning of the first Fiscal Year that starts at least five years after Commencement of Commercial Operations, with subsequent increases on each fifth year thereafter.

(b) Upstream Water System. Contemporaneously with execution of the joinder to this Deed, Grantee has engaged Grantor in a separate agreement to salvage and sell existing water pumps owned by Grantee and currently located in a pump house situated on and over the Penobscot River on or adjacent to the Whole Oceans Parcels. The net sales proceeds from the sale of such salt water pumps shall be placed in a separate bank account under the control of Grantor (the "**Upstream R&M Account**") to be withdrawn and used only for the costs and expenses related to the "Approved Upstream R&M Costs" (as defined below). The costs of any Approved Upstream R&M Cost shall be paid first from the Upstream R&M Account. After the Upstream R&M Account has been reduced to zero dollars, the cost of such Approved Upstream R&M Costs shall be shared equally by Grantor and Grantee. At such time as there is an Approved Upstream R&M Cost, Grantor shall provide to Grantee a proposal for such costs and written request for funding (an "**Upstream Funding Request**"). To the extent that the Upstream Funding Request for Approved Upstream R&M Costs exceeds the available funds in the Upstream R&M Account, Grantor and Grantee shall fund 50% of such excess within thirty (30) days after such Upstream Funding Request. If either Grantor or Grantee pays more than its share as provided in the preceding sentence, the other party shall pay its share of such costs to the party that made the excess payment within five (5) days after receipt of an invoice, along with reasonable documentation supporting such costs. The term "**Approved Upstream R&M Costs**" shall be, and include, only those repair and maintenance costs pertaining to the pumps and pump house that pump water from Alamoosook Lake to Silver Lake, the pipeline running from Alamoosook Lake to Silver Lake, and related equipment, valves, filters, meters, water control equipment and the like, and which either (i) cost less than $10,000 for any single item or related item; or (ii) cost $10,000 or more and are approved by both Grantor and Grantee (or as determined by arbitration as provided below). For avoidance of doubt, Approved Upstream R&M Costs do not include any costs or expenses relating to any of the dams or the lakes within the Upstream Water System. If Grantor and Grantee are unable to agree upon the need for any repair and maintenance that cost $10,000 or more, as provided in clause (ii) above, either party shall have the right, to refer the matter to arbitration under Section 13 hereof. The standard to be used by the arbitrator is whether such repair and/or maintenance is needed to reasonably and dependably deliver water under normal conditions to Silver Lake in sufficient amounts so as to satisfy the water rights of all parties entitled to water from Silver Lake (based an assumed water level at Silver Lake at 124' MSL), including Grantor, Grantee, any Third Party Mill Property User, any Outside User, BuckGen and including the rights of Maine Water Company, or its successor or assign, under the Silver Lake Indenture (the "**Upstream Baseline Standard**"). If the arbitrator determines that such repair and maintenance is reasonably required to meet the Upstream Baseline Standard, such repair and maintenance shall be undertaken and, if such repair and maintenance is an Approved Upstream R&M Cost, Grantor and Grantee shall share equally in the cost of the same, to the extend such funds are not available in the Upstream R&M Account.

(c) Pumping from Alamoosook. If the amount of water in Silver Lake falls below 124 feet above MSL, at the request of, and to the extent requested by, Whole Oceans, Grantor shall pump water from Alamoosook Lake in an effort to raise the water level at Silver Lake, all in accordance with the Lake Management Plan. Grantee shall contribute toward the costs to operate the pumps at Alamoosook Lake based upon the same percentage as the Water obtained by Grantee during the preceding calendar year bears to all of the water obtained by all parties entitled to water from Silver Lake, including Grantor, Grantee, any Third Party Mill Property User, any Outside User, BuckGen and Maine Water Company, or its successor or assign, under the Silver Lake Indenture. By way of illustration only, if in the calendar year prior to pumping Grantee withdrew 400,000,000 gallons of water from Silver Lake and the total amount of water obtained by all parties from Silver Lake during such calendar year, including Grantee, was 600,000,000 gallons, then Grantee would contribute 66.7% toward the cost of operating the Alamoosook Pumps as provided above. Grantor shall provide notice to Grantee of the cost of any such pumping, along with reasonable documentation supporting such cost.

(d) Insurance. Either Grantor or Grantee shall have the right, but neither shall be obligated, to insure the Fresh Water Supply System, or any portion thereof, against such perils and for such amounts as the insuring party shall determine in its sole and absolute discretion. If either Grantor or Grantee elects to insure all or any portion of the Fresh Water Supply System, and if there is a loss to the Fresh Water Supply System for which insurance proceeds are received by the insured party, such insured party agrees to make such insurance proceeds available for restoration of any damage to the Fresh Water Supply System to the extent of such covered loss. For avoidance of doubt, nothing in this Section 8(d) obligates either Grantor or Grantee to insure the Fresh Water Supply System, or any portion thereof.

Section 9. **Grantor's Covenants**. Grantor hereby covenants and agrees as follows:

(a) Except during any period of time when Grantee's right to withdraw Water is suspended or terminated as provided in Section 10 or Section 11 hereof, Grantor shall use its good faith efforts to (i) comply with the Silver Lake Indenture, the Lake Management Plan and any lake level order or other private agreement pertaining to the Silver Lake Water System to which Grantor is a party and applicable law; and (ii) manage the Silver Lake Water System in a manner such that the amount of water in Silver Lake is at or above the lower end of the Standard Range of Water Elevation, including providing for commercially reasonable and ordinary repair and maintenance, subject to the sharing of costs as provided in Section 8(b) hereof. Good faith efforts mean, subject to commercially reasonable operating procedures and taking into account historical practices, pumping water from Alamoosook Lake, subject to sharing of costs as provided in Section 8(c) hereof, and, if necessary, releasing water from Toddy Pond, subject to any legal limitation (including, without limitation, the provisions of the Silver Lake Indenture, any changes in law and any condemnation or other taking by any governmental or quasi-governmental authority) on Grantor's ability to draw water from such lakes and maintaining the Silver Lake Water System to the extent necessary to facilitate sufficient water elevation in Silver Lake as provided in this subsection (a).

(b) Except during any period of time when Whole Ocean's right to acquire Water is suspended or terminated as provided in Section 10 or Section 11 hereof, Grantor shall use good faith efforts maintain the Downstream Infrastructure to the point of connection by Grantee and BuckGen to the extent reasonably necessary to facilitate continuous flow of water to BuckGen and the Whole Oceans Connector Water Pipe in the amounts necessary to allow BuckGen and Grantee to withdraw the Available Water as described herein and to comply with applicable law, it being understood that Grantor shall not be obligated to expend its own funds but shall utilize funds in the Downstream R&M Account in connection with such efforts. Notwithstanding the foregoing, Grantor's obligations under this subsection (b) shall be subject to there being sufficient funds in the R&M Account to fund the costs of any such maintenance, repair, replacement, upgrades or modifications. Except in the case of an emergency, Grantor shall provide not less than sixty (60) days' notice before undertaking any maintenance, repair, replacement, upgrade or modification that would adversely impact the ability of BuckGen or Grantee to withdraw Water as contemplated herein. Any such work, whether planned or brought about by emergency, shall be undertaken in such a manner so as to minimize the disruption to the flow of Water to BuckGen and Whole Oceans.

(c) If Grantor fails to satisfy in any material respect its obligations under subsection (b) of this Section with respect to the Downstream Infrastructure or fails to repair and maintain the Upstream Water System in accordance with subsection (a) of this Section resulting in or contributing to the water level at Silver Lake falling below the lower end of the Standard Range of Water Elevation, and such failure continues for thirty (30) days after written notice thereof to Grantor with a copy to BuckGen, or such shorter period of time as reasonable under the circumstances in the event of an emergency, Grantee shall have the right, but not the obligation, to perform such repair or maintenance or such obligations and recover the costs of such repair and maintenance from the Upstream R&M Account. To the extent that

there are insufficient funds in the Upstream R&M Account or insufficient insurance proceeds as provided in Section 8(d) hereof to fully reimburse Whole Oceans, Grantor shall reimburse Grantee for 50% of any such unreimbursed costs incurred by Grantee within forty-five (45) days after notice from Grantee setting forth the amount of such costs and providing reasonable documentation with respect thereto (a "**Reimbursement Request**"). If Grantor fails to reimburse Grantee for its share of such costs, as set forth in the Reimbursement Request within such 45-day period, Grantee may thereafter offset such amount against its R&M Fee and/or the Water Consumption Fee, and/or other funds due hereunder from Grantee to Grantor until fully recovered; provided, however, if on or before the end of such 45-day period Grantor notifies Grantee that it disagrees with the amount claimed by Grantee or with the right of Grantee to exercise its self-help right under this subsection (c) and demands arbitration under Section 13 hereof, then the parties will proceed to arbitration in accordance with Section 13 and Grantee shall not be entitled to offset any such amounts against its R&M Fees and/or the Water Consumption Fees or other funds until the conclusion of the arbitration or the parties otherwise agree. If the arbitration decision is that Grantee is entitled to reimbursement of its costs, such amount together with interest thereon from the date of the Reimbursement Request to the date of the arbitrator's decision at the Default Interest Rate shall be paid by Grantor to Grantee within ten (10) days after such arbitration decision is delivered to the parties. If not paid within such 10-day period, such amount, together with interest thereon from the date of the Reimbursement Request to the date of the arbitrator's decision at the Default Interest Rate, may thereafter be offset by Grantee against its R&M Fee and/or the Water Consumption Fees and/or other funds due hereunder from Grantee to Grantor, or otherwise recover from Grantor. If Grantor fails to object to the Reimbursement Request and demand arbitration within the 45-day period specified above, Grantor shall be deemed to have accepted the costs set forth in the Reimbursement Request.

(d) Grantor will otherwise comply in all material respects with its obligations under this Exhibit C.

Section 10. **Suspension.** If Grantee (a) is in default of any of its non-payment covenants in this Exhibit C, and, if capable of cure, such default continues for more than thirty (30) days after written notice from Grantor to Grantee specifying such failure, or (b) defaults in the timely payment of its R&M Fee, the Water Consumption Fee, or any other amount payable hereunder from Grantee to Grantor and such default continues for five (5) days, then subject to the Lender Protection provisions of Section 12 below, Grantor will have the right to suspend the performance of any of its obligations under this Exhibit C, and to suspend Grantee's right to withdraw Water from the Fresh Water Supply System, until such time as such overdue payments have been made and any such defaults have been cured. The foregoing notwithstanding, if the Whole Ocean's non-payment default is capable of being cured, but cannot reasonably be cured within thirty (30) days, then Grantee shall not be default hereunder so long as it commences such cure within such 30-day period and continues with diligence and in good faith to prosecute such cure to completion and such cure is in fact accomplished within one-hundred eighty (180) days and (y) for the first time in any calendar year that Grantee fails to timely pay its R&M fee, the Water Consumption Fee or any other amount when due, Grantee shall not be in default hereunder so long as it cures such default within five (5) days after written notice from Grantor specifying such default. Notwithstanding anything to the contrary in the foregoing, subject to the Lender Protection provisions of Section 12 below, Grantor will have the right to suspend the provision of Water to Grantee after ten days' notice to Grantee if Grantee is in default of its covenants set forth in Sections 6(a)(ii) or (iii), which suspension may continue until such prohibited activity ceases. The foregoing notwithstanding, if Grantee in good faith disputes any claim of default or failure of performance, and makes written demand for arbitration under Section 13 hereof, Grantor shall have no right to suspend its obligations or Grantee's rights hereunder, including the right to withdraw Water, on account of such disputed claim of default until such time as the arbitration process has completed with a finding in favor of Grantor and such default is not cured within the time period specified above, as measured from the date of entry of such decision. Notwithstanding anything to the contrary in this Deed, Grantor will have the right to immediately suspend

the provision of Water to Grantee if it violates its covenants set forth in Section 6(a)(ii) and/or (iii) for so long as such violation continues.

Section 11. Termination.

(a) The Easements may be released by Grantee at any time upon written notice to Grantor of not less than six (6) months. In order to effectuate such release, Grantee shall promptly record an instrument in the Registry of Deeds releasing to Grantor all of Grantee's rights under the Easements. Upon the recording of such release, Grantee shall have no further rights with respect to the Easements and no further rights or obligations under this Exhibit C, except as set forth in this Section 11. No such release shall affect any other rights of Grantee in any other property or rights conveyed to Grantee in this Deed.

(b) In addition, subject to the Lender Protection provisions of Section 12 below, the Easements may be terminated as follows:

(i) by mutual agreement of Grantor and Grantee, whereupon Grantee shall promptly execute and record a release in the Registry Deeds as provided in Section 11(a) above; or

(ii) by Grantor if (A) Grantee fails to timely pay its R&M Fee or the Water Consumption Fee or any other amount payable hereunder from Grantee to Grantor, and such failure continues for more than thirty (30) days after receipt by Grantee of written notice from Grantor setting forth the details of such failure (subject to the provisions of Section 11(c)) or (B) Grantor has rightfully suspended Grantee's rights under the Easements, including without limitation, the right to withdraw Water from the Fresh Water Supply System pursuant to Section 10 hereof for a non-payment default and the circumstance giving rise to such suspension is not cured within thirty (30) days after the commencement of such suspension; provided, however, that if Grantee in good faith disputes any claim of failure to pay or failure to perform that gave rise to the suspension under Section 10, and makes demand for arbitration as provided in Section 13 hereof, Grantor shall have no right to terminate the Easements on account of such disputed failure to pay or failure to perform until such time as the arbitration process has been completed with a finding in favor of Grantor and such failure is not cured within ten (10) days (for payment default) or thirty (30) days (for non-payment default) after the date that such arbitration decision is rendered and delivered to the parties hereto; or

(iii) by Grantor or Grantee if any in change in law, regulations or ordinances or any taking or other condemnation takes place that would make it legally or physically impracticable on a permanent basis for Grantor to comply with its obligations under this Exhibit C or for Grantee to exercise its rights under the Water Transmission Easement and the Water Use Easement; provided that in such event, Grantor shall comply with this Exhibit C and Grantee shall have the right to exercise its rights under the Water Transmission Easement and the Water Use Easement for so long as, and to the extent, legally permitted to do so or is physically able to do so, as applicable. If any such law, regulation or ordinance, or if any condemnation causes a non-permanent disruption of Grantor's ability to comply with its obligations hereunder or Grantee's ability to exercise its rights under the Water Transmission Easement and the Water Use Easement, those obligations of Grantor or those rights of Grantee under the Water Transmission Easement or the Water Use Easement, as applicable, rendered illegal or physically impractical, shall be suspended during the period such disruption exists, but Grantor shall comply with those obligations hereunder and Grantee shall have the right to exercise those Easement rights that are not so interrupted and Grantor shall use its good faith efforts to minimize any disruption and to commence any interrupted obligations as soon as legally able or physically practicable to do so,

provided that in no event shall Grantor be obligated to expend any funds in such effort or commence a lawsuit. Grantee shall have the right to challenge any such change in law, regulation or ordinances or condemnation or taking within ninety (90) days; within which period, and for so long as Grantee is diligently and in good faith pursuing such challenge, Grantor shall have no right to terminate the Easements pursuant to this Section 11(b)(iii).

(iv) By Grantor if Grantee makes a voluntary filing for bankruptcy or similar type of insolvency proceeding under federal of state laws or if an involuntary bankruptcy similar type of insolvency proceeding is filed against Grantee and such involuntary proceeding is not dismissed within sixty (60) days.

(c) Grantee shall have the right at any time and from time to time prior to termination of the Easements to extend the thirty (30) day cure period set forth in Section 11(b)(ii) above to ninety (90) days by delivering to Grantor a letter of credit drawn on a commercial United States bank in an amount equal to the greater of (i) $50,000 or (ii) 150% of the amount of the immediately prior Water Consumption Fee. Such Letter of Credit may be drawn upon by Grantor, up to the amount owed by Whole Oceans, only if such amount owed by Grantee is not paid by the end of such 90-day period, or if the matter is referred to arbitration as provided in Section 13 hereof, within the ten (10) day period referenced in Section 11(b)(ii) above. If at any time such letter of credit expires or is drawn down by Grantor, the cure period set forth in Section 11(b)(ii) shall revert to thirty (30) days, subject to Grantee right to again extend such cure period by renewing the letter of credit, or posting a new letter of credit, as the case may be, satisfying the requirements of this Section 11(c).

(d) In the event of any termination under Section 11(a) or 11(b) above, Grantee shall be responsible for the cost of any Water Consumption Fees and R&M Fees accrued prior to the date of termination, which payment obligations will survive the termination of the Easements. If the Easements are terminated under Section 11(a) above, Grantee shall be entitled to 25% of any R&M Funds remaining in the R&M Account as of the date of such termination notice plus 50% of any R&M Fees paid by Grantee after the date of such termination notice and prior to the effective date of such termination. If the Easements are terminated under Section 11(b)(i)(ii) or (iii) above, Grantee shall be entitled to 50% of any R&M Funds remaining the R&M Account as of the date of termination and Grantor shall be entitled to the balance in the R&M Account; provided, however, that if the Easements are terminated under Section 11(b)(ii) above, Grantor may offset any unpaid Water Consumption Fees and R&M Fees due from Grantee against Grantee's share of the R&M Account and the balance of Grantee's share of the R&M Account, if any, shall be returned to Grantee. Any obligation of a party accruing prior to such expiration or termination will survive the expiration or earlier termination of the Easements. If the Easements are terminated as provided in this Section 11, Grantor and Grantee shall promptly execute and record an instrument in the Registry of Deeds confirming such termination and releasing to Grantor all of Grantee's rights under the Easements.

Section 12. **<u>Lender Protection Provisions for Grantee</u>.**

(a) Notwithstanding anything to the contrary in this Exhibit C, Grantee, and its permitted successors and assigns, shall have the right to mortgage, pledge or collaterally assign its interests in the Easements, under one or more instruments, upon the condition that all rights acquired under such instruments shall be subject to each and all of the covenants, conditions and restrictions set forth in this Exhibit C and provided further that the holder of any such mortgage also has a mortgage on the Whole Oceans Parcel, or portion thereof. The term "**Mortgage**" as used in this Section shall include fee mortgages, deeds of trust, collateral or conditional assignments of Grantee's interest in the Easements and like instruments and all modifications, extensions, renewals and replacements thereto. The term "**Mortgagee**" shall mean the holder of a Mortgage.

(b) If Grantee and/or its permitted successors and assigns shall grant a Mortgage with respect to the Easements, and if Mortgagee shall send to Grantor written notice of such Mortgage specifying the name and address of the Mortgagee (an "**Eligible Mortgagee**"), Grantor agrees that so long as any such Mortgage shall remain unsatisfied of record or until written notice of satisfaction is given by the holder to Grantor, the following provisions shall apply:

(i) There shall be no termination of the Easements under Section 11(b)(i) above and no modification of this Exhibit C that impacts the rights or obligations of Grantee without the prior written consent of such Eligible Mortgagee.

(ii) Grantor shall, upon serving Grantee with any notice of default, also serve a copy of such notice upon the Eligible Mortgagee, and no such notice of default to Grantee shall be effective unless and until a copy of such notice is delivered to each such Eligible Mortgagee. The Eligible Mortgagee shall thereupon have the same period as Grantee, after notice is given to such Eligible Mortgagee, to remedy or cause to be remedied the defaults complained of, and Grantor shall accept such performance by or at the instigation of such Eligible Mortgagee as if the same had been done by Grantee; provided, however, that in the event of default based upon Grantee's failure to timely pay its R&M Fee, the Water Consumption Fee, or any other amount when due, the Eligible Mortgagee shall have five (5) days after receipt of notice of such default to cure the same.

(iii) Anything herein contained notwithstanding, while such Mortgage remains unsatisfied of record, if any default shall occur which, pursuant to any provision of this Exhibit C, entitles Grantor to terminate the Easements, and if before the expiration of ten (10) days from the date of service of notice of termination upon such Eligible Mortgagee such Eligible Mortgagee shall have notified Grantor of its desire to nullify such notice and shall have paid to Grantor all fees and other payments herein provided for, and then in default, and shall have complied or shall commence the work of complying with all of the other requirements of this Exhibit C, if any, that are then in default, and shall prosecute the same to completion with reasonable diligence and cure such default within 30 days, (or if such default cannot reasonably be cured within 30 days, within such longer period of time as is reasonable under the circumstances so long as such Eligible Mortgagee commences such cure within such 30-day period and continues diligently and in good faith to complete such cure, but in no event shall the period be extended beyond 180 days) then in such event Grantor shall not be entitled to terminate the Easements and any notice of termination theretofore given shall be void and of no effect and the Easements shall be reinstated.

(iv) Grantee shall give the Eligible Mortgagee notice of any arbitration proceedings by the parties hereto and such Eligible Mortgagee shall have the right to intervene therein and be made a party to such proceedings, and the parties hereto do hereby consent to such intervention. In the event that the Eligible Mortgagee shall not elect to intervene or become a party to such proceedings, Grantee will send the Eligible Mortgagee notice of, and a copy of any award or decision made in said arbitration proceedings.

(v) Each Eligible Mortgagee shall be a third-party beneficiary of the provisions of this Section and shall be entitled to enforce the provisions of this Section,. Notwithstanding the foregoing, Grantor shall upon request, execute, acknowledge and deliver to each Eligible Mortgagee, an agreement prepared at the sole cost and expense of Grantee in form satisfactory to such Eligible Mortgagee, Grantee and Grantor, agreeing to all of the provisions of this Section.

(vi) Any notice to be given to an Eligible Mortgagee shall be given in accordance with the notice procedures set forth in Section 15(b) hereof, at the address specified in the notice referenced in Section 12(b) or subsequent notice from an Eligible Mortgagee.

(c) Notwithstanding anything to the contrary in this Section, if any Mortgagee forecloses on its Mortgage, or takes an assignment of the Easements in lieu of foreclosure, it, and its successors and assigns, shall be only be entitled to withdraw Water only if it, or its successors or assigns, also own a portion of the Whole Oceans Parcels and have assumed in writing reasonably satisfactory to Grantor all of Grantee's obligations under this Exhibit C and have agreed to be bound by the provisions of this Exhibit C. In any event, the rights of such Mortgagee, or its successors and assign, shall be subject to terms and conditions set forth in this Exhibit C, including without limitation, the provisions of Section 3 and 4 above.

Section 13. Arbitration.

(a) All disputes (each, a "**Dispute**") under this Exhibit C will be resolved by arbitration in accordance with the provisions of this Section.

(b) Either party may commence an arbitration proceeding by serving a written notice (an "**Arbitration Notice**") on the American Arbitration Association and on the other party or parties involved not more than ninety (90) days after the expiration of the time period provided for the parties to resolve such Dispute (or any extension thereof that may be mutually agreed by the parties involved). The Arbitration Notice shall contain a reasonably detailed description of the Dispute and the remedy sought and shall set forth the name of the arbitrator selected by the party giving the Arbitration Notice. The parties receiving the Arbitration Notice shall, within fifteen (15) days after receipt thereof, serve a notice (the "**Reply Notice**") on the party commencing the arbitration. Each Reply Notice shall contain a reasonably detailed response to the claim (including any counterclaims and remedies sought) by the parties giving the Reply Notice. If none of the parties submitting Reply Notices include an objection to the arbitrator designated in the Arbitration Notice or if no Reply Notice is timely given, then the arbitrator named in the Arbitration Notice shall serve as a sole arbitrator under this Section. If the arbitrator designated in the Arbitration Notice is objected to in any Reply Notice, as promptly as practicable, and no later than twenty (20) days after the date of the Reply Notice, the American Arbitration Association shall select a single arbitrator. Except as otherwise provided in this section, any arbitration hereunder shall be administered (and if necessary an arbitrator selected) by American Arbitration Association in accordance with its Commercial Arbitration Rules, or if the Dispute involves a matter related to the construction, reconstruction, maintenance or repair, in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association.

(c) The arbitration proceeding shall take place in Portland, Maine, or in such other location as the Parties involved may agree in writing. The arbitrator shall:

(i) promptly fix a time and place for receiving information from the parties in connection with the Dispute at hand; and

(ii) make his or her decision only in relation to matters expressly referred to such arbitrator in accordance with this Section.

All decisions of the arbitrator or by a majority of the arbitrators shall be final and binding upon the parties involved.

(e) During the continuation of the resolution of any Dispute arising under this Exhibit C and except as an arbitrator or a court having jurisdiction shall order otherwise, the parties shall continue to perform their obligations under this Exhibit C.

(e) Anything to the contrary in this Section notwithstanding, if any Dispute involves the rights and obligations of one or more third parties and any such third parties do not agree to the arbitration provisions set forth in this Section, either Grantor or Grantee will have the right to resolve any such Dispute in a court of competent jurisdiction located in the State of Maine.

Section 14. **Force Majeure.** Grantor shall not be liable to Grantee or be in default under this Exhibit C to the extent that any failure or delay by Grantor in performing its obligations under this Exhibit C is due to any Force Majeure (as defined below). As soon as practicable, but in no event later than five (5) Business Days after it becomes aware of the commencement of an occurrence that is a Force Majeure, Grantor will provide Grantee with notice in the form of a letter identifying the occurrence as a Force Majeure and describing in detail the particulars of the occurrence giving rise to the Force Majeure including the expected duration and effect of such Force Majeure and the steps that Grantor is taking to resume performance under this Exhibit C. Failure to provide timely notice shall not constitute a waiver of a claim of a Force Majeure. The suspension of performance due to a claim of a Force Majeure will be of no greater scope and of no longer duration than is required by the Force Majeure. Grantor will take, or cause to be taken, such action as is commercially reasonable to void, or nullify, or otherwise to mitigate, in all material respects, the effects of such Force Majeure, in taking such actions, it being understood that under no circumstances shall Grantor be obligated to spend any of its own funds in taking any such action. Grantor shall take commercially reasonable action to resume the normal performance of its obligations under this Exhibit C after the cessation of any Force Majeure, including any repairs to the Fresh Water Supply System that may be required as a result of any such Force Majeure event, it being understood that under no circumstances shall Grantor be obligated to spend any of its own funds in taking any such action. Without limiting the foregoing, in the event of such Force Majeure, Grantee shall have the right, at its sole cost and expense, to take such action as it determines as needed to void, or nullify, or otherwise to mitigate, in all material respects, the effects of such Force Majeure. For purposes hereof, "**Force Majeure**" means an event which (i) is not within the reasonable control of Grantor, (ii) was not caused by the acts, omissions, negligence, fault or delays of the Grantor, and (iii) by the prompt exercise of due diligence, Grantor is unable to overcome or avoid or cause to be avoided. Force Majeure may include, to the extent the conditions set forth in the preceding sentence are satisfied, any of the following: acts of God; acts of the public enemy, war, hostilities, invasion, insurrection, riot, civil disturbance, or order of any competent civil or military government; volcanoes, earthquakes, tidal waves, and similar geologic events and the effects thereof, abnormally severe weather events and resulting conditions (hurricanes, flooding, ice and snow, wind storms and drought); explosion or fire; malicious acts, terrorism, vandalism or sabotage; action or restraint by court order of any public or governmental authority not requested by Grantor or any affiliate of Grantor; the adoption, enactment or application to Grantor or its assets of any law or regulation or ordinance not existing or not applicable to Grantor or its assets on the Effective Date, or any change in any law or regulation or ordinance or the application thereof by a governmental authority after the Effective Date; and any taking or condemnation. Nothing in this Section 14 modifies, diminishes or otherwise affects Grantor's right to otherwise terminate the Easements in accordance with the terms set forth herein.

Section 15. Miscellaneous.

(a) This rights and obligations under the Easements touch and concern the land and shall constitute covenants running with the Easement Areas and Premises and shall inure to the benefit of and be binding upon Grantor, and any successor to or assignee of Grantor's interests in the Easement Areas (Grantor and such successors and assigns, the "Easement Areas Owner"), and Grantee and its successors and assigns, provided that, except as provided herein, Grantee will not assign any of its rights under the Easements in whole or in part or delegate any of its duties under this Exhibit C to any third party without the prior written consent of the then current Easement Areas Owner, which consent shall not be unreasonably withheld, conditioned or delayed, and provided further that Grantor may not assign or otherwise convey to any other party, other than to any party controlling, controlled by or under common control with Grantor, in any manner any of its rights and/or obligations in the Easement Areas or under this Exhibit C without first offering to assign such rights and obligations to BuckGen in consideration of one dollar. Grantee acknowledges that upon any change of control of Grantor, BuckGen shall have the right to require Grantor to assign all of its rights and interest under this Exhibit C to BuckGen in consideration of one dollar. Any such assignment from Grantor to BuckGen shall be in form and substance reasonably satisfactory to Grantee, and shall expressly include an assumption by BuckGen of all of Grantor's obligations hereunder and shall not alter Grantee's rights and obligations hereunder. Any assignment or delegation in violation of this Section will be void and of no force and effect. Notwithstanding the foregoing, Grantee shall have the right, without the consent of the then current Easement Areas Owner, but with not less than ten (10) days prior written notice to such Easement Areas Owner, to assign its rights under the Easements and this Exhibit C and together with such assignment delegate to the same party Grantee's duties hereunder, (i) to any party controlling, controlled by or under common control with Grantee provided that Grantee will not be relieved of its obligations under the Easements and this Exhibit C upon any such assignment; (ii) to any successor in interest of any part of the Premises who also acquires the business and activities located on, and directly related to and supporting operation at, the Premises, which third party (x) is, if such assignment occurs before the Commencement of Commercial Operations, reasonably acceptable to the then current Easement Areas Owner, and (y) assumes contemporaneously with such assignment in a writing reasonably acceptable to such Easement Areas Owner and BuckGen, all of Grantee's rights and obligations under this Exhibit C; and (iii) to any lender of Grantee as collateral security pursuant to Section 12 of this Exhibit C and to any third-party purchaser of such lender's interest in the Easements pursuant to any foreclosure or secured party's sale, or assignment in lieu thereof, provided that contemporaneously with such assignment such third party purchaser assumes in a writing reasonably acceptable to Grantor and BuckGen, all of Grantee's rights and obligations under this Exhibit C. Except as expressly set forth in this Agreement, there are no third-party beneficiaries to this Exhibit C.

(b) All notices, requests, demands and other communications hereunder shall be in writing and shall be deemed to have been given: (i) when delivered personally, (ii) one business day after being sent by nationally recognized overnight delivery service, return receipt requested, or (iii) three business days after being deposited in the United States mail, certified and with proper postage prepaid, return receipt requested, addressed as follows:

If to Grantor:
c/o American Iron & Metal Company, Inc.
9100 Henri-Bourassa E.
Montreal, QC H1E 2S4
Canada
Attn: General Counsel

If to Grantee:
Whole Oceans, LLC
P.O. Box 7561
2 Union Street
Portland Maine
04112 (P.O. Box)
04101 (street address)

With a copy to:
Pierce Atwood LLP
Merrill's Wharf
254 Commercial Street
Portland, Maine 04101
Attn: Commercial Real Estate Dept.

If to BuckGen:
Bucksport Generation LLC
2 River Road
Bucksport, ME 04416
Attention: Plant Manager & Legal Department
richardl@buckgen.com
daveb@buckgen.com
kylen@buckgen.com

Any party may change the address to which notices or other communications are to be directed to it by giving notice of such change to the other parties in the manner provided in this Section and recording such notice of change of address in the Registry of Deeds.

(c) The terms and conditions of the Water Transmission Easement, the Water Use Easement and the Access Easement are intended solely for the benefit of the parties hereto and their respective successors and assigns, and nothing herein, express or implied, is intended to or shall confer upon any other person any legal or equitable right, benefit or remedy of any nature whatsoever under or by reason of such Easements.

(d) Nothing in this Deed creates or is intended to create an association, trust, partnership, joint venture or other entity or similar legal relationship between the parties, or impose a trust, partnership or fiduciary duty, obligation or liability on or with respect to either party. Neither party shall act as or be the agent or representative of the other party.

(e) EACH PARTY ACKNOWLEDGES AND AGREES THAT ANY CONTROVERSY OR WHICH MAY ARISE UNDER THIS DEED IS LIKELY TO INVOLVE COMPLICATED AND

DIFFICULT ISSUES AND, THEREFORE, EACH PARTY HEREBY IRREVOCABLY AND UNCONDITIONALLY WAIVES ANY RIGHT IT MAY HAVE TO A TRIAL BY JURY IN RESPECT OF ANY LEGAL ACTION ARISING OUT OF OR RELATING TO THIS DEED.

(f) EACH PARTY HEREBY WAIVE ANY RIGHT TO SEEK OR OBTAIN ANY CONSEQUENTIAL, INCIDENTAL OR PUNITIVE DAMAGES FROM ANY OTHER PARTY HERETO RESULTING FROM, OR ALLEGED TO BE RESULTING FROM, ANY VIOLATION OF, OR DEFAULT UNDER, THE TERMS AND CONDITIONS OF THIS EXHIBIT C.

Section 16. Purchase Rights.

(a) In the event that Grantor elects to sell all or any portion of the Fresh Water Supply System that is not an Excluded Transfer under Section 16(c), Grantor agrees that it will provide BuckGen and Grantee written notice of such election or proposed sale and (i) BuckGen shall have a ninety (90) day option to purchase the Fresh Water Supply System on the terms set forth in the BuckGen Water Supply Easement, such ninety (90) day period to commence upon receipt of such written notice, and (ii) if BuckGen does not exercise such purchase option within such 90-day period, it shall have waived any right to purchase the Fresh Water Supply System under the BuckGen Water Supply Easement or otherwise and the provisions of Section 16(b) shall apply. If BuckGen does acquire the Fresh Water Supply System as provided in the BuckGen Water Supply Easement, Grantee's right to purchase the Fresh Water Supply System as provided in this Section 16 shall continue after such acquisition.

(b) If BuckGen does not timely exercise its right to purchase the Fresh Water Supply System as provided in in the BuckGen Water Supply Easement, prior to offering the Fresh Water Supply System for sale to any other party or prior to such membership interest sale, as applicable, Grantor shall first offer in writing to sell the Fresh Water Supply System, or such portion thereof that it intends to sell, to Grantee for such price and upon such terms as Grantor shall determine (the "**Offer Notice** "). Grantee shall then have a period of fifteen (15) days after receipt of such Offer Notice within which to notify Grantor in writing that Grantee desires to accept such offer for the price and upon the terms stated in the Offer Notice. If Grantee elects to purchase the Fresh Water Supply System, or such portion as is being offered for sale, it shall so notify Grantor in writing (the "**Acceptance Notice**") on or before the end of such 15-day period. If Grantee does not so elect to purchase the Fresh Water Supply System, or such portion thereof that is offered for sale, within such 15-day period, Grantor shall be free to sell the Fresh Water Supply System, or such portion thereof that was offered for sale, to a third party at a price no less than and on terms no more favorable to a buyer than those offered to Grantee in such Offer Notice, provided that such sale closes within one-hundred eighty (180) days after the giving of such Offer Notice to Grantee. If the sale does not take place within such 180-day period, or if Grantor wishes to sell the Fresh Water Supply System, or such portion thereof, at a price that is less than the price offered to Grantee in the Offer Notice or on terms and conditions materially more favorable than those offered to Grantee in the Offer Notice, Grantor shall then again offer to BuckGen and Grantee the right to purchase the Fresh Water Supply System, or such portion thereof that is offered for sale, in accordance with the provisions of this Section. If BuckGen declines such purchase and Grantee fails to give such Acceptance Notice within such 15-day period, they each shall be deemed to have waived its rights with respect to that sale; provided, however, that any subsequent sale or conveyance shall be subject to the terms of this right of first offer. Neither BuckGen nor Grantee shall have the right to purchase less than all of that portion of the Fresh Water Supply System that is described in the Offer Notice.

(c) The right to purchase granted hereunder to Grantee shall not apply to the sale or transfer (an "**Excluded Transfer**") to any entity that controls, is controlled by or is under common control with Grantor, provided that such transfer is for no consideration, other than for receipt of stock or membership interests in such entity; provided, however, that the purchase rights of Grantee granted in this Section 16

shall continue in effect following any Excluded Transfer and shall bind any transferee in such Excluded Transfer.

(d) If Grantee timely elects to purchase the Fresh Water Supply System , or so much thereof as is being offered for sale, the parties shall be bound to close such transaction and the closing of title shall take place on the business day that is at least 45 days after the date the Acceptance Notice is given. The closing shall be held at 10:00 a.m. at the offices of Pierce Atwood, Merrill's Wharf, 254 Commercial Street, Portland, Maine, or at such other time or place as the parties may mutually agree. At the closing, Grantor shall convey the Fresh Water Supply System to Grantee in accordance with the terms and conditions set forth in the Offer Notice and Grantee shall pay to Grantor the purchase price as set forth in the Offer Notice.

(e) Any sale of the Fresh Water Supply System, whether to Grantee under this Section 16, to BuckGen under the BuckGen Water Supply Easement or to a third party, shall be subject to documentation reasonably satisfactory to Grantee that its rights and obligations with respect to the Fresh Water Supply System and this Deed will continue uninterrupted as set forth herein.

BK: OR 6951 PAGE:621 # OF PGS:47
05/22/2019 08:40:34 AM INSTR# 2019005790
JULIE A. CURTIS, REGISTER OF DEEDS
HANCOCK COUNTY MAINE
eRecorded Document

Execution Copy

RELEASE AND CROSS EASEMENT INDENTURE

THIS RELEASE AND CROSS EASEMENT INDENTURE (this "Indenture"), dated as of May 21, 2019, is by and among **BUCKSPORT MILL LLC**, a Delaware limited liability company ("**BuckMill**"), **BUCKSPORT GENERATION LLC**, a Delaware limited liability company ("**BuckGen**"), and **WHOLE OCEANS, LLC**, a Delaware limited liability company ("**Whole Oceans**") (BuckMill, BuckGen, and Whole Oceans are sometimes individually referred to as a "**Party**" and collectively as the "**Parties**").

RECITALS:

A. Reference is made to that certain plan entitled "Amended Mapfile 45, No. 29 Subdivision Plan Showing Lands Bucksport Mill, LLC, Bucksport Generation, LLC 2 River Road – Bucksport, Hancock County, Maine" prepared by Plisga & Day, dated December 28, 2018, and recorded in the Hancock County Registry of Deeds (the "**Registry**") in File 45, Page 96 (as amended from time to time, including by that certain plan entitled "Amended Mapfile 45, No. 96 Amended Mapfile 45, Nos. 29, 30, & 31 Amended Subdivision Plan for Bucksport Mill, LLC Bucksport Generation, LLC" prepared by Plisga & Day, dated March 19, 2019, and recorded in in the Registry in File 46, No. 11, "**Subdivision Plan**"), a reduced copy of which is attached hereto as Exhibit B. BuckGen is the owner of Lot 1, Whole Oceans is the owner of Lot 2, and BuckMill is the owner of Lot 3 and Lot 4. Lots 1, 3 and 4, and a portion of Lot 2, are depicted on the Subdivision Plan. Lot 1 is sometimes referred to herein as the "**BuckGen Parcel**"). Lot 2, together with the other property owned by Whole Oceans and described on Exhibit C attached hereto is sometimes collectively referred to herein as the "**Whole Oceans Property**". Lot 3 and Lot 4, together with the other property owned by BuckMill and described on Exhibit D attached hereto is sometimes collectively referred to herein as the "**BuckMill Property**".

B. Up until recently, the BuckGen Parcel, the BuckMill Property and the Whole Oceans Property (collectively, the "**Entire Property**"), and the various components and improvements thereon, were owned by affiliated entities. In order to facilitate the division of the Entire Property into multiple parcels to be owned and operated by separate owners, the parties have agreed to grant and/or recognize various easements on the Entire Property that run to the benefit of the Parties hereto

C. Reference is made to that certain multi-sheet plan entitled Cross Easements Bucksport Mill, LLC Route 15-Bucksport, Maine, prepared by Plisga & Day, a reduced copy of which is attached hereto as Exhibit A, with a full-sized copy being recorded in the Hancock County Registry of Deeds herewith (as amended from time to time, the "**Easement Plan**"). The following easement areas are identified on the Easement Plan:

(i) an access easement area located on Lot 1, Lot 2 and Lot 4, and the area adjacent to State Route 15, which area is labeled on the Easement Plan as "**Access Easement Area**";

(ii) an easement area situated on the easterly side of Lot 4 of the BuckMill Property and identified on the Easement Plan and referred to herein as the "**Lot 4 Eastside Easement Area** "; and

(iii) an easement area situated on the northerly side of Lot 1, the BuckGen Parcel, and adjacent to the Lot 4 Eastside Easement Area, identified on the Easement Plan and referred to herein as the "**Lot 1 Eastside Easement Area**"; and together with Lot 4 Eastside Easement Area, the "**Eastside Easement Area**"; and

(iv) an easement area situated on the westerly side of Lot 3 of the BuckMill Property and identified on the Easement Plan and referred to herein, as "**Lot 3 Riverside Easement Area**";

(v) an easement area situated on the southwesterly side of Lot 2 of the Whole Oceans Property and adjacent to Lot 3 Riverside Easement Area and the Penobscot River and identified on the Easement Plan and referred to herein as the "**Lot 2 Riverside Easement Area**" and together with the Lot 3 Riverside Easement Area, the "**Riverside Easement Area**";

(vi) a roughly 30 foot wide access easement running from the Access Easement through Lot 4 (solely within the Eastside Easement Area), Lot 1, Lot 3 and Lot 2 (solely within the Access Easement Area), to be located generally in the area identified on the Easement Plan and referred to herein as the "**Loop Road**"; and

(vii) an easement area situated on the northwest sideline of Lot 4 adjacent to the boundary of Lot 2 and identified on the Easement Plan and referred to herein as the "**Lot 4 Grading Easement Area**";

(viii) an easement area situated on Lot 3 and identified on the Easement Plan and referred to herein as the "**Duct Bank Electrical Easement Area**"; and

(ix) an easement area situated on land of BuckMill located southerly of the Access Easement Area and between the railroad tracks and State Route 15, identified on the Easement Plan and referred to herein as the "**Route 15 Utility Easement Area**").

D. There is currently located on the southern end of the Lot 2 Riverside Easement Area a pump house that pumps water out of the Penobscot River. Such pump house, together with all pumps, water intake facilities, valves, meters, filters, and related equipment located within or attached to such pump house, are referred to herein as the "**Salt Water Pump House**". The Salt Water Pump House is depicted on the Easement Plan. Piping will need to be installed

to transport water from the Salt Water Pump House to the Whole Oceans Property. The Salt Water Pump House and the various water lines, pipes, pipe lines, conduits, valves, meters, and other equipment and facilities that have historically delivered or were designed to deliver water from the Penobscot River to portions of the Entire Property, and which will be added by Whole Oceans as provided in this Indenture to deliver water to the Whole Oceans Property, are collectively referred to herein as the "**River Water Intake System**".

E. There is currently located on the Riverside Easement Area existing discharge facilities for discharging water, wastewater, leachate, and stormwater through outflow pipes into the Penobscot River, which facilities include outflow pipes extending into the Penobscot River, including outflow pipe #001B, together with diffusers attached thereto, ("**Outflow Pipe #001B**") and outflow pipe #003, together with diffusers attached thereto, ("**Outflow Pipe #003**", and together with Outflow Pipe #001B, the "**Outflow Pipes**"), both of which Outflow Pipes are depicted on the Easement Plan. Such Outflow Pipes, together with related pipelines, valves, meters, filters, wastewater treatment pools, trenches, a grit pit, valve house and related equipment and facilities, currently existing and to be installed and constructed by Whole Oceans as provided in this Indenture, are collectively referred to herein as the "**River Water Discharge System**").

F. Whole Oceans intends to construct additional pipelines, in accordance with this Indenture, connecting to the existing River Water Intake System to supply water to the Whole Oceans Property. BuckMill currently has pipelines included in the existing River Water Discharge System that are used to discharge water, wastewater, leachate, and stormwater from the BuckMill Property to the Penobscot River. Whole Oceans intends to construct additional pipelines, in accordance with this Indenture, connecting to the existing River Water Discharge System to be used to discharge water, wastewater, leachate, and stormwater from the Whole Oceans Property to the Penobscot River.

G. The Parties desire to confirm and exchange certain rights and easements necessary and convenient for the use of their respective properties.

AGREEMENT

NOW THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

ARTICLE 1
RELEASE OF CERTAIN EASEMENTS

Section 1.1 **Release to Whole Oceans**. BuckGen, for consideration paid, releases to Whole Oceans, all of BuckGen's right, title and interest in and to the Whole Oceans Property, including but not limited to any and all rights and easements, rights to request new easements, and rights to request modifications to existing easements encumbering the Whole Oceans Property. Specifically included in the forgoing release are all rights granted to BuckGen pursuant to that certain deed from BuckMill to BuckGen dated December 21, 2016, and recorded in the Hancock County Registry of Deeds in Book 6702, Page 172 (the "**BuckGen Deed**") and that certain ground lease from BuckMill to BuckGen dated January 29, 2015, a memorandum of

which is recorded in the Hancock County Registry of Deeds in Book 6464, Page 130 (the "**BuckGen Lease**") insofar as they encumber the Whole Oceans Property.

Section 1.2 **Release to BuckMill**. BuckGen, for consideration paid, releases to BuckMill, all of BuckGen's right, title and interest in and to the BuckMill Property, including but not limited to any and all rights and easements, rights to request new easements, and rights to request modifications to existing easements encumbering the BuckMill Property. Specifically included in the forgoing release are all rights granted to BuckGen pursuant to the BuckGen Deed and the BuckGen Lease insofar as they encumber the BuckMill Property.

ARTICLE 2

ACCESS EASEMENT

Section 2.1 **Grant of Access Easement and Easement for Loop Road**

(a) Whole Oceans, for consideration paid, grants to BuckMill and BuckGen, for the benefit of the BuckMill Property and the BuckGen Parcel, respectively, a perpetual non-exclusive easement for vehicular and pedestrian access over and across (i) the roads, driveways and sidewalks now or hereafter existing on the portion of the Whole Oceans Property located within the Access Easement Area to provide ingress to and egress from the BuckMill Property and the BuckGen Parcel, respectively, and Route 15, also known as Main Street, and (ii) the portion of the Loop Road now or hereafter existing on the Whole Oceans Property to provide access to Lot 3 and Lot 4 of the BuckMill Property and the BuckGen Parcel.

(b) BuckMill, for consideration paid, grants to (i) Whole Oceans and BuckGen, for the benefit of the Whole Oceans Property and the BuckGen Parcel, respectively, a perpetual non-exclusive easement for vehicular and pedestrian access over and across the roads, driveways and sidewalks now or hereafter existing on the portion of the BuckMill Property located within the Access Easement Area and the Eastside Easement Area to provide ingress to and egress from the Whole Oceans Property and the BuckGen Parcel, respectively, and Route 15, also known as Main Street, and (ii) BuckGen, for the benefit of the BuckGen Parcel, a perpetual non-exclusive easement for vehicular and pedestrian access over and across that portion of the Loop Road located now or hereafter existing on the BuckMill Property to provide to provide access to the BuckGen Parcel.

(c) BuckGen, for consideration paid, grants to (i) Whole Oceans and BuckMill, for the benefit of the Whole Oceans Property and the BuckMill Property, respectively, a perpetual non-exclusive easement for vehicular and pedestrian access over and across the roads, driveways and sidewalks now or hereafter existing on that portion of the BuckGen Parcel located within the Access Easement Area and the Eastside Easement Area to provide ingress to and egress from the Whole Oceans Property and the BuckMill Property, respectively, and Route 15, also known as Main Street and (ii) BuckMill, for the benefit of Lot 3 and Lot 4 of the BuckMill Property, a perpetual non-exclusive easement for vehicular and pedestrian access over and across that portion of the Loop Road now or hereafter existing on the BuckGen Parcel to provide access to the BuckMill Property.

(d) The easements set forth in paragraphs (a)(i), (b)(i) and (c)(i) are collectively referred to herein as the "**Access Easement**" and the easements set forth in paragraphs (a)(ii), (b)(ii) and (c)(ii) are collectively referred to herein as the "**Loop Road Easement**".

Section 2.2 **Terms and Conditions**

(a) Each Party shall enter upon and shall use the Access Easement Area and Loop Road Easement at its own risk and hereby releases each other Party from any liability with respect to, or arising out of, such entrance or use, except with respect to any negligence or intentional misconduct of another Party, in which case such other Party only shall not be released.

(b) Each Party hereby agrees to indemnify and hold harmless the other Parties from and against any and all damages, liabilities, losses, expenses, claims, and suits (including reasonable attorneys' fees) incurred or suffered in consequence of or arising in any manner out of the exercise of its rights under the Access Easement or the Loop Road Easement by the indemnifying Party or its officers, employees, agents, contractors, or invitees, except to the extent caused by the gross negligence or intentional misconduct of the indemnified Party.

(c) Each Party shall have the right, but not the obligation, to repair and maintain the Access Easement and the Loop Road Easement, including snow removal. Notwithstanding anything to the contrary in the foregoing, a Party will promptly repair (in accordance with paragraph (d) below) any damage to the property subject to the Access Easement and the Loop Road Easement that is caused by such Party or its officers, employees, agents, contractors, or invitees. No Party hereto shall be obligated to reimburse any other Party with respect to such repairs or maintenance, except that a Party shall be responsible for the cost of any repairs or maintenance that were necessitated by any negligent or intentional act of such Party.

(d) No Party shall interfere with another Party's right to access its property over the Access Easement and the Loop Road Easement. Notwithstanding the foregoing, temporary interference in connection with utility installation or maintenance shall be permitted with ten (10) days' prior written notice to each affected party, provided that any such temporary interference is minimized in scope and duration, provided, further, that in no event shall access to the Parties' respective properties be blocked during any such installation or maintenance.

(e) No Party shall, as a result of any work done by or for the benefit of such Party, suffer or permit any mechanic's or materialmen's lien to attach to the property of any other Party. In the event any such lien shall be filed and recorded, the Party having done such work or for whose benefit the work was done, shall promptly take steps to remove such lien in any lawful manner.

(f) The Parties acknowledge that Central Maine Power Company ("**CMPCo**") may require an easement over and across the Loop Road to provide access between Route 15, also known as Main Street, and the Substation owned by CMPCo and identified on the Easement Plan and the power easements on the Whole Oceans Parcel owned by CMPCo. Upon request of Whole Oceans, all Parties shall execute and deliver to CMPCo an easement in recordable form granting CMPCo the above-described easement over the Loop Road, in form and substance reasonably satisfactory to the Parties and CMPCo. Neither BuckMill nor BuckGen, nor any subsequent owner of all or any portion of Lot 1, Lot 3 or Lot 4 shall have any responsibility for

any improvements required by CMPCo to the Loop Road. Any such which work will be coordinated with the owner of BuckGen Parcel and subject to the reasonable requirements of such owner.

ARTICLE 3
EASTSIDE UTILITY EASEMENTS

Section 3.1 **Grant of Utility Easements**

(a) BuckMill, for consideration paid, grants to Whole Oceans and BuckGen, for the benefit of the Whole Oceans Property and the BuckGen Parcel, respectively, a perpetual non-exclusive easement over, under, across, and through the Lot 4 Eastside Easement Area and the Route 15 Utility Easement Area, for the purposes and subject to the conditions set forth herein.

(b) BuckGen, for consideration paid, grants to Whole Oceans and BuckMill, for the benefit of the Whole Oceans Property and the BuckMill Property, respectively, a perpetual non-exclusive easement over, under, across, and through the Lot 1 Eastside Easement Area, for the purposes and subject to the conditions set forth herein.

Section 3.2 **Purposes**. The easements granted by BuckMill pursuant to Section 3.1(a) above and the easements granted by BuckGen pursuant to Section 3.1(b) above (collectively, the "**Eastside Utility Easements**"), shall be for the following purposes:

(a) to erect, install, bury, construct, maintain, repair, rebuild, replace, modify, operate, and patrol water lines, pipes, pipe lines, conduits, pumps, valves, meters, and other equipment, facilities, and appurtenances related thereto for the delivery and monitoring of water to the Whole Oceans Property, the BuckMill Property or the BuckGen Parcel, as applicable, together with the right, subject to and in accordance with Section 3.3 below, to connect with any and all pipelines, valves, and equipment owned by BuckMill or BuckGen as are now or may hereafter be located within the Eastside Easement Area or the Route 15 Utility Easement Area for the purpose of supplying water to the Whole Oceans Property, the BuckMill Property and the BuckGen Parcel, as applicable;

(b) to erect, install, bury, construct, maintain, repair, rebuild, replace, modify, operate and patrol all water line pipes, pipe lines, sewer pipes, storm water pipes, a leachate line connected to BuckMill's existing landfill situated in Bucksport, Maine, natural gas supply lines, electrical and telecommunications lines, wires, cables, and all fixtures and appurtenances related thereto including, without limitation, conduits, valves, meters, regulators, batteries, wires, cables, metering, protection systems, monitoring devices, and other equipment, facilities, and appurtenances related thereto for the purpose of supply and monitoring all utility services, as defined in 33 M.R.S. § 458(2)(B), to the Whole Oceans Property, the BuckMill property or the BuckGen Parcel, as applicable, together with the right, after obtaining the consent of the owner of such facilities, to connect with any and all such utility services as are now or may hereafter be located within the Eastside Easement Area, which consent shall not be unreasonably withheld, conditioned or delayed. Without limiting the generality of the foregoing, these utilities shall include water, natural gas, and telecommunications;

(c) to erect, install, bury, construct, and with respect to the Whole Oceans Property, the BuckMill Property or the BuckGen Parcel, as applicable, to maintain, repair, rebuild, replace, operate, and patrol pipe lines or conduits with all necessary equipment, facilities, and appurtenances thereto for conveying sewage and/or wastewater, together with the right, after obtaining the consent of the owner of such facilities, which consent shall not be unreasonably withheld, conditioned or delayed, to connect to existing pipelines, valves, conduits, and equipment for the purpose of conveying sewage and/or wastewater from the Whole Oceans Property, and the BuckGen Parcel, as applicable; and

(d) to grant easements to public utilities for any of the aforementioned utilities, subject to the prior approval of the Party or Parties owning fee title to the property that will be affected by such easements, which approval shall not be unreasonably withheld, conditioned or delayed.

Section 3.3 Terms and Conditions.

(a) In exercising its rights under the Eastside Utility Easements, each of Whole Oceans, BuckGen and BuckMill shall have the right to, and shall be responsible for, the cost to connect to the existing water supply system located within the Eastside Easement Area bringing water from Silver Lake and to install a meter to measure the use of such water taken by Whole Oceans, BuckMill or BuckGen, as applicable. The location of such connection and meter and the details of such connection and installation shall be subject to review and approval by BuckMill, which approval shall not be unreasonably withheld, conditioned, or delayed.

(b) Unless otherwise approved by the applicable fee owner, all pipelines and conduits shall be installed underground; provided, however, that all connections to existing facilities and those portions of the facilities customarily located above-ground or that need to be above-ground to reasonably access and/or repair, or for safety reasons, such as pumps, valves, monitors, regulators and the like, may be above-ground together with a structure to house any such above-ground facilities.

(c) The Eastside Utility Easements shall include the right of Whole Oceans, BuckGen and BuckMill, as applicable, to access by workers and equipment in order to carry out or effectuate the purposes of the easements specified above. During construction and any repair, replacement, upgrade, or maintenance, Whole Oceans, BuckMill and BuckGen, as applicable, shall have the temporary right to enter on adjacent property of Whole Oceans and BuckGen, with personnel, vehicles, and equipment, as reasonably required in order to undertake and complete such construction, repair, and maintenance, upon advance notice to the Party owning such adjacent property. The Party making such entry shall use its good faith efforts to minimize disruption to operations on such adjacent property.

(d) The Parties hereby covenant and agree that (i) each Party's water lines, pipes, pipe lines, conduits, valves, meters, and other equipment and facilities installed by or for such party pursuant to this Article 3 (collectively, the "**Utility Infrastructure**") are and shall continue to be personal property owned by Party installing such Utility Infrastructure, notwithstanding its affixation or annexation to any real property; and (ii) such water lines, pipes, pipe lines, conduits, valves, meters, and other equipment and facilities are hereby severed and shall be and remain

separate and severed from the real property on which it is located, even if affixed or annexed thereto now or in the future. To the extent applicable, this document shall constitute an agreement pursuant to Title 33 M.R.S. §455.

(e) Prior to any Party locating any new facilities or improvements permitted pursuant to this Article in a portion of the Eastside Easement Area not owned by such Party, the Party installing such new facilities or improvements shall first provide to the Party that owns the parcel where the new facilities or improvements are to be located engineered drawings reflecting such location. Any such location shall be subject to the prior approval of such owner, as provided in Section 3.3(m) below. Prior to any Party connecting into any portion of the existing infrastructure, the Party making such connection shall first provide to the Party or Parties currently using that portion of the existing infrastructure engineered drawings reflecting such connection. Any such connection shall be subject to the prior approval the Party or Parties already using such portion of the existing infrastructure, as provided in Section 3.3(m) below.

(f) Any Party performing any work in the Eastside Easement Area shall be obliged to obtain, or shall cause the appropriate party to obtain, all necessary local, state, and federal permits, licenses, consents, and entitlements related to any work to be done by it or on its behalf in such Eastside Easement Area. The other Parties shall reasonably cooperate in all such permitting processes, at no out of pocket cost or expense.

(g) Whole Oceans agrees to repair and maintain the Whole Oceans Utility Infrastructure at its sole expense as necessary to ensure that they do not become an environmental or safety hazard. BuckMill and Buck Gen each agree to repair and maintain their respective utility infrastructure located within or adjacent to the Eastside Easement Area, at their own cost, as necessary to ensure that they do not become an environmental or safety hazard.

(h) No Party shall suffer or permit any mechanic's or materialmen's lien to attach to the property of any other Party by virtue of the exercise of such Party's rights under this Article 3. In the event any such lien shall be filed and recorded, the Party having done such work or for whose benefit the work was done shall promptly take steps to remove such lien in any lawful manner.

(i) Any Party performing any work in the Eastside Easement Area agrees to promptly restore all areas of the Eastside Easement Area affected by such work as near as reasonably possible to its or their immediately prior condition; provided that such obligation to restore shall expressly exclude any obligation to restore vegetation. Notwithstanding the foregoing, any Party performing any such work on Lot 4 of the BuckMill Property shall promptly restore any vegetation and/or landscaping located on said Lot 4 affected by any such work to its immediately prior condition.

(j) Each Party (an "Indemnifying Party") hereby agrees to indemnify and hold harmless the other Parties from and against any and all damages, liabilities, losses, expenses, claims, and suits (including reasonable attorneys' fees) incurred or suffered as a consequence of or arising in any manner out of the Indemnifying Party's exercise of the rights granted by this Article 3 by the Indemnifying Party or its officers, employees, agents, contractors, or invitees, or

the breach or violation of the terms of this Article 3 by the Indemnifying Party, except to the extent caused by the negligence or intentional misconduct of the other Parties.

(k) BuckMill and BuckGen each reserves all rights to use their respective Eastside Easement Area in any manner that is not inconsistent with the rights granted to Whole Oceans hereunder and does not interfere with the use and enjoyment by Whole Oceans of the easements granted by this Article 3. The foregoing notwithstanding, BuckMill and BuckGen covenant and agree that they will not (i) construct any buildings or other permanent structures within the Eastside Easement Area; or (ii) conduct any excavation or utility work within the Eastside Easement Area, without first affording Whole Oceans thirty (30) days prior written notice of such intent, said notice to include reasonably detailed engineering plans of such work. Notwithstanding the foregoing, the Parties acknowledge that (x) Whole Oceans may request an easement to CMPCo. for the Loop Road as provided in Section 2.2(f) hereof and (y) BuckMill and BuckGen will continue the location, operation, and maintenance of any subsurface utilities and/or conduits now in place within the Eastside Easement Area, provided, that, subject to the notice and consent provisions of subsection (m) below, and the other requirements of this Section 3.3, such subsurface utilities and/or conduits may be replaced in connection with changes to the manner in which utilities are being provided to all or any portion of the Entire Property.

(l) All Parties agree to observe good utility practices, and to use their good faith efforts to undertake activities within the Eastside Easement Area in such a manner so as to minimize the effect on the equipment, facilities, and infrastructure installed by the other Parties or servicing the land of such other Parties, and at no time will a Party's access or utilities be negatively impacted by such activities without the prior consent in each case of such negatively impacted Party.

(m) With respect to any approval, consent, notice or plans to be submitted to any of the Parties under this Section, the Party receiving a request for such approval or consent, or receiving such notice or plans shall have 30 days to respond in writing, and the Party requesting such approval or consent or submitting such notice and/or plans, as applicable, shall not commence any such excavation or utility work or other work or take such action subject to such approval or consent without receipt of the other Parties' prior approval or consent, which approval or consent shall not be unreasonably withheld, conditioned or delayed, provided that (x) if a Party receiving such request for approval or consent, or receiving such notice and/or plans does not respond within such thirty (30) day period, the submitting Party may commence such work or take such action as specified therein, (y) any denial of approval or consent shall include a reasonably detailed explanation for the reason such denial, and (z) the foregoing will not apply in the event of any emergency, but the Party submitting such request for approval or consent or such notice and/or plans, as applicable, will provide notice of the same to the other Parties as soon as is practicable and will use reasonable efforts to minimize the work or action as necessary to address the emergency.

(n) Gas is currently brought to the Eastside Easement Area by Bangor Gas Company, LLC (**"Bangor Gas"**) pursuant to certain easement deeds, including Easement Release Deed and Agreement for Gas Line between Bangor Gas and Champion International Corporation dated May 24, 2000 and recorded in the Hancock County Registry of Deeds in Book 2919, Page 354

and Easement Release Deed and Agreement for Meter Site between Bangor Gas and Champion International Corporation dated May 24, 2000 and recorded in said Registry in Book 2919, Page 365 (collectively, the "**Bangor Gas Easements**"). BuckMill and BuckGen hereby (i) assign to Whole Oceans, in common with BuckMill and BuckGen, the right to request service from Bangor Gas through the Bangor Gas Easements; and (ii) agree that they will not terminate the Bangor Gas Easements, or either of them, without the approval of Whole Oceans, which approval shall not be unreasonably withheld, conditioned or delayed. If Whole Oceans requests service from Bangor Gas, Whole Oceans shall have the right, at its sole cost and expense, to connect to the Bangor Gas system and to install a meter to measure the use of such gas by Whole Oceans. The location of such connection and meter and the details of such connection and installation shall be subject to review and approval by BuckMill, which approval shall not be unreasonably withheld, conditioned or delayed.

ARTICLE 4
RIVERSIDE EASEMENTS

Section 4.1 **Grant of Riverside Easements;**

(a) BuckMill, for consideration paid, grants to Whole Oceans, for the benefit of the Whole Oceans Property, a perpetual non-exclusive easement over, under, across, and through the Lot 3 Riverside Easement Area, and the intertidal zone adjacent thereto, for the purposes and subject to the conditions set forth herein.

(b) Whole Oceans, for consideration paid, grants to BuckMill, for the benefit of the Lot 3 and Lot 4 of the BuckMill Property, a perpetual non-exclusive easement over, under, across and through the Lot 2 Riverside Easement Area, and the intertidal zone adjacent thereto, for the purposes and subject to the conditions set forth herein.

Section 4.2 **Purposes**

(a) The easements granted by BuckMill to Whole Oceans pursuant to Section 4.1(a) above shall be to (i) install, bury, construct, maintain, repair, rebuild, replace, operate, and patrol all water lines, pipes, pipe lines, conduits, valves, pumps, meters, and other equipment, facilities, and appurtenances thereto for drawing water from the Penobscot River through the River Water Intake System and conveying and discharging water into the Penobscot River through the River Water Discharge System, together with the right to connect to existing pipelines, valves, conduits, and equipment for the benefit of the Whole Oceans Parcel for the purpose of discharging waste water to the Penobscot River through the River Water Discharge System; provided that the location of any such pipes, conduits, and valves on the Lot 3 Riverside Easement Area and the connection by Whole Oceans into any existing pipelines, valves, conduits, or equipment, shall be subject to the provisions of Section 4.3 below, and (ii) for access over any travelways located on the Lot 3 Riverside Easement Area from time to time as reasonably necessary for the purposes set forth in this Section 4.2(a). Whole Oceans shall have the right to remove surface slabs or underground foundations from demolished structures in the exercise of its rights hereunder, subject to the terms hereof.

(b) The easement granted by Whole Oceans to BuckMill pursuant to Section 4.1(b) above shall be to (i) maintain, repair, rebuild, operate, and patrol all existing stormwater discharge lines, pipes, pipe lines, conduits, valves, meters, and other equipment, facilities, and appurtenances thereto currently used for conveying and discharging stormwater into the Penobscot River through the existing stormwater lines and facilities within the River Water Discharge System and Outflow Pipe #001B, together with any replacements or upgrades thereof in the same location, subject to the provisions of Section 4.3 below, and (ii) for access over any travelways located on the Lot 2 Riverside Easement Area from time to time as reasonably necessary for the purposes set forth in this Section 4.2(c).

Section 4.3 Terms and Conditions.

(a) BuckMill and Whole Oceans shall be responsible for the cost of repair, upgrade, and maintenance of the River Water Discharge System in the following manner:

(i) The cost of repair, upgrade, and maintenance of any "Common Facilities" (as defined below) within the River Water Discharge System shall be shared by the Parties using such Common Facilities in proportion to the amount of water that each Party sharing that Common Facility bears to the total amount of water that all Parties sharing that Common Facility have discharged into that Common Facility during the preceding calendar year. Notwithstanding the foregoing, if a Party's volume of water discharged through the Common Facilities increases by 100% or more over the prior year's volume of water discharged through the Common Facilities, and any upgrade, repair or maintenance is performed in such year, then such Party's share of the cost of such upgrade, repair or maintenance will be increased equitably to account for such increase in volume. The cost and repair of any "Exclusive Facilities" (as defined below) within the River Water Discharge System shall be borne solely by the Party that has the exclusive use of such Exclusive Facility.

(ii) As used herein, the term "**Exclusive Facilities**" shall mean any portion of the River Water Discharge System, as the case may be, that is used exclusively by a single Party and that no other Party has the right to use. The term "**Common Facilities**" shall mean any portion of the River Water Discharge System that is used by more than one Party or is connected in such a way so as to be capable of being used by more than one Party whether or not it is actually being used by more than one Party.

(iii) Whole Oceans shall be responsible for maintaining, upgrading and repairing the Common Facilities to which it is one of the benefited Parties at a sufficient level to handle the requirements of the Parties entitled to use the same; provided, however, that Whole Oceans shall not be required to make any capital expenditures to repair or replace any portion of the Common Facilities. Whole Oceans will invoice BuckMill for its prorata share in accordance with the above. Any such amounts invoiced shall be due and payable from BuckMill within ten (10) days of invoice. Any amounts due under this Section and not paid within ten (10) days of such invoice shall accrue interest at the lower of (a) the "**WSJ Prime Rate**" (as defined below) plus 100 basis points (the "**Default Interest Rate**"), and (b) the highest rate permitted under applicable

law, from the date of invoice until paid. The WSJ Prime Rate shall mean the rate of interest published in The Wall Street Journal from time to time as the "U.S. Prime Rate". If more than one Prime Rate is published in The Wall Street Journal for a day, the average of the Prime Rates shall be used, and such average shall be rounded up to the nearest one–quarter of one percent (.25%). If The Wall Street Journal ceases to publish the "U.S. Prime Rate", Whole Oceans shall select a comparable publication that publishes such "U.S. Prime Rate", and if such prime rates are no longer generally published, then Whole Oceans shall select a comparable interest rate index, at its reasonable discretion.

(iv) If Whole Oceans fails to satisfy in any material respect its obligations to maintain the Common Facilities as provided in clause (iii) above, and such failure continues for thirty (30) days after written notice thereof to Whole Oceans from any other Party using such Common Facilities setting forth in reasonable detail such failure and proposed action to be taken, the Party providing such notice shall have the right, but not the obligation, to perform such repair or maintenance or such obligations and recover from Whole Oceans its share of the cost of such repair and maintenance, which amount shall be paid within ten (10) days after notice from the Party performing such work confirming that such work has been completed and setting forth the amount of such costs, Whole Oceans' share and providing reasonable documentation with respect thereto (a "**Reimbursement Request**"). Any amount not paid within such 10-day period shall bear interest at the Default Interest Rate; provided, however, if on or before the end of such 10-day period Whole Oceans notifies the other Party that Whole Oceans disagrees with the amount claimed by such Party or with the right of such Party to exercise its self-help right under this subsection and demands arbitration under Section 6.1 hereof, then the parties will proceed to arbitration in accordance with Section 6.1. If the arbitration decision is that the Party providing the Reimbursement Request is entitled to reimbursement of its costs, such amount together with interest thereon from the date of the Reimbursement Request to the date of the arbitrator's decision at the Default Interest Rate shall be paid by Whole Oceans to such Party within ten (10) days after such arbitration decision is delivered to the parties.

(v) If any Party fails to timely pay its prorata share of expenses as provided in this Section 4.3(a) and arbitration is demanded in accordance with Section 6.1 hereof, the prevailing party shall be entitled to recover reasonable attorneys' fee and costs.

(b) Prior to any Party locating any new facilities or improvements permitted pursuant to this Section 4 in a portion of the Riverside Easement Area not owned by such Party, the Party installing any such new facilities or improvements shall first provide to the Party that owns the parcel where the new facilities or improvements are to be located engineered drawings reflecting such location. Any such location shall be subject to the prior approval of such owner, as provided in Section 4.3(n) below. Prior to any Party connecting into any portion of the existing River Water Discharge System, the Party making such connection shall first provide to the Party or Parties currently using that portion of the River Water Discharge System engineered drawings reflecting such connection. Any such connection shall be subject to the prior approval the Party or Parties already using such portion of the River Water Discharge System, as provided in

Section 4.3(n) below. If any facility or improvement is connected to a portion of the River Water Discharge System that is currently being used by one or more other Parties, the party that is making the connection shall also install a meter so that usage of water or other utility can be properly measured and its quality and effluent tested.

(c) The discharge by BuckMill of water to the Penobscot River through the River Water Discharge System shall not exceed 750,000 gallons per day on an intermittent basis. BuckMill shall install meters on its river water discharge facilities at locations approved by Whole Oceans that accurately track the total discharge of water by BuckMill to the Penobscot River.

(d) Unless otherwise approved by the applicable fee owner, all new intake and discharge water facilities installed on such fee owner's parcel shall be installed underground; provided, however, that all connections to existing facilities and those portions of the facilities customarily located above-ground or that need to be above-ground to reasonably access and/or repair or for safety reasons, such as pumps, valves, monitors, and regulators and the like, may be above-ground, together with structures to house any such above-ground facilities.

(e) The above easements shall include the right of benefited party to access by and with workers and equipment in order to carry out or effectuate the purposes of the easements specified above. During construction and any repair, replacement, upgrade, or maintenance, each Party shall have the temporary right to enter on adjacent property of a Party, with personnel, vehicles, and equipment, as reasonably required in order to undertake and complete such construction, repair, replacement, upgrade, or maintenance, upon advance notice to such Party. The Party performing such construction, repair, or maintenance shall use its good faith effort to minimize disruption to operations on such adjacent property.

(f) All intake and discharge facilities within the River Water Intake System and River Water Discharge System, now existing or added pursuant to this Indenture are collectively referred to herein as "**River Water Facilities**"). The Parties hereby covenant and agree that (i) each Party's River Water Facilities are and shall continue to be personal property notwithstanding their affixation or annexation to any real property; and (ii) such River Water Facilities are hereby severed and shall be and remain separate and severed from the real property on which they are located, even if affixed or annexed thereto now or in the future. To the extent applicable, this document shall constitute an agreement pursuant to Title 33 M.R.S. §455.

(g) Any Party undertaking any construction or work within the Riverside Easement Areas shall be obliged to obtain, or shall cause the appropriate party to obtain, all necessary local, state, and federal permits, licenses, consents, and entitlements related to any work to be done by it or on its behalf in the Riverside Easement Area. The other Parties shall reasonably cooperate in all such permitting processes, at no out of pocket cost or expense.

(h) Except as otherwise provided herein, BuckMill and Whole Oceans shall each cause its own River Water Facilities to be in good condition and repair so as not to interfere with the operation by the other Party of its River Water Facilities and so as not to present an environmental or safety hazard, and shall operate and maintain its respective River Water Facilities in accordance with all applicable laws, regulations, permits, and approvals.

(i) No Party shall, as a result of any work done by or for the benefit of such Party, suffer or permit any mechanic's or materialmen's lien to attach to the property of any other Party. In the event any such lien shall be filed and recorded, the Party having done such work or for whose benefit the work was done, shall promptly take steps to remove such lien in any lawful manner.

(j) In connection with the initial installation of any River Water Facilities and/or in connection with any subsequent work performed in connection therewith, the Party performing such work or for whose benefit such work is undertaken, agrees to restore all surface areas affected by such work as near as reasonably possible to its or their immediately prior condition; provided that such obligation to restore shall expressly exclude any obligation to restore vegetation.

(k) Each of BuckMill and Whole Oceans hereby agrees to indemnify and hold harmless the other from and against any and all damages, liabilities, losses, expenses, claims, and suits (including reasonable attorneys' fees) incurred or suffered in consequence of or arising in any manner out of (i) the negligent exercise by the indemnifying Party of the rights granted by this Article 4; or (ii) the breach or violation of the terms hereof by the indemnifying Party; and (iii) the discharge by the indemnifying party of any water, effluent or other materials in violation of any law, regulation or permit.

(l) Whole Oceans and BuckMill each reserves all rights to use their respective Riverside Easement Area in any manner that is not inconsistent with the rights granted to the other Party hereunder and does not interfere with the use and enjoyment by such other Party of the easements granted by this Article 4. The foregoing notwithstanding, Whole Oceans and BuckMill covenant and agree that they will not (i) construct any buildings or other permanent structures within the Riverside Easement Area situated above any River Water Facility owned by another Party without such Party's consent, not to be unreasonably withheld, conditioned or delayed, or (ii) conduct any excavation or utility work within the Riverside Easement Area without first affording any Party that has an easement right within such Riverside Easement Area thirty (30) days prior written notice of such intent, said notice to include reasonably detailed engineering plans of such work, except in the case of an emergency. Such other Party shall have 30 days to respond in writing to said notice and plans. Notwithstanding the foregoing, the Parties acknowledge and consent to the installation, maintenance and paving of the Loop Road, as depicted on the Easement Plan.

(m) The Parties acknowledge and agree this Indenture allows BuckMill and Whole Oceans to have facilities and improvements located in and under the Riverside Easement Area. The Parties agree to observe good utility practice and to use their good faith efforts to undertake activities within the Riverside Easement Area in such a manner so as to minimize any effect on the equipment, facilities, and infrastructure installed by the other Party or servicing the land of such other Party.

(n) With respect to any approval, consent, notice or plans to be submitted to any of the Parties under this Section, the Party receiving a request for such approval or consent, or receiving such notice or plans shall have 30 days to respond in writing, and the Party requesting

such approval or consent or submitting such notice and/or plans, as applicable, shall not commence any such excavation or utility work or other work or take such action subject to such approval or consent without receipt of the other Parties' prior approval or consent, which approval or consent shall not be unreasonably withheld, conditioned or delayed, provided that (x) if a Party receiving a request for such approval or consent, or receiving such notice and/or plans does not respond within such thirty (30) day period, the submitting Party may commence such work or take such action as specified therein, (y) any denial of approval or consent shall include a reasonably detailed explanation for the reason such denial, and (z) the foregoing will not apply in the event of any emergency, but the Party submitting such request for approval or consent or such notice and/or plans, as applicable, will provide notice of the same to the other Parties as soon as is practicable and will use reasonable efforts to minimize the work or action as necessary to address the emergency.

ARTICLE 5
OTHER EASEMENTS

5.1 **Duct Bank Electrical Easement**. BuckMill hereby grants to BuckGen an easement over the Duct Bank Electrical Easement Area for purposes of maintaining electric utility lines and other related facilities that are required to connect the power generation facilities located on the BuckGen Parcel to the CMPCo's substation adjacent to Lot 3, and to maintain, repair, replace and upgrade such line and all facilities and appurtenances thereto.

5.2 **Grading Easement**. BuckMill hereby grants to Whole Oceans an easement to fill, grade, landscape, seed, plant grass and shrubs, mow, cut and trim the same over, under and across the Lot 4 Grading Easement Area to supply lateral support for the Whole Oceans Property (the "Grading Easement"). Whole Oceans agrees that prior to exercising its rights to initially fill and grade the Lot 4 Grading Easement Area it will submit plans to BuckMill for review and consultation. Whole Oceans and BuckMill shall review and negotiate in good faith to limit the impact of the Grading Easement on Lot 4. If BuckMill and Whole Oceans agree upon the plans for the Grading Easement, the scope of the Grading Easement shall be adjusted to be consistent with such plans. If BuckMill and Whole Oceans are unable to agree upon plans for the Grading Easement, Whole Oceans will modify the Grading Easement to be an easement within the Lot 4 Grading Easement Area, but limited to five (5) feet along the common boundary of Lot 2 and Lot 4, to construct a retaining wall and grading; provided that BuckMill agrees to pay promptly upon demand up to $75,000 of the cost and expense incurred in connection with the design and construction of such retaining wall. Such demand shall include reasonable supporting documentation for such cost and expense.

5.3. **Stormwater Easement**. BuckGen hereby grants to BuckMill, for the benefit of Lot 4, a perpetual easement over, under and across the BuckGen Parcel for the existing storm water system serving Lot 4 in order to transport and discharge stormwater from Lot 4, together with the right and to maintain, repair, replace and upgrade such system and all facilities and appurtenances thereto.

5.4. Terms and Conditions.

(a) The easements granted in this Article 5 shall include the right of Whole Oceans, BuckGen and BuckMill, as applicable, for access by workers and equipment in order to carry out or effectuate the purposes of the easements specified above. During construction and any repair, replacement, upgrade, or maintenance, Whole Oceans, BuckMill and BuckGen, as applicable, shall have the temporary right to enter on adjacent property of the Parties, with personnel, vehicles, and equipment, as reasonably required in order to undertake and complete such construction, repair, and maintenance, upon advance notice to the Party owning such adjacent property. The Party making such entry shall use its good faith efforts to minimize disruption to operations on such adjacent property.

(b) Prior to BuckMill or BuckGen locating any new facilities or improvements permitted hereunder in a portion of the easement areas specified in Section 5.1 and Section 5.3 not owned by such party, such party shall first provide to the Party that owns the parcel where the new facilities or improvements are to be located engineered drawings reflecting such location. Any such location shall be subject to the prior approval such owner, not to be unreasonably withheld, conditioned or delayed. Prior to BuckMill or BuckGen connecting into any portion of the existing infrastructure, such Party shall first provide to the Party or Parties currently using that portion of the existing infrastructure engineered drawings reflecting such connection. Any such location shall be subject to the prior approval the Party or Parties already using such portion of the existing infrastructure, not to be unreasonably withheld, conditioned or delayed.

(c) Any Party performing any work in the easement areas specified in this Article 5 shall be obliged to obtain, or shall cause the appropriate party to obtain, all necessary local, state, and federal permits, licenses, consents, and entitlements related to any work to be done by it or on its behalf. The Party that owns the parcel over which such work is being conducted shall reasonably cooperate in all such permitting processes, at no out of pocket cost or expense.

(d) No Party shall suffer or permit any mechanic's or materialmen's lien to attach to the property of any other Party by virtue of the exercise of such Party's rights under this Article 5. In the event any such lien shall be filed and recorded, the Party having done such work or for whose benefit the work was done shall promptly take steps to remove such lien in any lawful manner.

(e) Any Party performing any work in the easement areas set forth in this Article 5 agrees to promptly restore all areas of such easement areas affected by such work as near as reasonably possible to its or their immediately prior condition; provided that such obligation to restore shall expressly exclude any obligation to restore vegetation and provided further that such obligation to restore shall not apply to the grading easement created under Section 5.2 above for the initial installation of the loam, fill and initial landscaping and shall arise only in the event that subsequent to such initial work, Whole Oceans performs any repair and maintenance or otherwise disturbs the Lot 4 Grading Easement Area.

(f) Each Party (an "Indemnifying Party") hereby agrees to indemnify and hold harmless the other Parties from and against any and all damages, liabilities, losses, expenses,

claims, and suits (including reasonable attorneys' fees) incurred or suffered as a consequence of or arising in any manner out of the Indemnifying Party's exercise of the rights granted by this Article 5 by the Indemnifying Party or its officers, employees, agents, contractors, or invitees, or the breach or violation of the terms of this Article 5 by the Indemnifying Party, except to the extent caused by the negligence or intentional misconduct of the other Parties.

(g) BuckMill and Buck Gen agree to observe good utility practices, and to use their good faith efforts to undertake activities within the easement areas covered by Section 5.1 and 5.3 above in such a manner so as to minimize the effect on the equipment, facilities, and infrastructure installed by the other Parties located thereon or servicing the land of such other Parties, and at no time will a Party's access or utilities be negatively impacted by such activities without the prior consent in each case of such negatively impacted Party.

(h) In exercising their rights under this Article 5, the Parties agree to repair and maintain any infrastructure or improvements installed by such Party at such Party's sole expense as necessary to keep them in good condition, subject to reasonable wear and tear, and to ensure that they do not become a safety hazard.

(i) With respect to any approval, consent, notice or plans to be submitted to any of the Parties under this Section 5.4, the Party receiving a request for such approval or consent, or receiving such notice or plans shall have 30 days to respond in writing, and the Party requesting such approval or consent or submitting such notice and/or plans, as applicable, shall not commence any such excavation or utility work or other work or take such action subject to such approval or consent without receipt of the other Parties' prior approval or consent, which approval or consent shall not be unreasonably withheld, provided that (x) if a Party receiving such request for approval or consent or receiving such notice and/or plans does not respond within such thirty (30) day period, the submitting Party may commence such work or take such action as specified therein, (y) any denial of approval or consent shall include a reasonably detailed explanation for the reason such denial, and (z) the foregoing will not apply in the event of any emergency, but the Party submitting such request for approval or consent or such notice and/or plans, as applicable, will provide notice of the same to the other Parties as soon as is practicable and will use reasonable efforts to minimize the work or action as necessary to address the emergency.

ARTICLE 6
GENERAL TERMS AND CONDITIONS

Section 6.1. <u>Arbitration.</u>

(a) All disputes (each, a "**Dispute**") under this Indenture will be resolved by arbitration in accordance with the provisions of this Section.

(b) Either party may commence an arbitration proceeding by serving a written notice (an "**Arbitration Notice**") on the American Arbitration Association and on the other party or

parties involved not more than ninety (90) days after the expiration of the time period provided for the parties to resolve such Dispute (or any extension thereof that may be mutually agreed upon by the parties involved). The Arbitration Notice shall contain a reasonably detailed description of the Dispute and the remedy sought and shall set forth the name of the arbitrator selected by the party giving the Arbitration Notice. The parties receiving the Arbitration Notice shall, within fifteen (15) days after receipt thereof, serve a notice (the "**Reply Notice**") on the party commencing the arbitration. Each Reply Notice shall contain a reasonably detailed response to the claim (including any counterclaims and remedies sought) by the parties giving the Reply Notice. If none of the parties submitting Reply Notices include an objection to the arbitrator designated in the Arbitration Notice or if no Reply Notice is timely given, then the arbitrator named in the Arbitration Notice shall serve as a sole arbitrator under this Section. If the arbitrator designated in the Arbitration Notice is objected to in any Reply Notice, as promptly as practicable, and no later than twenty (20) days after the date of the Reply Notice, the American Arbitration Association shall select a single arbitrator. Except as otherwise provided in this section, any arbitration hereunder shall be administered (and if necessary an arbitrator selected) by the American Arbitration Association in accordance with its Commercial Arbitration Rules, or if the Dispute involves a matter related to any construction, reconstruction, maintenance, or repair, in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association.

(c) The arbitration proceeding shall take place in Portland, Maine, or in such other location as the Parties involved may agree in writing. The arbitrator shall:

(i) promptly fix a time and place for receiving information from the parties in connection with the Dispute at hand; and

(ii) make his or her decision only in relation to matters expressly referred to such arbitrator in accordance with this Section.

All decisions of the arbitrator or by a majority of the arbitrators shall be final and binding upon the parties involved.

(d) During the continuation of the resolution of any Dispute arising under this Indenture and except as an arbitrator or a court having jurisdiction shall order otherwise, the parties shall continue to perform their obligations under this Indenture.

(e) Anything to the contrary in this Section notwithstanding, if any Dispute involves the rights and obligations of one or more third parties and any such third parties do not agree to the arbitration provisions set forth in this Section, any party to this Indenture that is a party to the Dispute will have the right to resolve any such Dispute in a court of competent jurisdiction located in the State of Maine.

Section 6.2 **Insurance**. Each Party shall obtain and keep in full force and effect general liability insurance in amounts of not less than $1,000,000 for any single event and not less than $3,000,000 in the aggregate. The deductible and/or self-insurance reserve under any such policies shall not exceed $50,000. Such policies shall include contractual liability

endorsements covering indemnification and other contractual liabilities hereunder. All such insurance policies shall be endorsed to name the other Parties as additional insured and to provide that such policies shall not be amended to reduce coverage or terminated without providing at least twenty (20) days prior written notice to the other Parties.

Section 6.3 **Limitation on Indemnification**. Notwithstanding anything to the contrary herein, any claim for indemnification hereunder shall be limited as follows: (a) no such claim shall include any recovery for any matter covered by any insurance kept or required to be maintained by the Party making claim to any indemnification; and (b) such indemnity shall not run to any consequential, special, or punitive damages.

Section 6.4 **Consent and Approval**. Whenever any Party's consent or approval is required hereunder, such consent or approval shall not be unreasonably withheld, conditioned, or delayed, unless expressly stated otherwise.

Section 6.5 **Right to Relocate**. If any Party that is the fee owner of the land burdened by any of the easements granted or described in this Indenture reasonably determines that it is necessary for the development or efficient use of its property, such Party shall have the right to relocate any such easement, subject to compliance with all of the following requirements:

(a) The cost of any such relocation, along with any costs incurred by the easement holder as a result of such relocation, shall be borne by the Party seeking such relocation;

(b) Such relocation will not negatively impact the easement holder's use and enjoyment of its easement rights in any material respect;

(c) The Party seeking such relocation shall give the applicable easement holder not less than 90 days prior notice of the intent to relocate, along with a plan in reasonable detail depicting the relocated easement, together with engineered drawings depicting and providing the specifications for any new location or connection, which plans shall be subject to the approval of the applicable easement holder;

(d) The Party seeking such relocation shall obtain any and all necessary consents and approvals, including amending any applicable permits, if necessary;

(e) Such relocation shall be undertaken in such a manner so as not to cause any interruption of any service afforded by the easement;

(f) Such relocation work shall be undertaken in a good and workmanlike manner, using new materials, unless otherwise approved by the easement holder, and such work shall be performed in a good and workmanlike manner and in compliance with all applicable laws, rules, and regulations and once commenced must proceed diligently without any undue interruption until completion;

(g) The Party seeking such relocation shall have prepared, at its sole cost and expense, an amendment to the Easement Plan, reflecting such relocation, which amendment to Easement Plan shall be subject to the approval of the other Parties; and

(h) The Party seeking such relocation shall indemnify and hold harmless the applicable easement holder against any loss, damage, liability, cost, or expense, including loss of income and reasonable attorneys' fees, incurred by the applicable easement holder as a result of any such relocation.

Section 6.6 **Notices**. All notices, requests, demands and other communications hereunder shall be in writing and shall be deemed to have been given: (i) when delivered personally, (ii) one business day after being sent by nationally recognized overnight delivery service, return receipt requested, or (iii) three business days after being deposited in the United States mail, certified and with proper postage prepaid, return receipt requested, addressed as follows:

If to BuckMill:
c/o American Iron & Metal Company, Inc.
9100 Henri-Bourassa E.
Montreal, QC H1E 2S4
Canada
Attn: General Counsel

If to Whole Oceans:
Whole Oceans, LLC
P.O. Box 7561
2 Union Street
Portland Maine
04112 (P.O. Box)
04101 (street address)

If to BuckGen:
Bucksport Generation LLC
2 River Road
Bucksport, ME 04416
Attention: Plant Manager & Legal Department

Any party may change the address to which notices or other communications are to be directed to it by giving notice of such change to the other parties in the manner provided in this Section and recording such notice of change of address in the Hancock County Registry of Deeds.

Section 6.7 **Amendments**. Any provision of this Indenture that affects the rights and/or obligations of all of the Parties can only be amended by a written instrument executed by all of the Parties. Any provision of this Declaration that affects the rights and/or obligations or less than all of the Parties may be amended by a written instrument executed by the Parties so affected. Any amendment signed by less than all of the Parties shall have no effect on, and shall be binding against, any Party that is not a signatory thereto. No amendment to this Indenture shall be effective until it is recorded in the Registry.

Section 6.8 **No Waiver**. The failure of any Party to insist upon strict performances of any of the terms, covenants or conditions hereof shall not be deemed a waiver of any rights or remedies which that Party may have hereunder or at law or equity and shall not be deemed a waiver of any subsequent breach or default in any of such terms, covenants or conditions.

Section 6.9 **Partial Invalidity**. Invalidation of any of the provisions contained in this Indenture, or of the application thereof to any person by judgment or court order shall in no way affect any of the other provisions hereof or the application thereof to any other person and the same shall remain in full force and effect.

Section 6.10 **No Partnership**. None of the terms or provisions of this Indenture shall be deemed to create a partnership between the Parties in their respective businesses or otherwise, nor shall it cause them to be considered joint venturers or members of any joint enterprise.

Section 6.11 **Successors and Assigns.** This Indenture touches and concerns the land and constitutes covenants running with the Entire Property. The terms and conditions of this Indenture will be binding upon and shall inure to the benefit of, the Parties hereto and their respective successor and assigns of any portion of the Entire Property (each, a "**Successor**") to the same extent binding upon the original party to this Indenture from which such Successor obtained any rights to the Entire Property and as if such Successor was an original Party to this Indenture. The foregoing notwithstanding, upon request of any Party, any Successor shall enter into a recordable joinder agreement in form and substance reasonably acceptable to the Parties other than the Successor, confirming its rights and obligations hereunder.

Section 6.12 **Applicable Laws.** Each original party hereto and each Successor hereby agrees that it shall exercise its rights and obligations under this Indenture in accordance with all applicable laws, rules, ordinances, court orders, governmental licenses, permits and approvals.

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IN WITNESS WHEREOF, the undersigned have each caused this instrument to be signed and sealed by a duly authorized officer or agent as of the date set forth in the introductory paragraph hereof.

WITNESS:

BUCKMILL:

BUCKSPORT MILL LLC, a Delaware limited liability company

By: _____
Jeff McGlin
Its Authorized Signatory

STATE OF MAINE
COUNTY OF CUMBERLAND, ss

On May 20, 2019, then personally appeared the above-named Jeff McGlin, as authorized signatory of Bucksport Mill LLC and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of Bucksport Mill LLC.

Before me,

_____
~~Notary Public~~ Attorney at Law
Print: Bonnie L. Martindale

WITNESS:

Richard D. Prentice

BUCKGEN:

BUCKSPORT GENERATION LLC, a Delaware limited liability company

By: Jeff McGlin
Jeff McGlin
Its Authorized Signatory

STATE OF MAINE
COUNTY OF CUMBERLAND, ss

On May 20, 2019, then personally appeared the above-named Jeff McGlin, as authorized signatory of Bucksport Generation LLC and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of Bucksport Generation LLC.

Before me,

Bonnie L Martinolich
~~Notary Public~~ / Attorney at Law
Print: Bonnie L. Martinolich

WITNESS:

_____

WHOLE OCEANS:

WHOLE OCEANS, LLC, a Delaware limited liability company

By: Dale Reicks
Name: DALE REICKS
Its: MANAGER

STATE OF Iowa
COUNTY OF Chickasaw, ss

On May 20, 2019, then personally appeared the above-named Dale Reicks, as Manager of Whole Oceans, LLC and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of Whole Oceans, LLC.

Before me,

Lois A Buck
Notary Public
Print: Lois A Buck

My commission expires 8-15-21

LOIS A BUCK
NOTARY PUBLIC
8-15-21

EXHIBIT A

REDUCED COPY OF EASEMENT PLAN

(The reduced copy of the Easement Plan is attached hereto for the convenience of the reader. Reference should be made to the full sized copy of the Easement Plan to be recorded in the Hancock County Registry of Deeds)

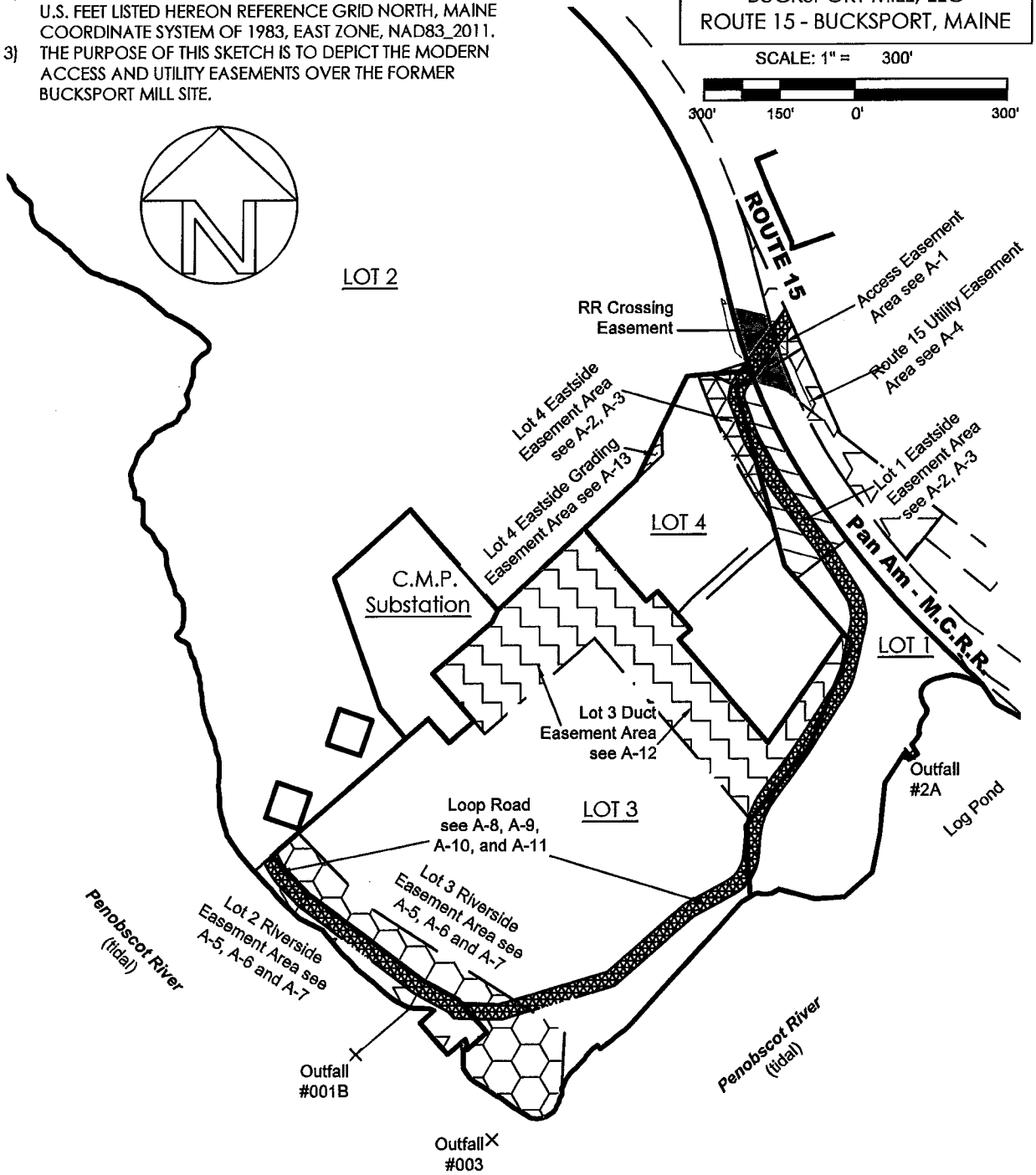
NOTES:
1) REFERENCES LISTEDHEREON ARE RECORDED IN THE HANCOCK COUNTY REGISTRY OF DEEDS, UNLESS OTHERWISE NOTED.
2) BEARINGS, NORTH ORIENTATION AND COORDINATES IN U.S. FEET LISTED HEREON REFERENCE GRID NORTH, MAINE COORDINATE SYSTEM OF 1983, EAST ZONE, NAD83_2011.
3) THE PURPOSE OF THIS SKETCH IS TO DEPICT THE MODERN ACCESS AND UTILITY EASEMENTS OVER THE FORMER BUCKSPORT MILL SITE.

EXHIBIT A-0 Index

CROSS EASEMENTS
BUCKSPORT MILL, LLC
ROUTE 15 - BUCKSPORT, MAINE

SCALE: 1" = 300'

300' 150' 0' 300'



LEGEND

ADJOINER
EASEMENT
BOUNDARY

May 18, 2019
Project No. 98079 (PLS#2327)

PLISGA & DAY 72 MAIN STREET BANGOR, ME 04401 (207) 947-0019

P:\1998\98079_2018 AIM Whole Oceans\DWG\98079 2018 ME83E_USFT v2.dwg

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EXHIBIT A-1 Access

CROSS EASEMENTS
BUCKSPORT MILL, LLC
ROUTE 15 - BUCKSPORT, MAINE

SCALE: 1" = 40'

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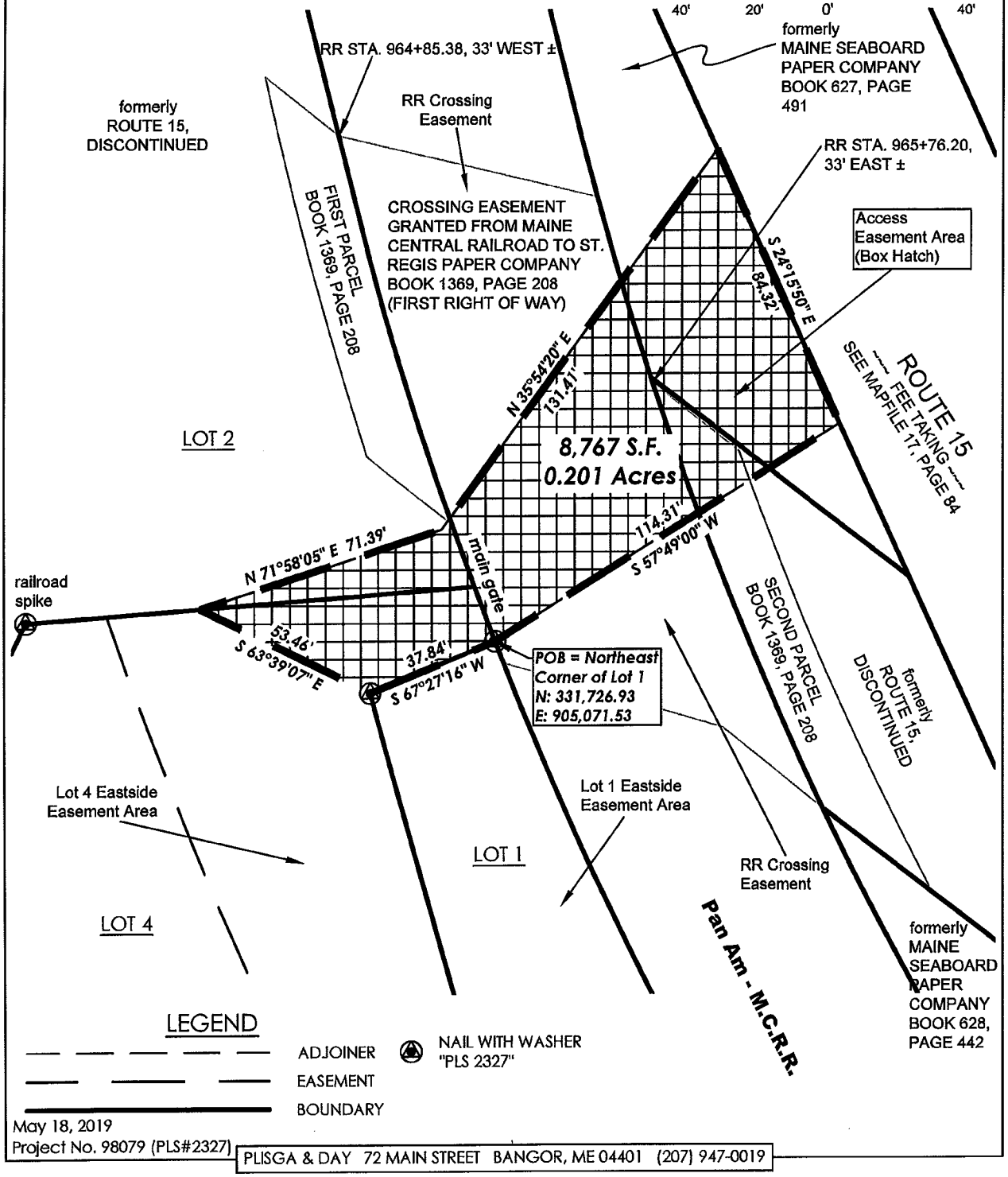

May 18, 2019
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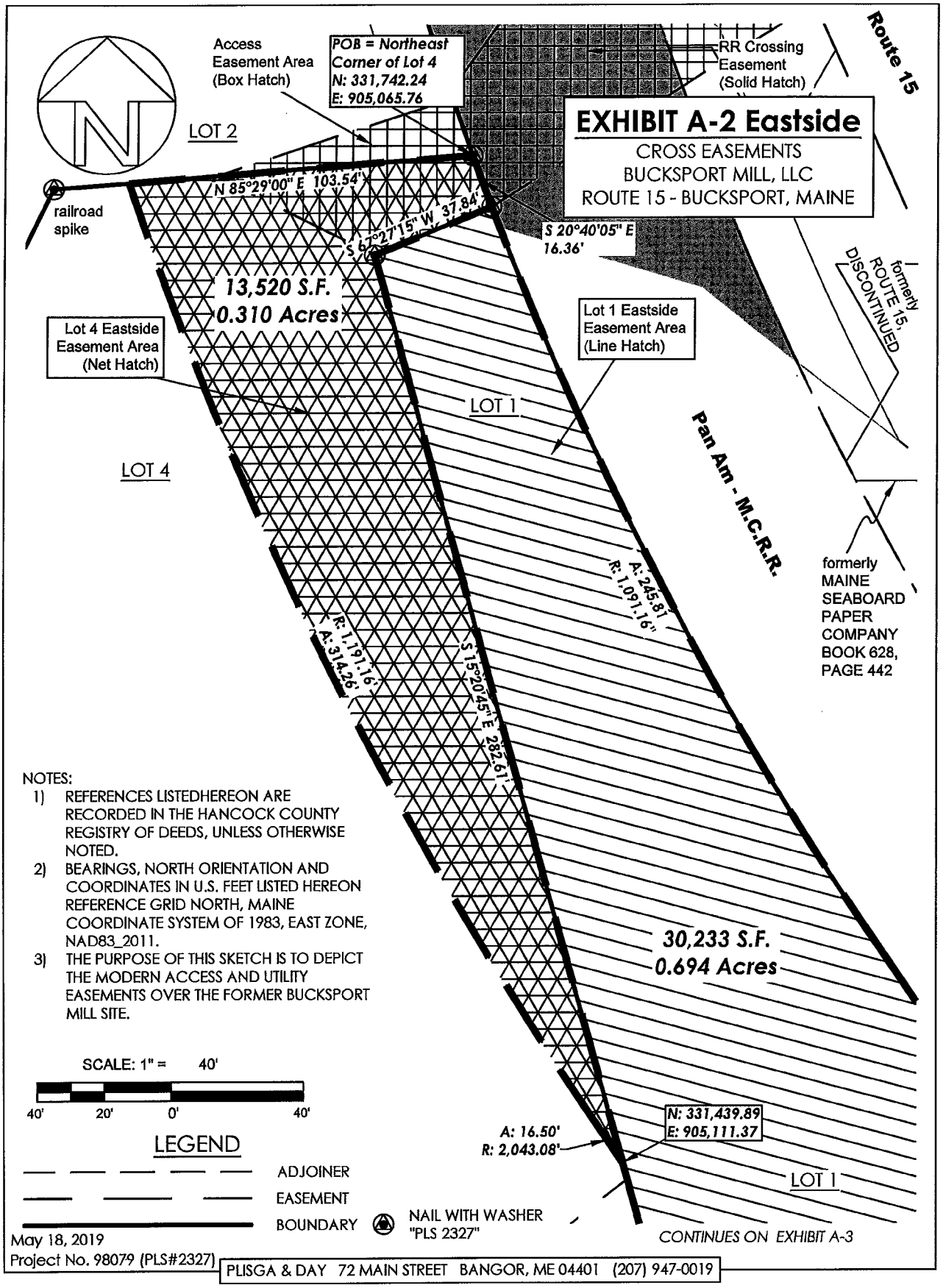

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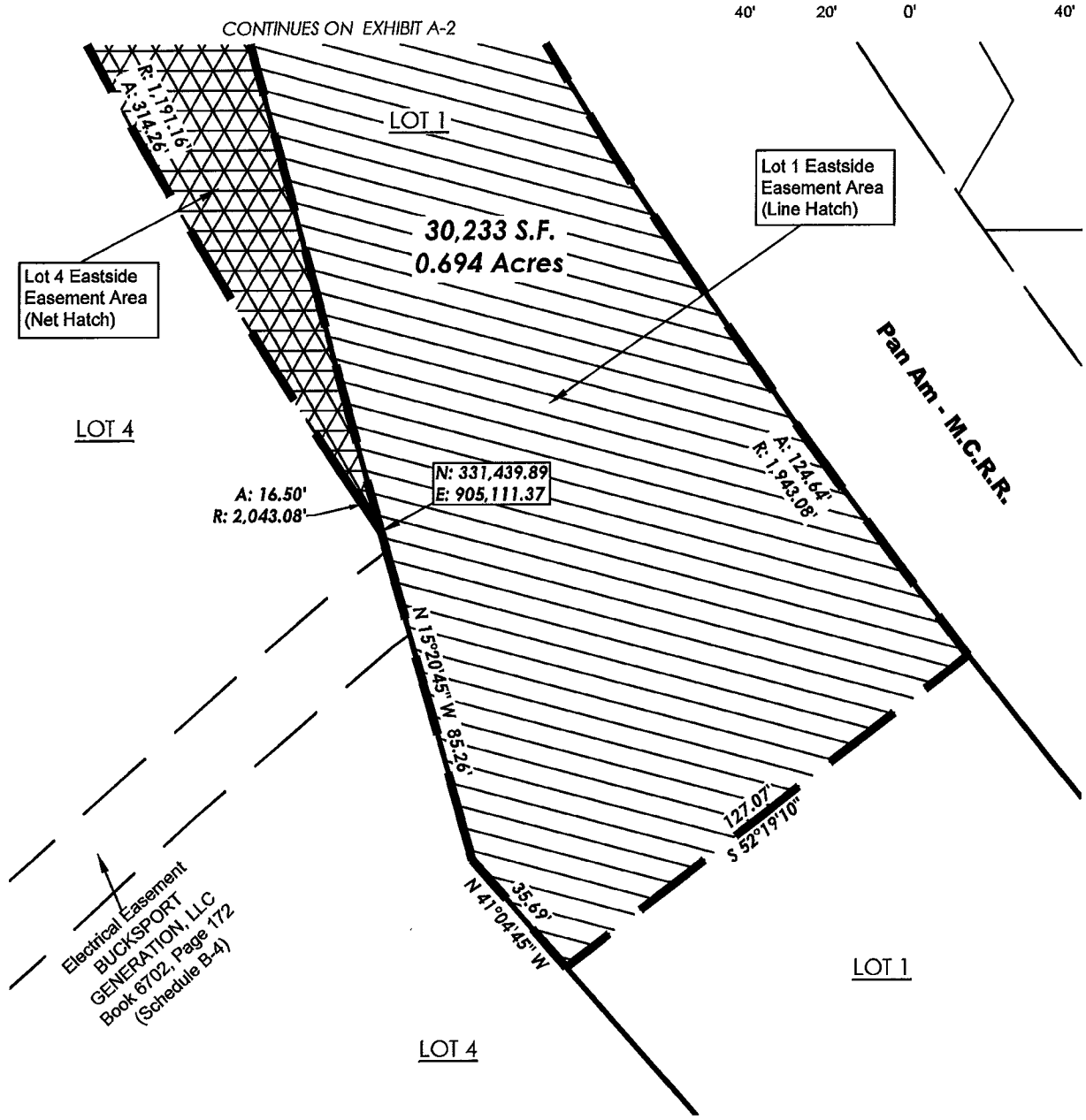
EXHIBIT A-3 Eastside

CROSS EASEMENTS
BUCKSPORT MILL, LLC
ROUTE 15 - BUCKSPORT, MAINE

SCALE: 1" = 40'

40' 20' 0' 40'



LEGEND

ADJOINER
EASEMENT
BOUNDARY

May 18, 2019
Project No. 98079 (PLS#2327)

PLISGA & DAY 72 MAIN STREET BANGOR, ME 04401 (207) 947-0019

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EXHIBIT A-4 Route 15 Utility Easement

CROSS EASEMENTS
BUCKSPORT MILL, LLC
ROUTE 15 - BUCKSPORT, MAINE

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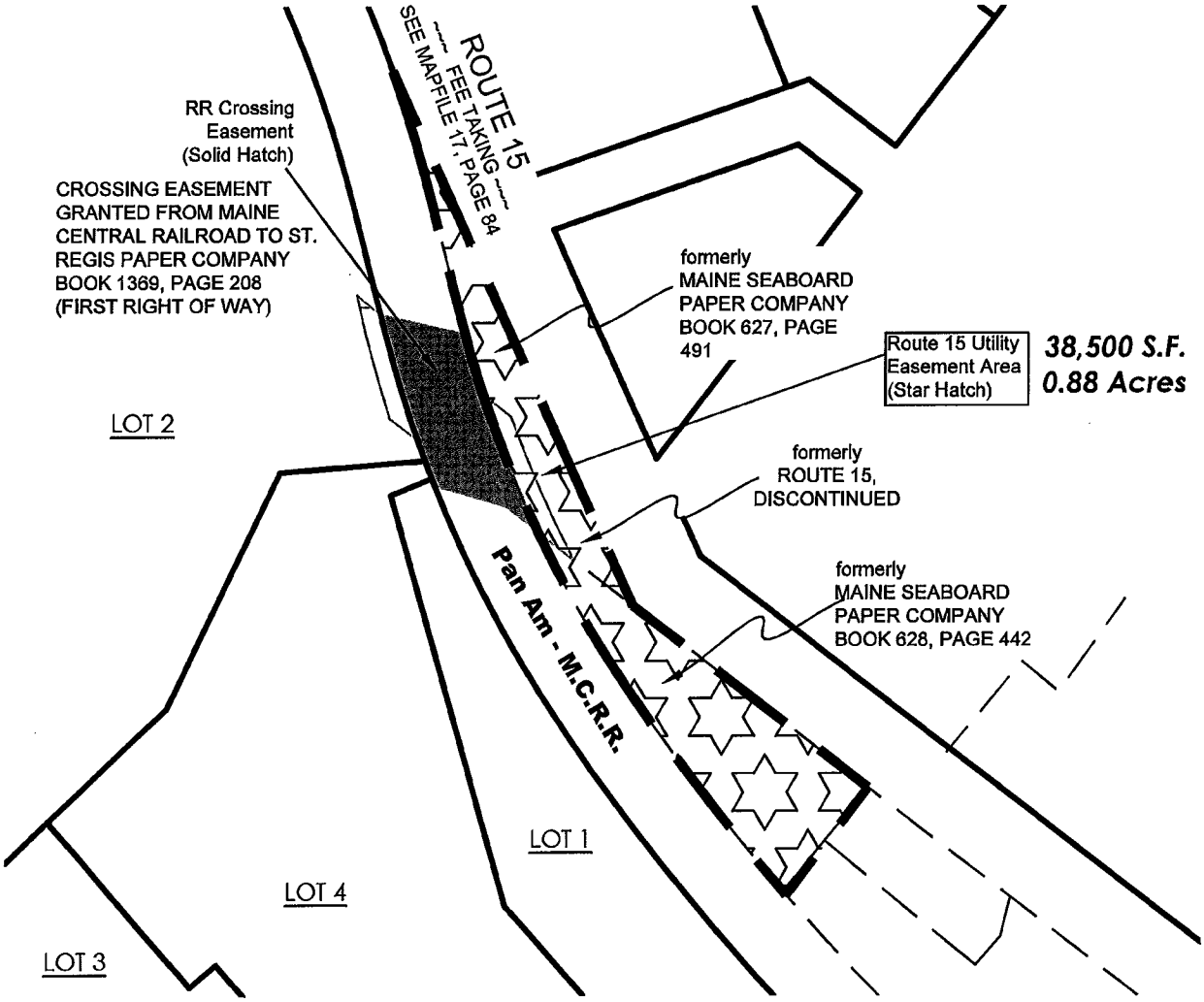

LEGEND

ADJOINER
EASEMENT
BOUNDARY

May 18, 2019
Project No. 98079 (PLS#2327)

PLISGA & DAY 72 MAIN STREET BANGOR, ME 04401 (207) 947-0019

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EXHIBIT A-5 Riverside

CROSS EASEMENTS
BUCKSPORT MILL, LLC
ROUTE 15 - BUCKSPORT, MAINE

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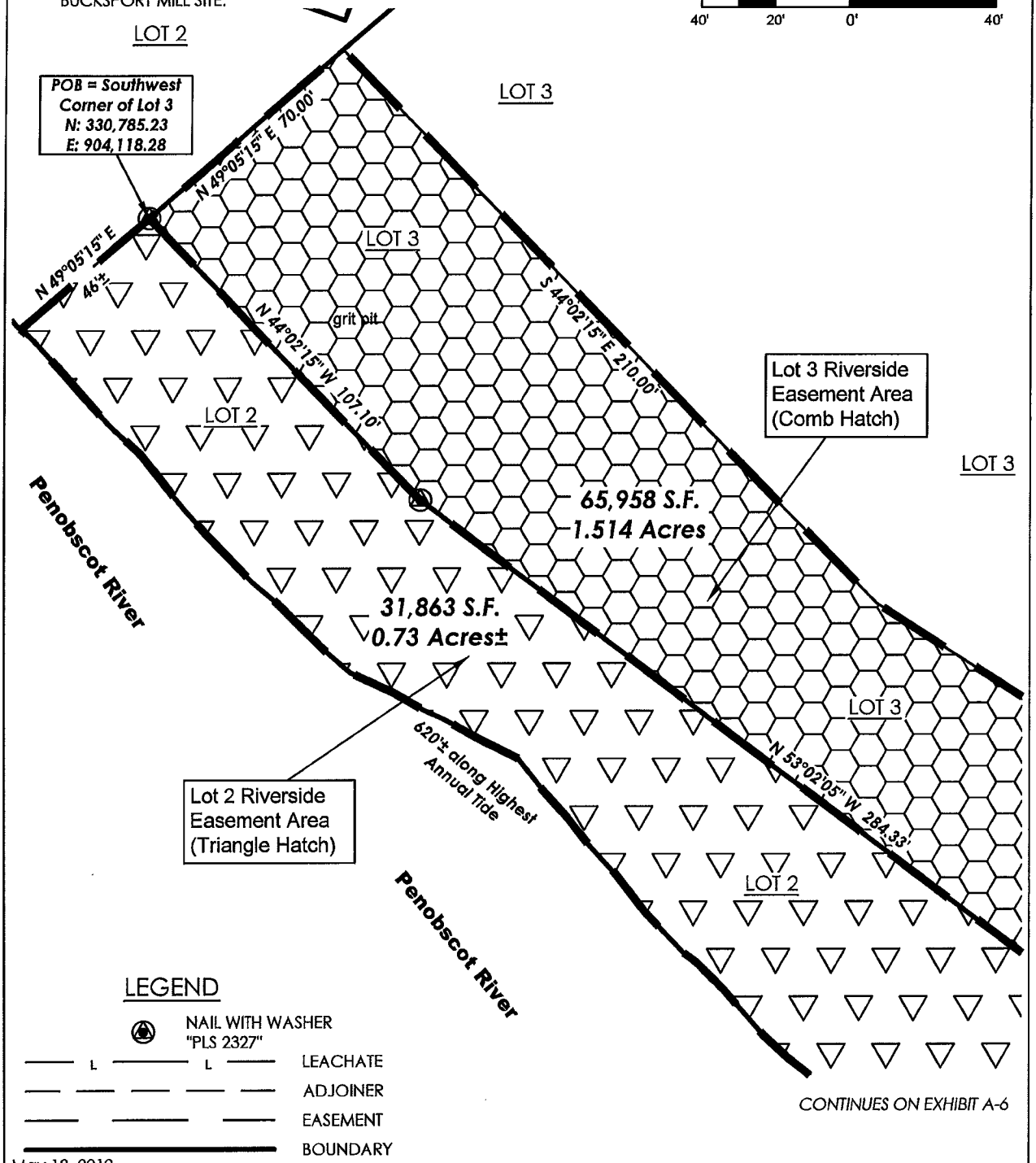
40' 20' 0' 40'



LEGEND

NAIL WITH WASHER "PLS 2327"
LEACHATE
ADJOINER
EASEMENT
BOUNDARY

CONTINUES ON EXHIBIT A-6

May 18, 2019
Project No. 98079 (PLS#2327)

PLISGA & DAY 72 MAIN STREET BANGOR, ME 04401 (207) 947-0019

P:\1998\98079_2018 AIM Whole Oceans\DWG\98079 2018 ME83E_USFT v2.dwg

NOTES:
1) REFERENCES LISTEDHEREON ARE RECORDED IN THE HANCOCK COUNTY REGISTRY OF DEEDS, UNLESS OTHERWISE NOTED.
2) BEARINGS, NORTH ORIENTATION AND COORDINATES IN U.S. FEET LISTED HEREON REFERENCE GRID NORTH, MAINE COORDINATE SYSTEM OF 1983, EAST ZONE, NAD83_2011.
3) THE PURPOSE OF THIS SKETCH IS TO DEPICT THE MODERN ACCESS AND UTILITY EASEMENTS OVER THE FORMER BUCKSPORT MILL SITE.

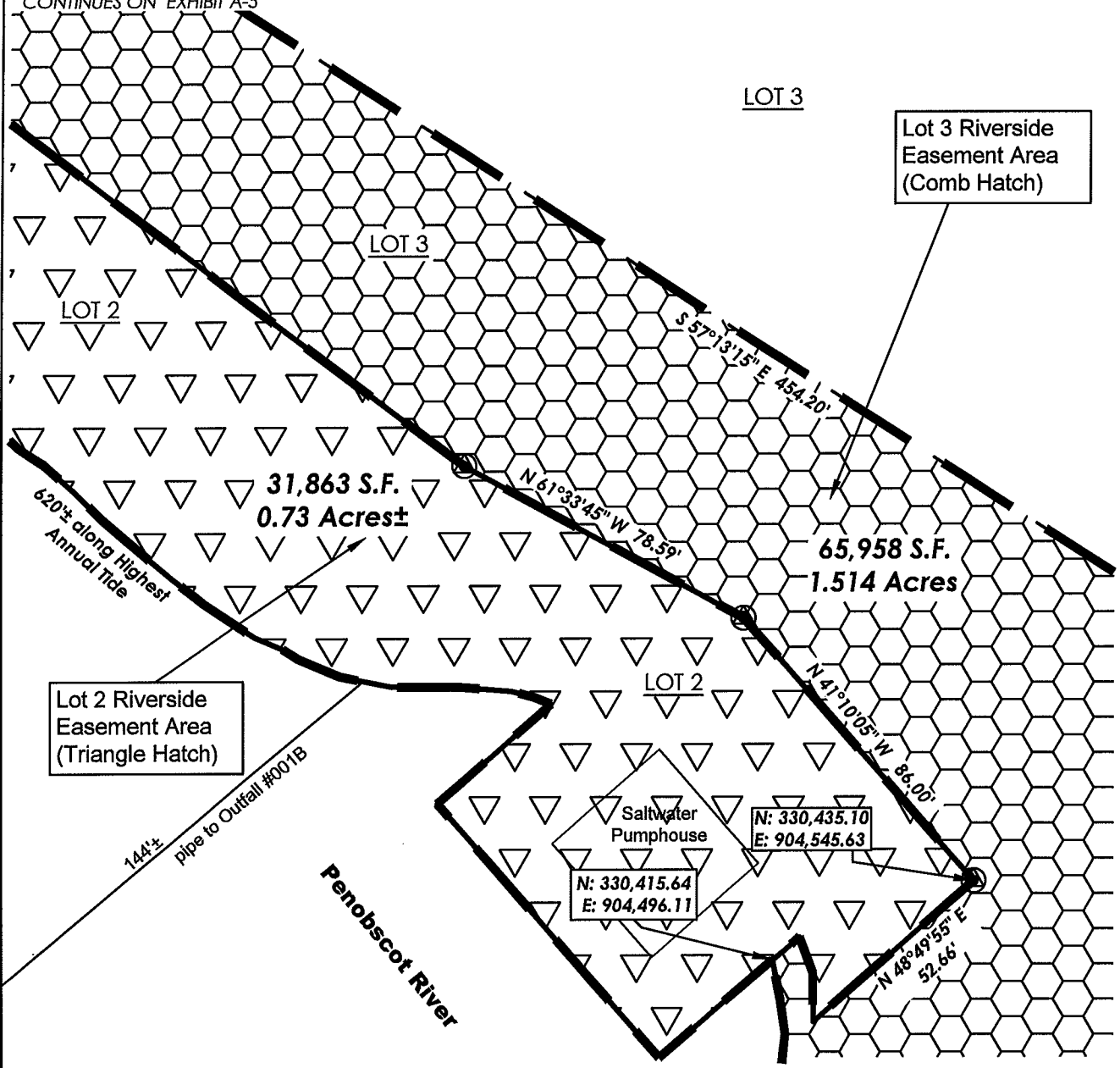
EXHIBIT A-6 Riverside

CROSS EASEMENTS
BUCKSPORT MILL, LLC
ROUTE 15 - BUCKSPORT, MAINE

SCALE: 1" = 40'

40' 20' 0' 40'

CONTINUES ON EXHIBIT A-5



CONTINUES ON EXHIBIT A-7

LEGEND

- PK NAIL WITH WASHER
- ADJOINER
- EASEMENT
- BOUNDARY

May 18, 2019
Project No. 98079 (PLS#2327)

PLISGA & DAY 72 MAIN STREET BANGOR, ME 04401 (207) 947-0019

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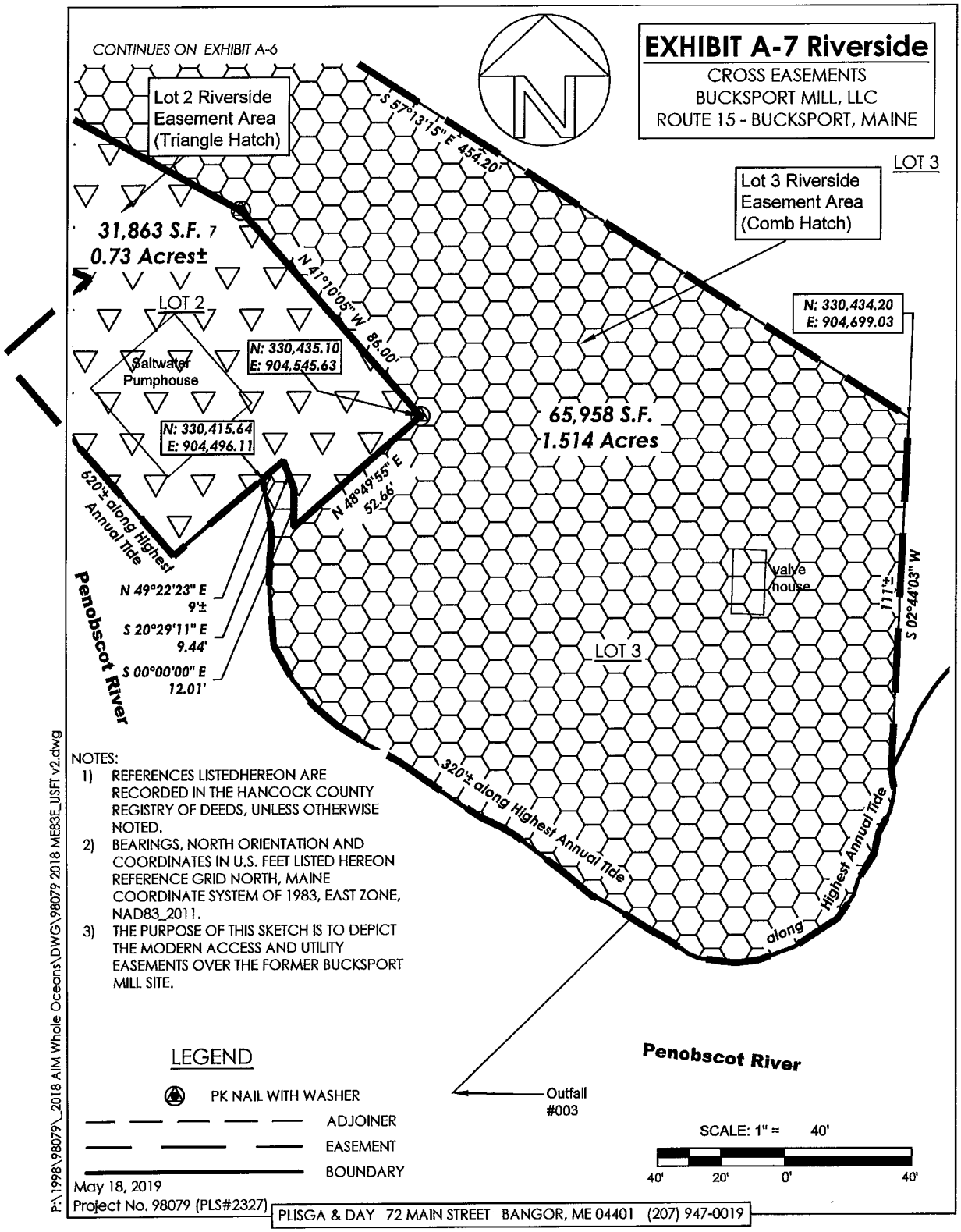

NOTES:

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2) BEARINGS, NORTH ORIENTATION AND COORDINATES IN U.S. FEET LISTED HEREON REFERENCE GRID NORTH, MAINE COORDINATE SYSTEM OF 1983, EAST ZONE, NAD83_2011.
3) THE PURPOSE OF THIS SKETCH IS TO DEPICT THE MODERN ACCESS AND UTILITY EASEMENTS OVER THE FORMER BUCKSPORT MILL SITE.

NOTES:

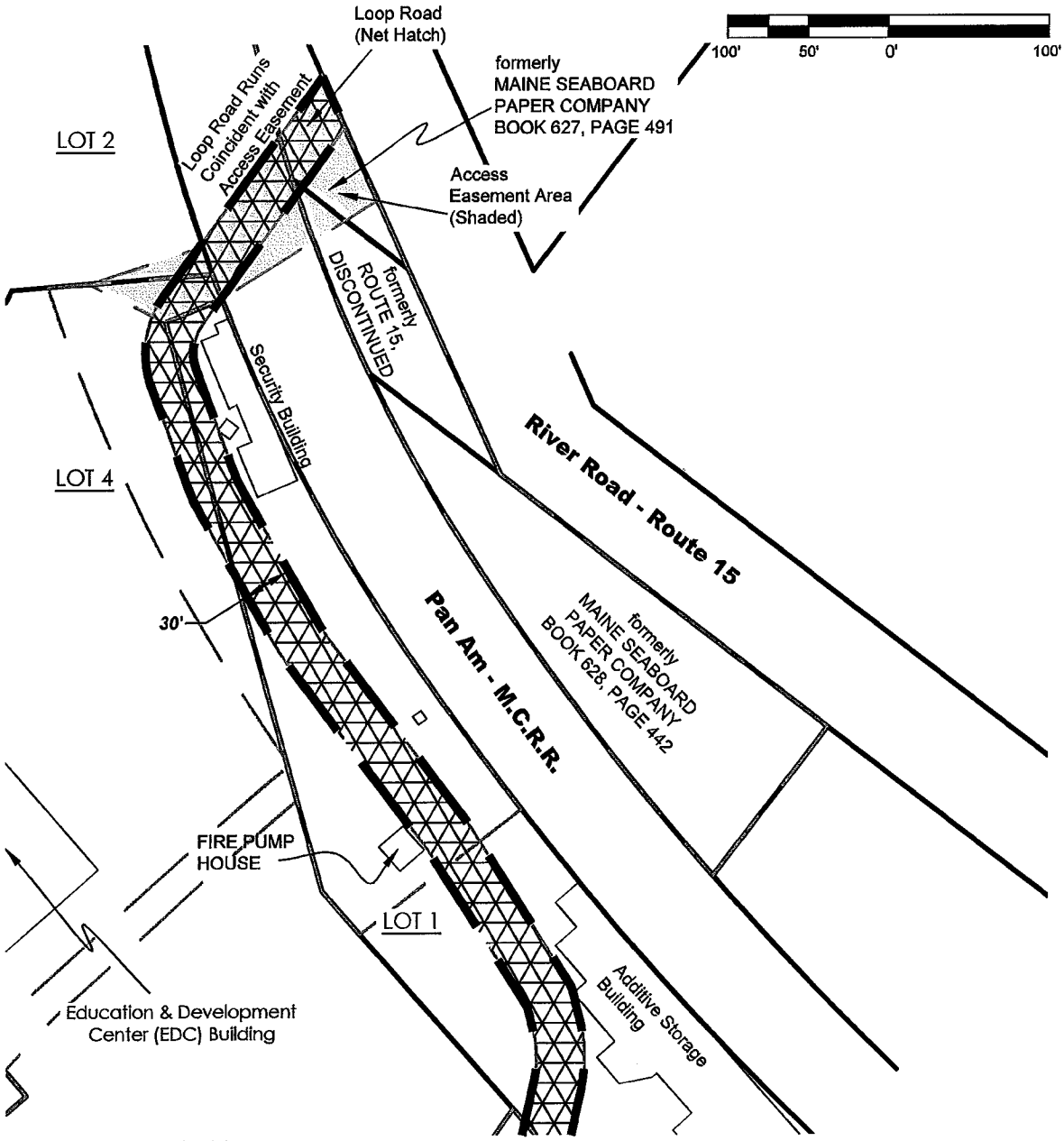
1) REFERENCES LISTEDHEREON ARE RECORDED IN THE HANCOCK COUNTY REGISTRY OF DEEDS, UNLESS OTHERWISE NOTED.
2) BEARINGS, NORTH ORIENTATION AND COORDINATES IN U.S. FEET LISTED HEREON REFERENCE GRID NORTH, MAINE COORDINATE SYSTEM OF 1983, EAST ZONE, NAD83_2011.
3) THE PURPOSE OF THIS SKETCH IS TO DEPICT THE MODERN ACCESS AND UTILITY EASEMENTS OVER THE FORMER BUCKSPORT MILL SITE.

EXHIBIT A-8
Loop Road

CROSS EASEMENTS
BUCKSPORT MILL, LLC
ROUTE 15 - BUCKSPORT, MAINE

SCALE: 1" = 100'

100' 50' 0' 100'



CONTINUES ON EXHIBIT A-9

LEGEND

ADJOINER
EASEMENT
BOUNDARY

May 18, 2019
Project No. 98079 (PLS#2327)

PLISGA & DAY 72 MAIN STREET BANGOR, ME 04401 (207) 947-0019

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NOTES:

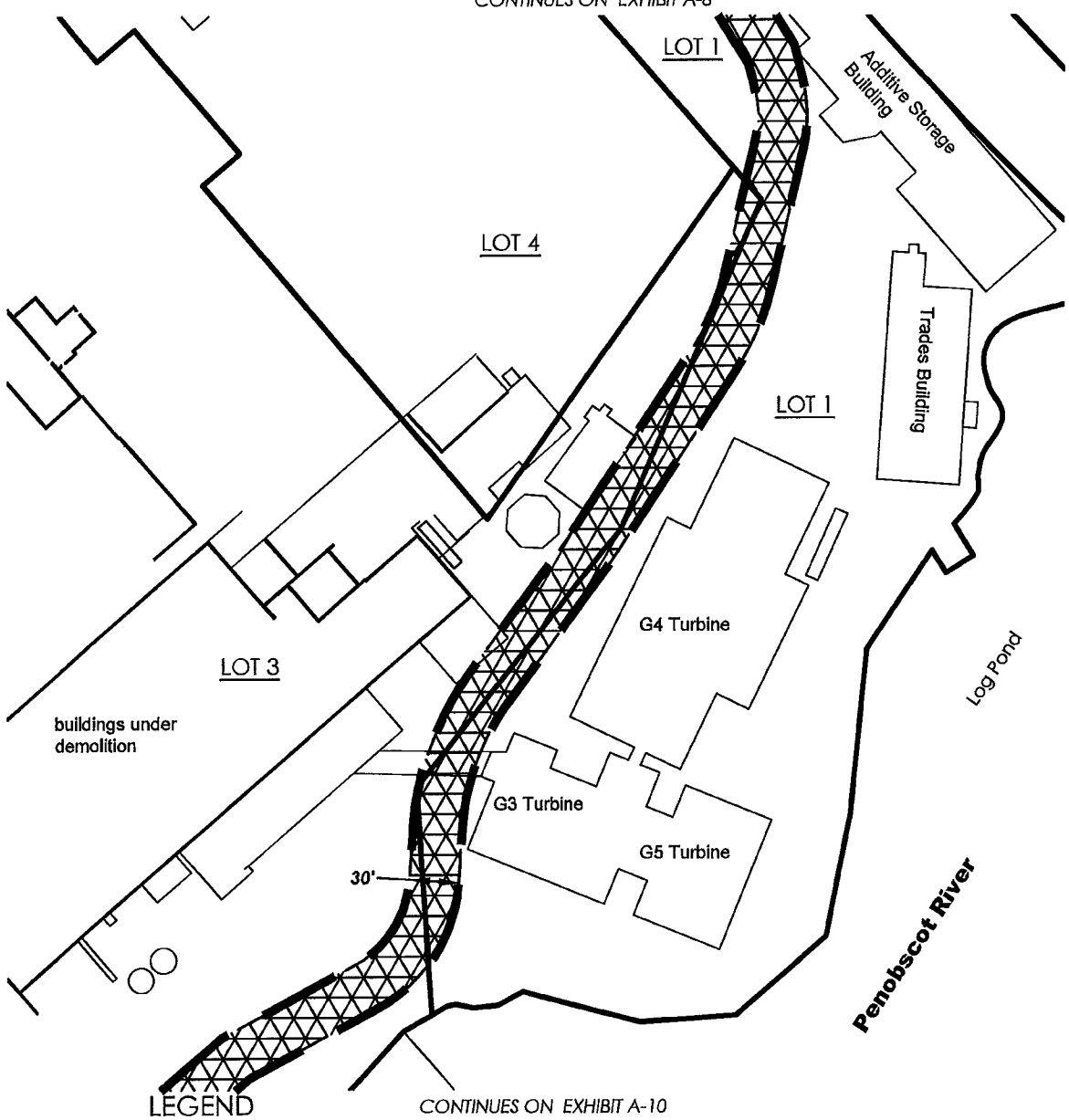
1) REFERENCES LISTEDHEREON ARE RECORDED IN THE HANCOCK COUNTY REGISTRY OF DEEDS, UNLESS OTHERWISE NOTED.
2) BEARINGS, NORTH ORIENTATION AND COORDINATES IN U.S. FEET LISTED HEREON REFERENCE GRID NORTH, MAINE COORDINATE SYSTEM OF 1983, EAST ZONE, NAD83_2011.
3) THE PURPOSE OF THIS SKETCH IS TO DEPICT THE MODERN ACCESS AND UTILITY EASEMENTS OVER THE FORMER BUCKSPORT MILL SITE.

EXHIBIT A-9
Loop Road

CROSS EASEMENTS
BUCKSPORT MILL, LLC
ROUTE 15 - BUCKSPORT, MAINE

SCALE: 1" = 100'

100' 50' 0' 100'



LEGEND

ADJOINER
EASEMENT
BOUNDARY

May 18, 2019
Project No. 98079 (PLS#2327)

PLISGA & DAY 72 MAIN STREET BANGOR, ME 04401 (207) 947-0019

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NOTES:

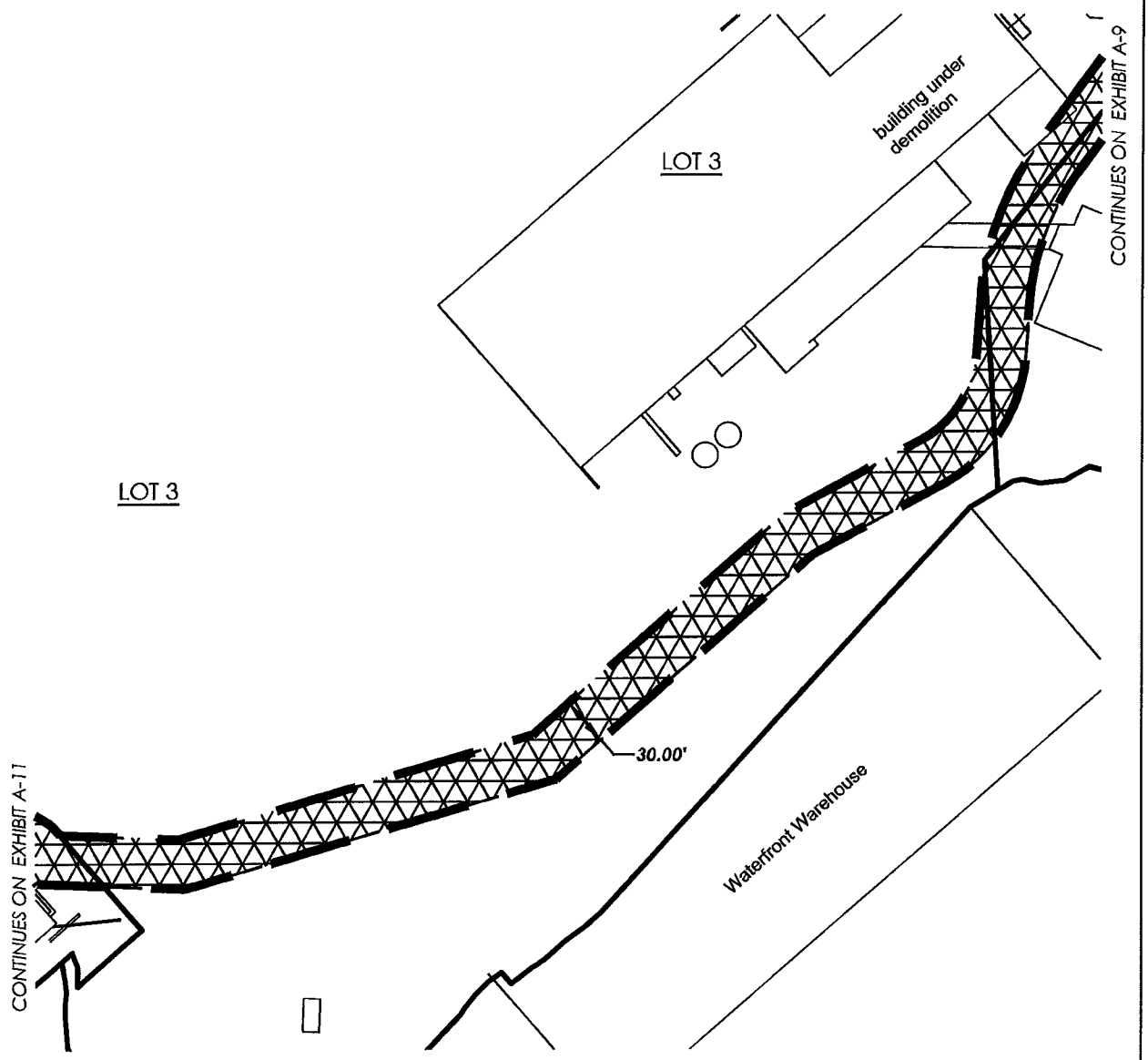
1) REFERENCES LISTEDHEREON ARE RECORDED IN THE HANCOCK COUNTY REGISTRY OF DEEDS, UNLESS OTHERWISE NOTED.
2) BEARINGS, NORTH ORIENTATION AND COORDINATES IN U.S. FEET LISTED HEREON REFERENCE GRID NORTH, MAINE COORDINATE SYSTEM OF 1983, EAST ZONE, NAD83_2011.
3) THE PURPOSE OF THIS SKETCH IS TO DEPICT THE MODERN ACCESS AND UTILITY EASEMENTS OVER THE FORMER BUCKSPORT MILL SITE.

EXHIBIT A-10
Loop Road

CROSS EASEMENTS
BUCKSPORT MILL, LLC
ROUTE 15 - BUCKSPORT, MAINE

SCALE: 1" = 100'

100' 50' 0' 100'



LEGEND

ADJOINER
EASEMENT
BOUNDARY

May 18, 2019
Project No. 98079 (PLS#2327)

PLISGA & DAY 72 MAIN STREET BANGOR, ME 04401 (207) 947-0019

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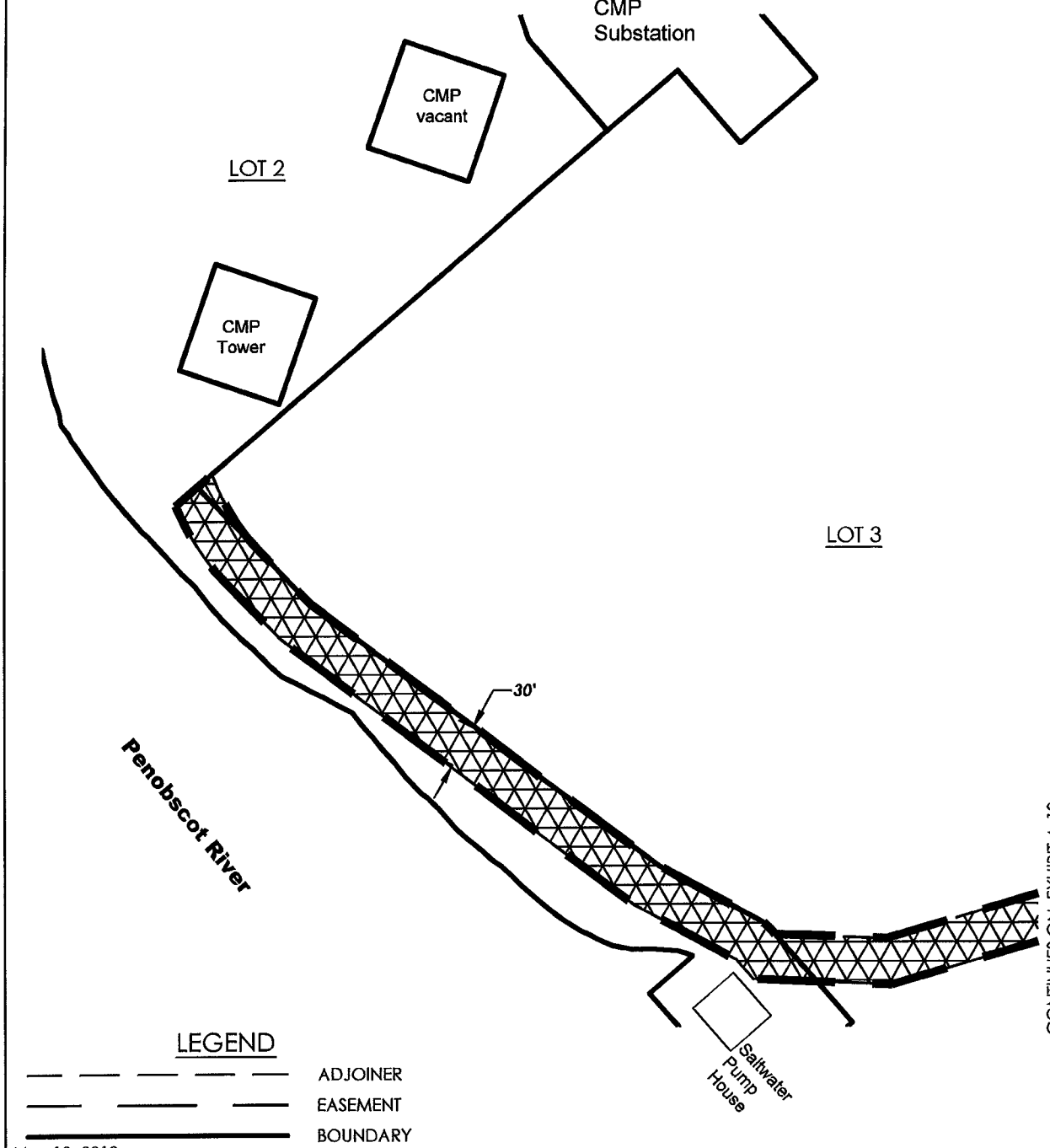
NOTES:
1) REFERENCES LISTEDHEREON ARE RECORDED IN THE HANCOCK COUNTY REGISTRY OF DEEDS, UNLESS OTHERWISE NOTED.
2) BEARINGS, NORTH ORIENTATION AND COORDINATES IN U.S. FEET LISTED HEREON REFERENCE GRID NORTH, MAINE COORDINATE SYSTEM OF 1983, EAST ZONE, NAD83_2011.
3) THE PURPOSE OF THIS SKETCH IS TO DEPICT THE MODERN ACCESS AND UTILITY EASEMENTS OVER THE FORMER BUCKSPORT MILL SITE.

EXHIBIT A-11
Loop Road
CROSS EASEMENTS
BUCKSPORT MILL, LLC
ROUTE 15 - BUCKSPORT, MAINE

SCALE: 1" = 100'

100' 50' 0' 100'



LEGEND
ADJOINER
EASEMENT
BOUNDARY

May 18, 2019
Project No. 98079 (PLS#2327)

PLISGA & DAY 72 MAIN STREET BANGOR, ME 04401 (207) 947-0019

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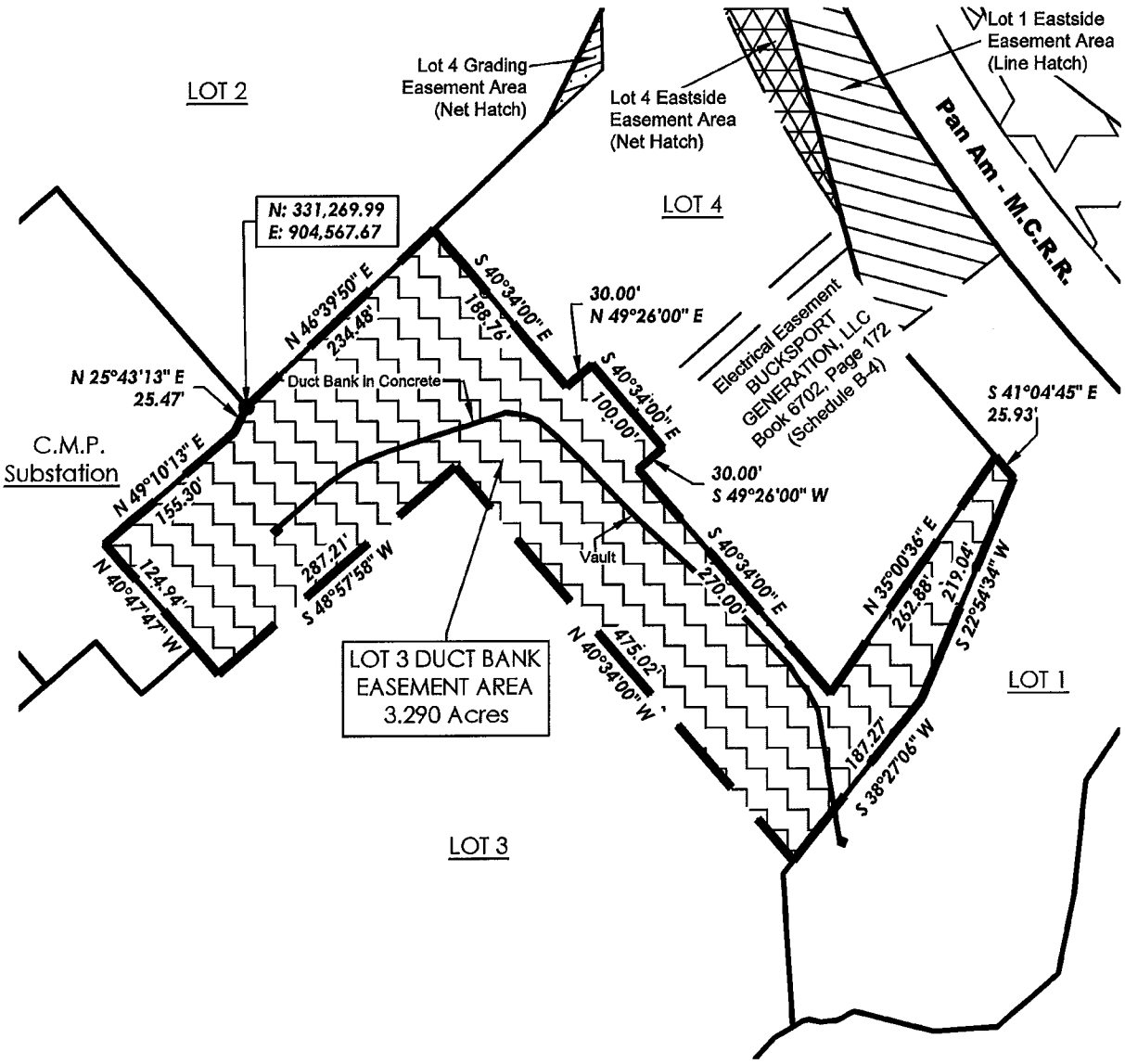
NOTES:
1) REFERENCES LISTEDHEREON ARE RECORDED IN THE HANCOCK COUNTY REGISTRY OF DEEDS, UNLESS OTHERWISE NOTED.
2) BEARINGS, NORTH ORIENTATION AND COORDINATES IN U.S. FEET LISTED HEREON REFERENCE GRID NORTH, MAINE COORDINATE SYSTEM OF 1983, EAST ZONE, NAD83_2011.
3) THE PURPOSE OF THIS SKETCH IS TO DEPICT THE MODERN ACCESS AND UTILITY EASEMENTS OVER THE FORMER BUCKSPORT MILL SITE.

EXHIBIT A-12 Duct Bank Electrical

CROSS EASEMENTS
BUCKSPORT MILL, LLC
ROUTE 15 - BUCKSPORT, MAINE

SCALE: 1" = 150'

150' 75' 0' 150'



LEGEND

ADJOINER
EASEMENT
BOUNDARY
IRON ROD SET IN 2018, CAPPED "PLS 2327"

May 18, 2019
Project No. 98079 (PLS#2327)

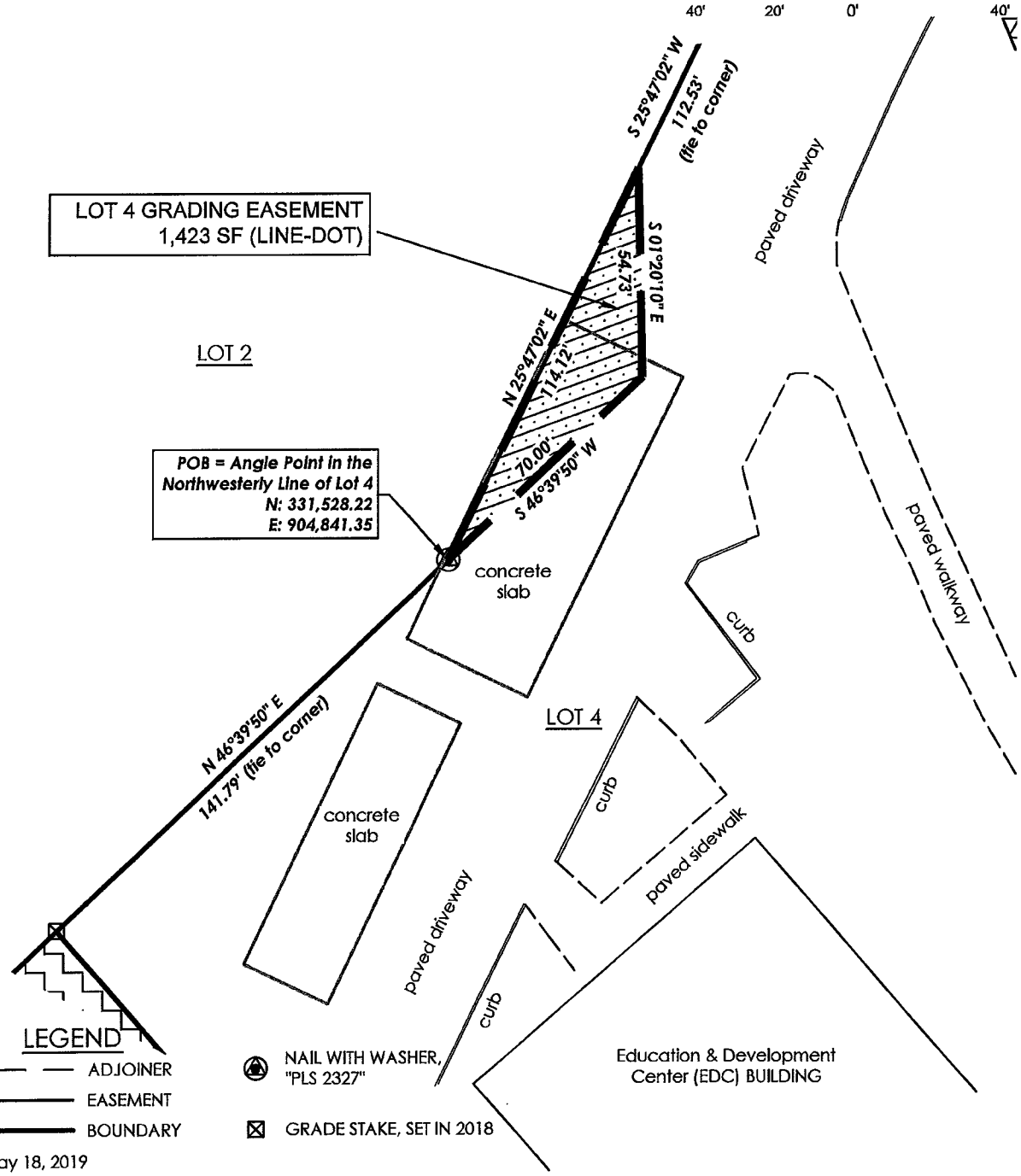
PLISGA & DAY 72 MAIN STREET BANGOR, ME 04401 (207) 947-0019

P:\1998\98079_2018 AIM Whole Oceans\DWG\98079 2018 ME83E_USFT v2.dwg

NOTES:
1) REFERENCES LISTEDHEREON ARE RECORDED IN THE HANCOCK COUNTY REGISTRY OF DEEDS, UNLESS OTHERWISE NOTED.
2) BEARINGS, NORTH ORIENTATION AND COORDINATES IN U.S. FEET LISTED HEREON REFERENCE GRID NORTH, MAINE COORDINATE SYSTEM OF 1983, EAST ZONE, NAD83_2011.
3) THE PURPOSE OF THIS SKETCH IS TO DEPICT THE MODERN ACCESS AND UTILITY EASEMENTS OVER THE FORMER BUCKSPORT MILL SITE.

EXHIBIT A-13
Grading Easement
CROSS EASEMENTS
BUCKSPORT MILL, LLC
ROUTE 15 - BUCKSPORT, MAINE

SCALE: 1" = 40'



May 18, 2019
Project No. 98079 (PLS#2327)

PLISGA & DAY 72 MAIN STREET BANGOR, ME 04401 (207) 947-0019

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EXHIBIT B

REDUCED COPY OF AMENDED SUBDIVISION PLAN

(A reduced copy of the Subdivision Plan is attached hereto for the convenience of the reader. Reference should be made to the full sized copy of the Subdivision Plan recorded in the Hancock County Registry of Deeds)

GRID NORTH
MAINE COORDINATE SYSTEM OF 1983 (EAST ZONE) (1802)
NAD83 (1997 CORRECTION)

PENOBSCOT RIVER

TIDAL FLOW

LOT 2
59.3 acres±

LOT 4
3.907 acres

LOT 1
BUCKSPORT GENERATION, LLC
BOOK 6702, PAGE 172
3.9 acres±

LOT 3
BUCKSPORT MILL, LLC
14.2 acres±

DETAIL
EASEMENT #3
2,149 S.F.
0.049 Acres
1"=50'

SCALE:
1"= 100'

LOT AREA TABLE*

Lot #	Gross Area (acres)	S.F.R** (acres)
1	3.9±	1.6±
2	59.3±	50.5±
3	14.2±	8.8±
4	3.907	3.199
TOTAL	111.3±	71.09±

* PER Backport Land Use LAND MINIMUM LOT AREA – 20,000 = 43,560 SF PER PERSONAL SOURCE
** PER Backport Subdivision Ordinance Appendix C (1-20-2010)

PLANNING BOARD APPROVAL

THE TOWN OF BUCKSPORT PLANNING BOARD HAS CONDUCTED A REVIEW OF THIS SUBDIVISION PLAT AND FOUND IT AND SUPPORTING DOCUMENTS ON FILE IN THE BUCKSPORT TOWN OFFICE TO BE IN COMPLIANCE WITH THE APPLICABLE PROVISIONS OF THE BUCKSPORT TOWN CODE, APPENDIX C, SUBDIVISION ORDINANCE AND TITLE 30-A M.R.S.A. (-449), ET SEQ. THE PLANNING BOARD HEREBY APPROVES THIS PLAT AND UPON RECORDING OF THE APPROVED PLAT AT THE HANCOCK COUNTY REGISTRY OF DEEDS, THE CONSTRUCTION IMPROVEMENTS AND THE CONVEYANCE OF LOTS AS SHOWN MAY COMMENCE, SUBJECT TO ANY CONDITIONS STATED ON THE APPROVED PLAT. NO BUILDINGS MAY BE CONSTRUCTED OR INSTALLED IN THIS SUBDIVISION BEFORE ALL THE PERMITS HAVE BEEN ISSUED. THIS APPROVAL IS SUBJECT TO RECEIPT BY THE TOWN OF BUCKSPORT OF THE CROSS EASEMENT AGREEMENT CONCERNING ACCESS TO THE LOTS.

ADDITIONAL CONDITIONS (IF ANY)

DATED: 4-2-2019

THE TOWN OF BUCKSPORT PLANNING BOARD

SURVEY STANDARD

THIS PLAN WAS PREPARED FROM INFORMATION DERIVED FROM A SURVEY PERFORMED PURSUANT TO THE REQUIREMENTS OF TECHNICAL STANDARDS CONTAINED IN CHAPTER 10, PART 2, OF THE RULES OF THE BOARD OF LICENSING FOR PROFESSIONAL LAND SURVEYORS, EFFECTIVE APRIL 1, 2001.

JONATHAN M. STEWART
NO. 2357
JONATHAN M. STEWART, MAINE LICENSED PROFESSIONAL LAND SURVEYOR No. 2357

GRID DISTANCES LISTED HEREON, PROJECT SCALE FACTOR IN SUBDIVISION GROUND TO GRID
CONTOUR INTERVAL = 2 FEET (MAINE)

HANCOCK SS. REGISTRY OF DEEDS
RECEIVED April 8, 2019
AT 12 H 32 M. AND RECORDED
INSTRUMENT NO. 09
FILE No. 11
ATTEST Judith A. Curtis
REGISTER

Zoning Dimensions (ID/IDO)

Code	Item	Required	Existing	Notes
14.3.2	Minimum Street Frontage	100 Feet	2000 Feet	Access over RR tracks
14.3.3	Minimum Shoreline Frontage	200 Feet	Lot 1: 779 Feet; Lot 2: 7,340 Feet; Lot 3: 600 Feet; Lot 4: 0 Feet	Highest Annual Tide level is more conservative than natural high water line.
14.3.4	Minimum Front Setback	50 Feet	Lot 1: 13.0 Feet;	Security building
14.3.5	Minimum Side Setback	50 Feet	Lot 1: 0 Feet;	Additions Storage to be removed
14.3.6	Minimum Rear Setback	50 Feet	Lot 1: 36.43 Feet;	Solar building
14.3.7	Minimum Shoreline Setback	25 Feet (IDO)	Lot 1: 8.88 Feet; Lot 2: 0 Feet; Lot 3: 0 Feet; Lot 4: N/A	Gas Warehouse and Pumphouse that exist over the shoreline. Main Mass are Accessory Structure, as Principal is white. *Pile removal of Additions Storage
14.3.8	Maximum Lot Coverage	80%	Lot 1: 78,204 ft.; Lot 2: 2,625; Lot 3: 1034; Lot 4: 1505	
14.3.9	Maximum Height	100 Feet	Smoke Stack, exceed 200 Feet	No Principal Structure Exceeds

NOTES

1) DOCUMENTS REFERENCED ON THIS PLAN ARE RECORDED IN THE HANCOCK COUNTY REGISTRY OF DEEDS, UNLESS OTHERWISE NOTED.

2) BEARINGS AND NORTH ORIENTATION REFERENCE GRID NORTH, MAINE COORDINATE SYSTEM OF 1983, EAST ZONE, [NAD83(2011) (2010.00)]. COORDINATES AND DISTANCES ARE LISTED IN UNITS OF U.S. SURVEY FEET. COORDINATES LISTED AS AN AID IN LOCATION AND DO NOT SUPERSEDE THE PHYSICAL LOCATION OF THE MONUMENT.

3) EXISTING SITE IS THE FORMER BUCKSPORT PAPER MILL SITE. THIS PLAN REPRESENTS A COLLECTION OF FIELD DATA AND DIGITALLY MAPPED FEATURES THAT WERE DRAFTED BY AERIAL SURVEY & PHOTO, INC. USING PHOTOGRAMMETRIC METHODS 3/1994. PORTIONS OF THE SUBJECT PREMISES FEATURE MAPPING CONTAINS OF THE 2010 BOUNDARY LINES HAVE BEEN MONUMENTED AS NOTED. SIGNIFICANT FEATURES SUCH AS BUILDINGS NEAR THE BUCKSPORT GENERATION SITE WERE MAPPED ON THE GROUND BY PLISGA & DAY IN 2018 FOR THE CREATION OF LOT 1.

4) WATER LINE SHOWN IS THE HIGHEST ANNUAL TIDE LINE OF 7.0 FEET (NAVD88) AS PREDICTED BY THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION IN THEIR 2017 PREDICTION TABLE. "HAT" LINE COMPUTED FROM 2010 LIDAR DERIVED CONTOUR DATA.

5) PENOBSCOT RIVER IS TIDAL AND NAVIGABLE, UNLESS OTHERWISE NOTED. PROPERTY BOUNDARIES EXTEND FROM BOXLINES SHOWN HEREON TO THE LOW WATER LINE.

6) 2' CONTOURS SHOWN WERE DERIVED FROM 2010 LIDAR MAPPING OF THE COAST OF MAINE. THE DERIVED CONTOURS WERE OBTAINED FROM THE MAINE OFFICE OF GIS DATA CATALOG. CONTOURS ARE PROVIDED FOR PLANNING PURPOSES. WHERE BOXLINES AND FEATURES HAVE BEEN REMOVED ON THE MILL SITE, ANY ENGINEERING OR DESIGN SHOULD BE BASED ON UPDATED GROUND MAPPING.

7) UTILITIES SHOWN BASED ON GROUND LOCATION OF SUBSURFACE TRACING MARKS AND ADDITIONALLY FROM MILL ENGINEERING PLANS. PRIOR TO ANY GRADING OR DIGGING, CALL 1-888-344-7233 AND LOCAL UTILITY PROVIDERS.

8) SUBJECT PREMISES FALLS IN THE FOLLOWING ZONES: INDUSTRY DEVELOPMENT (ID) AND INDUSTRY DEVELOPMENT SHORELAND OVERLAY (IDO). SEND THE 300' STRIP ALONG THE RIVER. SUBJECT PREMISES IS APPROXIMATELY DEPICTED ON BUCKSPORT ASSESSOR TAX MAP 1 AS LOT 10.

9) SUBJECT PREMISES IS A PORTION OF LANDS DESCRIBED IN A DEED TO BUCKSPORT MILL LLC (FORMERLY KNOWN AS VCRSO BUCKSPORT LLC AND FORMERLY KNOWN AS GAP BUCKSPORT LLC), DATED 2008, RECORDED IN THE HANCOCK COUNTY REGISTRY OF DEEDS BOOK 6702, PAGE 145 AND BOOK 4594, PAGE 34. PORTIONS OF SUBJECT PREMISES ARE SUBJECT TO EASEMENTS DESCRIBED IN BOOK 5793, PAGE 172 (NOT SHOWN HEREON).

10) COUNTY ROAD DISCONTINUED (NOT SHOWN OVER LOT 2). SEE PLANBOOK 17, PAGES 43-44 DRAFTED BY MAINE DEPARTMENT OF TRANSPORTATION FOR ADDITIONAL DETAILS.

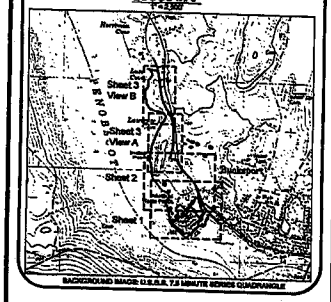
11) FUTURE DIVISION OF SUBJECT PREMISES OR SUBSEQUENT LOTS ARE SUBJECT TO CONDITIONS PLACED ON THE ORIGINAL APPROVAL.

NOTES CONTINUED ON SHEET 2 OF 3; SEE AMENDED MAPFILE 45, NO. 86 AND MAPFILE 45, NOS. 28, 30, & 31

LEGEND

SEE SHEET 2 OF 3 (MAPFILE 45, NO. 86)

LOCUS MAP



BACKGROUND IMAGE: U.S.G.S. 7.5 MINUTE SERIES QUADRANGLE

AMENDED MAPFILE 45, NO. 86
AMENDED MAPFILE 45, NOS. 28, 30, & 31

AMENDED SUBDIVISION PLAN

FOR

BUCKSPORT MILL, LLC
BUCKSPORT GENERATION, LLC
2 RIVER ROAD–BUCKSPORT
HANCOCK COUNTY, MAINE

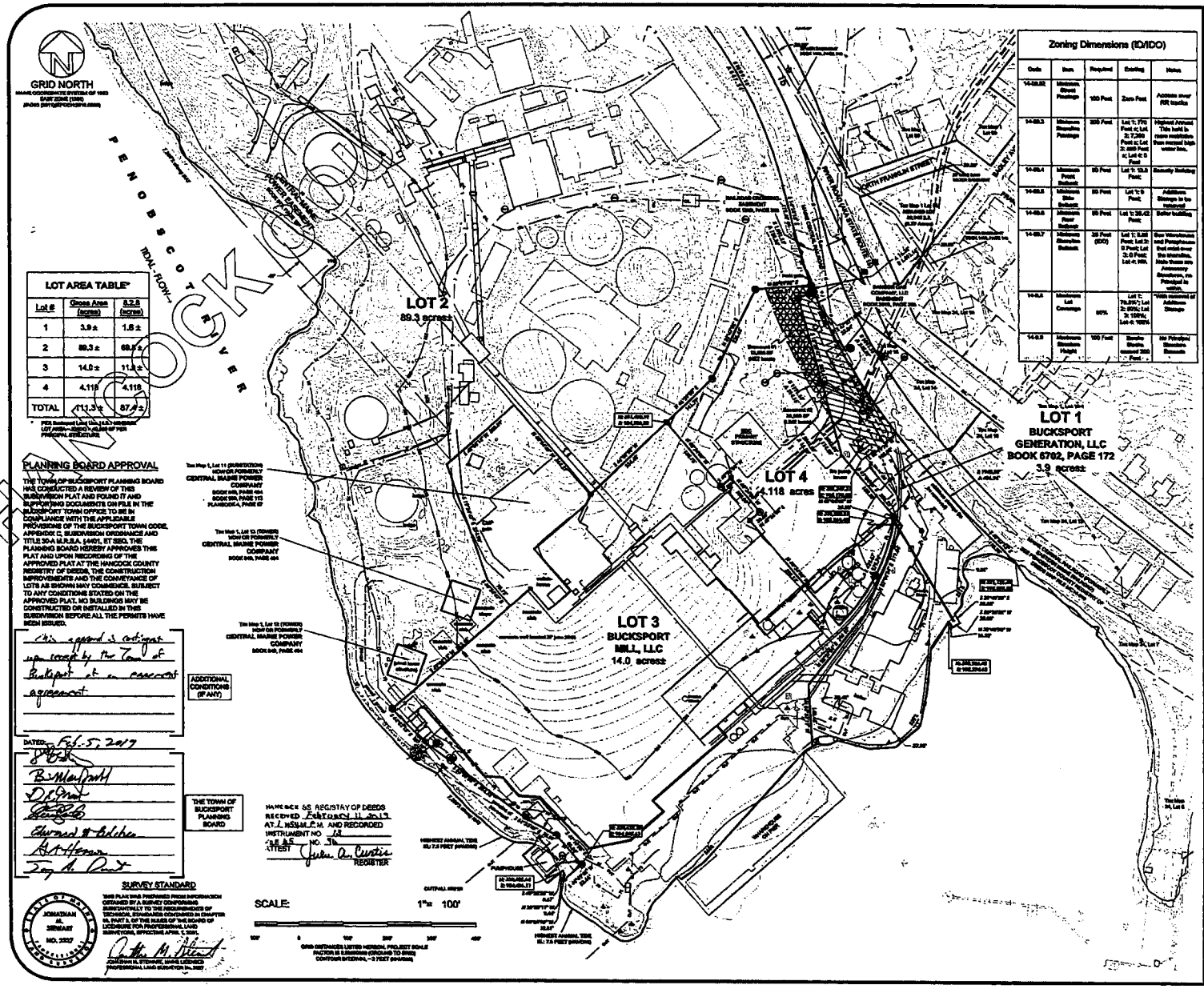
RECORD OWNER/APPLICANT:
BUCKSPORT MILL, LLC
2 RIVER ROAD
BUCKSPORT, ME 04416

PLISGA & DAY
LAND SURVEYORS
73 MAIN STREET
BANGOR, ME 04401
(207) 947-0019
www.WeMapit.com

DRAWING: 09079
DATE: March 19, 2019
SCALE: 1" = 100'
SHEET: 1 OF 3*

*Sheet 1 zoomed in shows LOT 4, showing shed on Backport Mill, LLC. This Sheet 1 supersedes boundary lines shown on Sheets 2, 3 and 3 as previously recorded (Sheets 45, Nos. 28, 30, & 31). PROPRIETARY, 2019 JAM Whole Consultants 2019 AMENDED LOT 10.dwg

Book: OR 6951 Page: 662 Instrument #: 2019005790



LOT AREA TABLE*

Lot #	Gross Area (acres)	3.2.8 (acres)
1	3.9±	1.8±
2	89.3±	69.5±
3	14.0±	11.3±
4	4.118	4.118
TOTAL	111.3±	87.4±

* PER Subdivision Lots 1&2, 3.2.8 = minimum lot area—approx. 40,000 SF per principal structure.

Zoning Dimensions (ID/IDO)

Code	Item	Required	Existing	Notes
14-68.02	Minimum Street Frontage	100 Feet	Zero Feet	Access over ROW/Easements
14-68.3	Minimum Shoreline Frontage	200 Feet	Lot 1: 770 Feet +; Lot 2: 7,200 Feet +; Lot 3: 800 Feet +; Lot 4: 0 Feet	Highest Annual Tide Mark is more restrictive than normal high water line.
14-68.4	Minimum Front Setback	50 Feet	Lot 1: 0 Feet	Existing Building
14-68.5	Minimum Side Setback	50 Feet	Lot 1: 0 Feet	Additions Siting to be Approved
14-68.6	Minimum Rear Setback	50 Feet	Lot 1: 30.42 Feet	Sulfur building
14-68.7	Minimum Shoreline Setback	30 Feet (IDO)	Lot 1: 0.00 Feet; Lot 2: 0 Feet; Lot 3: 0 Feet; Lot 4: 100	Raw Warehouse and Pentaphosphate Building are over the shoreline. Note these are Accessory Structures, no Principal is within.
14-68.8	Maximum Lot Coverage	50%	Lot 1: 75.05%; Lot 2: 50%; Lot 3: 100%; Lot 4: 100%	*Only Contained of Additional Storage
14-68.9	Maximum Structure Height	100 Feet	Smoke Stack: Removed 2005 Feet	No Principal Structure Remains

NOTES

1) DOCUMENTS REFERENCED ON THIS PLAN ARE RECORDED IN THE HANCOCK COUNTY REGISTRY OF DEEDS, UNLESS OTHERWISE NOTED.

2) BEARINGS AND NORTH ORIENTATION REFERENCE GRID NORTH, MAINE COORDINATE SYSTEM OF 1983, EAST ZONE, (NAD83(2011)(2012)(EPS)). COORDINATES AND DISTANCES ARE LISTED IN UNITS OF U.S. SURVEY FEET. COORDINATES LISTED AS AN AID IN LOCATION AND DO NOT SUPERSEDE THE PHYSICAL LOCATION OF THE MONUMENT.

3) EXISTING SITE IS THE FORMER BUCKSPORT PAPER MILL SITE. THIS PLAN REPRESENTS A COLLECTION OF FIELD DATA AND DIGITALLY MAPPED FEATURES THAT WERE DRAFTED BY AERIAL SURVEY & PHOTO, INC. USING PHOTOGRAMMETRIC METHODS IN 2014. PORTIONS OF THE SUBJECT PREMISES INFRASTRUCTURE HAS BEEN DEMOLISHED AND REMOVED SINCE THE INITIAL FEATURE MAPPING. CORNERS OF THE 1970 BOUNDARY LINES HAVE BEEN MONUMENTED AS NOTED. SIGNIFICANT FEATURES SUCH AS BUILDINGS NEAR THE BUCKSPORT GENERATION SITE WERE MAPPED ON THE GROUND BY PLISGA & DAY IN 2016 FOR THE CREATION OF LOT 1.

4) WATER LINE SHOWN IS THE HIGHEST ANNUAL TIDE LINE OF 7.0 FEET (NAVD88) AS PREDICTED BY THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION IN THEIR 2017 PREDICTION TABLE. "HAT" LINE COMPUTED FROM 2010 LIDAR DERIVED CONTOUR DATA.

5) PENOBSCOT RIVER IS TIDAL AND NAVIGABLE, UNLESS OTHERWISE NOTED. PROPERTY BOUNDARIES EXTEND FROM SIDELINES SHOWN HEREON TO THE LOW WATER LINE.

6) 2' CONTOURS SHOWN WERE DERIVED FROM 2010 LIDAR MAPPING OF THE COAST OF MAINE. THE DERIVED CONTOURS WERE OBTAINED FROM THE MAINE OFFICE OF GIS DATA CATALOG. CONTOURS ARE PROVIDED FOR PLANNING PURPOSES. WHERE SOME BUILDINGS AND FEATURES HAVE BEEN REMOVED ON THE MILL SITE, ANY ENGINEERING OR DESIGN SHOULD BE BASED ON UPDATED GROUND MAPPING.

7) UTILITIES SHOWN BASED ON GROUND LOCATION OF SUBSURFACE TRACING MARKS AND ADDITIONALLY FROM MILL ENGINEERING PLANS. PRIOR TO ANY GRADING OR DIGGING, CALL 1-888-DIG-SAFE AND LOCAL UTILITY PROVIDERS.

8) SUBJECT PREMISES FALLS IN THE FOLLOWING ZONES: INDUSTRY DEVELOPMENT (ID) AND INDUSTRY DEVELOPMENT SHORELAND OVERLAY (IDO), WEND THE 200' STRIP ALONG THE RIVER. SUBJECT PREMISES IS APPROXIMATELY DEPICTED ON BUCKSPORT ASSESSOR TAX MAP 1 AS LOT 16.

9) SUBJECT PREMISES IS A PORTION OF LANDS DESCRIBED IN A DEED TO BUCKSPORT MILL LLC (FORMERLY KNOWN AS VERSO BUCKSPORT LLC AND FORMERLY KNOWN AS CMP BUCKSPORT LLC), DATED 2008, RECORDED IN THE HANCOCK COUNTY REGISTRY OF DEEDS BOOK 4884, PAGE 146 AND BOOK 4886, PAGE 36. PORTIONS OF SUBJECT PREMISES ARE SUBJECT TO EASEMENTS DESCRIBED IN BOOK 5765, PAGE 172 (NOT SHOWN HEREON).

10) COUNTY ROAD DISCONTINUED (NOT SHOWN OVER LOT 3, SEE PLANBOOK 17, PAGES 63-64 DRAFTED BY MAINE DEPARTMENT OF TRANSPORTATION FOR ADDITIONAL DETAILS.

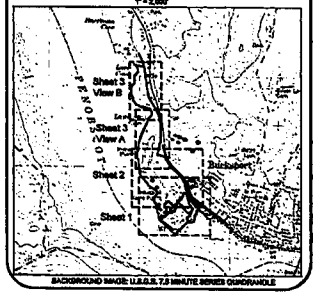
11) FUTURE DIVISION OF SUBJECT PREMISES OR SUBSEQUENT LOTS ARE SUBJECT TO CONDITIONS PLACED ON THE ORIGINAL APPROVAL.

NOTES CONTINUED ON SHEET 3 OF 3

LEGEND

SEE SHEET 3 OF 3

LOCUS MAP



BACKGROUND IMAGE: U.S.G.S. 7.5 MINUTE SERIES QUADRANGLE

AMENDED MAPPLE 48, NO. 29

SUBDIVISION PLAN

SHOWING LANDS

BUCKSPORT MILL, LLC
BUCKSPORT GENERATION, LLC

2 RIVER ROAD—BUCKSPORT
HANCOCK COUNTY, MAINE

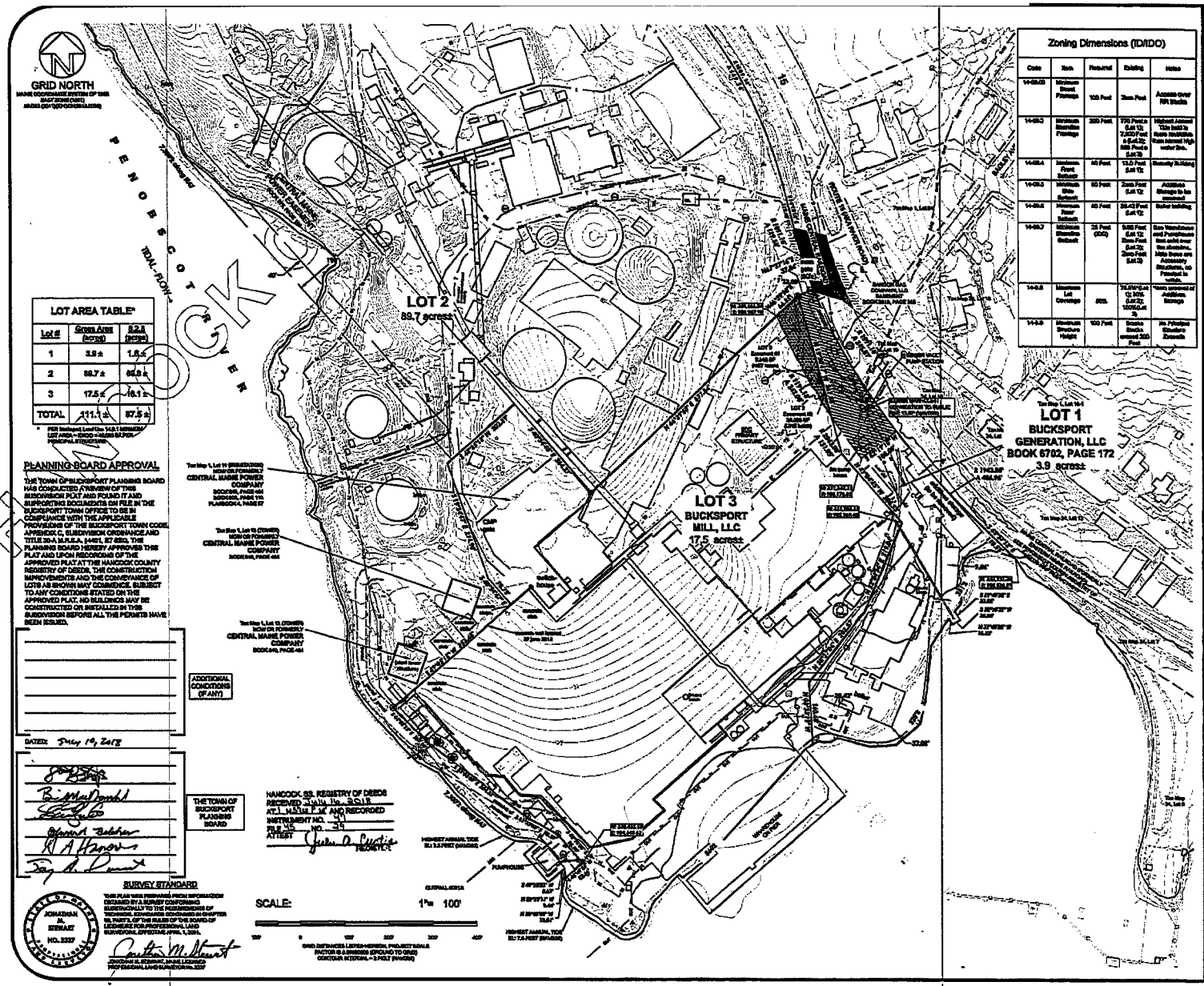
RECORD OWNER/APPLICANT:
BUCKSPORT MILL, LLC
ATTN: JEFF MCGUIN, AM DEVELOPMENT
2 RIVER ROAD
BUCKSPORT, ME 04416

PLISGA & DAY
LAND SURVEYORS
72 MAIN STREET
BANGOR, ME 04401
(207) 947-0019
www.WeMapIt.com

DRAWING:	SHEET:
66079	1
DATE: December 28, 2016	OF 3*
SCALE: 1" = 100'	

*Sheet 1 was drafted for the purpose of dividing LOT 4 and creating Lot 2 exclusive to Debtor. Sheet 1 provides boundary lines shown on Sheet 2 and 3 as previously recorded.

P:\66079\66079_2016 AM Mills Closure\CMB\66079 2016 MDEP_DEP7 v2.dwg



LOT AREA TABLE*		
Lot #	Gross Area (acres)	S.Z.3 (acres)
1	3.9 ±	1.5 ±
2	89.7 ±	80.3 ±
3	17.5 ±	16.1 ±
TOTAL	111.1 ±	97.9 ±

* PER Bucksport Land Use Ord. 14-3.1 MINIMUM LOT AREA – 20,000 + 10,000 SF PER PRINCIPAL STRUCTURE

PLANNING BOARD APPROVAL

THE TOWN OF BUCKSPORT PLANNING BOARD HAS CONDUCTED A REVIEW OF THIS SUBDIVISION PLAN AND FOUND IT AND SUPPORTING DOCUMENTS ON FILE IN THE BUCKSPORT TOWN OFFICE TO BE IN COMPLIANCE WITH THE APPLICABLE PROVISIONS OF THE BUCKSPORT TOWN CODE, APPENDIX C, SUBDIVISION ORDINANCE AND TITLE 30-A M.R.S.A. §4401, ET SEQ. THE PLANNING BOARD HEREBY APPROVES THIS PLAT AND UPON RECORDING OF THE APPROVED PLAT AT THE HANCOCK COUNTY REGISTRY OF DEEDS, THE CONSTRUCTION IMPROVEMENTS AND THE CONVEYANCE OF LOTS AS SHOWN MAY COMMENCE, SUBJECT TO ANY CONDITIONS STATED ON THE APPROVED PLAT. NO BUILDINGS MAY BE CONSTRUCTED OR INSTALLED IN THIS SUBDIVISION BEFORE ALL THE PERMITS HAVE BEEN ISSUED.

ADDITIONAL CONDITIONS (IF ANY)

DATE: July 10, 2018

THE TOWN OF BUCKSPORT PLANNING BOARD

HANCOCK, SS. REGISTRY OF DEEDS
RECEIVED July 16, 2018
AT 1:00 P.M. & 1 M. AND RECORDED
IN PLAN BOOK NO. 41
FILE NO. 39
ATTEST Julie A. Curtis
REGISTER

SURVEY STANDARD

THIS PLAN WAS PREPARED FROM INFORMATION OBTAINED BY A SURVEY CONFORMING SUBSTANTIALLY TO THE REQUIREMENTS OF "MINIMUM STANDARDS" CONTAINED IN CHAPTER 90, PART 3, OF THE RULES OF THE BOARD OF LICENSURE FOR PROFESSIONAL LAND SURVEYORS, EFFECTIVE APRIL 1, 2015.

JONATHAN M. STEWART NO. 2327

JONATHAN M. STEWART, MAINE LICENSED PROFESSIONAL LAND SURVEYOR, 2327

Zoning Dimensions (ID/IDO)

Code	Item	Required	Existing	Notes
14-3A.2	Minimum Road Frontage	100 Feet	3xxx Feet	Access over RR tracks
14-3A.3	Minimum Shoreline Frontage	200 Feet	770 Feet in (Lot 1); 7,530+/ feet in (Lot 2); 985 Feet in (Lot 3)	Highest Annual Tide Mark is from Hancock Main Island High water line.
14-3A.4	Minimum Front Setback	40 Feet	13.0 Feet (Lot 1)	Nonconf. To Zoning
14-3A.5	Minimum Side Setback	40 Feet	2xxx Feet (Lot 1)	Accessory Storage to be removed
14-3A.6	Minimum Rear Setback	40 Feet	28.4± Feet (Lot 1)	Boiler building
14-3A.7	Minimum Shoreline Setback	25 Feet (IDO)	5.85 Feet (Lot 1); 8xxx Feet (Lot 2); 3xxx Feet (Lot 3)	Gas Transfomer and Pumphouse lies within over the shoreline. Main Dams are Accessory Structures, no Permit in write.
14-3A.8	Maximum Lot Coverage	50%	75.5%(Lot 1); 2.8% (Lot 2); 10.5% Lot 3)	Needs variance of Zoning Bylaws
14-3A.9	Maximum Structure Height	100 Feet	Stacks Stacks around 300 Feet	No Principal Structure Stacks

NOTES

1) DOCUMENTS REFERENCED ON THIS PLAN ARE RECORDED IN THE HANCOCK COUNTY REGISTRY OF DEEDS, UNLESS OTHERWISE NOTED.

2) BEARINGS AND NORTH ORIENTATION REFERENCE GRID NORTH, MAINE COORDINATE SYSTEM OF 1983, EAST ZONE, (NAD83(CORS96)). COORDINATES AND DISTANCES ARE LISTED IN UNITS OF U.S. SURVEY FEET. COORDINATES LISTED AS AN AID IN LOCATION AND DO NOT SUPERCEDE THE PHYSICAL LOCATION OF THE MONUMENT.

3) EXISTING SITE IS THE FORMER BUCKSPORT PAPER MILL SITE. THIS PLAN REPRESENTS A COLLECTION OF FIELD DATA, MOSTLY DIGITALLY MAPPED FEATURES WERE DRAFTED BY AERIAL SURVEY & PHOTO OF NEWENGINEERING USING AERIAL PHOTOGRAMMETRIC METHODS 1/2004. PORTIONS OF THE SUBJECT PREMISES INFRASTRUCTURE HAS BEEN DEMOLISHED AND REMOVED IN SINCE THE INITIAL FEATURE MAPPING. SOMEPART OF THE SUB BOUNDARY LINES HAVE BEEN NONCUMBERTED AS NOTED. SOMEPART FIXTURES SUCH AS BUILDINGS NEAR THE BUCKSPORT GENERATION SITE WERE MAPPED ON THE GROUND BY PLISGA & DAY IN 2018 FOR THE DIVISION OF LOT 1.

4) WATER LINE SHOWN IS THE HIGHEST ANNUAL TIDE LINE OF 12.8 FEET (NAVD88) AS PREDICTED BY THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION IN "DEP 2017 PREDICTION TABLE. "HIT" LINE COMPUTED FROM 2018 LIDAR DERIVED CONTOUR DATA. THIS ELEVATION IS 12.8 FEET (NAVD88).

5) MINCHECOT RIVER IS TIDAL AND NAVIGABLE, UNLESS OTHERWISE NOTED, PROPERTY BOUNDARIES EXTEND FROM EXCLUDED SHOWN HORIZON TO THE LOW WATER LINE.

6) 2' CONTOURS SHOWN WERE DERIVED FROM 2018 LIDAR MAPPING OF THE COAST OF MAINE. THE DERIVED CONTOURS WERE OBTAINED FROM THE MAINE OFFICE OF GIS DATA CATALOG. CONTOURS ARE PROVIDED FOR PLANNING PURPOSES. WHERE SOME BUILDINGS AND FEATURES HAVE BEEN REMOVED ON "THE MILL SITE, ANY ENGINEERING OR DESIGN SHOULD BE BASED ON UPDATED GROUND MAPPING.

7) UTILITIES SHOWN BASED ON GROUND LOCATION OF SUBSURFACE TRACING MARKS AND ADDITIONALLY FROM MILL ENGINEERING PLANS. PRIOR TO ANY GROUND OR DIGGING CALL 1-888-DIG-SAFE FOR LOCAL UTILITY PROVIDERS.

8) SUBJECT PREMISES FALLS IN FOLLOWING ZONES: INDUSTRY DEVELOPMENT (ID) AND INDUSTRY DEVELOPMENT SHORELAND OVERLAY (IDO). BEING THE 200' STRIP ALONG THE RIVER. SUBJECT PREMISES IS APPROXIMATELY DEPICTED ON BUCKSPORT TAX MAP 1 LOT 1.

9) SUBJECT PREMISES IS A PORTION OF LANDS DESCRIBED IN A DEED TO BUCKSPORT MILL LLC (FORMERLY KNOWN AS VERSO BUCKSPORT LLC AND FORMERLY KNOWN AS CMP WOODFORD CO.) DATED 1988, RECORDED IN THE HANCOCK COUNTY REGISTRY OF DEEDS IN BOOK 1486, PAGE 144 AND BOOK 4888, PAGE 98. PORTIONS OF SUBJECT PREMISES ARE SUBJECT TO EASEMENTS DESCRIBED IN BOOK 2052, PAGE 122 (NOT SHOWN HEREON)

10) COUNTY ROAD DISCONTINUED (NOT LYING OVER LOT 2, SEE PLANBOOK 17, PAGES 63-64 DRAFTED BY MAINE DEPAR. "VIEW OF TRANSPORTATION FOR ADDITIONAL DETAILS.

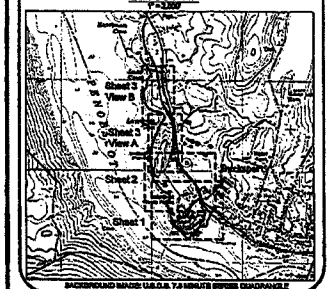
11) FUTURE DIVISION OF SUBJECT PREMISES OR SUBSEQUENT LOTS ARE SUBJECT TO CONDITIONS PLACED ON THE ORIGINAL APPROVAL.

NOTES CONTINUED ON SHEET 2 OF 3

LEGEND

SEE SHEET 2 OF 3

LOCUS MAP



BACKGROUND MADE U.S.G.S. 7.5 MINUTE SERIES QUADRANGLE

SUBDIVISION PLAN

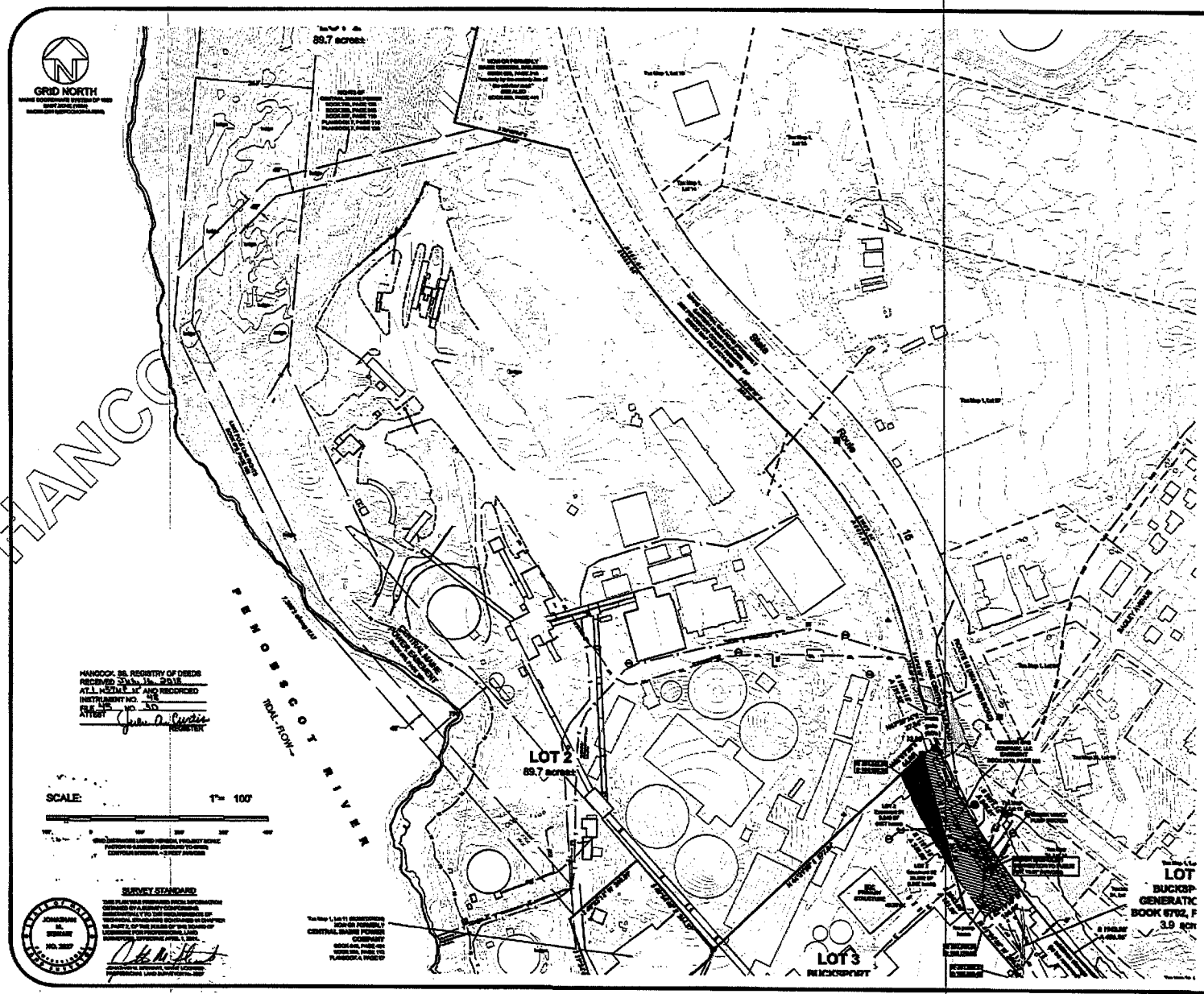
SHOWING LANDS
BUCKSPORT MILL, LLC
BUCKSPORT GENERATION, LLC
2 RIVER ROAD–BUCKSPORT
HANCOCK COUNTY, MAINE

RECORD OWNER/APPLICANT:
BUCKSPORT MILL, LLC
ATTN: JEFF MOGUN, AM DEVELOPMENT
2 RIVER ROAD
BUCKSPORT, ME 04416

PLISGA & DAY
LAND SURVEYORS
72 MAIN STREET
BANGOR, ME 04401
(207) 947-5019
www.WeMapIt.com

DRAWING:	SHEET:
68079	1
DATE: JULY 9, 2018	OF 3
SCALE: 1"= 100'	

PLISGA&DAY_2018 AM Mods Drawn/DWG68079 2018 SubDivision Drawing



NOTES

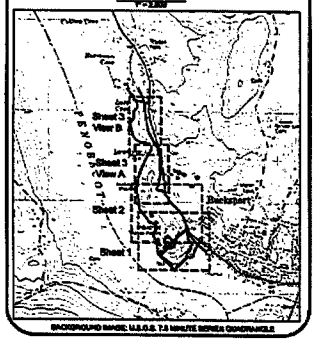
SEE SHEET 1 OF 3.

LEGEND

- IRON ROD, SET 2016
- IRON ROD, FOUND
- IRON PIPE, FOUND
- GRANITE MONUMENT, FOUND
- SURVEY CONTROL POINT
- LAS LOWEST ADJACENT GRADE
- HAT HIGHEST ANNUAL TIDE
- BUILDING
- TANK / STORAGE
- FOOTER FOR STRUCTURE
- CONTOUR, 2' (LIDAR)
- CONTOUR, 10' (LIDAR)
- LEDGE
- LEDGE
- NAIL/WASHER, SET 2016
- EXTON BARR
- MANHOLE
- SEWER MANHOLE
- UTILITY POLE
- GUY ANCHOR
- WATER SHUT OFF
- HYDRANT
- LAMP / STREET LIGHT
- END OF CULVERT
- SIGN POST
- SHRUB / BUSH
- TREE
- TREE LINE / VEGETATION
- FENCE
- EFFLUENT
- EFFLUENT
- ELECTRIC
- LEACHATE
- NATURAL GAS
- OIL
- SURFACE WATER
- POTABLE WATER
- FIRE PROTECTION
- SEWER
- STORMDRAIN
- 75' SETBACK
- ABUTTER
- EASEMENT
- BOUNDARY

NOTE: PAVED OR DRIVED FEATURES AND SYMBOLS DERIVED FROM AERIAL MAPPING

LOCUS MAP



BACKGROUND IMAGE: U.S.G.S. 7.5 MINUTE SERIES QUADRANGLE

SUBDIVISION PLAN

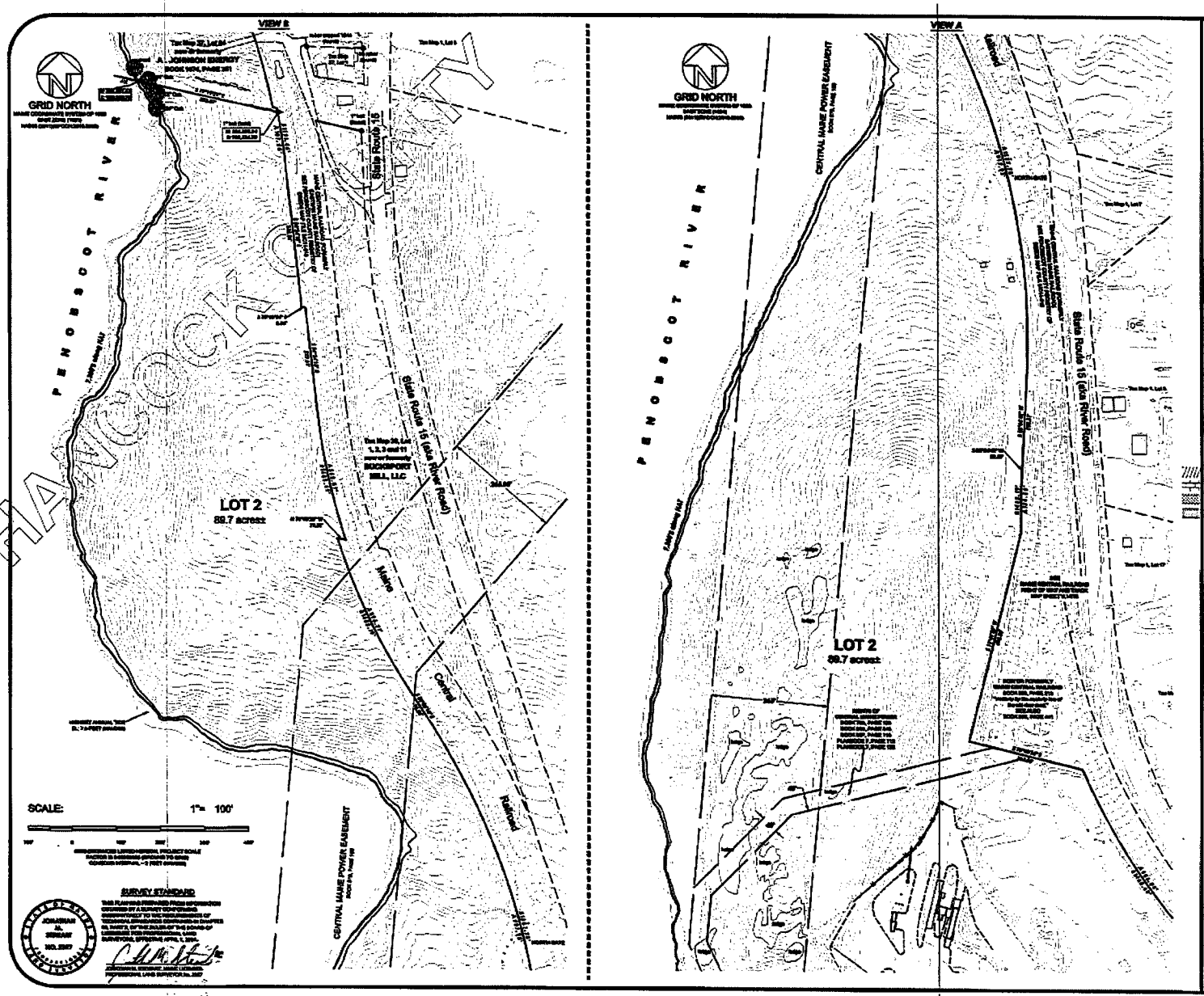
EXISTING LANDS

BUCKSPORT MILL, LLC
BUCKSPORT GENERATION, LLC
2 RIVER ROAD–BUCKSPORT
HANCOCK COUNTY, MAINE

RECORD OWNER/APPLICANT:
BUCKSPORT MILL, LLC
ATTN: JEFF MOSLIN, AVI DEVELOPMENT
2 RIVER ROAD
BUCKSPORT, ME 04416

PLISGA & DAY
LAND SURVEYORS
70 MAIN STREET
BANGOR, ME 04401
(207) 947-2019
www.plisgaplis.com

DRAWING:	SHEET:
88079	2
DATE: JULY 9, 2018	OF 3
SCALE: 1"= 100'	



NOTES

NOTES CONTINUED FROM SHEET 1 OF 3

13) REGARDING SECTION 6.1A OF THE SUBDIVISION ORDINANCE, THE BUCKSPORT PLANNING BOARD HAS GRANTED A WAIVER FROM THE VEGETATED BUFFER STANDARD.

15) PER SECTION 7.5 OF THE BUCKSPORT SUBDIVISION ORDINANCE, PLANNING BOARD APPROVAL IS REQUIRED FOR ANY SUBSEQUENT REVISION OR AMENDMENT TO THE APPROVED SUBDIVISION PLAT, IN ACCORDANCE WITH TITLE 30-A, §4407 OF THE MAINE REVISED STATUTES AND SECTION 13 OF THE TOWN OF BUCKSPORT LOADING ORDINANCE.

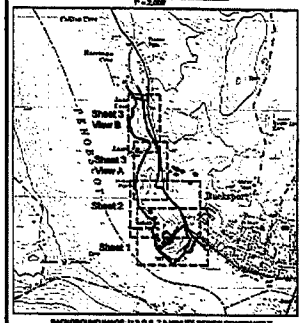
14) REGARDING SECTION 6.3.2.6 OF THE SUBDIVISION ORDINANCE THE BUCKSPORT PLANNING BOARD HAS GRANTED A WAIVER FROM "ALL CORNERS" ON LOTS BEING MARKED WITH PERMANENT MONUMENTS DUE TO THE INDUSTRIAL AND CHANGING NATURE OF THE EXISTING FACILITIES.

HANCOCK SS. REGISTRY OF DEEDS
RECEIVED July 11, 2019
AT 1:03 M. AND RECORDED
INSTRUMENT NO. 33
FILE 35 NO. 33
ATTEST [signature] REGISTER

LEGEND

SEE SHEET 2 OF 3

LOCUS MAP & SHEET INDEX



BACKGROUND IMAGE: U.S.G.S. 7.5-MINUTE SERIES ORTHOIMAGE

SUBDIVISION PLAN

SHOWING LANDS

BUCKSPORT MILL, LLC
BUCKSPORT GENERATION, LLC

2 RIVER ROAD–BUCKSPORT
HANCOCK COUNTY, MAINE

RECORD OWNER/APPLICANT:
BUCKSPORT MILL, LLC
ATTN: JEFF MOSUR, ABS DEVELOPMENT
2 RIVER ROAD
BUCKSPORT, ME 04416

PLISGA & DAY
LAND SURVEYORS
70 MAIN STREET
BANGOR, ME 04401
(207) 947-0313
www.PlisgaDay.com

DRAWING:	SHEET:
98070	3 OF 3
DATE: JULY 9, 2018	
SCALE: 1" = 100'	

EXHIBIT C

DESCRIPTION OF THE WHOLE OCEANS PROPERTY

Those certain lots or parcels of land, with the improvements located thereon and the easements appurtenant thereto located in Bucksport and Orland, Hancock County, Maine, all as more particularly bounded and described in the deed from Bucksport Mill LLC to Whole Oceans LLC of near or even date and to be recorded in the Hancock County Registry of Deeds herewith.

EXHIBIT D

LEGAL DESCRIPTION OF THE BUCKMILL PROPERTY

Those certain lots or parcels of land, with the improvements located thereon and the easements appurtenant thereto located in Bucksport and Orland, Hancock County, Maine, all as more particularly bounded and described in that certain corrective deed from International Paper Company to CMP Bucksport LLC, n/k/a Bucksport Mill LLC, dated September 11, 2006, and recorded in the Hancock County Registry of Deeds in Book 4588, Page 26, correcting a deed from SP Forest, L.L.C. to CMP Bucksport LLC dated July 28, 2006, and recorded in Book 4558, Page 148, EXCEPTING that which is conveyed in the deed from Bucksport Mill LLC to Whole Oceans LLC of near or even date and to be recorded in the Hancock County Registry of Deeds herewith, and also EXCEPTING the property conveyed by the following deeds:

a. Deed from Verso Bucksport LLC to the Inhabitants of the Town of Bucksport dated January 19, 2011 and recorded in said Registry of Deeds in Book 5568, Page 333;

b. Deed from Bucksport Verso LLC to the Inhabitants of the Town of Orland dated March 21, 2011 and recorded in the Hancock County Registry of Deeds in Book 5621, Page 174;

c. Deed from Verso Bucksport LLC to Verso Androscoggin LLC dated as of January 29, 2015 and recorded in said Registry of Deeds in Book 6345, Page 257;

d. Deed to Bucksport Generation LLC from Bucksport Mill LLC dated December 21, 2016 and recorded in Book 6702, Page 172; and

e. Quitclaim Deed with Covenant from Bucksport Mill LLC to Bucksport United Methodist Church dated March 6, 2019 and recorded in Book 6939, Page 523.

DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS
696 VIRGINIA ROAD
CONCORD, MASSACHUSETTS 01742-2751

REPLY TO
ATTENTION OF
Regulatory Division
File No. NAE-2019-1562

June 13, 2019

Jason Mitchell, President
Whole Oceans, LLC
P.O. Box 7561
Portland, Maine 04101

Dear Mr. Mitchell:

In accordance with your recent request, we acknowledge that Department of the Army authorization, numbers:

NAE-1960-00261 (formerly ME-BUCK-60-261),
NAE-1964-00186 (formerly ME-BUCK-64-186),
NAE-1973-00233 (formerly ME-BUCK-73-233),
NAE-1974-00214 (formerly ME-BUCK-74-214),
NAE-1975-00161 (formerly ME-BUCK-75-161),
NAE-1987-05152 (formerly 198705152),
NAE-1990-10979 (formerly 199010979),
NAE-2000-00853 (formerly 200000853),

have been transferred from St. Regis Paper Company, Champion International Corporation, International Paper Company and Verso Corporation to you; Jason Mitchell, Whole Oceans, LLC, P.O. Box 7561, Portland, Maine 04101. We have updated our files accordingly and no further action is required unless new work is proposed in Waters of the United States (WoUS).

The conditions of the original authorization remain in full force and effect.

If you have any questions on this matter, please contact Shawn Mahaney of my staff at 978-318-8492 at our Augusta, Maine Project Office.

Sincerely,

MAHANEY.SHAWN.B.1006439302

Digitally signed by MAHANEY.SHAWN.B.1006439302
Date: 2019.06.13 10:08:23 -04'00'

For: Lindsey E. Lefebvre
Chief, Permits and Enforcement Branch
Regulatory Division

SECTION 3

FINANCIAL CAPACITY

Whole Oceans, LLC is a Maine based company and is proposing to develop this project in phases. The first phase will be termed the Earthwork Phase and will include excavation of existing soils in preparation for the construction of the Freshwater Building, South Grow-out Building and related utility connections, as described in Section 1.

The Whole Oceans team worked together examining the site layout and design to determine estimated costs for the Earthwork Phase of the project. Cianbro completed and provided to CES an estimate that the 22-acre Earthwork Phase will cost approximately $6.5 million to complete. Given that Whole Oceans has already purchased the property, this represents the total cost estimate for the Earthwork Phase.

Earthwork Phase	$6.5 Million
TOTAL	**$6.5 Million**

At this time, it is anticipated that the Earthwork Phase of the project will be started in the fall of 2019 and conclude during the late winter/early spring of 2020. Subsequent phases of the project will be constructed over the following years.

The following letter of commitment from Compeer Financial, which will fund the project, demonstrates that Whole Oceans has the financial capacity to complete the Earthwork Phase of the project, as proposed. Whole Oceans will provide evidence of financial capacity for approval prior to construction of future phases. Documentation that Whole Oceans is in “Good Standing” with the Secretary of State is also provided.

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: Tue Apr 02 2019 10:17:36. Please print or save for your records.

Legal Name	Charter Number	Filing Type	Status
WHOLE OCEANS, LLC	20170868FC	LIMITED LIABILITY COMPANY (FOREIGN)	GOOD STANDING

Filing Date	Expiration Date	Jurisdiction
05/24/2017	N/A	DELAWARE

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

NONE

Clerk/Registered Agent

DAVID J. CHAMPOUX
MERRILL'S WHARF
254 COMMERCIAL STREET
PORTLAND, ME 04101

Back to previous screen New Search

Click on a link to obtain additional information.

List of Filings	View list of filings
Obtain additional information:	
Certificate of Existence (more info)	Short Form without 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 Bureau's Reporting and Information Section at 207-624-7752 or e-mail or visit our Feedback page.

© Department of the Secretary of State

4.31	**31. Earthwork**	**1**	**LS**				**$ 6,518,540**	**-**	
4.31.1	Erosion Control, Clearing and Grubbing	1	LS	$71,750.000		$ 71,750		-	
4.31.1.1	Erosion & Sedimentation Control	8,500	LF	$7.50	$ 63,750				Erosion Control Fence, Hay Bales, Fabric and Maintenance, Temp. Detention Ponds
4.31.1.2	Clearing and Grubbing	1	LS	$8,000	$ 8,000				Northwest section of building and along RR tracks (Allowance)
4.31.2	Demolition	150,000	CY	$5		$ 750,000		-	Allowance
4.31.2.1	Demolition of Existing Foundations	1	LS	$500,000	$ 500,000				Allowance for removal, crushing and disposal of remaining concrete foundations within Phase 1.
4.31.2.2	Demolition of Existing RR Tracks	1	LS	$250,000	$ 250,000				Allowance
4.31.3	Rock Blast / Excavate / Process	160,000	CY	$30		$ 4,800,000		-	
4.31.3.1	Drill and Blast Rock	160,000	CY	$15	$ 2,400,000				Open Blast with Cover
4.31.3.2	Crush / Process / Grade Rock	160,000	CY	$10	$ 1,600,000				On-Site Crush and Process
4.31.3.3	Place / Grade / Compact Rock	160,000	CY	$5	$ 800,000				
4.31.4	Common Till Excavation	79,500	CY	$5		$ 397,500		-	
4.31.4.1	Till : Cut Grade to Fill	79,500	CY	$5	$ 397,500				
4.31.5	Common Excavation:	96,942	CY	$5		$ 499,290		-	
4.31.5.1	Cut to Fill	91,110	CY	$5	$ 455,550				
4.31.5.2	Clay: Cut to Export	5,832	CY	$8	$ 43,740				

COMPEER FINANCIAL

1921 Premier Drive
PO Box 4249
Mankato, MN 56001

P: (507) 387-4174
F: (507) 387-4177

compeer.com

Date: June 17, 2019

To: Interested Parties Related to Whole Oceans, LLC

RE: Whole Oceans, LLC

We are pleased to confirm on behalf of our customer that Whole Oceans LLC has access to more than $7,500,000 in available funds as of the date first written above to support its development work in Maine.

Sincerely;

Kent Bang

Kent Bang
Director, Swine Lending
Compeer Financial

SECTION 4

TECHNICAL ABILITY

Whole Oceans, LLC (Whole Oceans), as the owner and applicant, has assembled a team of local, national, and international experts to design, permit, construct, and operate this state-of-the-art Recirculating Aquaculture System (RAS) Atlantic Salmon farm, as proposed. Currently the project team includes:

- Whole Oceans, LLC (Applicant, Owner, Operator);
- Emergent Holdings, LLC (Parent company of Whole Oceans, LLC);
- Kuterra, LP (experienced aquaculture farming company);
- PR Aqua, Inc. (Aquaculture Process Designers and Technologists);
- Cianbro Corp. (Engineering, Procurement and Construction Manager); and
- CES, Inc. (Engineering Support/State and Local Permitting).

Whole Oceans, LLC is a Maine-based Company on-track to become America's premier, land-based producer of sustainable farm-raised Atlantic Salmon. Whole Oceans has assembled a team experienced in the necessary technology, engineering, and construction to bring this project to completion. Whole Oceans has plans to develop production on both the east and west coast of North America, beginning with the state-of-the-art Atlantic salmon recirculating aquaculture system (RAS) facility in Bucksport, Maine. Its website is WholeOceans.com.

Emergent Holdings is the parent company of Whole Oceans, LLC and other aquaculture related companies. An excerpt from their website reads: "Emergent Holdings is a private investment partnership formed exclusively to invest in aquaculture and agricultural markets in North America. Emergent has a strong investment platform led by a team of professionals with deep agricultural and financial experience in investing, farm management and acquisition, and risk management. We focus on investments where our expertise creates opportunities for value through capital improvement, management improvement, scalability and strategy." Their website is http://EmergentHoldings.com/investment-portfolio/aquaculture.

Kuterra, LP is a pioneer land-based Atlantic salmon producer, the first in North America growing Atlantic salmon for consumers on land using RAS (recirculating aquaculture system technology). The Kuterra mission is to bring the most environmentally sound, safe and healthy farmed salmon to people who care about the food they eat and serve to their families. Kuterra raises Atlantic salmon in conditions that produce a superior tasting, firm-fleshed fish. Kuterra's sustainable aquaculture system minimizes stress and doesn't use hormones, antibiotics or pesticides. Emergent Holdings is currently engaged in a purchase agreement with 'Namgis First Nation', who currently owns Kuterra. Whole Oceans will utilize Kuterra's operational and technological experience as an advantage for the Bucksport facility. The Kuterra website is Kuterra.com.

PR Aqua is a pioneering aquaculture design and technology provider based in British Columbia, Canada. For more than 30 years, PR Aqua has delivered integrated water treatment and fish handling solutions for both the commercial and public aquaculture industries.

PR Aqua supports clients with a broad range of services including project planning, engineering design, delivery of specialty equipment, construction management and start-up & training services. Through the integration of services and technology, PR Aqua has the seamless ability to delivery robust technical solutions to meet aggressive schedules.

The PR Aqua team is a group of project management and engineering professionals with specific expertise in aquaculture systems design, construction, and operation, specializing in Recirculating Aquaculture Systems (RAS). The team has delivered some of the first, longest running, and most notable land-based RAS designs in North America. PR Aqua has been and remains a designer of choice for the Canadian operations of one of the world's largest farmed salmon producers. Their website is PRAqua.com

Cianbro: Throughout their 70-year history, Cianbro has safely and efficiently planned, managed, and constructed many technically complex, historic, and environmentally sensitive projects for a wide variety of public and private clients. A total commitment to safety combined with the enthusiasm of an innovative team of construction professionals has enabled Cianbro to build a durable reputation for completing projects safely, on schedule, and within budget. Teamwork, dedication, and commitment are what differentiate Cianbro from its competitors. Cianbro applies their can-do spirit in the workplace every day, implementing innovative and creative solutions for client's needs on a wide variety of projects. Ranked #132 on Engineering News-Record's (ENR) 2019 The Top 400 Contractors, Cianbro is best known for managing major construction projects along with self-perform capabilities and hands-on construction techniques.

Founded in 1949 by the Cianchette Brothers, Cianbro is one of the United States' largest, most diverse, successful, open shop, 100 percent employee-owned construction and construction services companies. Presently operating in diverse markets in more than 40 states, and employing over 4,000 team members, Cianbro manages and self-performs civil, structural, mechanical, electrical, instrumentation, telecommunications, thermal, and fabrication and coating. Cianbro has been named the 30th largest majority employee-owned company in the U.S. by the National Center for Employee Ownership (NCEO). Their website is Cianbro.com.

CES, Inc. (CES) is a Maine based company with over 40 years of design and permitting experience. CES is responsible for multi-disciplinary design and permitting for this project including, Conceptual Engineering Design, Final Site Design, Structural and MEP Engineering design support and permitting for Local and State development and environmental permits. CES, Inc. has prepared numerous Site Location of Development Act Permit Applications, Amendments, and Modifications for public and private clients in the past. CES has the design experience to complete facets of the technical support systems required for the aquaculture operations, both interior and exterior of the buildings. Their website is CESincusa.com.

Included are select bios for the various team members.

Whole Oceans

Jason Mitchell

Jason is the President and Chief Operating Officer at Whole Oceans. Before finding a passion for Recirculating Aquaculture Systems (RAS) with Whole Oceans, Jason had an extensive career as a defense contractor working for General Dynamics. He has more than 15 years of experience in operations management, most recently serving as the Director of Ground Assembly at Bath Iron Works (BIW). Entrepreneurial at heart, Jason has led multiple start-up companies including real estate investment, breweries and an art studio. Jason also serves on the Board of Directors for a non-profit called One Summit, out of Boston, to benefit children with cancer and their families. He is a seasoned leader in operations and manufacturing, with a Bachelor of Science degree in Marine Engineering from the United States Merchant Marine Academy at Kings Point and a Master of Science in Business from San Diego State University.

Jennifer Fortier

Jennifer is a native of Ellsworth and has worked with a variety of marine and aquaculture businesses in Downeast Maine, including the Department of Marine Resources, the Shaw Institute, and Acadia Harvest, Inc. She received a Master of Science degree in Marine Biology from the University of Maine's Aquaculture Research Institute, as well as bachelor's degrees in marine science and Microbiology.

Kevin Tait

Kevin received his Bachelor of Science degree in Accounting from the University of Southern Maine. He has extensive knowledge in finances, accounting, real estate management and construction. He most recently was the Head of Finance at Akelius Real Estate for their New York, Boston and Washington DC offices.

Michelle Black

Michelle has over 15 years of experience as an Executive Assistant. She has provided support for Fortune 500 companies such as Unum as well as the only Maine company, IDEXX, to make it to the Fortune 1000. Adding to her experience, she also has an extensive background in marketing and event coordinating.

Emergent Holdings

Jacob Bartlett

Jacob is a seasoned global executive with extensive experience in strategy, marketing, project management, business development and innovation (including the development of the largest recirculating aquaculture facility in North America). His career spans Fortune 500 companies to start-ups, in focus areas as diverse as Northern Europe, the Pacific Rim, China and North America. For over a decade, Jacob has consistently exceeded goals and expectations by driving sales and profitability. Whether in sales, marketing, analytics, or account management, with

Fortune 500 or start-up companies, Jacob possesses the proven ability to create and implement successful business strategies, awaken established businesses, lead cross-functional teams, develop new products and concepts, and cultivate lasting business relationships.

Kuterra, LP

Gary Robinson

Gary Robinson is a salmon aquaculture specialist and biologist with over 30 years of experience in salmon farming operations management, project management, financial analysis and research. This includes 22 years managing marine salmon farm operations that included up to 40 farms on the BC coast producing 40,000mt per year. Over the last 10 years Gary has focused exclusively on land-based salmon farming which has included development of, and ongoing support for the Kuterra land-based RAS salmon farm. Gary has also supported land-based salmon farm business development activities for several clients locally and internationally. This work included the development of detailed biological and financial models as well as cost analysis. Recently, his focus has included the development of land-based Aquaculture Parks as a pathway to catalyze the development of all land-based aquaculture industries.

Garry Ullstrom

Garry holds a BComm from UBC and is a CPA, CA. An entrepreneur at heart, he co-founded Silvarado Silviculture in 1987 (now Spectrum Resource Group) and began managing the finances for the 'Namgis First Nation in 1992. Since 2006 Garry has been involved in the start-up and management of seven businesses and strategic partnerships in the 'Namgis commercial portfolio, including fishery, forestry, mining, and energy businesses. He's been a member of the Kuterra Executive team since its inception in 2011, and the CEO since 2014. Garry is a strategic thinker with an eye for detail. He has demonstrated an ability to negotiate effectively, to build and motivate high performance teams, to communicate effectively with large numbers of stakeholders, and to build strong relationships with key partners.

John Burton

John is a graduate from Sir Sanford Fleming College with a degree in Aquaculture Technician. He has over 20 years of experience working as a technician. John brings firsthand expertise to land-based aquaculture.

PR Aqua

KC Hosler

KC is General Manager and Chief Technology Officer for PR Aqua. He is a registered professional engineer with more than 20 years of experience in the field of aquaculture systems engineering and construction. In his combined role as GM and CTO, KC leads both the day-to-day operations of PR Aqua, while also providing the technical vision that drives the business's technology development.

Travis E. Noyes, PE

Principal-in-Charge / Project Manager

Travis E. Noyes has over 24 years of civil engineering experience related to site development and infrastructure design and analysis. Travis has worked on a wide range of projects including roads, trails, and site design, wastewater treatment plant upgrades; pump station design; water system analysis and design; civil utility; Capital Improvement Plan for development for water utilities; and project management. Travis also has experience coordinating with State and Federal funding agencies for sewer and water projects. Along with his project management experience, Travis serves as the Engineering Division Director where he is responsible for ensuring appropriate resources are allocated to meet the goals and milestones of each project.

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(207) 989-4824 ext. 2303

Professional History

2008 – Present
CES, Inc.
Project Manager

2003 – 2008
Woodard and Curran
Project Manager / Team Leader / Regional Delivery Manager

2001 – 2003
City of Brewer
Assistant City Engineer

1996 – 2001
CES, Inc.
Project Engineer

Core Expertise:

Site Design and Permitting

Utilities and Roads

Capital Improvement Planning

Education

B.S. (1996) Civil and Environmental Engineering, University of Maine

Registrations

Professional Engineer, State of Maine (#9713)

Affiliations

American Council of Engineering Companies, State of Maine Chapter Board Member

Project Experience

Campground Development | Winter Harbor, Maine

Travis is currently acting as project manager for the development of a 150-acre campground which includes approximately 100 sites and a variety of mixed use non-motorized vehicular trails. There are approximately five miles of trails associated with the project. The project construction start date was summer 2013. The project required a SLODA permit, local permitting, and a NRPA permit for wetland and vernal pool impacts.

Verso | Bucksport, Maine

Travis served as Project Manager and Project Engineer for the site design and permitting of a new wood yard associated with a wood handling process upgrade. The site design focused on balancing stormwater collection needs with maximizing the wood yard area within the constraints of the new process. Travis was responsible for coordinating all tasks with the lead engineering firm, our direct client for this work, BE&K Engineering from North Carolina. SLODA permit amendments were required.

Maine Veterans Home | Machias, Maine

As Project Engineer for the design of new utilities to service facility, including storm water collection, wastewater collection, water distribution, electrical, and communications, Travis assisted in site design review and specification production. He was responsible for coordinating all tasks with the lead Architectural firm. Amendments to the site SLODA were required.

The Jackson Laboratory | Bar Harbor, Maine

Travis served as Project Engineer for the design of new utilities to service an expansion of the existing facility and a new 150 space parking lot. Design included storm water collection and wastewater collection. Travis also assisted in site design and specification production, coordinated all tasks with the lead Architectural firm and Laboratory. This work also resulted in a need to amend the SLODA permit for the site.

Hartt Transportation | Auburn, Maine

Travis managed the design of a seven-acre site expansion, road design, and utilities within an existing business park in Auburn. Follow up services include assisting the owner with obtaining SLODA amendments for future expansion needs.

Site and Utility Design | SeDoMoCha Middle School | Dover-Foxcroft, Maine

Travis served as Project Engineer for site design and utility design for the expansion of an existing elementary school. The utility design included replacement of existing sewer piping, a new stormwater collection system, and water mains. Site design focused on an expansion of access to the site and significant improvements to existing parking conditions as well as improvements to the existing athletic fields. He was responsible for coordinating all tasks with lead Architectural firm.

Site Design | Hope School | Hope, Maine

Travis was Project Engineer for site design for the expansion of an existing elementary school. The site design focused on an expansion of access to the site and significant improvements to existing parking conditions as well as improvements to the existing athletic fields.

Utility Design | Maine Veterans Home | Machias, Maine

Travis assisted in site design review and specification production in his capacity as Project Engineer for this site. His duties included the design of new utilities to service facility, including storm water collection, wastewater collection, water distribution, electrical, and communications. He also coordinated all tasks with lead Architectural firm.

Utility Service Design | The Jackson Laboratory | Bar Harbor, Maine

Travis served as Project Engineer for the design of new utilities to service an expansion of the existing facility. The design included stormwater collection and wastewater collection. He also assisted in site design and specification production, as well as coordinated all tasks with lead architectural firm.

Facility Expansion | USDA National Cold Water Marine Aquaculture Center | Franklin, Maine

Travis was Project Engineer for the site design and utility design for the expansion of an existing aquaculture research facility. The utility design included effluent discharge piping and influent fresh and salt water lines. Site design focused on significant grade changes and new access roads to accommodate new buildings. Travis helped to produce specifications for the construction project, and coordinated all tasks with lead Architectural firm.

Infrastructure Improvements | Milford, Maine

CES was hired by the Town of Milford and the Old Town Water District to prepare the design of improvements within the Davenport Street neighborhood. The improvements included the design of new road, stormwater collection and conveyance, sanitary sewer collection and conveyance, potable water distribution, sidewalks and roadways. The value of the work was nearly $2.5 million.

Infrastructure Improvements | Castine, Maine

CES was hired by the Town of Castine to design Phase I of their Long Term Infrastructure Improvements project. Phase I included approximately $2,000,000 worth of improvements. The project included the design of improvements to roads, stormwater systems, water mains, and sewers for portions of Battle Avenue, Perkins Street, and Wadsworth Cove Road. Travis served as Project Manager for this project.

Commercial Park | Baileyville, Maine

Travis assisted the Town of Baileyville with the permitting and design of the extension of an existing Commercial Park. The Park is currently capable of serving two lots and the Town has plans to extend the road and utilities out approximately 1,700 feet to serve approximately eight more lots. Phase II of construction included the construction of a road, sewer, water, and electrical extensions.

Large Retail Commercial Development | Bangor, Maine

CES recently completed the evaluation and design of nearly 2,000 feet of sanitary sewer improvements and nearly 4,200 linear feet of storm drainage improvements. The project includes the design of pervious pavement to be utilized as a stormwater treatment mechanism.

Road Reconstruction | Newcastle, Maine

Travis served as Project Manager for the design of the reconstruction of three roads in Newcastle. The projects included full-depth reconstruction, reclaim and pave, and drainage improvements.

Road Reconstruction | Veazie, Maine

Travis was Project Manager for the design of the reconstruction of seven roads/streets in Veazie. The projects included full-depth reconstruction, drainage improvements, and sewer and water improvements.

Capital Improvement Planning | Bar Harbor, Maine

Travis served as Project Engineer assisting the community with the development of a Comprehensive Master Plan. The work included utilizing the previously-developed distribution system model to identify problem areas within the system and develop potential improvements to remedy the problems, making recommendations for future projects, developing cost estimates for the proposed improvements, and development of a unidirectional flushing program.

Capital Improvement Plan, Richmond Utilities District | Richmond, Maine

Travis acted as Project Manager for the Capital Improvement Plan. The project included GPS location of all available water system components, development of a System Map, development and calibration of a WaterCAD water system distribution model, analysis of the system to identify deficiencies, a prioritized listing of recommended improvements for the District, and a report summarizing our findings along with cost estimates for each recommendation. The Plan outlined Short Term and Long Term recommendations.

KC has been project manager and/or lead consultant on an extensive list of projects in commercial aquaculture, fisheries enhancement, and aquatic laboratory applications. KC specializes in guiding the technical development of aquaculture projects through direct interface and coordination with customers, internal resources, external contractors. He focusses on aquaculture facility bio-programming, planning, and concept development to establish a solid foundation for design and operational success of the facility.

KC frequently speaks or participates in technical discussion panels at aquaculture conferences and courses, providing him the opportunity to educate the industry on modern aquaculture techniques and to share his extensive project experience. KC has served on the Board of Directors of the Aquaculture Engineering Society for the past four years and currently holds the position of Past President.

Stephen Piggott

Stephen Piggott is a Senior Project Engineer for PR Aqua with more than 15 years aquaculture facility design experience, 20 years' experience as a professional engineer and 25+ years in the engineering profession. With 3 post-secondary degrees, including a wastewater treatment research post-graduate degree, Stephen's technical insight and water treatment expertise has been an asset in the delivery of aquaculture facility and technology development projects. Stephen has been a key technical resource and lead engineer on numerous commercial, state, and federal fish hatcheries projects involving recirculating aquaculture system technology.

Ben Briese

Ben Briese is a Senior Project Engineer for PR Aqua with more than 8 years of experience in aquaculture equipment and facility design and nearly 15 years of experience in the engineering profession. With a degree in biomedical engineering, and an agricultural background, Ben has an unusual talent for blending theory and fundamental engineering principles, with practical and cost-effective implementation. Ben has been the technical lead on number of major recirculating aquaculture projects with a special focus on Atlantic Salmon smolt and post-smolt production projects. Ben is currently a registered member with the Association of Professional Engineers and Geoscientists of British Columbia.

Kevin Graham

Kevin Graham is a Sr. Engineering Technologist at PR Aqua working exclusively in the design of aquaculture systems for more than 15 years. He has been an integral to the design development and implementation of many successful aquaculture projects ranging from influent pathogen control, effluent and sludge treatment, aquatic laboratories, and comprehensive recirculating aquaculture systems (RAS). Kevin specializes in the development of detailed designs and documentation for process systems. Post-design, Kevin's role transitions to supporting the construction process, and supervising system start-up and commissioning activities, and development of standard operating procedures to support successful project execution and hand-off.

Michael E. Thompson

Senior Project Scientist

Michael Thompson is a consulting ecologist and has over 37 years of experience in wildlife research, forest ecology, biometrics, ecological risk assessment, rare plant and animal conservation, ecological restoration, wetlands, marine science, and aquatic ecology. While serving a wide range of clients, Mike specializes in projects related to natural resource conservation and management, renewable energy, ecological risk assessment, transportation, forest management, and outdoor recreation planning. As a past president of the North Atlantic Chapter of the Society of Environmental Toxicology and Chemistry (SETAC), Mike has worked on large and small contaminated sites, including PCB sites on the Housatonic River in Massachusetts, and the Hudson River in New York. Mike has been involved in major FERC hydropower relicensing projects and has also worked on nuclear power plant decommissioning efforts in Massachusetts and Connecticut. Mike also has experience with permitting and post-construction monitoring at wind power projects throughout the U.S.

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(207) 989-4824

Professional History

2017 – Present

CES, Inc.
Senior Project Scientist

2007 – 2017

Penobscot Environmental Consulting, Inc.
President / Principal Ecologist

2015 – 2017

Tetra Tech, Inc.
Senior Ecologist

2015 – 2017

Stone Environmental, Inc.
Senior Ecologist

2011 – 2012

First Wind

Environmental Permitting & Compliance Manager

Core Expertise

Professional Wetland Scientist

Certified Wildlife Biologist

Natural Resource Permitting

Ecological Risk Assessment

Education

PhD (in prep) Forest Ecology, University of Maine, Orono

M.S. (1987) Wildlife Management, University of Maine, Orono

B.S. (1981) Wildlife Resources, Quantitative Option, University of Idaho, Moscow

Registrations

Professional Wetland Scientist # 831

Affiliations

Society of Wetland Scientists

Friends of Maine's Seabird Islands, Rockland, Maine, Chair, Board of Directors

Project Experience

Loring Air Force Base Superfund Site | Limestone, Maine

Mr. Thompson was a project scientist working on site characterization and stream restoration components of the Loring Air Force Base Superfund Site in northern Maine. His work included delineating wetlands and other natural resources, recording potential contamination areas, and working with the team developing and implementing ecological restoration plans following the remediation of Greenlaw Brook, an important salmonid spawning stream.

Housatonic River Superfund Site | Pittsfield, Massachusetts

Mr. Thompson was the lead investigator working closely with the USEPA and USFWS on an assessment of PCB impacts on amphibians breeding in vernal pools in the floodplain of the Housatonic River near Pittsfield, MA. As part of this project he also advised the USEPA and USFWS on sample size requirements for characterizing fish biomass and determining the relationship between fish size and PCB tissue concentration levels.

First Wind | Portland, Maine

Working with the lead engineering team, Mike was instrumental in finalizing project design and construction methods needed to ensure full compliance with local, State, and Federal permits.

Irving Woods, LLC | Fort Kent, Maine

As a member of the Scientific Certification Systems, Mike and his team provided auditing services for 1.2 million acres of forest land in northern Maine against the Forest Stewardship Council (FSC) Standard.

Wagner Forest Management, Ltd. | Various Sites, Maine

Mike was the lead ecologist responsible for developing several deer wintering area habitat management plans on private forestlands in Maine. As part of this work, he conducted studies related to old growth forests and other unique ecological areas.

Yankee Nuclear Power Station | Rowe, MA

Mike was responsible for monitoring ecological restoration of a nuclear power station as it was being decommissioned. This project included wetland delineation, rare plant surveys, State and Federal permitting, and 3 years of environmental compliance monitoring during construction phases. As lead Science Diver, Mike assisted in the collection of lake sediments using SCUBA associated with the final decommissioning of Yankee Nuclear Power Station.

TransCanada Hydro Northeast Deerfield River Recreation Enhancement Plan | Monroe Bridge, MA

Mike designed, permitted, and oversaw construction of FERC-mandated enhancements to boat launches, picnic areas, and hiking trails as part of a 10-year recreational enhancement program for the Deerfield River Hydroelectric Project.

Knox County Regional Airport | Owls Head, Maine

As lead scientist for this project, Mike was responsible for wetland mitigation efforts associated with airport expansion and runway improvements. This project included identifying suitable wetland mitigation projects, landowner negotiation, and client representation in regulatory proceedings.

Wind Power Projects | Various Sites, Eastern United States

Mike provides senior environmental consulting services on a variety of projects that include wind power permitting and post-construction monitoring, acoustic bat surveys with an emphasis on northern long-eared bats, and avian surveys at proposed and operating wind farms. He was also project manager and senior ecologist for post-construction bat fatality monitoring at a wind farm in Oklahoma. Mike also provides QA/QC oversight and statistical analysis for bird and bat risk assessment studies associated with proposed wind power projects.

Maine Department of Transportation | Calais Border Crossing | Calais, Maine

As lead scientist for this project, Mike's duties included wetland mitigation efforts associated with a new border crossing to Canada. This project required identifying suitable wetland mitigation projects, landowner negotiation, and client representation in regulatory proceedings.

As Wetland Scientist, Mike worked to provide wetland delineation and permitting support for several clients in Southern Maine:

- Coastal Maine Botanical Gardens | Boothbay, Maine – proposed expansion
- City of Bath, Maine – pump station upgrades
- Town of Falmouth, Maine – sewer force main upgrades
- Private Client, Boothbay, Maine – develop planting plan to restore site cleared in violation of Shoreland Zoning Ordinances

Mike has also been involved as lead auditor for Climate, Community & Biodiversity Alliance (CCBA) validation processes for the following entities:

- REDD Forests | Tasmania
- The Conservation Fund | Mingo NWR, MO
- The Conservation Fund | Grand Cote and Lake Ophelia NEW, LA

- Forest Carbon Offset, LLC | Boden Creek Preserve |Toledo District, Belize

Publications

Wesely, N., S. Fraver, L.S. Kenefic, A.R. Weiskittel, J-C. Ruel, M.E. Thompson, and A.S. White. 2018. Structural attributes of old-growth and partially harvested northern white-cedar stands in northeastern North America. Forests 2018 9(7), 376.

Thompson, M.E. 2012. *Ethics in Environmental Consulting*. Environmental Practice, Vol. 14, Issue 3.

Thompson, M.E. 2008. Integrating rare species conservation into forest management planning in northern Maine. Internal workshop for foresters on private forestlands in northern Maine.

Thompson, M.E. and Lortie, J.P. 2004. Designing and implementing field studies of amphibians and reptiles on contaminated sites. North Atlantic Chapter SETAC Annual Meeting Short Course.

Jon H. Whitten, Jr., PE

Project Manager

Jon H. Whitten, Jr. has over 20 years of civil engineering experience related to site development and infrastructure design stormwater management, and commercial development. Jon has worked on a wide range of projects including subdivision planning and permitting, site planning and permitting, roadway and utility design and extensions, as well as stormwater and erosion control design. Jon also has experience coordinating with State, Federal and Local regulatory permitting and has been involved in the management, design and permitting of numerous projects throughout Maine. Along with his project management experience, Jon has worked on projects involving gravel and rock extraction permitting, solid waste permitting, construction observation, post construction inspections and stormwater management inspections.

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(207) 989-4824

Professional History

2019 – Present

CES, Inc.
Project Manager

2015 – 2019

Plymouth Engineering Inc.
Senior Project Manager

2006 – 2015

Terradyn Consultants, LLC
Project Manager / Project Engineer

1996 – 2001

Sebago Technics, Inc.
Project Manager / Project Engineer

Core Expertise:

Site Design and Permitting

Utilities and Roads

Construction Administration/Oversight

Environmental Permitting

Education

B.S. (1997) Civil Engineering, University of Maine, Orono

Registrations

Professional Engineer,

State of Maine (#10414)

MDOT LPA Certified

Affiliations

American Society of Civil Engineers

National Society of Professional Engineers

Project Experience

Town of Baldwin | Baldwin, Maine

Jon served as Project Manager and Project Engineer for the stormwater modeling of over 200 acres of mountainous terrain to establish flow characteristics and flood levels at two problematic culvert crossings on Brown Road in Baldwin, Maine. The re-design of the culvert crossings included the installation of new, larger pipes as well as new vertical alignment for approximately 700 LF of roadway. Jon coordinated with FEMA and MDEP throughout the project design and construction observation for this project.

Dearborn Precision Tubular Products, Inc. | Fryeburg, Maine

Jon managed the campus planning and design, site grading, stormwater management and permitting for a large expansion of an existing site. The site included 22 acres of impervious area on a 76-acre parcel of land. Stormwater management features included catch basin and pipe system, dry swales, and large infiltration basins. Jon worked closely with a construction firm to obtain a Site Location of Development Permit from MDEP for this project.

Watchic Lake Association | Standish, Maine

Several waterfront properties on the eastern shore of Watchic Lake were experiencing degradation of their property due to lack of stormwater runoff control. Jon worked with landowners, Watchic Lake Association Members, the Town of Standish, and MDEP to develop a shared stormwater management system to responsibly convey runoff from the north side of Route 114 to Watchic Lake. Work included the use of natural, wooded wetlands to temporarily impound runoff, a serpentine, vegetated swale and a settling basin, swale and culvert system.

Residential Development Projects | Various Locations, Maine

Longfellow Street Condominiums, Westbrook, Maine – 12-unit condominium project with private access drive, public water and sewer, underground utilities, natural gas, and LID stormwater features.

Majestic Woods Subdivision, Westbrook, Maine

Patrick Drive, Scarborough, Maine

Shalom House, Inc., Westbrook, Maine – 5-unit building

Olde Woolen Mill, MSHA Housing, North Berwick, Maine

Jockey Cap Ridge Subdivision, Fryeburg, Maine

Mobius, Inc. Damariscotta, Maine – 5-unit building

MSHA Rental Housing, Chebeague Island, Maine

Convene Road Subdivision, Sebago, Maine

Hawthorne Lane Subdivision, Westbrook, Maine

Knight Street Subdivision, Westbrook, Maine

Fox Hill Estates, Naples, Maine

Commercial Site Plans | Various Locations, Maine

Village Green History Park, Windham Historical Society
McDonald's Restaurant Addition, Bridgton, Maine
Fire and Rescue Station, Town of Sebago, Maine
Salt Storage Shed, Town of Limington, Maine
Construction Demolition and Debris Recycling Facility, Naples, Maine
Coastal Kids Preschool, Damariscotta, Maine
Burns' Fencing Co. Office Building, Westbrook, Maine
Windham Youth Soccer, Soccer Field, Windham, Maine
Shaw Earthworks, Inc., Office and Shop, Gorham, Maine
Becky's Diner, Portland, Maine
Westbrook Heights Business Park, Westbrook, Maine

Christopher "Toby" Michaud, PE

Project Manager / Project Engineer

Christopher "Toby" Michaud has over 10 years of experience providing civil and mechanical engineering design to residential and commercial developments and industrial projects. As Project Manager, Toby oversees the design, permitting, bidding, and construction of site and roadway projects, as well as heating, ventilation, air conditioning (HVAC) and energy audits/assessments for residential, commercial, and industrial clients. Toby is experienced in working with local, state, and federal agencies to obtain required permitting, including: local planning board approval; Site Location of Development; Stormwater Permit by Rule; and Stormwater Permit. He also prepares spill prevention, control, and countermeasure (SPCC) plans.

tmichaud@cesincusa.com
(207) 989-4824 ext. 2308

Professional History

2004 – Present

CES, Inc.
Project Engineer / Project Manager

2002 – 2004

Lincoln Pulp & Paper Division of Eastern Paper
Junior Project Engineer

Affiliations

American Society of Engineers (ASME)

Francis Crowe Society Member

American Society of Heating, Refrigerating, & Air-Conditioning Engineers (ASHRAE)

Order of the Engineer

Core Expertise

Site Development & Roadway Design

Stormwater Management & Phosphorus Control

Local, State, & Federal Permitting

HVAC Design & Energy Assessments / Audits

Education

B.S. Mechanical Engineering, University of Maine, Orono

B.A. Behavioral Sciences, University of Maine, Presque Isle

A.A. Criminal Justice, University of Maine, Presque Isle

Registrations

Registered Engineer, Maine #12674

Registered Engineer, Rhode Island #11397

NCEES Record # 60506

Standard First Aid & CPR

Project Experience

MEARNG AFRC Access Road Reconstruction | Bangor, Maine

As the project manager, Toby oversaw the design and construction oversight for the Maine Army National Guard AFRC access road reconstruction in Bangor, Maine. The project included sizing and designing the replacement of a culvert that had washed out as well as improving drainage along a section of roadway that crossed an old concrete tarmac causing stormwater to pond on the uphill side of the roadway.

MEARNG Aviation Readiness Center | Bangor, Maine

Working with a team consisting of an A/E firm from Boston and a construction firm out of Rhode Island, Toby designed two gravel wetland systems for stormwater treatment, completed the Maine Department of Environmental Protection Site Location of Development Amendment (SLODA) application and provided construction oversight for the gravel wetland construction.

RH Foster Parking Lot Design | Bangor, Maine

Toby performed the grading, stormwater management, irrigation, lighting, and utility design as well as met the City of Bangor ordinance requirements for a parking lot reconstruction and expansion for a convenience store in Bangor, Maine.

Penobscot Community Health Center | Winterport, Maine

Toby performed the layout design, grading, stormwater management, and utility design for a parking lot expansion related to a medical facility building expansion in Winterport, Maine.

Hammond Lumber Facility Planning Permit | Belgrade, Maine

Toby provided the stormwater management and phosphorous control design and prepared a site location of development planning permit for a sawmill in Belgrade, Maine.

Emera Maine Water Works Substation | Bangor, Maine

Working with a team consisting of two other firms, Toby provided the stormwater management and erosion and sedimentation control design, and prepared the permitting application for a State Stormwater Permit to the Maine Department of Environmental Protection for a Substation in Bangor, Maine.

Village Woods Association Parking Expansion | Bangor, Maine

As the project manager, Toby oversaw the design and permitting of a parking lot expansion for the Village Woods Association in Bangor, Maine. The permitting included City of Bangor Land Development approval and required a transfer application of a portion of a Site Location of Development Permit from a larger project to the Association.

Emera Maine Orrington Substation | Orrington, Maine

Working with a team consisting of two other firms, Toby provided the stormwater management and erosion and sedimentation control (ESC) design, and prepared the stormwater management and ESC sections of a Site Location of Development Amendment Application to the Maine Department of Environmental Protection for a Substation in Orrington, Maine.

Transfer Station Site Design | Howland, Maine

Toby configured the layout of a transfer station in the Town of Howland, Maine based on truck movement requirements and requirements of the Town's existing equipment being utilized at the new site. The project required the site be graded and accommodate for stormwater runoff management in accordance with the State of Maine Solid Waste Requirements.

Former Downeast Energy Plant Demolition Permitting | Deblois, Maine

Toby prepared the Site Location of Development Amendment application (SLODA) for the demolition of the former Downeast Energy Plant in Deblois, ME. The SLODA Amendment application included addressing stormwater runoff changes from the site as well as erosion and sedimentation control design.

Nadia Drive Improvements | Glenburn, Maine

Toby was responsible for the management of the Nadia Drive Improvements project. The project consisted of the design of approximately 800 linear feet of roadway with associated drainage improvements.

Hartt Transportation Truck Terminal | Auburn, Maine

Toby provided the stormwater management design at a truck terminal facility in Auburn, Maine. The design was performed for treatment of an almost seven-acre site with multiple grassed underdrained soil filters in accordance with the Maine DEP Chapter 500 standards as part of a Site Location of Development Permit Application.

Former Verso Plant Demolition Permitting | Bucksport, Maine

Toby prepared the stormwater management and erosion and sedimentation control design for a Site Location of Development Application (SLODA) for the demolition of the former Verso Paper Mill in Bucksport, ME.

Road Reconstruction | Cranberry Isle, Maine

Toby designed the reconstruction of four roads on Great Cranberry Isle and a roadway on Little Cranberry Isle. These projects included completing a drainage study on the roads to improve stormwater flow lines. Additionally, Toby coordinated the replacement of roadway pavement with recycled slate roof shingles on the roadway on Great Cranberry Isles.

Pine Grove Road | Glenburn, Maine

Toby updated and brought to completion the reconstruction of Pine Grove Road in Glenburn, Maine. Work on this project included the addition of culverts, culvert replacement, pavement reclamation, and roadway paving. Toby assembled the bid package, assisted the Town with the bidding process, and responded to resident questions during the construction phase.

Roadway Evaluation and Recommendations | Glenburn, Maine

Toby performed field evaluations on 24 public roadways within the Town of Glenburn to assist the Town with making recommendations on maintenance requirements for each roadway. Toby prepared the cost estimates including roadway improvement concepts and provided that information to the Town. The Town utilized that information to have the roadway improvements designed and constructed.

Milo Safe Streets | Milo, Maine

Toby designed the reconstruction of two intersections, as well as sidewalks, crosswalks, and drainage in the downtown Milo area to improve pedestrian safety and traffic flow.

Eastern Piscataquis Business Park | Milo, Maine

As the project manager, Toby was responsible for the design and bidding for the Eastern Piscataquis Business Park entrance road. The project included design of 800 feet of roadway with associated utilities.

Lakeside Landing Road Improvements | Glenburn, Maine

Toby was responsible for the management of the Lakeside Landing Road Improvements project. The project consisted of the design of approximately 3,100 linear feet of roadway with associated drainage improvements, as well as bidding administration assistance, and construction oversight.

Roadway Evaluation and Recommendations | Eddington, Maine

Toby performed field evaluations on approximately 11 miles public roadways within the Town of Eddington to assist the Town with creating a roadway inventory. The report included recommendations on maintenance requirements specific roadway segments, prioritization of maintenance repairs, and cost estimates of the repairs. This information is used by the Town to schedule roadway maintenance requirements.

Whispering Meadow Subdivision | Bangor, Maine

Toby designed the stormwater BMPs (Best Management Practices) and erosion control measures required for the State Stormwater Permit approval of a 21-lot subdivision in Bangor, Maine. The stormwater BMPs utilized were under-drained soil filters.

CIANBRO

RICHARD S. BRESCIA

VICE PRESIDENT

With Cianbro Since 1999

PROFESSIONAL ASSOCIATIONS & COMMUNITY INVOLVEMENT

Associated General Contractors – Member

EDUCATION

B.S. Business Finance, University of Maine; Orono, ME

PROFESSIONAL RESPONSIBILITY

As Vice President, Richard is responsible for identifying, evaluating, and managing risk in current and potential projects, as well as administering, coordinating, and expediting contract negotiations for The Cianbro Companies. Richard has worked closely with Senior Management to develop ways to mitigate risk for The Cianbro Companies. Richard and his team works with clients to ensure that the wording of contracts accurately reflects the positions with which clients and Cianbro agree. Richard's team works closely with Cianbro's Operations and Finance teams to favorably close-out projects.

PROFESSIONAL EXPERIENCE

Richard started with Cianbro in 1999, spending the first eight years working in operations on some of Cianbro's more complex projects, in both the Northern New England (NNE) and Mid-Atlantic Regions (MAR). After spending his first year working in NNE, helping manage the construction of several commercial building projects, he moved to MAR to help construct one of Cianbro's largest projects, the Lehigh Cement Plant. Upon completion, Richard remained in MAR for three years, taking over the responsibilities of rebuilding and managing the industrial group. In 2004, Richard returned to NNE to help construct a post office distribution project and reconstruct two multi-purpose supply vessels. In 2008, he joined the Contracts Group at the Corporate Office, reviewing and negotiating new contracts for The Cianbro Companies.

Richard comes from a long history in the construction industry. He worked for many years in a family owned construction company, dealing with operations, banking, and bonding. His construction experience, financial knowledge and risk understanding is a valuable combination.

- Project Manager – Cianbro Corporation; NNE & MAR
  - United States Postal Service Distribution Center; Scarborough, ME
  - Vessel Conversion; Portland, ME
  - Lehigh Portland Cement Plan Modernization; Union Bridge, MD
  - MBNA Commercial Building Projects; Belfast, ME

- Project & Financial Manager – Brescia Construction; Clinton, ME
  - Estimated and Managed various construction projects, ranging from $100,000 to $3 million;
  - Created financial reporting system, generated five year financial forecast, and prepared fiscal year end financial information; and
  - Corresponded with project owners, engineers, subcontractors, and suppliers.

Woodridge Subdivision Phases I, II, III, and IV | Bangor, Maine

Toby designed the stormwater BMPs and erosion control measures required for the Site location of Development Permit approval of a four-phase subdivision, which included a total of 63 single family residential lots and 24 single family attached residential units in Bangor, Maine. The stormwater BMPs utilized were under-drained soil filters and both meadow and wooded buffers.

Grandview Estates | Bangor, Maine

Toby created the site design of a 54-unit condominium development in Bangor, Maine. The site design included vertical road design of a 1,500 linear foot roadway, road and site grading, stormwater treatment design, Maine DEP Stormwater Permit Application, and City of Bangor Land Development Application Materials.

Herrick Heights Subdivision | Brooksville, Maine

Toby designed the stormwater BMPS and erosion control measures required for the State Stormwater Permit and local Phosphorus Standard approvals of a 13-lot subdivision in Brooksville, Maine. The Stormwater BMPs utilized were a combination of both wooded and meadow buffers and an under-drained soil filter.

Dunbar & Brawn Construction Laydown Area | Bangor, Maine

Toby designed the stormwater BMPs and erosion control measures required for the State Stormwater Permit approval of a laydown area for Dunbar & Brawn Construction in Bangor, Maine. The Stormwater BMPs utilized was an under-drained soil filter.

Deer Park Self-Storage Facility | Milford, Maine

Toby designed the stormwater BMPs and erosion control measures required for the Site Location Development Permit approval of the Deer Park Self-Storage facility in Milford, Maine. The storage facility included an 115,600 square foot climate-controlled storage and retail store building along with 824 storage units. The stormwater BMPs utilized was two wet ponds.

CIANBRO

BRUCE METRICK

SENIOR PROJECT MANAGER

With Cianbro Since 2007

CERTIFICATIONS & TRAINING:

Project Management Administration

EDUCATION

Master's in Business Administration – Lehigh University; Bethleham, PA
B.S Mechanical Engineering – U.S. Naval Academy; Annapolis, MD
Naval Nuclear Power School and Prototype Graduate; Goose Creek, SC

CURRENT RESPONSIBILITIES

As Senior Project Manager, Bruce is the point of contact for the project team and is responsible for direct contact with the client. Bruce leads the project team in regards to the business aspects of the job to ensure all safety, customer, people, production, quality, financial and company objectives are met and coordinates resources as needed. Bruce oversees the overall project performance including safety, quality, production, motivation and project morale. It is Bruce's responsibility to establish and maintain a high level of project performance and professionalism amongst the entire project team. Bruce is also responsible for overseeing the direct day-to-day supervision of all subcontractors to ensure the project team's commitment to management of cost, schedule, and quality is maintained and that project goals are met or exceeded. The attitude Bruce sets forth parallels the Cianbro Team's policies and reflects the professionalism of the entire Project Team and Cianbro.

EXPERIENCE

Bruce has over 40 year's operations, engineering, estimating and project management experience. Following 5 years of service in the US Navy Nuclear Submarine fleet, Bruce worked as a Project and Engineering Manager in the private industrial sector. Capital projects included large industrial gas and chemical facilities, electric power generation plants and large scale water treatment and processing plants. These projects ranged in size from several million to hundreds of millions of dollars in capital costs. Over his career, Bruce has been responsible for managing the development, estimating, engineering and project management of large capital projects. He has worked the majority of his career with Air Products and Chemicals, Inc. where he served as Director of Projects, followed by a similar position with the General Electric Global Water Treatment group. Bruce was an active member of the Construction Industry Institute for many years.

PROJECT EXPERIENCE

- Confidential Northeast Client- Program development support for an HVDC project including route evaluation, permitting and ordinance analysis, GIS mapping for the entire route and estimating.
- Maine Green Line- Program development support including route analysis, community outreach and coordination of GIS and technical design data.
- Central Maine Power (CMP) – Maine Power Reliability Program (MPRP); Augusta, ME- Engineering and Real Estate Manager.
- General Electric-Ionics – Major Water Treatment Projects; Watertown, MA
- Algeria (Hamma) Desalination Facility - $350million EPC Project.
- Aruba Desalination Facility.
- Minneapolis Water Works Purification Facility; Minneapolis, MN
  - Pepsi Bottling Company - Waste Water Treatment; Detroit, MI
- Air Products and Chemicals - Major Chemical, Air Separation and Power Generation Facilities; Allentown, PA
- Exxon Baytown Hydrogen Supply; Baytown, TX
- Texaco Carson Hydrogen Supply; Carson, CA
- Bangkok Co Generation Facility; Thailand
- Air Products Orlando - Coal Generation Facility; Orlando, FL
- Cambria Waste - Coal Cogeneration Facility; Ebensburg, PA
- Taiwan Semi-Conductor Industrial Gas Supply; Taiwan
- Hometown NF3 Industrial Gas Supply; Hometown, PA

CIANBRO

THOMAS M. FIGURA

CHIEF ESTIMATOR

With Cianbro Since 2003

CERTIFICATIONS & TRAINING:

Constructware Contract Management

Heavy Bid Estimating Software

Exposure to Heat &Cold

Hearing Conservation

Work Area Barricade Protection

Hand & Finger Protection

Fire & Safety Extinguisher Use

CIANBRO Accident Prevention Process (CAPP) Observation

Personal Protective Equipment

Fall Protection

Suspended Loads

Confined Space Entry Awareness

Confined Space Changes

Respirator

EDUCATION

B.S. Civil Engineering & Construction Management, Pennsylvania State University; Harrisburg, PA
A.S. Architectural Engineering, Pennsylvania State University; Scranton, PA

PROJECT RESPONSIBILITY

As Chief Estimator, Tom is directly responsible for conceptual estimating for projects in the building market and is the building estimating team leader. Drawing upon a vast experience and knowledge base, Tom is responsible for developing accurate, realistic and cost-effective estimates for our construction management and building projects.

EXPERIENCE

Tom has over 40 years of experience working on various projects within the Building and Industrial & Manufacturing markets as well as experience providing pre-construction services on numerous healthcare and commercial projects. As an estimator, Tom works directly with the project management team to develop cost-effective budgets and schedules. Tom has successfully led the pre-construction and construction teams on various projects. Tom's experience as a manager of projects, operations, and estimating provides Tom the understanding of market costs and a vast network of subcontractors.

PROJECT EXPERIENCE

- Maine Veterans Homes – New 138 Bed Retirement Facility; Augusta, ME
- United States General Services Administration – Alexandria Bay Land Point of Entry; Alexandia Bay, NY
- Portsmouth Naval Shipyard – Defueling Complex; Kittery, ME
- Sebasticook Valley Hospital – Additions, Renovations, and Central Utility Plant; Pittsfield, ME
- Eastern Maine Medical Center – Various Projects; Bangor, ME
  - Penobscot Pavilion / Acute Dialysis Renovations / OR Upgrades / Emergency Drive Relocation / Utility Corridor / Enabling Projects
- Eastern Maine Medical Center – Various Projects; Brewer, ME
  - Rheumatology Treatment Center Fit-Out
  - Pediatric Oncology and Breast Health Clinic
- Franklin Memorial Hospital – Various Projects; Farmington, ME
  - Farmington Family Practice / West Wing Code Repairs / 1st and 2nd Floor Reconstruction – 3 Story MOB & Procedure Space / Roof Reconstruction
- City of Bangor – Cross Insurance Center; Bangor, ME
- Cumberland County – Civic Center Renovations; Portland, ME
- University of Maine – AEWC Offshore Wind Laboratory and Test Stand; Orono, ME
- Penn National Gaming – Hollywood Slots at Bangor; Bangor, ME
- Laurentian Aerospace Hangar; Plattsburgh, NY
- Proctor & Gamble – West Wing Expansion; Auburn, ME
- Wyeth Bio-Pharma Laboratory Renovation; Andover, MA
- Various Projects as Regional Manager and Project Manager – H.E. Sargent Inc; Stillwater, ME
  - Webber West Design/Build MOB Building; Bangor, ME
  - Jackson Laboratory 5-story Fit-Out; Bar Harbor, ME
  - Strafford County Dept. of Corrections County Jail; Dover, NH
  - University of Maine – AEWC Wood Composite Facility; Orono, ME
- Various Projects as Project Superintendent / Project Engineer – The Austin Company; Cincinnati, OH

CIANBRO

ROBERT L. GREENE, LEED AP

PRECONSTRUCTION MANAGER

With Cianbro Since 2008

CERTIFICATIONS & TRAINING:

LEED AP / BD&C

OSHA 30 Hour Certification

Hearing Conservation

Constructware Contract Management

First Aid / CPR / Defibrillator

Fire Safety & Extinguisher Use

Hazardous Materials Communication

Fall Protection

Personal Protective Equipment

EDUCATION

B.S. Civil Engineering, University of Maine, Orono, ME

PROJECT RESPONSIBILITY

As Preconstruction Manager, Bob will work with the Owner and the project team to provide accurate and timely preconstruction support to enable fully informed decision making throughout the preconstruction process. Bob's responsibilities include managing and coordinating the design and preconstruction efforts including budgeting and estimating, permitting support, subcontractor qualification, preliminary scheduling and phasing, and project planning and logistics analysis. Bob also reviews the following: constructability and sustainability, value analysis/engineering, equipment, and safety. Additionally, Bob analyzes life cycle costing, options, and alternatives.

EXPERIENCE

Bob has over 40 years of experience performing duties as a Preconstruction Manager on a variety of projects within the Building Market. Bob has extensive experience working on healthcare projects, in which Bob has been the lead person for overall construction. Bob is experienced in strategic planning and scheduling, estimating, project procurement, construction phase project administration, cost accounting/budget control, quality control, commissioning, and project closeout methods and procedures. Bob has consistently delivered Customer Satisfaction in the areas of safety, quality, schedule, and cost.

PROJECT EXPERIENCE

- Abiomed – Abiomed Facility Expansion; Danvers, MA
- WEX – Darling Avenue Fit-out; Portland, ME
- Evonik – HPAPI Lab Renovation; Birmingham, AL
- Eastern Maine Medical Center – Various Projects; Bangor, ME
  - Pre-construction for Penobscot Pavilion / Acute Dialysis Renovations / OR Upgrades / Emergency Drive Relocation / Utility Corridor / Enabling Projects / Parking Garage Repairs
- First MRI – Interior Renovations & HVAC Upgrades; Bangor, ME
- American Healthcare Inc. – MRI Facilities; Portsmouth, NH
- Procter & Gamble – Tank Farm Expansion Projects; Andover, MA
- City of Bangor – Columbia St. Parking Garage; Bangor, ME
- Town of Pittsfield – Library Expansion; Pittsfield, ME
- Cutler Associates; Various Locations
  - Fallon Medical Clinic(s); Several Locations; MA
  - Medical Office Buildings including Labs and Pharmacies
  - UMass Cancer Research Lab; Worcester, MA
  - Multiple Lab Fit-outs
  - Memorial Hospital; Worcester, MA
  - Cancer Treatment Center and Parking Garage
  - Hahnemann Hospital; Medical Suite Fit-out; Worcester, MA
  - St. Vincents Hospital; Medical Suite Fit-out; Worcester, MA
  - Melrose Wakefield Hospital; Melrose, MA
    - Medical Office Building
    - OB Suite
    - Medical Surgical Floor
    - Parking Garage
  - Mount Holyoke College; Unified Science Center; South Hadley, MA
  - Wheaton College; Performing Arts Center; Norton, MA
  - American Superconductor; 350 sf Wire Manufacturing Facility; Devens, MA
  - Polar Beverages Corporation; New Bottling Plant; Worcester, MA

SECTION 5

NOISE

The Whole Oceans property is zoned heavy industrial in the Town of Bucksport and the current use, as indicated by the existing Site Location of Development Act permit for the site, is industrial in nature. The Town ordinance requires that projects within the Town comply with Maine Department of Environmental Protection (MDEP) Regulations on noise, therefore this project must meet the Sound Level Limits defined within 06-096 CMR 375, Section 10 “Control of Noise”.

Noise Limits

Generally, 06-096 CMR 375, Section 10 regulates the control of noise being produced from both the construction of and routine operation of the proposed project, at all hours. Sound levels are limited during routine operation to 75dBA, any time of day, measured at exterior property lines. They are further limited at any Protected Location, as defined in Section 10 (G). Sound levels are limited during construction of the project depending upon the time of day and the duration of the construction operation. Construction equipment is further regulated by federal noise regulations. Please refer to 06-096 CMR 375, Section 10(C)(1)&(2) for these limits.

Neighborhood/Project Layout

Properties and features adjacent to the Whole Oceans’ Parcels 1 and 2 (see Section 2 of this permit for Parcel information) include:

- Route 15 (River Road),
- Penobscot River,
- Railroad tracks,
- Capped landfill,
- Substation and high voltage transmission lines,
- Industrial zoned land (tank farm and retained land that was formerly part of the Mill),
- Residential homes (far northerly border of Parcel 1 and southerly border of Parcel 2), and
- A Church (between Route 15 and Parcel 2).

Protected Locations near the site are limited to the Church property and residential properties located adjacent to Parcel 2. The proposed layout of development on Parcel 2 puts Ancillary Building #1 approximately 65 feet from the Church property boundary and 120 feet from the closest residential property boundary. The use of this building is expected to be a combination of office space, a visitor center and warehouse/storage space.

The proposed layout of development for Parcel 1 puts the South Grow-out building approximately 220 feet away from the Church property and 85 feet away from the easterly property boundary of the site. The Freshwater Building will be approximately 52 feet from the property line to the south and 224 feet from the easterly property line.

Base Data

Data on noise levels at land-based fish farms indicates the following:

- A research study was done at fish hatcheries in South Dakota to measure sound levels within a fish hatchery and their impacts on employees. The paper, published in 2017 by Jill Voorhees and Michael Barnes, is titled "Occupational Noise Levels in Two Fish Rearing Buildings at an Aquaculture Facility". Results from the study show that during normal operation, interior sound levels were 70.2 dBA, and that the highest mean tank room noise obtained was 73 dBA during tank cleaning. The noise producing equipment associated with the fish farm facility is predominately generated by pumps and tank cleaning equipment. The highest recorded sound level during the study was from the power washer, which recorded a level of 83.2 dBA.
- Noise readings were taken at two different RAS facilities to provide a baseline for expected noise levels. The highest readings outside the buildings at the respective facilities were found to be 70 dBA approximately 10 meters (32.8 feet) from the building at one facility and 85 dBA approximately 5 meters (16.4 feet) from the building at the other facility.

Operational Noise Level Calculations

Equipment similar to those used at other RAS facilities will be used at the Bucksport facility. The most likely location for noise generated on the project site to be above the MDEP limits is in the southeast corner of Parcel 1. This corner is where proposed buildings are closest to exterior property boundaries, existing buildings and Protected Locations. The expected uses (office, visitor center and storage) within Ancillary Building #1 are not expected to generate noise levels above 70 dBA inside of the building, therefore we are assuming a noise level of 60 dBA at 10 feet from the building. (OSHA suggests that 60 dBA is common measurement for normal conversation from 3 feet away.)

Using the standard inverse square law method and assuming a range from 70 dBA, 32.8 feet and 85 dBA, 16.4 feet for Parcel 1 and 60 dBA at 10 feet for Parcel 2, the expected sound levels range from:

South Grow-Out Building to:

- Church Property: 53.5 dBA to 62.4 dBA at 220 feet (Limit is 70 dBA)
- Eastern Property Line: 61.7 dBA to 70.7 dBA at 85 feet (Limit is 75 dBA)

Freshwater Building to:

- Southern Property Line: 66 dBA to 75 dBA at 52 feet (Limit is 75 dBA)
- Eastern Property Line: 53.3 dBA to 62.3 dBA at 224 feet (Limit is 75 dBA)

Ancillary Building #1 to:

- Church Property: 43.7 dBA at 65 feet (Limit is 70 dBA)
- Southern Property Line (Residential property): 38.4 dBA at 120 feet (Limit is 60 dBA)

Emergency Power Generators

Three (3) 4MW diesel powered generators are proposed to provide back-up power for the full build-out of the Whole Oceans Aquaculture Facility. The generators will only be operated at times when power from the grid is cut off or inadequate and for normal maintenance/testing procedures, and thus their use will not be part of routine operations. Furthermore, they will be located in an area of the site that is adjacent to the existing Central Maine Power sub-station and will be enveloped by weatherproof enclosures that will dampen sounds to meet MDEP noise level limits at the property lines.

Construction Operations

Whole Oceans and its Contractors will be required to meet the sound level limits presented in 06-096 CMR 375, Section 10(C)(2) during the construction of the site, as well as other State and Federal regulations regarding allowable sounds levels for construction equipment.

Conclusion

Based on the research study as well as recorded values at existing facilities and manufacturer information, sound levels generated on the site from routine operations, including emergency generators, will be at or below the noise limits presented in 06-096 CMR 375, Section 10(C)(1).[1] Additionally, Whole Oceans and its Contractors will be required to meet the sound level limits presented in 06-096 CMR 375, Section 10(C)(2) during the construction of the site, as well as other State and Federal regulations regarding allowable sound levels for construction equipment.

[1] As is demonstrated in this filing, the project will meet MDEP's noise standards in Chapter 375. However, it is not clear that the noise standards even apply to the project. Pursuant to 06-096 CMR 375, Section 10(C)(5), "aquacultural activity" is exempt from regulation. Although that term is not defined in the rules, it would appear that a recirculating aquaculture system is an "aquacultural activity" within the meaning of the rules.

SECTION 6

VISUAL QUALITY AND SCENIC CHARACTER

Whole Oceans currently owns approximately 101 acres of land that was formerly part of the pulp and paper Mill in Bucksport. The proposed Whole Oceans Bucksport Aquaculture Facility will ultimately re-develop approximately 33 acres of the old Mill site. Since this facility is on a significant site for the Town of Bucksport and is visible from Route 15, Fort Knox, the Penobscot Narrows Bridge, and from the Penobscot River, Whole Oceans is excited to be anchoring the Town of Bucksport's Redevelopment Master Plan visions for the old Mill site and assist in turning many of their visions into reality. Please see the attached Executive Summary of the "A.D.A.P.T. Bucksport" report prepared by the Town, which highlights the development of the project as a cornerstone of future build-out of this area of the community.

The Whole Oceans project will introduce buildings of a consistent height, color, and finish that will be in direct contrast to the heavy industrial visual quality of the old Mill. The Mill had many large-scale components, including features such as stacks, large material piles, and conveyors, that were necessary to support the pulp and paper manufacturing use. This resulted in a visual landscape made up of a variety of colors, finishes, heights and angles layered over each other in many cases. Due to the necessary size of the Whole Oceans project, the development scenario illustrated on the report cover's color rendering will not be able to be fully realized, but the intent of the Master Redevelopment Plan, to use an anchor development to support other industrial and commercial uses that will utilize and enhance the resources that are present at the site, will be. Overall, the project will have less visual impact than the prior development and will not have an unreasonable adverse effect on the scenic character of the surrounding area.

Executive Summary

A.D.A.P.T. BUCKSPORT

AIM DEVELOPMENT ACTION PLAN FOR TOMORROW

EPA Area-Wide Brownfields Plan

November 2018

Project Partners:

Eastern Maine Development Corporation · Bucksport Maine · Main Street Bucksport · Bucksport Next · American Iron & Metal · EPA · Bucksport Heart & Soul · Bucksport Bay Area Chamber of Commerce · HCPC

Consulting Team:

ELAN Planning / Landscape Architecture / Engineering D.P.C. · Gartley & Dorsky Engineering & Surveying · The Partnership for Sustainable Ports

Plan Background

Photo Credit: Christopher Grindle Photography

The economy of Eastern Maine was, for years, dependent upon the forest products and papermaking industry. In recent years, however, new economic realities emerged as five mills in the region closed – including the Verso Paper Mill in Bucksport in 2014. American Iron & Metal (AIM) purchased the property in 2015 with intentions to dismantle and recycle much of the existing facility and ultimately redevelop the property. AIM and the Town of Bucksport established a close working relationship that grew into a joint effort with Eastern Maine Development Corporation (EMDC) to plan for the future of the former mill. In 2017, EMDC secured a grant from the U.S. EPA through its Brownfields Area-Wide Planning Program to work with the community, AIM, and other stakeholders to develop a redevelopment plan and implementation strategy for the former Mill.

A Shared Vision for the Future

The Plan represents a shared vision and strategy among AIM, EMDC, town officials, and community residents. As part of the planning process, the Project Team held two public open house events to collect community input and solicited input via an online survey. One-on-one interviews were conducted with dozens of stakeholders and experts. A Local Advisory Committee comprised of residents, town and state officials, business owners, and stakeholders proivded input and guided the process. The public input helped guide and shape the plan and was used to develop an overarching vision statement for the redevelopment area:

Vision Statement

The A.D.A.P.T Area is an economic engine at the head of Penobscot Bay that respects its past while looking to the future as an ongoing source of community pride, identity, and economic vitality.

Bucksport welcomes partnerships with industries that provide jobs in clean, resilient, and diversified businesses. Prosperous enterprises, using the Area's rich set of assets, are located adjacent to high-capacity power generation and an active port of regional significance.

The Area is integrated with the Town of Bucksport in a manner that sustains the long-standing and established community spirit and character for current and future generations.

Strategic Opportunities

In addition to public and stakeholder input, the planning process analyzed economic and market opportunities to identify potential redevelopment uses of the Project Area. The analysis studied industry and real estate trends as well as the physical conditions of the site and surrounding areas including infrastructure, brownfield and environmental characteristics, transportation, land use and zoning, and a port feasibility assessment. Several strong redevelopment opportunities were identified:

- A Bulk Aggregate-Focused Port
- Logistics & Distribution Operations
- Aquaculture & Food Processing/Packaging
- Wood Products Manufacturing
- Composites Manufacturing

The analysis also revealed other opportunities to leverage redevelopment of the Project Area for communitywide economic development and Main Street revitalization.

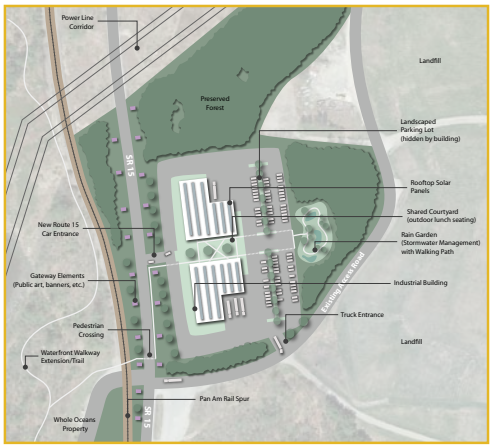
Redevelopment Master Plan

The Redevelopment Master Plan is a future vision for the build out of the area. It includes a mix of uses that are anchored by a State-of-the-Art Aquaculture Facility being developed by Whole Oceans. The company announced plans for the property after the research and analysis phase of the A.D.A.P.T. Plan. The project provides new redevelopment opportunities for the Project Area and Region. The initial phase of the Project includes a 370,000 Sq. Ft. indoor salmon farm, one of the first in the nation and part of the leading wave of what is expected to be a substantial industry of the future.

The Plan features additional uses including an institutional "Marine Campus" for regional R&D collaboration and workforce training for aquaculture and marine industries. An enhanced port is proposed along the waterfront with an export focus on materials such as wood chips, gravel, and other bulk aggregates. A "Community Hub" will provide support services for businesses and act as a community amenity for residents through a community/fitness center and co-working facility. New industrial development areas are proposed along with a new workforce housing neighborhood. A trail connecting to the existing Waterfront Walkway will tie the new development together and with the Waterfront and Main St. area.

Development Concepts

The Master Plan can be built out in a number of configurations. The A.D.A.P.T. Plan presents several development concepts that illustrate potential site plans for specific areas of the Master Plan. While theses illustrations are conceptual, they represent the envisioned uses, scale, and layout of the Master Plan areas and other key areas of interest.



◄ Industrial Development Site

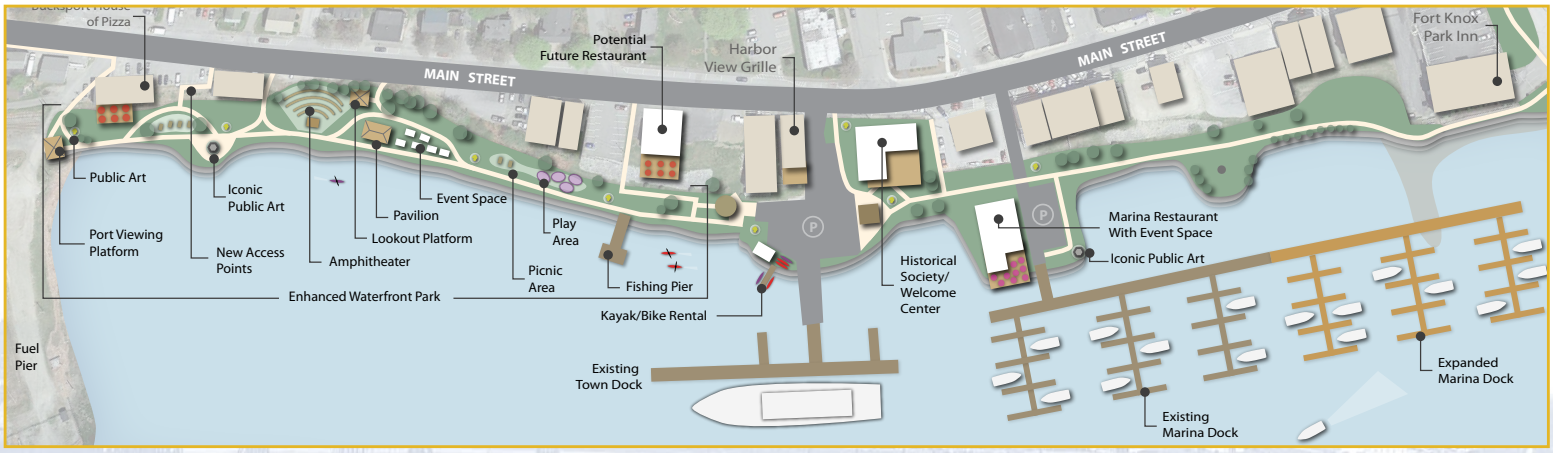
A new industrial site on underutilized land in front of the existing landfill will accommodate new industrial growth in target industries helping to create jobs and grow the tax base in Bucksport.

► Workforce Neighborhood

New quality single family homes are needed in the community for existing households and for new workers that will be employed in the Project Area. The neighborhood will feature preserved open space and walking trails.

▼ Waterfront Park

An enhanced waterfront park will transform a stretch of inactive and obsolete railroad tracks into a positive community amenity with an amphitheater, outdoor event space, picnic areas, children's play areas, and public art. The park will help tie the Project Area into the rest of the community.



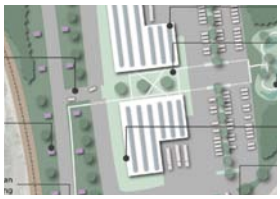
Priority Projects

The Priority Projects were selected by the Advisory Committee to help focus implementation efforts on initiatives likely to have the greatest impact with respect to realizing the Master Plan, building momentum and catalyzing additional projects, supporting economic development, and addressing critical needs and opportunities. Many of the priority "projects" are collections of similar and related plan recommendations that should be considered together when pursuing these priority initiatives.

Enhanced Port. A phased development of a regionally significant deep-water port with access to the Atlantic Ocean. Potential exists for truck and rail intermodal operation with upgraded rail spur connection. Market potential for the export of bulk aggregate materials.

Marine Campus. An institutional anchor providing collaborative R&D and workforce training facilities. Potential opportunities for hands-on training and research associated with Whole Oceans development. Administrative offices for AIM and port users are incorporated into the walkable campus setting.

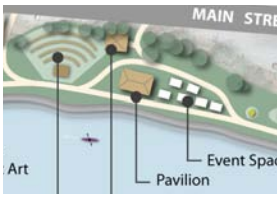
Waterfront Walkway. The existing Waterfront Walkway is extended into the Project Area providing pedestrian connectivity to the Project Area, including the Marine Campus, Whole Oceans, and other future development areas in and around the Project Area such as the workforce neighborhood.



Marketing. Economic development and business recruitment strategies to bring new investment and jobs to Bucksport and the region. New community marketing initiatives to bring new visitors and residents into the community including a focus on Main St. dining, shopping, and entertainment.

Main St. Upgrade. A comprehensive streetscape improvement of the Main Street/River Street corridor that will provide an attractive and pedestrian friendly corridor connecting the Main St. business district to the entire Project Area. New programs to support Main Street businesses and properties.

Waterfront Park. Transforming the inactive and obsolete stretch of rail corridor directly adjacent to the Town's Main Street Area and Town Dock. The park will feature a mix of uses such as performance space, event space, picnic areas, and other park amenities as desired by community members.



Workforce Housing. Policies and programs to increase the supply of quality housing options in the Town with a focus on attracting new workers in the Project Area to live in the community and support local businesses.

Focus: Enhanced Port

A phased port development strategy is proposed beginning with the utilization and enhancement of the existing property and infrastructure. In this phase, circulation improvements, dock extension, and conveyor system are recommended to create a functioning, bulk aggregate-focused port. The long-term vision for the port is to explore filling in the Log Pond area adjacent to the Project Area that is currently unnavigable, shallow, and muddy. This will allow for a greater capacity port with potential for additional importing/exporting such as locally produced seafood and food products and container shipping.

Other Plan Highlights

The A.D.A.P.T. Plan includes a number of other recommendations, projects, and initiatives to assist the Town of Bucksport and Eastern Maine Regional use redevelopment of the Project Area to create jobs, grow and attract businesses, enhance quality of life, and achieve other community goals. These include:

- Public art campaign to build a new salmon-themed identity
- Welcome center with paper-making & aquaculture exhibits
- Annual seafood and salmon themed festival
- Aquaculture program partnership for local students (RSU 25)
- Fiber optic expansion to Project Area, Main St, and Heritage Park
- Community co-working center with shared work spaces

Achieving Success

The Plan includes a detailed guide for implementation including approaches to priority projects, timelines, priority levels, project champions, partners to assist in carrying out recommendations, and potential funding sources and financial feasibility analysis.

Highlighted Implementation Strategies:

- Local Implementation Committee
- Town TIF Implementation Fund
- New Economic Development Support Position
- EMDC Implementation Assistance
- Reactivated Local Economic Development Corporation

Additional Information

For Additional Information Contact:

Michael Ludwig
Eastern Maine Development Corp.
MLudwig@emdc.org
1-800-339-6389

Richard Rotella
Town of Bucksport
rich.rotella@bucksportmaine.gov
207-469-7368

To View the Full Plan Visit: www.bucksportmaine.gov

SECTION 7

WILDLIFE AND FISHERIES

The project makes adequate provision for the protection of wildlife and fisheries. The MDEP has already found in the SLODA permit approval (L-1415-26-A-X) that the Mill did not impact wildlife or fisheries. Further, the proposed Whole Oceans Bucksport Aquaculture Facility has a MEPDES Permit (#ME0037478), as well as a Maine WDL (#W009190-6F-A-N) with plans and procedures in place to be sure the project does not impact wildlife or fisheries either on or near the development site. Please also see that attached letters of support from the Atlantic Salmon Federation, Town of Bucksport, and Gulf of Maine Research Institute that were submitted during the recent review and approval of the MEPDES Permit and WDL.

Atlantic Salmon Federation Fédération du Saumon Atlantique

October 29, 2018

Gregg Wood
Maine Department of Environmental Protection
Division of Water Quality Management Bureau of Water Quality
17 State House Station
Augusta, ME 04333-0017

RE: Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0037478 Maine Waste Discharge License (WDL) #W009190-6F-A-N

Dear Mr. Wood:

I am writing on behalf of the Atlantic Salmon Federation (ASF) in support of Whole Oceans, LLC Maine Pollutant Discharge Elimination System Permit associated with their land-based recirculating aquaculture system (RAS) facility in Bucksport, Maine. We believe the proposed activities and effluent discharges will not have an adverse effect on the Penobscot River and are protective of wild salmon populations.

ASF has partnered with the Conservation Fund's Freshwater Institute on a series of grow out trials and subsequent workshops around the developing technology of land-based RAS. Our experience has demonstrated that this can be an environmentally sustainable industry and that the by-products of salmon production can be greatly reduced, including all solids along with the majority of phosphorous and nitrogen. This area of the lower river is also heavily influenced by both freshwater, saltwater and tides that will serve to readily dilute effluents to background ambient levels.

We are very supportive of the proposed monitoring requirements proposed in the permit. These include a dye study to further identify the mixing characteristics of the effluent, and an ambient water quality monitoring study in selected locations near the facility. We are also supportive of the required Operations and Maintenance Plan and the required Containment Management System (CMS) intended to prevent the possibility of any live fish escaping into the river. ASF was part of a small group that developed the current CMS for the coastal net pens in the early 2000s, which quickly eliminated the history of escapes from the net pens. Though the potential for escaped fish from the facility in the river is very remote, we recommend the mandatory reporting of any escape as opposed to the current threshold of 50 fish escaping to trigger a notification event.

Sincerely,

Andrew Goode
Vice President, US Programs
Atlantic Salmon Federation

Fort Andross, Suite 202 14 Maine Street Brunswick, ME 04011-2030
Tel 207 725 2833 | Fax 207 725 2967 | www.asf.ca

Carrie Beedle

From: Wood, Gregg <Gregg.Wood@maine.gov>
Sent: Monday, October 29, 2018 2:31 PM
To: William Taylor; Elizabeth M. Ransom
Subject: FW: [EXTERNAL SENDER] ME0037478 Proposed Whole Oceans Discharge Permit

*****This message originated outside your organization*****

From: Lessard, Susan [mailto:slessard@bucksportmaine.gov]
Sent: Monday, October 29, 2018 2:28 PM
To: Wood, Gregg <Gregg.Wood@maine.gov>
Subject: [EXTERNAL SENDER] ME0037478 Proposed Whole Oceans Discharge Permit

Good afternoon,

The purpose of this email is to support the application of Whole Oceans for a wastewater discharge permit. The Town of Bucksport has been working with the Whole Oceans team for more than a year and a half. The proposed use of the former VERSO mill site in Bucksport is of great benefit to the Town of Bucksport and the region, and is a more environmentally friendly use of that industrial site than the mills or tannery that were its predecessors.

While I understand that there is concern over the use of a virgin site in the Nordic Applcation for Belfast, I am asking that the Whole Oceans use of a long-time industrial site for an industrial purpose that is more beneficial than previous uses be judged on its own merit and not 'lumped in' to the Nordic application review.

Whole Oceans started its discussions with permitting agencies more than a year ago and has worked hard to understand and address any concerns that the Department has identified. They have done considerable outreach over the past two years to many conservation organizations as well, and are committed to being a good environmental steward of the property and the Penobscot River watershed. They have presented industry standard, documentable evidence for outfall numbers out of an abundance of caution - so that they are not making promises of outcomes that there is no way to benchmark. That does not mean that they will not seek to better those numbers - just that making claims that have no current real-world applications does not provide the transparency and forthright behavior that is a hallmark of this company.

Finally, Whole Oceans is a Maine-based company seeking to help make Maine a world leader in addressing food security, trade imbalance, and providing good paying, environmentally responsible jobs. I encourage you to consider this application based on its own merit, in consideration of its siting on an existing industrial site.

Sincerely,

Susan Lessard
Town Manager

Carrie Beedle

From: Wood, Gregg <Gregg.Wood@maine.gov>
Sent: Tuesday, October 30, 2018 8:43 AM
To: William Taylor; Elizabeth M. Ransom
Subject: FW: [EXTERNAL SENDER] Whole Oceans MPDES and WDL comments

*****This message originated outside your organization*****

From: Don Perkins [mailto:don@gmri.org]
Sent: Monday, October 29, 2018 5:01 PM
To: Wood, Gregg <Gregg.Wood@maine.gov>
Subject: [EXTERNAL SENDER] Whole Oceans MPDES and WDL comments

Dear Mr. Wood:

I'm writing to share our view of the marine ecosystem impact and economic development considerations of the Whole Oceans' proposed RAS salmon facility in Bucksport in light of your draft Maine Pollutant Discharge Elimination System (MEPDES) permit and Maine Waste Discharge License (WDL).

Five years ago, we looked closely at the challenge of how Maine might diversify away from its risky dependence on lobstering as the economic mainstay of our fishing communities. We concluded that responsible aquaculture is the logical complement to our traditional fishing economy. As a result, we're supporting the growth of responsible algae, shellfish, and finfish production.

Maine is blessed with numerous competitive advantages on which to build a successful aquaculture industry. Our fresh and saltwater is clean and cold. We have a deep heritage of fishery skill and experience. We have an extraordinary network of marine research institutions to support the evolution of aquaculture here. The Maine brand is highly respected. We're located close to major metropolitan markets. We're known nationwide as the nation's best-practice state due to the Maine Department of Marine Resources' comprehensive management of aquaculture and the Maine Aquaculture Association's leadership in developing best practices.

Given our interest in aquaculture as a 21st century seafood opportunity and the carrying capacity of coastal waters, we've been supporting strategies of responsible diversification from owner/operator lobstering into owner/operator algae and shellfish farming, modest expansion in sea pen salmon-farming Downeast, and breakthrough attraction and development of on-land finfish RAS (Recirculating Aquaculture System) production between Harpswell and Cutler.

Given the Whole Oceans draft MEPDES Permit and Waste Discharge License open for public comment, I'm writing to share the following observations:

- Whole Oceans has developed a highly-engineered RAS production facility. They've drawn on European know-how and technology and Maine-based marine construction expertise to do so.

- They have chosen a community and prior industrial site to build a safe, contained facility with limited environmental impact.

- The have engineered their facility such that individual salmon escape risk is minimized with redundant barriers and overboard discharge does not diminish water quality against current state water quality classifications.

- They have committed to a competent strategy to monitor impact from operations as they grow and evolve, including a dye study to assess local water quality impact after their first phase is operational.

- They have hired competent operational management and committed to best-practice operational management approaches and training.

- Given the approach that Whole Oceans has taken to each step of their business development over the past three years, including their proposed approach to managing environmental risks, we believe they offer Maine a breakthrough opportunity of a significant capital investment and a leadership role in the evolution of a responsible 21st century seafood economy.

If we can assist you in any way as you consider the Whole Oceans proposal, please contact me.

Sincerely,

Donald W. Perkins
President/CEO

****

Donald W. Perkins
President
Gulf of Maine Research Institute
350 Commercial Street
Portland, Maine 04101
(207) 831-3627 (cell)
(207) 228-1634 (office)
don@gmri.org

SECTION 8

HISTORIC SITES

In the SLODA permit amendment approval (L-07713-20-AF-A) dated September 2, 2015, the Maine Department of Environmental Protection (MDEP) stated that the Maine Historic Preservation Commission reviewed the project and found that the project had no effect upon any structure or site of historic, architectural, or archaeological significance, as defined by the national Historic Preservation Act of 1966. Furthermore, the MDEP concluded that the previous demolition project would not have an adverse effect on the preservation of any historic site either on or near the development site; therefore, it can be concluded that neither will the proposed redevelopment of the site.

SECTION 9

UNUSUAL NATURAL AREAS

In the SLODA permit amendment approval (L-07713-20-AF-A), dated September 2, 2015, the Maine Department of Environmental Protection (MDEP) stated that the Maine Natural Areas Program database does not contain any records documenting the existence of rare or unique botanical features on the project site and that the proposed development would not have an adverse effect on the preservation of any unusual natural areas either on or near the development site. Therefore, it can be concluded that neither will the proposed redevelopment of the site for the Whole Oceans Aquaculture Facility.

SECTION 10

BUFFERS

The Site consists of land which was historically developed as a paper manufacturing facility with associated support facilities. It is bordered directly by the Penobscot River to the west, railroad tracks and Route 15 to the east, remaining Mill properties to the south, undeveloped land to the North, and through historical development and current uses, has little to no vegetative buffering along the property boundaries. No new vegetative buffers or stormwater buffers are proposed to be planted or maintained for this project.

The proposed development has been designed to meet the Town of Bucksport Ordinance requirements for the Industrial Zone and therefore, proposed buildings are set back at least 50 feet from the property lines and no changes in buffering is proposed. Given the necessity of accessing existing water and wastewater discharge infrastructure located in and along the River, combined with the existing Central Maine Power Company easements between the development area and the River, there is little opportunity to propose new vegetative buffer areas along the River.

The Whole Oceans Aquaculture Facility meshes well with the Town's Redevelopment Master Plan (see Section 6) and that report and related renderings of possible development scenarios does not suggest changes in buffering along the property lines.

In light of these factors, the project makes adequate provision for buffer strips.

SECTION 11

SOILS

The MDEP has already found in the SLODA permit approval (L-1415-26-A-X) that the soils on the Mill site are suitable for the nature of the development and present no limitations to development that cannot be overcome through standard engineering practices.

A geotechnical report prepared by SW Cole is included within this Section. Various methods for construction over clay-based soils on the site are currently being analyzed. Blasting will be required by the project and will be addressed in Section 20.

REPORT Rev1

17-0214

June 28, 2019

Explorations and Geotechnical Engineering Services

Proposed Whole Oceans' Facility
Route 15
Bucksport, Maine

Prepared For:
CES, Inc.
Attention: Travis Noyes, P.E.
465 S. Main Street
P.O. Box 639
Brewer, ME 04412

Prepared By:
S. W. Cole Engineering, Inc.
37 Liberty Drive
Bangor, ME 04401
Tel: (207) 848-5714

S.W.COLE
ENGINEERING, INC.

- *Geotechnical Engineering*
- *Construction Materials Testing and Special Inspections*
- *GeoEnvironmental Services*
- *Test Boring Explorations*

www.swcole.com

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17-0214

June 28, 2019

CES, Inc.
Attention: Travis Noyes, P.E.
465 S. Main Street
P.O. Box 639
Brewer, ME 04412

Subject: Explorations and Geotechnical Engineering Services – Rev1
Proposed Whole Oceans' Facility
Route 15
Bucksport, Maine

Dear Travis:

In accordance with our Revised Agreement, dated April 4, 2018, and Contract Addendum, dated October 12, 2018, we have performed subsurface explorations for the subject project. This report summarizes our findings and geotechnical recommendations and its contents are subject to the limitations set forth in Appendix A.

1.0 INTRODUCTION

1.1 Scope and Purpose

The purpose of our services was to obtain subsurface information at the site in order to develop geotechnical recommendations relative to foundations and earthwork associated with the proposed construction. Our scope of services included review of previous explorations, completion of forty-five test boring explorations, soils laboratory testing, a geotechnical analysis of the subsurface findings and preparation of this report.

1.2 Site and Proposed Construction

The site is located at the former Verso paper mill site on the western side of Route 15 in Bucksport, Maine. The site was previously developed including numerous buildings, tanks, waste water treatment process equipment, staging areas and paved and unpaved

access drives. We understand the previous buildings and equipment have been or are currently being razed however, relic foundations and debris are present at the site.

Based on the provided Site Plan Concept 3, dated April 10, 2019, and the detailed Development Description received by email on June 27, 2019, we understand the proposed development calls for construction of a Recirculating Aquaculture System Facility to produce Atlantic salmon. We understand the facility will constructed in phases.

The initial phase will include earthwork (Earthwork Phase) for the development of the Freshwater Building, Power Generation Area and South Grow-out Building (Aquaculture Development Phase). The Aquaculture Development Phase will consist of the Freshwater Building and related utility supply piping and structures followed by the South Grow-out Building and eventually the North Grow-out Building along with Support Functions Building and then Ancillary Buildings. We understand the freshwater building will have a footprint of 75,200 square feet (SF), the south and north grow-out buildings are proposed to occupy footprints of about 384,400 and 400,000 SF, and the support building will have a footprint of 20,000 SF. The buildings are proposed within the central portion of the site. We understand the buildings will be steel-framed with spread footing foundations. We understand on-grade floor slabs are proposed, with thickened portions below tanks. We understand a finished floor elevation (FFE) of 50 feet (project datum) is proposed for the south grow-out building and a FFE of 48 feet is proposed for the north grow-out building. We understand the foundations will extend up to 8 feet below the proposed FFE to allow for plumbing and utilities.

Existing grades within the south grow-out building area generally slope downward from a high point at elevation 86 feet in the southern portion to elevation 34 feet in the eastern portion. Based on the existing grades, we understand tapered cuts of up to 45 feet and tapered fills of up to 16 feet are anticipated to achieve proposed FFE. Existing grades within the north grow-out building area generally slope downward from west to east form about elevation 74 to 36 feet. Based on the existing grade, we understand tapered cuts of up to 26 feet and tapered fills of up to 12 feet are anticipated to achieve proposed FFE. Proposed and existing site features are shown on the “Exploration Location Plan” attached in Appendix B.

2.0 EXPLORATION AND TESTING

2.1 Explorations

2.1.1 Current Explorations

Forty-five test borings (B-18-1 through B-18-44 and B-18-34A) were made at the site from April 17 to 30, 2018 by S. W. Cole Explorations, LLC, a subsidiary of S. W. Cole Engineering, Inc. (S.W.COLE). The exploration locations were selected and established in the field by S.W.COLE using a mapping grade GPS unit. The approximate exploration locations are shown on the "Exploration Location Plan" attached in Appendix B. Logs of the test borings and a key to the notes and symbols used on the logs are attached in Appendix C.

2.1.2 Prior Explorations

Twenty-one test borings (B96-1 through B96-19, B96-11A and B96-11B) were made at the site by S.W.COLE in September 1996 for a prior development concept. The approximate locations of these explorations are shown on the "Exploration Location Plan" attached in Appendix B. Logs of these explorations are attached in Appendix C.

Ten test borings (B94-101 through B94-108, B94-103A and B94-103B) were made at the site by Maine Test Borings, Inc. in September 1994 for a prior development concept. The approximate locations of these explorations are shown on the "Exploration Location Plan" attached in Appendix B. Logs of these explorations are attached in Appendix C.

2.2 Testing

The test borings were drilled using a combination of hollow-stem auger and cased wash-boring drilling methods. The soils were sampled at 2 to 5 foot intervals using a split spoon sampler and Standard Penetration Testing (SPT) methods. Pocket Penetrometer Testing (PPT) was performed where stiffer cohesive soils were encountered. Two thin-walled Shelby Tube clay samples were obtained from test borings B-18-2 and B-18-8 for laboratory consolidation testing. Vane shear testing (VST) was performed where softer silty clay was encountered to estimate strength characteristics. Upon encountering bedrock, test boring B-18-1 was advanced 5 feet into bedrock using NQ2 rock core drilling techniques. SPT blow counts, PPT and VST results and rock core intervals are noted on the logs.

Soil and rock core samples obtained from the explorations were returned to our laboratory for further classification and testing. We performed two one-dimensional consolidation tests, two Atterberg Limit tests and two moisture content tests on Shelby Tube samples of gray silty clay from test borings B-18-2 and B-18-8. Atterberg Limits and moisture content test results are noted on the logs. Results of the consolidation tests are attached in Appendix D.

3.0 SUBSURFACE CONDITIONS

3.1 Soil and Bedrock

Underlying a surficial layer of topsoil, pavement or concrete, pavement, the test borings encountered a soils profile generally consisting of uncontrolled fill soils overlying glaciomarine silt, clay and sand overlying glacial till or fill soils overlying glacial till overlying refusal surfaces (bedrock) with depth. The principal strata encountered are summarized below.

Fill: Uncontrolled fill soils were encountered at the explorations except B-18-27, B-18-36 and B-18-43. The fill soils generally extend to depths of about 1 to 10.5 feet below the existing ground surface. The fill soils generally consisted of sand with varying amounts of gravel and silt. Areas with trace to some organics (wood debris) from previous site operations were noted across the site.

Wood Debris / Relic Organics: Underlying the fill soils, test boring B-18-2 encountered a 2 foot wood debris layer to a depth of about 8 feet below the existing ground surface (bgs). Below the fill, borings B-18-22 and B-18-34A encountered a relic topsoil layer. The relic topsoil layer was observed to be about 0.5 feet thick where encountered.

Glaciomarine Soils: Underlying the fills or relic organic layer, test borings B-18-1 through B-18-9, B-18-13 through B-18-15, B-18-19, B-18-23, B-18-25, B-18-29, B-18-31 through B-18-33, B-18-34A and B-18-39 encountered about 2.5 to 20 feet of glaciomarine soils generally consisting of silty clay with varying amounts of sand. The silty clay generally had a very stiff to stiff crust becoming softer and compressible where clay thickness was greater than about 6 to 8 feet.

Softer, compressible silty clay was encountered in borings B-18-1, B-18-2, B-18-3, B-18-6, B-18-7, B-18-8, B-18-14, B-18-31 and B-18-32 and was about 2 to 13 feet thick where encountered.

Based on the laboratory consolidation testing performed on samples of the softer gray silty clay, the gray silty clay deposit appears to be slightly over-consolidated with an over-consolidation ratio (OCR) of about 1.2 to 1.6. Field vane shear testing performed in the gray silty clay ranged from about 300 to 930 psf with remolded vane shear values ranging from about 50 to 430 psf.

Glacial Till: Underlying the fills or glaciomarine soils, where encountered, the test borings encountered medium dense to very dense gray glacial till generally consisting of silt with varying portions of sand and gravel.

Refusal Surfaces: Refusal surfaces (probable bedrock or boulder) were encountered at test borings B-18-1, B-18-6, B-18-13, B-18-14, B-18-19, B-18-26 through B-18-29, B-18-31, B-18-32, B-18-33, B-18-36, B-18-37, B-18-40, B-18-43 and B-18-44 at depths ranging from 4.4 to 33.6 feet.

Bedrock core obtained from test boring B-18-1 consisted of meta-sandstone of the Bucksport Formation. Rock quality designation (RQD) value for the bedrock core was 75 percent correlating to a Rock Mass Quality (RMQ) of fair.

Not all the strata were encountered at each exploration; refer to the attached logs for more detailed subsurface information. A summary of soil strata encountered and refusal depths are attached in Appendix C.

3.2 Groundwater Conditions

The soils encountered at the test borings were moist to wet from the ground surface. Saturated soils were encountered at depths varying from 5 to 20 feet. Groundwater likely becomes perched on the relatively impervious silty clay and glacial till encountered at the test borings. Long term groundwater information is not available. It should be anticipated that groundwater levels will fluctuate, particularly in response to periods of snowmelt and precipitation, as well as changes in site use.

4.0 EVALUATION AND RECOMMENDATIONS

4.1 General Findings

Based on the subsurface findings, the proposed construction appears feasible from a geotechnical standpoint. However, the varying subsurface conditions (thick fills, softer silty clay and glacial till and shallow bedrock) will present challenges. The principle geotechnical considerations are as follows:

- Based on the subsurface findings, it appears the site is underlain by uncontrolled fill with areas of relic topsoil/organics that vary in thickness from about 0.5 to 13 feet. Uncontrolled fills and relic topsoil/organics should be removed from beneath the proposed buildings. Over-excavations should be backfilled with properly compacted Granular Borrow or Structural Fill.

- Soft, compressible silty clay was observed along the eastern edge of Phase 1 (borings B-18-6, B-18-31 and B-18-32) to depths of about 15 to 20 feet bgs and the northeastern corner of Phase 2 (borings B-18-1, B-18-2, B-18-3, B-18-7 and B-18-8) to depths of about 18 to 27 feet bgs. Considering these subsurface conditions and the potential for differential settlement, we recommend over-excavation and replacement of the softer compressible silty clay. Alternatively, we recommend ground improvement consisting of rigid inclusions into the dense to very dense glacial till or bedrock for foundation and slab support.

- Relatively shallow bedrock was encountered in the southwestern edge of the site where cuts of 25 to 45 feet are proposed. The bedrock will require blasting for excavation. Loose and over-blasted bedrock must be removed beneath the proposed building footprint.

- Following removal of uncontrolled fills and softer compressible silty clay or use of ground improvement as described, we anticipate spread footing foundations and slab-on-grade floors bearing on properly prepared subgrades appear suitable for proposed building foundations, tanks and equipment. We anticipate foundation subgrades will vary from new compacted fills to ground improvement to very stiff silty clay to glacial till to bedrock.

- Spread footings are anticipated to bear on at least 12 inches of Crushed Stone wrapped in non-woven geotextile fabric overlying new compacted fills in over-excavation areas or native very stiff silty clay, glacial till and bedrock. On-grade floor slabs should bear on at least 12-inches of properly compacted Structural Fill overlying properly prepared subgrades.

- The uncontrolled fills below the proposed building envelope are unsuitable for reuse beneath proposed buildings but may be suitable for reuse as Common Borrow for landscape areas.

- Earthwork and grading activities should occur during drier, non-freezing months of late Spring, Summer and Fall. Rubber tired construction equipment should not operate directly on the exposed silts and clays. Excavation of bearing surfaces should be completed with a smooth-edged bucket to lessen subgrade disturbance.

- Blasted bedrock may be processed on-site to reuse for mass fills in the proposed paved areas as well as gravels for pavements and foundation backfill. The existing native site soils are generally silty, clayey and wet and may be suitable for reuse as subgrade fill in paved areas, provided earthwork is completed during dry, non-freezing weather. Reuse of existing uncontrolled fills appear feasible for reuse as Granular Borrow provided they are screened of deleterious material.

4.2 Settlement Evaluation

The gray silty clay encountered along the eastern edge of Phase 1 (borings B-18-6, B-18-31 and B-18-32) and northeastern corner of Phase 2 (borings B-18-1, B-18-2, B-18-3, B-18-7 and B-18-8) is compressible and will consolidate under the weight of new fills and building loads resulting in post-construction settlement. Settlement evaluations were made using a three-dimensional model with Settle3D computer software. The evaluations were completed considering the laboratory consolidation test results, site grading based on the proposed FFEs and provided foundation plan and structural loading information.

Based on our evaluation, including the thicknesses of the proposed fills, we anticipate the weight of these fills will exceed the preconsolidation pressure resulting in settlement. Additionally, based on the differing subsurface conditions consisting of silty clay to glacial till, we anticipate the settlement would occur differentially between column locations. Therefore, we recommend the compressible silty clay be over-excavated or the building

foundations and on-grade floor slabs be supported on ground improved with Rigid Inclusions to mitigate adverse post-construction settlement. The proposed area of over-excavation or ground improvement is shown on the "Explorations Location Plan" attached in Appendix B.

4.3 Site and Subgrade Preparation

We recommend site preparation begin with the construction of an erosion control system to protect adjacent drainage ways and areas outside the construction limits. As much vegetation as possible should remain outside the construction areas to lessen the potential for erosion and site disturbance.

As discussed, the site was previously developed. Foundation remnants and uncontrolled fill and previous ground surfaces (relic topsoil and organics) are present at the site. Based on the borings, the uncontrolled fills vary in thickness from about 1 to 13 feet across the site. Additionally, soft compressible silty clay was observed along the eastern edge of Phase 1 (borings B-18-6, B-18-31 and B-18-32) to depths of about 15 to 20 feet bgs and northeastern corner of Phase 2 (borings B-18-1, B-18-2, B-18-3, B-18-7 and B-18-8) to depths of about 18 to 27 feet bgs. Considering the potential total and differential settlement, we recommend over-excavation and replacement of the uncontrolled fills and softer compressible silty clay in these area. Alternatively, ground improvement consisting of rigid inclusions constructed into the dense glacial till could be used for foundation support without the need for over-excavation of the softer, compressible silty clay.

Following stripping and grubbing of the site, blasting will be required to achieve proposed grades in the building area and portions of the paved areas. We recommend that blasting for bedrock removal be performed to at least 2 feet below slab-on-grade subgrade elevation and at least 1 foot below footing subgrade elevation for the proposed building. We understand the tanks will require below grade piping, which may require deeper blasting depths. Loose and over-blasted bedrock should be removed beneath the building footprint after blasting. Crushed Stone should be thoroughly worked into the bedrock surface to choke any voids or fractures in the bedrock. We anticipate that blasting fines will create a choking material in areas of deeper bedrock cuts. Subgrade soils which become disturbed due to blasting should be removed and replaced with compacted Structural Fill.

Following over-excavation or use of ground improvement, where needed, we anticipate the proposed buildings could be founded on conventional spread footing foundations with on-grade floor slabs.

Over-Excavate and Replace: Over-excavations would consist of removing existing uncontrolled fills, relic topsoil and organics and soft compressible silty clay from beneath the entire building footprints and backfilling with compacted Granular Borrow or Structural Fill. The extent of removal should extend 1 foot laterally outward from outside edge of perimeter footings for every 1 foot of excavation depth (1H:1V bearing splay).

Ground Improvement: The proposed building foundations and slabs could derive support from ground improvement elements (rigid inclusions) extending into the dense glacial till. Ground improvement elements would be used below the proposed building footprint to provide support of conventional spread footing foundations and on-grade floor slabs. We anticipate a 2-foot thick bearing layer (Load Transfer Pad) of Crushed Stone wrapped in a geotextile fabric or Structural Fill would be constructed below footings to help distribute foundation loads to the ground improvement elements.

We recommend excavations to subgrade in soil be performed with a smooth-edged bucket to lessen disturbance of subgrade soils. We recommend perimeter footing subgrades be over-excavated by at least 12-inches and backfilled with compacted Crushed Stone wrapped in a non-woven Geotextile Fabric or Structural Fill. The Crushed Stone will help provide a stable working mat and a drainage media for dewatering. We recommend interior footings and slab areas be over-excavated by at least 12-inches and backfilled with compacted Structural Fill.

4.4 Excavation and Dewatering

Excavation work will generally encounter concrete, bituminous pavement, uncontrolled fill soils, silty clay, glacial till and bedrock. Care must be exercised during construction to limit disturbance of the bearing soils. Earthwork and grading activities should occur during drier Spring, Summer and Fall seasons. Rubber tired construction equipment should not operate directly on the native silty or clayey subgrade soils. Final cuts to subgrade should be performed with a smooth-edged bucket to help minimize soil disturbance.

Based on the subsurface findings, we anticipate blasting will be required for bedrock removal. We recommend a licensed blasting contractor be engaged to provide bedrock

removal. Pre-blast surveys should be completed on surrounding structures, water supply wells and infrastructure prior to commencing blasting activities.

Vibrations from construction should be controlled below threshold limits of 0.5 in/sec for structures, water supply wells and infrastructure within 500 feet of the project site. More restrictive vibration limits may be warranted in specific cases with sensitive equipment, historic structures or artifacts on-site or within close proximity.

Groundwater is expected to be perched near the ground surface and will likely fluctuate based on seasonal conditions. Groundwater was encountered within 5 to 15 feet of existing grades at the borings locations. Open excavations shallower than about 5 to 10 feet appear feasible with conventional sump and pump dewatering techniques. Deeper excavations, such as for over-excavations and utilities, may require sheet piling and dewatering systems for groundwater cutoff and control. Controlling the water levels to at least 1 foot below planned excavation depths will help stabilize subgrades during construction. Excavations must be properly shored or sloped in accordance with OSHA trenching regulations to prevent sloughing and caving of the sidewalls during construction. Care must be taken to preclude undermining adjacent structures and utilities. The design and planning of excavations, excavation support systems, and dewatering is the responsibility of the contractor.

4.5 Foundations and Walls

As discussed, the existing uncontrolled fills, relic topsoil, organics and softer, compressible silty clay are unsuitable for support of the proposed buildings and tanks. However, the buildings may be supported on spread footings provided the uncontrolled fills, relic topsoil and compressible silty clay are over-excavated from beneath the entire building footprint and backfilled with compacted Granular Borrow or alternatively founded on ground improvement elements such as rigid inclusions below footings and slabs. Discussion of potential options for support of the proposed building is provided below.

4.5.1 Spread Footings and Walls

Following over-excavations to remove uncontrolled fills, relic topsoil, organics and areas of softer, compressible silty clays, we anticipate the proposed buildings could be founded on conventional spread footing foundations with on-grade floor slabs. Over-excavations should be backfilled with compacted Granular Borrow or Structural Fill.

We recommend foundations be founded on at least 12 inches of Crushed Stone wrapped in a geotextile fabric (Mirafi 180N) underlain by native soils.

For spread footings supported on properly prepared subgrades as discussed herein, we recommend the following geotechnical parameters for foundation design consideration:

Geotechnical Parameters for Spread Footings and Walls on Over-Excavated Ground	
Design Frost Depth (100-yr AFI)	5 feet
Seismic Soil Site Class	D (IBC 2015)
Net Allowable Soil Bearing Pressure (Over-Excavated Ground)	2.5 ksf
Base Friction Factor (concrete to Crushed Stone)	0.4
Total Unit Weight of Backfill (compacted Structural Fill)	125 pcf
At-Rest Lateral Earth Pressure Coefficient (Structural Fill)	0.5
Internal Friction Angle of Backfill (compacted Structural Fill)	30°
Total Post-Construction Settlement	1 inch
Differential Post-Construction Settlement	½ inch

4.5.2 Ground Improvement

As an alternative to over-excavating the softer, compressible silty clay areas, we recommend the use of ground improvement using rigid inclusions to support the on-grade floor slabs and spread footing foundations for the proposed buildings. The ground improvement elements will need to extend through uncontrolled fills, relic topsoil, organics and softer compressible silty clay and into the dense glacial till strata. For foundations bearing on properly prepared subgrades, we recommend the following geotechnical parameters for design consideration:

Geotechnical Parameters for Spread Footings and Walls on Improved Ground	
Design Frost Depth (100-yr AFI)	5 feet
Seismic Soil Site Class	E (IBC 2015)
Net Allowable Soil Bearing Pressure (Improved Ground)	4.0 ksf
Base Friction Factor	0.4
Total Unit Weight of Backfill	125 pcf
At-Rest Lateral Earth Pressure Coefficient	0.5
Internal Friction Angle of Backfill	30°
Total Settlement (Improved Ground)	1-inch
Differential Settlement (Improved Ground)	½-inch

Following installation of the ground improvement elements, we anticipate a Load Distribution Pad consisting of about 2 feet of Crushed Stone wrapped in a geotextile fabric would be used to help distribute the foundation loads. We recommend the specialty design-build

contractor provide final foundation and slab subgrade preparation recommendations for the selected ground improvement option.

We recommend the contract documents require an engineered submittal for Rigid Inclusions to improve ground conditions to meet or exceed the geotechnical parameters for bearing capacity and settlement as recommended herein. The Rigid Inclusions submittal must include a qualified, full-time, solely-dedicated QC representative and modulus/load testing procedures. We recommend Rigid Inclusions load testing be completed prior to installing production Rigid Inclusions. The Rigid Inclusions submittal must be prepared and sealed by a Professional Engineer licensed in the State of Maine and endorsed by the Rigid Inclusions Installer.

4.6 Foundation Drainage

We recommend an underdrain system be installed on the outside edge of perimeter foundations. The underdrain pipe should consist of 4-inch diameter, perforated SDR-35 foundation drain pipe bedded in Crushed Stone and wrapped in non-woven geotextile fabric, such as Mirafi 180N or equivalent. The underdrain pipe must have a positive gravity outlet protected from freezing, clogging and backflow. Surface grades should be sloped away from the building for positive surface water drainage. A general foundation detail sketch is attached in Appendix B.

4.7 Slab-On-Grade

On-grade floor slabs in heated areas may be designed using a subgrade reaction modulus of 120 pci (pounds per cubic inch) provided the slab is underlain by at least 12-inches of compacted Structural Fill placed over properly prepared subgrades. The structural engineer or concrete consultant must design steel reinforcing and joint spacing appropriate to slab thickness and function.

The presence of shallow bedrock beneath proposed buildings increases the risk of radon intrusion in the building. We recommend a qualified radon consultant be consulted to provide design of a sub-slab radon venting system and positive building pressurization, as needed for building function.

We recommend a sub-slab vapor retarder particularly in areas of the building where the concrete slab will be covered with an impermeable surface treatment or floor covering that may be sensitive to moisture vapors. The vapor retarder must have a permeance

that is less than the floor cover or surface treatment that is applied to the slab. The vapor retarder must have sufficient durability to withstand direct contact with the sub-slab base material and construction activity. The vapor retarder material should be placed according to the manufacturer's recommended method, including the taping and lapping of all joints and wall connections. The architect and/or flooring consultant should select the vapor retarder products compatible with flooring and adhesive materials.

The floor slab should be appropriately cured using moisture retention methods after casting. Typical floor slab curing methods should be used for at least 7 days. The architect or flooring consultant should assign curing methods consistent with current applicable American Concrete Institute (ACI) procedures with consideration of curing method compatibility to proposed surface treatments, flooring and adhesive materials.

4.8 Entrance Slabs and Sidewalks

Entrance slabs and sidewalks adjacent to the building must be designed to reduce the effects of differential frost action between adjacent pavement, doorways, and entrances. We recommend Structural Fill be provided to a depth of at least 5 feet below the top of entrance slabs and adjacent to sidewalks. This thickness of Structural Fill should extend the full width of the entrance slab and outward at least 5 feet, thereafter transitioning up to the bottom of the adjacent sidewalk or pavement gravels at a 3H:1V or flatter slope. General details of this frost transition zone are shown on the foundation detail sketch attached in Appendix B.

4.9 Backfill and Compaction

The silty or clayey fill soils are unsuitable for reuse a Granular Borrow. The more granular fill soils to be removed for foundation excavation appear suitable for re-use as Granular Borrow, provided all deleterious materials are removed. We anticipate the bedrock to be removed will be processed to be used on-site as Crushed Stone or blended with sand to meet the Structural Fill or Granular Borrow materials.

It should be noted that the fill soils observed in the test boring explorations may not be indicative of the material as a result of the sample sizes obtained during the exploration work. We recommend the fill soils be tested for gradation when representative sample sizes can be provided. We recommend the following fill and backfill materials:

Granular Borrow: Fill to raise grades in the building area or backfill for over-excavations over dry subgrades should be sand or silty sand meeting the gradation requirements for Maine Department of Transportation (MaineDOT) Standard Specification 703.19 Granular Borrow.

Structural Fill: Backfill for foundations (interior and exterior) and on-grade slab base material should be clean, non-frost susceptible sand and gravel meeting the gradation requirements for Structural Fill as given below:

Structural Fill	
Sieve Size	**Percent Finer by Weight**
4 inch	100
3 inch	90 to 100
¼ inch	25 to 90
#40	0 to 30
#200	0 to 6

Crushed Stone: Crushed Stone, used as an initial fill layer on wet subgrade, below foundations or for underdrain aggregate, should meet the gradation requirements of MaineDOT Standard Specification 703.22 Underdrain Backfill Material Type C.

Underdrain Sand: Sand used as backfill around below slab utilities and piping should be clean, free-draining sand meeting the requirements of 2014 MaineDOT Standard Specification 703.22 Underdrain Backfill Material Type B or as recommended by the Utility Designer.

Placement and Compaction: Fill should be placed in horizontal lifts and compacted such that the desired density is achieved throughout the lift thickness with 3 to 5 passes of the compaction equipment. Loose lift thicknesses for grading, fill and backfill activities should not exceed 12 inches. We recommend that fill and backfill in building and equipment areas be compacted to at least 95 percent of its maximum dry density as determined by ASTM D-1557. Crushed Stone should be compacted with 3 to 5 passes of a vibratory plate compactor having a static weight of at least 500 pounds.

4.10 Weather Considerations

Construction activity should be limited during wet and freezing weather and the site soils may require drying before construction activities may continue. The contractor should

anticipate the need for water to temper fills in order to facilitate compaction during dry weather. If construction takes place during cold weather, subgrades, foundations and floor slabs must be protected during freezing conditions. Concrete and fill must not be placed on frozen soil; and once placed, the concrete and soil beneath the structure must be protected from freezing.

4.11 Design Review and Construction Testing

S.W.COLE should be retained to review the construction documents to determine that our earthwork and foundation recommendations have been properly interpreted and implemented.

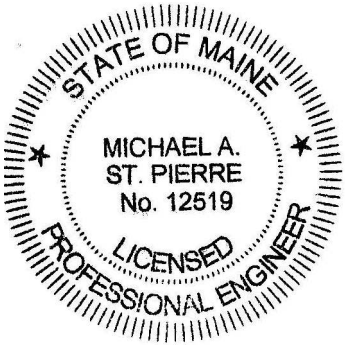
A soils and concrete testing program should be implemented during construction to observe compliance with the design concepts, plans, and specifications. We recommend S.W.COLE be onsite to provide observations for over-excavations and subgrades for slabs and foundations as well as provide testing and special inspection services for ground improvement, soils, concrete, asphalt, steel and spray-applied fireproofing construction materials.

5.0 CLOSURE

It has been a pleasure to be of assistance to you with this phase of your project. We look forward to working with you during the construction phase of the project.

Sincerely,

S. W. Cole Engineering, Inc.



Michael A. St. Pierre, P.E.
Senior Geotechnical Engineer

MAS:nds-rec

Appendix A
Limitations

This report has been prepared for the exclusive use of CES, Inc. for specific application to the proposed Whole Oceans Facility project at the Former Verso Paper Mill on Route 15 in Bucksport, Maine. S. W. Cole Engineering, Inc. (S.W.COLE) has endeavored to conduct our services in accordance with generally accepted soil and foundation engineering practices. No warranty, expressed or implied, is made.

The soil profiles described in the report are intended to convey general trends in subsurface conditions. The boundaries between strata are approximate and are based upon interpretation of exploration data and samples.

The analyses performed during this investigation and recommendations presented in this report are based in part upon the data obtained from subsurface explorations made at the site. Variations in subsurface conditions may occur between explorations and may not become evident until construction. If variations in subsurface conditions become evident after submission of this report, it will be necessary to evaluate their nature and to review the recommendations of this report.

Observations have been made during exploration work to assess site groundwater levels. Fluctuations in water levels will occur due to variations in rainfall, temperature, and other factors.

S.W.COLE's scope of services has not included the investigation, detection, or prevention of any Biological Pollutants at the project site or in any existing or proposed structure at the site. The term "Biological Pollutants" includes, but is not limited to, molds, fungi, spores, bacteria, and viruses, and the byproducts of any such biological organisms.

Recommendations contained in this report are based substantially upon information provided by others regarding the proposed project. In the event that any changes are made in the design, nature, or location of the proposed project, S.W.COLE should review such changes as they relate to analyses associated with this report. Recommendations contained in this report shall not be considered valid unless the changes are reviewed by S.W.COLE.

APPENDIX B
Figures

APPROXIMATE AREA OF OVER-EXCAVATION OR GROUND IMPROVEMENT

B-96-19 B-18-1 B-96-18 B-18-2 B-18-3 B-96-17 B-18-4 B-18-5 B-96-16 B-96-15 B-96-14 B-96-13 B-96-12 B-18-6 B-18-31 B-96-11A B-96-11 B-96-11B B-18-32 B-18-33 B-18-7 B-18-8 B-18-9 B-96-10 B-96-9 B-96-8 B-18-10 B-96-5 B-96-3 B-96-7 B-96-6 B-18-11 B-96-4 B-18-12 B-18-34A B-81-1 SB-30 B-18-13 B-18-14 B-94-101 B-94-102 B-96-1 B-94-103 B-18-34 B-18-35 B-18-36 B-18-15 B-96-2 B-18-16 B-18-17 B-18-18 B-94-108 B-18-37 SB-31 B-94-107 B-18-38 B-18-19 B-18-20 B-18-21 B-18-22 B-18-23 B-18-24 B-94-105 B-18-25 B-94-104 B-94-106 B-18-39 B-18-40 B-18-41 PB-1 PB-2 B-18-26 B-18-27 B-18-28 B-18-29 B-18-30 B-18-43 B-18-44 B-18-42 SB-21 SB-20 SB-23 SB-24 SB-24A SB-22 SB-33A B-96-106 B-96-109 B-96-111 B-96-102 B-96-104 B-96-108A B-96-108 B-96-103 B-96-105 B-96-110 B-96-101 B-96-107

PARCEL 1
91.6 ACRES±

AIM
1.80 ACRES

AIM
5.76 ACRES

CMP
1.87 ACRES

CMP
0.22 ACRES

AIM
13.2 ACRES±

PENOBSCOT RIVER

LEGEND:

- APPROXIMATE BORING LOCATION
- APPROXIMATE TEST PIT LOCATION
- APPROXIMATE PROBE LOCATION
- APPROXIMATE 2018 BORING LOCATION

NOTES:

1. EXPLORATION LOCATION PLAN WAS COMPILED FROM A 1"=150' SCALE PLAN OF THE SITE ENTITLED "EXISTING CONDITIONS PLAN," PREPARED BY CES, INC., DATED 03/27/2018 AND A SITE LAYOUT PLAN PROVIDED BY CES 06/14/2019.
2. THE EXSTING BORINGS WERE LOCATED IN THE FIELD BY GPS SURVEY BY S. W. COLE ENGINEERING, INC. USING A MAPPING GRADE TRIMBLE GPS RECEIVER.
3. THIS PLAN SHOULD BE USED IN CONJUNCTION WITH THE ASSOCIATED S. W. COLE ENGINEERING, INC. GEOTECHNICAL REPORT.
4. THE PURPOSE OF THIS PLAN IS ONLY TO DEPICT THE LOCATION OF THE EXPLORATIONS IN RELATION TO THE EXISTING CONDITIONS AND PROPOSED CONSTRUCTION AND IS NOT TO BE USED FOR CONSTRUCTION.

0 100 200 Feet

NO.	DATE	DESCRIPTION	BY
2	06/18/2019	FINAL REPORT SUBMISSION	CEM
1	05/03/2018	PRELIMINARY FINDINGS SUBMISSION	CEM
0	04/05/2018	PROPOSED EXLORATIONS	CEM

S.W.COLE ENGINEERING, INC.

CES, INC.

EXPLORATION LOCATION PLAN

PROPOSED WHOLE OCEANS' FACILITY
BUCKSPORT, MAINE

Job No.: 17-0214 Scale: 1" = 100'
Date : 04/05/2018 Sheet: 1

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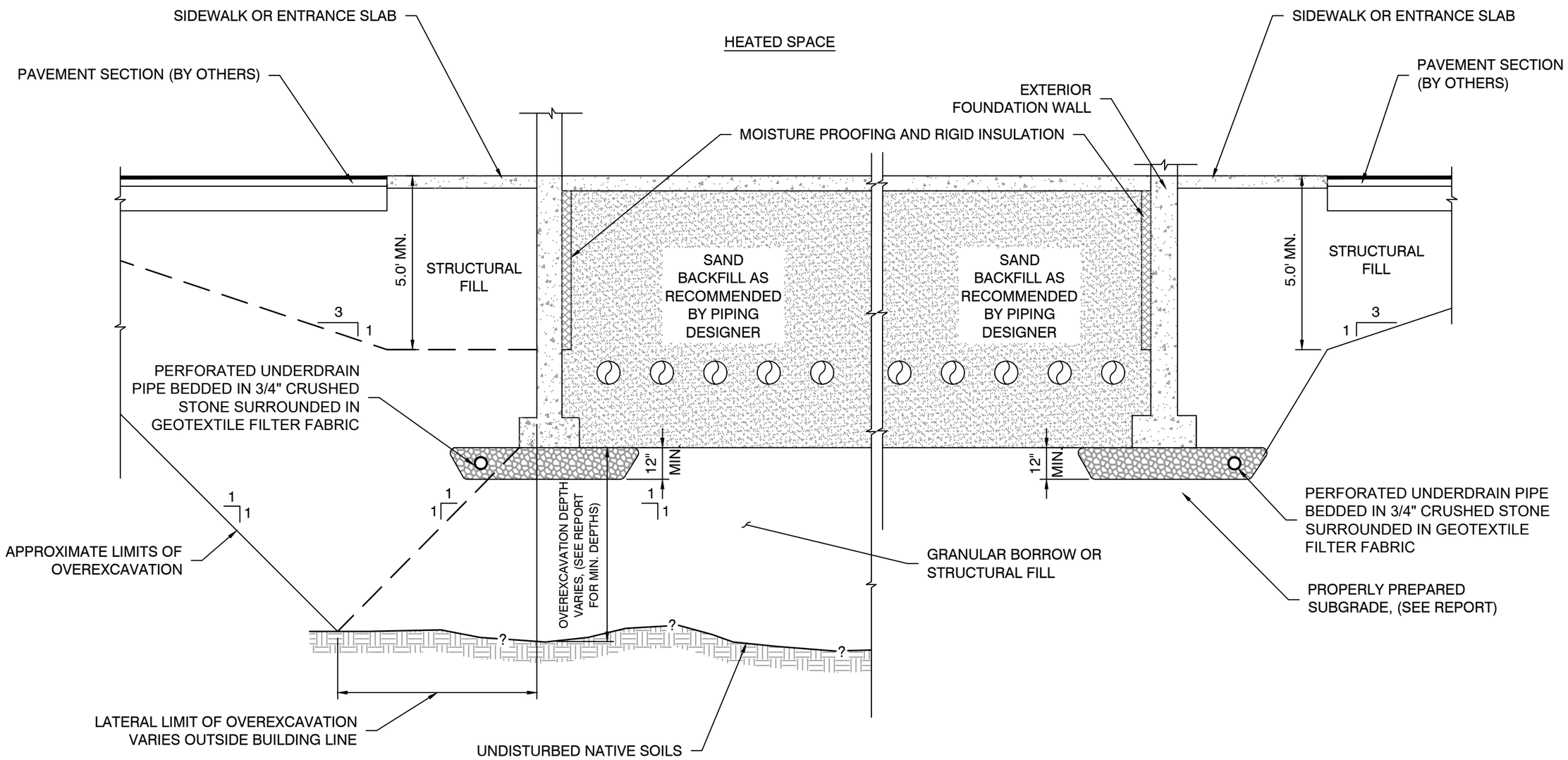

NOTE:

1. UNDERDRAIN INSTALLATION AND MATERIAL GRADATION RECOMMENDATIONS ARE CONTAINED WITHIN THIS REPORT.

2. DETAIL IS PROVIDED FOR ILLUSTRATIVE PURPOSES ONLY, NOT FOR CONSTRUCTION.

S.W.COLE ENGINEERING, INC.

CES, INC.

FOUNDATION DETAIL SKETCH

PROPOSED WHOLE OCEANS' FACILITY
BUCKSPORT, MAINE

Job No.:	17-0214	Scale:	Not to Scale
Date :	06/18/2019	Sheet:	2

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APPENDIX C
Exploration Logs and Key

KEY TO NOTES & SYMBOLS
Test Boring and Test Pit Explorations

Stratification lines represent the approximate boundary between soil types and the transition may be gradual.

Key to Symbols Used:

w	-	water content, percent (dry weight basis)
q_u	-	unconfined compressive strength, kips/sq. ft. - laboratory test
S_v	-	field vane shear strength, kips/sq. ft.
L_v	-	lab vane shear strength, kips/sq. ft.
q_p	-	unconfined compressive strength, kips/sq. ft. – pocket penetrometer test
O	-	organic content, percent (dry weight basis)
W_L	-	liquid limit - Atterberg test
W_P	-	plastic limit - Atterberg test
WOH	-	advance by weight of hammer
WOM	-	advance by weight of man
WOR	-	advance by weight of rods
HYD	-	advance by force of hydraulic piston on drill
RQD	-	Rock Quality Designator - an index of the quality of a rock mass.
γ_T	-	total soil weight
γ_B	-	buoyant soil weight

Description of Proportions:

Trace:	0 to 5%
Some:	5 to 12%
"Y"	12 to 35%
And	35+%
With	Undifferentiated

Description of Stratified Soils

Parting:	0 to 1/16" thickness
Seam:	1/16" to 1/2" thickness
Layer:	½" to 12" thickness
Varved:	Alternating seams or layers
Occasional:	one or less per foot of thickness
Frequent:	more than one per foot of thickness

REFUSAL: **Test Boring Explorations** - Refusal depth indicates that depth at which, in the drill foreman's opinion, sufficient resistance to the advance of the casing, auger, probe rod or sampler was encountered to render further advance impossible or impracticable by the procedures and equipment being used.

REFUSAL: **Test Pit Explorations** - Refusal depth indicates that depth at which sufficient resistance to the advance of the backhoe bucket was encountered to render further advance impossible or impracticable by the procedures and equipment being used.

Although refusal may indicate the encountering of the bedrock surface, it may indicate the striking of large cobbles, boulders, very dense or cemented soil, or other buried natural or man-made objects or it may indicate the encountering of a harder zone after penetrating a considerable depth through a weathered or disintegrated zone of the bedrock.

BORING LOG

S.W.COLE ENGINEERING, INC.

CLIENT: CES, Inc.
PROJECT: Proposed Whole Oceans Development
LOCATION: River Road, Bucksport, Maine

BORING NO.: B-18- 1
SHEET: 1 of 2
PROJECT NO. 17-0214
DATE START: 4/30/2018
DATE FINISH: 4/30/2018

Drilling Information

LOCATION: See Exploration Location Plan **ELEVATION (FT):** 34' +/- **TOTAL DEPTH (FT):** 39.0 **LOGGED BY:** Nate Strout
DRILLING CO.: S. W. Cole Explorations, LLC **DRILLER:** Matt Leonard **DRILLING METHOD:** Cased Boring
RIG TYPE: Track Mounted Diedrich D-50 **AUGER ID/OD:** N/A / N/A **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic / Automatic **HAMMER WEIGHT (lbs):** 140 / 140 **CASING ID/OD:** 4 in / 4 1/2 in **CORE BARREL:** NQ2 / 2
HAMMER EFFICIENCY FACTOR: 0.92 **HAMMER DROP (inch):** 30 / 30
WATER LEVEL DEPTHS (ft): Soils wet below 11' +/-
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth	Remarks
			1D	D	0-2	24/14	2-3-10-6			0.5 Topsoil; Medium dense, brown Gravelly SAND and SILT with trace organics (Fill)		
			2D	D	2-4	24/7	8-22-4-7					
30												
	5		3D	D	5-7	24/17	6-8-9-11	q_P=8 ksf		5.0 Very stiff to medium consistency, brown and gray Silty CLAY		
25												
	10		4D	D	10-12	24/24	3-3-3-2	q_P=1-2 ksf				
										11.7 Soft consistency, gray Silty CLAY		
20												
	15		1V	B	15.5-16	6		S_V=.39/.05ksf				
			2V	B	16.5-17	6		S_V=.36/.07ksf				
15												
	20		3V	B	20.5-21	6		S_V=.39/.07ksf				
			4V	B	21.5-22	6		S_V=.42/.09ksf				
10												
	25		5D	D	25-25.2	2/2	50/2"			24.8 Medium dense, brown Silty Gravelly SAND with cobbles (Glacial Till)		
5												
	30		6D	D	30-32	24/15	16-13-13-13					
0			R1	R	34-39	60/56	75			33.6 Medium gray, metamorphosed Sandstone, foliated at 70 to 90° (from horizontal), cross		

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

(Continued Next Page)

BORING / WELL 17-0214.GPJ SWCE TEMPLATE.GDT 6/14/19

BORING LOG

CLIENT: CES, Inc.
PROJECT: Proposed Whole Oceans Development
LOCATION: River Road, Bucksport, Maine

BORING NO.: B-18- 1
SHEET: 2 of 2
PROJECT NO. 17-0214
DATE START: 4/30/2018
DATE FINISH: 4/30/2018

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth	Remarks
-5										cutting joints at 30°, locally filled with quartz, recrystallized to gneiss (Bucksport Formation)		

Bottom of Exploration at 39.0 feet

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 17-0214.GPJ SWCE TEMPLATE.GDT 6/14/19

BORING LOG

S.W.COLE ENGINEERING, INC.

CLIENT: CES, Inc.
PROJECT: Proposed Whole Oceans Development
LOCATION: River Road, Bucksport, Maine

BORING NO.: B-18- 2
SHEET: 1 of 1
PROJECT NO. 17-0214
DATE START: 4/17/2018
DATE FINISH: 4/17/2018

Drilling Information

LOCATION: See Exploration Location Plan **ELEVATION (FT):** 35' +/- **TOTAL DEPTH (FT):** 32.0 **LOGGED BY:** Nate Strout
DRILLING CO.: S. W. Cole Explorations, LLC **DRILLER:** Matt Leonard **DRILLING METHOD:** Cased Boring
RIG TYPE: Track Mounted Diedrich D-50 **AUGER ID/OD:** N/A / N/A **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic / Automatic **HAMMER WEIGHT (lbs):** 140 / 140 **CASING ID/OD:** 4 in / 4 1/2 in **CORE BARREL:**
HAMMER EFFICIENCY FACTOR: 0.92 **HAMMER DROP (inch):** 30 / 30
WATER LEVEL DEPTHS (ft): Soils wet below 15'
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_U = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_2O Depth	Remarks
			1D	D	0-2	24/15	5-7-12-7			Medium dense, brown Gravelly SAND, some silt with cobbles (Fill)		
										1.8 Loose to medium dense, gray Sandy SILT, some gravel (Fill)		
30	5		2D	D	5-7	24/22	2-3-50-12					
										6.0 Wood Debris		
										8.0 Very stiff consistency, brown and gray Silty CLAY		
25	10		3D	D	10-12	24/20	5-8-10-14	q_P=5-6 ksf				
20	15		4D	D	15-17	24/24	3-3-5-5					
										16.0 Soft consistency, gray Silty CLAY		
15	20		1U	U	20-22	24/24		ID 21455B w =40.1 % W_L=39 W_P=20				
			1V	V	22.5-23	6		S_V=.40/.11ksf				
			2V	V	23.5-24	6		S_V=.43/.15ksf				
10	25											
			3V	V	25.5-26	6		S_V=.30/.10ksf				
			4V	V	26.5-27	6		S_V=.30/.08ksf				
										27.0 Medium dense, gray Sandy SILT, some gravel and clay with cobbles (Glacial Till)		
5	30		5D	D	30-32	24/3	8-12-12-12					

Bottom of Exploration at 32.0 feet

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 17-0214.GPJ SWCE TEMPLATE.GDT 6/14/19

BORING LOG

S.W.COLE ENGINEERING, INC.

CLIENT: CES, Inc.
PROJECT: Proposed Whole Oceans Development
LOCATION: River Road, Bucksport, Maine

BORING NO.: B-18- 3
SHEET: 1 of 1
PROJECT NO. 17-0214
DATE START: 4/17/2018
DATE FINISH: 4/17/2018

Drilling Information

LOCATION: See Exploration Location Plan **ELEVATION (FT):** 36' +/- **TOTAL DEPTH (FT):** 27.0 **LOGGED BY:** Nate Strout
DRILLING CO.: S. W. Cole Explorations, LLC **DRILLER:** Matt Leonard **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50 **AUGER ID/OD:** 2 1/4 in / 5 5/8 in **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic **HAMMER WEIGHT (lbs):** 140 **CASING ID/OD:** N/A /N/A **CORE BARREL:**
HAMMER EFFICIENCY FACTOR: 0.92 **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): Soils wet below 15' +/-
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_U = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_2O Depth	Remarks
35			1D		0-2	24/14	6-5-10-11			0.4 Topsoil; Medium dense, brown Gravelly SAND, some silt (Fill)		
			2D		2-4	24/18	12-12-16-9			2.5 Medium dense, gray Gravelly Sandy SILT (Fill)		
30	5		3D		5-7	24/20	3-4-5-5			5.0 Loose, gray and brown Clayey SILT, some sand, trace gravel and organics (Fill)		
25	10		4D		10-12	24/24	5-7-8-11	q_P=8-9+ ksf		10.0 Hard to medium consistency, brown and gray Silty CLAY		
20	15		5D		15-17	24/24	2-3-2-3	q_P=2 ksf		16.0 Soft consistency, gray Silty CLAY		
										18.0 Medium dense, gray Gravelly Silty SAND, some clay with cobbles (Glacial Till)		
15	20		6D		20-22	24/16	8-8-6-12					
10	25		7D		25-27	24/15	9-12-12-15					

Bottom of Exploration at 27.0 feet

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 17-0214.GPJ SWCE TEMPLATE.GDT 6/14/19

BORING LOG

S.W.COLE ENGINEERING, INC.

CLIENT: CES, Inc.
PROJECT: Proposed Whole Oceans Development
LOCATION: River Road, Bucksport, Maine

BORING NO.: B-18- 4
SHEET: 1 of 1
PROJECT NO. 17-0214
DATE START: 4/17/2018
DATE FINISH: 4/17/2018

Drilling Information

LOCATION: See Exploration Location Plan **ELEVATION (FT):** 35' +/- **TOTAL DEPTH (FT):** 32.0 **LOGGED BY:** Nate Strout
DRILLING CO.: S. W. Cole Explorations, LLC **DRILLER:** Matt Leonard **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50 **AUGER ID/OD:** 2 1/4 in / 5 5/8 in **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic **HAMMER WEIGHT (lbs):** 140 **CASING ID/OD:** N/A /N/A **CORE BARREL:**
HAMMER EFFICIENCY FACTOR: 0.92 **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): ▽ 16 ft Free water observed at 16'
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_U = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth	Remarks
			1D		0-2	24/15	8-10-11-12			0.4 Topsoil; Medium dense, brown Gravelly SAND, some silt (Fill)		
			2D		2-4	24/16	8-9-7-7			3.0 Hard consistency, brown and gray Silty CLAY		
30	5		3D		5-7	24/24	4-7-8-11	q_P=8-9 ksf				
										8.4 Medium dense, brown Gravelly Sandy SILT, some clay (Glacial Till)		
25	10		4D		10-12	24/14	7-12-14-11					
20	15		5D		15-17	24/15	3-3-4-4			15.0 Medium dense, brown Clayey Sandy SILT, some gravel (Glacial Till)	▽	
15	20		6D		20-22	24/16	3-7-10-10			20.5 Medium dense, brown Gravelly Sandy SILT, some clay (Glacial Till)		
10	25		7D		25-27	24/15	4-6-8-8					
5	30		8D		30-32	24/15	12-26-19-15			30.0 Dense, brown Gravelly Silty SAND, some clay (Glacial Till)		

Bottom of Exploration at 32.0 feet

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 17-0214.GPJ SWCE TEMPLATE.GDT 6/14/19

BORING LOG

S.W.COLE ENGINEERING, INC.

CLIENT: CES, Inc.
PROJECT: Proposed Whole Oceans Development
LOCATION: River Road, Bucksport, Maine

BORING NO.: B-18- 5
SHEET: 1 of 1
PROJECT NO. 17-0214
DATE START: 4/18/2018
DATE FINISH: 4/18/2018

Drilling Information

LOCATION: See Exploration Location Plan
ELEVATION (FT): 35' +/-
TOTAL DEPTH (FT): 27.0
LOGGED BY: Nate Strout
DRILLING CO.: S. W. Cole Explorations, LLC
DRILLER: Matt Leonard
DRILLING METHOD: Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50
AUGER ID/OD: 2 1/4 in / 5 5/8 in
SAMPLER: Standard Split-Spoon
HAMMER TYPE: Automatic
HAMMER WEIGHT (lbs): 140
CASING ID/OD: N/A /N/A
CORE BARREL:
HAMMER EFFICIENCY FACTOR: 0.92
HAMMER DROP (inch): 30
WATER LEVEL DEPTHS (ft): Soils wet below 10' +/-
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_2O Depth	Remarks
			1D		0-2	24/17	8-12-8-11			0.3 Topsoil; Medium dense, brown Gravelly SAND, some silt with cobbles (Fill)		
			2D		2-4	24/13	8-7-7-6					
30	5		3D		5-7	24/24	4-5-8-8	q_P=6-7 ksf		5.0 Very stiff consistency, brown and gray Silty CLAY		
										8.5 Medium dense, brown Gravelly Silty CLAY (Glacial Till)		
25	10		4D		10-12	24/16	5-8-8-8			11.5 Medium dense, brown Silty Gravelly SAND with cobbles (Glacial Till)		
20	15		5D		15-17	24/3	12-13-20-21					
15	20		6D		20-22	24/14	9-10-12-13			20.0 Medium dense, gray Gravelly Sandy SILT, some clay with cobbles (Glacial Till)		
10	25		7D		25-27	24/16	9-11-13-13					

Bottom of Exploration at 27.0 feet

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 17-0214.GPJ SWCE TEMPLATE.GDT 6/14/19

BORING LOG

S.W.COLE ENGINEERING, INC.

CLIENT: CES, Inc.
PROJECT: Proposed Whole Oceans Development
LOCATION: River Road, Bucksport, Maine

BORING NO.: B-18- 6
SHEET: 1 of 1
PROJECT NO. 17-0214
DATE START: 4/18/2018
DATE FINISH: 4/18/2018

Drilling Information

LOCATION: See Exploration Location Plan **ELEVATION (FT):** 34' +/- **TOTAL DEPTH (FT):** 27.2 **LOGGED BY:** Nate Strout
DRILLING CO.: S. W. Cole Explorations, LLC **DRILLER:** Matt Leonard **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50 **AUGER ID/OD:** 2 1/4 in / 5 5/8 in **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic **HAMMER WEIGHT (lbs):** 140 **CASING ID/OD:** N/A /N/A **CORE BARREL:**
HAMMER EFFICIENCY FACTOR: 0.92 **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): ▽ 11.3 ft Free water observed at 11.3 feet
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_U = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth	Remarks
			1D		0-2	24/15	5-7-5-3			0.3 Topsoil; 1.0 Medium dense, brown Silty Gravelly SAND (Fill)		
			2D		2-4	24/24	5-5-8-11	q_P=8 ksf		2.0 Medium dense, gray Clayey SILT, some sand (Fill)		
30										Hard to stiff consistency, brown and gray Silty CLAY		
	5		3D		5-7	24/24	4-5-6-8	q_P=5-6 ksf				
25												
	10		4D		10-12	24/24	1-2-1-2			with shells and gravel from 10 to 11'		
										11.0 Soft consistency, gray Silty CLAY	▽	
20												
	15		1V	B	15.7-16	4		S_V=1.80/.62ksf		16.0 Medium dense, brown Gravelly Silty SAND (Glacial Till)		
			5D		16.2-17.7	18/18	14-11-12					
15												
	20		6D		20-22	24/16	7-11-11-11			20.0 Medium dense, gray Sandy SILT, some gravel and clay with cobbles (Glacial Till)		
10												
	25		7D		25-26.5	18/6	7-48-56					

Refusal at 27.2 feet
Probable Boulder or Bedrock

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 17-0214.GPJ SWCE TEMPLATE.GDT 6/14/19

BORING LOG

S.W.COLE ENGINEERING, INC.

CLIENT: CES, Inc.
PROJECT: Proposed Whole Oceans Development
LOCATION: River Road, Bucksport, Maine

BORING NO.: B-18- 7
SHEET: 1 of 1
PROJECT NO. 17-0214
DATE START: 4/19/2018
DATE FINISH: 4/19/2018

Drilling Information

LOCATION: See Exploration Location Plan
ELEVATION (FT): 40' +/-
TOTAL DEPTH (FT): 26.5
LOGGED BY: Bob Chaput
DRILLING CO.: S. W. Cole Explorations, LLC
DRILLER: Matt Leonard
DRILLING METHOD: Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50
AUGER ID/OD: 2 1/4 in / 5 5/8 in
SAMPLER: Standard Split-Spoon
HAMMER TYPE: Automatic
HAMMER WEIGHT (lbs): 140
CASING ID/OD: N/A /N/A
CORE BARREL:
HAMMER EFFICIENCY FACTOR: 0.92
HAMMER DROP (inch): 30
WATER LEVEL DEPTHS (ft): ▽ 6 ft Free water observed at 6'
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth	Remarks
										0.4 Bituminous Pavement (5.25")		
			1D		0.5-2.5	24/10	12-14-20-31			Dense, brown Gravelly Silty SAND with cobbles (Fill)		
			2D		2.5-4.5	24/24	30-41-44-21			3.0 Dense to medium dense, gray Gravelly SAND, some silt (Fill)		
35	5		3D		5-7	24/2	4-6-8-10			6.0 Very stiff to stiff consistency, brown and gray Clayey SILT	▽	
30	10		4D		10-12	24/24	2-2-2-3	q_p=2-2.25 ksf		with shells below 10'		
										12.0 Soft consistency, gray Silty CLAY		
25	15		5D		15-17	24/24	WOH-1/12"-1					
20	20											
			1V		20.7-21	4		S_V=.37/.31ksf				
			2V		21.7-22	4		S_V=.62/.31ksf		22.2 Probable Glaciall Till soils (Split spoon sampler broken obtaining sample 6D)		
15	25		6D		25-26.5	18/0	11-21-50					

Bottom of Exploration at 26.5 feet

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 17-0214.GPJ SWCE TEMPLATE.GDT 6/14/19

BORING LOG

S.W.COLE ENGINEERING, INC.

CLIENT: CES, Inc.
PROJECT: Proposed Whole Oceans Development
LOCATION: River Road, Bucksport, Maine

BORING NO.: B-18- 8
SHEET: 1 of 1
PROJECT NO. 17-0214
DATE START: 4/17/2018
DATE FINISH: 4/17/2018

Drilling Information

LOCATION: See Exploration Location Plan
ELEVATION (FT): 38' +/-
TOTAL DEPTH (FT): 27.0
LOGGED BY: Bob Chaput
DRILLING CO.: S. W. Cole Explorations, LLC
DRILLER: Matt Leonard
DRILLING METHOD: Cased Boring
RIG TYPE: Track Mounted Diedrich D-50
AUGER ID/OD: N/A / N/A
SAMPLER: Standard Split-Spoon
HAMMER TYPE: Automatic / Automatic
HAMMER WEIGHT (lbs): 140 / 140
CASING ID/OD: 4 in / 4 1/2 in
CORE BARREL:
HAMMER EFFICIENCY FACTOR: 0.92
HAMMER DROP (inch): 30 / 30
WATER LEVEL DEPTHS (ft): Soils wet below 10' +/-
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:

Water Level
- ▽ At time of Drilling
- ▼ At Completion of Drilling
- ▼ After Drilling

D = Split Spoon Sample
U = Thin Walled Tube Sample
R = Rock Core Sample
V = Field Vane Shear

Pen. = Penetration Length
Rec. = Recovery Length
bpf = Blows per Foot
mpf = Minute per Foot

WOR = Weight of Rods
WOH = Weight of Hammer
RQD = Rock Quality Designation
PID = Photoionization Detector

S_v = Field Vane Shear Strength, kips/sq.ft.
q_U = Unconfined Compressive Strength, kips/sq.ft.
Ø = Friction Angle (Estimated)
N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_2O Depth	Remarks
										Concrete (10")		
			1D	D	0.8-1.6	10/8	20-50/4"			0.8 Medium dense, brown SAND and GRAVEL, some silt with cobbles (Fill)		
35										3.0 Medium dense, dark brown Sandy SILT with wood debris (Fill)		
	5		2D	D	5-7	24/24	7-7-10-12	q_P=4 ksf		5.5 Stiff consistency, brown and gray Silty CLAY		
30												
	10		3D	D	10-12	24/24	3-3-6-6	q_P=3 ksf				
25										14.0 Soft consistency, gray Silty CLAY		
	15		1U	U	15-17	24/24		ID 21456B w =35.7 % W_L=33 W_P=19				
20			1V	V	17.5-18	6		S_V=.49/.14ksf		18.2 Medium dense, gray Sandy SILT, some gravel and clay with cobbles (Glacial Till)		
	20		4D	D	20-22	24/16	3-7-9-7					
15												
	25		5D	D	25-27	24/6	11-16-18-20					

Bottom of Exploration at 27.0 feet

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 17-0214.GPJ SWCE TEMPLATE.GDT 6/14/19

BORING LOG

S.W.COLE ENGINEERING, INC.

CLIENT: CES, Inc.
PROJECT: Proposed Whole Oceans Development
LOCATION: River Road, Bucksport, Maine

BORING NO.: B-18- 9
SHEET: 1 of 1
PROJECT NO. 17-0214
DATE START: 4/19/2018
DATE FINISH: 4/19/2018

Drilling Information

LOCATION: See Exploration Location Plan **ELEVATION (FT):** 39' +/- **TOTAL DEPTH (FT):** 27.0 **LOGGED BY:** Bob Chaput
DRILLING CO.: S. W. Cole Explorations, LLC **DRILLER:** Matt Leonard **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50 **AUGER ID/OD:** 2 1/4 in / 5 5/8 in **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic **HAMMER WEIGHT (lbs):** 140 **CASING ID/OD:** N/A /N/A **CORE BARREL:**
HAMMER EFFICIENCY FACTOR: 0.92 **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): Soils wet below 4.2' +/-
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_2O Depth	Remarks
										Concrete (9")		
			1D		0.8-2.8	24/16	23-28-26-26			0.8 Medium dense, brown Gravelly SAND, some silt with cobbles (Fill)		
			2D		2.8-4.8	24/12	16-12-8-7					
35	5		3D		5-7	24/2	6-7-7-8			5.0 Stiff consistency, brown Silty CLAY		
30	10		4D		10-12	24/0	14-16-16-19			8.5 Medium dense, brown Gravelly Sandy SILT (Glacial Till)		
25	15		5D		15-17	24/12	5-9-10-11			16.0 Medium dense, gray Gravelly Sandy SILT (Glacial Till)		
20	20		6D		20-22	24/10	4-6-6-8					
15	25		7D		25-27	24/12	11-13-14-10					

Bottom of Exploration at 27.0 feet

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 17-0214.GPJ SWCE TEMPLATE.GDT 6/14/19

BORING LOG

S.W.COLE ENGINEERING, INC.

CLIENT: CES, Inc.
PROJECT: Proposed Whole Oceans Development
LOCATION: River Road, Bucksport, Maine

BORING NO.: B-18-10
SHEET: 1 of 1
PROJECT NO. 17-0214
DATE START: 4/18/2018
DATE FINISH: 4/18/2018

Drilling Information

LOCATION: See Exploration Location Plan **ELEVATION (FT):** 38' +/- **TOTAL DEPTH (FT):** 22.0 **LOGGED BY:** Bob Chaput
DRILLING CO.: S. W. Cole Explorations, LLC **DRILLER:** Matt Leonard **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50 **AUGER ID/OD:** 2 1/4 in / 5 5/8 in **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic **HAMMER WEIGHT (lbs):** 140 **CASING ID/OD:** N/A /N/A **CORE BARREL:**
HAMMER EFFICIENCY FACTOR: 0.92 **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): No free water observed
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_2O Depth	Remarks
			1D		0-1.9	23/18	7-21-29-50/5"			Medium dense, brown Gravelly SAND, some silt with cobbles (Fill)		
										1.5 Medium dense to dense, brown Gravelly Sandy SILT with cobbles (Glacial Till)		
35			2D		3-5	24/20	18-22-18-16					
	5		3D		5-7	24/24	15-15-17-22					
										6.5 Medium dense to dense, gray Sandy SILT, some gravel with cobbles (Glacial Till)		
30												
	10		4D		10-12	24/18	7-9-13-24					
25												
	15		5D		15-17	24/18	22-27-29-24					
20												
	20		6D		20-22	24/12	21-38-35-43					

Bottom of Exploration at 22.0 feet

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 17-0214.GPJ SWCE TEMPLATE.GDT 6/14/19

BORING LOG

S.W.COLE ENGINEERING, INC.

CLIENT: CES, Inc.
PROJECT: Proposed Whole Oceans Development
LOCATION: River Road, Bucksport, Maine

BORING NO.: B-18-11
SHEET: 1 of 1
PROJECT NO. 17-0214
DATE START: 4/18/2018
DATE FINISH: 4/19/2018

Drilling Information

LOCATION: See Exploration Location Plan **ELEVATION (FT):** 38' +/- **TOTAL DEPTH (FT):** 27.0 **LOGGED BY:** Nate Strout
DRILLING CO.: S. W. Cole Explorations, LLC **DRILLER:** Matt Leonard **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50 **AUGER ID/OD:** 2 1/4 in / 5 5/8 in **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic **HAMMER WEIGHT (lbs):** 140 **CASING ID/OD:** N/A /N/A **CORE BARREL:**
HAMMER EFFICIENCY FACTOR: 0.92 **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): ▽ 6.1 ft Free water observed at 6.1'
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth	Remarks
										0.6 Bituminous Pavement (7")		
			1D		1-3	24/14	9-10-11-13			Medium dense, brown Gravelly SAND, some silt with cobbles (Fill)		
35			2D		3-5	24/16	11-8-3-4			2.5 Medium dense to dense, gray Gravelly Sandy SILT with cobbles (Glacial Till)		
	5		3D		5-7	24/20	9-12-13-11				▽	
30												
	10		4D		10-12	24/18	11-15-18-20					
25												
	15		5D		15-17	24/20	19-20-21-16					
20												
	20		6D		20-22	24/18	5-8-10-11					
15												
	25		7D		25-27	24/15	21-22-33-42					

Bottom of Exploration at 27.0 feet

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 17-0214.GPJ SWCE TEMPLATE.GDT 6/14/19

BORING LOG

S.W.COLE ENGINEERING, INC.

CLIENT: CES, Inc.
PROJECT: Proposed Whole Oceans Development
LOCATION: River Road, Bucksport, Maine

BORING NO.: B-18-12
SHEET: 1 of 1
PROJECT NO. 17-0214
DATE START: 4/18/2018
DATE FINISH: 4/18/2018

Drilling Information

LOCATION: See Exploration Location Plan
ELEVATION (FT): 46' +/-
TOTAL DEPTH (FT): 27.0
LOGGED BY: Nate Strout
DRILLING CO.: S. W. Cole Explorations, LLC
DRILLER: Matt Leonard
DRILLING METHOD: Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50
AUGER ID/OD: 2 1/4 in / 5 5/8 in
SAMPLER: Standard Split-Spoon
HAMMER TYPE: Automatic
HAMMER WEIGHT (lbs): 140
CASING ID/OD: N/A /N/A
CORE BARREL:
HAMMER EFFICIENCY FACTOR: 0.92
HAMMER DROP (inch): 30
WATER LEVEL DEPTHS (ft): No free water observed
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_2O Depth	Remarks
45			1D		0.7-2.7	24/13	18-28-27-13			0.6 Bituminous Pavement (7") Dense, brown SAND and GRAVEL, some silt with cobbles (Fill)		
			2D		3-5	24/8	9-21-28-23			3.0 Dense to medium dense, brown Silty Gravelly SAND with cobbles (Fill)		
	5		3D		5-7	24/10	10-15-19-18					
40			4D		7-8.5	18/18	9-16-28			6.0 Medium dense, brown Gravelly SAND and SILT with numerous cobbles (Glacial Till)		
	10		5D		10-12	24/16	9-13-23-21					
35												
	15		6D		15-17	24/19	10-21-25-30			15.0 Medium dense to dense, gray Gravelly Sandy SILT with cobbles (Glacial Till)		
30												
	20		7D		20-22	24/10	20-14-15-23					
25												
	25		8D		25-27	24/12	19-17-22-29					
20												

Bottom of Exploration at 27.0 feet

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 17-0214.GPJ SWCE TEMPLATE.GDT 6/14/19

BORING LOG

S.W.COLE ENGINEERING, INC.

CLIENT: CES, Inc.
PROJECT: Proposed Whole Oceans Development
LOCATION: River Road, Bucksport, Maine

BORING NO.: B-18-13
SHEET: 1 of 1
PROJECT NO. 17-0214
DATE START: 4/19/2018
DATE FINISH: 4/19/2018

Drilling Information

LOCATION: See Exploration Location Plan **ELEVATION (FT):** 50' +/- **TOTAL DEPTH (FT):** 21.2 **LOGGED BY:** Bob Chaput
DRILLING CO.: S. W. Cole Explorations, LLC **DRILLER:** Matt Leonard **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50 **AUGER ID/OD:** 2 1/4 in / 5 5/8 in **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic **HAMMER WEIGHT (lbs):** 140 **CASING ID/OD:** N/A /N/A **CORE BARREL:**
HAMMER EFFICIENCY FACTOR: 0.92 **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): ▽ 5 ft Free water observed at 5'
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_2O Depth	Remarks
										0.6 Bituminous Pavement (7")		
			1D		0.8-2.8	24/18	7-12-7-6			Medium dense, brown Gravelly SAND, some silt (Fill)		
			2D		2.8-4.8	24/14	7-7-6-5					
45	5		3D		5-7	24/16	3-1-6-6			4.5 Loose, dark brown organic matter (Fill)	▽	
										6.0 Medium dense, black Silty Gravelly SAND with organics (Fill)		
			4D		8-10	24/16	4-8-10-14			8.5 Very stiff consistency, brown Clayey SILT		
40	10		5D		10-12	24/18	6-7-9-9					
										11.5 Medium dense to dense, gray Gravelly Sandy SILT (Glacial Till)		
35	15		6D		15-15.7	8/6	3-50/2"					
30	20		7D		20-21.2	14/10	21-27-25/2"					

Refusal at 21.2 feet
Probable Bedrock

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 17-0214.GPJ SWCE TEMPLATE.GDT 6/14/19

BORING LOG

S.W.COLE ENGINEERING, INC.

CLIENT: CES, Inc.
PROJECT: Proposed Whole Oceans Development
LOCATION: River Road, Bucksport, Maine

BORING NO.: B-18-14
SHEET: 1 of 1
PROJECT NO. 17-0214
DATE START: 4/20/2018
DATE FINISH: 4/20/2018

Drilling Information

LOCATION: See Exploration Location Plan
ELEVATION (FT): 44' +/-
TOTAL DEPTH (FT): 20.0
LOGGED BY: Bob Chaput
DRILLING CO.: S. W. Cole Explorations, LLC
DRILLER: Matt Leonard
DRILLING METHOD: Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50
AUGER ID/OD: 2 1/4 in / 5 5/8 in
SAMPLER: Standard Split-Spoon
HAMMER TYPE: Automatic
HAMMER WEIGHT (lbs): 140
CASING ID/OD: N/A /N/A
CORE BARREL:
HAMMER EFFICIENCY FACTOR: 0.92
HAMMER DROP (inch): 30
WATER LEVEL DEPTHS (ft): No free water observed
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_2O Depth	Remarks
										0.4 Bituminous Pavement (5")		
			1D		0.8-2.8	24/12	20-24-29-21			Dense, brown Gravelly SAND, some silt (Fill)		
			2D		2.8-4.6	21/12	24-34-33-50/3"					
40	5		3D		5-7	24/14	12-7-7-6			5.5 Stiff consistency, gray Clayey SILT, trace organics (Fill)		
										6.8 Very stiff to stiff consistency, brown Clayey SILT		
35	10		4D		10-12	24/24	2-3-4-4	q_P=3-5 ksf				
										11.8 Medium dense, brown Clayey Sandy SILT, trace gravel		
										13.0 Soft consistency, gray Silty CLAY		
30	15		5D		15-17	24/24	WOR-WOH-9-8					
										16.0 Medium dense, gray Gravelly Sandy SILT (Glacial Till)		
25	20											Casing Snapped during Driving

Refusal at 20.0 feet
Probable Boulder or Bedrock

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 17-0214.GPJ SWCE TEMPLATE.GDT 6/14/19

BORING LOG

S.W.COLE ENGINEERING, INC.

CLIENT: CES, Inc.
PROJECT: Proposed Whole Oceans Development
LOCATION: River Road, Bucksport, Maine

BORING NO.: B-18-15
SHEET: 1 of 1
PROJECT NO. 17-0214
DATE START: 4/20/2018
DATE FINISH: 4/20/2018

Drilling Information

LOCATION: See Exploration Location Plan **ELEVATION (FT):** 43' +/- **TOTAL DEPTH (FT):** 22.0 **LOGGED BY:** Bob Chaput
DRILLING CO.: S. W. Cole Explorations, LLC **DRILLER:** Matt Leonard **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50 **AUGER ID/OD:** 2 1/4 in / 5 5/8 in **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic **HAMMER WEIGHT (lbs):** 140 **CASING ID/OD:** N/A /N/A **CORE BARREL:**
HAMMER EFFICIENCY FACTOR: 0.92 **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): No free water observed
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_2O Depth	Remarks
										0.4 Bituminous Pavement (5")		
			1D		0.6-2.4	21/12	15-19-24-50/3"			Dense, brown Gravelly SAND, some silt with cobbles (Fill)		
40			2D		3-5	24/16	12-32-32-20			3.8 Dense to medium dense, gray Gravelly Sandy SILT with wood (Fill)		
	5		3D		5-7	24/20	9-21-13-8			6.8 Very stiff to stiff consistency, brown and gray Clayey SILT		
35												
	10		4D		10-12	24/20	2-2-3-3	q_P=2-5 ksf		11.5 Medium dense, brown Clayey Sandy SILT, some gravel (Glacial Till)		
30										12.8 Medium dense, brown Silty Gravelly SAND with cobbles (Glacial Till)		
	15		5D		15-17	24/20	8-9-8-5					
25												
	20		6D		20-22	24/20	8-11-12-13			19.0 Medium dense, gray Gravelly Sandy SILT with cobbles (Glacial Till)		

Bottom of Exploration at 22.0 feet

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 17-0214.GPJ SWCE TEMPLATE.GDT 6/14/19

BORING LOG

S.W.COLE ENGINEERING, INC.

CLIENT: CES, Inc.
PROJECT: Proposed Whole Oceans Development
LOCATION: River Road, Bucksport, Maine

BORING NO.: B-18-16
SHEET: 1 of 1
PROJECT NO. 17-0214
DATE START: 4/20/2018
DATE FINISH: 4/20/2018

Drilling Information

LOCATION: See Exploration Location Plan **ELEVATION (FT):** 42' +/- **TOTAL DEPTH (FT):** 22.0 **LOGGED BY:** Bob Chaput
DRILLING CO.: S. W. Cole Explorations, LLC **DRILLER:** Matt Leonard **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50 **AUGER ID/OD:** 2 1/4 in / 5 5/8 in **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic **HAMMER WEIGHT (lbs):** 140 **CASING ID/OD:** N/A /N/A **CORE BARREL:**
HAMMER EFFICIENCY FACTOR: 0.92 **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): ▼ 5.5 ft Free water at 5.5' on 4/23/18
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_2O Depth	Remarks
40			1D		0-2	24/4	6-8-13-13			Medium dense, brown Silty Sandy GRAVEL with cobbles (Fill)		
	5		2D		4-6	24/1	7-6-9-31				▼	
35			3D		6-8	24/20	35-18-18-28			6.5 Medium dense, brown Gravelly Sandy SILT (Glacial Till)		
	10		4D		10-12	24/22	8-13-11-9			9.0 Medium dense to dense, gray Gravelly Sandy SILT with cobbles (Glacial Till)		
30												
	15		5D		15-17	24/12	15-17-27-20					
25												
	20		6D		20-22	24/16	15-25-37-21					
20										Bottom of Exploration at 22.0 feet		

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 17-0214.GPJ SWCE TEMPLATE.GDT 6/14/19

BORING LOG

S.W.COLE ENGINEERING, INC.

CLIENT: CES, Inc.
PROJECT: Proposed Whole Oceans Development
LOCATION: River Road, Bucksport, Maine

BORING NO.: B-18-17
SHEET: 1 of 1
PROJECT NO. 17-0214
DATE START: 4/23/2018
DATE FINISH: 4/23/2018

Drilling Information

LOCATION: See Exploration Location Plan **ELEVATION (FT):** 48' +/- **TOTAL DEPTH (FT):** 22.0 **LOGGED BY:** Nate Strout
DRILLING CO.: S. W. Cole Explorations, LLC **DRILLER:** Matt Leonard **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50 **AUGER ID/OD:** 2 1/4 in / 5 5/8 in **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic **HAMMER WEIGHT (lbs):** 140 **CASING ID/OD:** N/A /N/A **CORE BARREL:**
HAMMER EFFICIENCY FACTOR: 0.92 **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): No free water observed
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth	Remarks
										0.4 Bituminous Pavement (4.5")		
			1D		0.5-2.5	24/18	21-21-17-13			Medium dense, brown Gravelly SAND, some silt with cobbles (Fill)		
45			2D		2.5-4.5	24/22	12-11-13-17			3.0 Medium dense, brown Gravelly SAND and SILT with cobbles (Glacial Till)		
	5		3D		5-5.9	11/16	50			Gray below 5.5'		
40												
	10		4D		10-12	24/8	10-14-16-15					
35												
	15		5D		15-17	24/24	12-19-20-21			15.0 Dense, gray fine SAND and SILT, trace gravel (Glacial Till)		
30												
	20		6D		20-22	24/24	15-25-27-32					

Bottom of Exploration at 22.0 feet

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 17-0214.GPJ SWCE TEMPLATE.GDT 6/14/19

BORING LOG

S.W.COLE ENGINEERING, INC.

CLIENT: CES, Inc.
PROJECT: Proposed Whole Oceans Development
LOCATION: River Road, Bucksport, Maine

BORING NO.: B-18-18
SHEET: 1 of 1
PROJECT NO. 17-0214
DATE START: 4/25/2018
DATE FINISH: 4/25/2018

Drilling Information

LOCATION: See Exploration Location Plan **ELEVATION (FT):** 53' +/- **TOTAL DEPTH (FT):** 26.5 **LOGGED BY:** Nate Strout
DRILLING CO.: S. W. Cole Explorations, LLC **DRILLER:** Matt Leonard **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50 **AUGER ID/OD:** 2 1/4 in / 5 5/8 in **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic **HAMMER WEIGHT (lbs):** 140 **CASING ID/OD:** N/A /N/A **CORE BARREL:**
HAMMER EFFICIENCY FACTOR: 0.92 **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): Soils wet below 20' +/-
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_2O Depth	Remarks
										Concrete (10")		
			1D	D	0.9-2.9	24/17	16-20-20-12			0.8 Dense, brown SAND and GRAVEL, some silt with cobbles (Fill)		
50			2D	D	2.9-4.9	24/22	8-26-50-46			with 1" layer of wood at 4.5'		
	5		3D	D	5-7	24/20	16-45-37-46			5.0 Dense, brown Silty Gravelly SAND with cobbles (Fill)		
45			4D	D	7-9	24/19	30-36-38-25					
	10		5D	D	10-11.2	14/11	13-28-50/2"			8.5 Medium dense to dense, brown Gravelly Silty SAND with cobbles (Glacial Till)		
40												
	15		6D	D	15-17	24/21	12-19-19-18			15.0 Medium dense to dense, gray Gravelly Sandy SILT with cobbles (Glacial Till)		
35												
	20		7D	D	20-22	24/16	14-18-25-30					
30												
	25		8D	D	25-26.5	18/15	15-46-57					

Bottom of Exploration at 26.5 feet

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 17-0214.GPJ SWCE TEMPLATE.GDT 6/14/19

BORING LOG

S.W.COLE ENGINEERING, INC.

CLIENT: CES, Inc.
PROJECT: Proposed Whole Oceans Development
LOCATION: River Road, Bucksport, Maine

BORING NO.: B-18-19
SHEET: 1 of 1
PROJECT NO. 17-0214
DATE START: 4/25/2018
DATE FINISH: 4/25/2018

Drilling Information

LOCATION: See Exploration Location Plan **ELEVATION (FT):** 59' +/- **TOTAL DEPTH (FT):** 13.4 **LOGGED BY:** Nate Strout
DRILLING CO.: S. W. Cole Explorations, LLC **DRILLER:** Matt Leonard **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50 **AUGER ID/OD:** 2 1/4 in / 5 5/8 in **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic **HAMMER WEIGHT (lbs):** 140 **CASING ID/OD:** N/A /N/A **CORE BARREL:**
HAMMER EFFICIENCY FACTOR: 0.92 **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): No free water observed
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_U = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth	Remarks
			1D		0-2	24/6	2-10-18-10			0.5 Topsoil; Medium dense, brown Silty SAND and GRAVEL (Fill)		
			2D		2-4	24/13	33-22-13-13					
55	5		3D		5-7	24/24	10-6-9-10	q_P=5 ksf		5.0 Very stiff consistency, brown Silty CLAY		
50	10		4D		10-10.5	6/4	60			7.5 Medium dense, brown Silty Gravelly SAND (Glacial Till)		

Refusal at 13.4 feet
Probable Bedrock

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 17-0214.GPJ SWCE TEMPLATE.GDT 6/14/19

BORING LOG

S.W.COLE ENGINEERING, INC.

CLIENT: CES, Inc.
PROJECT: Proposed Whole Oceans Development
LOCATION: River Road, Bucksport, Maine

BORING NO.: B-18-20
SHEET: 1 of 1
PROJECT NO. 17-0214
DATE START: 4/20/2018
DATE FINISH: 4/20/2018

Drilling Information

LOCATION: See Exploration Location Plan **ELEVATION (FT):** 56' +/- **TOTAL DEPTH (FT):** 26.6 **LOGGED BY:** Bob Chaput
DRILLING CO.: S. W. Cole Explorations, LLC **DRILLER:** Matt Leonard **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50 **AUGER ID/OD:** 2 1/4 in / 5 5/8 in **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic **HAMMER WEIGHT (lbs):** 140 **CASING ID/OD:** N/A /N/A **CORE BARREL:**
HAMMER EFFICIENCY FACTOR: 0.92 **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): No free water observed
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_2O Depth	Remarks
55			1D		0.7-2.7	24/6	16-20-15-16			0.4 Bituminous Pavement (4.5") Medium dense, brown Sandy GRAVEL, some silt (Fill)		
			2D		2.7-4.7	24/18	16-14-10-11					
50	5		3D		5-7	24/10	5-7-6-6					
45	10		4D		10-12	24/14	21-23-28-28			9.0 Dense, brown Silty Sandy GRAVEL (Glacial Till)		
40	15		5D		15-15.8	10/6	26-50/4"					
35	20		6D		20-22	24/10	14-13-15-17			18.0 Medium dense, brown Gravelly Sandy SILT (Glacial Till)		
30	25		7D		25-26.6	19/20	14-20-34-25/1"			24.0 Dense, gray fine Sandy SILT		

Bottom of Exploration at 26.6 feet

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 17-0214.GPJ SWCE TEMPLATE.GDT 6/14/19

BORING LOG

S.W.COLE ENGINEERING, INC.

CLIENT: CES, Inc.
PROJECT: Proposed Whole Oceans Development
LOCATION: River Road, Bucksport, Maine

BORING NO.: B-18-21
SHEET: 1 of 1
PROJECT NO. 17-0214
DATE START: 4/20/2018
DATE FINISH: 4/20/2018

Drilling Information

LOCATION: See Exploration Location Plan **ELEVATION (FT):** 55' +/- **TOTAL DEPTH (FT):** 27.0 **LOGGED BY:** Bob Chaput
DRILLING CO.: S. W. Cole Explorations, LLC **DRILLER:** Matt Leonard **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50 **AUGER ID/OD:** 2 1/4 in / 5 5/8 in **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic **HAMMER WEIGHT (lbs):** 140 **CASING ID/OD:** N/A /N/A **CORE BARREL:**
HAMMER EFFICIENCY FACTOR: 0.92 **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): Soils wet below 5' +/-
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_2O Depth	Remarks
										0.4 Bituminous Pavement (5")		
			1D		0.8-2.8	24/18	11-14-16-15			Medium dense, brown Gravelly SAND, some silt (Fill)		
			2D		2.8-4.8	24/18	14-11-8-5					
50	5		3D		5-7	24/6	3-4-3-3			5.0 Loose, gray Clayey Sandy SILT, trace gravel with roots (Fill)		
			4D		7-9	24/16	6-9-10-10			7.5 crushed stone observed on auger flights when advancing to 10'		
										Dense to medium dense, brown Gravelly Sandy SILT with cobbles (Glacial Till)		
45	10		5D		10-10.4	5/0	50/5"					
40	15		6D		15-17	24/8	20-26-25-35					
35	20		7D		20-22	24/4	11-15-19-18					
										24.0 Medium dense, gray Gravelly Sandy SILT (Glacial Till)		
30	25		8D		25-27	24/6	10-14-17-13					

Bottom of Exploration at 27.0 feet

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 17-0214.GPJ SWCE TEMPLATE.GDT 6/14/19

BORING LOG

S.W.COLE ENGINEERING, INC.

CLIENT: CES, Inc.
PROJECT: Proposed Whole Oceans Development
LOCATION: River Road, Bucksport, Maine

BORING NO.: B-18-22
SHEET: 1 of 1
PROJECT NO. 17-0214
DATE START: 4/23/2018
DATE FINISH: 4/23/2018

Drilling Information

LOCATION: See Exploration Location Plan **ELEVATION (FT):** 54' +/- **TOTAL DEPTH (FT):** 32.0 **LOGGED BY:** Nate Strout
DRILLING CO.: S. W. Cole Explorations, LLC **DRILLER:** Matt Leonard **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50 **AUGER ID/OD:** 2 1/4 in / 5 5/8 in **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic **HAMMER WEIGHT (lbs):** 140 **CASING ID/OD:** N/A /N/A **CORE BARREL:**
HAMMER EFFICIENCY FACTOR: 0.92 **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): Soils wet below 10' +/-
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth	Remarks
			1D		0-1.8	21/18	3-5-8-50/3"			Loose, brown Silty Gravelly SAND (Fill)		
										1.0 Medium dense, gray Silty Gravelly SAND (Fill)		
			2D		3-3.5	6/6	61					
50												
	5		3D		5-7	24/10	1/12"-8-8			5.0 Loose, dark brown wood debris and organics with some sand and silt (Fill)		
										6.0 Loose, gray Silty SAND and GRAVEL (Fill)		
45												
	10		4D		10-12	24/15	2-3-3-4			10.5 Loose, gray Sandy SILT with trace organics (probable relic topsoil)		
										11.0 Medium dense, gray Sandy SILT, some clay and gravel		
										13.0 Dense, brown SILT and SAND, some gravel with cobbles (Glacial Till)		
40												
	15		5D		15-17	24/24	13-19-22-18					
35												
	20		6D		20-22	24/16	14-17-16-15			20.0 Medium dense, brown Gravelly Sandy SILT with cobbles (Glacial Till)		
30												
	25		7D		25-27	24/11	6-8-8-10					
25												
	30		8D		30-32	24/17	8-10-19-16					

Bottom of Exploration at 32.0 feet

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 17-0214.GPJ SWCE TEMPLATE.GDT 6/14/19

BORING LOG

S.W.COLE ENGINEERING, INC.

CLIENT: CES, Inc.
PROJECT: Proposed Whole Oceans Development
LOCATION: River Road, Bucksport, Maine

BORING NO.: B-18-23
SHEET: 1 of 1
PROJECT NO. 17-0214
DATE START: 4/23/2018
DATE FINISH: 4/23/2018

Drilling Information

LOCATION: See Exploration Location Plan **ELEVATION (FT):** 50' +/- **TOTAL DEPTH (FT):** 27.0 **LOGGED BY:** Nate Strout
DRILLING CO.: S. W. Cole Explorations, LLC **DRILLER:** Matt Leonard **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50 **AUGER ID/OD:** 2 1/4 in / 5 5/8 in **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic **HAMMER WEIGHT (lbs):** 140 **CASING ID/OD:** N/A /N/A **CORE BARREL:**
HAMMER EFFICIENCY FACTOR: 0.92 **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): No free water observed
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_2O Depth	Remarks
			1D		0.7-2.7	24/13	10-13-11-7			0.3 Bituminous Pavement (4") Medium dense, brown Gravelly SAND, some silt with cobbles (Fill)		
			2D		2.7-4.7	24/16	5-3-9-11			2.7 Medium dense, black Silty Gravelly SAND, trace ash (Fill) 2.8 Medium dense, gray Sandy SILT 3.5 Medium dense, gray Gravelly SILT and SAND (Glacial Till) 5.0 Medium dense to dense, brown Gravelly SILT and SAND with numerous cobbles (Glacial Till)		
45	5		3D		5-7	24/24	6-4-6-13					
40	10		4D		10-12	24/22	6-7-11-14					
35	15		5D		15-17	24/17	10-18-23-23			Gray below 15'		
30	20		6D		20-22	24/13	12-22-22-24					
25	25		7D		25-27	24/14	13-14-11-12					

Bottom of Exploration at 27.0 feet

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 17-0214.GPJ SWCE TEMPLATE.GDT 6/14/19

BORING LOG

S.W.COLE ENGINEERING, INC.

CLIENT: CES, Inc.
PROJECT: Proposed Whole Oceans Development
LOCATION: River Road, Bucksport, Maine

BORING NO.: B-18-24
SHEET: 1 of 1
PROJECT NO. 17-0214
DATE START: 4/23/2018
DATE FINISH: 4/23/2018

Drilling Information

LOCATION: See Exploration Location Plan **ELEVATION (FT):** 55' +/- **TOTAL DEPTH (FT):** 25.3 **LOGGED BY:** Nate Strout
DRILLING CO.: S. W. Cole Explorations, LLC **DRILLER:** Matt Leonard **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50 **AUGER ID/OD:** 2 1/4 in / 5 5/8 in **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic **HAMMER WEIGHT (lbs):** 140 **CASING ID/OD:** N/A /N/A **CORE BARREL:**
HAMMER EFFICIENCY FACTOR: 0.92 **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): ▽ 9.5 ft Free water observed at 9.5'
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_U = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_2O Depth	Remarks
										0.4 Bituminous Pavement (5")		
			1D		0.8-2.8	24/16	11-32-33-24			Dense, gray SAND and GRAVEL, some silt with cobbles (Fill)		
			2D		3-5	24/14	11-8-4-7			2.9 Medium dense, dark brown wood debris and organics with some sand and silt (Fill)		
50	5		3D		5-7	24/24	6-9-12-12	q_P=5-6 ksf		4.5 Very stiff consistency, brown and gray Silty CLAY		
										7.0 Medium dense, brown Gravelly Silty SAND with cobbles (Glacial Till)	▽	
45	10		4D		10-12	24/19	7-8-12-15					
40	15		5D		15-17	24/13	10-14-33-15			15.0 Medium dense, gray Gravelly Sandy SILT with cobbles (Glacial Till)		
35	20		6D		20-22	24/16	6-10-7-8					
30	25		7D		25-25.3	4/2	50/4"					

Refusal at 25.3 feet
Probable Cobble or Boulder

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 17-0214.GPJ SWCE TEMPLATE.GDT 6/14/19

BORING LOG

S.W.COLE ENGINEERING, INC.

CLIENT: CES, Inc.
PROJECT: Proposed Whole Oceans Development
LOCATION: River Road, Bucksport, Maine

BORING NO.: B-18-25
SHEET: 1 of 1
PROJECT NO. 17-0214
DATE START: 4/23/2018
DATE FINISH: 4/23/2018

Drilling Information

LOCATION: See Exploration Location Plan **ELEVATION (FT):** 55' +/- **TOTAL DEPTH (FT):** 32.0 **LOGGED BY:** Nate Strout
DRILLING CO.: S. W. Cole Explorations, LLC **DRILLER:** Matt Leonard **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50 **AUGER ID/OD:** 2 1/4 in / 5 5/8 in **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic **HAMMER WEIGHT (lbs):** 140 **CASING ID/OD:** N/A /N/A **CORE BARREL:**
HAMMER EFFICIENCY FACTOR: 0.92 **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): Soils wet below 10' +/-
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth	Remarks
			1D		0.5-2.5	24/15	12-21-19-22			0.5 Bituminous Pavement (5.75"); Dense, brown SAND and GRAVEL, some silt with cobbles (Fill)		
			2D		2.5-4.5	24/21	24-37-36-44			2.5 Dense to medium dense, brown Silty Gravelly SAND with cobbles (Glacial Till)		
50	5		3D		5-7	24/18	24-30-31-39					
45	10		4D		10-12	24/14	10-10-9-10					
40	15		5D		15-17	24/16	15-17-21-22					
35	20		6D		20-22	24/19	13-14-16-17			20.0 Medium dense, gray Sandy SILT, some gravel with cobbles (Glacial Till)		
30	25		7D		25-27	24/17	16-27-28-36			25.0 Dense, gray fine SAND and SILT		
25	30		8D		30-32	24/24	14-21-31-42					

Bottom of Exploration at 32.0 feet

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 17-0214.GPJ SWCE TEMPLATE.GDT 6/14/19

BORING LOG

S.W.COLE ENGINEERING, INC.

CLIENT: CES, Inc.
PROJECT: Proposed Whole Oceans Development
LOCATION: River Road, Bucksport, Maine

BORING NO.: B-18-26
SHEET: 1 of 1
PROJECT NO. 17-0214
DATE START: 4/24/2018
DATE FINISH: 4/24/2018

Drilling Information

LOCATION: See Exploration Location Plan **ELEVATION (FT):** 68' +/- **TOTAL DEPTH (FT):** 21.1 **LOGGED BY:** Nate Strout
DRILLING CO.: S. W. Cole Explorations, LLC **DRILLER:** Matt Leonard **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50 **AUGER ID/OD:** 2 1/4 in / 5 5/8 in **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic **HAMMER WEIGHT (lbs):** 140 **CASING ID/OD:** N/A /N/A **CORE BARREL:**
HAMMER EFFICIENCY FACTOR: 0.92 **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): No free water observed
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth	Remarks
			1D		0-2	24/10	1-1-2-3			0.3 Topsoil		
										Loose, brown Silty SAND, some gravel with trace organics (Fill)		
65			2D		2-4	24/6	4-7-11-11			3.0 Medium dense to dense, brown Gravelly Silty SAND with cobbles (Glacial Till)		
	5		3D		5-7	24/17	8-11-21-28					
60												
	10		4D		10-12	24/20	12-18-21-25			10.0 Medium dense to dense, gray Gravelly Sandy SILT with cobbles (Glacial Till)		
55												
	15		5D		15-17	24/17	12-16-15-17					
50												
	20		6D		20-21	12/12	16-57					

Refusal at 21.1 feet
Probable Boulder or Bedrock

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 17-0214.GPJ SWCE TEMPLATE.GDT 6/14/19

BORING LOG

S.W.COLE ENGINEERING, INC.

CLIENT: CES, Inc.
PROJECT: Proposed Whole Oceans Development
LOCATION: River Road, Bucksport, Maine

BORING NO.: B-18-27
SHEET: 1 of 1
PROJECT NO. 17-0214
DATE START: 4/24/2018
DATE FINISH: 4/24/2018

Drilling Information

LOCATION: See Exploration Location Plan **ELEVATION (FT):** 56' +/- **TOTAL DEPTH (FT):** 30.9 **LOGGED BY:** Nate Strout
DRILLING CO.: S. W. Cole Explorations, LLC **DRILLER:** Matt Leonard **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50 **AUGER ID/OD:** 2 1/4 in / 5 5/8 in **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic **HAMMER WEIGHT (lbs):** 140 **CASING ID/OD:** N/A /N/A **CORE BARREL:**
HAMMER EFFICIENCY FACTOR: 0.92 **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): No free water observed
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth	Remarks
55			1D	D	0-2	24/14	5-7-14-10			0.3 Topsoil		
			2D	D	2-4	24/7	16-19-28-26			Dense, brown Gravelly Silty SAND (Glacial Till)		
50	5		3D	D	5-7	24/14	10-10-10-9			5.0 Medium dense, brown Gravelly SAND and SILT with cobbles (Glacial Till)		
45	10		4D	D	10-12	24/4	9-15-13-13					
40	15		5D	D	15-17	24/22	10-13-9-8			15.0 Medium dense to dense, gray Sandy SILT, some gravel and clay with cobbles (Glacial Till)		
35	20		6D	D	20-22	24/20	14-21-23-29			Gravelly below 20'		
30	25		7D	D	25-27	24/23	15-25-46-60					
	30		8D	D	30-30.9	11/10	27-50/5"			Refusal at 30.9 feet Probable Boulder or Bedrock		

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 17-0214.GPJ SWCE TEMPLATE.GDT 6/14/19

BORING LOG

S.W.COLE ENGINEERING, INC.

CLIENT: CES, Inc.
PROJECT: Proposed Whole Oceans Development
LOCATION: River Road, Bucksport, Maine

BORING NO.: B-18-28
SHEET: 1 of 1
PROJECT NO. 17-0214
DATE START: 4/24/2018
DATE FINISH: 4/24/2018

Drilling Information

LOCATION: See Exploration Location Plan **ELEVATION (FT):** 62' +/- **TOTAL DEPTH (FT):** 18.5 **LOGGED BY:** Nate Strout
DRILLING CO.: S. W. Cole Explorations, LLC **DRILLER:** Matt Leonard **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50 **AUGER ID/OD:** 2 1/4 in / 5 5/8 in **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic **HAMMER WEIGHT (lbs):** 140 **CASING ID/OD:** N/A /N/A **CORE BARREL:**
HAMMER EFFICIENCY FACTOR: 0.92 **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): No free water observed
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth	Remarks
			1D		0-2	24/16	5-4-4-6			0.5 Topsoil		
60			2D		2-4	24/20	6-14-28-30			Medium dense, brown and gray Sandy SILT, some clay (Fill) 2.0 Medium dense, brown Gravelly Silty SAND (Glacial Till)		
	5		3D		5-7	24/16	12-5-6-10					
55										6.5 Medium dense, brown Gravelly SAND and SILT with cobbles (Glacial Till)		
	10		4D		10-12	24/15	8-12-19-10					
50												
	15		5D		15-17	24/11	16-13-9-13			15.0 Medium dense, gray Gravelly Sandy SILT (Glacial Till)		
45												

Refusal at 18.5 feet
Probable Boulder or Bedrock

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 17-0214.GPJ SWCE TEMPLATE.GDT 6/14/19

BORING LOG

S.W.COLE ENGINEERING, INC.

CLIENT: CES, Inc.
PROJECT: Proposed Whole Oceans Development
LOCATION: River Road, Bucksport, Maine

BORING NO.: B-18-29
SHEET: 1 of 1
PROJECT NO. 17-0214
DATE START: 4/24/2018
DATE FINISH: 4/24/2018

Drilling Information

LOCATION: See Exploration Location Plan **ELEVATION (FT):** 56' +/- **TOTAL DEPTH (FT):** 30.0 **LOGGED BY:** Nate Strout
DRILLING CO.: S. W. Cole Explorations, LLC **DRILLER:** Matt Leonard **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50 **AUGER ID/OD:** 2 1/4 in / 5 5/8 in **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic **HAMMER WEIGHT (lbs):** 140 **CASING ID/OD:** N/A /N/A **CORE BARREL:**
HAMMER EFFICIENCY FACTOR: 0.92 **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): Soils wet below 15' +/-
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_U = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_2O Depth	Remarks
55			1D		0-2	24/18	3-5-7-6			0.4 Topsoil Medium dense, brown Gravelly SILT and SAND (Fill)		
			2D		2-4	24/5	5-5-3-4					
50	5		3D		5-7	24/24	2-4-6-8	q_P=6-7 ksf		5.0 Very stiff consistency, brown and gray Silty CLAY		
45	10		4D		10-12	24/20	12-20-18-17			8.7 Medium dense to dense, brown Gravelly Silty SAND with cobbles (Glacial Till)		
40	15		5D		15-17	24/19	6-7-8-7			15.0 Medium dense to dense, gray Gravelly Sandy SILT with cobbles (Glacial Till)		
35	20		6D		20-22	24/17	7-11-10-10					
30	25		7D		25-27	24/16	7-9-17-17					
	30		8D		30-30	0/0	25/0"			Refusal at 30.0 feet Probable Boulder or Bedrock		

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 17-0214.GPJ SWCE TEMPLATE.GDT 6/14/19

BORING LOG

S.W.COLE ENGINEERING, INC.

CLIENT: CES, Inc.
PROJECT: Proposed Whole Oceans Development
LOCATION: River Road, Bucksport, Maine

BORING NO.: B-18-30
SHEET: 1 of 1
PROJECT NO. 17-0214
DATE START: 4/24/2018
DATE FINISH: 4/24/2018

Drilling Information

LOCATION: See Exploration Location Plan
ELEVATION (FT): 56' +/-
TOTAL DEPTH (FT): 32.0
LOGGED BY: Nate Strout
DRILLING CO.: S. W. Cole Explorations, LLC
DRILLER: Matt Leonard
DRILLING METHOD: Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50
AUGER ID/OD: 2 1/4 in / 5 5/8 in
SAMPLER: Standard Split-Spoon
HAMMER TYPE: Automatic
HAMMER WEIGHT (lbs): 140
CASING ID/OD: N/A /N/A
CORE BARREL:
HAMMER EFFICIENCY FACTOR: 0.92
HAMMER DROP (inch): 30
WATER LEVEL DEPTHS (ft): No free water observed
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth	Remarks
55			1D		0-2	24/17	6-15-14-12			Medium dense, brown Gravelly SAND, some silt (Fill)		
			2D		2-4	24/10	13-11-7-6					
	5		3D		5-7	24/8	9-3-3-6			5.0 Loose, brown Gravelly Silty SAND (Fill)		
50			4D		7-8.3	15/10	10-14-50/3"			6.5 Medium dense to dense, brown Silty Gravelly SAND with cobbles (Glacial Till)		
	10		5D		10-12	24/19	11-12-12-12					
45												
	15		6D		15-17	24/14	13-28-25-26					
40												
	20		7D		20-22	24/24	19-23-24-22					
35												
	25		8D		25-27	24/24	10-11-16-19			25.0 Medium dense, gray fine SAND and SILT		
30												
	30		9D		30-32	24/24	6-10-12-17					
25												

Bottom of Exploration at 32.0 feet

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 17-0214.GPJ SWCE TEMPLATE.GDT 6/14/19

BORING LOG

S.W.COLE ENGINEERING, INC.

CLIENT: CES, Inc.
PROJECT: Proposed Whole Oceans Development
LOCATION: River Road, Bucksport, Maine

BORING NO.: B-18-31
SHEET: 1 of 1
PROJECT NO. 17-0214
DATE START: 4/18/2018
DATE FINISH: 4/18/2018

Drilling Information

LOCATION: See Exploration Location Plan
ELEVATION (FT): 36' +/-
TOTAL DEPTH (FT): 24.1
LOGGED BY: Nate Strout
DRILLING CO.: S. W. Cole Explorations, LLC
DRILLER: Matt Leonard
DRILLING METHOD: Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50
AUGER ID/OD: 2 1/4 in / 5 5/8 in
SAMPLER: Standard Split-Spoon
HAMMER TYPE: Automatic
HAMMER WEIGHT (lbs): 140
CASING ID/OD: N/A /N/A
CORE BARREL:
HAMMER EFFICIENCY FACTOR: 0.92
HAMMER DROP (inch): 30
WATER LEVEL DEPTHS (ft): Soils wet below 10' +/-
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_2O Depth	Remarks
35			1D		0-2	24/14	5-7-15-12			0.3 Topsoil Medium dense, brown Silty Gravelly SAND with cobbles (Fill)		
			2D		2-4	24/13	8-10-10-8					
30	5		3D		5-7	24/13	4-4-4-4	q_P=5-6 ksf		5.0 Very stiff consistency, brown and gray Silty CLAY		
25	10		4D		10-12	24/24	1-1-1-1			10.0 Soft consistency, gray Silty CLAY		
			1V		12.7-13	4		S_V=.68/.31ksf				
			2V		13.7-14	4		S_V=.93/.43ksf				
20	15		5D		15-17	24/19	8-4-3-3			14.8 Medium dense, brown Silty fine SAND		
										18.0 Medium dense, brown Gravelly Silty SAND with cobbles (Glacial Till)		
15	20		6D		20-22	24/16	11-13-12-19					

Refusal at 24.1 feet
Probable Boulder or Bedrock

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 17-0214.GPJ SWCE TEMPLATE.GDT 6/14/19

BORING LOG

S.W.COLE ENGINEERING, INC.

CLIENT: CES, Inc.
PROJECT: Proposed Whole Oceans Development
LOCATION: River Road, Bucksport, Maine

BORING NO.: B-18-32
SHEET: 1 of 1
PROJECT NO. 17-0214
DATE START: 4/27/2018
DATE FINISH: 4/27/2018

Drilling Information

LOCATION: See Exploration Location Plan
ELEVATION (FT): 37' +/-
TOTAL DEPTH (FT): 25.0
LOGGED BY: Nate Strout
DRILLING CO.: S. W. Cole Explorations, LLC
DRILLER: Matt Leonard
DRILLING METHOD: Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50
AUGER ID/OD: 2 1/4 in / 5 5/8 in
SAMPLER: Standard Split-Spoon
HAMMER TYPE: Automatic
HAMMER WEIGHT (lbs): 140
CASING ID/OD: N/A /N/A
CORE BARREL:
HAMMER EFFICIENCY FACTOR: 0.92
HAMMER DROP (inch): 30
WATER LEVEL DEPTHS (ft): Soils wet below 10' +/-
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth	Remarks
										0.4 Concrete (5")		
										0.6 Void		
35			1D		0.6-2.6	24/4	3-4-3-2			Loose, brown Silty Gravelly SAND with cobbles (Fill)		
			2D		2.6-4.6	24/12	4-4-6-6					
	5		3D		5-7	24/14	5-4-5-7	q_P=6-7 ksf		5.0 Very stiff to stiff consistency, brown and gray Silty CLAY		
30												
	10		4D		10-12	24/24	4-5-5-6	q_P=3-4 ksf				
25												
	15		5D		15-17	24/24	WOH/12"-2-2			15.0 Soft consistency, gray Silty CLAY with shells and gravel below 16'		
20												
	20		6D		20.5-22.5	24/16	6-13-22-20			20.5 Medium dense, brown Silty Gravelly SAND with cobbles (Glacial Till)		
15												
	25											Casing Snapped during Driving

Refusal at 25.0 feet
Probable Boulder or Bedrock

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 17-0214.GPJ SWCE TEMPLATE.GDT 6/14/19

BORING LOG

S.W.COLE ENGINEERING, INC.

CLIENT: CES, Inc.
PROJECT: Proposed Whole Oceans Development
LOCATION: River Road, Bucksport, Maine

BORING NO.: B-18-33
SHEET: 1 of 1
PROJECT NO. 17-0214
DATE START: 4/26/2018
DATE FINISH: 4/26/2018

Drilling Information

LOCATION: See Exploration Location Plan
ELEVATION (FT): 36' +/-
TOTAL DEPTH (FT): 20.0
LOGGED BY: Nate Strout
DRILLING CO.: S. W. Cole Explorations, LLC
DRILLER: Matt Leonard
DRILLING METHOD: Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50
AUGER ID/OD: 2 1/4 in / 5 5/8 in
SAMPLER: Standard Split-Spoon
HAMMER TYPE: Automatic
HAMMER WEIGHT (lbs): 140
CASING ID/OD: N/A /N/A
CORE BARREL:
HAMMER EFFICIENCY FACTOR: 0.92
HAMMER DROP (inch): 30
WATER LEVEL DEPTHS (ft): Soils wet below 10' +/-
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:

Water Level
- ▽ At time of Drilling
- ▼ At Completion of Drilling
- ▼ After Drilling

D = Split Spoon Sample
U = Thin Walled Tube Sample
R = Rock Core Sample
V = Field Vane Shear

Pen. = Penetration Length
Rec. = Recovery Length
bpf = Blows per Foot
mpf = Minute per Foot

WOR = Weight of Rods
WOH = Weight of Hammer
RQD = Rock Quality Designation
PID = Photoionization Detector

S_v = Field Vane Shear Strength, kips/sq.ft.
q_u = Unconfined Compressive Strength, kips/sq.ft.
Ø = Friction Angle (Estimated)
N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth	Remarks
35			1D		0-2	24/10	3-4-7-8			0.2 Topsoil Medium dense, brown Silty Gravelly SAND with cobbles (Fill)		
			2D		2-4	24/12	8-6-6-6			2.5 Very stiff consistency, gray Clayey SILT		
	5		3D		5-7	24/24	5-6-9-13	q_P=6-7 ksf		4.0 Very stiff to stiff consistency, brown and gray Silty CLAY		
30												
	10		4D		10-12	24/24	3-3-3-3	q_P=2-3 ksf				
25										12.5 Medium dense, brown Gravelly Silty SAND with cobbles (Glacial Till)		
	15		5D		15-17	24/3	18-22-20-30					
20												
	20											Casing Snapped during Driving

Refusal at 20.0 feet
Probable Boulder or Bedrock

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 17-0214.GPJ SWCE TEMPLATE.GDT 6/14/19

BORING LOG

S.W.COLE ENGINEERING, INC.

CLIENT: CES, Inc.
PROJECT: Proposed Whole Oceans Development
LOCATION: River Road, Bucksport, Maine

BORING NO.: B-18-34
SHEET: 1 of 1
PROJECT NO. 17-0214
DATE START: 4/25/2018
DATE FINISH: 4/26/2018

Drilling Information

LOCATION: See Exploration Location Plan
ELEVATION (FT): 49' +/-
TOTAL DEPTH (FT): 11.2
LOGGED BY: Nate Strout
DRILLING CO.: S. W. Cole Explorations, LLC
DRILLER: Matt Leonard
DRILLING METHOD: Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50
AUGER ID/OD: 2 1/4 in / 5 5/8 in
SAMPLER: Standard Split-Spoon
HAMMER TYPE: Automatic
HAMMER WEIGHT (lbs): 140
CASING ID/OD: N/A /N/A
CORE BARREL:
HAMMER EFFICIENCY FACTOR: 0.92
HAMMER DROP (inch): 30
WATER LEVEL DEPTHS (ft): Soils wet below 5' +/-
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:

Water Level
- ▽ At time of Drilling
- ▼ At Completion of Drilling
- ▼ After Drilling

D = Split Spoon Sample
U = Thin Walled Tube Sample
R = Rock Core Sample
V = Field Vane Shear

Pen. = Penetration Length
Rec. = Recovery Length
bpf = Blows per Foot
mpf = Minute per Foot

WOR = Weight of Rods
WOH = Weight of Hammer
RQD = Rock Quality Designation
PID = Photoionization Detector

S_v = Field Vane Shear Strength, kips/sq.ft.
q_u = Unconfined Compressive Strength, kips/sq.ft.
Ø = Friction Angle (Estimated)
N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth	Remarks
			1D		0-2	24/14	2-8-6-9			Medium dense, brown Gravelly SAND and SILT (Fill)		
			2D		2-4	24/11	7-12-21-19			2.0 Medium dense, brown silty SAND and GRAVEL with cobbles (Fill)		
45	5		3D		5-7	24/13	18-22-11-14			5.0 Medium dense, gray Gravelly Sandy SILT (Glacial Till)		
			4D		7-9	24/19	17-14-13-11			8.0 Medium dense, brown Gravelly Silty SAND with cobbles (Glacial Till)		
40	10		5D		10-10.8	10/8	12-50/4"					

Refusal at 11.2 feet
Probable Cobble or Boulder

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 17-0214.GPJ SWCE TEMPLATE.GDT 6/14/19

BORING LOG

S.W.COLE ENGINEERING, INC.

CLIENT: CES, Inc.
PROJECT: Proposed Whole Oceans Development
LOCATION: River Road, Bucksport, Maine

BORING NO.: B-18-34A
SHEET: 1 of 1
PROJECT NO. 17-0214
DATE START: 4/30/2018
DATE FINISH: 4/30/2018

Drilling Information

LOCATION: See Exploration Location Plan
ELEVATION (FT): 47' +/-
TOTAL DEPTH (FT): 17.0
LOGGED BY: Nate Strout
DRILLING CO.: S. W. Cole Explorations, LLC
DRILLER: Matt Leonard
DRILLING METHOD: Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50
AUGER ID/OD: 2 1/4 in / 5 5/8 in
SAMPLER: Standard Split-Spoon
HAMMER TYPE: Automatic
HAMMER WEIGHT (lbs): 140
CASING ID/OD: N/A /N/A
CORE BARREL:
HAMMER EFFICIENCY FACTOR: 0.92
HAMMER DROP (inch): 30
WATER LEVEL DEPTHS (ft): Soils wet below 14'
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_U = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_2O Depth	Remarks
										0.4 Topsoil		
45			1D		0.8-2.8	24/20	16-23-35-45			Dense, brown SAND and GRAVEL, some silt with cobbles (Fill)		
			2D		2.8-3.2	5/5	50/5"			2.5 Dense, brown Gravelly Silty SAND with cobbles (Fill)		
	5		3D		5-7	24/22	3-4-7-9	q_P=8 ksf		5.0 Medium dense, brown Sandy SILT with organics (probable relic topsoil)		
40										5.4 Very stiff consistency, brown and gray Clayey SILT		
	10		4D		10-10.4	5/5	50/5"			9.0 Medium dense, brown Gravelly Silty SAND with cobbles (Glacial Till)		
35												
	15		5D		15-17	24/12	12-9-9-6			15.0 Medium dense, brown and gray Gravelly Sandy SILT (Glacial Till)		
30												

Bottom of Exploration at 17.0 feet

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 17-0214.GPJ SWCE TEMPLATE.GDT 6/14/19

BORING LOG

S.W.COLE ENGINEERING, INC.

CLIENT: CES, Inc.
PROJECT: Proposed Whole Oceans Development
LOCATION: River Road, Bucksport, Maine

BORING NO.: B-18-35
SHEET: 1 of 1
PROJECT NO. 17-0214
DATE START: 4/26/2018
DATE FINISH: 4/26/2018

Drilling Information

LOCATION: See Exploration Location Plan
ELEVATION (FT): 48' +/-
TOTAL DEPTH (FT): 26.0
LOGGED BY: Nate Strout
DRILLING CO.: S. W. Cole Explorations, LLC
DRILLER: Matt Leonard
DRILLING METHOD: Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50
AUGER ID/OD: 2 1/4 in / 5 5/8 in
SAMPLER: Standard Split-Spoon
HAMMER TYPE: Automatic
HAMMER WEIGHT (lbs): 140
CASING ID/OD: N/A /N/A
CORE BARREL:
HAMMER EFFICIENCY FACTOR: 0.92
HAMMER DROP (inch): 30
WATER LEVEL DEPTHS (ft): Soils wet below 10'
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_2O Depth	Remarks
			1D		0-2	24/2	3-10-5-5			Medium dense, brown Gravelly Silty SAND with cobbles and concrete debris (Fill)		
45			2D		2-4	24/10	3-6-3-2					
										3.0 Loose, brown fine to medium SAND, some silt (Fill)		
	5		3D		4-6	24/14	3-1-1-1					
			4D		6-8	24/20	1-2-4-4					
										7.0 Medium dense, brown Silty Gravelly SAND (Fill)		
40			5D		8-10	24/15	8-10-7-7					
										9.0 Medium dense, brown Gravelly Silty SAND with cobbles (Glacial Till)		
	10		6D		10-12	24/7	8-9-13-8					
35												
	15		7D		15-17	24/13	11-13-13-35					
30												
										20.0 Medium dense, gray Gravelly Sandy SILT (Glacial Till)		
	20		8D		20-22	24/17	16-18-26-35					
25												
	25		9D		25-26	12/10	36-58					

Bottom of Exploration at 26.0 feet

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 17-0214.GPJ SWCE TEMPLATE.GDT 6/14/19

BORING LOG

S.W.COLE ENGINEERING, INC.

CLIENT: CES, Inc.
PROJECT: Proposed Whole Oceans Development
LOCATION: River Road, Bucksport, Maine

BORING NO.: B-18-36
SHEET: 1 of 1
PROJECT NO. 17-0214
DATE START: 4/26/2018
DATE FINISH: 4/26/2018

Drilling Information

LOCATION: See Exploration Location Plan **ELEVATION (FT):** 58' +/- **TOTAL DEPTH (FT):** 7.6 **LOGGED BY:** Nate Strout
DRILLING CO.: S. W. Cole Explorations, LLC **DRILLER:** Matt Leonard **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50 **AUGER ID/OD:** 2 1/4 in / 5 5/8 in **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic **HAMMER WEIGHT (lbs):** 140 **CASING ID/OD:** N/A /N/A **CORE BARREL:**
HAMMER EFFICIENCY FACTOR: 0.92 **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): No free water observed
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth	Remarks
			1D		0-2	24/16	5-16-11-10			0.5 Topsoil Medium dense, brown Gravelly SILT and SAND with cobbles (Glacial Till)		
55			2D		2-4	24/11	5-6-9-9					
	5		3D		5-7	24/16	7-20-24-39					

Refusal at 7.6 feet
Probable Bedrock

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 17-0214.GPJ SWCE TEMPLATE.GDT 6/14/19

BORING LOG

S.W.COLE ENGINEERING, INC.

CLIENT: CES, Inc.
PROJECT: Proposed Whole Oceans Development
LOCATION: River Road, Bucksport, Maine

BORING NO.: B-18-37
SHEET: 1 of 1
PROJECT NO. 17-0214
DATE START: 4/26/2018
DATE FINISH: 4/26/2018

Drilling Information

LOCATION: See Exploration Location Plan **ELEVATION (FT):** 42' +/- **TOTAL DEPTH (FT):** 6.8 **LOGGED BY:** Nate Strout
DRILLING CO.: S. W. Cole Explorations, LLC **DRILLER:** Matt Leonard **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50 **AUGER ID/OD:** 2 1/4 in / 5 5/8 in **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic **HAMMER WEIGHT (lbs):** 140 **CASING ID/OD:** N/A /N/A **CORE BARREL:**
HAMMER EFFICIENCY FACTOR: 0.92 **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): No free water observed
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth	Remarks
										0.5 Concrete (5")		
										Dense, brown Silty Gravelly SAND (Fill)		
40										1.5 Dense, light brown Gravelly Silty SAND with cobbles (Fill)		
			1D		0.7-2.7	24/20	12-37-33-28					
			2D		2.7-4.7	24/24	40-44-49-68			3.5 Dense, reddish-brown Silty GRAVEL and SAND with cobbles (Glacial Till)		
	5		3D		5-5.3	4/4	50/4"					

Refusal at 6.8 feet
Probable Bedrock

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 17-0214.GPJ SWCE TEMPLATE.GDT 6/14/19

BORING LOG

S.W.COLE ENGINEERING, INC.

CLIENT: CES, Inc.
PROJECT: Proposed Whole Oceans Development
LOCATION: River Road, Bucksport, Maine

BORING NO.: B-18-38
SHEET: 1 of 1
PROJECT NO. 17-0214
DATE START: 4/25/2018
DATE FINISH: 4/25/2018

Drilling Information

LOCATION: See Exploration Location Plan **ELEVATION (FT):** 54' +/- **TOTAL DEPTH (FT):** 21.7 **LOGGED BY:** Nate Strout
DRILLING CO.: S. W. Cole Explorations, LLC **DRILLER:** Matt Leonard **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50 **AUGER ID/OD:** 2 1/4 in / 5 5/8 in **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic **HAMMER WEIGHT (lbs):** 140 **CASING ID/OD:** N/A /N/A **CORE BARREL:**
HAMMER EFFICIENCY FACTOR: 0.92 **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): No free water observed
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth	Remarks
										0.3 Bituminous Pavement (4")		
										1.0 Medium dense, brown SAND and GRAVEL, some silt (Fill)		
			1D		0.6-2.6	24/16	10-11-7-7			Medium dense, brown Gravelly Silty SAND with cobbles (Glacial Till)		
			2D		2.6-4.6	24/15	13-17-16-20					
50	5		3D		5-7	24/17	18-20-32-19					
45	10		4D		10-11.3	15/12	11-16-50/3"					
40	15		5D		15-17	24/13	5-6-5-8			15.0 Medium dense, gray Sandy SILT, some gravel and clay with cobbles (Glacial Till)		
35	20		6D		20-20.5	6/5	57					

Refusal at 21.7 feet
Probable Cobble or Boulder

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 17-0214.GPJ SWCE TEMPLATE.GDT 6/14/19

BORING LOG

S.W.COLE ENGINEERING, INC.

CLIENT: CES, Inc.
PROJECT: Proposed Whole Oceans Development
LOCATION: River Road, Bucksport, Maine

BORING NO.: B-18-39
SHEET: 1 of 1
PROJECT NO. 17-0214
DATE START: 4/25/2018
DATE FINISH: 4/25/2018

Drilling Information

LOCATION: See Exploration Location Plan **ELEVATION (FT):** 55' +/- **TOTAL DEPTH (FT):** 27.0 **LOGGED BY:** Nate Strout
DRILLING CO.: S. W. Cole Explorations, LLC **DRILLER:** Matt Leonard **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50 **AUGER ID/OD:** 2 1/4 in / 5 5/8 in **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic **HAMMER WEIGHT (lbs):** 140 **CASING ID/OD:** N/A /N/A **CORE BARREL:**
HAMMER EFFICIENCY FACTOR: 0.92 **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): Soils wet below 11' +/-
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_U = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_2O Depth	Remarks
										0.6 Bituminous Pavement (6.5")		
			1D		0.6-2.6	24/15	13-12-9-8			Medium dense to loose, brown Silty Gravelly SAND (Fill)		
			2D		2.6-4.4	21/14	10-8-7-50/3"					
50	5		3D		5-7	24/16	3-3-3-4					
			4D		7-9	24/2	4-2-6-8					
			5D		9-11	24/20	3-5-6-9	q_P=7 ksf		9.0 Loose, gray Sandy SILT, trace organics (Fill)		
45	10									10.0 Very stiff consistency, brown and gray Silty CLAY		
			6D		11-13	24/20	7-9-13-9	q_P=7 ksf				
										13.0 Medium dense, brown Gravelly Sandy SILT with cobbles (Glacial Till)		
40	15		7D		15-17	24/8	16-18-12-16					
35	20		8D		20-22	24/15	10-12-10-10					
30	25		9D		25-27	24/13	15-10-8-9			25.0 Medium dense, gray Gravelly Sandy SILT (Glacial Till)		

Bottom of Exploration at 27.0 feet

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 17-0214.GPJ SWCE TEMPLATE.GDT 6/14/19

BORING LOG

S.W.COLE ENGINEERING, INC.

CLIENT: CES, Inc.
PROJECT: Proposed Whole Oceans Development
LOCATION: River Road, Bucksport, Maine

BORING NO.: B-18-40
SHEET: 1 of 1
PROJECT NO. 17-0214
DATE START: 4/27/2018
DATE FINISH: 4/27/2018

Drilling Information

LOCATION: See Exploration Location Plan **ELEVATION (FT):** 62' +/- **TOTAL DEPTH (FT):** 12.1 **LOGGED BY:** Nate Strout
DRILLING CO.: S. W. Cole Explorations, LLC **DRILLER:** Matt Leonard **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50 **AUGER ID/OD:** 2 1/4 in / 5 5/8 in **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic **HAMMER WEIGHT (lbs):** 140 **CASING ID/OD:** N/A /N/A **CORE BARREL:**
HAMMER EFFICIENCY FACTOR: 0.92 **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): Soils wet below 7' +/-
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth	Remarks
			1D		0-2	24/7	1-2-2-4			Loose, brown medium SAND, some silt and gravel (Fill)		
60			2D		2-4	24/6	4-5-4-2					
	5		3D		4.5-6.5	24/15	2-2-5-6					
										6.0 Loose, brown Gravelly Silty SAND with cobbles (Fill)		
55			4D		6.5-8.5	24/9	5-6-4-3					
			5D		8.5-10.5	24/18	4-10-15-16			9.0 Medium dense, brown Gravelly SAND and SILT (Glacial Till)		
	10		6D		10.5-12.5	24/6	6-9-10-36					
50												

Refusal at 12.1 feet
Probable Bedrock

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 17-0214.GPJ SWCE TEMPLATE.GDT 6/14/19

BORING LOG

CLIENT: CES, Inc.
PROJECT: Proposed Whole Oceans Development
LOCATION: River Road, Bucksport, Maine

BORING NO.: B-18-41
SHEET: 1 of 1
PROJECT NO. 17-0214
DATE START: 4/27/2018
DATE FINISH: 4/27/2018

Drilling Information

LOCATION: See Exploration Location Plan **ELEVATION (FT):** 81' +/- **TOTAL DEPTH (FT):** 1.3 **LOGGED BY:** Nate Strout
DRILLING CO.: S. W. Cole Explorations, LLC **DRILLER:** Matt Leonard **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50 **AUGER ID/OD:** 2 1/4 in / 5 5/8 in **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic **HAMMER WEIGHT (lbs):** 140 **CASING ID/OD:** N/A /N/A **CORE BARREL:**
HAMMER EFFICIENCY FACTOR: 0.92 **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): No free water observed
GENERAL NOTES: Offset at 5 adjacent locations, refusal at 1.3'

KEY TO NOTES AND SYMBOLS:
Water Level
▽ At time of Drilling
▼ At Completion of Drilling
▼ After Drilling

D = Split Spoon Sample
U = Thin Walled Tube Sample
R = Rock Core Sample
V = Field Vane Shear

Pen. = Penetration Length
Rec. = Recovery Length
bpf = Blows per Foot
mpf = Minute per Foot

WOR = Weight of Rods
WOH = Weight of Hammer
RQD = Rock Quality Designation
PID = Photoionization Detector

S_v = Field Vane Shear Strength, kips/sq.ft.
q_u = Unconfined Compressive Strength, kips/sq.ft.
Ø = Friction Angle (Estimated)
N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth	Remarks
80			1D	X	0-1	12/5	1-1-50/0"			Rubble Fill with sand and silt (Fill)		
										Refusal at 1.3 feet Rubble Fill		

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 17-0214.GPJ SWCE TEMPLATE.GDT 6/14/19

BORING LOG

S.W.COLE ENGINEERING, INC.

CLIENT: CES, Inc.
PROJECT: Proposed Whole Oceans Development
LOCATION: River Road, Bucksport, Maine

BORING NO.: B-18-42
SHEET: 1 of 1
PROJECT NO. 17-0214
DATE START: 4/25/2018
DATE FINISH: 4/25/2018

Drilling Information

LOCATION: See Exploration Location Plan
ELEVATION (FT): 52' +/-
TOTAL DEPTH (FT): 27.0
LOGGED BY: Nate Strout
DRILLING CO.: S. W. Cole Explorations, LLC
DRILLER: Matt Leonard
DRILLING METHOD: Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50
AUGER ID/OD: 2 1/4 in / 5 5/8 in
SAMPLER: Standard Split-Spoon
HAMMER TYPE: Automatic
HAMMER WEIGHT (lbs): 140
CASING ID/OD: N/A /N/A
CORE BARREL:
HAMMER EFFICIENCY FACTOR: 0.92
HAMMER DROP (inch): 30
WATER LEVEL DEPTHS (ft): Soils wet below 19' +/-
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_2O Depth	Remarks
			1D		0-2	24/13	38-7-10-23			0.5 Bituminous Pavement (6") Medium dense, brown Gravelly SAND, some silt (Fill)		
50												
			2D		3-5	24/16	20-18-17-16					
	5		3D		5-7	24/15	10-10-8-7					
45			4D		7-9	24/18	5-3-3-3			7.3 Loose, dark brown wood debris and organics with some sand and silt (Fill)		
			5D		9-11	24/8	3-3-3-2					
	10											
			6D		11-13	24/5	2-2-2-2					
40												
			7D		13-15	24/10	2-2-2-1			13.0 Loose, black SILT and SAND with organics (Fill)		
	15		8D		15-17	24/8	1-1-1-2			Petroleum odor observed from sample 7D		
35			9D		17-19	24/24	2-3-3-3					
			10D		19-21	24/18	3-2-2-2					
	20									20.0 Medium dense, gray SAND and SILT, some gravel (probable Glacial Till)		
			11D		21-23	24/24	1-1-1-12					
30										22.5 Medium dense, gray Gravelly Silty SAND with cobbles (Glacial Till)		
			12D		23-25	24/12	11-11-11-15					
	25		13		25-27	24/5	28-14-15-15					
25										Bottom of Exploration at 27.0 feet		

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 17-0214.GPJ SWCE TEMPLATE.GDT 6/14/19

BORING LOG

S.W.COLE ENGINEERING, INC.

CLIENT: CES, Inc.
PROJECT: Proposed Whole Oceans Development
LOCATION: River Road, Bucksport, Maine

BORING NO.: B-18-43
SHEET: 1 of 1
PROJECT NO. 17-0214
DATE START: 4/27/2018
DATE FINISH: 4/27/2018

Drilling Information

LOCATION: See Exploration Location Plan **ELEVATION (FT):** 80' +/- **TOTAL DEPTH (FT):** 4.4 **LOGGED BY:** Nate Strout
DRILLING CO.: S. W. Cole Explorations, LLC **DRILLER:** Matt Leonard **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50 **AUGER ID/OD:** 2 1/4 in / 5 5/8 in **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic **HAMMER WEIGHT (lbs):** 140 **CASING ID/OD:** N/A /N/A **CORE BARREL:**
HAMMER EFFICIENCY FACTOR: 0.92 **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): No free water observed
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_2O Depth	Remarks
			1D		0-2	24/10	2-8-9-26			0.5 Topsoil Medium dense, brown Gravelly Silty SAND with cobbles (Glacial Till)		
			2D		3-4.4	17/15	8-21-50/5"					

Refusal at 4.4 feet
Probable Bedrock

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 17-0214.GPJ SWCE TEMPLATE.GDT 6/14/19

BORING LOG

S.W.COLE ENGINEERING, INC.

CLIENT: CES, Inc.
PROJECT: Proposed Whole Oceans Development
LOCATION: River Road, Bucksport, Maine

BORING NO.: B-18-44
SHEET: 1 of 1
PROJECT NO. 17-0214
DATE START: 4/27/2018
DATE FINISH: 4/27/2018

Drilling Information

LOCATION: See Exploration Location Plan **ELEVATION (FT):** 84' +/- **TOTAL DEPTH (FT):** 10.4 **LOGGED BY:** Nate Strout
DRILLING CO.: S. W. Cole Explorations, LLC **DRILLER:** Matt Leonard **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50 **AUGER ID/OD:** 2 1/4 in / 5 5/8 in **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic **HAMMER WEIGHT (lbs):** 140 **CASING ID/OD:** N/A /N/A **CORE BARREL:**
HAMMER EFFICIENCY FACTOR: 0.92 **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): No free water observed
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth	Remarks
										0.2 Bituminous Pavement (2")		
			1D		0.8-2.8	24/16	5-10-20-26			Medium dense, brown SAND and GRAVEL, some silt (Fill)		
			2D		2.8-4.8	24/16	17-15-17-18			2.5 Medium dense, brown and gray Silty GRAVEL and SAND with trace wood debris (Fill)		
80	5		3D		5-7	24/13	8-13-8-7					
			4D		7-9	24/10	19-5-14-23					
75	10		5D		10-10.2	2/2	50/2"					

Refusal at 10.4 feet
Probable Bedrock

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 17-0214.GPJ SWCE TEMPLATE.GDT 6/14/19

S.W.COLE ENGINEERING, INC.

SUMMARY OF SUBSURFACE STRATA

PROJECT: PROPOSED WHOLE OCEANS FACILITY
CLIENT: CES, INC.
LOCATION: ROUTE 15, BUCKSPORT, MAINE

PROJECT NO.: 17-0214

EXPLORATION NO.	B-18-1	B-18-2	B-18-3	B-18-4	B-18-5	B-18-6	B-18-7	B-18-8	B-18-9	B-18-10	B-18-11	B-18-12	B-18-13	B-18-14	B-18-15	B-18-16	B-18-17	B-18-18	B-18-19	B-18-20
APPROXIMATE GROUND SURFACE ELEVATION (ft)	34.0	35.0	36.0	35.0	35.0	34.0	40.0	38.0	39	38	38.0	46.0	50.0	44.0	43.0	42.0	48.0	53.0	59.0	56.0
DEPTH OF EXPLORATION OR REFUSAL (ft)	39.0	32.0	27.0	32.0	27.0	27.2	26.5	37.0	27.0	22.0	27.0	27.0	21.2	20.0	22.0	22.0	22.0	26.5	13.4	26.6
DEPTH TO WATER OR SATURATED SOIL (ft)	11.0	15.0	15.0	16.0	10.0	11.3	6.0	10.0	4.2	N/E	6.1	N/E	5.0	N/E	N/E	5.5	N/E	20.0	N/E	N/E
STRATUM THICKNESS																				
Topsoil / Pavement (ft)	0.5	--	0.4	0.4	0.3	0.3	0.4	--	--	--	0.6	0.6	0.6	0.4	0.4	--	0.4	--	0.5	0.4
Fill (ft)	4.5	6.0	9.6	2.6	4.7	1.7	5.6	5.5	5.0	1.5	1.9	5.4	7.9	6.4	6.4	6.5	2.6	8.5	4.5	8.6
Organic Debris / Relic Topsoil (ft)	--	2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Glaciomarine Silt, Clay, Sand (ft)	19.8	19.0	8.0	5.4	3.5	14.0	16.2	12.7	3.5		--	--	3.0	9.2	4.7	--	--	--	2.5	--
Glacial Till (ft)	8.8	5.0*	9.0*	23.6*	18.5*	11.2	4.3*	8.8*	11.0*	20.5*	24.5*	21.0*	9.7	4.0*	10.5*	15.5*	19.0*	18.0*	5.9*	17.6*
Bedrock (ft)	5.4*	--	--	--	--	0.0	--	--	--	--	--	--	0.0	--	--	--	--	--	0.0	--
Interpreted Refusal Surface	Bedrock	N/E	N/E	N/E	N/E	Bedrock / Boulder	N/E	N/E	N/E	N/E	N/E	N/E	Bedrock	Bedrock / Boulder	N/E	N/E	N/E	N/E	Bedrock	N/E

EXPLORATION NO.	B-18-21	B-18-22	B-18-23	B-18-24	B-18-25	B-18-26	B-18-27	B-18-28	B-18-29	B-18-30	B-18-31	B-18-32	B-18-33	B-18-34	B-18-34A	B-18-35	B-18-36	B-18-37	B-18-38	B-18-39
APPROXIMATE GROUND SURFACE ELEVATION (ft)	55.0	54.0	50.0	55.0	55.0	68.0	56.0	62.0	56.0	56.0	36.0	37.0	36.0	49.0	47.0	48.0	58.0	42.0	54.0	55.0
DEPTH OF EXPLORATION (ft)	27.0	32.0	27.0	25.3	32.0	21.1	30.9	18.5	30.0	32.0	24.1	25.0	20.0	11.2	17.0	26.0	7.6	6.8	21.7	27.0
DEPTH TO WATER OR SATURATED SOIL (ft)	5.0	10.0	N/E	9.5	10.0	N/E	N/E	N/E	15.0	N/E	10.0	10.0	10.0	5.0	14.0	10.0	N/E	N/E	N/E	11.0
STRATUM THICKNESS																				
Topsoil / Pavement (ft)	0.4	--	0.3	0.4	0.5	0.3	0.3	0.5	0.4	--	0.3	--	0.2	--	0.4	--	0.5	--	0.3	0.6
Fill (ft)	7.1	10.5	3.2	4.1	2.0	2.7	--	1.5	4.6	6.5	4.7	5.0	2.3	5.0	4.6	9.0	--	3.5	0.7	9.4
Organic Debris / Relic Topsoil (ft)	--	0.5	--	--	--	--	--	--	--	--	--	--	--	--	0.4	--	--	--	--	--
Glaciomarine Silt, Clay, Sand (ft)	--	--	1.5	2.5	--	--	--	--	3.7	--	13.0	15.5	10.0	--	3.4	--	--	--	--	3.0
Glacial Till (ft)	19.5*	21.0*	23.5*	18.3	29.5*	18.1	30.6	16.5	21.3	25.5*	6.1	4.5*	7.5*	6.2*	8.0*	17.0*	7.1	3.3	20.7	14.0*
Bedrock (ft)	--	--	--	--	--	0.0	0.0	0.0	0.0	--	0.0	--	--	--	--	--	0.0	0.0	--	--
Interpreted Refusal Surface	N/E	N/E	N/E	Cobble / Boulder	N/E	Bedrock / Boulder	Bedrock / Boulder	Bedrock / Boulder	Bedrock / Boulder	N/E	Bedrock / Boulder	Bedrock / Boulder	Bedrock / Boulder	Cobble / Boulder	N/E	N/E	Bedrock	Bedrock	Cobble / Boulder	Cobble / Boulder

EXPLORATION NO.	B-18-40	B-18-41	B-18-42	B-18-43	B-18-44
APPROXIMATE GROUND SURFACE ELEVATION (ft)	62.0	81.0	52.0	80.0	84.0
DEPTH OF EXPLORATION (ft)	12.1	1.3	27.0	4.4	10.4
DEPTH TO WATER OR SATURATED SOIL (ft)	7.0	N/E	19.0	N/E	N/E
STRATUM THICKNESS					
Topsoil / Pavement (ft)	--	--	0.5	0.5	0.2
Fill (ft)	9.0	1.3*	19.5	--	10.2
Organic Debris / Relic Topsoil (ft)	--	--	--	--	--
Glaciomarine Silt, Clay, Sand (ft)	--	--	--	--	--
Glacial Till (ft)	3.1	--	4.5*	3.9*	--
Bedrock (ft)	0.0	--	--	0.0	0.0
Interpreted Refusal Surface	Bedrock	Rubble Fill	N/E	Bedrock	Bedrock

NOTES:
1. N/A INDICATES GROUND SURFACE ELEVATION NOT AVAILABLE
2. N/E INDICATES NOT ENCOUNTERED
3. -- INDICATES STRATUM NOT ENCOUNTERED WITHIN DEPTH OF EXPLORATION
4. * INDICATES DEPTH PENETRATED INTO STRATUM

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.:	**SB-20**
SHEET:	1 OF 1
PROJECT NO.:	11-0265 S
DATE START:	5/23/2011
DATE FINISH:	5/24/2011
ELEVATION:	175' +/-
SWC REP.:	NDS

PROJECT / CLIENT: RENEWABLE ENERGY PROJECT / VERSO PAPER
LOCATION: BUCKSPORT, MAINE
DRILLING CO. : MAINE TEST BORINGS DRILLER: MIKE PORTER

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	NW	3"	300 lbs	16"
SAMPLER:	SS	1 3/8"	140 lbs	30"
CORE BARREL:				

WATER LEVEL INFORMATION
PIEZOMETER INSTALLED
WATER AT 9.5' FOLLOWING INSTALLATION

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
AUGER										REDDISH BROWN SANDY SILT (FILL)
TO									2.0'	(ML)
5'										
"	1D	18"	9"	3.5'	12	27	46			BROWN SILTY GRAVELLY SAND WITH COBBLES
"										(GLACIAL TILL)
91										(SM)
64	2D	24"	17"	7.0'	36	54	67	42		~ DENSE ~
75										
72										
143									10.0'	
91										
79	3D	24"	1"	12.0'	29	28	35	46		w = 9.5%
117										
178										
150										
N/A										BROWN GRAVELLY SAND AND SILT WITH COBBLES (GLACIAL TILL)
"	4D	24"	1"	17.0'	20	18	37	57		(SM)
"										
"										~ DENSE ~
"										
"										
"	5D	18"	14"	21.5'	60	68	110			
"										INSTALLED OPEN STANDPIPE PIEZOMETER
"										PVC SCREEN 27.3' TO 32.3'
"										
"										GROUNDWATER DEPTHS
"	6D	7"	5"	25.6'	160	50/0.1'				
"										5/24/2011 9.5'
"										5/31/2011 10.8'
"										6/10/2011 13.4'
"										6/17/2011 13.7'
"	7D	24"	17"	32.0'	100	86	56	81		
"									33.4'	
										CASING REFUSAL AT 33.4'
										REVISED 8/5/2011

SAMPLES:
D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:

	DRILLER - VISUALLY
X	SOIL TECH. - VISUALLY
X	LABORATORY TEST

REMARKS: CASING BLOWS NOT RECORDED AFTER 15', SINCE DRILLER WASHED AHEAD PRIOR TO DRIVING CASING
STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

BORING NO.: **SB-20**

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.:	**SB-21**
SHEET:	1 OF 1
PROJECT NO.:	11-0265 S
DATE START:	5/19/2011
DATE FINISH:	5/19/2011
ELEVATION:	N/A
SWC REP.:	NDS

PROJECT / CLIENT: RENEWABLE ENERGY PROJECT / VERSO PAPER
LOCATION: BUCKSPORT, MAINE
DRILLING CO. : MAINE TEST BORINGS DRILLER: MIKE PORTER

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	HSA	2 1/4"		
SAMPLER:	SS	1 3/8"	140 lbs	30"
CORE BARREL:				

WATER LEVEL INFORMATION
NO GROUNDWATER OBSERVED

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
									0.2'	BITUMINOUS ASPHALT PAVEMENT
										DARK BROWN GRAVELLY SAND WITH SOME SILT & TRACE ASPHALT & ORGANICS (FILL - PAVEMENT BASE) (SW)
	1D	24"	17"	4.0'	20	21	18	31	3.8'	~ DENSE ~
	2D	24"	20"	7.0'	15	23	16	15		w = 11.6%
										BROWN TO GRAY-BROWN GRAVELLY SAND AND SILT (GLACIAL TILL) (SM) ~ MEDIUM DENSE TO DENSE ~
	3D	24"	10"	12.0'	18	28	20	16		w = 8.9%
									15.0'	
	4D	24"	12"	17.0'	4	8	15	24		GRAY-BROWN GRAVELLY SANDY SILT (GLACIAL TILL) (SM) ~ MEDIUM DENSE TO DENSE ~
	5D	24"	12"	22.0'	26	32	32	44		
									23.4'	
										AUGER REFUSAL AT 23.4'

SAMPLES:
D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:

	DRILLER - VISUALLY
X	SOIL TECH. - VISUALLY
X	LABORATORY TEST

REMARKS: CAVED AT 18.8'
REVISED 8/5/2011
STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

BORING NO.: **SB-21**

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.:	**SB-22**
SHEET:	1 OF 1
PROJECT NO.:	11-0265 S
DATE START:	5/19/2011
DATE FINISH:	5/19/2011
ELEVATION:	NA
SWC REP.:	NDS

PROJECT / CLIENT: RENEWABLE ENERGY PROJECT / VERSO PAPER
LOCATION: BUCKSPORT, MAINE
DRILLING CO. : MAINE TEST BORINGS DRILLER: MIKE PORTER

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	HSA	2 1/4"		
SAMPLER:	SS	1 3/8"	140 lbs	30"
CORE BARREL:				

WATER LEVEL INFORMATION
WATER OBSERVED AT 4.7'

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
									0.5'	WOODCHIPS
	1D	24"	13"	4.0'	9	9	6	3		GRAY-BROWN SILTY GRAVELLY SAND WITH ORGANICS (FILL) ~ LOOSE TO MEDIUM DENSE ~
	2D	24"	10"	7.0'	9	17	17	29	6.5'	
									10.0'	BROWN GRAVELLY SILTY SAND (GLACIAL TILL) (SM) ~ DENSE ~
	3D	24"	13"	12.0'	9	17	29	24		BROWN GRAVELLY SAND AND SILT (GLACIAL TILL) (SM) ~ DENSE ~
	4D	4"	4"	15.8'	50/0.3'					
	5D	4"	4"	20.3'	50/0.3'					
									25.5'	
	6D	24"	19"	27.5'	12	21	32	36		BROWN SILTY SAND, FEW SILTY LAYERS (SM) ~ DENSE ~
	7D	24"	24"	32'	7	40	52	67	32.0'	
										BOTTOM OF EXPLORATION AT 32.0'

SAMPLES:
D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:
[ ] DRILLER - VISUALLY
[X] SOIL TECH. - VISUALLY
[ ] LABORATORY TEST

REMARKS: CAVED AT 8.7' REVISED 8/5/2011
PETROLEUM-LIKE ODOR IN SAMPLE 2-D
STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

BORING NO.: **SB-22**

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.:	**SB-23**
SHEET:	1 OF 1
PROJECT NO.:	11-0265 S
DATE START:	5/20/2011
DATE FINISH:	5/20/2011
ELEVATION:	163' +/-
SWC REP.:	NDS

PROJECT / CLIENT: RENEWABLE ENERGY PROJECT / VERSO PAPER
LOCATION: BUCKSPORT, MAINE
DRILLING CO. : MAINE TEST BORINGS DRILLER: MIKE PORTER

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	HSA	2 1/4"		
SAMPLER:	SS	1 3/8"	140 lbs	30"
CORE BARREL:				

WATER LEVEL INFORMATION
NO GROUNDWATER OBSERVED

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
									0.3'	WOODCHIPS
	1D	24"	9"	4.0'	3	8	8	4	6.0'	DARK BROWN SILTY SAND AND GRAVEL WITH WOOD CHIPS (FILL) ~ LOOSE ~
	2D	24"	16"	7.0'	3	4	3	7	10.0'	LIGHT BROWN FINE SANDY SILT, SOME GRAVEL, TRACE ORGANICS (FILL) (ML) ~ LOOSE ~
	3D	24"	14"	12.0'	23	27	45	33		BROWN GRAVELLY SILTY SAND (GLACIAL TILL) (SM) ~ DENSE ~
	4D	24"	13"	17.0'	14	21	22	22	19.3'	
										AUGER REFUSAL AT 19.3'

SAMPLES:
D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:
[ ] DRILLER - VISUALLY
[X] SOIL TECH. - VISUALLY
[ ] LABORATORY TEST

REMARKS: CAVED AT 17.8'
REVISED 8/5/2011
STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

BORING NO.: **SB-23**

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.:	**SB-24**
SHEET:	1 OF 1
PROJECT NO.:	11-0265 S
DATE START:	5/20/2011
DATE FINISH:	5/20/2011
ELEVATION:	144' +/-
SWC REP.:	NDS

PROJECT / CLIENT: RENEWABLE ENERGY PROJECT / VERSO PAPER
LOCATION: BUCKSPORT, MAINE
DRILLING CO. : MAINE TEST BORINGS DRILLER: MIKE PORTER

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	HSA	2 1/4"		
SAMPLER:	SS	1 3/8"	140 lbs	30"
CORE BARREL:				

WATER LEVEL INFORMATION
NO GROUNDWATER OBSERVED

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
										GRAY-BROWN SILTY GRAVELLY SAND (FILL)
										(SM)
									3.0'	~ MEDIUM DENSE ~
	1D	24"	3"	4.0'	28	22	16	17		GRAY-BROWN SANDY SILT, SOME GRAVEL, TRACE ORGANICS (FILL)
										(ML)
										~ MEDIUM DENSE ~
	2D	15"	10"	6.3'	10	13	50/0.3'		6.3'	
										SAMPLER REFUSAL AT 6.3'

SAMPLES:
D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:
[ ] DRILLER - VISUALLY
[X] SOIL TECH. - VISUALLY
[ ] LABORATORY TEST

REMARKS: STONE LODGED IN THE TIP OF THE SPOON AT 6.3'
REVISED 8/5/2011
STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

BORING NO.: **SB-24**

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.:	**SB-24A**
SHEET:	1 OF 1
PROJECT NO.:	11-0265 S
DATE START:	6/17/2011
DATE FINISH:	6/17/2011
ELEVATION:	142' +/-
SWC REP.:	NDS

PROJECT / CLIENT: RENEWABLE ENERGY PROJECT
LOCATION: BUCKSPORT, MAINE
DRILLING CO. : MAINE TEST BORINGS DRILLER: MIKE PORTER

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	HSA	2 1/4"		
SAMPLER:	SS	1 3/8"	140 lbs	30"
CORE BARREL:				

WATER LEVEL INFORMATION
WATER OBSERVED AT 22.1'

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
	1D	24"	8"	4.0'	21	16	14	13	4.5'	BROWN SILTY GRAVELLY SAND (FILL) (SM) ~ MEDIUM DENSE ~
	2D	24"	15"	7.0'	3	3	7	14	11.0'	BROWN SANDY SILT, SOME GRAVEL, TRACE ORGANICS (FILL) (ML) ~ LOOSE TO MEDIUM DENSE ~
	3D	24"	10"	12.0'	8	12	21	33		BROWN GRAVELLY SAND AND SILT, FEW SILTY LAYERS (GLACIAL TILL) (SM) ~ DENSE ~
	4D	24"	20"	17.0'	30	35	36	50		
	5D	24"	14"	22.0'	24	24	22	16		
	6D	24"	16"	27.0'	6	12	22	47	27.0'	BOTTOM OF EXPLORATION AT 27.0'

SAMPLES:
D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:
[ ] DRILLER - VISUALLY
[X] SOIL TECH. - VISUALLY
[ ] LABORATORY TEST

REMARKS: CAVED AT 23.8' REVISED 8/5/2011
LOCATED 10' SOUTH OF SB-24
STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

BORING NO.: **SB-24A**

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.:	**SB-30**
SHEET:	1 OF 1
PROJECT NO.:	11-0265 S
DATE START:	5/20/2011
DATE FINISH:	5/20/2011
ELEVATION:	151' +/-
SWC REP.:	NDS

PROJECT / CLIENT: RENEWABLE ENERGY PROJECT / VERSO PAPER
LOCATION: BUCKSPORT, MAINE
DRILLING CO. : MAINE TEST BORINGS DRILLER: MIKE PORTER

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	HSA	2 1/4"		
SAMPLER:	SS	1 3/8"	140 lbs	30"
CORE BARREL:				

WATER LEVEL INFORMATION
WATER OBSERVED AT 2.8'

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
									0.8'	TOPSOIL
									2.0'	BROWN SILTY SAND AND GRAVEL (FILL) (SW)
									3.0'	LIGHT BROWN GRAVELLY SILTY SAND ~MEDIUM DENSE ~ (SM)
	1D	24"	19"	4.0'	9	13	34	42		BROWN CLAYEY SILT (CL) qp = 8 ksf
									5.0'	~ HARD CONSISTENCY ~
	2D	5"	2"	5.4'	50/0.4'				5.4'	LIGHT BROWN FINE SANDY SILT (ML)
										AUGER REFUSAL AT 5.4'

SAMPLES:
D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:
[ ] DRILLER - VISUALLY
[X] SOIL TECH. - VISUALLY
[ ] LABORATORY TEST

REMARKS: CAVED AT 5.4'
REVISED 8/5/2011
STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

BORING NO.: **SB-30**

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.:	**SB-31**
SHEET:	1 OF 1
PROJECT NO.:	11-0265 S
DATE START:	5/20/2011
DATE FINISH:	5/20/2011
ELEVATION:	156' +/-
SWC REP.:	NDS

PROJECT / CLIENT: RENEWABLE ENERGY PROJECT / VERSO PAPER
LOCATION: BUCKSPORT, MAINE
DRILLING CO. : MAINE TEST BORINGS DRILLER: MIKE PORTER

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	HSA	2 1/4"		
SAMPLER:	SS	1 3/8"	140 lbs	30"
CORE BARREL:				

WATER LEVEL INFORMATION
WATER OBSERVED AT 7.7'

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
										DARK BROWN SILTY SAND AND GRAVEL (FILL)
									2.0'	(SM)
										BROWN SILTY CLAY qp = 5.5 ksf
	1D	24"	13"	4.0'	9	10	13	18		(CL)
										~ VERY STIFF CONSISTENCY ~
									6.0'	
	2D	18"	18"	6.5'	8	10	50			BROWN GRAVELLY SILTY SAND (GLACIAL TILL)
										(SM)
									8.5'	~ MEDIUM DENSE~
										AUGER REFUSAL AT 8.5'

SAMPLES:
D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:
[ ] DRILLER - VISUALLY
[X] SOIL TECH. - VISUALLY
[ ] LABORATORY TEST

REMARKS: CAVED AT 7.7'
REVISED 8/5/2011
STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

BORING NO.: **SB-31**

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.:	**SB-33A**
SHEET:	1 OF 1
PROJECT NO.:	11-0265 S
DATE START:	5/23/2011
DATE FINISH:	5/23/2011
ELEVATION:	170' +/-
SWC REP.:	NDS

PROJECT / CLIENT: RENEWABLE ENERGY PROJECT / VERSO PAPER
LOCATION: BUCKSPORT, MAINE
DRILLING CO. : MAINE TEST BORINGS DRILLER: MIKE PORTER

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	HSA	2 1/4"		
SAMPLER:	SS	1 3/8"	140 lbs	30"
CORE BARREL:				

WATER LEVEL INFORMATION
NO GROUNDWATER OBSERVED

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
										DARK BROWN SILTY SAND AND GRAVEL WITH ORGANICS (FILL)
									5.0'	
	1D	14"		6.2'	36	56	50/0.2'			w = 8.9% BROWN GRAVELLY SILTY SAND (GLACIAL TILL) (SM) ~ DENSE ~
	2D	18"		11.5'	85	74	75			
	3D	24"		17.0'	23	29	37	40		
	4D	24"		22.0'	38	27	38	55	22.0'	
										BOTTOM OF EXPLORATION AT 22.0'

SAMPLES:
D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:

	DRILLER - VISUALLY
X	SOIL TECH. - VISUALLY
X	LABORATORY TEST

REMARKS: CAVED AT 15.8'
REVISED 8/5/2011
STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

BORING NO.: **SB-33A**

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.:	**SB-33**
SHEET:	1 OF 1
PROJECT NO.:	11-0265 S
DATE START:	5/23/2011
DATE FINISH:	5/23/2011
ELEVATION:	170' +/-
SWC REP.:	NDS

PROJECT / CLIENT: RENEWABLE ENERGY PROJECT / VERSO PAPER
LOCATION: BUCKSPORT, MAINE
DRILLING CO. : MAINE TEST BORINGS DRILLER: MIKE PORTER

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	HSA	2 1/4"		
SAMPLER:	SS	1 3/8"	140 lbs	30"
CORE BARREL:				

WATER LEVEL INFORMATION
NO WATER OBSERVED

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
										DARK BROWN SILTY SAND AND GRAVEL WITH ORGANICS (FILL)
	1D	7"	5"	2.6'	79	50/.01'			2.9'	
										AUGER REFUSAL AT 2.9'

SAMPLES:
D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:
[ ] DRILLER - VISUALLY
[X] SOIL TECH. - VISUALLY
[ ] LABORATORY TEST

REMARKS: MOVED 5' +/- SOUTH TO BORING SB-33A

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

BORING NO.: **SB-33**

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.:	**PB-1**
SHEET:	1 OF 1
PROJECT NO.:	11-0265 S
DATE START:	5/20/2011
DATE FINISH:	5/20/2011
ELEVATION:	167' +/-
SWC REP.:	NDS

PROJECT / CLIENT: RENEWABLE ENERGY PROJECT / VERSO PAPER
LOCATION: BUCKSPORT, MAINE
DRILLING CO. : MAINE TEST BORINGS DRILLER: MIKE PORTER

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	HSA	2 1/4"		
SAMPLER:	SS	1 3/8"	140 lbs	30"
CORE BARREL:				

WATER LEVEL INFORMATION
NO GROUNDWATER OBSERVED

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
									0.8'	TOPSOIL
									3.0'	BROWN SILTY SAND, SOME GRAVEL, TRACE ORGANICS (FILL) (SM) ~ LOOSE ~
	1D	24"	10"	4.0'	2	3	25	58		BROWN GRAVELLY SILTY SAND (GLACIAL TILL) (SM) ~ DENSE ~
	2D	24"	14"	7.5'	35	49	51	37	8.6'	
										AUGER REFUSAL AT 8.6'

SAMPLES:
D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:
[ ] DRILLER - VISUALLY
[X] SOIL TECH. - VISUALLY
[ ] LABORATORY TEST

REMARKS: CAVED AT 7.9' REVISED 8/5/2011
NUMEROUS BOULDERS AND COBBLES ON SURFACE IN THE AREA
STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

BORING NO.: **PB-1**

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.:	**PB-2**
SHEET:	1 OF 1
PROJECT NO.:	11-0265 S
DATE START:	5/20/2011
DATE FINISH:	5/20/2011
ELEVATION:	160' +/-
SWC REP.:	NDS

PROJECT / CLIENT: RENEWABLE ENERGY PROJECT / VERSO PAPER
LOCATION: BUCKSPORT, MAINE
DRILLING CO. : MAINE TEST BORINGS DRILLER: MIKE PORTER

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	HSA	2 1/4"		
SAMPLER:	SS	1 3/8"	140 lbs	30"
CORE BARREL:				

WATER LEVEL INFORMATION
WATER OBSERVED AT 6.4'

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
									1.0'	TOPSOIL
									2.5'	BROWN SILTY SAND WITH TRACE ORGANICS (FILL) (SM)
	1D	24"	14"	4.0'	10	15	25	15		BROWN GRAVELLY SAND AND SILT (GLACIAL TILL) (SM) ~ DENSE ~
	D	24"		7.0'	14	40	38	49		
	2D	24"	22"	12.0'	20	25	31	69	12.0'	
										BOTTOM OF EXPLORATION AT 12.0'

SAMPLES:
D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:
[ ] DRILLER - VISUALLY
[X] SOIL TECH. - VISUALLY
[ ] LABORATORY TEST

REMARKS: CAVED AT 9.4'
REVISED 8/5/2011
STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

BORING NO.: **PB-2**

S. W. COLE ENGINEERING, INC.

BORING LOG

BORING NO.	B96-1
SHEET	1 OF 1
PROJECT NO.	95-533 S
DATE START	09-17-96
DATE FINISH	09-18-96
ELEVATION	150.80

PROJECT: PROPOSED WOOD PROCESSING PROJECT
LOCATION: CHAMPION INTERNATIONAL CORPORATION, BUCKSPORT
DRILLING FIRM: MAINE TEST BORINGS, INC. DRILLER: MEL COFFIN

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING	NW	3"	300 LB	16"
SAMPLER	SS	1 3/8"	140 LB	30"
CORE BARREL				

WATER LEVEL INFORMATION
WATER @ 3.5' ON 09/24/96, HOLE CAVED @ 5.5'

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
AUGER										BROWN GRAVELLY SILTY SAND WITH TRACE OF WOOD (FILL) ~ DENSE ~
"									2.5'	
"	1D	24"		4.0'	38	30	60	85		
"										
"										
33	2D	24"		7.0'	15	21	25	20		BROWN GRAVELLY SILTY SAND ~ DENSE ~
45										
55										
12										
158										
WASHED	3D	18"		11.5'	60	85	90			
AHEAD										
"										
"									14.0'	
"										
"	4D	18"		16.5'	15	20	20			GRAY GRAVELLY SANDY SILT (TILL) ~ DENSE ~
"										
"										
"									19.8'	
"										
"	5D	18"		22.5'	20	25	38			GRAY GRAVELLY SANDY SILT WITH BOULDERS (TILL) ~ VERY DENSE ~
"										
"										
"										
"										
	6D	18"		26.6'	17	55	105		26.6'	
										BOTTOM OF EXPLORATION 26.6' NO REFUSAL

SOIL CLASSIFIED BY:

DRILLER - VISUALLY	XX
SOIL TECHNICIAN - VISUALLY	XX
LABORATORY TESTS	XX

REMARKS: ROLLERCONE FROM 22.6' TO 25.1'

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

S. W. COLE ENGINEERING, INC.

BORING LOG

BORING NO.	B96-2
SHEET	1 OF 2
PROJECT NO.	95-533 S
DATE START	09-19-96
DATE FINISH	09-20-96
ELEVATION	150.79

PROJECT: PROPOSED WOOD PROCESSING PROJECT
LOCATION: CHAMPION INTERNATIONAL CORPORATION, BUCKSPORT
DRILLING FIRM: MAINE TEST BORINGS, INC. DRILLER: MEL COFFIN

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING	NW	3"	300 LB	16"
SAMPLER	SS	1 3/8"	140 LB	30"
CORE BARREL				

WATER LEVEL INFORMATION
WATER @ 9.3' ON 09/24/96, HOLE CAVED @ 25.0'

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
AUGER										
"										BROWN SAND AND GRAVEL WITH SOME SILT (FILL)
"	1D	24"		4.0'	10	20	21	40		
"									4.0'	~ DENSE ~
"										
35	2D	24"		7.0'	21	32	25	25		
90										BROWN SILTY SAND AND GRAVEL (FILL ?)
80										
55										~ DENSE ~
32									10.0'	
25	3D	24"		12.0'	11	20	32	38		qp = 9+ ksf
30										
40										
45										GRAY-BROWN MOTTLED SILTY CLAY
42										
40	4D	18"		16.5'	4	6	7			w = 25..6 % qp = 3.5 - 4 ksf
40										
50										~ HARD BECOMING STIFF ~
55										
52									20.0'	
50	5D	18"		21.5'	WOH	WOH	WOH			w = 32.0 % qp = < 1 ksf
45										
50										GRAY SILTY CLAY
45										
45										~ SOFT ~
42	6D	18"		26.5'	WOH	WOH	40		26.0'	qp = < 1 ksf
40										
45										
55										
290										
190										
95	7D	18"		32.5'	35	40	75			BROWN GRAVELLY SILTY SAND
160										
135										~ VERY DENSE ~
160										
105	8D	10"		35.8'	35	140				
910										
340										
1253									38.0'	
796										BROWN GRAVELLY SILTY SAND WITH BOULDERS ~VERY DENSE~

SOIL CLASSIFIED BY:

DRILLER - VISUALLY	XX
SOIL TECHNICIAN - VISUALLY	XX
LABORATORY TESTS	XX

REMARKS:

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

S. W. COLE ENGINEERING, INC.

BORING LOG

BORING NO.	B96-2
SHEET	2 OF 2
PROJECT NO.	95-533 S
DATE START	09-19-96
DATE FINISH	09-20-96
ELEVATION	150.79

PROJECT: PROPOSED WOOD PROCESSING PROJECT
LOCATION: CHAMPION INTERNATIONAL CORPORATION, BUCKSPORT
DRILLING FIRM: MAINE TEST BORINGS, INC. DRILLER: MEL COFFIN

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING	NW	3"	300 LB	16"
SAMPLER	SS	1 3/8"	140 LB	30"
CORE BARREL				

WATER LEVEL INFORMATION
WATER @ 9.3' ON 09/24/96, HOLE CAVED @ 25.0'

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
	D	2"		40.7'	60				41.8'	BROWN GRAVELLY SILTY SAND WITH BOULDERS ~VERY DENSE~
										BOTTOM OF EXPLORATION 41.8'
										REFUSAL IN BOULDERS (BENT CASING)

SOIL CLASSIFIED BY:

DRILLER - VISUALLY	XX
SOIL TECHNICIAN - VISUALLY	XX
LABORATORY TESTS	

REMARKS:

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

S. W. COLE ENGINEERING, INC.

BORING LOG

BORING NO.	B96-3
SHEET	1 OF 2
PROJECT NO.	95-533 S
DATE START	09-16-96
DATE FINISH	09-17-96
ELEVATION	148.05

PROJECT: PROPOSED WOOD PROCESSING PROJECT
LOCATION: CHAMPION INTERNATIONAL CORPORATION, BUCKSPORT
DRILLING FIRM: MAINE TEST BORINGS, INC. DRILLER: MEL COFFIN

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING	NW	3"	300 LB	16"
SAMPLER	SS	1 3/8"	140 LB	30"
CORE BARREL				

WATER LEVEL INFORMATION
WATER @ 11.3' ON 09/24/96, HOLE CAVED @ 15.0'

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
AUGER										
"										
"										
"	1D	24"		4.0'	9	9	9	10		BROWN SILTY GRAVELLY SAND WITH COBBLES, TRACE OF ORGANICS AND WOOD (FILL)
"										
"	2D	5"		5.4'	60					
"										~ MEDIUM DENSE ~
"									8.0'	
55										BROWN GRAVELLY SILTY SAND
67										
40	3D	24"		12.0'	40	58	40	37		~ VERY DENSE ~
90										
70									13.0'	
195										GRAY GRAVELLY SANDY SILT (TILL)
130										
28	4D	18"		17.0'	22	40	52			
60										
60										
55										
68										
18	5D	18"		21.5'	8	18	25			
60										
70										
50										
50										
35	6D	18"		27.0'	8	15	14			
50										
40										
40										~ MEDIUM DENSE ~
40										
20	7D	18"		31.5'	4	3	14			
20										
45										
40										
72										
50	8D	6"		35.5'	135					
60										
105										
50										
90										

SOIL CLASSIFIED BY:

DRILLER - VISUALLY	XX
SOIL TECHNICIAN - VISUALLY	XX
LABORATORY TESTS	XX

REMARKS: WASHED AHEAD 20.0' TO 50.0'

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

S. W. COLE ENGINEERING, INC.
BORING LOG

BORING NO.	B96-3
SHEET	2 OF 2
PROJECT NO.	95-533 S
DATE START	09-16-96
DATE FINISH	09-17-96
ELEVATION	148.05

PROJECT: PROPOSED WOOD PROCESSING PROJECT
LOCATION: CHAMPION INTERNATIONAL CORPORATION, BUCKSPORT
DRILLING FIRM: MAINE TEST BORINGS, INC. DRILLER: MEL COFFIN

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING	NW	3"	300 LB	16"
SAMPLER	SS	1 3/8"	140 LB	30"
CORE BARREL				

WATER LEVEL INFORMATION
WATER @ 11.3' ON 09/24/96, HOLE CAVED @ 15.0'

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
	8D	18"		41.5'	32	75	80			
	D	18"		46.5'	65	90	130			GRAY GRAVELLY SANDY SILT (TILL) ~ VERY DENSE ~
	9D	18"		51.5'	35	42	70		51.5'	
										BOTTOM OF EXPLORATION 51.5' NO REFUSAL

SOIL CLASSIFIED BY:

DRILLER - VISUALLY	XX
SOIL TECHNICIAN - VISUALLY	XX
LABORATORY TESTS	

REMARKS: WASHED AHEAD 20.0' TO 50.0'

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

S. W. COLE ENGINEERING, INC.

BORING LOG

BORING NO.	B96-4
SHEET	1 OF 1
PROJECT NO.	95-533 S
DATE START	09-16-96
DATE FINISH	09-16-96
ELEVATION	147.43

PROJECT: PROPOSED WOOD PROCESSING PROJECT
LOCATION: CHAMPION INTERNATIONAL CORPORATION, BUCKSPORT
DRILLING FIRM: MAINE TEST BORINGS, INC. DRILLER: MEL COFFIN

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING	NW	3"	300 LB	16"
SAMPLER	SS	1 3/8"	140 LB	30"
CORE BARREL				

WATER LEVEL INFORMATION
WATER @ 10.5' ON 09/24/96, HOLE CAVED @ 18.5'

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
AUGER										
"	1D	8"		2.7'	20	75				BROWN SILT SAND AND GRAVEL WITH COBBLES, WOOD, ASH AND ORGANICS (FILL)
"										
"										
"									5.0'	~ DENSE ~
"	2D	24"		7.0'	5	18	25	19		BROWN SILTY SANDY GRAVEL WITH COBBLES (FILL)
"									6.5'	~ MEDIUM DENSE ~
"									8.5'	GRAY-BROWN CLAYEY SILT WITH TRACE FINE SAND
12										
37										BROWN SILTY GRAVELLY SAND
2	3D	24"		12.0'	25	25	42	50		
1										~ VERY DENSE ~
8									13.0'	
21										
45										
11	4D	24"		17.0'	33	30	35	30		
14										
9										GRAY GRAVELLY SANDY SILT (TILL)
11										
15										
	5D	18"		21.5'	14	25	33			~ DENSE TO VERY DENSE ~
	6D	18"		26.5'	20	14	15		26.5'	
										BOTTOM OF EXPLORATION 26.5' NO REFUSAL

SOIL CLASSIFIED BY:

DRILLER - VISUALLY	XX
SOIL TECHNICIAN - VISUALLY	XX
LABORATORY TESTS	

REMARKS: WASHED AHEAD 10.0' TO 25.0'

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

BORING NO. B96-4

S. W. COLE ENGINEERING, INC.

BORING LOG

BORING NO.	B96-5
SHEET	1 OF 1
PROJECT NO.	95-533 S
DATE START	09-13-96
DATE FINISH	09-13-96
ELEVATION	137.67

PROJECT: PROPOSED WOOD PROCESSING PROJECT
LOCATION: CHAMPION INTERNATIONAL CORPORATION, BUCKSPORT
DRILLING FIRM: MAINE TEST BORINGS, INC. DRILLER: MEL COFFIN

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING	NW	3"	300 LB	16"
SAMPLER	SS	1 3/8"	140 LB	30"
CORE BARREL				

WATER LEVEL INFORMATION

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
AUGER										BROWN SILTY SAND AND GRAVEL WITH TRACE OF WOOD (FILL)
"									2.0'	
"	1D	24"		4.0'	30	25	25	22		
"										
"										BROWN GRAVELLY SILTY SAND
32	2D	24"		7.0'	18	30	70	60		~ VERY DENSE ~
35										
50										
60										
80									10.0'	
WASHED	3D	18"		11.5'	18	18	23			
AHEAD										
"										
"										
"										GRAY GRAVELLY SANDY SILT (TILL)
"	4D	13"		16.1'	55	105	50			
"										
"										~ DENSE TO VERY DENSE ~
"										
"										
	5D	18"		21.5'	42	70	105		21.5'	
										BOTTOM OF EXPLORATION 21.5'
										NO REFUSAL

SOIL CLASSIFIED BY:

DRILLER - VISUALLY	XX
SOIL TECHNICIAN - VISUALLY	XX
LABORATORY TESTS	

REMARKS:

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

S. W. COLE ENGINEERING, INC.

BORING LOG

BORING NO.	B96-6
SHEET	1 OF 3
PROJECT NO.	95-533 S
DATE START	09-11-96
DATE FINISH	09-13-96
ELEVATION	139.36

PROJECT: PROPOSED WOOD PROCESSING PROJECT
LOCATION: CHAMPION INTERNATIONAL CORPORATION, BUCKSPORT
DRILLING FIRM: MAINE TEST BORINGS, INC. DRILLER: TOM SCHAEFER

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING	NW	3"	300 LB	16"
SAMPLER	SS	1 3/8"	140 LB	30"
CORE BARREL				

WATER LEVEL INFORMATION

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
AUGER										BROWN SILTY GRAVELLY SAND WITH COBBLES, TRACE OF WOOD (FILL)
"										
"										
"									4.0'	
"										GRAY GRAVELLY SILTY SAND WITH COBBLES (TILL) ~ DENSE ~
"	1D	18"		6.5'	10	25	36			
"										
"										
22										
38									10.0'	
18	2D	18"		11.5'	21	40	52			GRAY GRAVELLY SANDY SILT (TILL) ~ VERY DENSE ~
26										
31										
61										
38										
24	3D	18"		16.5'	24	35	42			
20										
19										
17										
12										
20	4D	12"		21.0'	62	90				
35										
35										
36										
52										
60	5D	6"		25.5'	103					
45										
36										
35										
38										
21	6D	18"		31.5'	26	32	51			
39										
56										
65										
60										
48	7D	14"		36.2'	20	30	50			
190										
110										
75										
95										

SOIL CLASSIFIED BY:

DRILLER - VISUALLY	XX
SOIL TECHNICIAN - VISUALLY	XX
LABORATORY TESTS	XX

REMARKS: WASHED AHEAD 9.0' TO 80.0'

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

S. W. COLE ENGINEERING, INC.

BORING LOG

BORING NO.	B96-6
SHEET	2 OF 3
PROJECT NO.	95-533 S
DATE START	09-11-96
DATE FINISH	09-13-96
ELEVATION	139.36

PROJECT: PROPOSED WOOD PROCESSING PROJECT
LOCATION: CHAMPION INTERNATIONAL CORPORATION, BUCKSPORT
DRILLING FIRM: MAINE TEST BORINGS, INC. DRILLER: TOM SCHAEFER

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING	NW	3"	300 LB	16"
SAMPLER	SS	1 3/8"	140 LB	30"
CORE BARREL				

WATER LEVEL INFORMATION

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
60	8D	18"		41.5'	35	44	70			GRAY GRAVELLY SANDY SILT WITH COBBLES (TILL) ~ VERY DENSE ~
62										
53										
67										
84										
29	9D	4"		45.3'	100					
41										
70										
50										
38										
100	10D	6"		51.0'	108				51.0'	
									52.2'	BOULDER
	11D	8"		55.7'	60	50				GRAY GRAVELLY SANDY SILT WITH COBBLES (TILL) ~ VERY DENSE ~
	12D	6"		60.5'	125					
	13D	18"		66.5'	82	63	65		70.1'	
	14D	2"		70.2'	75				71.9'	BOULDER
	15D	6"		75.5'	85					GRAY GRAVELLY SANDY SILT WITH COBBLES (TILL) ~ VERY DENSE ~

SOIL CLASSIFIED BY:

DRILLER - VISUALLY	XX
SOIL TECHNICIAN - VISUALLY	XX
LABORATORY TESTS	

REMARKS: WASHED AHEAD 9.0' TO 80.0'

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

S. W. COLE ENGINEERING, INC.

BORING LOG

BORING NO.	B96-6
SHEET	3 OF 3
PROJECT NO.	95-533 S
DATE START	09-11-96
DATE FINISH	09-13-96
ELEVATION	139.36

PROJECT: PROPOSED WOOD PROCESSING PROJECT
LOCATION: CHAMPION INTERNATIONAL CORPORATION, BUCKSPORT
DRILLING FIRM: MAINE TEST BORINGS, INC. DRILLER: TOM SCHAEFER

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING	NW	3"	300 LB	16"
SAMPLER	SS	1 3/8"	140 LB	30"
CORE BARREL				

WATER LEVEL INFORMATION

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
	16D	8"		80.7'	82	50			80.7'	80.7' GRAY GRAVELLY SANDY SILT WITH COBBLES (TILL)
										81.0' ROCK
										BOTTOM OF EXPLORATION 81.0'
										REFUSAL

SOIL CLASSIFIED BY:

DRILLER - VISUALLY	XX
SOIL TECHNICIAN - VISUALLY	XX
LABORATORY TESTS	

REMARKS: ROLLERCONE 80.7' TO 81.0'

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

BORING NO. B96-6

S. W. COLE ENGINEERING, INC.

BORING LOG

BORING NO.	B96-7
SHEET	1 OF 1
PROJECT NO.	95-533 S
DATE START	09-19-96
DATE FINISH	09-19-96
ELEVATION	136.64

PROJECT: PROPOSED WOOD PROCESSING PROJECT
LOCATION: CHAMPION INTERNATIONAL CORPORATION, BUCKSPORT
DRILLING FIRM: MAINE TEST BORINGS, INC. DRILLER: TOM SCHAEFER

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING	HW	4"	300 LB	16"
SAMPLER	SS	1 3/8"	140 LB	30"
CORE BARREL				

WATER LEVEL INFORMATION
ARTESIAN PRESSURE WITH CASING @ 20'

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
AUGER										BROWN SILTY GRAVELLY SAND WITH TRACE OF WOOD (FILL)
"									2.0'	
"	1D	18"		3.5'	12	17	20			BROWN MOTTLED CLAYEY SILT WITH TRACE OF FINE SAND
"										
"									5.0'	~ DENSE ~
37	2D	18"		6.5'	12	16	20			w = 26.5 % qp = 9+ ksf
41										
74										BROWN MOTTLED SILTY CLAY
82										
85									10.5'	~ HARD ~
100	3D	18"		11.5'	5	6	6			w = 33.0 % qp = < 1 ksf
108										
69										
82	1U	24"		14.0'	HYDRAULIC PUSH					GRAY SILTY CLAY
85	3 1/2 X 7	VANE		14'-7"				34/5	Sv = 0.47/0.07 ksf	
	3 1/2 X 7	VANE		15'-2"				40/5	Sv = 0.55/0.07 ksf	w = 39.6 %
									18.5'	~ SOFT ~
	4D	18"		21.5'	22	43	43			GRAY SILTY GRAVELLY SAND WITH SOME COBBLES (TILL)
										~ VERY DENSE ~
									24.0'	
										GRAY GRAVELLY SANDY SILT WITH COBBLES (TILL)
	5D	18"		26.5'	18	34	41		26.5'	~ DENSE ~
										BOTTOM OF EXPLORATION 26.5'
										NO REFUSAL

SOIL CLASSIFIED BY:

DRILLER - VISUALLY	XX
SOIL TECHNICIAN - VISUALLY	XX
LABORATORY TESTS	XX

REMARKS: WASHED AHEAD 14.0' TO 25.0'

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

BORING NO. B96-7

S. W. COLE ENGINEERING, INC.

BORING LOG

BORING NO.	B96-8
SHEET	1 OF 1
PROJECT NO.	95-533 S
DATE START	09-18-96
DATE FINISH	09-19-96
ELEVATION	139.39

PROJECT: PROPOSED WOOD PROCESSING PROJECT
LOCATION: CHAMPION INTERNATIONAL CORPORATION, BUCKSPORT
DRILLING FIRM: MAINE TEST BORINGS, INC. DRILLER: TOM SCHAEFER

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING	NW	3"	300 LB	16"
SAMPLER	SS	1 3/8"	140 LB	30"
CORE BARREL				

WATER LEVEL INFORMATION
ARTESIAN PRESSURE WITH CASING @ 10'

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
AUGER										
"									2.5'	BROWN SILTY SAND AND GRAVEL WITH TRACE OF WOOD (FILL)
"	1D	24"		4.0'	14	24	12	17		
"										BROWN MOTTLED SILTY CLAY qp = 8.5 - 9+ ksf
"										
7	2D	24"		7.0'	6	10	11	11		w = 23.7% qp = 4.5 - 6 ksf
9										
9										~ HARD BECOMING VERY STIFF ~
13									9.0'	
85										
571	3D	20"		12.6'	20	38	42	100		
105										
165										
132										BROWN SILTY GRAVELLY SAND WITH COBBLES AND BOULDERS (TILL)
105										
38	4D	18"		16.5'	18	13	17			
45										~ DENSE TO VERY DENSE ~
65										
68										
63										
40	5D	18"		21.5'	20	18	35			
60										
130									23.0'	
245										GRAY GRAVELLY SILTY SAND (TILL)
120										
	6D	18"		26.5'	21	28	25		26.5'	~ VERY DENSE ~
										BOTTOM OF EXPLORATION 26.5' NO REFUSAL

SOIL CLASSIFIED BY:

DRILLER - VISUALLY	XX
SOIL TECHNICIAN - VISUALLY	XX
LABORATORY TESTS	XX

REMARKS: WASHED AHEAD 10.0' TO 16.0'

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

BORING NO. B96-8

S. W. COLE ENGINEERING, INC.

BORING LOG

BORING NO.	B96-9
SHEET	1 OF 2
PROJECT NO.	95-533 S
DATE START	09-09-96
DATE FINISH	09-09-96
ELEVATION	136.05

PROJECT: PROPOSED WOOD PROCESSING PROJECT
LOCATION: CHAMPION INTERNATIONAL CORPORATION, BUCKSPORT
DRILLING FIRM: MAINE TEST BORINGS, INC. DRILLER: TOM SCHAEFER

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING	NW	3"	300 LB	16"
SAMPLER	SS	1 3/8"	140 LB	30"
CORE BARREL				

WATER LEVEL INFORMATION
WATER @ 3.5' ON 09/11/96, HOLE CAVED @ 5.2'

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
AUGER									0.5'	BROWN GRAVELLY SAND WITH TRACE OF WOOD CHIPS (FILL)
"										BROWN SILTY SAND AND GRAVEL WITH SOME COBBLES, TRACE OF WOOD AND ORGANICS (FILL)
"	1D	16"		3.8'	32	60	95			
"									4.0'	~ VERY DENSE ~
"										
32	2D	18"		6.5'	53	26	42			BROWN GRAVELLY SAND AND SILT WITH SOME COBBLES
25										
60										~ VERY DENSE ~
95									9.0'	
75										GRAY GRAVELLY SANDY SILT WITH SOME COBBLES (TILL)
68	3D	5"		10.4'	100					
73										
58										
49										
72										
81	4D	18"		16.5'	45	82	84			~ VERY DENSE ~
62										
55										
48										
52										
32	5D	18"		21.5'	20	23	27			
32									22.0'	
38										GRAY SANDY SILT WITH TRACE OF GRAVEL AND COBBLES (TILL)
34										
37										
	6D	14"		26.2'	43	55	50			
										~ VERY DENSE ~
	7D	16"		31.3'	48	57	50			
	8D	8"		35.7'	45	50				
									39.0'	
										GRAY GRAVELLY SANDY SILT (TILL) ~ VERY DENSE ~

SOIL CLASSIFIED BY:

DRILLER - VISUALLY	XX
SOIL TECHNICIAN - VISUALLY	XX
LABORATORY TESTS	

REMARKS: WASHED AHEAD 5.0' TO 50.0'

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

S. W. COLE ENGINEERING, INC.

BORING LOG

BORING NO.	B96-9
SHEET	2 OF 2
PROJECT NO.	95-533 S
DATE START	09-09-96
DATE FINISH	09-09-96
ELEVATION	136.05

PROJECT: PROPOSED WOOD PROCESSING PROJECT
LOCATION: CHAMPION INTERNATIONAL CORPORATION, BUCKSPORT
DRILLING FIRM: MAINE TEST BORINGS, INC. DRILLER: TOM SCHAEFER

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING	NW	3"	300 LB	16"
SAMPLER	SS	1 3/8"	140 LB	30"
CORE BARREL				

WATER LEVEL INFORMATION
WATER @ 3.5' ON 09/11/96, HOLE CAVED @ 5.2'

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
	9D	11"		40.9'	50	100				
										GRAY GRAVELLY SANDY SILT WITH TRACE OF COBBLES (TILL)
	10D	14"		46.2'	43	65	50			~ VERY DENSE ~
	11D	18"		51.5'	35	65	88		51.5'	
										BOTTOM OF EXPLORATION 51.5' NO REFUSAL

SOIL CLASSIFIED BY:

DRILLER - VISUALLY	XX
SOIL TECHNICIAN - VISUALLY	XX
LABORATORY TESTS	

REMARKS: WASHED AHEAD 5.0' TO 50.0'

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

S. W. COLE ENGINEERING, INC.

BORING LOG

BORING NO.	B96-10
SHEET	1 OF 2
PROJECT NO.	95-533 S
DATE START	09-09-96
DATE FINISH	09-09-96
ELEVATION	136.22

PROJECT: PROPOSED WOOD PROCESSING PROJECT
LOCATION: CHAMPION INTERNATIONAL CORPORATION, BUCKSPORT
DRILLING FIRM: MAINE TEST BORINGS, INC. DRILLER: MEL COFFIN

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING	NW	3"	300 LB	16"
SAMPLER	SS	1 3/8"	140 LB	30"
CORE BARREL				

WATER LEVEL INFORMATION
WATER @ 3.7' ON 09/13/96, HOLE CAVED @ 61.0'

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
AUGER										
"										BROWN SILTY SAND AND GRAVEL WITH TRACE OF ORGANICS (FILL)
"	1D	24"		4.2'	23	25	30	27		
"										
"									5.0'	~ VERY DENSE ~
20	2D	24"		7.0'	18	27	23	17		BROWN GRAVELLY SILTY SAND
27									7.0'	~ DENSE ~
40										
40										
37										
12	3D	24"		12.0'	17	21	36	32		
14										
17										
15										
17										
9	4D	18"		17.0'	15	15	18	18		
14										
14										GRAY SANDY SILT WITH TRACE OF GRAVEL (TILL)
11										
9										
9	5D	24"		22.0'	18	26	35	45		
12										
16										
12										
12										
14	6D	24"		27.0'	24	45	50	70		~ DENSE TO VERY DENSE ~
16										
16										
20										
17										
17	7D	19"		31.6'	55	60	70	50		
32										
20										
22										
15										
19	8D	24"		37.0'	38	38	60	70		
30										
20										
15										
19										

SOIL CLASSIFIED BY:

DRILLER - VISUALLY	XX
SOIL TECHNICIAN - VISUALLY	XX
LABORATORY TESTS	

REMARKS: WASHED AHEAD 10.0' TO 63.0'

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

S. W. COLE ENGINEERING, INC.

BORING LOG

BORING NO.	B96-10
SHEET	2 OF 2
PROJECT NO.	95-533 S
DATE START	09-09-96
DATE FINISH	09-09-96
ELEVATION	136.22

PROJECT: PROPOSED WOOD PROCESSING PROJECT
LOCATION: CHAMPION INTERNATIONAL CORPORATION, BUCKSPORT
DRILLING FIRM: MAINE TEST BORINGS, INC. DRILLER: MEL COFFIN

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING	NW	3"	300 LB	16"
SAMPLER	SS	1 3/8"	140 LB	30"
CORE BARREL				

WATER LEVEL INFORMATION
WATER @ 3.7' ON 09/13/96, HOLE CAVED @ 61.0'

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
32	9D	18"		41.5'	27	55	60			
23										
20										
17										
14										
18	10D	18"		46.5'	17	25	60			
13										
13										GRAY SANDY SILT WITH TRACE OF GRAVEL (TILL)
13										
21										
25	11D	24"		52.0'	13	23	35	40		
27										
22										
19										
18										
23	12D	24"		57.0'	15	21	25	30		~ DENSE TO VERY DENSE ~
18										
19										
18										
21										
36	13D	24"		62.0'	30	20	30	30		
22										
25										
128									64.6'	
100										
										BOULDER
									68.6'	
									70.4'	GRAY SANDY SILT WITH TRACE OF GRAVEL (TILL) ~VERY DENSE~
	14D	18"		70.4'	30	35	42			
										BOTTOM OF EXPLORATION 70.4' NO REFUSAL

SOIL CLASSIFIED BY:

DRILLER - VISUALLY	XX
SOIL TECHNICIAN - VISUALLY	XX
LABORATORY TESTS	

REMARKS: WASHED AHEAD 10.0' TO 63.0'

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

BORING NO. B96-10

S. W. COLE ENGINEERING, INC.

BORING LOG

BORING NO.	B96-11
SHEET	1 OF 1
PROJECT NO.	95-533 S
DATE START	09-13-96
DATE FINISH	09-13-96
ELEVATION	136 +/-

PROJECT: PROPOSED WOOD PROCESSING PROJECT
LOCATION: CHAMPION INTERNATIONAL CORPORATION, BUCKSPORT
DRILLING FIRM: MAINE TEST BORINGS, INC. DRILLER: TOM SCHAEFER

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING	NW	3"	300 LB	16"
SAMPLER	SS	1 3/8"	140 LB	30"
CORE BARREL				

WATER LEVEL INFORMATION

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
AUGER										
"										BROWN SILTY SANDY GRAVEL WITH SOME WOOD AND ORGANICS (FILL)
"	1D	18"		3.5'	8	13	18			
"										
"									5.3'	~ MEDIUM DENSE ~
	2D	4"		5.3'	100					BOTTOM OF EXPLORATION 16.5' REFUSAL ON STEEL

SOIL CLASSIFIED BY:

DRILLER - VISUALLY	XX
SOIL TECHNICIAN - VISUALLY	XX
LABORATORY TESTS	

REMARKS: REFUSAL ON STEEL @ 5.3'

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

S. W. COLE ENGINEERING, INC.

BORING LOG

BORING NO.	B96-11A
SHEET	1 OF 2
PROJECT NO.	95-533 S
DATE START	09-16-96
DATE FINISH	09-16-96
ELEVATION	136 +/-

PROJECT: PROPOSED WOOD PROCESSING PROJECT
LOCATION: CHAMPION INTERNATIONAL CORPORATION, BUCKSPORT
DRILLING FIRM: MAINE TEST BORINGS, INC. DRILLER: TOM SCHAEFER

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING	NW	3"	300 LB	16"
SAMPLER	SS	1 3/8"	140 LB	30"
CORE BARREL	BQ	1 7/6"		

WATER LEVEL INFORMATION
WATER PONDED @ SURFACE
ON 09/19/96

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
AUGER										BROWN SILTY SANDY GRAVEL WITH SOME WOOD AND ORGANICS (FILL)
"										
"										
30										
60										
160										
125									7.0'	
100										BROWN-GRAY SILTY CLAY
										w = 34.2 % qp = 2.5 - 3 ksf
6	1D	18"		11.5'	4	4	4			
7										
6									13.5'	~ STIFF ~
10										
44										
4	2D	18"		16.5'	11	18	22			GRAY GRAVELLY SANDY SILT WITH COBBLES (TILL)
2										
6										
17										
32										
12	3D	18"		21.5'	13	24	20			
17										
24										
30										
38										
15	4D	18"		26.5'	12	16	20			
36										
37										
175										
90										
18	5D	12"		31.0'	53	75				~ DENSE ~
22										
21										
19										
33										
14	D	18"		37.5'	35	35	48			
19										
31										
58										
105										

SOIL CLASSIFIED BY:

DRILLER - VISUALLY	XX
SOIL TECHNICIAN - VISUALLY	XX
LABORATORY TESTS	XX

REMARKS: SPUN 4" CASING 2.0 TO 10.0'; WASHED AHEAD 14.0' TO 49.0'

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

S. W. COLE ENGINEERING, INC.

BORING LOG

BORING NO.	B96-11A
SHEET	2 OF 2
PROJECT NO.	95-533 S
DATE START	09-16-96
DATE FINISH	09-16-96
ELEVATION	136 +/-

PROJECT: PROPOSED WOOD PROCESSING PROJECT
LOCATION: CHAMPION INTERNATIONAL CORPORATION, BUCKSPORT
DRILLING FIRM: MAINE TEST BORINGS, INC. DRILLER: TOM SCHAEFER

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING	NW	3"	300 LB	16"
SAMPLER	SS	1 3/8"	140 LB	30"
CORE BARREL	BQ	1 7/6"		

WATER LEVEL INFORMATION
WATER PONDED @ SURFACE
ON 09/19/96

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
	D	1"		40.1'	100					GRAY GRAVELLY SANDY SILT WITH COBBLES (TILL) ~ VERY DENSE ~
	6D	6"		45.5'	105				46.2'	
									RQD = 33%	METASANDSTONE, SLIGHT WEATHERING, FRACTURES AT 5 AND 75 DEGREES FROM HORIZONTAL
	1R	1.0'	0.8'	50.0'	80%				50.0'	
										BOTTOM OF EXPLORATION 50.0'

SOIL CLASSIFIED BY:

DRILLER - VISUALLY	XX
SOIL TECHNICIAN - VISUALLY	XX
LABORATORY TESTS	

REMARKS: WASHED AHEAD 14.0' TO 49.0'

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

S. W. COLE ENGINEERING, INC.

BORING LOG

BORING NO.	B96-11B
SHEET	1 OF 1
PROJECT NO.	95-533 S
DATE START	09-23-96
DATE FINISH	09-23-96
ELEVATION	136.21

PROJECT: PROPOSED WOOD PROCESSING PROJECT
LOCATION: CHAMPION INTERNATIONAL CORPORATION, BUCKSPORT
DRILLING FIRM: MAINE TEST BORINGS, INC. DRILLER: MEL COFFIN

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING	HW	4"	300 LB	16"
SAMPLER	SS	1 3/8"	140 LB	30"
CORE BARREL				

WATER LEVEL INFORMATION
WATER @ 1.2' ON 09/24/96, HOLE CAVED @ 2.0'

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
AUGER										BROWN SILTY SANDY GRAVEL WITH SOME WOOD AND ORGANICS (FILL)
"										
"										
"										
"										
"										
"										
18										
30									9.0'	
	U	24"		12.0'	HYDRAULIC PUSH					BROWN-GRAY CLAYEY SILT AND SHELLS WITH TRACE OF GRAVEL
	1D	24"		12.0'					12.0'	
										BOTTOM OF EXPLORATION 12.0'

SOIL CLASSIFIED BY:

DRILLER - VISUALLY	XX
SOIL TECHNICIAN - VISUALLY	XX
LABORATORY TESTS	

REMARKS:

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

S. W. COLE ENGINEERING, INC.

BORING LOG

BORING NO.	B96-12
SHEET	1 OF 3
PROJECT NO.	95-533 S
DATE START	09-10-96
DATE FINISH	09-11-96
ELEVATION	135.50

PROJECT: PROPOSED WOOD PROCESSING PROJECT
LOCATION: CHAMPION INTERNATIONAL CORPORATION, BUCKSPORT
DRILLING FIRM: MAINE TEST BORINGS, INC. DRILLER: TOM SCHAEFER

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING	NW/HW	3"/4"	300 LB	16"
SAMPLER	SS	1 3/8"	140 LB	30"
CORE BARREL	NQ2	2"		

WATER LEVEL INFORMATION
WATER @ 3.6' ON 09/13/96, HOLE CAVED @ 14.0'

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
AUGER										
"									2.5'	BROWN SILTY GRAVELLY SAND WITH COBBLES (FILL)
"										
"	1D	18"		4.5'	12	20	28			w = 29.5 % qp = 7.5 - 9+ ksf
"										BROWN SILTY CLAY
12	2D	18"		6.5'	10	12	17			w = 33.9 % qp = 5.5 - 6.5 ksf
10										
14										~ HARD BECOMING VERY STIFF ~
15									9.5'	
18										
19	3D	18"		11.5'	6	32	45		10.5'	BROWN SANDY CLAYEY SILT WITH TRACE OF GRAVEL
16										
16										BROWN SILTY SANDY GRAVEL WITH TRACE OF COBBLES
22										
42									15.0'	~ DENSE ~
	4D	11"		15.9'	24	100			15.9'	GRAY SANDY CLAYEY SILT WITH TRACE OF CLAY AND COBBLES
	R	1.5'	1.1'	17.7'	74%	N CLEAN OUT			17.7'	BOULDER
	5D	18"		21.5'	34	28	35			GRAY GRAVELLY SANDY SILT WITH COBBLES (TILL)
										~ VERY DENSE ~
									25.0'	
	6D	18"		26.5'	15	22	22			GRAY SANDY SILT WITH TRACE OF GRAVEL AND COBBLES (TILL)
	7D	18"		31.5'	24	34	46			~ DENSE TO VERY DENSE ~
	8D	7"		36.5'	65	50			36.0'	
										GRAY GRAVELLY SANDY SILT WITH COBBLES (TILL)
										~ VERY DENSE ~

SOIL CLASSIFIED BY:

DRILLER - VISUALLY	XX
SOIL TECHNICIAN - VISUALLY	XX
LABORATORY TESTS	XX

REMARKS: WASHED AHEAD 9.0' TO 16.2' AND 20.0' TO 76.7'
SPIN 4" CASING 15.0' TO 20.0'
STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

BORING NO. B96-12

S. W. COLE ENGINEERING, INC.

BORING LOG

BORING NO.	B96-12
SHEET	2 OF 3
PROJECT NO.	95-533 S
DATE START	09-10-96
DATE FINISH	09-11-96
ELEVATION	135.50

PROJECT: PROPOSED WOOD PROCESSING PROJECT
LOCATION: CHAMPION INTERNATIONAL CORPORATION, BUCKSPORT
DRILLING FIRM: MAINE TEST BORINGS, INC. DRILLER: TOM SCHAEFER

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING	NW/HW	3"/4"	300 LB	16"
SAMPLER	SS	1 3/8"	140 LB	30"
CORE BARREL	NQ2	2"		

WATER LEVEL INFORMATION
WATER @ 3.6' ON 09/13/96, HOLE CAVED @ 14.0'

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
	9D	4"		40.3'	100					
	10D	12"		46.0'	65	105				GRAY GRAVELLY SANDY SILT WITH COBBLES (TILL)
	11D	6"		50.5'	98					
	12D	11"		55.9'	47	100				~ VERY DENSE ~
	13D	5"		60.4'	75				65.0'	
	14D	12"		66.0'	43	70				GRAY SANDY SILT WITH COBBLES, TRACE OF GRAVEL (TILL)
	15D	16"		71.3'	40	66	75			~ VERY DENSE ~
	16D	18"		76.5'	38	60	77		76.7'	
										METASANDSTONE, SLIGHT WEATHERING, FRACTURES AT 5 TO 10 AND 80 DEGREES FROM HORIZONTAL

SOIL CLASSIFIED BY:

DRILLER - VISUALLY	XX
SOIL TECHNICIAN - VISUALLY	XX
LABORATORY TESTS	

REMARKS: WASHED AHEAD 20.0' TO 76.7'
SPIN 4" CASING 15.0' TO 20.0'
STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

S. W. COLE ENGINEERING, INC.

BORING LOG

BORING NO.	B96-12
SHEET	3 OF 3
PROJECT NO.	95-533 S
DATE START	09-10-96
DATE FINISH	09-11-96
ELEVATION	135.50

PROJECT: PROPOSED WOOD PROCESSING PROJECT
LOCATION: CHAMPION INTERNATIONAL CORPORATION, BUCKSPORT
DRILLING FIRM: MAINE TEST BORINGS, INC. DRILLER: TOM SCHAEFER

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING	NW/HW	3"/4"	300 LB	16"
SAMPLER	SS	1 3/8"	140 LB	30"
CORE BARREL	NQ2	2"		

WATER LEVEL INFORMATION
WATER @ 3.6' ON 09/13/96, HOLE CAVED @ 14.0'

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
	1R	5.0'	4.6'	81.7'	92%				81.7'	RQD = 80% METASANDSTONE, SLIGHT WEATHERING
										BOTTOM OF EXPLORATION 81.7'

SOIL CLASSIFIED BY:

DRILLER - VISUALLY	XX
SOIL TECHNICIAN - VISUALLY	XX
LABORATORY TESTS	

REMARKS: WASHED AHEAD 20.0' TO 76.7'
SPIN 4" CASING 15.0' TO 20.0'
STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

S. W. COLE ENGINEERING, INC.
BORING LOG

BORING NO.	B96-13
SHEET	1 OF 3
PROJECT NO.	95-533 S
DATE START	09-10-96
DATE FINISH	09-12-96
ELEVATION	135.91

PROJECT: PROPOSED WOOD PROCESSING PROJECT
LOCATION: CHAMPION INTERNATIONAL CORPORATION, BUCKSPORT
DRILLING FIRM: MAINE TEST BORINGS, INC. DRILLER: MEL COFFIN

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING	NW	3"	300 LB	16"
SAMPLER	SS	1 3/8"	140 LB	30"
CORE BARREL	BQ	1 7/16"		

WATER LEVEL INFORMATION
WATER @ 3.9' ON 09/13/96, HOLE CAVED @ 5.0'

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
AUGER										BROWN SILTY GRAVELLY SAND WITH TRACE OF WOOD (FILL)
"									2.0'	
"	1D	22"		3.8'	15	45	55	80		BROWN SILTY SAND AND GRAVEL (FILL)
"									4.0'	~ VERY DENSE ~
"										
20	2D	24"		7.0'	11	11	16	19		BROWN GRAVELLY SILTY SAND
34										
36									8.0'	~ DENSE ~
45										
62										
20	D	18"		11.5'	20	18	16			
30										
24										
40										
40										
38	3D	18"		16.5'	12	22	22			
35										
40										GRAY GRAVELLY SANDY SILT (TILL)
90										
65										
28	4D	18"		22.5'	17	14	8			
32										
35										
42										
62										
38	5D	18"		26.5'	10	13	20			~ DENSE ~
75										
180										
315										
310										
120	6D	18"		31.5'	32	45	55			
90										
90										
85										
67										
32	7D	18"		36.5'	17	24	55			
40										
60										
57										
55										

SOIL CLASSIFIED BY:

DRILLER - VISUALLY	XX
SOIL TECHNICIAN - VISUALLY	XX
LABORATORY TESTS	

REMARKS: WASHED AHEAD 30.0' TO 95.1'

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

S. W. COLE ENGINEERING, INC.

BORING LOG

BORING NO.	B96-13
SHEET	2 OF 3
PROJECT NO.	95-533 S
DATE START	09-10-96
DATE FINISH	09-12-96
ELEVATION	135.91

PROJECT: PROPOSED WOOD PROCESSING PROJECT
LOCATION: CHAMPION INTERNATIONAL CORPORATION, BUCKSPORT
DRILLING FIRM: MAINE TEST BORINGS, INC. DRILLER: MEL COFFIN

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING	NW	3"	300 LB	16"
SAMPLER	SS	1 3/8"	140 LB	30"
CORE BARREL	BQ	1 7/16"		

WATER LEVEL INFORMATION
WATER @ 3.9' ON 09/13/96, HOLE CAVED @ 5.0'

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
36	8D	18"		41.5'	20	32	55			
40										
42										
50										
66										
50	9D	18"		46.5'	20	20	28			
40										
50										
55										
60										
57	10D	18"		51.5'	32	45	57			
60										
56										
150										
183										
55	11D	18"		56.5'	20	32	37			
50										GRAY GRAVELLY SANDY SILT (TILL)
45										
38										
40										
30	12D	18"		61.5'	7	28	38			
22										
25										
60										
82										~ DENSE ~
40	13D	18"		66.5'	22	25	35			
65										
65										
65										
114										
68	14D	18"		71.5'	25	30	42			
90										
48										
52										
58										
55	15D	18"		76.5'	16	38	48			
55										
65										
110										
115										

SOIL CLASSIFIED BY:

DRILLER - VISUALLY	XX
SOIL TECHNICIAN - VISUALLY	XX
LABORATORY TESTS	

REMARKS: WASHED AHEAD 30.0' TO 95.1'

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

S. W. COLE ENGINEERING, INC.
BORING LOG

BORING NO.	B96-13
SHEET	3 OF 3
PROJECT NO.	95-533 S
DATE START	09-10-96
DATE FINISH	09-12-96
ELEVATION	135.91

PROJECT: PROPOSED WOOD PROCESSING PROJECT
LOCATION: CHAMPION INTERNATIONAL CORPORATION, BUCKSPORT
DRILLING FIRM: MAINE TEST BORINGS, INC. DRILLER: MEL COFFIN

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING	NW	3"	300 LB	16"
SAMPLER	SS	1 3/8"	140 LB	30"
CORE BARREL	BQ	1 7/16"		

WATER LEVEL INFORMATION
WATER @ 3.9' ON 09/13/96, HOLE CAVED @ 5.0'

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
62	16D	18"		81.5'	20	22	22		81.0'	GRAY GRAVELLY SANDY SILT (TILL) ~ DENSE ~
50										
50										
50										GRAY SANDY CLAYEY SILT (TILL)
55										
	17D	18"		86.5'	6	20	17			~ DENSE ~
									88.5'	
	18D	18"		91.5'	14	22	35			GRAY GRAVELLY SANDY SILT (TILL)
										~ DENSE ~
									95.1'	
	1R	5.0'	4.5'	100.1'	90%				RQD = 73%	METASANDSTONE WITH GRANITIC INTRUSIONS, SLIGHT WEATHERING, FRACTURES AT 0 TO 15 DEGREES FROM HORIZONTAL
									RQD = 72%	
	2D	5.0'	5.1'	105.1'	102%				105.1'	
										BOTTOM OF EXPLORATION 105.1'

SOIL CLASSIFIED BY:

DRILLER - VISUALLY	XX
SOIL TECHNICIAN - VISUALLY	XX
LABORATORY TESTS	

REMARKS: WASHED AHEAD 30.0' TO 95.1'

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

BORING NO. B96-13

S. W. COLE ENGINEERING, INC.

BORING LOG

BORING NO.	B96-14
SHEET	1 OF 1
PROJECT NO.	95-533 S
DATE START	09-23-96
DATE FINISH	09-23-96
ELEVATION	136.33

PROJECT: PROPOSED WOOD PROCESSING PROJECT
LOCATION: CHAMPION INTERNATIONAL CORPORATION, BUCKSPORT
DRILLING FIRM: MAINE TEST BORINGS, INC. DRILLER: MEL COFFIN

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING	HW	4"	300 LB	16"
SAMPLER	SS	1 3/8"	140 LB	30"
CORE BARREL				

WATER LEVEL INFORMATION
WATER @ 5.0' ON 09/24/96, HOLE CAVED @ 22.0'

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
AUGER										
"	1D	6"		2.5'	85					BROWN SILTY SANDY GRAVEL WITH WOOD AND ORGANICS, TRACE OF ASH (FILL) ~ DENSE ~
"										
"									4.0'	
"										
60	2D	24"		7.0'	8	13	18	18		BROWN MOTTLED SILTY CLAY qp = 9+ ksf
70										
85										
85										~ HARD BECOMING VERY STIFF ~
90									10.0'	
85										GRAY SILTY CLAY
85	1U	24"		12.0'	HYDRAULIC PUSH				Sv = > 2.03 ksf	w = 32.9 %
80	2 X 7	VANE		12'-7"				50+	13.0'	~ VERY STIFF ~
105										
125										
95	3D	18"		16.5'	14	14	17			
90										
105										
120										GRAY GRAVELLY SANDY SILT (TILL)
130										
WASHED	D	18"		21.5'	11	14	14			
AHEAD										~ DENSE ~
"										
"										
"										
	4D	24"		27.0'	16	17	21	21		
									27.0'	
										BOTTOM OF EXPLORATION 27.0'
										NO REFUSAL

SOIL CLASSIFIED BY:

DRILLER - VISUALLY	XX
SOIL TECHNICIAN - VISUALLY	XX
LABORATORY TESTS	XX

REMARKS:

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

S. W. COLE ENGINEERING, INC.
BORING LOG

BORING NO.	B96-15
SHEET	1 OF 1
PROJECT NO.	95-533 S
DATE START	09-24-96
DATE FINISH	09-24-96
ELEVATION	135.57

PROJECT: PROPOSED WOOD PROCESSING PROJECT
LOCATION: CHAMPION INTERNATIONAL CORPORATION, BUCKSPORT
DRILLING FIRM: MAINE TEST BORINGS, INC. DRILLER: MEL COFFIN

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING	HW	4"	300 LB	16"
SAMPLER	SS	1 3/8"	140 LB	30"
CORE BARREL				

WATER LEVEL INFORMATION

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
AUGER										
"										BROWN SANDY SILTY GRAVEL WITH WOOD AND ORGANICS, TRACE OF ASH (FILL)
"	1D	24"		4.0'	28	75	50	24		
"										
"									5.5'	~ VERY DENSE ~
35	2D	24"		7.0'	5	11	15	28		
80										qp = 8 - 9 ksf
115										
155										BROWN MOTTLED SILTY CLAY
165										
140										
105	U	24"		12.0'	HYDRAULIC PUSH					~ HARD BECOMING STIFF ~
90										
120	U	24"		14.0'	HYDRAULIC PUSH				14.0'	
102										
90										GRAY SILTY CLAY
65	1U	24"		17.0'	HYDRAULIC PUSH					
60	3 1/2 X 7	VANE		17'-7"				37/10	Sv = 0.51/0.14 ksf	w = 36.7 %
50	3 1/2 X 7	VANE		18'-2"				40/10	Sv = 0.55/0.14 ksf	
45										
WASHED										~MEDIUM TO SOFT ~
AHEAD	2U	24"		22.0'	HYDRAULIC PUSH				Sv = 0.48/0.10 ksf	
"	3 1/2 X 7	VANE		22'-7"				35/7	Sv = 0.55/0.14 ksf	w = 41.4 %
"	3 1/2 X 7	VANE		28'-2"				40/10	24.5'	
"										
	3D	24"		27.0'	27	1	21	65		GRAY GRAVELLY SILTY SAND (TILL)
									27.0'	~ DENSE ~
										NO REFUSAL
										BOTTOM OF EXPLORATION 27.0'

SOIL CLASSIFIED BY:

DRILLER - VISUALLY	XX
SOIL TECHNICIAN - VISUALLY	XX
LABORATORY TESTS	XX

REMARKS:

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

S. W. COLE ENGINEERING, INC.

BORING LOG

BORING NO.	B96-16
SHEET	1 OF 2
PROJECT NO.	95-533 S
DATE START	09-17-96
DATE FINISH	09-17-96
ELEVATION	135.32

PROJECT: PROPOSED WOOD PROCESSING PROJECT
LOCATION: CHAMPION INTERNATIONAL CORPORATION, BUCKSPORT
DRILLING FIRM: MAINE TEST BORINGS, INC. DRILLER: TOM SCHAEFER

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING	NW	3"	300 LB	16"
SAMPLER	SS	1 3/8"	140 LB	30"
CORE BARREL	NQ2	2"		

WATER LEVEL INFORMATION
WATER @ 4.5' ON 09/24/96, HOLE CAVED @ 10.0'

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
AUGER										BROWN SILTY GRAVELLY SAND WITH TRACE OF COBBLES (FILL)
"										
"	1D	18"		3.5'	24	21	30		3.0'	~ DENSE ~
"									4.0'	GRAY-BROWN CLAYEY SILT WITH TRACE OF FINE SAND
"										
18	2D	18"		6.5'	20	28	28			BROWN MOTTLED SILTY CLAY qp = 9+ ksf
26										
27									8.5'	~ HARD ~
59										
115										
14	3D	18"		11.5'	40	62	77			
12										
20										
27										
32										BROWN GRAVELLY SILTY SAND WITH SOME COBBLES
20	4D	18"		16.5'	16	32	28			
35										
53										~ DENSE ~
70										
105										
78	D	18"		21.5'	12	29	41			
50										
36										
36										
30									25.0'	
24	5D	18"		26.5'	20	12	23			
30										
64										
137										
125										GRAY GRAVELLY SANDY SILT WITH SOME COBBLES (TILL)
19	6D	18"		31.5'	35	37	24			
17										
20										~ VERY DENSE ~
52										
35										
27	7D	18"		36.5'	35	40	42			
30										
45									38.8'	
122										
										BOULDER WITH COBBLES (TILL)

SOIL CLASSIFIED BY:

DRILLER - VISUALLY	XX
SOIL TECHNICIAN - VISUALLY	XX
LABORATORY TESTS	XX

REMARKS: WASHED AHEAD 9.0' TO 20.0' AND 29.0' TO 39.5'

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

S. W. COLE ENGINEERING, INC.
BORING LOG

BORING NO.	B96-16
SHEET	2 OF 2
PROJECT NO.	95-533 S
DATE START	09-17-96
DATE FINISH	09-17-96
ELEVATION	135.32

PROJECT: PROPOSED WOOD PROCESSING PROJECT
LOCATION: CHAMPION INTERNATIONAL CORPORATION, BUCKSPORT
DRILLING FIRM: MAINE TEST BORINGS, INC. DRILLER: TOM SCHAEFER

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING	NW	3"	300 LB	16"
SAMPLER	SS	1 3/8"	140 LB	30"
CORE BARREL	NQ2	2"		

WATER LEVEL INFORMATION
WATER @ 4.5' ON 09/24/96, HOLE CAVED @ 10.0'

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
									41.0'	BOULDER WITH COBBLES (TILL)
	1R	3.0'	2.9'	42.5'	97%				42.5'	GRAY SANDY SILT WITH TRACE OF GRAVEL, SOME COBBLES
										BOTTOM OF EXPLORATION 42.5' NO REFUSAL

SOIL CLASSIFIED BY:

DRILLER - VISUALLY	XX
SOIL TECHNICIAN - VISUALLY	XX
LABORATORY TESTS	

REMARKS:

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

S. W. COLE ENGINEERING, INC.

BORING LOG

BORING NO.	B96-17
SHEET	1 OF 1
PROJECT NO.	95-533 S
DATE START	09-17-96
DATE FINISH	09-17-96
ELEVATION	135.10

PROJECT: PROPOSED WOOD PROCESSING PROJECT
LOCATION: CHAMPION INTERNATIONAL CORPORATION, BUCKSPORT
DRILLING FIRM: MAINE TEST BORINGS, INC. DRILLER: TOM SCHAEFER

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING	NW	3"	300 LB	16"
SAMPLER	SS	1 3/8"	140 LB	30"
CORE BARREL				

WATER LEVEL INFORMATION
WATER @ 2.8' ON 09/24/96, HOLE CAVED @ 10.0'

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
AUGER										BROWN SILTY SANDY GRAVEL WITH COBBLES (FILL)
"									2.5'	~ DENSE ~
"	1D	18"		3.5'	27	19	16			GRAY MOTTLED CLAYEY SILT WITH TRACE OF ORGANICS (FILL)
"										
"									5.5'	~ DENSE ~
18	2D	18"		6.5'	11	13	22			BROWN MOTTLED CLAYEY SILT
21										
29									8.0'	~ DENSE ~
46										BROWN MOTTLED SILTY CLAY
48										
45	3D	18"		11.5'	9	12	16			w = 31.9 % qp = 5 - 6 ksf
78										
85									13.0'	~ VERY STIFF ~
90										BROWN GRAVELLY SILTY SAND
95										
52	4D	18"		16.5'	17	9	5		16.0'	~ MEDIUM DENSE ~
60										GRAY SANDY SILTY CLAY
72									18.0'	
85										
88										
	5D	18"		21.5'	5	9	9			GRAY GRAVELLY SANDY SILT (TILL)
										~ MEDIUM DENSE ~
									25.0'	
	6D	18"		26.5'	13	32	38		26.5'	GRAY SANDY SILT WITH SOME CLAY AND GRAVEL (TILL)~DENSE~
										BOTTOM OF EXPLORATION 26.5'
										NO REFUSAL

SOIL CLASSIFIED BY:

DRILLER - VISUALLY	XX
SOIL TECHNICIAN - VISUALLY	XX
LABORATORY TESTS	XX

REMARKS: WASHED AHEAD 19.0' TO 25.0'

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

BORING NO. B96-17

S. W. COLE ENGINEERING, INC.
BORING LOG

BORING NO.	B96-18
SHEET	1 OF 1
PROJECT NO.	95-533 S
DATE START	09-18-96
DATE FINISH	09-19-96
ELEVATION	135.68

PROJECT: PROPOSED WOOD PROCESSING PROJECT
LOCATION: CHAMPION INTERNATIONAL CORPORATION, BUCKSPORT
DRILLING FIRM: MAINE TEST BORINGS, INC. DRILLER: TOM SCHAEFER

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING	NW	3"	300 LB	16"
SAMPLER	SS	1 3/8"	140 LB	30"
CORE BARREL	NQ2	2"		

WATER LEVEL INFORMATION

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
AUGER										
"										
"	1D	12"		3.0'	42	90				DARK BROWN GRAVELLY SILTY SAND WITH ORGANICS, SOME COBBLES, TRACE OF WOOD (FILL)
"										
"										~ DENSE ~
11	2D	18"		7.5'	12	12	12		6.0'	
24										GRAY GRAVELLY SANDY SILT WITH SOME CLAY (FILL)
18										
78									9.2'	~ MEDIUM DENSE ~
100									10.2'	COBBLES (FILL)
WASHED	3D	18"		12.7'	53	38	32			qp = 8 - 9 ksf
AHEAD										BROWN MOTTLED SILTY CLAY
"										
"										~ HARD BECOMING VERY STIFF ~
"										
"	4D	18"		16.5'	13	19	14			w = 30.2 % qp = 7 - 8 ksf
"									17.0'	
"										
"										GRAY SILTY CLAY
"										~ SOFT ~
"	5D	18"		21.5'	4	4	4			w = 35.6 % qp = 1 - 1.5 ksf
"									22.0'	
"										
"										DARK GRAY SILTY CLAY WITH SHELLS
"									25.8'	~ SOFT ~ qp = < 1 ksf
"	6D	18"		26.5'	WOR	WOR	WOR			
"										
"										GRAY SILTY CLAY
"										
"										~ SOFT ~
	7D	24"		32.0'	WOR	WOR	2	29	31.5'	qp = < 1 ksf
									32.0'	GRAY CLAYEY SILT WITH TRACE OF GRAVEL (TILL) ~ DENSE ~
										BOTTOM OF EXPLORATION 32.0'
										NO REFUSAL

SOIL CLASSIFIED BY:

DRILLER - VISUALLY	XX
SOIL TECHNICIAN - VISUALLY	XX
LABORATORY TESTS	XX

REMARKS:

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

S. W. COLE ENGINEERING, INC.

BORING LOG

BORING NO.	B96-19
SHEET	1 OF 1
PROJECT NO.	95-533 S
DATE START	09-19-96
DATE FINISH	09-19-96
ELEVATION	136.71

PROJECT: PROPOSED WOOD PROCESSING PROJECT
LOCATION: CHAMPION INTERNATIONAL CORPORATION, BUCKSPORT
DRILLING FIRM: MAINE TEST BORINGS, INC. DRILLER: TOM SCHAEFER

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING	NW	3"	300 LB	16"
SAMPLER	SS	1 3/8"	140 LB	30"
CORE BARREL				

WATER LEVEL INFORMATION

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
AUGER										BROWN SILTY GRAVELLY SAND WITH COBBLES, TRACE OF ORGANICS (FILL)
"										
"	1D	18"		3.5'	35	30	28		3.8'	~ VERY DENSE ~
"										
"									5.2'	BOULDER
8	2D	18"		7.0'	20	18	35			BROWN SANDY SILT WITH SOME CLAY, TRACE OF GRAVEL,
11										
38									8.0'	WOOD AND ORGANICS (FILL) ~ DENSE ~
31										BROWN MOTTLED SILTY CLAY
53										
	3D	18"		11.5'	8	9	14			w = 31.8 % qp = 3.5 - 4.5 ksf
									13.0'	~ STIFF ~
										GRAY SILTY CLAY WITH BROWN SILTY CLAY LAYERS
										~ SOFT ~
	4D	18"		16.5'	1	2	2		16.0'	w = 38.5 % qp = < 1 ksf
										GRAY SILTY CLAY
	5D	18"		21.5'	WOR	WOR	WOR			w = 40.1 % qp = < 1 ksf
										~ SOFT ~
									24.0'	
										BROWN SILTY CLAY
	6D	24"		27.0'	WOR	WOR	38	26	26.0'	~ SOFT ~ qp = < 1 ksf
									27.0'	GRAY SANDY SILT WITH TRACE OF GRAVEL (TILL) ~VERY DENSE~
										BOTTOM OF EXPLORATION 27.0'
										NO REFUSAL

SOIL CLASSIFIED BY:

DRILLER - VISUALLY	XX
SOIL TECHNICIAN - VISUALLY	XX
LABORATORY TESTS	XX

REMARKS: WASHED AHEAD 5.5' TO 25.0'

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

BORING NO. B96-19

S.W.COLE
ENGINEERING, INC.
GEOTECHNICAL CONSULTANTS

PROJECT NUMBER 95-533

ROCK CORE LOG

PROJECT NAME/LOCATION CHAMPION PAPER WOODYARD

BORING NUMBER B96-11A

CORE SIZE B

SHEET 1 OF 1

LOGGED BY BUB/TODD

DATE 9/25/96

CHECKED BY

DATE

DEPTH BELOW SURFACE (Ft.)	CORE RUN	CORE INTERVAL (In.)	CORE RECOVERY (In.)	RQD (%)	ROCK QUALITY	GRAPHIC LOG	ROCK DESCRIPTION AND IDENTIFICATION
49							
	1R	12	10	33%	P O R	7 PIECES	MICA SANDSTONE BEDDING - LAMINATED - 80° FRACTURE - 5° & 75° SLIGHT WEATHERING HARD
50							

S.W.COLE
ENGINEERING, INC.
GEOTECHNICAL CONSULTANTS

PROJECT NUMBER 95-533

ROCK CORE LOG

PROJECT NAME/LOCATION CHAMPION PAPER WOODYARD
BORING NUMBER B96-12
CORE SIZE NQ-2 SHEET 1 OF 1
LOGGED BY BLB/TODD DATE 9/25/96
CHECKED BY _____ DATE _____

DEPTH BELOW SURFACE (Ft.)	CORE RUN	CORE INTERVAL (In.)	CORE RECOVERY (In.)	RQD (%)	ROCK QUALITY	GRAPHIC LOG	ROCK DESCRIPTION AND IDENTIFICATION
76.7	1R	60	54	80%	GOOD		META SANDSTONE BEDDING - 80 to 90° (RELIC) - LAMINATED FRACTURE - 5 to 10°, 80° SLIGHT WEATHERING HARD
81.7							MISSING

S.W.COLE
ENGINEERING, INC.
GEOTECHNICAL CONSULTANTS

PROJECT NUMBER 95-533

ROCK CORE LOG

PROJECT NAME/LOCATION CHAMPION PAPER WOODYARD
BORING NUMBER B96-13
CORE SIZE B
SHEET 1 OF 1
LOGGED BY BUG/TODD
DATE 9/25/96
CHECKED BY
DATE

DEPTH BELOW SURFACE (Ft.)	CORE RUN	CORE INTERVAL (In.)	CORE RECOVERY (In.)	RQD (%)	ROCK QUALITY	GRAPHIC LOG	ROCK DESCRIPTION AND IDENTIFICATION
95.1							METASANDSTONE W/ GRANETIC INTRUSIONS
						GRANITE	BEDDING (GRANITE, MASSIVE)
							- 80 to 90°
							- LAMINATED
	1R	60	54	73%	FAIR		FRACTURE
							- 0 to 15°
							SLIGHT WEATHERING
						GRANITE	HARD
						GRANITE	
						MISSING	
100.1						GRANITE	
	2R	60	61	72%	FAIR		
						GRANITE "VEIN"	
105.1							

MAINE TEST BORINGS, INC. BREWER, MAINE 04412	CLIE CHAMPION PAPER MILL	SHEET 1 OF 2 HOLE NO. 94-101
DRILLER DARREL MCKEEN	PROJECT NAME WOOD YARD	LINE & STATION
M.T.B. JOB NUMBER 94-144	LOCATION BUCKSPORT, MAINE	OFFSET

GROUND WATER OBSERVATIONS					CASING	SAMPLER	CORE BARREL	DATE START	DATE FINISH
AT	FT.	AFTER	HOURS	TYPE	NW	SS	BQ	09/07/94	09/08/94
				SIZE I.D.	3"	1 3/8"	1 7/16"	SURFACE ELEVATION	
AT	FT.	AFTER	HOURS	HAMMER WT.	300	140		138.4' (MILL DATUM)	
				HAMMER FALL	16"	30"			

CASING BLOWS PER FOOT	SAMPLE NO.	O.D.	PEN.	REC.	DEPTH @ BOT.	BLOWS PER 6" ON SAMPLER 0-6	6-12	12-18	VANE READING	DEPTH	STRATUM DESCRIPTION
AUGER											BROWN SANDY GRAVEL WITH COBBLES AND BOULDERS, TRACE OF WOOD (FILL)
"											
"	1D	2"	18"		3.5	8	8	10		3.0	
"											GRAY BROWN CLAYEY SILT W/ORGANICS (FILL)
"										5.0	
8	2D	2"	18"		6.5	6	8	10			W= 26.6% qp= 8-9 ksf
15											
21											
24											GRAY AND BROWN SILTY CLAY
25											~~ HARD BECOMING SOFT W/DEPTH ~~
28	3D	2"	18"		11.5	2	2	3			W= 30.4% qp= 1-2.5 ksf
31											
30										13.0	
28											GRAY SILTY CLAY
28											~~ VERY SOFT ~~
29	1C	2"	17"		16.4	WOR	WO1M	WO1M		16.4	qu= 0.6 ksf W= 36.6% qp= 0.5 ksf
50											BROWN SILTY SANDY GRAVEL
53											
49										19.0	~~ DENSE ~~
80											
43	4D	2"	18"		21.5	29	25	33			BROWN SILTY SANDY GRAVEL, TRACE OF COBBLES
98											
85											~~ DENSE ~~
89											
130											
28										26.0	
33	5D	2"	18"		27.5	21	26	26			GRAY BROWN SILTY COARSE TO FINE SAND, TRACE GRAVEL, TRACE OF COBBLES
37											
68											~~ DENSE ~~
85										30.0	
43	6D	2"	18"		31.5	24	18	18			
45											
64											
100											
90	D	2"	2"		35.7	100					BROWN GRAVELLY SANDY CLAYEY SILT, TRACE OF COBBLES
38											
110											~~ DENSE ~~
43											
52											
42											

SAMPLES
D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE
P = 3½" SHELBY TUBE

SOIL CLASSIFIED BY:
XX DRILLER-VISUALLY
X SOIL TECHNICIAN-VISUALLY
X LABORATORY TESTS

REMARKS:

HOLE NO. 94-101

MAINE TEST BORINGS, INC. BREWER, MAINE 04412	CLIENT CHAMPION PAPER MILL	SHEET 2 OF 2 HOLE NO. 94-101
DRILLER DARREL MCKEEN	PROJECT NAME WOOD YARD	LINE & STATION
M.T.B. JOB NUMBER 94-144	LOCATION BUCKSPORT, MAINE	OFFSET

GROUND WATER OBSERVATIONS		CASING	SAMPLER	CORE BARREL	DATE START	DATE FINISH
AT FT. AFTER HOURS	TYPE	NW	SS	BQ	09/07/94	09/08/94
	SIZE I.D.	3"	1 3/8"	1 7/16"	SURFACE ELEVATION	
AT FT. AFTER HOURS	HAMMER WT.	300	140			
	HAMMER FALL	16"	30"			

CASING BLOWS PER FOOT	SAMPLE NO.	O.D.	PEN.	REC.	DEPTH @ BOT.	BLOWS PER 6" ON SAMPLER 0-6	6-12	12-18	VANE READING	DEPTH	STRATUM DESCRIPTION
24	7D	2"	18"		41.5	15	10	29			BROWN GRAVELLY SANDY CLAYEY SILT, TRACE COBBLES
35										42.0	
127											
65											
116											
61	8D	2"	18"		46.5	62	109	30			
86											
205											
150											
30											
29	9D	2"	18"		51.5	103	170	180			
22											
30											W/TRACE OF CLAY,
24											GRAY GRAVELLY SANDY ~~CLAYEY~~ SILT, TRACE COBBLES
23											(TILL)
33	10D	2"	18"		56.5	32	24	37			
24											
22											
26											
63	11D	2"	10"		60.8	40	150				~~ VERY DENSE ~~
150											
105											
71											
78											
142	12D	2"	11"		65.9	104	200				
63											
52											
120											
84										69.9	
61											
											ROCK
											INTERBEDDED METASANDSTONE AND BIOTITE SCHIST VERY SLIGHTLY WEATHERED FRACTURES AT 0°-5° FROM HORIZONTAL
										RQD= 82%	
	1R	2 3/8"	5.1	5.1'	75.0	100%				75.0	
											BOTTOM OF BORING @ 75.0'

SAMPLES
D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE
P = 3½" SHELBY TUBE

SOIL CLASSIFIED BY:
[XX] DRILLER-VISUALLY
[X] SOIL TECHNICIAN-VISUALLY
[ ] LABORATORY TESTS

REMARKS:
CASING BROKE OFF @ 35.0'
WASHED AHEAD 50.0' TO 66.0'

HOLE NO. 94-101

MAINE TEST BORINGS, INC. BREWER, MAINE 04412	CLIE' CHAMPION PAPER MILL	SHEET 1 OF 1 HOLE NO. 94-102
DRILLER TOM SCHAEFER	PROJECT NAME WOOD YARD	LINE & STATION
M.T.B. JOB NUMBER 94-144	LOCATION BUCKSPORT, MAINE	OFFSET

GROUND WATER OBSERVATIONS

AT FT. AFTER HOURS

AT FT. AFTER HOURS

	CASING	SAMPLER	CORE BARREL
TYPE	NW	SS	NQ2
SIZE I.D.	3"	1 3/8"	2"
HAMMER WT.	300	140	
HAMMER FALL	16"	30"	

DATE START	DATE FINISH
09/08/94	09/08/94

SURFACE ELEVATION

140.8' (MILL DATUM)

CASING BLOWS PER FOOT	SAMPLE NO.	O.D.	PEN.	REC.	DEPTH @ BOT.	BLOWS PER 6" ON SAMPLER 0-6	6-12	12-18	VANE READING	DEPTH	STRATUM DESCRIPTION
AUGER											BROWN SANDY GRAVEL WITH COBBLES *AND TRACE OF WOOD*
"										2.5	*SILTY* *(FILL)*
"	1D	2"	8"		3.2	42	50			3.0	GRAY SILTY FINE GRAVELLY SAND WITH COBBLES
"											
"											GRAY FINE SANDY SILT WITH SOME GRAVEL, LITTLE COBBLES *(TILL)*
31											
70	2D	2"	18"		7.0	25	18	21			*~~ DENSE ~~*
108										8.3	
50										9.4	BOULDER
30	1R	3"	1.0'	0.4'	10.0	40%					
42	3D	2"	14"		11.2	22	27	50			
60											
52											
48											GRAY FINE SANDY SILT WITH LITTLE COARSE SAND AND GRAVEL, COBBLES AND BOULDERS *(TILL)*
	4D	2"	12"		16.0	31	75				
											~~ VERY DENSE ~~
	5D	2"	18"		21.5	55	62	80		21.5	
											BOTTOM OF BORING @ 21.5'

SAMPLES

D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE
P = 3½" SHELBY TUBE

SOIL CLASSIFIED BY:

XX DRILLER-VISUALLY
X SOIL TECHNICIAN-VISUALLY
X LABORATORY TESTS

REMARKS:

WASHED AHEAD 8.0' TO 20.0'
SPIN 8.0' TO 10.0'

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HOLE NO. 94-102

MAINE TEST BORINGS, INC. BREWER, MAINE 04412	CLI[ENT] CHAMPION PAPER MILL	SHEET 1 OF 1 HOLE NO. B94-103
DRILLER DARREL MCKEEN	PROJECT NAME WOOD YARD	LINE & STATION
M.T.B. JOB NUMBER 94-144	LOCATION BUCKSPORT, MAINE	OFFSET

GROUND WATER OBSERVATIONS		CASING	SAMPLER	CORE BARREL	DATE START	DATE FINISH
	TYPE	NW	SS		09/01/94	09/02/94
AT FT. AFTER HOURS	SIZE I.D.	3"	1 3/8"		SURFACE ELEVATION	
	HAMMER WT.	300	140		*150'± (MILL DATUM)*	
AT FT. AFTER HOURS	HAMMER FALL	16"	30"			

CASING BLOWS PER FOOT	SAMPLE NO.	O.D.	PEN.	REC.	DEPTH @ BOT.	BLOWS PER 6" ON SAMPLER 0-6	6-12	12-18	VANE READING	DEPTH	STRATUM DESCRIPTION
AUGER											
"											
"											
"											
"											
"											SAME AS B-103 A & B
"											
"											
"											
"											
29											
55											
58										13.0	
104											
130											
17	1D	2"	18"		16.5	69	127	125			
22											
15											GRAY GRAVELLY SANDY ~~CLAYEY~~ SILT (TILL)
40											
51											
41	2D	2"	18"		21.5	38	59	75			
42											*~ VERY DENSE ~*
42											
76											
81											
59	3D	2"	18"		26.5	31	33	61			
79											
75										28.1	
60											
											REFUSAL @ 28.1'
											WATER @ 4.8' WITH 25.0' CASING
											CAVED @ 24.0'
											WATER @ 2.5' NO CASING

SAMPLES	SOIL CLASSIFIED BY:	REMARKS:
D = SPLIT SPOON	[XX] DRILLER-VISUALLY	WASHED AHEAD 15.0' TO 25.0'
C = 2" SHELBY TUBE	[X] SOIL TECHNICIAN-VISUALLY	BROKE ROLLERCONE @ 28.0'; BENT CASING
S = 3" SHELBY TUBE	[ ] LABORATORY TESTS	@ 28.1'
P = 3½" SHELBY TUBE		HOLE NO. B94-103

(6)

MAINE TEST BORINGS, INC. BREWER, MAINE 04412	CLIENT CHAMPION PAPER MILLS	SHEET 1 OF 1 HOLE NO. B94-103A
DRILLER DARREL MCKEEN	PROJECT NAME WOOD YARD	LINE & STATION
M.T.B. JOB NUMBER 94-144	LOCATION BUCKSPORT, MAINE	OFFSET

GROUND WATER OBSERVATIONS					CASING	SAMPLER	CORE BARREL	DATE START	DATE FINISH
AT	FT.	AFTER	HOURS	TYPE	NW	SS		09/01/94	09/01/94
				SIZE I.D.	3"	1 3/8"		SURFACE ELEVATION	
				HAMMER WT.	300	140		*150'± (MILL DATUM)*	
AT	FT.	AFTER	HOURS	HAMMER FALL	16"	30"			

CASING BLOWS PER FOOT	SAMPLE NO.	O.D.	PEN.	REC.	DEPTH @ BOT.	BLOWS PER 6" ON SAMPLER 0-6	6-12	12-18	VANE READING	DEPTH	STRATUM DESCRIPTION
AUGER											
"											
"											
"											SEE B94-103B
"											
35											
40											
60											
100											
100										10.0	
											REFUSAL @ 10.0'

SAMPLES
D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE
P = 3½" SHELBY TUBE

SOIL CLASSIFIED BY:
[XX] DRILLER-VISUALLY
[ ] SOIL TECHNICIAN-VISUALLY
[ ] LABORATORY TESTS

REMARKS:
CASING BENT @ 10.0'

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HOLE NO. B94-103A

MAINE TEST BORINGS, INC. BREWER, MAINE 04412	CLI CHAMPION PAPER MILLS	SHEET 1 OF 1 HOLE NO. B94-103B
DRILLER DARREL MCKEEN	PROJECT NAME WOOD YARD	LINE & STATION
M.T.B. JOB NUMBER 94-144	LOCATION BUCKSPORT, MAINE	OFFSET

GROUND WATER OBSERVATIONS

AT FT. AFTER HOURS

AT FT. AFTER HOURS

	CASING	SAMPLER	CORE BARREL
TYPE	NW	SS	
SIZE I.D.	3"	1 3/8"	
HAMMER WT.	300	140	
HAMMER FALL	16"	30"	

DATE START	DATE FINISH
09/01/94	09/01/94

SURFACE ELEVATION
150'± (MILL DATUM)

CASING BLOWS PER FOOT	SAMPLE NO.	O.D.	PEN.	REC.	DEPTH @ BOT.	BLOWS PER 6" ON SAMPLER 0-6	6-12	12-18	VANE READING	DEPTH	STRATUM DESCRIPTION
AUGER										0.1	ASPHALT
"										1.0	BROWN SANDY GRAVEL
"	1D	2"	16"		3.3	25	35	100		4.0	BROWN GRAY ~~GRAVELLY SANDY SILT,~~ TRACE WOOD *SILTY SANDY GRAVEL* *(FILL)*
"											
"											
35	2D	2"	18"		6.5	14	19	15		7.0	GREEN GRAY GRAVELLY SANDY SILT ~~ *DENSE* ~~
40											
60											
100											BROWN GRAVELLY SANDY SILT, TRACE COBBLES
289											
53	3D	2"	18"		11.5	30	26	23			~~ *VERY DENSE* ~~
58											
230											
100										14.1	
											REFUSAL @ 14.1'

SAMPLES
D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE
P = 3½" SHELBY TUBE

SOIL CLASSIFIED BY:
XX DRILLER-VISUALLY
X SOIL TECHNICIAN-VISUALLY
X LABORATORY TESTS

REMARKS:
BENT CASING @ 14.0'

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HOLE NO. B94-103B

MAINE TEST BORINGS, INC. BREWER, MAINE 04412	CL' CHAMPION PAPER MILL	SHEET 1 OF 2 HOLE NO. 94-104
DRILLER DARREL MCKEEN	PROJECT NAME WOOD YARD	LINE & STATION
M.T.B. JOB NUMBER 94-144	LOCATION BUCKSPORT, MAINE	OFFSET

GROUND WATER OBSERVATIONS		CASING	SAMPLER	CORE BARREL	DATE START	DATE FINISH
AT FT. AFTER HOURS	TYPE	NW	SS	BQ	09/09/94	09/12/94
	SIZE I.D.	3"	1 3/8"	1 7/16"	SURFACE ELEVATION	
AT FT. AFTER HOURS	HAMMER WT.	300	140		*158.0' (MILL DATUM)*	
	HAMMER FALL	16"	30"			

CASING BLOWS PER FOOT	SAMPLE NO.	O.D.	PEN.	REC.	DEPTH @ BOT.	BLOWS PER 6" ON SAMPLER 0-6	6-12	12-18	VANE READING	DEPTH	STRATUM DESCRIPTION
AUGER										0.5	PAVEMENT
"										1.5	DARK BROWN SILTY SANDY GRAVEL
"	1D	2"	18"		3.5	6	11	15			
"											BROWN GRAVELLY SANDY CLAYEY SILT *(FILL)*
"										5.0	
"	2D	2"	18"		6.5	29	58	70			BROWN ~~SILTY SANDY GRAVEL~~, TRACE COBBLES
"										7.0	*GRAVELLY SANDY SILT* *~~ VERY DENSE ~~*
"											BOULDER
"											
"										10.0	
	3D	2"	18"		11.8	13	12	18		11.0	BROWN SILTY SANDY GRAVEL *~~ DENSE ~~*
											BROWN FINE SANDY SILT, TRACE CLAY, TRACE GRAVEL
39	4D	2"	18"		16.5	32	17	14			
43											*~~ VERY DENSE ~~*
44										18.5	
83											
230											
43	5D	2"	18"		21.5	83	85	89			
36											
35											
31											*GRAY*
34											~~BROWN~~ GRAVELLY SANDY SILT, TRACE OF CLAY *(TILL)*
22	6D	2"	18"		26.5	46	82	115			
14											*~~ VERY DENSE ~~*
13											
13											
25	7D	2"	5"		30.4	100				30.0	
113											
85											*GRAY*
66											~~BROWN~~ GRAVELLY SANDY SILT, TRACE CLAY, TRACE COBBLES (TILL)
130											
300	8D	2"	4"		35.3	100					*~~ VERY DENSE ~~*
77											
80											
119											
161										39.5	
130											ROCK

SAMPLES
D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE
P = 3½" SHELBY TUBE

SOIL CLASSIFIED BY:
XX DRILLER-VISUALLY
X SOIL TECHNICIAN-VISUALLY
X LABORATORY TESTS

REMARKS:

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HOLE NO. 94-104

MAINE TEST BORINGS, INC. BREWER, MAINE 04412	CLIE' CHAMPION PAPER MILL	SHEET 2 OF 2 HOLE NO. 94-104
DRILLER DARREL MCKEEN	PROJECT NAME WOOD YARD	LINE & STATION
M.T.B. JOB NUMBER 94-144	LOCATION BUCKSPORT, MAINE	OFFSET

GROUND WATER OBSERVATIONS		CASING	SAMPLER	CORE BARREL	DATE START	DATE FINISH
AT FT. AFTER HOURS	TYPE	NW	SS	BQ	09/09/94	09/12/94
	SIZE I.D.	3"	1 3/8"	1 7/16"	SURFACE ELEVATION	
AT FT. AFTER HOURS	HAMMER WT.	300	140			
	HAMMER FALL	16"	30"			

CASING BLOWS PER FOOT	SAMPLE NO.	O.D.	PEN.	REC.	DEPTH @ BOT.	BLOWS PER 6" ON SAMPLER 0-6	6-12	12-18	VANE READING	DEPTH	STRATUM DESCRIPTION
	1R	2 3/8"	1.4'	1.0'	41.4	71%				RQD= 35%	ROCK *BIOTITE SCHIST VERY SLIGHTLY WEATHERED FRACTURES AT 0°-10°, 85° FROM HORIZONTAL*
	2R	2 3/8"	3.6'	2.9'	45.0	81%				RQD=70% 45.0	

BOTTOM OF BORING @ 45.0'
CAVED @ 36.5'
WATER @ 10.5'

SAMPLES
D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE
P = 3½" SHELBY TUBE

SOIL CLASSIFIED BY:
XX DRILLER-VISUALLY
X SOIL TECHNICIAN-VISUALLY
LABORATORY TESTS

REMARKS:

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HOLE NO. 94-104

MAINE TEST BORINGS, INC. BREWER, MAINE 04412	CL' CHAMPION PAPER MILL	SHEET 1 OF 1 HOLE NO. 94-105
DRILLER TOM SCHAEFER	PROJECT NAME WOOD YARD	LINE & STATION
M.T.B. JOB NUMBER 94-144	LOCATION BUCKSPORT, MAINE	OFFSET

GROUND WATER OBSERVATIONS		CASING	SAMPLER	CORE BARREL	DATE START	DATE FINISH
AT FT. AFTER HOURS	TYPE	NW	SS		09/09/94	09/09/94
	SIZE I.D.	3"	1 3/8"		SURFACE ELEVATION	
	HAMMER WT.	300	140		156.0' (MILL DATUM)	
AT FT. AFTER HOURS	HAMMER FALL	16"	30"			

CASING BLOWS PER FOOT	SAMPLE NO.	O.D.	PEN.	REC.	DEPTH @ BOT.	BLOWS PER 6" ON SAMPLER 0-6	6-12	12-18	VANE READING	DEPTH	STRATUM DESCRIPTION
AUGER											
"											
"	1D	2"	18"		3.5	15	25	23			GRAVELLY SAND W/TRACE OF SILT BROWN ~~FINE TO COARSE SAND WITH GRAVEL~~ (FILL)
"											
"											
"	2D	2"	18"		6.5	20	18	41			
"											
"											
"										9.5	GRAVELLY
"											BROWN SILTY FINE SAND WITH ~~LITTLE GRAVEL~~, TRACE OF CLAYEY SILT LAYERS
28	3D	2"	18"		11.5	15	21	32			
52										12.0	~~ DENSE ~~
90										13.0	OLIVE FINE SANDY SILT W/LITTLE COARSE SAND & GRAVL
										14.4	BOULDER
											GRAVELLY
	4D	2"	18"		16.5	43	52	32			OLIVE FINE SANDY SILT WITH LITTLE COARSE SAND ~~AND GRAVEL~~
											~~ VERY DENSE ~~
										20.0	
	5D	2"	16"		21.3	31	36	75		21.3	GRAY FINE SANDY SILT W/LITTLE COARSE SAND & GRAVEL ~~ VERY DENSE ~~
											BOTTOM OF BORING @ 21.3'

SAMPLES
D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE
P = 3½" SHELBY TUBE

SOIL CLASSIFIED BY:
XX DRILLER-VISUALLY
X SOIL TECHNICIAN-VISUALLY
LABORATORY TESTS

REMARKS:
WASHED AHEAD 12.0' TO 20.0'

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HOLE NO. 94-105

MAINE TEST BORINGS, INC. BREWER, MAINE 04412	CL' CHAMPION PAPER MILL	SHEET 1 OF 1 HOLE NO. B94-106
DRILLER DARREL MCKEEN	PROJECT NAME WOOD YARD	LINE & STATION
M.T.B. JOB NUMBER 94-144	LOCATION BUCKSPORT, MAINE	OFFSET

GROUND WATER OBSERVATIONS		CASING	SAMPLER	CORE BARREL	DATE START	DATE FINISH
AT *9.5* FT. AFTER *120* HOURS	TYPE	NW	SS	NQ2	09/01/94	09/01/94
	SIZE I.D.	3"	1 3/8"	2"	SURFACE ELEVATION	
AT *10.0* FT. AFTER *192* HOURS	HAMMER WT.	300	140		*156.6' (MILL DATUM)*	
	HAMMER FALL	16"	30"			

CASING BLOWS PER FOOT	SAMPLE NO.	O.D.	PEN.	REC.	DEPTH @ BOT.	BLOWS PER 6" ON SAMPLER 0-6	6-12	12-18	VANE READING	DEPTH	STRATUM DESCRIPTION
AUGER											
"										2.5	BROWN SANDY GRAVEL, TRACE WOOD *AND ORGANICS* *(FILL)*
"											
"	1D	2"	24"		4.0	22	40	20	22		BROWN GRAVELLY SILTY SAND *W/WOOD AND ORGANICS* *(FILL)*
"											
13											
10	2D	2"	24"		7.0	8	8	7	6	7.0	
8											GRAY AND BROWN SILTY CLAY, TRACE SAND & GRAVEL
11										9.5	*(FILL ?)*
60											
39	3D	2"	18"		11.5	29	29	26			BROWN *SILTY* SANDY GRAVEL, ~~TRACE SILT~~
57										12.0	*~~ DENSE ~~*
69											
104											GRAY GRAVELLY SANDY ~~CLAYEY~~ SILT *W/TRACE OF CLAY* (TILL)
106											
40	4D	2"	18"		16.5	32	32	40		16.5	*~~ DENSE ~~*
36											
											BOULDER
	1R	3"	5.0'	5.0'	21.6	100%				21.6	
											GRAY GRAVELLY SANDY ~~CLAYEY~~ SILT *W/TRACE OF CLAY*
	5D	2"	18"		23.1	15	17	21		23.1	*~~ DENSE ~~* (TILL)
											BOTTOM OF BORING @ 23.1'

SAMPLES
D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE
P = 3½" SHELBY TUBE

SOIL CLASSIFIED BY:
XX DRILLER-VISUALLY
X SOIL TECHNICIAN-VISUALLY
LABORATORY TESTS

REMARKS:

HOLE NO. B94-106

MAINE TEST BORINGS, INC. BREWER, MAINE 04412	CLIENT CHAMPION PAPER MILL	SHEET 1 OF 1 HOLE NO. 94-107
DRILLER DARREL MCKEEN	PROJECT NAME WOOD YARD	LINE & STATION
M.T.B. JOB NUMBER 94-107	LOCATION BUCKSPORT, MAINE	OFFSET

GROUND WATER OBSERVATIONS

AT FT. AFTER HOURS

AT FT. AFTER HOURS

	CASING	SAMPLER	CORE BARREL
TYPE	NW	SS	NQ2
SIZE I.D.	3"	1 3/8"	2"
HAMMER WT.	300	140	
HAMMER FALL	16"	30"	

DATE START	DATE FINISH
09/09/94	09/09/94

SURFACE ELEVATION

148.0' (MILL DATUM)

CASING BLOWS PER FOOT	SAMPLE NO.	O.D.	PEN.	REC.	DEPTH @ BOT.	BLOWS PER 6" ON SAMPLER 0-6	6-12	12-18	VANE READING	DEPTH	STRATUM DESCRIPTION
AUGER											
"										2.5	BROWN SANDY GRAVEL, TRACE OF COBBLES *(FILL)*
"	1D	2"	18"		3.5	40	18	15			
"										4.0	GRAY BROWN GRAVELLY SANDY CLAYEY SILT, TRACE WOOD *(FILL)*
"											
25	2D	2"	18"		6.5	15	16	25			
48											GRAY AND BROWN GRAVELLY SANDY SILT
45											
39										9.5	~~ *VERY DENSE* ~~
80											
23											
23	3D	2"	18"		12.0	13	21	21			BROWN GRAVELLY SANDY ~~CLAYEY~~ SILT, TRACE OF *CLAY AND* COBBLES
25											
26											
85										15.0	~~ *VERY DENSE* ~~
	1R	3"	0.8'	0.6'	16.0	75%				15.8	COBBLE
	4D	2"	18"		17.6	15	25	37			
											GRAY GRAVELLY SANDY ~~CLAYEY~~ SILT, TRACE OF *CLAY AND* COBBLES
	5D	2"	16"		21.3	38	24	70		21.3	~~ *VERY DENSE* ~~
											REFUSAL @ 21.3' CAVED @ 17.5' WATER @ 9.0'

SAMPLES

D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE
P = 3½" SHELBY TUBE

SOIL CLASSIFIED BY:

- [XX] DRILLER-VISUALLY
- [X] SOIL TECHNICIAN-VISUALLY
- [ ] LABORATORY TESTS

REMARKS:
WASHED AHEAD 15.0' TO 21.3'

13

HOLE NO. 94-107

MAINE TEST BORINGS, INC. BREWER, MAINE 04412	CLIE CHAMPION PAPER MILL	SHEET 1 OF 3 HOLE NO. 94-108
DRILLER DARREL MCKEEN	PROJECT NAME WOOD YARD	LINE & STATION
M.T.B. JOB NUMBER 94-144	LOCATION BUCKSPORT, MAINE	OFFSET

GROUND WATER OBSERVATIONS

AT 14.1 FT. AFTER 96 HOURS

AT 6.4 FT. AFTER 168 HOURS

	CASING	SAMPLER	CORE BARREL
TYPE	NW	SS	BQ
SIZE I.D.	3"	1 3/8"	1 7/16"
HAMMER WT.	300	140	
HAMMER FALL	16"	30"	

DATE START	DATE FINISH
09/02/94	09/07/94

SURFACE ELEVATION
153.5' (MILL DATUM)

CASING BLOWS PER FOOT	SAMPLE NO.	O.D.	PEN.	REC.	DEPTH @ BOT.	BLOWS PER 6" ON SAMPLER 0-6	6-12	12-18	VANE READING	DEPTH	STRATUM DESCRIPTION
AUGER											BROWN SANDY GRAVEL
"										2.0	
"	1D	2"	18"		3.5	17	24	26			
"											
"											
40	2D	2"	18"		6.5	17	20	25			
50											SILTY BROWN GRAVELLY ~~SILTY~~ SAND
40											
36											
43											~~ DENSE ~~
29	3D	2"	18"		11.5	20	25	20			
43											
52										13.0	
90											
64											
23	4D	2"	18"		16.5	22	17	20			
28											GRAY GRAVELLY SANDY CLAYEY SILT (TILL)
41											
38											~~ DENSE ~~
52											
33	5D	2"	18"		21.5	12	13	15			
93										22.0	
198											
333											
340											
54	6D	2"	18"		26.5	62	74	81			
50											GRAY SANDY ~~CLAYEY~~ SILT, TRACE GRAVEL (TILL)
46											
49											~~ VERY DENSE ~~
49											
40	7D	2"	18"		31.5	33	44	75			
47											
45											
52											
48											
43	8D	2"	18"		36.5	34	43	49			
45											
43										38.5	
44											GRAY GRAVELLY SANDY CLAYEY SILT
37											

SAMPLES
D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE
P = 3½" SHELBY TUBE

SOIL CLASSIFIED BY:
XX DRILLER-VISUALLY
X SOIL TECHNICIAN-VISUALLY
X LABORATORY TESTS

REMARKS:
WASHED AHEAD 25.0' TO 27.0'

14

HOLE NO. 94-108

MAINE TEST BORINGS, INC. BREWER, MAINE 04412	CL CHAMPION PAPER MILL	SHEET 2 OF 3 HOLE NO. 94-108
DRILLER DARREL MCKEEN	PROJECT NAME WOOD YARD	LINE & STATION
M.T.B. JOB NUMBER 94-144	LOCATION BUCKSPORT, MAINE	OFFSET

GROUND WATER OBSERVATIONS

AT FT. AFTER HOURS

AT FT. AFTER HOURS

	CASING	SAMPLER	CORE BARREL
TYPE	NW	SS	BQ
SIZE I.D.	3"	1 3/8"	1 7/16"
HAMMER WT.	300	140	
HAMMER FALL	16"	30"	

DATE START	DATE FINISH
09/02/94	09/07/94

SURFACE ELEVATION

CASING BLOWS PER FOOT	SAMPLE NO.	O.D.	PEN.	REC.	DEPTH @ BOT.	BLOWS PER 6" ON SAMPLER 0-6	6-12	12-18	VANE READING	DEPTH	STRATUM DESCRIPTION
40	9D	2"	18"		41.5	33	45	52			
38											
37											
51											GRAY GRAVELLY SANDY ~~CLAYEY~~ SILT *(TILL)*
49											
44	10D	2"	18"		46.5	62	86	110			
48											
52											
63											
81											
42	11D	2"	18"		51.5	45	117	115			~~ *VERY DENSE* ~~
35											
31											
31											
33											
21	12D	2"	18"		56.5	22	35	40			
22											
24											
28											
23											
21	13D	2"	18"		61.5	28	42	38			
31											
32											
28											
31											
30	14D	2"	18"		66.5	25	34	30			
35											
33											
32											
53										70.0	
53	15D	2"	18"		71.5	14	24	30			
43											
42											
38											
28											
23	16D	2"	18"		76.5	18	14	21			GRAY SANDY CLAYEY SILT, TRACE GRAVEL *(TILL)*
29											
31											~~ *DENSE* ~~
34											
33											

SAMPLES

D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE
P = 3½" SHELBY TUBE

SOIL CLASSIFIED BY:

- [XX] DRILLER-VISUALLY
- [X] SOIL TECHNICIAN-VISUALLY
- [ ] LABORATORY TESTS

REMARKS:
WASHED AHEAD 44.0' TO 70.0'

MAINE TEST BORINGS, INC. BREWER, MAINE 04412	CL CHAMPION PAPER MILL	SHEET 3 OF 3 HOLE NO. 94-108
DRILLER DARREL MCKEEN	PROJECT NAME WOOD YARD	LINE & STATION
M.T.B. JOB NUMBER 94-144	LOCATION BUCKSPORT, MAINE	OFFSET

GROUND WATER OBSERVATIONS

AT FT. AFTER HOURS

AT FT. AFTER HOURS

	CASING	SAMPLER	CORE BARREL
TYPE	NW	SS	BQ
SIZE I.D.	3"	1 3/8"	1 7/16"
HAMMER WT.	300	140	
HAMMER FALL	16"	30"	

DATE START	DATE FINISH
09/02/94	09/07/94

SURFACE ELEVATION

CASING BLOWS PER FOOT	SAMPLE NO.	O.D.	PEN.	REC.	DEPTH @ BOT.	BLOWS PER 6" ON SAMPLER 0-6	6-12	12-18	VANE READING	DEPTH	STRATUM DESCRIPTION
30	17D	2"	18"		81.5	20	13	15			
38											
40											GRAY SANDY CLAYEY SILT, TRACE GRAVEL *(TILL)*
40											
29											*~~ DENSE ~~*
15	18D	2"	18"		86.5	17	23	21			
18										87.0	
50	1R	2 3/8"	1.5'	0.3'	88.9	20%				87.5	GRAY SANDY CLAYEY SILT, TRACE GRAVEL AND COBBLES
70											COBBLE AND TILL
57	19D	2"	13"		90.1	41	53	50		90.1	*~~ VERY DENSE ~~*
											ROCK *INTERBEDDED GRANITE AND METASANDSTONE*
	2R	2 3/8"	3.3'	2.9'	93.5	88%				*RQD=78%*	*SLIGHTLY WEATHERED*
										RQD=75%	*BIOTITE PRESENT IN METASANDSTONE*
	3R	2 3/8"	1.7'	1.7'	95.2	100%				95.2	*FRACTURES AT 0°-5°, 20° FROM HORIZONTAL*
											BOTTOM OF BORING @ 95.2'

SAMPLES

D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE
P = 3½" SHELBY TUBE

SOIL CLASSIFIED BY:

XX DRILLER-VISUALLY
X SOIL TECHNICIAN-VISUALLY
LABORATORY TESTS

REMARKS:

MAINE TEST BORINGS, INC. BREWER, MAINE 04412	CLIENT St. Regis Paper Company	SHEET 1 OF 1 HOLE NO. B-1
DRILLER Greg Lidstone	PROJECT NAME Proposed Boiler	LINE & STATION
M.T.B. JOB NUMBER 81-123	LOCATION Bucksport, Maine	OFFSET

GROUND WATER OBSERVATIONS		CASING	SAMPLER	CORE BARREL	
AT ____ FT AFTER ____ HOURS	TYPE	HS	SS	BXC3	DATE START 9-2-81 DATE FIN. 9-2-81
AT ____ FT. AFTER ____ HOURS	SIZE I.D.	2 1/2"	1 3/8"	1 3/8"	SURFACE ELEV.
	HAMMER WT.		140		GROUND WATER ELEV.
	HAMMER FALL		30"		

CASING BLOWS PER FOOT	SAMPLE NO.	O.D.	PEN.	REC.	DEPTH @ BOT	BLOWS PER 6" ON SAMPLER 0-6	6-12	12-18	VANE READING	DEPTH	STRATUM DESCRIPTION
										1.0	Brown silty f-c sand w/ gravel, cobbles & wood
	1D	2"	18"		4.0	5	9	16			Brown mottled clay w/trace brown silty fine sand
	1C	2"	24"		6.0	Hyd. Push					
										8.0	
	2D	2"	18"		9.0	17	15	15		9.0	Brown sandy silt
	3D	2"	18"		11.5	21	23	21			Brown silty f-c sand w/ gravel & cobbles w/trace boulders
										15.5	
	4D	2"	18"		16.5	21	17	19			Gray silty f-m sand w/ gravel, cobbles, & boulders (Till)
	5D	2"	18"		21.5	12	12	13			
	6D	2"	18"		26.5	13	18	37			
										30.3	
	7D	2"	3"		30.3	13/3"	50/0"				
	1R	*	60"	36"	35.3	Boulders & Rock				33.8	Boulders
	2R	*	49"	48"	39.3	97.6%					Rock
	3R	*	15"	15"	40.6	100%				40.6	

SAMPLES
D - Split Spoon
C - 2" Shelby Tube
U - 3 1/2" Shelby Tube

SOIL CLASSIFIED BY:
[X] Driller - Visually
[ ] Soil Technician - Visually
[ ] Laboratory Tests

REMARKS

Bottom of boring @ 40.6'

* 2 3/8"

HOLE NO. B-1

MAINE TEST BORINGS, INC. BREWER, MAINE 04412	CLIENT CHAMPION PAPER MILL	SHEET 1 OF 1 HOLE NO. ~~B96-1~~ B-96-101
DRILLER DARREL MCKEEN	PROJECT NAME MILL	LINE & STATION
F.B. JOB NUMBER 96-137	LOCATION BUCKSPORT, MAINE	OFFSET

GROUND WATER OBSERVATIONS					CASING	SAMPLER	CORE BARREL	DATE START	DATE FINISH
				TYPE	NW	SS	NQ2	08/19/96	08/19/96
AT	FT.	AFTER	HOURS	SIZE I.D.	3"	1 3/8"	2"	SURFACE ELEVATION	
				HAMMER WT.	300	140		135'±	
	FT.	AFTER	HOURS	HAMMER FALL	16"	30"			

CASING BLOWS PER FOOT	SAMPLE NO.	O.D.	PEN.	REC.	DEPTH @ BOT.	BLOWS PER 6" ON SAMPLER 0-6	6-12	12-18	VANE READING	DEPTH	STRATUM DESCRIPTION
AUGER										0.3	TOPSOIL
"											
"											
"	1D	2"	24"		4.0	15	40	20	8		BROWN GRAVELLY SANDY ~~CLAYEY~~ SILT, TRACE COBBLES, TRACE WOOD *(FILL)* *OF CLAY AND*
"										5.0	
"											
"	2D	2"	24"		7.0	2	5	6	9		GRAY BROWN ~~CLAYEY SILT~~ *SILTY CLAY*, TRACE OF FINE SAND *qp > 9 ksf*
"											
"											~~ *HARD BECOMING VERY STIFF* ~~
"											
9										11.5	*W=21.2%* *qp=4.5-6.5 ksf*
30	3D	2"	24"		12.0	4	6	8	27		BROWN GRAVELLY SILTY SAND *(TILL)* ~~ *VERY DENSE* ~~
95											
160											
200	4D	2"	10"		15.8	41	100			15.5	
197											WEATHERED ROCK
220										17.1	
											ROCK *METASANDSTONE*
										RQD=37%	*POOR QUALITY*
	1R	3"	5.0'	4.0'	22.1	40%				22.1	
											BOTTOM OF BORING @ 22.1' CAVED @ 17.0' WATER @ 8.5'

SAMPLES
D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE

SOIL CLASSIFIED BY:
XX DRILLER-VISUALLY
X SOIL TECHNICIAN-VISUALLY
X LABORATORY TESTS

REMARKS:

2

HOLE NO. ~~B96-1~~ B-96-101

MAINE TEST BORINGS, INC. BREWER, MAINE 04412	CLIENT CHAMPION PAPER MILL	SHEET 1 OF 1 HOLE NO. ~~B96-2~~ B-96-102
DRILLER DARREL MCKEEN	PROJECT NAME MILL	LINE & STATION
T.B. JOB NUMBER 96-137	LOCATION BUCKSPORT, MAINE	OFFSET

GROUND WATER OBSERVATIONS

AT FT. AFTER HOURS

FT. AFTER HOURS

	CASING	SAMPLER	CORE BARREL
TYPE	NW	SS	NQ2
SIZE I.D.	3"	1 3/8"	2"
HAMMER WT.	300	140	
HAMMER FALL	16"	30"	

DATE START	DATE FINIS
08/20/96	08/20/96

SURFACE ELEVATION

131.8'±

CASING BLOWS PER FOOT	SAMPLE NO.	O.D.	PEN.	REC.	DEPTH @ BOT.	BLOWS PER 6" ON SAMPLER 0-6	6-12	12-18	VANE READING	DEPTH	STRATUM DESCRIPTION
AUGER										0.3	TOPSOIL
"										2.0	BROWN GRAVELLY SANDY SILT
"											
"	1D	2"	24"		4.0	6	7	7	8		BROWN CLAYEY SILT, TRACE SAND *(FILL ?)*
"											~~ *MEDIUM DENSE* ~~
"	2D	2"	18"		6.5	8	10	75		6.5	
"											BOULDER
										8.6	
										9.0	BROWN GRAVELLY SILTY SAND
WASHED											BOULDER
AHEAD										12.1	
"											
"	1R	3"	5.0' 3.5'		14.2	70%					BROWN GRAVELLY SILTY SAND *(TILL)*
100											
49	3D	2"	18"		16.5	43	85	115		16.5	~~ *VERY DENSE* ~~
50											
											ROCK
											METASANDSTONE
											FAIR QUALITY
										RQD=55%	
	1R	3"	5/0' 4.6'		22.0	92%				22.0	
											BOTTOM OF BORING @ 22.0'
											CAVED @ 14.5'
											WATER @ 4.5'
											AUGER TO 7.3'; H CASING TO 7.3'
											WASHED AHEAD TO 8.6', REDUCED TO N CASING
											TO 9.0'. THEN H CASING TO 7'

SAMPLES

D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE
R = 2"(?) SHELBY TUBE

SOIL CLASSIFIED BY:

XX DRILLER-VISUALLY
X SOIL TECHNICIAN-VISUALLY
LABORATORY TESTS

REMARKS:

HOLE NO. ~~B96-2~~ B-96-102

MAINE TEST BORINGS, INC. BREWER, MAINE 04412	CLIENT: CHAMPION MILL	SHEET 1 OF 1 HOLE NO. ~~B96-4~~ B-96-104
DRILLER: DARREL MCKEEN	PROJECT NAME: MILL	LINE & STATION
T.B. JOB NUMBER: 96-137	LOCATION: BUCKSPORT, MAINE	OFFSET

GROUND WATER OBSERVATIONS

AT FT. AFTER HOURS

FT. AFTER HOURS

	CASING	SAMPLER	CORE BARREL
TYPE	NW	SS	NQ2
SIZE I.D.	3"	1 3/8"	2"
HAMMER WT.	300	140	
HAMMER FALL	16"	30"	

DATE START	DATE FINIS
08/20/96	08/20/96

SURFACE ELEVATION: *125.8'±*

CASING BLOWS PER FOOT	SAMPLE NO.	O.D.	PEN.	REC.	DEPTH @ BOT.	BLOWS PER 6" ON SAMPLER 0-6	6-12	12-18	VANE READING	DEPTH	STRATUM DESCRIPTION
AUGER										0.3	TOPSOIL
"											BROWN GRAVELLY SANDY SILT *(FILL?)*
"										3.0	
"	1D	2"	24"		4.0	5	4	7	7		BROWN SANDY CLAYEY SILT *(FILL?)*
"										5.0	
13											
20	2D	2"	24"		7.0	9	12	15	17		*W=30.0%* *qp > 9 ksf*
26											GRAY BROWN SILTY CLAY, TRACE FINE SAND
30											
34											~~ *HARD BECOMING MEDIUM CONSISTENCY WITH DEPTH*
40											
35	3D	2"	24"		12.0	2	4	5	4		*W=30.9%* *qp= 1-2 ksf*
35											
35										15.5	
44											*SILTY GRAVELLY*
75											BROWN ~~GRAVELLY SILTY~~ SAND *(TILL)*
92	4D	2"	24"		18.0	21	39	35	27		~~ *VERY DENSE* ~~
54										19.0	
											ROCK
											METAPELITE - HORNFELSIC
										RQD=46%	*POOR QUALITY*
	1R	3"	4.9'	4.9'	24.0	100%				24.0	
											BOTTOM OF BORING @ 24.0'
											CAVED @ 20.0' ~~WITH~~ WATER 8.0'

SAMPLES

D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE
R = CHILL SHELBY TUBE

SOIL CLASSIFIED BY:

XX DRILLER-VISUALLY
X SOIL TECHNICIAN-VISUALLY
X LABORATORY TESTS

REMARKS:

5

HOLE NO. ~~B96-4~~ B-96-104

MAINE TEST BORINGS, INC. BREWER, MAINE 04412	CLIENT: CHAMPION PAPER MILL	SHEET 1 OF 1 HOLE NO. ~~B96-5~~ B-96-105
DRILLER: TOM SCHAEFER	PROJECT NAME: MILL	LINE & STATION
B. JOB NUMBER: 5-137	LOCATION: BUCKSPORT, MAINE	OFFSET

GROUND WATER OBSERVATIONS

AT FT. AFTER HOURS

FT. AFTER HOURS

	CASING	SAMPLER	CORE BARREL
TYPE	NW	SS	NQ2
SIZE I.D.	3"	1 3/8"	2"
HAMMER WT.	300	140	
HAMMER FALL	16"	30"	

DATE START	DATE FINISH
12/30/96	12/30/96

SURFACE ELEVATION: *139'±*

CASING BLOWS PER FOOT	SAMPLE NO.	O.D.	PEN.	REC.	DEPTH @ BOT.	BLOWS PER 6" ON SAMPLER 0-6	6-12	12-18	VANE READING	DEPTH	STRATUM DESCRIPTION
AUGER										0.2	BLACK TOP
"										1.0	BROWN GRAVELLY SAND WITH COBBLES
"											*BROWN GRAVELLY SILTY SAND W/TRACE OF CLAY AND ASH (FILL*
"	1D	2"	24"		4.0	8	14	15	12	4.5	~~MOTTLED SILTY SAND WITH TRACE OF CLAY AND GRAVEL~~
"											
20											*qp=6-7 ksf*
30	2D	2"	24"		7.0	12	14	28	43		MOTTLED SILTY CLAY ~~WITH TRACE OF SILTY CLAY~~ WITH TRACE OF SANDY SILT LAYERS
42											*~~ VERY STIFF ~~*
56											
75											
	3D	2"	19"		11.6	9	15	25	75	11.6	
											COBBLES WITH GRAVEL *(TILL)*
										14.5	*~~ DENSE ~~*
										RQD=55%	ROCK *METASANDSTONE*
	1R	3"	4.7'	3.3'	16.3	70%				16.3	*FAIR QUALITY*
											BOTTOM OF BORING @ 16.3'
											WATER AT 4.5' WITH CASING AT 10'

SAMPLES
D = SPLIT SPOON
= 2" SHELBY TUBE
S = 3" SHELBY TUBE

SOIL CLASSIFIED BY:
XX DRILLER-VISUALLY
X SOIL TECHNICIAN-VISUALLY
X LABORATORY TESTS

REMARKS:

6

HOLE NO. ~~B96-5~~ B-96-105

MAINE TEST BORINGS, INC. BREWER, MAINE 04412	CLIENT CHAMPION PAPER MILL	SHEET 1 OF 1 HOLE NO. ~~B96-6~~ B-96-106
DRILLER TOM SCHAEFER	PROJECT NAME MILL	LINE & STATION
T.B. JOB NUMBER 96-137	LOCATION BUCKSPORT, MAINE	OFFSET

ROUND WATER OBSERVATIONS

AT FT. AFTER HOURS

FT. AFTER HOURS

	CASING	SAMPLER	CORE BARREL
TYPE	NW	SS	NQ2
SIZE I.D.	3"	1 3/8"	2"
HAMMER WT.	300	140	
HAMMER FALL	16"	30"	

DATE START	DATE FINIS
12/31/96	12/31/96

SURFACE ELEVATION
134'±

CASING BLOWS PER FOOT	SAMPLE NO.	O.D.	PEN.	REC.	DEPTH @ BOT.	BLOWS PER 6" ON SAMPLER 0-6	6-12	12-18	VANE READING	DEPTH	STRATUM DESCRIPTION
AUGER											
"											
"											BROWN SILTY GRAVELLY SAND
"	1D	2"	24"		4.0	11	15	16	13		*WITH TRACE OF ORGANICS (FILL)*
"											
6											
8	2D	2"	24"		7.0	4	2	3	4		
23											
38										9.0	
53	3D	2"	10"		10.8	36	50			10.8	~~OLIVE CLAYEY SILT WITH TRACE OF GRAVEL~~ ~~ VERY DENSE ~~ *BROWN GRAVELLY SILTY SAND (TILL)*
	1R	3"	2.6'	1.8'	13.1	78%					BROWN SILTY GRAVELLY SAND WITH COBBLES *(TILL)*
	2R	3"	2.1'	1.2'	15.2	57%					
	3R	3"	2.9'	1.4'	18.1	48%				18.1	
											BOTTOM OF BORING @ 18.1'

SAMPLES
D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE

SOIL CLASSIFIED BY:
XX DRILLER-VISUALLY
X SOIL TECHNICIAN-VISUALLY
LABORATORY TESTS

REMARKS:

7

HOLE NO. ~~B96-6~~ B-96-106

MAINE TEST BORINGS, INC. BREWER, MAINE 04412	CLIENT CHAMPION PAPER MILL	SHEET 1 OF 1 HOLE NO. ~~B96-7~~ B-96-107
DRILLER TOM SCHAEFER	PROJECT NAME MILL	LINE & STATION
.T.B. JOB NUMBER 96-137	LOCATION BUCKSPORT, MAINE	OFFSET

ROUND WATER OBSERVATIONS

AT FT. AFTER HOURS

FT. AFTER HOURS

	CASING	SAMPLER	CORE BARREL
TYPE	NW	SS	NQ2
SIZE I.D.	3"	1 3/8"	2"
HAMMER WT.	300	140	
HAMMER FALL	16"	30"	

DATE START	DATE FINIS
12/27/96	12/27/96

SURFACE ELEVATION

133.5'±

CASING BLOWS PER OOT	SAMPLE NO.	O.D.	PEN.	REC.	DEPTH @ BOT.	BLOWS PER 6" ON SAMPLER 0-6	6-12	12-18	VANE READING	DEPTH	STRATUM DESCRIPTION
AUGER											
"											~~BROWN SILTY FINE SAND WITH LITTLE GRAVEL AND COBBLES~~
"											
"	1D	2"	24"		4.0	2	3	10	9		
"											*BROWN SILTY GRAVELLY SAND WITH COBBLES AND TRACE OF ORGANICS (FILL)*
6											
8	2D	2"	24"		7.0	3	4	7	12		
6											
9											
14											
12											
6	D	2"	24"		12.0	13	7	6	6		
8											
5											
3										15.0	
6											BROWN SILTY FINE SAND WITH GRAVEL, CLAY AND WOOD *(FILL)*
52	3D	2"	24"		17.0	3	2	7	40	17.6	
150											
										RQD=56%	ROCK *METASILTSTONE FAIR QUALITY*
	1R	3"	3.0'	3.0'	20.6	100%				20.6	
											BOTTOM OF BORING @ 20.6'
											WATER AT 11.0', CAVED AT 13.0' ON 12/30/96

SAMPLES

D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE

SOIL CLASSIFIED BY:

- [XX] DRILLER-VISUALLY
- [X] SOIL TECHNICIAN-VISUALLY
- [ ] LABORATORY TESTS

REMARKS:

8

HOLE NO. ~~B96-7~~ B-96-107

MAINE TEST BORINGS, INC. BREWER, MAINE 04412	CLIENT CHAMPION PAPER MILL	SHEET 1 OF 1 HOLE NO. ~~B96-8~~ B-96-108
DRILLER TOM SCHAEFER	PROJECT NAME MILL	LINE & STATION
T.B. JOB NUMBER 96-137	LOCATION BUCKSPORT, MAINE	OFFSET

ROUND WATER OBSERVATIONS											
AT	FT.	AFTER	HOURS		CASING	SAMPLER	CORE BARREL	DATE START	DATE FINIS
				TYPE	NW	SS		12/26/96	12/26/96
				SIZE I.D.	3"	1 3/8"		SURFACE ELEVATION	
				HAMMER WT.	300	140		130.5'±	
	FT.	AFTER	HOURS	HAMMER FALL	16"	30"			

CASING BLOWS PER FOOT	SAMPLE NO.	O.D.	PEN.	REC.	DEPTH @ BOT.	BLOWS PER 6" ON SAMPLER 0-6	6-12	12-18	VANE READING	DEPTH	STRATUM DESCRIPTION
AUGER											*BROWN SILTY GRAVELLY SAND WITH TRACE OF ORGANICS* ~~BROWN SILTY FINE SAND WITH LITTLE COARSE SAND AND GRAVEL~~ *(FILL)*
"											
"											
"	1D	2"	24"		4.0	11	12	15	7	4.5	
"											~~MOTTLED SILTY SAND WITH GRAVEL AND CLAY~~ *(FILL)*
18											
	2D	2"	24"		7.0	2	3	5	4	7.0	*BROWN GRAVELLY SANDY SILT W/TRACE OF CLAY & ORGAN*
											BOTTOM OF BORING @ 7.0' WATER @ 5.0' *WATER LINE ENCOUNTERED WITH CASING AT 5.5'±*

SAMPLES
D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE

SOIL CLASSIFIED BY:
[XX] DRILLER-VISUALLY
[X] SOIL TECHNICIAN-VISUALLY
[ ] LABORATORY TESTS

REMARKS:
HIT WATER LINE

9

HOLE NO. ~~B96-8~~ B-96-108

MAINE TEST BORINGS, INC. BREWER, MAINE 04412	CLIENT CHAMPION PAPER MILL	SHEET 1 OF 1 HOLE NO. ~~B96-6A~~ B-96-108A
DRILLER TOM SCHAEFER	PROJECT NAME MILL	LINE & STATION
J.B. JOB NUMBER 96-137	LOCATION BUCKSPORT, MAINE	OFFSET

GROUND WATER OBSERVATIONS					CASING	SAMPLER	CORE BARREL	DATE START	DATE FINISH
AT	FT.	AFTER	HOURS	TYPE	NW	SS	NQ2	12/31/96	12/31/96
				SIZE I.D.	3"	1 3/8"	2"	SURFACE ELEVATION	
	FT.	AFTER	HOURS	HAMMER WT.	300	140		131'±	
				HAMMER FALL	16"	30"			

CASING BLOWS PER FOOT	SAMPLE NO.	O.D.	PEN.	REC.	DEPTH @ BOT.	BLOWS PER 6" ON SAMPLER 0-6	6-12	12-18	VANE READING	DEPTH	STRATUM DESCRIPTION
AUGER											
"											
"											
"	1D	2"	24"		4.0	9	7	7	5		~~BROWN SILTY GRAVELLY SAND WITH SOME CLAY~~ *BROWN GRAVELLY SILT AND SAND WITH TRACE OF CLAY (FILL)*
"										5.5	
14											
37	2D	2"	24"		7.0	4	12	22	33		MOTTLED SANDY CLAYEY SILT ~~DENSE~~
68										8.0	
75											BROWN SANDY CLAYEY SILT WITH TRACE OF GRAVEL ~~DENSE~~
92											
	3D	2"	13"		11.1	14	30	50		11.1	
	1R	3"	2.4'	1.8'	13.5	75%				*RQD=0%*	ROCK *METASANDSTONE* *VERY POOR QUALITY*
										RQD=0% 16.1	
	2R	3"	2.6'	1.9'	16.1	73%					
											BOTTOM OF BORING @ 16.1'

SAMPLES
D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE

SOIL CLASSIFIED BY:
XX DRILLER-VISUALLY
X SOIL TECHNICIAN-VISUALLY
LABORATORY TESTS

REMARKS:

(10)

HOLE NO. B-96-108A ~~B96-6A~~

MAINE TEST BORINGS, INC. BREWER, MAINE 04412	CLIENT: CHAMPION PAPER MILL	SHEET 1 OF 1 HOLE NO. ~~B96-9~~ B-96-109
DRILLER: TOM SCHAEFER	PROJECT NAME: MILL	LINE & STATION
.B. JOB NUMBER: 96-137	LOCATION: BUCKSPORT, MAINE	OFFSET

OUND WATER OBSERVATIONS

AT FT. AFTER HOURS

FT. AFTER HOURS

	CASING	SAMPLER	CORE BARREL
TYPE	NW	SS	NQ2
SIZE I.D.	3"	1 3/8"	2"
HAMMER WT.	300	140	
HAMMER FALL	16"	30"	

DATE START	DATE FINIS
12/26/96	12/26/96

SURFACE ELEVATION: *129.5'±*

CASING BLOWS ER OT	SAMPLE NO.	O.D.	PEN.	REC.	DEPTH @ BOT.	BLOWS PER 6" ON SAMPLER 0-6	6-12	12-18	VANE READING	DEPTH	STRATUM DESCRIPTION
AUGER										1.5	BROWN SANDY SILT WITH LITTLE GRAVEL, TRACE CLAY
"											
"											MOTTLED CLAYEY SANDY SILT
"	1D	2"	24"		4.0	7	7	4	4		*WITH TRACE OF GRAVEL AND ORGANICS (FILL)*
"										5.5	
11											GRAY SANDY CLAYEY SILT WITH TRACE OF ORGANICS *(FILL)*
15	2D	2"	24"		7.0	2	4	6	10	7.0	
19											
33											BROWN CLAYEY SILT
42										10.5	
60										11.5	MOTTLED SANDY CLAYEY SILT *~~DENSE~~*
70	3D	2"	24"		12.0	12	16	22	23		BROWN SILTY CLAY
90										13.0	
90											*GRAVELLY SILTY*
120											BROWN ~~SILTY GRAVELLY~~ SAND WITH COBBLES *(TILL)*
95											
140	4D	2"	18"		17.5	42	38	57			*~~VERY DENSE~~*
192										18.3	
200											ROCK
											METASILTSTONE
										RQD=30%	*POOR QUALITY*
	1R	3"	5.0'	4.8'	23.5	96%				23.5	
											BOTTOM OF BORING @ 23.5'

SAMPLES

D = SPLIT SPOON

C = 2" SHELBY TUBE

S = 3" SHELBY TUBE

SOIL CLASSIFIED BY:

XX DRILLER-VISUALLY

X SOIL TECHNICIAN-VISUALLY

LABORATORY TESTS

REMARKS:

(11)

HOLE NO. ~~B96-9~~ B-96-109

MAINE TEST BORINGS, INC. BREWER, MAINE 04412	CLIENT CHAMPION PAPER MILL	SHEET 1 OF 1 HOLE NO. ~~B96-10~~ B-96-110
DRILLER TOM SCHAEFER	PROJECT NAME MILL	LINE & STATION
B. JOB NUMBER 96-137	LOCATION BUCKSPORT, MAINE	OFFSET

GROUND WATER OBSERVATIONS

AT FT. AFTER HOURS

FT. AFTER HOURS

	CASING	SAMPLER	CORE BARREL
TYPE	NW	SS	NQ2
SIZE I.D.	3"	1 3/8"	2"
HAMMER WT.	300	140	
HAMMER FALL	16"	30"	

DATE START	DATE FINISH
12/30/96	12/30/96

SURFACE ELEVATION
120'±

CASING BLOWS PER FOOT	SAMPLE NO.	O.D.	PEN.	REC.	DEPTH @ BOT.	BLOWS PER 6" ON SAMPLER 0-6	6-12	12-18	VANE READING	DEPTH	STRATUM DESCRIPTION
AUGER										0.3	BLACK TOP
"	1D	2"	8"		2.7	22	50			2.9	BROWN GRAVELLY SAND WITH COBBLES *BROWN SILTY SANDY GRAVEL (FILL)*
"											
											ROCK *METASILTSTONE*
	1R	3"	3.1'	3.0'	6.6	97%				*RQD=46%*	*POOR TO FAIR QUALITY*
										RQD=54%	
	2R	3"	2.0'	1.8'	8.6	90%				8.6	
											BOTTOM OF BORING @ 8.6' WATER @ 0.9'

SAMPLES
D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE

SOIL CLASSIFIED BY:
XX DRILLER-VISUALLY
X SOIL TECHNICIAN-VISUALLY
LABORATORY TESTS

REMARKS:

(12)

HOLE NO. ~~B96-10~~ B-96-110

MAINE TEST BORINGS, INC. BREWER, MAINE 04412	CLIENT CHAMPION PAPER MILL	SHEET 1 OF 1 HOLE NO. ~~B96-11~~ B-96-111
DRILLER TOM SCHAEFER	PROJECT NAME MILL	LINE & STATION
T.B. JOB NUMBER 96-137	LOCATION BUCKSPORT, MAINE	OFFSET

ROUND WATER OBSERVATIONS					CASING	SAMPLER	CORE BARREL	DATE START	DATE FINIS
AT	FT.	AFTER	HOURS	TYPE	NW	SS		12/27/96	12/27/96
				SIZE I.D.	3"	1 3/8"		SURFACE ELEVATION	
				HAMMER WT.	300	140		121'±	
	FT.	AFTER	HOURS	HAMMER FALL	16"	30"			

CASING BLOWS PER FOOT	SAMPLE NO.	O.D.	PEN.	REC.	DEPTH @ BOT.	BLOWS PER 6" ON SAMPLER 0-6	6-12	12-18	VANE READING	DEPTH	STRATUM DESCRIPTION
AUGER											
"											
"											MOTTLED SILTY ~~SANDY~~ CLAY
"	10	2"	24"		4.0	2	8	13	15		~~VERY STIFF~~ qp=5.5-7.5 ksf
"										5.0	
19											
25	20	2"	24"		7.0	3	7	10	14		BROWN SANDY CLAYEY SILT WITH ~~SAND AND~~ TRACE OF GRAVEL
30										8.0	~~ MEDIUM DENSE ~~
82											
105											BROWN ~~SILTY GRAVELLY~~ GRAVELLY SILTY SAND WITH COBBLES (TILL)
35											
65	30	2"	24"		12.0	32	40	51	40	12.6	~~ VERY DENSE ~~
80											
											REFUSAL @ 12.6'

SAMPLES
D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE

SOIL CLASSIFIED BY:
XX DRILLER-VISUALLY
X SOIL TECHNICIAN-VISUALLY
X LABORATORY TESTS

REMARKS:

(13)

HOLE NO. ~~B96-11~~ B-96-111

APPENDIX D
Laboratory Test Results

S.W.COLE ENGINEERING, INC.

Consolidation Test

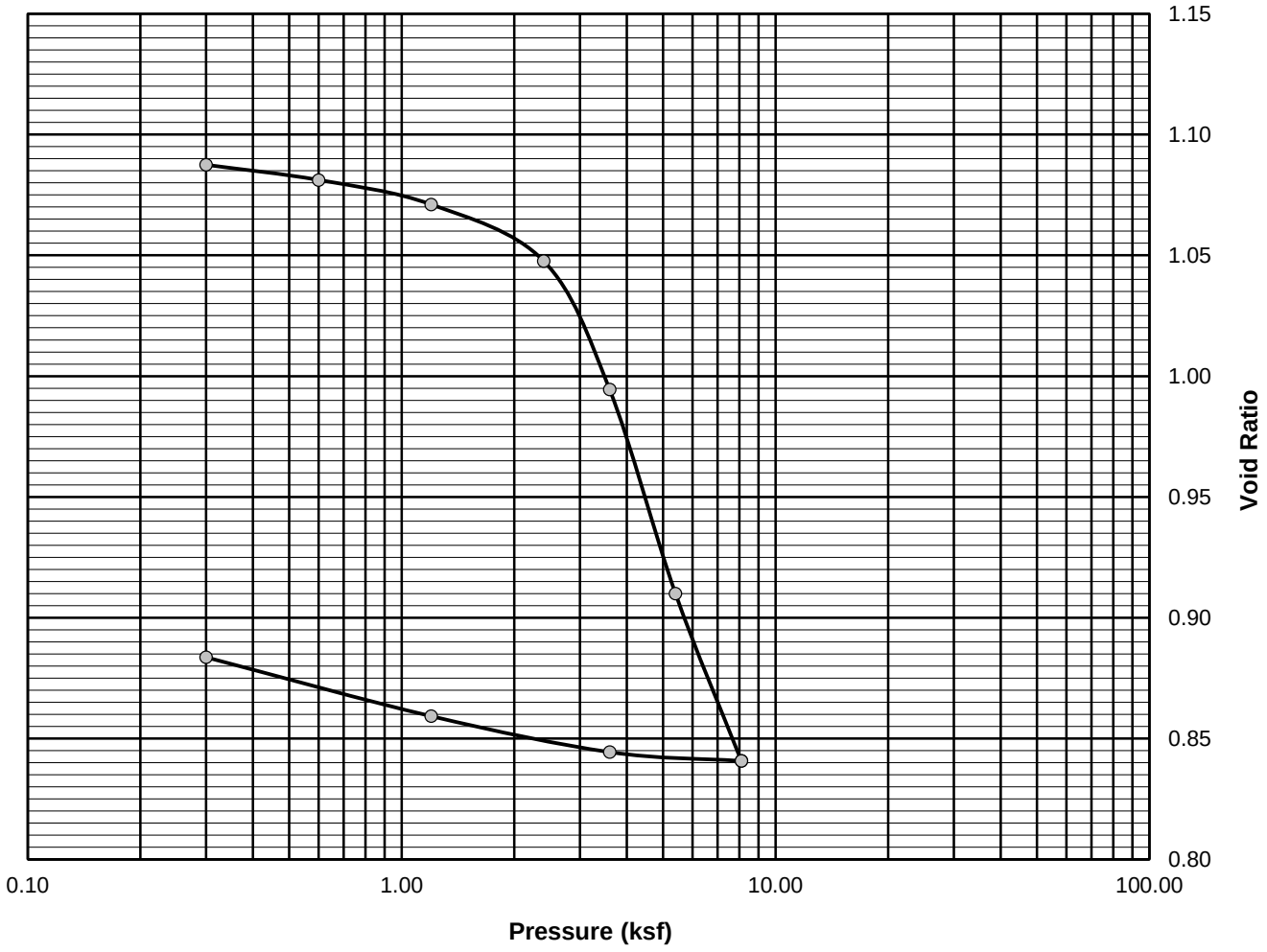
ASTM D-4767

Project Name: Bucksport - Whole Oceans
Client: CES, Inc.

Project Number: 17-0214
Lab ID: 21455B
Date: 4/17/2018

Boring: B-18-2
Sample: 1U
Depth: 20-22'

P_C =	3.0
C_C =	0.487
C_R =	0.036
w =	40.1%
W_L =	39
W_P =	20



Comments:

Reviewed By

S.W.COLE ENGINEERING, INC.

Consolidation Test

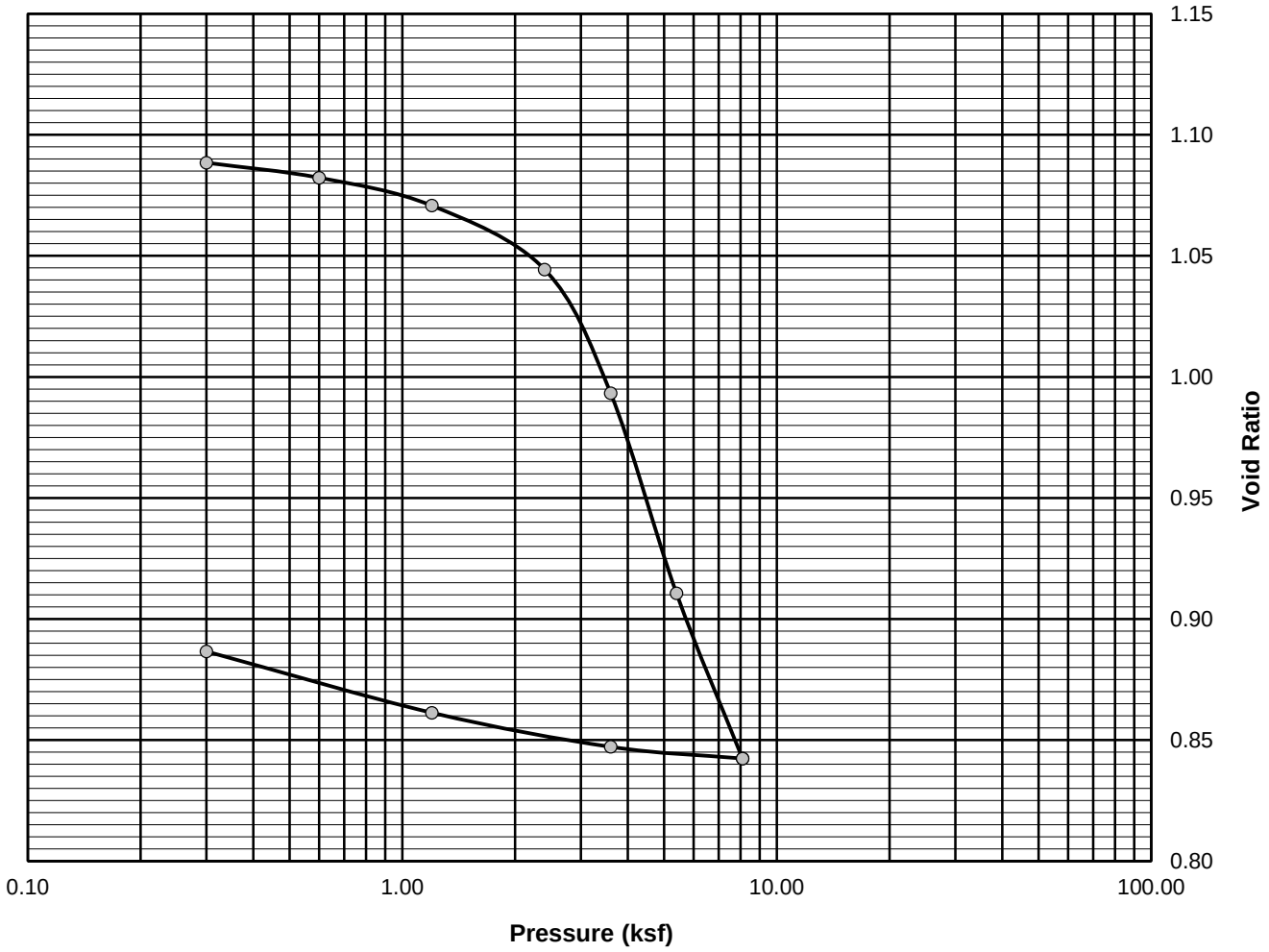
ASTM D-4767

Project Name: Bucksport - Whole Oceans
Client: CES, Inc.

Project Number: 17-0214
Lab ID: 21456B
Date: 4/17/2018

Boring: B-18-8
Sample: 1U
Depth: 15-17'

P_C =	2.9
C_C =	0.446
C_R =	0.03
w =	35.7%
W_L =	33
W_P =	19



Comments:

Reviewed By

SECTION 12

STORMWATER MANAGEMENT

A. NARRATIVE

The intent of this Stormwater Management Plan is to comply with the requirements of the Maine Department of Environmental Protection (MDEP) Chapter 500 regulations. This project involves the development and redevelopment of approximately 33 acres for the construction of an aquaculture facility consisting of buildings and paved areas for maneuvering and parking. Buildings proposed to be developed include: Freshwater Building, Power Generation Area, South Grow-out Building, North Grow-out Building, Support Functions Building, Ancillary Buildings and system support buildings, , as further described in detail in Section 1. The paved areas include maneuver access around the facility as well as parking for employees and facility vehicles.

Erosion control measures will be in place prior to the start of any construction. Temporary and permanent measures will be installed in accordance with Section 14 of this application. Upon completion of the construction and stabilization of all disturbed areas, the temporary erosion control measures will be removed.

Basic Standard Submission: Information is provided as required for the Basic Standard Submission in Section 14.0-Basic Standards.

Flooding Standard Submission: The following information is provided as required in the Flooding Standard Submission.

1. Control of Peak Flows: Areas on the west side of Route 15 are exempt from the flooding standard as the stormwater runoff from the site drains directly to the Penobscot River. Any redevelopment on the east side of Route 15 will be over existing impervious area and as such will not increase peak flows from site.

2. Details, Design, and Specifications: Sizing of the required stormwater treatment methods are included in Section 12A.

General Standards Submission: The following Information is provided as required in the General Standard Submission.

Narrative: The proposed project will occupy approximately 31.6 acres over what was historically developed as a pulp and paper mill and woodyard. The proposed project encompasses existing developed areas. The Chapter 500 stormwater standards for a redevelopment project were calculated to determine the treatment percentage required. Based on pollutant rankings for the area, historically a mill and woodyard compared to the proposed aquaculture facility, the resultant ranked impact change due to redevelopment requires treatment of 50% of the proposed developed area. As a planning permit, the intent is to treat as much of the proposed area as

practicable, to minimize future treatment requirements. Proposed treatment methods include the reconstruction of a pond adjacent to the proposed impervious areas to make it a wet pond.

1. Drainage Plans: A plan set is provided as part of Section 1 requirements. The plan set includes the locations of BMPs used to treat the stormwater from this development, and a site detail sheet is included that provides detailed information on the wet pond.

2. Calculations: Wet pond sizing calculations were determined in accordance with Chapter 500 and the MDEP Stormwater BMP Technical Design Manual, Volume III.

3. Details, Designs, and Specifications: The project is currently proposing to control runoff quality issues using a wet pond.

Phosphorus Standards Submission: The following Information is provided as required in the Phosphorus Standard Submission.

1. Narrative: As the project area is not in a lake watershed, it is not required to meet the phosphorus standards.

SECTION 12A

STORMWATER QUALITY CONTROL NARRATIVE

The proposed Whole Oceans Aquaculture Facility is being developed to farm Atlantic salmon for the Global food market. The proposed buildings consist of a freshwater building, two grow-out buildings, and accessory buildings. The entire site drains westerly to the Penobscot River. The site is historically the location of a pulp and paper mill and woodyard, the majority of which has been demolished. The proposed project requires a Site Location of Development Act (SLODA) Planning Permit. According to Chapter 500 requirements, 50% of the proposed redevelopment areas must be treated.

EXISTING CONDITIONS Existing condition is a high use woodyard area and paper mill facility. Pavement and gravel areas are high use with the potential for high pollutants			
AREA (ACRES)	**DESCRIPTION**	**POLLUTANT RANKING**	**IMPACT WEIGHTED AVE**
5.13	Existing Buildings	3	15.39
2.40	Pavement areas in the woodyard and mill	5	12.00
17.44	Gravel areas in woodyard and mill	5	87.20
3.57	Grassed areas in/adjacent to the woodyard and mill	2	7.14
1.59	Forested area	0	0.00
30.13	**TOTAL**		121.73
EXISTING IMPACT RATING (TOTAL WEIGHTED AVE IMPACT / REDEVELOPMENT AREA TOTAL)			**4.04**

PROPOSED CONDITIONS Proposed condition is an aquaculture facility with paved maneuver and parking areas			
AREA (ACRES)	**DESCRIPTION**	**POLLUTANT RANKING**	**IMPACT WEIGHTED AVE**
21.01	Proposed Buildings	3	63.03
9.00	Proposed Pavement	4	36.00
0.12	Grassed Area	2	0.22
30.13	**TOTAL**		99.25
PROPOSED IMPACT RATING (TOTAL WEIGHTED AVE IMPACT / REDEVELOPMENT AREA TOTAL)			**3.29**

SUBTRACTING EXISTING IMPACT RATING FROM PROPOSED IMPACT RATING	**-0.75**

From Chapter 500 Table 3 - Treatment Levels for Redevelopment Projects

0.0 or less equates to 50% of the developed area that must be treated (due to Site project)

To treat stormwater associated with the proposed development, Whole Oceans is proposing the reconfiguration of an existing pond to meet current stormwater quality standards. The wet pond will be located to the west of the proposed development to maximize the treatment of runoff. The location of the wet pond is shown on the plan set.

The project development is required to meet the General Standards of Chapter 500. The majority of the project area is a redevelopment of the existing lumberyard and Mill area. The proposed ancillary buildings adjacent to the north access road are located on previously undeveloped land and as such are not allowed the redevelopment exemption. A breakdown of the treatment requirements for the two areas are as follows:

Redevelopment Area

This area is required to treat 50% of the proposed development. The redevelopment areas include the Freshwater Building, Growout Buildings, Support Functions Building, Water and Wastewater Treatment Buildings, Ancillary Building on Parcel 2, the paved maneuver and access areas, and the power generation area. The total proposed redevelopment impervious and developed areas are summarized in the Project Redevelopment Area table below.

PROJECT REDEVELOPMENT AREA

PROJECT AREA	IMPERVIOUS AREA	DEVELOPED AREA
Buildings	934,990 SF	934,990 SF
Maneuver, Access, and Power Generation Areas	377,558 SF	377,558 SF
TOTAL AREA	**1,312,548 SF**	**1,312,548 SF**
AREA REQUIRING TREATMENT (50% of Total)	**656,274 SF**	**656,274 SF**
AREA TREATED BY WET POND	**958,200 SF**	**958,200 SF**
OVERTREATMENT AREA	**301,926 SF**	**301,926 SF**

New Development Area

The new development area includes the two ancillary buildings and associated pavement adjacent to the north access road. This area is required to meet the 95% impervious and 80% developed area treatment standards of Chapter 500. The project is proposing to utilize the overtreatment of the redeveloped area to offset treatment of the ancillary buildings and associated pavement. The following table summarizes the new development area as well the treatment requirements and the application of the overtreatment by the redevelopment area.

PROJECT NEW DEVELOPMENT AREA

PROJECT AREA	IMPERVIOUS AREA	DEVELOPED AREA
Buildings	30,000 SF	30,000 SF
Paved Maneuver and Access Area	34,500 SF	34,500 SF

TOTAL AREA	**64,500 SF**	**64,500 SF**
AREA REQUIRING TREATMENT (95% Imp / 80% Dev)	**61,275 SF**	**49,020 SF**
AREA APPLIED FROM OVERTREATMENT	**61,274 SF**	**N/A**
OVERTREATMENT AREA REMAINING	**240,650 SF**	**N/A**

As can be seen in the above tables, by treating greater than 50% of the redevelopment area, the overtreatment can be applied to the new development area, and still provide a credit of 240,650 SF towards future development.

A description of the treatment type is as follows:

1. **Wet Pond**: The wet pond has been designed to provide water quality treatment. The pond is designed to store 160,630 cubic feet with a mean depth of 7 feet. Outlet structures will be constructed above these elevations to promote plug flow through the pond and maximize settlement of pollutants. Calculations for the size required for the mean depth is provided below.

Sizing Calculations: Chapter 500 wet pond sizing is based on volume below the permanent pool elevation at least equal to 2.0 inches times the sub catchment's impervious area plus 0.8 inches times the sub catchment's non-impervious developed area.

<u>Wet pond</u>

Total Required Permanent Pool Volume (PPV): 958,000 SF X (2/12) = 159,667 CF. 160,630 CF provided.

Channel Protection Volume (CPV): 958,000 SF X (1/12) = 79,833 CF. 80,629 CF provided.

Mean Depth: 139,339 CF / 19,870 SF = 7.01 FT

The proposed stormwater quality control devices have been designed in accordance with the standards outlined in Stormwater Management for Maine, Volume II BMP Manual, January 2006 and revised May 2016. Construction and maintenance will be done according to the standards outlined in this manual.

STORMWATER TREATMENT PLAN
DETAIL SHEETS

Included in Appendix B

SECTION 13

URBAN IMPAIRED STREAM SUBMISSION

The proposed project is not within the watershed of an urban impaired stream; therefore, this section is not applicable.

SECTION 14

BASIC STANDARDS SUBMISSION

The project site is located on a site that has been developed as a pulp and paper mill under various names since 1930. Land disturbance and development has occurred from the riverbanks to Route 15, even extending across Route 15 in support of the pulp and paper mill operations. Demolition of the site is currently permitted through a SLODA permit and Whole Oceans is taking over the site at the conclusion of the demolition. Demolition operations have been allowed to continue for a limited time by Whole Oceans as agreed to during their purchase process.

Site stabilization is a requirement of the current SLODA permit and therefore the site will be a stabilized site when demolition operations cease. The Whole Oceans property will be void of most above ground structures when they take control of the site. Ground cover will consist of existing gravel and paved surfaces and stabilized cut and fill areas associated with recent demolition activities. There will be some areas of vegetation/lawn/field area on the outer portions of the development area, but much of the site was covered by stockpiles of processed concrete, limiting growth of vegetation.

As required for all sites which do not qualify for a Stormwater Permit by Rule, an Erosion and Sedimentation Control Plan has been prepared for the Whole Oceans Aquaculture Facility. The erosion control notes address permanent stabilization measures, semi-permanent stabilization measures for large excavation operations, seeding, and mulching rates, as well as the timing of installation. Construction and installation details are also provided for the project. Additional descriptions and specifications are provided in Section 14A: Erosion and Sedimentation Control.

An Inspection and Maintenance Plan has been included in Section 14B. This plan includes a list of measures to be inspected and maintained. It also includes the frequency and responsible parties to implement the plan. A Housekeeping Plan has been submitted in Section 14C. This plan provides controls to address spill prevention and possible contamination of the site.

SECTION 14A

EROSION AND SEDIMENTATION CONTROL

The proposed construction will require the implementation of temporary and permanent erosion control measures. These measures will be implemented in accordance with the Maine Erosion and Sediment Control Best Management Practices (BMPs) Manual, prior to removal of any on-site vegetation or disturbance of any on-site soil. The general erosion and sediment control specifications and details, as provided within this section, are intended to describe measures to be used by contractors working on the site to maintain compliance with the standards established in the BMPs.

The proposed location and use of erosion control measures on-site are shown on the plan located in Section 12 of this application. There are no known existing erosion control concerns with the site. Implementation of proper erosion control measures will be required by site contractors to confine sediment and debris within the limit of soil disturbance. Proper use and maintenance of erosion control measures, described in Appendix B, provide protection against off-site transport of sediment and discharge of sediment to undisturbed areas of the development.

EROSION AND SEDIMENTATION CONTROL PLAN

1. Pollution Prevention: The proposed project includes the construction of an aquaculture facility in Bucksport, Maine. The facility will include freshwater systems, post smolt, and grow out modules, as well as support systems and associated roads and parking areas. All disturbed areas, with the exception of the buildings and parking/maneuvering areas, will be stabilized with vegetation or riprap. Proposed down-gradient vegetated areas will be protected with the use of silt fence or additional control devices if necessary, during construction.

2. Sediment Barriers: Prior to construction, sediment barriers will be installed downgradient of all disturbed areas. Sediment barriers will include silt fence, bark mulch berms, hay bales or additional measures which may become necessary.

Sediment barriers will also be installed adjacent to any significant natural drainage channel, not otherwise protected. All installed sediment barriers will be maintained until disturbed areas are permanently stabilized.

3. Temporary Stabilization: Disturbed areas, which have lost natural vegetation cover, and will not be worked for more than seven days, will be temporarily stabilized. Areas within 75 feet of a wetland or waterbody will be stabilized within 48 hours of the initial disturbance or prior to any significant storm event, whichever comes first.

Temporary stabilization will include mulch or other non-erodible material such as erosion control mesh mats. In some instances, temporary stabilization may include temporary mulch and seeding, based on the time until the area will be worked or permanently stabilized.

4. Removal of Temporary Sediment Control Measures: After permanent stabilization of disturbed areas has been completed, temporary measures, such as silt fence, will be removed within 30 days. Any accumulated sediments will be removed, and any disturbed areas permanently stabilized.

5. Permanent Stabilization: Once proposed construction is completed all disturbed areas, not otherwise permanently stabilized, will be permanently stabilized with vegetation, seeding, or permanent mulch.

Vegetation plantings and seeding will include species which are suitable for the light, soil, and moisture conditions of the area. Seeded areas will be protected with temporary mulch or erosion control blankets.

Concentrated flows will not be allowed on newly seeded areas until an adequate catch of vegetation is established. It may be necessary to reseed and mulch again if germination is sparse, plant coverage is spotty, or topsoil erosion is evident. For seeded areas, permanent stabilization means a 90% cover of healthy plants with no evidence of washing or rilling of the topsoil.

Other permanent measures associated with the project include the following:

A. Permanent Mulch: Permanent mulching means total coverage of 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.

B. Permanent Riprap: Permanent riprap means that slopes and ditches stabilized with riprap have an appropriate backing of well-graded gravel or approved geotextile to prevent soil movement from behind the riprap. Properly sized angular stones will be utilized.

C. Permanent Ditches, Channels, and Swales: Permanent stabilization means the channel is stabilized with a 90% cover of healthy vegetation or with a well-graded riprap lining. There must be no evidence of slumping of the channel lining, undercutting of the channel banks, or down-cutting of the channel.

6. Winter Construction: Overwinter construction is anticipated as part of this project. During winter construction additional provisions will be made to protect disturbed areas from runoff. Winter construction includes the time between November 1 and April 15, and during winter construction, the contractor shall meet the requirements of Section 3 – Overwinter Construction of the Maine Erosion and Sedimentation Control BMP Manual (October 2016).

7. Stormwater Channels: Ditches, swales, and open stormwater channels are planned as part of this project. They will be stabilized with either vegetation or rip rap depending on the situation to prevent soil erosion.

8. Roads: The proposed accessways associated with the project will vary in width. The width will vary based on the required heavy industrial equipment access. Portions of the accessway that are over the same footprint as the existing accessway will be resurfaced and stormwater will be allowed to sheet off as in pre-development conditions. Other proposed accessway areas will be graded to collect water a stormwater collection system and treated before being discharged to the Penobscot River.

9. Culverts: Culverts utilized in this project will be protected on both ends and are sized to convey the 24-hour, 25-year storm event.

10. Parking Areas: The proposed project includes parking areas graded to sheet runoff to the adjacent vegetated areas.

11. Additional Requirements: No additional requirements are proposed at this time.

SECTION 14B

INSPECTION AND MAINTENANCE

Whole Oceans and its contractor will be responsible for maintenance during construction. Whole Oceans will be responsible for post construction maintenance of the site and the devices that provide treatment for the stormwater from the site.

A Pre- and Post-Construction Maintenance Plan for the stormwater management system is included in this section. Any questions regarding the design and maintenance of the Stormwater Management and Erosion and Sedimentation Control Systems should be directed to:

- Jon Whitten, Jr., P.E.
  CES, Inc.
  P.O. Box 639
  Brewer, ME 04412
  (207) 989-4824
  jwhitten@cesincusa.com

MAINTENANCE PLAN OF STORMWATER MANAGEMENT SYSTEM

The Maine Department of Environmental Protection's (MDEP) Stormwater Management for Maine: Best Management Practices latest edition and the MDEP's Chapter 500: Stormwater Management were used as guidelines in the development of this Maintenance Plan. General maintenance requirements are listed below.

A. DURING CONSTRUCTION

The general contractor will be responsible for the inspection and maintenance of all stormwater management system components during construction.

Inspection: Inspection of disturbed and impervious areas, erosion control measures, materials storage areas that are exposed to precipitation, and locations where vehicles enter or exit the site will be performed at least once a week as well as before and after a storm event, and prior to completing permanent stabilization measures. Inspections shall be conducted by a person with knowledge of erosion and stormwater control, including the standards and conditions in the permit.

Maintenance: All erosion control measures will be kept in effective operating condition until areas are permanently stabilized. If BMPs need to be maintained or modified, additional BMPs are necessary, or other corrective action is needed, implementation will be completed within 7 calendar days and prior to any rainfall event.

Documentation: A log shall be kept summarizing the inspections and any corrective action taken. A copy of the log is provided at the end of this section, and is titled, Log of Inspections During Construction.

B. POST-CONSTRUCTION

The Owner will be responsible for the inspection and maintenance of all stormwater management system components associated with the proposed project. A list of corrective actions titled Inspection and Maintenance Plan for Stormwater Management Structures (BMPs) is provided at the end of this section.

Inspection and Corrective Action

1. **Vegetated Areas:** Inspections and maintenance of vegetated areas will be performed early in the growing season or after significant rainfall to identify any erosion problems. Areas where erosion is evident will be covered with an appropriate lining, or erosive flows will be diverted to an area able to handle the flows. Any bare areas or areas with sparse growth will be replanted.

2. **Ditches, Swales, and Culverts:** Inspections and maintenance of ditches, culverts, and swales will be performed in the Spring, late Fall, and after rain events greater than 1-inch in depth to remove any obstructions to flow, to remove any accumulated sediments within the structures, and to repair any erosion of channel linings, check dams, inlet protection, or outlet protection. Vegetated ditches and swales must be mowed no more than twice per year and cut no less than 6-inch in height.

3. **Stormwater Wet Ponds:** Maintenance of the wet ponds built for the treatment of stormwater will at a minimum include the items listed below.

   a. Embankment Inspection and Maintenance: A description will be provided of the yearly inspections of the impoundment embankments to identify excessive settlement, slope erosion, internal piping, and downstream swamping. Actions to be taken will be identified if any problems are found. Semi-annual mowing will be done to prevent the growth of woody vegetation on the embankment.

   b. Outlet Inspection and Clean Out: A description will be provided of the semi-annual inspection of the impoundment's outlet control structure to identify broken seals, obstructed orifices, plugged trash racks, and piping along the outlet barrel. Actions to be taken will be identified if any problems are found. A means of removal and disposal of any sediments and debris within the control structure will be provided.

C. DOCUMENTATION

A log shall be kept summarizing the inspections, maintenance, and any corrective action taken. A copy of the log is provided at the end of this section, and is titled, BMP Inspection Log

APPENDIX C

HOUSEKEEPING

1. **Spill Prevention** - During construction, controls will be used to prevent pollutants from being discharged from materials on site, including storage practices to minimize exposure of the materials to stormwater, and appropriate spill prevention, containment, and response planning and implementation.

2. **Groundwater Protection**- During construction, liquid petroleum products and other hazardous materials with the potential to contaminate groundwater will not be stored or handled in areas of the site draining to an infiltration area. Dikes, berms, sumps, and other forms of secondary containment that prevent discharge to groundwater may be used to isolate portions of the site for the purposes of storage and handling of these materials.

3. **Fugitive Sediment and Dust** - Actions must be taken to ensure that activities do not result in noticeable erosion of soils or fugitive dust emissions during or after construction. Oil will not be used for dust control. Water will be used for dust control during construction. Operations during wet months that cause mud to be tracked off the site onto public roads will provide sweeping of the road areas at least once per week and prior to significant storm events.

4. **Debris and Other Materials** - Litter, construction debris, and chemicals exposed to stormwater will be prevented from becoming a pollutant source.

5. **Trench or Foundation De-Watering** - If de-watering is necessary, the collected water will be removed from the ponded area and spread through natural wooded buffers or discharged into a construction sedimentation basin. The water will not be allowed to flow over disturbed areas to the site.

6. **Non Stormwater Discharges** – Identify and prevent contamination by non-stormwater discharges.

7. **Additional Requirements** – Additional requirements may be applied on a site-specific basis.

WHOLE OCEANS FACILITY
LOG OF INSPECTIONS DURING CONSTRUCTION

Inspection Date	Inspector (Name and Qualifications)	Major Observations	Work Performed

Notes

1) Major Observations include the operation and maintenance of erosion and sedimentation controls, materials storage areas, and vehicle access points to the parcel. Major Observations must include BMPs that need maintenance, BMPs that failed to operate as designed or proved inadequate for a particular location, and locations(s) where additional BMPs are needed. For each BMP requiring maintenance, BMP needing replacement, and location needing additional BMPs, note in the log the corrective action taken and when it was taken.
2) Work Performed will include a description of the corrective action taken, the date the corrective action was taken, and the name and qualifications of the person taking the corrective actions
3) The log must be made accessible to MDEP staff and a copy must be provided upon request.
4) The permittee shall retain a copy of the log for a period of at least three years from the completion of permanent stabilization.

WHOLE OCEANS FACILITY
BMP INSPECTION LOG

Date	Inspector (Name and Qualifications)	ID Number	BMP Structure	Work Performed	Comments

Notes

1) If a maintenance task requires the clean-out of any sediments or debris, indicate where the sediment and debris was disposed after removal.
2) BMP structures shall be numbered sequentially and located on attached site map.
3) The log must be made accessible to MDEP staff and a copy must be provided upon request.
4) The permittee shall retain a copy of the log for a period of at least five years from the completion of permanent stabilization.

INSPECTION AND MAINTENANCE PLAN FOR STORMWATER MANAGEMENT STRUCTURES (BMPS)		
	INSPECTION SCHEDULE	**CORRECTIVE ACTIONS**
VEGETATED AREAS	Annually early spring and after heavy rains	Inspect all slopes and embankments and replant areas of bare soil or with sparse growth
		Armor rill erosion areas with riprap or divert the runoff to a stable area
		Inspect and repair down-slope of all spreaders and turn-outs for erosion
		Mow vegetation as specified for the area
DITCHES, SWALES AND OPEN STORMWATER CHANNELS	Annually spring and late fall and after heavy rains	Remove obstructions, sediments or debris from ditches, swales and other open channels
		Repair any erosion of the ditch lining
		Mow vegetated ditches
		Remove woody vegetation growing through riprap
		Repair any slumping side slopes
		Repair riprap where underlying filter fabric or gravel is showing or if stones have dislodged
CULVERTS	Spring and late fall and after heavy rains	Remove accumulated sediments and debris at the inlet, outlet, or within the conduit
		Remove any obstruction to flow
		Repair any erosion damage at the culvert's inlet and outlet
CATCH BASINS	Annually in the spring	Remove sediments and debris from the bottom of the basin and inlet grates
		Remove floating debris and oils (using oil absorptive pads) from any trap
ROADWAYS AND PARKING AREAS	Annually in the spring or as needed	Clear and remove accumulated winter sand in parking lots and along roadways
		Sweep pavement to remove sediment
		Grade road shoulders and remove accumulated winter sand
		Grade gravel roads and gravel shoulders
		Clean-out the sediment within water bars or open-top culverts
		Ensure that stormwater runoff is not impeded by false ditches of sediment in the shoulder
RESOURCE AND TREATEMENT BUFFERS	Annually in the spring	Inspect buffers for evidence of erosion, concentrated flow, or encroachment by development
		Manage the buffer's vegetation with the requirements in any deed restrictions
		Repair any sign of erosion within a buffer
		Inspect and repair down-slope of all spreaders and turn-outs for erosion
		Install more level spreaders, or ditch turn-outs if needed for a better distribution of flow
		Clean-out any accumulation of sediment within the spreader bays or turnout pools
		Mow non-wooded buffers no shorter than six inches and less than three times per year
WETPONDS AND DETENTION BASINS	Annually in fall and after heavy rains	Inspect the embankments for settlement, slope erosion, piping, and slumping
		Mow the embankment to control woody vegetation
		Inspect the outlet structure for broken seals, obstructed orifices, and plugged trash racks
		Remove and dispose of sediments and debris within the control structure
		Repair any damage to trash racks or debris guards
		Replace any dislodged stone in riprap spillways
		Remove and dispose of accumulated sediments within the impoundment and forebay
FILTRATION AND INFILTRATION BASINS	Annually in the spring and late fall	Clean the basin of debris, sediment and hydrocarbons
		Provide for the removal and disposal of accumulated sediments within the basin
		Renew the basin media if it fails to drain within 72 hours after a one inch rainfall event
		Till, seed and mulch the basin if vegetation is sparse
		Repair riprap where underlying filter fabric or gravel is showing or where stones have dislodged
PROPRIETARY DEVICES	As specified by manufacturer	Contract with a third-party for inspection and maintenance
		Follow the manufacturer's plan for cleaning of devices
OTHER PRACTICES	As specified for devices	Contact the department for appropriate inspection and maintenance requirements for other drainage control and runoff treatment measures.

SECTION 15

GROUNDWATER

Before acquiring the site, Whole Oceans has conducted environmental due diligence, obtained a Phase I Environmental Site Assessment (ESA), and reviewed environmental sampling data available to its consultants for the property. Phase I Environmental Site Assessment Update, Bucksport Paper Mill, Bucksport, by Campbell Environmental Group, Inc., January 7, 2019. The ESA states that it was completed in conformance with the scope and limitations of ASTM Standard Practice E1527-2013 and 40 C.F.R. Part 312 and recites the known environmental sampling data that document the presence of hazardous substances and petroleum products on the property.

In addition, Whole Oceans applied for and obtained protections from assertion of liabilities under several Maine laws as authorized under the Maine Voluntary Response Action Plan (VRAP) program under 38 M.R.S. § 343-E. Letter from N. Hodgkins, Maine Department of Environmental Protection (MDEP) to J. Mitchell, Whole Oceans, RE: Whole Oceans Bucksport, Main Street, Bucksport, Maine, Revised No Further Action Assurance Letter – Voluntary Response Action Program, dated January 10, 2019.

The VRAP letter summarizes the existing conditions of the project site and the Mill site in general, (based on the ESA and a Hazardous Waste Generator Partial Closure Certification document created in 2014 through 2018).

Importantly, the MDEP's VRAP Letter of January 10, 2019, expressly states six conditions. The following lists the six conditions and explains how Whole Oceans has complied with each condition.

1. Groundwater extraction and use restrictions. These conditions are adopted in a Declaration of Environmental Covenant.

2. No residential uses. These conditions are adopted in the Declaration of Environmental Covenant.

3. Excavation must follow a Soil Management Plan or be otherwise approved by the MDEP. These conditions are adopted in the Declaration of Environmental Covenant.

4. A Declaration of Environmental Covenant must be adopted and recorded and provided to the MDEP. The Declaration of Environmental Covenant was adopted effective May 30, 2019; the document was provided to the MDEP by email to David Burns and Nicholas Hodgkins, dated June 6, 2019.

5. Whole Oceans must not exacerbate the environmental impacts of the onsite PCBs and must provide access to the property it owns for Bucksport Mill, LLC/AIM Development USA LLC and their contractors to remediate PCBs at the Site. Whole Oceans is not exacerbating these impacts and is allowing the PCB remediation to occur.

6. Recording a copy of the VRAP letter and supplying it to the MDEP. The recorded VRAP letter was provided to the MDEP by email from K. Gray, Pierce Atwood, to David Burns and Nicholas Hodgkins, MDEP, dated June 6, 2019.

See Declaration of Environmental Covenant by Whole Oceans, LLC, dated May 30, 2019, recorded in the Hancock County Registry of Deeds Book 6955, beginning at page 95 (Declaration of Environmental Covenant). Complying with the environmental covenant is also a condition for maintaining VRAP protections.

Groundwater: The project site is not located over a mapped sand and gravel aquifer. Potable water will be supplied via connection to the Maine Water Company watermain within Route 15. Untreated (raw) freshwater (up to 5,000,000 GPD) will be supplied via the existing water main fed by Silver Lake.

The *No Further Action Assurance Letter* states: "The risk of exposure to potentially contaminated soil and groundwater at the Site will be reduced provided that use of groundwater is restricted via a Declaration of Environmental Covenant and that impacted soil encountered during construction activities is managed in accordance with a Department-approved Soil Management Plan." Whole Oceans has implemented this restriction through the Declaration of Environmental Covenant and will adhere to these restrictions. If groundwater use for the facility were to be considered in the future, Whole Oceans would seek approvals as allowed under the Declaration of Environmental Covenant and through an amendment to this SLODA permit, as well as other permits tied to the site.

Contaminated Soils: This proposed project will include modification to the ground elevations in many areas and it can be expected that limited quantities of contaminated soil will be encountered. Whole Oceans and its contractors will follow the Soil Management Plan that is Exhibit A to the Declaration of Environmental Covenant when dealing with these soils. Please refer to Sections 8 and 18 (Soils and Solid Waste) of this application for more information regarding removal and disposal of contaminated soils.

Conclusion: The Whole Oceans Aquaculture Facility is not expected to withdraw from, or discharge to, the groundwater at this time. Whole Oceans and its contractors will conform to the Declaration of Environmental Covenant and Soil Management Plan throughout the construction of this project.

SECTION 16

WATER SUPPLY

Whole Oceans is proposing to amend the historical water supply demand and connections to the existing water supply lines that formerly fed the pulp and paper Mill. The Whole Oceans Aquaculture Facility will require potable water for employee and visitor use as well as both raw freshwater and saltwater for the aquaculture/building system processes. The facility will draw its potable water needs from the Maine Water Company water main in Route 15, while the raw freshwater and saltwater for the aquaculture process will be drawn from Silver Lake and the Penobscot River, respectively, using existing infrastructure that previously served the Mill.

The Whole Oceans Aquaculture Facility will be entirely enclosed and will utilize Recirculating Aquaculture System (RAS) units that will continuously recirculate and treat/condition a combination of raw freshwater and saltwater to support fish growth. Although there is a small, continuous volume of "makeup" water required as the RAS units operate, these units represent a system that significantly reduces water usage when compared to other aquaculture systems. The recirculated water goes through a process where solids, ammonia, carbon dioxide, etc. are removed from the water and other elements are added to maintain appropriate oxygen, salinity, and pH levels. This supplies a constant, clean, and healthy water supply for the growing salmon.

Additional demand for raw freshwater and saltwater will be HVAC systems and other support systems for the building and RAS units. The expected water supply demands for the Whole Oceans Aquaculture Facility are less than the historical demand from the paper Mill.

Historical Water Supply Demand:
It is our understanding that the paper Mill historically demanded:

- 117,489 GPD of potable water (Avg. usage by Verso Paper Co. in yr. 2000 reported by Maine Water Company)
- A monthly average of 18 MGPD of raw freshwater from the Silver Lake system, and
- A monthly average of 72 MGPD of saltwater from the Penobscot River.

Proposed Potable Water Demand:
Whole Oceans estimates that at full build-out, the facility will support approximately 200 employees/visitors per day. According to the State of Maine Subsurface Wastewater Disposal Rules, the expected design flow for wastewater production is 20 Gallons Per Day (GPD) for each employee and less for visitors. To be conservative we have assumed a demand of 20 GPD for 200 people and added 20% to compute a water supply demand volume of 4,800 GPD. This water demand is significantly less than that of the former Mill, and a letter from The Maine Water Company, verifying capacity to serve this level of demand, is enclosed.

No demand for potable water is required by the aquaculture process.

Proposed Raw Freshwater Demand:
Whole Oceans is expecting to demand 4,000,000 GPD of raw freshwater from Silver Lake, at full build-out. It has contracted for rights to use up to 5,000,000 GPD.

Proposed Saltwater Demand:
Whole Oceans is expecting to demand 14,600,000 GPD of saltwater from the Penobscot River, at full build-out.

Conclusion:
Since the Whole Oceans facility will utilize and upgrade existing water supply infrastructure that was previously used by the Mill and its demand for potable, raw freshwater and saltwater is less than that of the former Mill, it is expected that there is ample capacity for a sufficient and healthful water supply already at the site. Please see the attached Ability to Serve letter from the Maine Water Company in reference to the potable water supply.

The Maine Water Company
93 Industrial Park Road
Saco, ME 04072

T: 207.282.1543
www.mainewater.com

June 17, 2019

Christopher Michaud, PE
CES, Inc.
465 South Main Street
Brewer, ME 04412

Re: Whole Oceans Site Plan, Bucksport – Ability to Serve Determination

Dear Mr. Michaud:

The Maine Water Company (MWC) has received your request for Ability to Serve Determination for the above referenced project. The request indicates that the proposed project will use approximately 4,800 gallons per day of potable water from Bucksport Division. Based on this anticipated usage, we can confirm that MWC will be able to serve the proposed project.

MWC will be installing a new 10" ductile iron water main from which service to the proposed project will need to be tapped from to serve the project. If hydrants are proposed, a fire flow test at the nearest hydrant may need to be completed to verify that adequate fire flows can be delivered to the proposed project.

Please keep in contact with Maine Water Company personnel as the project progresses. If you have any questions or need additional information, please feel free to contact me at 1-800-287-1643 or via email at jearle@mainewater.com

Sincerely,
The Maine Water Company

Jon Earle, PE
Supervisor of Engineering Services

SECTION 17

WASTEWATER DISPOSAL

The wastewater disposal plan for the project consists of disposal for sanitary wastewater from employees and visitors to the Town of Bucksport wastewater system. The facility is designed to support 200 employees with an assumed daily usage of 20 gallons per day for a place of employment with showers, totaling an estimated 4,000 GPD of wastewater produced. Included is a letter from the Bucksport Wastewater Treatment Facility stating its capacity to accept the employee wastewater produced.

For process wastewaters, the Whole Oceans aquaculture facility has a Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0037478 and Maine Waste Discharge License (WDL) #W009190-6F-A-N. This allows Whole Oceans to discharge its treated effluent from the aquaculture operations to the Penobscot River. Treatment will be provided onsite prior to discharge to the river. Whole Oceans is required to monitor and meet certain standards in the conditions of the signed permit and license.

TOWN OF BUCKSPORT
MAINE
INCORPORATED JUNE 25, 1792

Bucksport Waste Water Treatment Facility
P. O. Box X
205 U S Route #1
Bucksport, Maine 04416
Phone (207)469-6288
Fax (207)469-6289

May 13, 2019

Christopher Michaud, PE
CES, Inc.
465 South Main Street
Brewer, ME 04412

RE: Whole Oceans Site Plan, Bucksport – Ability to accept Domestic Wastewater

Dear Mr. Michaud;

The Town of Bucksport Wastewater has received your request for ability to accept and process Domestic Wastewater from Whole Oceans located on the River Road Bucksport. Approximate usage of 4,000 gallons per day will not impact our facility and process, and therefore the Town Wastewater can accept your domestic discharge.

If you have questions or need additional information please feel free to contact me at 1-800-287-1643.

Very truly yours,

Dave Michaud
Bucksport Division Superintendent

DM/pjb

SECTION 18

SOLID WASTE

Municipal Solid Waste:
Based on research done for commercial factory developments, we estimate that 396 lbs/day of municipal solid waste (MSW) would be generated by a total of 200 employees and visitors at the Whole Oceans facility, at full build-out. This results in an estimated annual production of 72 tons of MSW. Please refer to the enclosed letter from Pine Tree Waste Services indicating available capacity to accept the anticipated solid waste.

Site Clearing and Grubbing:
The Whole Oceans facility is proposed on an already developed site. Much of the development will take place on the site of the former pulp and paper mill and woodyard. There is only a limited amount of vegetated area (5,000 S.F.) that will need to be cleared and grubbed in Earthwork Development Phase and the Aquaculture Development Phase. It is expected that another 65,000 S.F. of area will need to be cleared and grubbed to support Ancillary Buildings 2 and 3. No clearing is expected for Ancillary Building 1, as it will be located on an existing paved parking lot area. Cleared vegetation and tailings will be processed on-site and used for erosion control.

Construction and Demolition Debris:
The majority of above-ground structures associated with the old mill are currently being demolished and removed from the site under the existing Site Location of Development Act permit by the previous landowner. Whole Oceans will be responsible for the demolition and removal of any underground foundations and utilities that will not be utilized by the aquaculture facility. A high percentage of the required demolition for this project is expected to occur during the first few months of construction under the Earthwork Development Phase.

Concrete materials will be processed on-site and reused in the construction process. Metals will be separated and recycled appropriately. Anything not deemed usable for re-use on the site or recycled, including wastes identified as a “special waste” will be collected and properly disposed of at the Juniper Ridge Landfill in Old Town or another facility licensed to accept it. Given the industrial uses historically conducted on this site, the discovery of contaminated soils and other special waste is expected. Please see **Section 15: Groundwater** for more information.

The construction of the facility’s buildings is not expected to generate a significant amount of construction debris as the buildings will be pre-fabricated metal buildings and most of the equipment for the facility will be pre-manufactured off-site and assembled on-site. Construction debris will be accepted by Pine Tree Waste Services for disposal at Juniper Ridge Landfill or another facility licensed to accept it.

Operational Waste:
The waste that is generated by the aquaculture use will be organic in nature and may include fish mortality waste, fish processing waste and an organic sludge filtered out during the wastewater treatment process. Whole Oceans intends to contract with third party businesses to collect these wastes and utilize the waste in a variety of re-use and recycling options. We have attached a letter from Agri-Cycle Energy stating that it has the capacity and desire to collect the organic wastes from the Whole Oceans facility and utilize those wastes to generate biofuels and electricity. Whole Oceans is currently researching other possible agricultural outlets for the organic waste, i.e. fertilizers and soil composting. If no alternative outlet can be finalized or continued, wastes will be transported to the Juniper Ridge Landfill in Old Town, Maine, or another facility licensed to accept it.

A table of expected types and volumes of waste to be generated at full build-out is included below. We have also included commitment letters from Pine Tree Waste and Agri-Cycle Energy for review.

Expected Solid Waste Generation:

Type	Quantity
MSW:	72 tons per year
Site Clearing:	N/A
Construction & Demolition Debris:	60 CY per day
Special Waste:	TBD
Operational Waste:	
• Sludge	25 mT per day (wet @30% dry matter)
• Salmon Processing	25 mT per week
• Salmon Mortality	400 mT per year (at 10,000 mT production level)
• Universal Waste	2 CY per week

PINE TREE
WASTE SERVICES

May 1, 2019

CES, Inc
465 South Main St
Brewer ME 04412
Attn: Toby Michaud

Re: Capabilities Statement – Whole Oceans Aquaculture, Belfast ME

Dear Mr. Michaud,

This letter is to confirm that Pine Tree Waste Services located in Hermon, ME has the capabilities to pick up, truck, and dispose of all volumes of Construction and Demolition Debris generated by the proposed construction at the Whole Oceans Aquaculture facility located in Bucksport, ME. These materials can be disposed of at the Juniper Ridge Secured Landfill Facility located in West Old Town, ME.

Pine Tree Waste Services can also transport all anticipated volumes of non-hazardous MSW (Municipal Solid Waste) to the Penobscot Energy Recovery Corporation facility located in Orrington, ME (anticipated 72 Tons Annually). We are also prepared to handle all amounts of recycled products that may be generated from this development, as well Universal Waste and Land Clearing Debris.

This letter is not a quote for services. Rather it is a statement of capabilities. The sole purpose of this letter is to communicate the willingness and capabilities that Pine Tree Waste Services has towards providing this services as requested.

Please feel free to contact me with any future requests. I can be reached at (207) 310-0509.

Sincerely,

Adam Graham
Accounts Manager
Pine Tree Waste Services

June 14, 2019

Jason Mitchell
Whole Oceans
PO Box 7561
Portland, Maine 04112

Letter of Intent – Agri-Cycle

The Scarborough-based organics hauling company, Agri-Cycle, and its sister anaerobic digestion facility - Exeter Agri-Energy (EAE) in Exeter, Maine – together have the necessary resources to manage all transportation and processing of organic waste streams to be generated by the Whole Oceans Atlantic salmon recirculating aquaculture system facility in Bucksport, Maine. EAE's close proximity to the new facility, in addition to its vast network of digestion partners across New England, make it a natural partner to efficiently and responsibly manage the facility's anticipated annual organic waste volumes.

EAE was commissioned in late 2011 and has experienced unparalleled production and reliability throughout the Northeast. EAE is based at Stonyvale Farms, a fifth-generation, family-owned operation that manages over 3,500 acres of land base on which the farm and digesters are co-located. Commercial food waste and other organic waste streams fueling the facility are exclusively supplied by Agri-Cycle and the renewable power is exported to the ISO New England grid system under a 20-year, fixed-rate power purchase agreement with Emera Maine.

EAE is one of the premier dairy-based biogas plants in the nation, utilizing proven technologies from CH-Four Biogas and Martin Energy Group. The 3-megawatt facility is capable of processing up to 100,000 tons per year of organic waste with additional bi-products of animal bedding and nutrient-rich liquid fertilizer recycled for farmland application. The anaerobic digestion system is anchored by three vessels operating at approximately 100 F and totaling 3MM gallons of treatment capacity.

Since its inception in 2012, Agri-Cycle - our logistics and hauling company - has rapidly expanded its collection capabilities across New England and has since become the region's largest organics hauling and AD processing solution. The company operates a variety of collection assets designed to efficiently move commercial organic waste streams from hundreds of client locations in ME, MA, NH, VT, and NY to our host digester in Exeter, as well as to a number of partner digesters across the region. Furthermore,

Agri-Cycle is committed to carrying out its mission of converting organic wastes into renewable energy using the most environmentally responsible management practices available to the industry.

This integrated network of personnel, technology, and equipment has enabled the company to scale exponentially using logistical efficiencies as the primary catalyst. Relying on EAE as the insurance outlet for all volume, the result is a reliable, interconnected service offering the following key attributes which are unmatched by any other provider in the Northeast:

- Collection – existing routes covering ME, NH, VT, MA, and NY
    - (15) rear-load packer and rendering vehicles customized for organics collection
    - (10) tractor trailers supporting long haul activities
    - (6) 60-100 yard dump trailers to move 30-ton max payloads
    - (4) 9,000-gallon vacuum tankers supporting liquid organic waste accounts

- Transfer – (5) material aggregation points across the Northeast:
    - Portland, Maine
    - York, Maine
    - Westborough, Massachusetts
    - Charlestown, Massachusetts
    - Springfield, Vermont

- Processing – food waste de-packaging operations:
    - Exeter Agri-Energy - Exeter, Maine
    - EL Harvey & Sons - Westborough, Massachusetts
    - Waste Management – Charlestown, Massachusetts

- Disposal Partners – existing relationships with digestion facilities in five states and Canada:
    - Exeter Agri-Energy – Exeter, Maine
    - Laforge Bioenvironmental – Grand Falls, New Brunswick
    - Vanguard Renewables – (3) locations in Rutland, Haverhill, and Hadley, Massachusetts
    - Lewiston Auburn Pollution Control Authority – Lewiston, Maine
    - Waste Management, Charlestown, Massachusetts

Client relationships throughout the region with exceptional organizations such as Hannaford, Wal-Mart, Patriot Place, Massachusetts General Hospital, Colby College, Husson University, Unity College, Whole Foods, Trader Joe's, Wellesley College, Big Y, Amazon, Simon Malls, Jones Lang LaSalle, Fidelity, Jackson Labs, Maine General Medical Center, Boston Seaport Hotel, Sysco, Kerry Coffee, E.L. Harvey, Newport Biodiesel, and Tyson Foods further demonstrate the positive reputation and comprehensive service offering deployed by Agri-Cycle.

Please check out our website that outlines our company and highlights our services offerings. www.agricycleenergy.com We have also included the following below:

- Process overview of Anaerobic Digestion
- Photos of the EAE facility and Stonyvale Farm
- Photos of Agri-Cycle's collection fleet

AGRI-CYCLE

What happens to the waste?

Food waste is saved in separate bins by area businesses, reducing waste discarded in landfills.

Bins are collected regularly and transported to a processing facility.

Food waste is processed through a depackager, and then mixed with manure inside the anaerobic digester.

Microorganisms reproduce by feeding on the organic matter in the anaerobic digester, creating biogas.

Biogas becomes fuel for the system, a combined heat and power unit.

Excess electricity is sold back to the grid, reducing fossil fuel consumption and CO2 emissions.

A bio-separator recovers solid material for use as animal bedding or a compost product.

A bio-separator recovers the virtually odorless liquid material for use as natural cropland fertilizer, reducing the need for petroleum-based chemicals

Cow manure is collected and pumped into the anaerobic digester.

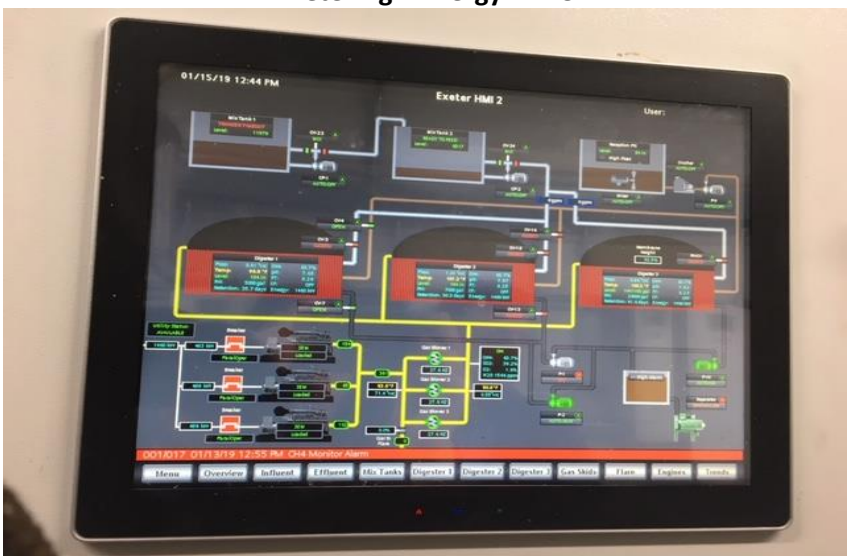
Anaerobic Digestion

can reduce landfill use, save fuel, create energy and produce valuable farm products.

Exeter Agri-Energy & Stonyvale Farm

Exeter Agri-Energy - Plant Overview

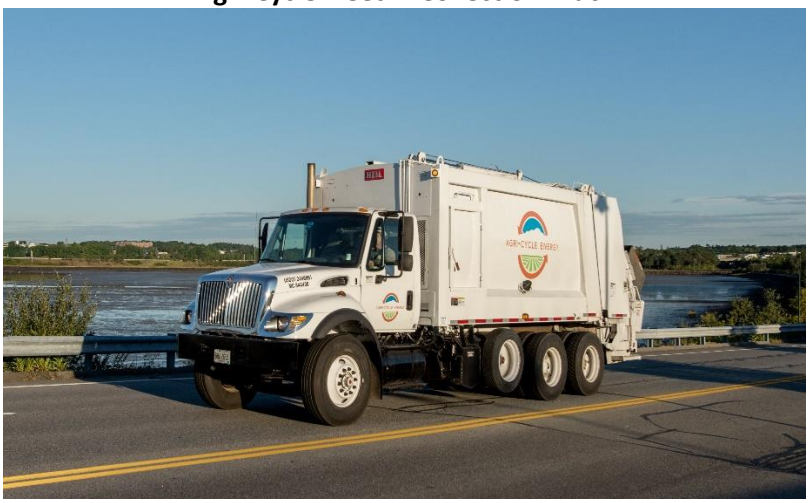
Exeter Agri-Energy – PLC



Agri-Cycle Fleet – Dump Trailer

Agri-Cycle Fleet – 8,500 gallon vacuum tanker

Agri-Cycle Fleet – Collection Truck



Agri-Cycle and EAE are prepared to leverage their many resources to collect and process the waste streams as Whole Oceans scales its operation to maximum production capacity. Agri-Cycle and EAE leadership will work with Whole Oceans in developing a plan for managing and processing its waste streams of sludge, irone slough, salmon processing solids (heads, guts, mortalities, etc.), and salmon processing grease (fat trap) at maximum production capacity.

Please feel free to contact us with any questions.

Sincerely,

Daniel J. Bell
Agri-Cycle
Partner / General Manager
(207) 671-3642
dan@agricycleenergy.com

PINE TREE
WASTE SERVICES

May 1, 2019

CES, Inc
465 South Main St
Brewer ME 04412
Attn: Toby Michaud

Re: Capabilities Statement – Whole Oceans Aquaculture, Belfast ME

Dear Mr. Michaud,

This letter is to confirm that Pine Tree Waste Services located in Hermon, ME has the capabilities to pick up, truck, and dispose of all volumes of Construction and Demolition Debris generated by the proposed construction at the Whole Oceans Aquaculture facility located in Bucksport, ME. Volume estimates are 60 CY per Day. These materials can be disposed of at the Juniper Ridge Secured Landfill Facility located in West Old Town, ME.

Pine Tree Waste Services can transport all anticipated volumes of non-hazardous MSW (Municipal Solid Waste) to the Penobscot Energy Recovery Corporation facility located in Orrington, ME (anticipated 72 Tons Annually). Pine Tree Waste also has the capacity to haul 25 mT per day of sludge and 400mT per year of Salmon mortality. Disposal of the sludge and salmon mortality are subject any required testing that may be required by the Maine DEP, to determine acceptance of said material at either Hawk Ridge Compost Facility in Unity or Juniper Ridge Landfill in Old Town. Disposal at either facility is not guaranteed until required testing is complete and material is approved by the appropriate parties. We are also prepared to handle all amounts of recycled products that may be generated from this development, as well Universal Waste and Land Clearing Debris.

This letter is not a quote for services. Rather it is a statement of capabilities. The sole purpose of this letter is to communicate the willingness and capabilities that Pine Tree Waste Services has towards providing this services as requested.

Please feel free to contact me with any future requests. I can be reached at (207) 310-0509.

Sincerely,

Adam Graham
Accounts Manager
Pine Tree Waste Services

SECTION 19

FLOODING

There is a small area on the east side of Route 15, within the Whole Oceans property, that is mapped as a Zone A floodplain on the attached FEMA Flood Insurance Rate Map (Number 230065, Panel 0683 D). As with the original Site Location of Development Act permit, no work or alterations are proposed within a mapped flood zone; therefore, this proposed facility will not cause an unreasonable amount or risk of flooding to any structure.

Map Projection:
Universal Transverse Mercator Zone 19N; North American Datum 1983; Western Hemisphere; Vertical Datum: NAVD 88

1 inch = 500 feet

0 500 1,000

0 125 250

FEMA

National Flood Insurance Program

NATIONAL FLOOD INSURANCE PROGRAM

FLOOD INSURANCE RATE MAP

HANCOCK COUNTY, ME
All Jurisdictions

PANEL **0683** OF **1552**

FEMA

Panel Contains:

COMMUNITY	NUMBER	PANEL	SUFFIX
BUCKSPORT, TOWN OF	230065	0683	D
VERONA ISLAND, TOWN OF	230300	0683	D

VERSION NUMBER
2.3.2.1

MAP NUMBER
23009C0683D

EFFECTIVE DATE
July 20, 2016

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

SECTION 20

BLASTING

The Earthwork Phase of the project will require blasting to achieve grading elevations for building foundations and footings. Additional blasting is expected for the North Grow-Out Building Phase as well as the Ancillary Building Phase (Buildings 2&3). Although a specific contractor has not been selected to perform the blasting for this project, it is understood by Whole Oceans and their technical team that the blasting contractor will be required to prepare a blasting plan specific to the project site in accordance with Title 38 M.R.S. § 490-Z (14).

SECTION 21

AIR EMISSIONS

Whole Oceans plans to construct a power generation facility adjacent to the Freshwater Building and the existing Central Maine Power Co. substation as part of the Aquaculture Development Phase. Emergency power generators will be required to ensure consistent power to the aquaculture systems. At this point it is anticipated that three (3), 4MW diesel powered generators will be located on the property at full build-out. Each and all of these units will require an air emissions license from the Maine Department of Environmental Protection. Whole Oceans is currently preparing an air emissions license application for the generators and expects the review and eventual approval of that license to be concurrent with, if not ahead of, the review of this SLODA Permit application.

Fugitive dust control measures will be implemented throughout the construction phases that will minimize the transportation of dust off the property at any given time. Permanent stabilization of the site will occur as each phase is completed. This will include paving accessways and maneuvering areas and established vigorous vegetation in other developed areas. It is expected that a combination of seed and mulch products will be used to form a semi-permanent stabilized surface on disturbed areas that will be part of future phases. See the erosion control measures within Section 14 for more details.

Blasting, crushing and processing for rock will occur on the site. Whole Oceans and its technical team are aware that the crushing equipment must be properly licensed to operate on the site. This licensing will be the responsibility of the equipment owner/operator and will be a condition of their contract to work on the project.

Traffic to and from the site is expected to be less than that generated by the prior Mill use of the property and will not significantly affect air quality.

As a result of these steps, the project will not have an unreasonable adverse effect on ambient air quality.

SECTION 22

ODORS

No noticeable odors are expected to be generated by the Whole Oceans facility. Typically, land-based aquaculture facilities store organic/biological wastes in airtight and/or cooled containers that are transported off-site for disposal. Organic/biological waste products from the Whole Oceans site will be removed from the site by a third party and used to produce agricultural beneficial products, biofuel, and/or electricity. If it becomes unfeasible to recycle this waste, it will be deposited in an authorized landfill. Please see the Solid Waste Section (Section 18) for more information.

Organic waste products that could potentially produce odors may include fish waste, incident mortality, degraded food, fish processing, and solids from the wastewater treatment system (sludge).

- Fish waste and incident mortality odors are minimized by routine cleaning of the tanks and equipment and continuous treatment of the water to remove fish waste. Dead fish will be removed from the culture tanks on a regular basis, mechanically ground up and mixed with an acid (e.g. Formic acid) to create a stable liquid silage that is then stored on site until pick up.
- Odors from degraded food will be mitigated by proper food inventory management, storing the food in dry environments and using the first-in / first-out system to minimize storage time.
- During fish processing, biological waste odor is minimized by an enclosed system and chemical introduction into the fish refuse. Refuse is also moved in a timely manner so that odors are not allowed to build up.
- Sludge from the wastewater treatment system will be isolated in an enclosed facility and removed on a regular basis.

In combination, these steps will ensure the adequate control of potentially offensive odors.

SECTION 23

WATER VAPOR

The aquaculture project involves a recirculating aquaculture system (RAS), which reduces the amount of makeup water required and minimizes large scale water vapor export. There are no sources of large water vapor emission associated with this project, therefore this project will not cause an unreasonable alteration of climate.

SECTION 24

SUNLIGHT

The proposed buildings and infrastructure for this facility will not reach the building heights of the past use given the current proximity of other buildings on abutting properties; therefore, this project will not block access to direct sunlight to abutting structures.

SECTION 25

NOTICES

Enclosed in this section is the *Notice of Intent to File* as Published in the Bangor Daily News. Abutters to the project area are included in this section.

CES INC

WHOLE OCEANS, LLC
BUCKSPORT, MAINE

ABUTTER'S LIST

MAP	LOT	OWNER	MAILING ADDRESS
01	05 08 87 88	Bucksport Mill LLC	2 River Road, Bucksport, Maine 04416
36	05	Bucksport Mill LLC	2 River Road, Bucksport, Maine 04416
01	10-02	Bucksport Generation LLC	2 River Road, Bucksport, Maine 04416
01	10-01 87-01	Bangor Gas Company	P.O. Box 980, Bangor, Maine 04402-0980
01	11 11-01 12 13	Central Maine Power Co. C/O Avangrid Mgmt. Co.	One City Center – 5th Floor Portland, Maine 04101
36	06	Central Maine Power Co. C/O Avangrid Mgmt Co.	One City Center – 5th Floor Portland, Maine 04101
01	14 15	Penobscot Bay Terminals C/O Bob Kelly	Drawer CC, Bucksport, Maine 04416
01	16	Dead River Company	P.O. Box 1429, Bucksport, Maine 04416
01	17	Webber Tanks, Inc. C/O Bob Kelly	Drawer CC, Bucksport, Maine 04416
01	89	Bucksport United Methodist Church	P.O. Box 1727, Bucksport, Maine 04416
01	91	Grindle, Earl S.	16 Bagley Avenue, Bucksport, Maine 04416
01	92	Corwin, Max/Katherine	18 Bagley Avenue, Bucksport, Maine 04416
01	93	Cole, Jared M./Emily	20 Bagley Avenue, Bucksport, Maine 04416
01	94	Judkins, Richard A.	P.O. Box 172, Bucksport, Maine 04416-172
01	95	Roi, Katherine M	24 Bagley Avenue, Bucksport, Maine 04416
01	96	Urquhart, Benjamin H/Christine	105 Kingswood CT, St. Simmons Island, GA 31522
01	97	Lemire, Anthony/Catherine	P.O. Box 2, Bucksport, Maine 04416
01	98	Scheier, Diane	6 Wenbelle Drive, APT #124, Bucksport, Maine 04416
01	99	Maine Central R.R. C/O Guilford Transp Ind.	1700 Iron Horse Park, N. Billerica, MA 01862
36	04	Phoenix ME Properties, LLC	50 Rocky Shore Drive, Orrington, Maine 04474
37	01	Smith, Clayton	P.O. Box 1661, Bucksport, Maine 04416
37	02	Smith, Donna M.	P.O. Box 1661 Bucksport, Maine 04416
37	04	Sprague International Properties, LLC	185 International Drive, Portsmouth, NH 03801

Legal Notices

PUBLIC NOTICE:
NOTICE OF INTENT TO FILE

Please take notice that Whole Oceans LLC, PO Box 7561, Portland, Maine 04112, 207-747-1400, is intending to file an application with the Maine Department of Environmental Protection pursuant to the Site Location of Development Act under the provisions of 38 M.R.S.A. §§ 481 thru 490 on or about July 1, 2019. The application is for the transfer of a portion of the existing Site Law permit for the property, located at 2 River Road in Bucksport, Maine, and an amendment of that permit for a long-term construction project that will redevelop the site with a new, land-based aquaculture facility.

A request for a public hearing or that the Board of Environmental Protection assume jurisdiction over this application must be received by the Department in writing, no later than 20 days after the application is found by the Department to be complete and is accepted for processing. A public hearing may or may not be held at the discretion of the Commissioner or Board of Environmental Protection. Public comment on the application will be accepted throughout the processing of the application.

The application will be filed for public inspection at the Department of Environmental Protection's office in Bangor during normal working hours. The application will also be available for inspection at the Bucksport Town Office, 50 Main Street, in Bucksport.

Written public comments on the application may be sent to the Department's regional office in Bangor where it is filed for public inspection: MDEP, Eastern Maine Regional Office, 106 Hogan Road, Bangor, Maine 04401.

June 27, 2019

CES INC

WHOLE OCEANS, LLC
BUCKSPORT, MAINE

CERTIFIED MAIL LIST & RECEIPTS
Mailed: June 27, 2019

Bucksport Mill LLC
2 River Road
Bucksport, Maine 04416

Bucksport Generation LLC
2 River Road
Bucksport, Maine 04416

Bangor Gas Company
P.O. Box 980
Bangor, Maine 04402-0980

Central Maine Power Co.
C/O Avangrid Mgmt. Co.
One City Center – 5th Floor
Portland, Maine 04101

Penobscot Bay Terminals
C/O Bob Kelly Drawer CC
Bucksport, Maine 04416

Dead River Company
P.O. Box 1429
Bucksport, Maine 04416

Webber Tanks, Inc.
C/O Bob Kelly Drawer CC
Bucksport, Maine 04416

Bucksport United Methodist Church
P.O. Box 1727
Bucksport, Maine 04416

Earl S. Grindle
16 Bagley Avenue
Bucksport, Maine 04416

Max & Katherine Corwin
18 Bagley Avenue
Bucksport, Maine 04416

CES INC

Jared M. & Emily Cole
20 Bagley Avenue
Bucksport, Maine 04416

Richard A. Judkins
P.O. Box 172
Bucksport, Maine 04416-172

Katherine M. Roi
24 Bagley Avenue
Bucksport, Maine 04416

Benjamin H. & Christine Urquhart
105 Kingswood CT
St. Simmons Island, GA 31522

Anthony & Catherine Lemire
P.O. Box 2
Bucksport, Maine 04416

Diane Scheier
6 Wenbelle Drive, APT #124
Bucksport, Maine 04416

Maine Central R.R.
C/O Guilford Transp Ind.
1700 Iron Horse Park, N. Billerica, MA 01862

Phoenix ME Properties, LLC
50 Rocky Shore Drive
Orrington, Maine 04474

Clayton Smith,
P.O. Box 1661
Bucksport, Maine 04416

Donna M. Smith
P.O. Box 1661
Bucksport, Maine 04416

Sprague International Properties, LLC
185 International Drive
Portsmouth, NH 03801

Town of Bucksport
50 Main Street
Bucksport, Maine 04416

JN: 12340.002

SLODA AMMENDMENT
WHOLE OCEANS, LLC

APPENDIX A

PERMIT BY RULE APPLICATION

04/06/2017

DEPARTMENT OF ENVIRONMENTAL PROTECTION

PERMIT BY RULE NOTIFICATION FORM

(For use with DEP Regulation, Natural Resouces Protection Act- Permit by Rule Standards, Chapter 305)

PLEASE TYPE OR PRINT IN *BLACK INK ONLY*

APPLICANT INFORMATION (Owner)		AGENT INFORMATION (If Applying on Behalf of Owner)	
Name:	Whole Oceans, LLC	**Name:**	CES, Inc. (Attn: Jon Whitten, Jr. PE)
Mailing Address:	P.O. Box 7561	**Mailing Address:**	P.O. Box 639
Town:	Portland	**Town:**	Brewer
State and Zip Code:	ME 04412	**State and Zip Code:**	ME 04412
Daytime Phone #:	207-747-1400	**Daytime Phone #:**	207-989-4824
Email Address:	jmitchell@wholeoceans.com	**Email Address:**	jwhitten@cesincusa.com

PROJECT INFORMATION

Part of a larger project? (check one):	■ Yes ❑ No	**After the Fact? (check one):**	❑ Yes ❑ No	**Project involves work below mean low water? (check one):**	❑ Yes ❑ No	**Name of waterbody:**	Penobscot River
Project Town:	Bucksport	**Project Location (Address):**	River Road			**Map & Lot Number:**	MAP: 1 LOT:10-2, 89
Brief Project Description:	REDEVELOPMENT OF AN EXISTING POND TO MEET CURRENT STORMWATER BMP STANDARDS						
Brief Directions to Site:	OFF ROUTE 15, PROJECT IS APPROXIMATELY 17 MILES SOUTH OF THE ROUTE 15/INTERSTATE 395 INTERSECTION						

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

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

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

<u>NOTIFICATION FORMS CANNOT BE ACCEPTED WITHOUT THE NECESSARY ATTACHMENTS</u>

- ■ ***<u>Attach</u>* all required submissions for the PBR Section(s) checked above. The required submissions for each PBR Section are outlined in Chapter 305 and may differ depending on the Section you are submitting under.**
- ■ ***<u>Attach</u>* a check for the correct fee made payable to: "Treasurer, State of Maine".The current fee for NRPA PBR Notifications can be found at the Department's website: <u>http://www.maine.gov/dep/feesched.pdf</u>**
- ■ ***<u>Attach</u>* a location map that clearly identifies the site (U.S.G.S. topo map, Maine Atlas & Gazetteer, or similar).**
- ■ ***<u>Attach</u>* *Proof of Legal Name* if applicant is a corporation, LLC, or other legal entity. Provide a copy of Secretary of State's *registration information* (available at http://icrs.informe.org/nei-sos-icrs/ICRS?MainPage=x) Individuals and municipalities are <u>not</u> required to provide any proof of identity.**

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

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

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

Signature of Agent or Applicant:		**Date:**	July 1, 2019

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

AUGUSTA DEP	PORTLAND DEP	BANGOR DEP	PRESQUE ISLE DEP
17 STATE HOUSE STATION	312 CANCO ROAD	106 HOGAN ROAD	1235 CENTRAL DRIVE
AUGUSTA, ME 04333-0017	PORTLAND, ME 04103	BANGOR, ME 04401	PRESQUE ISLE, ME 04769
(207)287-7688	(207)822-6300	(207)941-4570	(207)764-0477

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

NATURAL RESOURCES PROTECTION ACT - PERMIT BY RULE NOTIFICATION
WHOLE OCEANS, LLC

NARRATIVE

Whole Oceans, LLC is proposing to build an aquaculture facility on a portion of the former Bucksport Mill parcel in Bucksport, Maine. The site is located on the west side of River Road (Route 15) and is adjacent to the Penobscot River. The site is identified as Map 1 Lots 10-2 and 89 on the Town of Bucksport Tax Map and consists of approximately 104-acres that is currently developed with a woodyard and mill to the west of River Road, and a parking lot east of River Road. The remainder of the parcel is undeveloped.

The proposed aquaculture facility will be constructed on what is mostly the demolished Mill and woodyard. The development is seeking a Site Location of Development Act Planning Permit, for phased construction expecting to take place over an approximate time frame of 10 years. The structures associated with the project include a Freshwater Building, South Growout Building, North Growout Building, Water Treatment and Wastewater Treatment Buildings, as well as a Support Function Building, and several ancillary buildings.

The project intends to utilize the existing stormwater pond that was used by the Mill. The pond does not meet current MaineDEP Chapter 500 standards and is required to be reconstructed. Proposed work within the 75-foot setback of the river will consist of installation of silt fence, construction of the wet pond, filling of the containment area for the southern tank, and site restoration and loam and seed. The 75-foot setback is based on the highest annual tide line that has been defined as the project property line adjacent to the river.

Activities occurring within the 75-foot setback have been minimized to the greatest extent possible given existing limitations. Proper erosion control techniques will be used to minimize erosion and sedimentation transport to the river. Following completion of construction activities, site stabilization will include seeding and mulching of disturbed areas.

SITE LOCATION AND NATURAL RESOURCE PLAN

Refer to the attached Site Location Map and the Natural Resource Plan. The Natural Resource Plan shows the location of the Penobscot River and the proposed activities within the 75-foot setback.

WHOLE OCEANS, LLC
BUCKSPORT, MAINE

Photo No. 1

Photo Date:
June 25, 2019

Site Location:
Whole Oceans, LLC Property
Bucksport, Maine

Description:
View of the existing pond looking west towards the River.

Photo By: KSS

Photo No. 2

Photo Date:
June 25, 2019

Site Location:
Whole Oceans, LLC Property
Bucksport, Maine

Description:
View of existing pond structure.

Photo By: KSS

WHOLE OCEANS, LLC
BUCKSPORT, MAINE

Photo No. 3

Photo Date:
June 25, 2019

Site Location:
Whole Oceans, LLC Property
Bucksport, Maine

Description:
View from within the existing pond basin looking southeasterly towards the CMP substation and existing water tanks.

Photo By: KSS

Photo No. 4

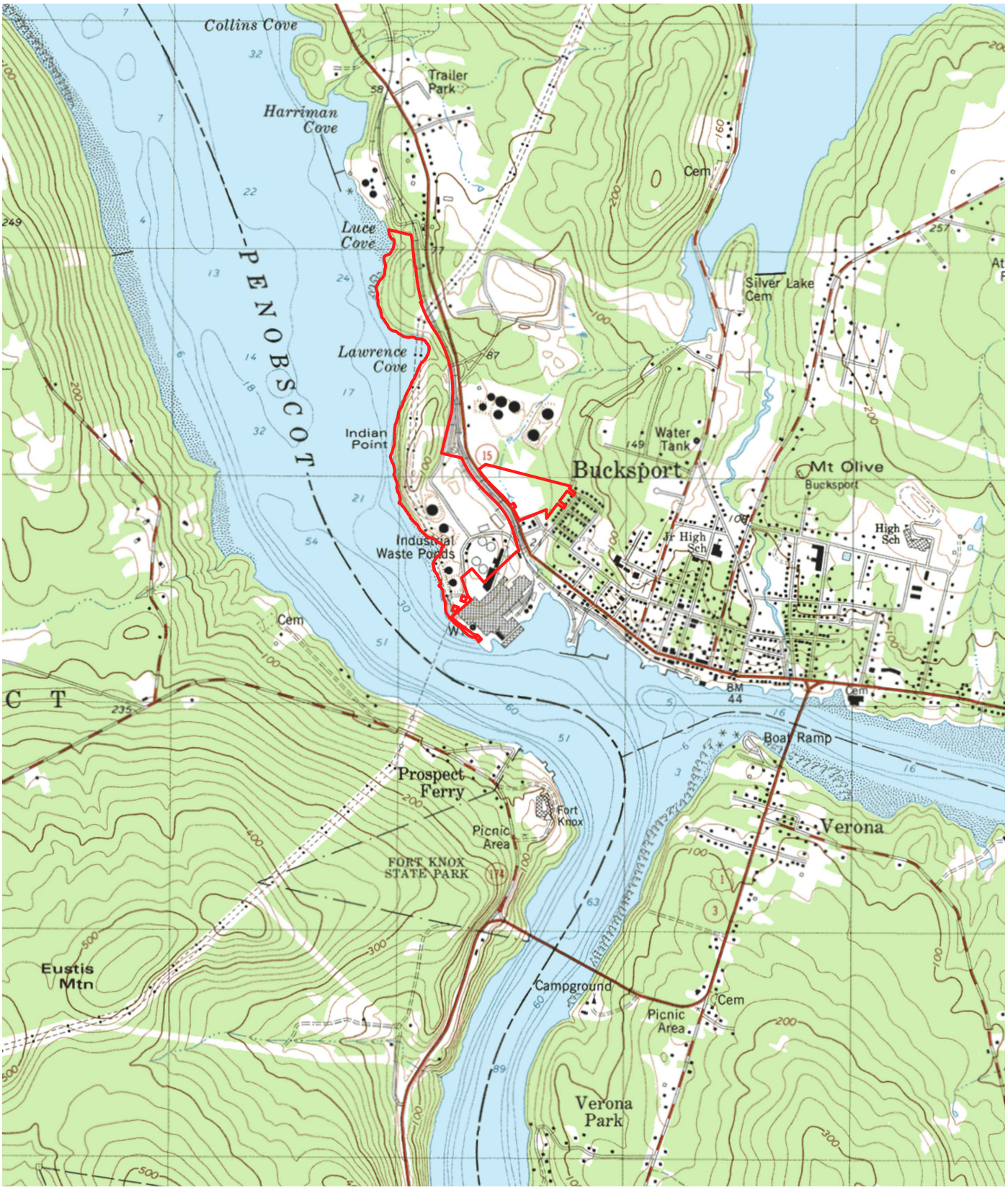
Photo Date:
June 25, 2019

Site Location:
Whole Oceans, LLC Property
Bucksport, Maine

Description:
View from the catwalk above the pond berm looking towards the Penobscot River.

Photo By: KSS

Terrain Navigator.© Maptech 800-627-7236

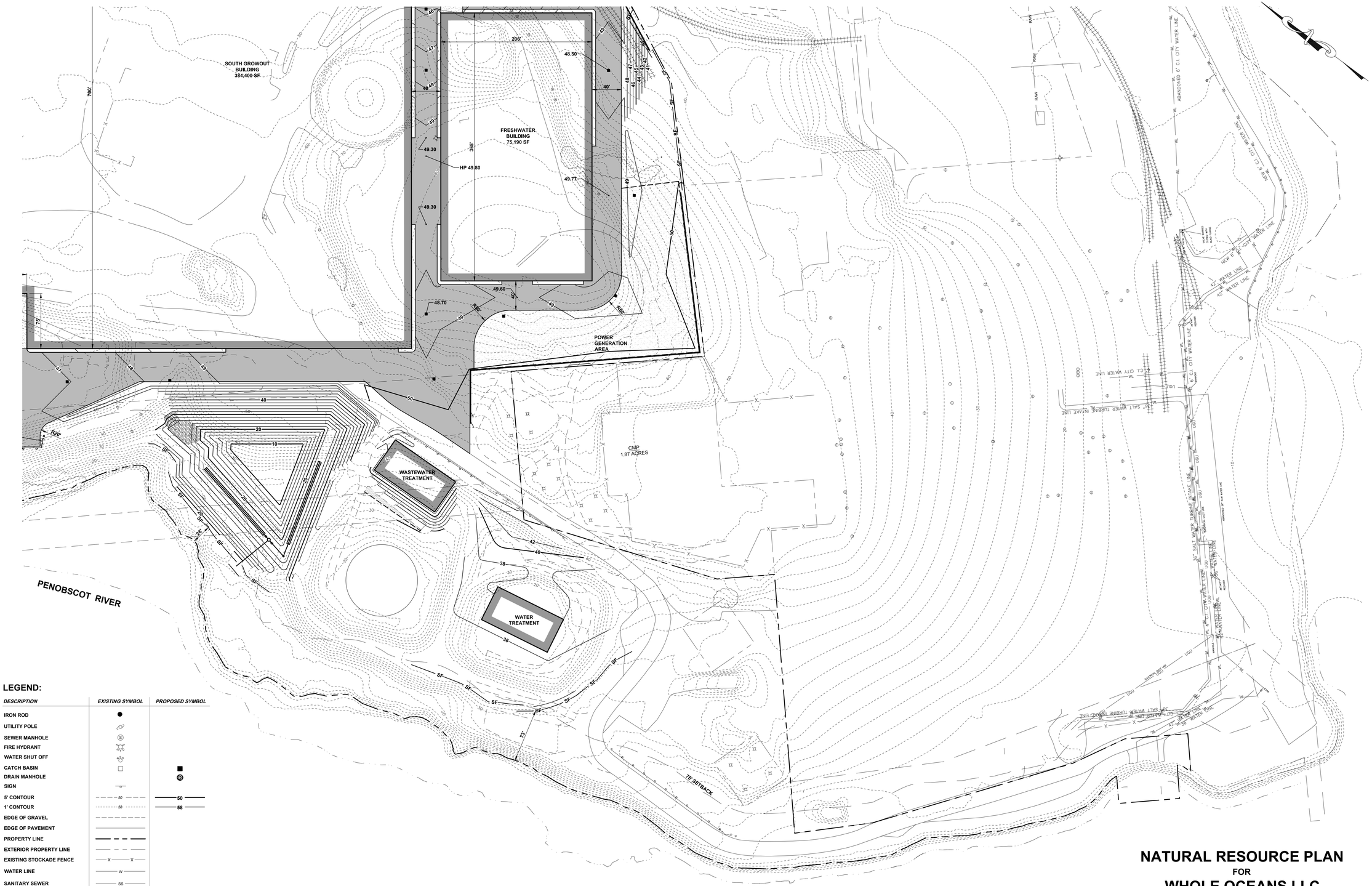


SOURCE:
U.S.G.S. TOPOGRAPHIC QUADRANGLE
BUCKSPORT
@ 1:24,000

CES INC

WHOLE OCEANS LLC
BUCKSPORT, MAINE
LOCATION MAP

2019-04-10
12340.002



LEGEND:

DESCRIPTION	EXISTING SYMBOL	PROPOSED SYMBOL
IRON ROD	●	
UTILITY POLE		
SEWER MANHOLE	Ⓢ	
FIRE HYDRANT		
WATER SHUT OFF		
CATCH BASIN	□	■
DRAIN MANHOLE		Ⓓ
SIGN		
5' CONTOUR	50	50
1' CONTOUR	58	58
EDGE OF GRAVEL		
EDGE OF PAVEMENT		
PROPERTY LINE		
EXTERIOR PROPERTY LINE		
EXISTING STOCKADE FENCE	X X	
WATER LINE	W	
SANITARY SEWER	SS	
OVERHEAD UTILITY	OHU	
STORM DRAIN	SD	SD
SILT FENCE		SF
TREELINE		
PAVEMENT		
75' SETBACK		

NATURAL RESOURCE PLAN
FOR
WHOLE OCEANS LLC
BUCKSPORT, MAINE

GRAPHIC SCALE

60 0 30 60 120 240

(IN FEET)
1 inch = 60 ft.

Brewer
46 Washington Street
PO Box 638
Brewer, ME
T:207-989-4824
F:207-989-4881

Presque Isle
4 South Main Street
PO Box 627
Presque Isle, ME
T:207-764-8412
F:207-764-8414

Waterville
44 Main Street
Suite 204
Waterville, ME
T:207-680-2202
F:207-680-2204

Machias
80 Water Street
PO Box 587
Machias, ME
T:207-255-8370
F:207-255-8367

Bar Harbor
105 Otis Highway 102
Bar Harbor, ME
T:207-288-0587
F:207-288-6888

Lewiston
44 Lisbon Street
Lewiston, ME
T:207-795-6009
F:207-795-6168

CES INC
Engineers • Environmental Scientists • Surveyors

PROJECT TITLE
WHOLE OCEANS LLC
BUCKSPORT, MAINE

SHEET TITLE
NATURAL RESOURCE PLAN

REV.	DESCRIPTION	DATE	DRAWN BY	CHECKED BY
R7				
R6				
R5				
R4				
R3				
R2				
R1				

ISSUE STATUS
NOT FOR CONSTRUCTION

SCALE	1"=60'
DATE	2019-05-22
DRAWN BY	WAB
CHECKED BY	CTM
DESIGNED BY	
APPROVED BY	
JOB NUMBER	12340.002
DRAWING NUMBER	1

P:\12340-WHOLE OCEANS, LLC\002-BUCKSPORT PARK ORDERS-NET\02-CAD_DRAWINGS\CIVIL\DISCH_DWGS\12340.002-NRPA.DWG, 6/28/2019 11:42 AM

APPENDIX B

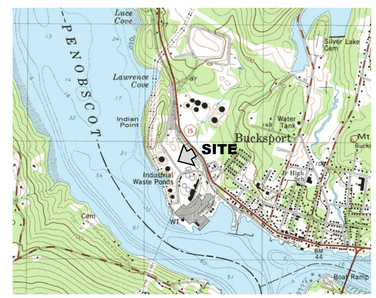
CIVIL PLAN SET

G0 Cover Sheet
C001 Notes and Legend Plan
C100 Overall Site Plan
C101 Earthwork Phase Plan
C102 Aquaculture Phase Layout Plan
C103 Aquaculture Phase Grading Plan
C104 Aquaculture Phase Utility Plan
C105 Ancillary Building Phase Layout Plan
C106 Ancillary Building Phase Grading / Utility Plan
C501 Site Details
C502 Site Details
C503 Site Details
C701 Stormwater Treatment Plan

WHOLE OCEANS LLC

BUCKSPORT, MAINE

WHOLE OCEANS™
MAINE SUSTAINABLE SALMON



LOCATION MAP: USGS QUADRANGLE: BUCKSPORT
SCALE: 1"=2000'
MAPTECH® USGS TOPOGRAPHIC SERIES™,
©MAPTECH®, INC. 978-933-3000
WWW.MAPTECH.COM/TOPO

PROJECT LOCATION

JULY 2019

STATE OF MAINE
JOHN H. WHITTEN, JR.
No. 10414
07/02/2019
LICENSED
PROFESSIONAL ENGINEER

INDEX OF DRAWINGS

G0 COVER SHEET

C001 NOTES AND LEGEND PLAN

CIVIL

C100 OVERALL SITE PLAN
C101 EARTHWORK PHASE PLAN
C102 AQUACULTURE PHASE LAYOUT PLAN
C103 AQUACULTURE PHASE GRADING PLAN
C104 AQUACULTURE PHASE UTILITY PLAN
C105 ANCILLARY BUILDING PHASE LAYOUT PLAN
C106 ANCILLARY BUILDING PHASE GRADING / UTILITY PLAN

C501 SITE DETAILS
C502 SITE DETAILS
C503 SITE DETAILS

C701 STORMWATER TREATMENT PLAN

CES INC
ENGINEERS • ENVIRONMENTAL SCIENTISTS • SURVEYORS
465 So. Main Street, P.O. Box 639, Brewer, ME 04412 Tel: 207-989-4824 Fax 207-989-4881
1366 State Highway 102, Bar Harbor, ME 04609 Tel: 207-288-0587 Fax 207-288-0588
61 Dublin Street. P.O. Box 587, Machias, ME 04654 Tel: 207-255-3270 Fax 207-255-8367
549 Main Street, P.O. Box 827, Presque Isle, ME 04769 Tel: 207-764-8412 Fax: 207-764-8414
44 Main Street, Suite 204, Waterville, ME 04903 Tel: 207-680-2202 Fax: 207-680-2204
640 Main Street, Lewiston, ME 04240 Tel: 207-795-6009 Fax: 207-795-6128

GENERAL NOTES:

1. THE APPLICANT AND RECORD OWNER OF THE PROJECT PROPERTY IS WHOLE OCEANS, LLC, WHOSE ADDRESS IS PO BOX 7561, PORTLAND, ME 04112, PER DEED RECORDED IN THE HANCOCK COUNTY REGISTRY OF DEEDS, BOOK 6951, PAGE 556.

2. THE PROPERTY IS SHOWN AS LOTS 01, 02, 03, 10-2, 11 & 87 ON THE TOWN OF BUCKSPORT ASSESSOR'S TAX MAP 1 AND IS LOCATED IN THE INDUSTRY DEVELOPMENT (ID) ZONING DISTRICT AND THE INDUSTRY DEVELOPMENT SHORELAND OVERLAY (IDO) .

3. LAND AREA:

PARCEL 1-LOT 2:	89.30 AC.
PARCEL 1-LOT 2A:	2.69 AC. (LAND BETWEEN R.R. AND RTE. 15)
PARCEL 2-LOT 1:	11.90 AC. .
TOTAL AREA:	103.89 AC.±

4. SPACE AND BULK INFORMATION FOR ID AND IDO ZONES:

	REQUIRED
MIN. LOT AREA:	40,000 S.F.
MIN. STREET FRONTAGE	100' (PER PRINCIPAL STRUCTURE)
MIN. SHORELINE FRONTAGE	200' (PER PRINCIPAL STRUCTURE)
MIN. FRONT YARD	50'
MIN. SIDE AND REAR YARD	10' (50' ABUTTING VIL ZONE)
MIN. SHORELINE SETBACK	25'
MAX. STRUCTURE HEIGHT	100' (HIGHER IF LEGALLY EXISTING)
MAX. LOT COVERAGE	NO MAX. (80% IN IDO)

5. THE PURPOSE OF THIS PLAN IS TO DEPICT THE OVERALL DEVELOPMENT SCENARIO SUPPORTING AN AQUACULTURE FACILITY, PROPOSED BY THE APPLICANT, FOR A LOCAL AND STATE PERMITTING. THE DEVELOPMENT IS TO TAKE PLACE IN PHASES, OVER A NUMBER OF YEARS.

6. THIS PROJECT IS AND MAY BE SUBJECT TO EXISTING AND PROPOSED PERMITTING FROM THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION (MDEP) AND THE TOWN OF BUCKSPORT (BUCKSPORT), SUCH AS:
   - BUCKSPORT SITE PLAN PERMIT
   - MDEP SITE LOCATION OF DEVELOPMENT ACT PERMIT
   - MDEP NATURAL RESOURCES PROTECTION ACT (NRPA) PERMIT BY RULE
   - MDEP AIR EMISSIONS LICENSE
   - MDEP VOLUNTARY RESPONSE ACTION PROGRAM (VRAP)
   - MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM (MEPDES) PERMIT #ME0037478
   - MAINE WASTE DISCHARGE LICENSE (WDL) #W009190-6F-A-N
   - AND OTHERS.

7. BOUNDARY AND TOPOGRAPHIC SURVEY INFORMATION PROVIDED BY PLISGA & DAY LAND SURVEYORS, 72 MAIN STREET, BANGOR, ME 04401. BOUNDARY INFORMATION BASED ON AN AMENDED SUBDIVISION PLAN FOR BUCKSPORT MILL, LLC/BUCKSPORT GENERATION, LLC RECORDED ON APRIL 8, 2019 IN HANCOCK COUNTY REGISTRY OF DEEDS MAPFILE 46, NO. 11. TOPOGRAPHIC INFORMATION BASED ON LIDAR INFORMATION.

8. EXISTING CONDITIONS MAY VARY BASED ON RECENT DEMOLITION ACTIVITIES.

9. THIS PROJECT IS TO BE CONSTRUCTED IN PHASES OVER AN EXPECTED 10-YEAR TIME PERIOD. EACH PHASE OF DEVELOPMENT IS TO BE INDEPENDENT OF THE OTHERS AND MAY NOT START CONSTRUCTION UNTIL WRITTEN APPROVAL IS GRANTED BY MDEP, THROUGH A CONDITION COMPLIANCE AND/OR PERMIT MODIFICATION OR AMENDMENT PROCESS.

GENERAL CONSTRUCTION NOTES

1. THE UTILITY LOCATIONS SHOWN ARE APPROXIMATE AND REQUIRE FIELD VERIFICATION BY THE CONTRACTOR.
2. CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITY WITH UTILITY COMPANIES, AND EMERGENCY SERVICES.
3. TEMPORARY BENCH MARKS (TBM'S) ARE GENERALLY SPIKES DRIVEN INTO THE BASE OF POWER POLES OR HYDRANT VALVE NUTS.
4. PROPERLY PROTECT AND DO NOT DISTURB PROPERTY IRONS AND MONUMENTS. IF DISTURBED, THE PROPERTY MONUMENT WILL BE RESET AT THE CONTRACTOR'S EXPENSE, BY A REGISTERED LAND SURVEYOR APPROVED BY THE ENGINEER.
5. ALL WASTEWATER FLOWS IN EXISTING SEWERS MUST BE MAINTAINED DURING CONSTRUCTION. COST IS INCIDENTAL TO ALL PAY ITEMS.
6. ALL WATER SERVICES DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE OWNER.
7. IF UNEXPECTED HAZARDOUS WASTE OR MATERIALS CONTAINING HAZARDOUS WASTE ARE ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY CEASE WORK AND CONTACT THE OWNER, ENGINEER, CONTRACTING OFFICER, AND DEP. WHEN A DEP APPROVED ACTION PLAN IS DETERMINED, WORK SHALL CONTINUE, AND ALL HAZARDOUS WASTE AND MATERIALS CONTAINING HAZARDOUS WASTE SHALL BE DISPOSED OF IN COMPLIANCE WITH THE APPROVED ACTION PLAN AND ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS.
8. MOVEABLE TRENCH BOXES SHALL BE USED ON OPEN TRENCH EXCAVATIONS.
9. THE CONTRACTOR SHALL PROVIDE ALL LABOR, EQUIPMENT, AND MATERIALS AS REQUIRED TO PERFORM THE WORK AS INDICATED ON THE DRAWINGS AND IN THE SPECIFICATIONS. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE APPLICABLE FEDERAL, STATE AND LOCAL CODES.
10. THE WORK SHALL INCORPORATE EROSION CONTROL MEASURES WHICH ARE COMPLIANT WITH THE LATEST VERSION OF "MAINE EROSION AND SEDIMENT CONTROL HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES".
11. THE LOCATION, TYPE AND SIZE OF EXISTING PIPES, DUCTS, CONDUITS AND OTHER UNDERGROUND STRUCTURES SHOWN ON THE DRAWINGS ARE NOT WARRANTED TO BE EXACT NOR IS IT WARRANTED THAT ALL UNDERGROUND STRUCTURES ARE SHOWN. CONTRACTOR SHALL FIELD VERIFY ALL UTILITY LOCATIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION. DEPTH OF SERVICES ARE UNKNOWN AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR. EXCAVATING TEST PITS AS NECESSARY TO VERIFY UTILITY LOCATIONS AND DEPTHS SHALL BE INCIDENTAL TO THIS PROJECT.
12. THE CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION WITH THE UTILITY COMPANIES, DIG SAFE, AND EMERGENCY SERVICES WHERE APPLICABLE. CONTRACTOR SHALL NOTIFY ALL UTILITIES PRIOR TO COMMENCING WORK TO ALLOW SUFFICIENT TIME TO LOCATE AND MARK THE LOCATION OF ALL BURIED UTILITIES. CONTRACTOR SHALL ALSO CONTACT "DIG SAFE", TELEPHONE NO 800-225-4977. REPAIR OF ANY DAMAGED UTILITY WILL BE INCIDENTAL TO THIS PROJECT.
13. INSULATE ALL WATER MAINS WITH LESS THAN 5.0 FEET OF COVER, OR WHERE DIRECTED BY THE ENGINEER. RIGID INSULATION REQUIRED: CLOSED-CELL RIGID FOAMED POLYSTYRENE, EQUAL TO "STYROFOAM" HI-60, BY DOW CHEMICAL. 2" THICK BY 4' WIDE, UNLESS OTHERWISE NOTED.
14. CONTRACTOR SHALL MAINTAIN TRAFFIC IN A SAFE MANNER AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR SHALL MAKE EVERY EFFORT TO MAINTAIN CONTINUOUS TRAFFIC FLOW DURING CONSTRUCTION. THE ROADS SHALL NOT BE CLOSED TO TRAFFIC WITHOUT PERMISSION FROM THE OWNER.
15. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT EQUIPMENT FLUIDS FROM REACHING ANY WATER COURSE. ANY INADVERTENT FLUID DISCHARGES SHALL BE IMMEDIATELY CLEANED FROM THE WATERS USING WHATEVER MEANS NECESSARY, AS DETERMINED BY THE ENGINEER.
16. RESTORE ALL AREAS OUTSIDE OF PROPERTY DISTURBED BY CONTRACTOR'S OPERATIONS TO ORIGINAL CONDITION (GRAVEL, PAVEMENT, GRASS, ETC.) UNLESS NOTED OTHERWISE ON PLANS. RESTORATION OF GRAVEL ROAD AND DRIVEWAY SURFACES AND LAWNS DAMAGED BY CONTRACTOR SHALL BE INCIDENTAL TO THE PROJECT.
17. RESTRICT ACCESS TO SITE THROUGH THE USE OF APPROPRIATE SIGNAGE, GATES, BARRIERS, FENCES, ETC. SITE SHALL BE LEFT WITH APPROPRIATE SAFETY MEASURES IN PLACE DURING NON-WORKING HOURS. NO TRENCH SHALL BE LEFT OPEN DURING NON-WORKING HOURS. SITE SAFETY IS THE RESPONSIBILITY OF CONTRACTOR, DURING BOTH WORKING AND NON-WORKING HOURS.
18. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY CONSTRUCTION PERMITS. PERMIT APPLICATIONS SHALL BE SUBMITTED WITH ADEQUATE TIME SO AS NOT TO DELAY CONSTRUCTION.
19. CONTRACTOR SHALL BE RESPONSIBLE FOR THE LAYOUT OF ALL PROPOSED WORK AS SHOWN ON DRAWINGS.
20. THE CONTRACTOR SHALL PROVIDE A SEDIMENT BASIN FOR ALL WATER PUMPED FROM EXCAVATIONS. BASIN SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE "MAINE EROSION AND SEDIMENT HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES". THE CONTRACTOR SHALL SUBMIT FOR REVIEW/APPROVAL PRIOR TO BEGINNING ANY PROJECT WORK.
21. BLASTING OPERATIONS SUBJECT TO TITLE 38 M.R.S. SECTION 490-Z (14).
22. EXCAVATION OF SOIL AND DEMOLITION ACTIVITIES SUBJECT TO A DECLARATION OF ENVIRONMENTAL COVENANT AND SOIL MANAGEMENT PLAN PER WHOLE OCEANS VRAP AGREEMENT WITH DEP.
23. EARTHWORK ACTIVITIES ARE SUBJECT TO A GEOTECHNICAL REPORT PREPARED BY S.W. COLE ENGINEERING, INC. DATED JUNE 28, 2019

GENERAL EROSION CONTROL NOTES

1. ALL SEDIMENTATION AND EROSION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE MAINE EROSION AND SEDIMENTATION CONTROL BEST MANAGEMENT PRACTICES (BMPS), PUBLISHED BY THE BUREAU OF LAND AND WATER QUALITY, MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, LATEST EDITION.
2. SILT FENCE WILL BE INSPECTED, REPLACED AND/OR REPAIRED IMMEDIATELY FOLLOWING ANY SIGNIFICANT RAINFALL OR SNOW MELT OR LOSS OF SERVICEABILITY DUE TO SEDIMENT ACCUMULATION. AT A MINIMUM, ALL EROSION CONTROL DEVICES WILL BE OBSERVED WEEKLY.
3. DURING THE CONSTRUCTION PHASE, INTERCEPTED SEDIMENT WILL BE RETURNED TO CONSTRUCTION SITE.
4. SEDIMENT CONTROL DEVICES SHALL REMAIN IN PLACE AND BE MAINTAINED BY THE CONTRACTOR UNTIL AREAS UPSLOPE ARE STABILIZED BY A SUITABLE GROWTH OF GRASS. ONCE A SUITABLE GROWTH OF GRASS HAS BEEN OBTAINED, ALL TEMPORARY EROSION CONTROL ITEMS SHALL BE REMOVED BY THE CONTRACTOR. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THEY ARE REMOVED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, PREPARED, SEEDED, AND MULCHED IMMEDIATELY.
5. ALL DISTURBED AREAS WILL BE SEEDED WITH 2.5 LBS. RED FESCUE AND 0.5 LBS. RYE GRASS PER 1,000 SQUARE FEET AND MULCHED AT A RATE OF 90 LBS. PER 1,000 SQUARE FEET OR EQUIVALENT APPLICATION OF SEED AND MULCH.
6. A SUITABLE BINDER SUCH AS CURASOL OR TERRTACK WILL BE USED ON THE HAY MULCH FOR WIND CONTROL.
7. IF FINAL SEEDING OF DISTURBED AREAS IS NOT COMPLETED BY SEPTEMBER 15th OF THE YEAR OF CONSTRUCTION, THEN ON THAT DATE THESE AREAS WILL BE GRADED AND SEEDED WITH WINTER RYE AT THE RATE OF 112 POUNDS PER ACRE OR 3 POUNDS PER 1000 SQUARE FEET. THE RYE SEEDING WILL BE PRECEDED BY AN APPLICATION OF 3 TONS OF LIME AND 800 LBS. OF 10-20-20 FERTILIZER OR ITS EQUIVALENT. MULCH WILL BE APPLIED AT A RATE OF 90 POUNDS PER 1000 SQUARE FEET.
8. IF THE RYE SEEDING CANNOT BE COMPLETED BY OCTOBER 1st OR IF THE RYE DOES NOT MAKE ADEQUATE GROWTH BY DECEMBER 1st, THEN ON THOSE DATES, HAY MULCH WILL BE APPLIED AT 150 POUNDS PER 1000 SQUARE FEET.
9. ALL CATCH BASINS ARE TO BE PROTECTED BY STRAW BALE OR SILTFENCE IN ACCORDANCE WITH SECTION B-3 STORM DRAIN INLET PROTECTION OF THE MAINE BMP HANDBOOK. SURROUNDING AREAS CAN BE EXCAVATED OR LEFT LOW AS A SEDIMENT TRAP. CURB INLETS SHALL BE PROTECTED BY GUTTERGATORS, OR APPROVED EQUIVALENT.
10. INTERIOR SILT FENCES ALONG CONTOUR DIVIDING FLAT AND STEEP SLOPES, AREAS WITH DIFFERENT DISTURBANCE SCHEDULES, AROUND TEMPORARY STOCKPILES OR IN OTHER UNSPECIFIED POSSIBLE CIRCUMSTANCES SHOULD BE CONSIDERED BY THE CONTRACTOR. THE INTENT OF SUCH INTERIOR SILT FENCES IS TO LIMIT SEDIMENT TRANSPORT WITHIN THE SITE TOWARD THE PROTECTED CATCH BASIN INLETS TO MINIMIZE SEDIMENT REMOVAL REQUIRED BY THE EROSION CONTROL NOTE 9 PROTECTIONS AND EXTEND LIFE OF SUCH DEVICES.
11. THE CONTRACTOR SHALL PROVIDE A SEDIMENT BASIN FOR ALL WATER PUMPED FROM EXCAVATIONS. BASIN SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE "MAINE EROSION AND SEDIMENT HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES". THE CONTRACTOR SHALL SUBMIT FOR REVIEW/APPROVAL PRIOR TO BEGINNING ANY PROJECT WORK.
12. CONTRACTOR TO PROVIDE SEDIMENT SACKS IN ALL EXISTING BASINS PRIOR TO CONSTRUCTION.
13. MINIMUM EROSION CONTROL MEASURES WILL NEED TO BE IMPLEMENTED AND THE CONTRACTOR WILL BE RESPONSIBLE TO MAINTAIN ALL COMPONENTS OF THE EROSION CONTROL PLAN UNTIL THE SITE IS FULLY STABILIZED. HOWEVER, BASED ON SITE AND WEATHER CONDITIONS DURING CONSTRUCTION, ADDITIONAL EROSION CONTROL MEASURES MAY NEED TO BE IMPLEMENTED. ALL AREAS OF INSTABILITY AND EROSION MUST BE REPAIRED IMMEDIATELY DURING CONSTRUCTION AND NEED TO BE MAINTAINED UNTIL THE SITE IS FULLY STABILIZED OR VEGETATION IS ESTABLISHED. A CONSTRUCTION LOG MUST BE MAINTAINED FOR THE EROSION AND SEDIMENTATION CONTROL INSPECTIONS AND MAINTENANCE

CONTRACTOR WILL BE RESPONSIBLE FOR FOLLOWING PROCEDURES FOUND IN THE "MAINE EROSION AND SEDIMENT CONTROL PRACTICES FIELD GUIDE FOR CONTRACTORS" (PUBLISHED MARCH 2015). THE PUBLICATION CAN BE FOUND AT: HTTP://WWW.MAINE.GOV/DEP/LAND/EROSION/ESCBMPS/INDEX.HTML

WET POND NOTES

CONSTRUCTION OVERSIGHT

THE APPLICANT WILL RETAIN THE SERVICES OF A PROFESSIONAL ENGINEER TO INSPECT THE CONSTRUCTION AND STABILIZATION OF ALL STORMWATER MANAGEMENT STRUCTURES. IF NECESSARY, THE INSPECTING ENGINEER WILL INTERPRET THE POND'S CONSTRUCTION PLAN FOR THE CONTRACTOR. ONCE ALL STORMWATER MANAGEMENT STRUCTURES ARE CONSTRUCTED AND STABILIZED, THE INSPECTING ENGINEER WILL NOTIFY THE DEPARTMENT IN WRITING WITHIN 30 DAYS TO STATE THAT THE POND HAS BEEN COMPLETED. ACCOMPANYING THE ENGINEER'S NOTIFICATION MUST BE A LOG OF THE ENGINEER'S INSPECTIONS GIVING THE DATE OF EACH INSPECTION, THE TIME OF EACH INSPECTION, AND THE ITEMS INSPECTED ON EACH VISIT, AND INCLUDE ANY TESTING DATA OR SIEVE ANALYSIS DATA OF EVERY MINERAL SOIL AND SOIL MEDIA SPECIFIED IN THE PLANS AND USED ON SITE.

WETPONDS

INSPECTION BY A PROFESSIONAL ENGINEER WILL CONSIST OF WEEKLY VISITS TO THE SITE TO INSPECT THE INSTALLATION OF EACH POND'S EMBANKMENT CONSTRUCTION, STORMWATER INLET, UNDERDRAINED GRAVEL OUTLET, GRAVEL OUTLET FILTER MATERIAL MAKEUP AND PLACEMENT, OUTLET CONTROL STRUCTURE, CLAY LINER (IF APPLICABLE), AND EMERGENCY SPILLWAY CONSTRUCTION FROM INITIAL GROUND DISTURBANCE TO FINAL STABILIZATION OF THE POND. AN INSPECTION OF THE UNDERDRAINED GRAVEL OUTLET SHALL ALSO BE PERFORMED ONE YEAR AFTER THE FINAL STABILIZATION OF THE POND.

BASIC STANDARDS - EROSION CONTROL MEASURES

MINIMUM EROSION CONTROL MEASURES WILL NEED TO BE IMPLEMENTED AND THE APPLICANT WILL BE RESPONSIBLE TO MAINTAIN ALL COMPONENTS OF THE EROSION CONTROL PLAN UNTIL THE SITE IS FULLY STABILIZED. HOWEVER, BASED ON SITE AND WEATHER CONDITIONS DURING CONSTRUCTION, ADDITIONAL EROSION CONTROL MEASURES MAY NEED TO BE IMPLEMENTED. ALL AREAS OF INSTABILITY AND EROSION MUST BE REPAIRED IMMEDIATELY DURING CONSTRUCTION AND NEED TO BE MAINTAINED UNTIL THE SITE IS FULLY STABILIZED OR VEGETATION IS ESTABLISHED. A CONSTRUCTION LOG MUST BE MAINTAINED FOR THE EROSION AND SEDIMENTATION CONTROL INSPECTIONS AND MAINTENANCE.

CONTRACTOR WILL BE RESPONSIBLE FOR FOLLOWING PROCEDURES FOUND IN THE "MAINE EROSION AND SEDIMENT CONTROL PRACTICES FIELD GUIDE FOR CONTRACTORS" (PUBLISHED MARCH 2015). THE PUBLICATION CAN BE FOUND AT: HTTP://WWW.MAINE.GOV/DEP/LAND/EROSION/ESCBMPS/INDEX.HTML

LEGEND:

DESCRIPTION	*EXISTING SYMBOL*	*PROPOSED SYMBOL*
IRON ROD	●	
UTILITY POLE		
SEWER MANHOLE	Ⓢ	
FIRE HYDRANT		
WATER SHUT OFF		
CATCH BASIN	□	■
DRAIN MANHOLE		Ⓓ
SIGN		
5' CONTOUR	50	50
1' CONTOUR	58	58
EDGE OF GRAVEL		
EDGE OF PAVEMENT		
PROPERTY LINE		
WATER LINE	W	W
RAW WATER LINE	RAW	RW
SANITARY SEWER	SS	SS
OVERHEAD UTILITY	OHU	
UNDERGROUND UTILITY		UGU
STORM DRAIN	SD	SD
UNDERDRAIN		UD
TREELINE		
PAVEMENT		
CONCRETE		
GRAVEL		

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CES INC
Engineers • Environmental Scientists • Surveyors

PROJECT TITLE
WHOLE OCEANS LLC
BUCKSPORT, MAINE

SHEET TITLE
NOTES AND LEGEND PLAN

REV.	DESCRIPTION	DATE	DRAWN BY	CHECKED BY
R1				
R2				
R3				
R4				
R5				
R6				
R7				

ISSUE STATUS
ISSUED FOR PERMITTING

STATE OF MAINE
JON H. WHITTEN, JR.
No. 10414
07/02/2019
LICENSED
PROFESSIONAL ENGINEER

SCALE	NTS
DATE	2019-05-22
DRAWN BY: WAB	CHECKED BY: CTM
DESIGNED BY	APPROVED BY
JOB NUMBER	12340.002
DRAWING NUMBER	**C001**

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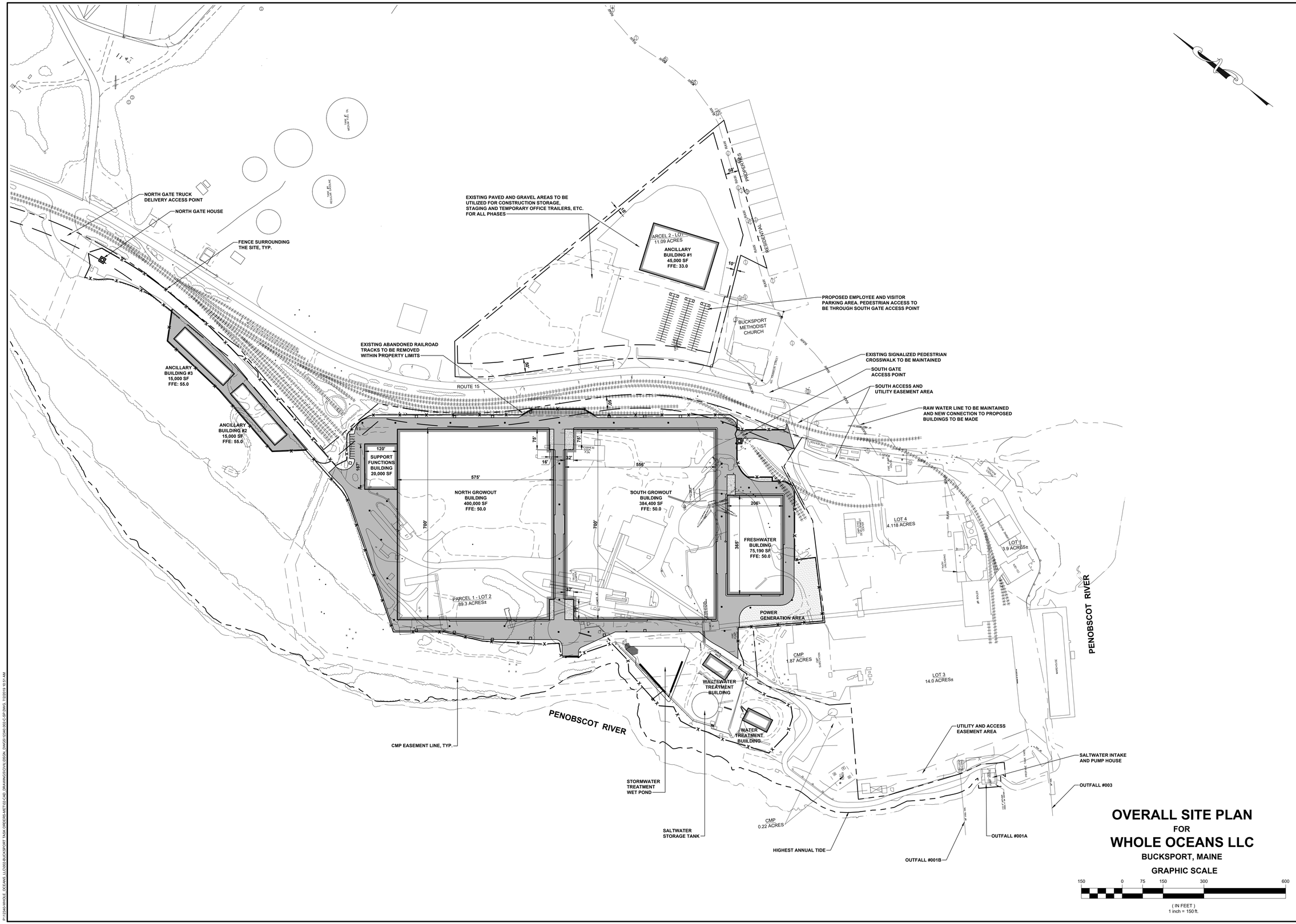

OVERALL SITE PLAN
FOR
WHOLE OCEANS LLC
BUCKSPORT, MAINE

GRAPHIC SCALE

150 0 75 150 300 600

(IN FEET)
1 inch = 150 ft.

Brewer
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CES INC
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PROJECT TITLE
WHOLE OCEANS LLC
BUCKSPORT, MAINE

SHEET TITLE
OVERALL SITE PLAN

REV.	DESCRIPTION	DATE	DRAWN BY	CHECKED BY
R7				
R6				
R5				
R4				
R3				
R2				
R1				

ISSUE STATUS
ISSUED FOR PERMITTING

STATE OF MAINE
JOHN H. WHITTEN JR.
No. 10414
07/02/2019
LICENSED
PROFESSIONAL ENGINEER

SCALE	1"=150'
DATE	2019-06-13
DRAWN BY	WAB
CHECKED BY	CTM
DESIGNED BY	
APPROVED BY	
JOB NUMBER	12340.002
DRAWING NUMBER	C100

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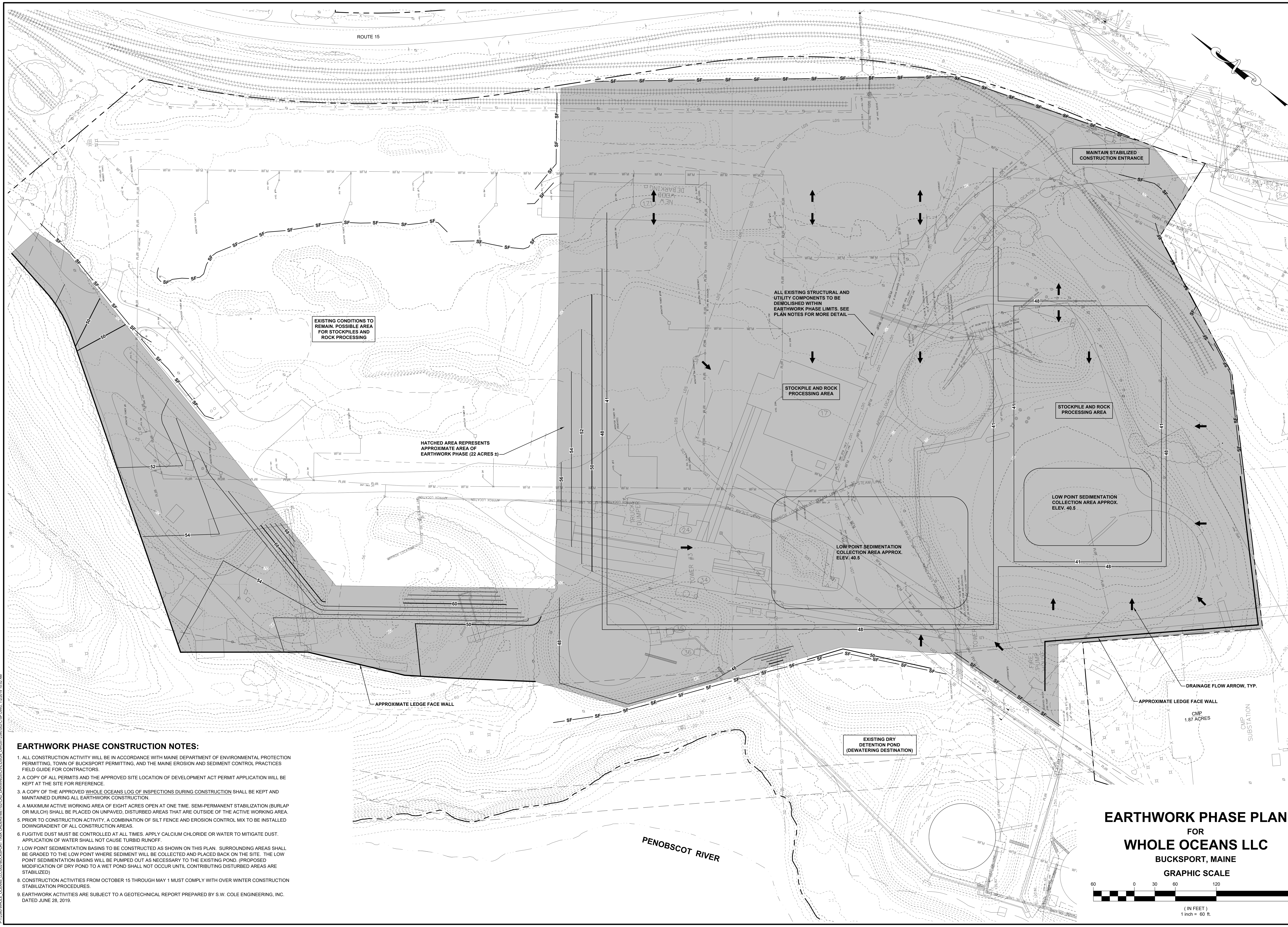

EARTHWORK PHASE CONSTRUCTION NOTES:

1. ALL CONSTRUCTION ACTIVITY WILL BE IN ACCORDANCE WITH MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION PERMITTING, TOWN OF BUCKSPORT PERMITTING, AND THE MAINE EROSION AND SEDIMENT CONTROL PRACTICES FIELD GUIDE FOR CONTRACTORS.
2. A COPY OF ALL PERMITS AND THE APPROVED SITE LOCATION OF DEVELOPMENT ACT PERMIT APPLICATION WILL BE KEPT AT THE SITE FOR REFERENCE.
3. A COPY OF THE APPROVED WHOLE OCEANS LOG OF INSPECTIONS DURING CONSTRUCTION SHALL BE KEPT AND MAINTAINED DURING ALL EARTHWORK CONSTRUCTION.
4. A MAXIMUM ACTIVE WORKING AREA OF EIGHT ACRES OPEN AT ONE TIME. SEMI-PERMANENT STABILIZATION (BURLAP OR MULCH) SHALL BE PLACED ON UNPAVED, DISTURBED AREAS THAT ARE OUTSIDE OF THE ACTIVE WORKING AREA.
5. PRIOR TO CONSTRUCTION ACTIVITY, A COMBINATION OF SILT FENCE AND EROSION CONTROL MIX TO BE INSTALLED DOWNGRADIENT OF ALL CONSTRUCTION AREAS.
6. FUGITIVE DUST MUST BE CONTROLLED AT ALL TIMES. APPLY CALCIUM CHLORIDE OR WATER TO MITIGATE DUST. APPLICATION OF WATER SHALL NOT CAUSE TURBID RUNOFF.
7. LOW POINT SEDIMENTATION BASINS TO BE CONSTRUCTED AS SHOWN ON THIS PLAN. SURROUNDING AREAS SHALL BE GRADED TO THE LOW POINT WHERE SEDIMENT WILL BE COLLECTED AND PLACED BACK ON THE SITE. THE LOW POINT SEDIMENTATION BASINS WILL BE PUMPED OUT AS NECESSARY TO THE EXISTING POND. (PROPOSED MODIFICATION OF DRY POND TO A WET POND SHALL NOT OCCUR UNTIL CONTRIBUTING DISTURBED AREAS ARE STABILIZED)
8. CONSTRUCTION ACTIVITIES FROM OCTOBER 15 THROUGH MAY 1 MUST COMPLY WITH OVER WINTER CONSTRUCTION STABILIZATION PROCEDURES.
9. EARTHWORK ACTIVITIES ARE SUBJECT TO A GEOTECHNICAL REPORT PREPARED BY S.W. COLE ENGINEERING, INC. DATED JUNE 28, 2019.

EARTHWORK PHASE PLAN
FOR
WHOLE OCEANS LLC
BUCKSPORT, MAINE

GRAPHIC SCALE

60 0 30 60 120 240

(IN FEET)
1 inch = 60 ft.

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PROJECT TITLE
WHOLE OCEANS LLC
BUCKSPORT, MAINE

SHEET TITLE
EARTHWORK PHASE PLAN

REV.	DESCRIPTION	DATE	DRAWN BY	CHECKED BY
R1				
R2				
R3				
R4				
R5				
R6				
R7				

ISSUE STATUS
ISSUED FOR PERMITTING

STATE OF MAINE
JON H. WHITTEN, JR.
No. 10414
07/02/2019
LICENSED PROFESSIONAL ENGINEER

SCALE	1"=60'
DATE	2019-05-22
DRAWN BY: WAB	CHECKED BY: CTM
DESIGNED BY	APPROVED BY
JOB NUMBER	12340.002
DRAWING NUMBER	C101

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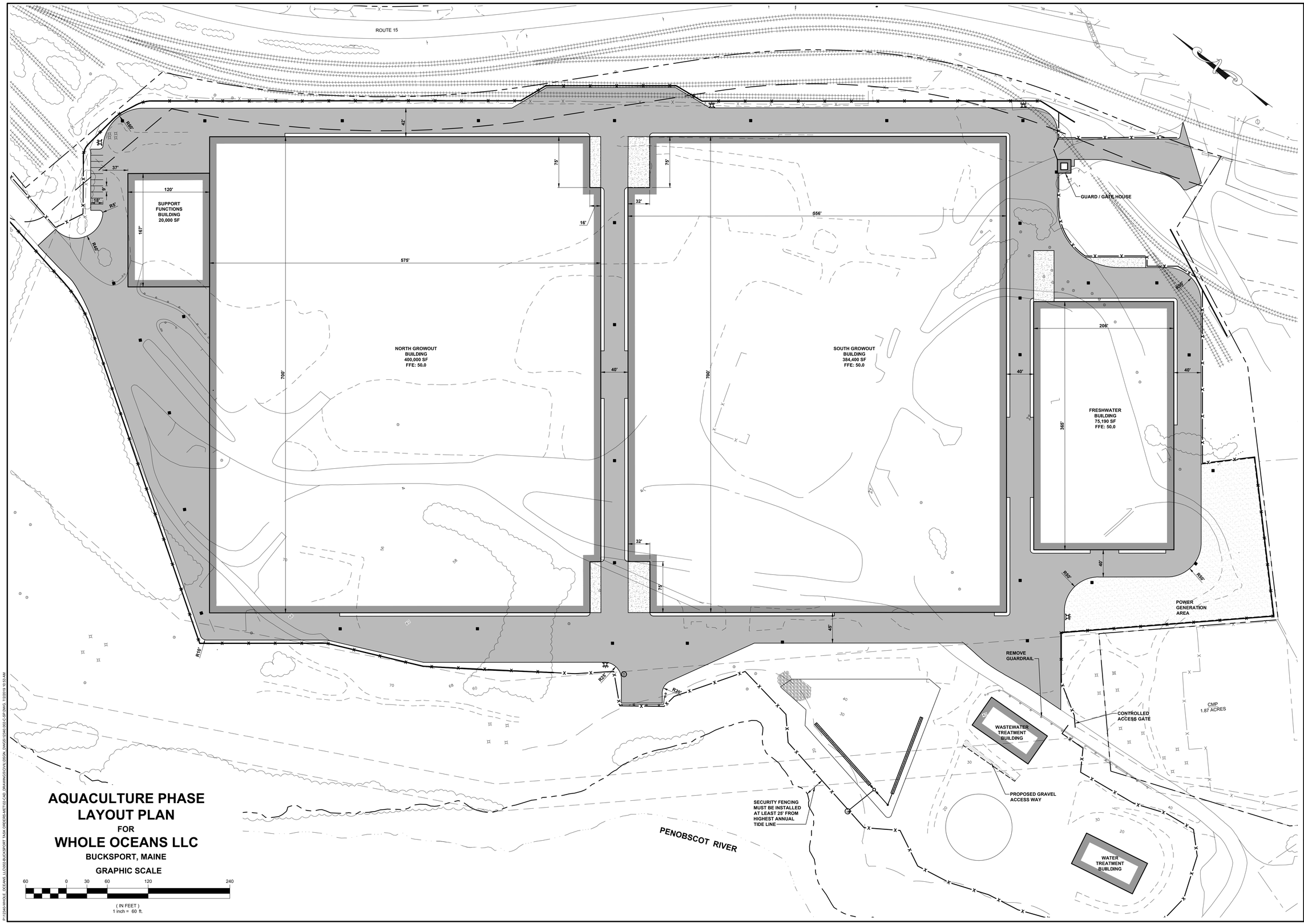

AQUACULTURE PHASE LAYOUT PLAN

FOR

WHOLE OCEANS LLC

BUCKSPORT, MAINE

CES INC
Engineers • Environmental Scientists • Surveyors

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PROJECT TITLE
WHOLE OCEANS LLC
BUCKSPORT, MAINE

SHEET TITLE
AQUACULTURE PHASE LAYOUT PLAN

REV.	DESCRIPTION	DATE	DRAWN BY	CHECKED BY
R7				
R6				
R5				
R4				
R3				
R2				
R1				

ISSUE STATUS
ISSUED FOR PERMITTING

STATE OF MAINE
CHARLES A. WHITTEN, JR.
No. 10414
07/02/2019
LICENSED
PROFESSIONAL ENGINEER

SCALE	1"=60'
DATE	2019-05-22
DRAWN BY	WAB
CHECKED BY	CTM
DESIGNED BY	
APPROVED BY	
JOB NUMBER	12340.002
DRAWING NUMBER	C102

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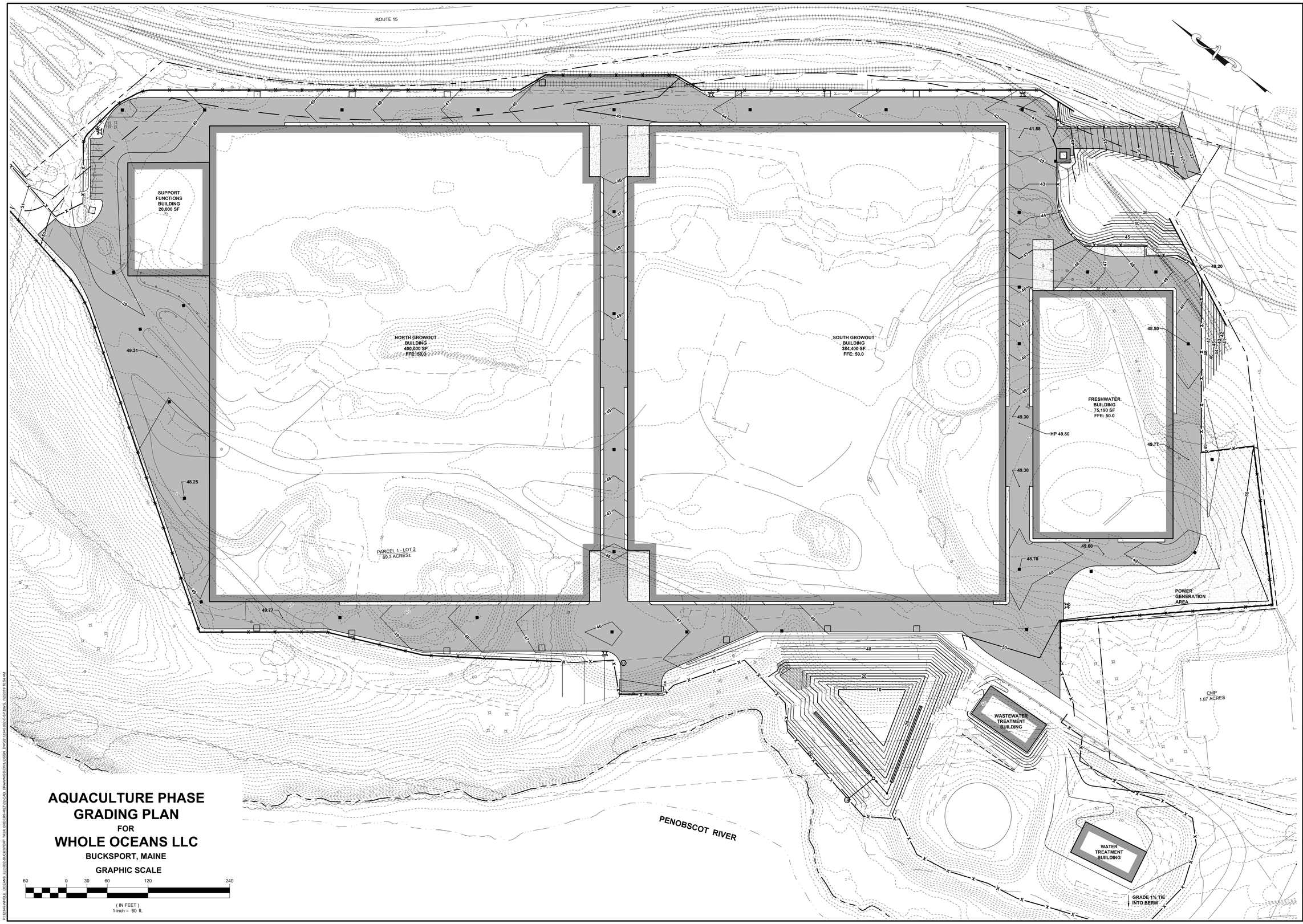

AQUACULTURE PHASE GRADING PLAN

FOR

WHOLE OCEANS LLC

BUCKSPORT, MAINE

GRAPHIC SCALE

60 0 30 60 120 240

(IN FEET)
1 inch = 60 ft.

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PROJECT TITLE
WHOLE OCEANS LLC
BUCKSPORT, MAINE

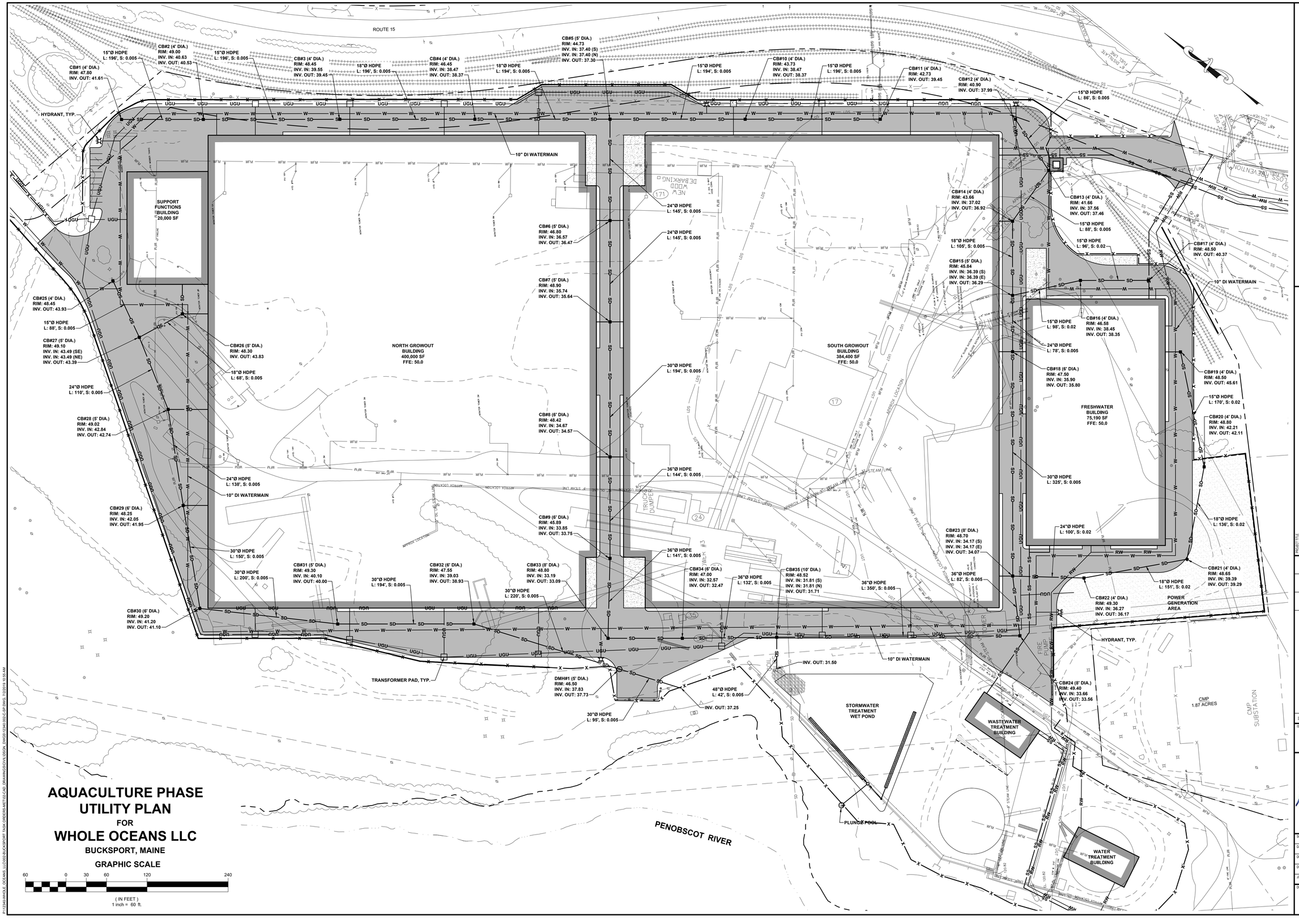
SHEET TITLE
AQUACULTURE PHASE GRADING PLAN

REV.	DESCRIPTION	DATE	DRAWN BY	CHECKED BY
R7				
R6				
R5				
R4				
R3				
R2				
R1				

ISSUE STATUS
ISSUED FOR PERMITTING

STATE OF MAINE
JOHN H. WHITTEN, JR.
No. 10414
07/02/2019
LICENSED
PROFESSIONAL ENGINEER

SCALE	1"=60'
DATE	2019-05-22
DRAWN BY	WAB
CHECKED BY	CTM
DESIGNED BY	
APPROVED BY	
JOB NUMBER	12340.002
DRAWING NUMBER	C103



AQUACULTURE PHASE UTILITY PLAN

FOR

WHOLE OCEANS LLC

BUCKSPORT, MAINE

GRAPHIC SCALE

60 0 30 60 120 240

(IN FEET)
1 inch = 60 ft.

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Brewer
Eastern Marsh Main Street
PO Box 639
Brewer, ME
T 207-989-4824
F 207-989-4881

Presque Isle
Edison Drive Street
PO Box 827
Presque Isle, ME
T 207-764-8412
F 207-764-8414

Bar Harbor
Main Street
PO Box 1579
Bar Harbor, ME
T 207-288-0087
F 207-288-0088

Waterville
Elm Street
Suite 204
Waterville, ME
T 207-680-2202
F 207-680-2204

Lewiston
Main Street
Lewiston, ME
T 207-795-6009
F 207-795-6128

Machias
Main Street
PO Box 1579
Machias, ME
T 207-255-8370
F 207-255-8367

CES INC
Engineers • Environmental Scientists • Surveyors

PROJECT TITLE
WHOLE OCEANS LLC
BUCKSPORT, MAINE

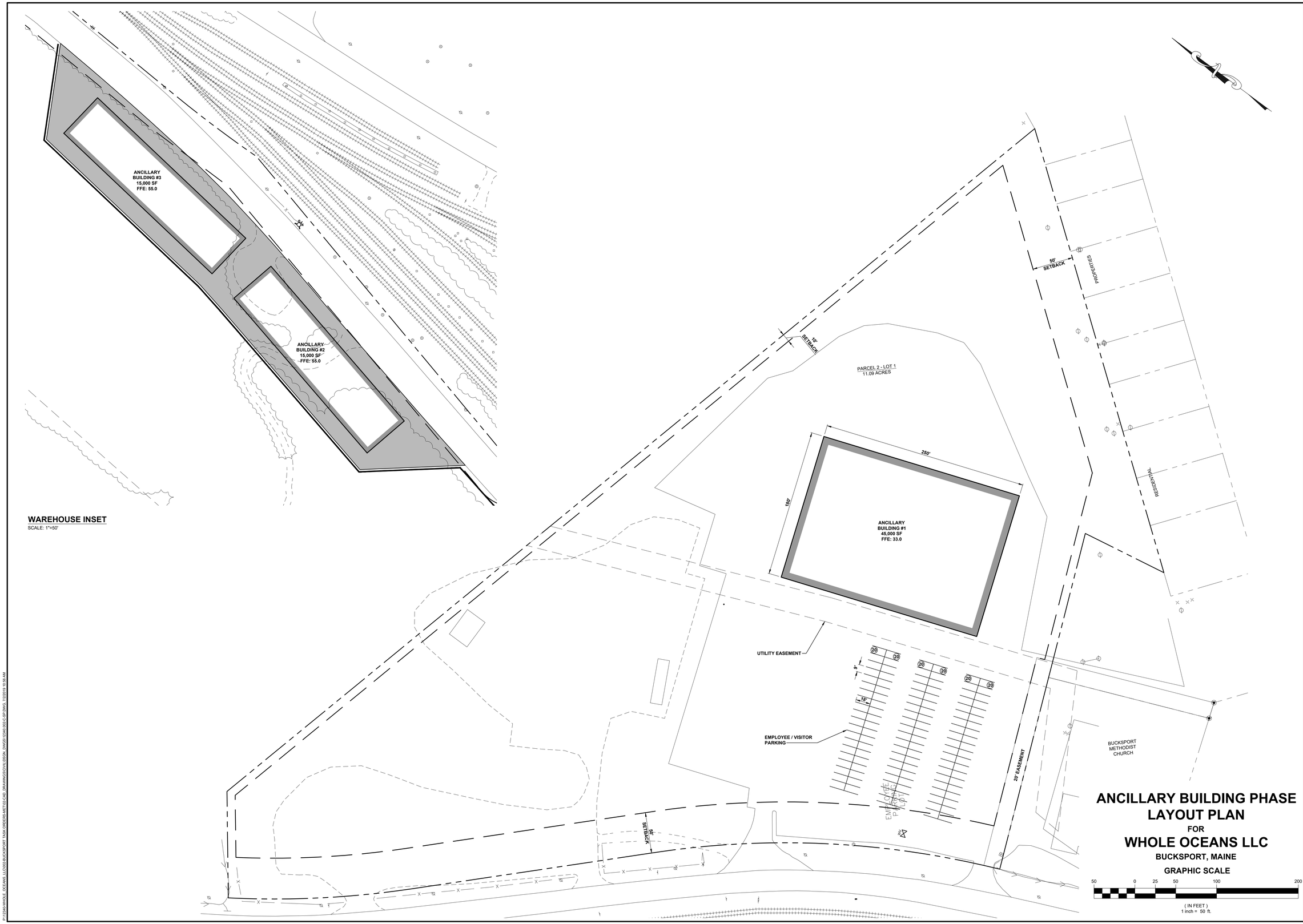
SHEET TITLE
AQUACULTURE PHASE
UTILITY PLAN

REV.	DESCRIPTION	DATE	DRAWN BY	CHECKED BY
R7				
R6				
R5				
R4				
R3				
R2				
R1				

ISSUE STATUS
ISSUED FOR PERMITTING

STATE OF MAINE
CHRISTOPHER T. WHITTEN, JR.
No. 10414
07/02/2019
LICENSED
PROFESSIONAL ENGINEER

SCALE	1"=60'
DATE	2019-05-22
DRAWN BY	WAB
CHECKED BY	CTM
DESIGNED BY	
APPROVED BY	
JOB NUMBER	12340.002
DRAWING NUMBER	C104



ANCILLARY BUILDING PHASE LAYOUT PLAN

FOR

WHOLE OCEANS LLC

BUCKSPORT, MAINE

CES INC
Engineers • Environmental Scientists • Surveyors

Brewer
85 Main Street
PO Box 639
Brewer, ME
T 207-989-4824
F 207-989-4881

Presque Isle
647 Main Street
PO Box 827
Presque Isle, ME
T 207-764-8412
F 207-764-8414

Waterville
44 Elm Street
Suite 204
Waterville, ME
T 207-680-2202
F 207-680-2204

Machias
1 Court Street
P.O. Box 579
Machias, ME
T 207-255-3270
F 207-255-8367

Bar Harbor
1386 State Hwy 102
Bar Harbor, ME
T 207-288-0387
F 207-288-0688

Lewiston
640 Main Street
Lewiston, ME
T 207-795-6009
F 207-795-6168

PROJECT TITLE: WHOLE OCEANS LLC, BUCKSPORT, MAINE

SHEET TITLE: ANCILLARY BUILDING PHASE LAYOUT PLAN

REV.	DESCRIPTION	DATE	DRAWN BY	CHECKED BY
R7				
R6				
R5				
R4				
R3				
R2				
R1				

ISSUE STATUS: ISSUED FOR PERMITTING

STATE OF MAINE — JON K. WHITTEN, JR. — No. 10414 — 07/02/2019 — LICENSED — PROFESSIONAL ENGINEER

SCALE	1"=50'
DATE	2019-06-06
DRAWN BY	WAB
CHECKED BY	CTM
DESIGNED BY	
APPROVED BY	
JOB NUMBER	12340.002
DRAWING NUMBER	C105

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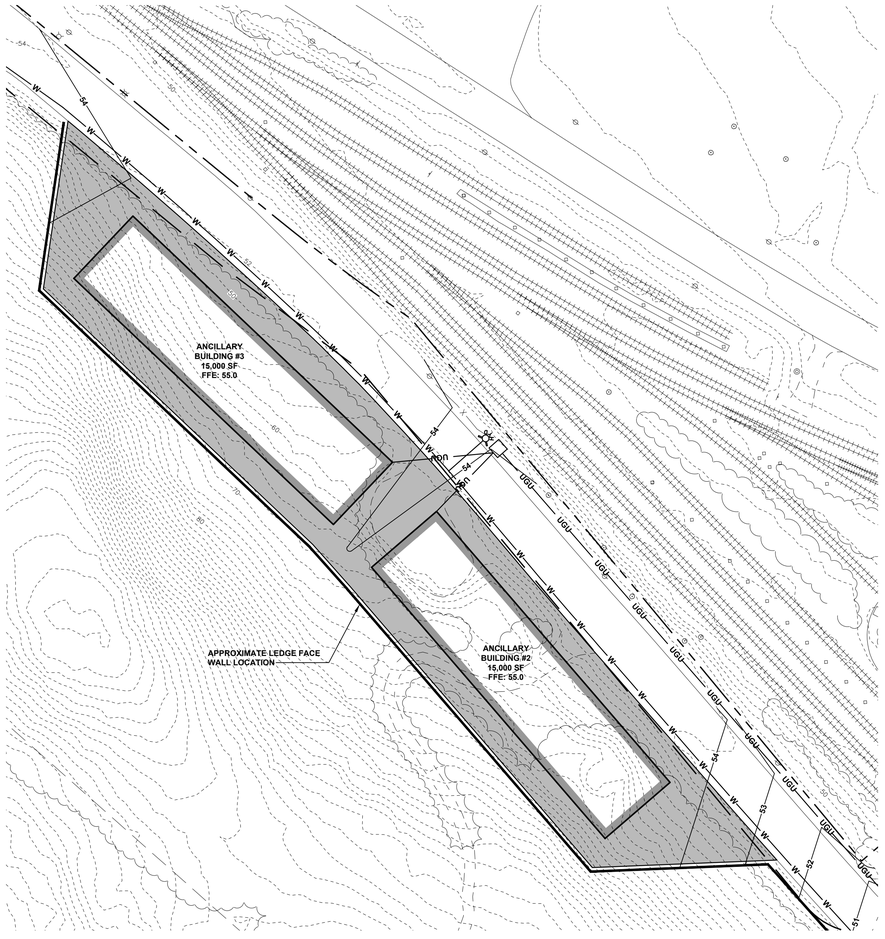
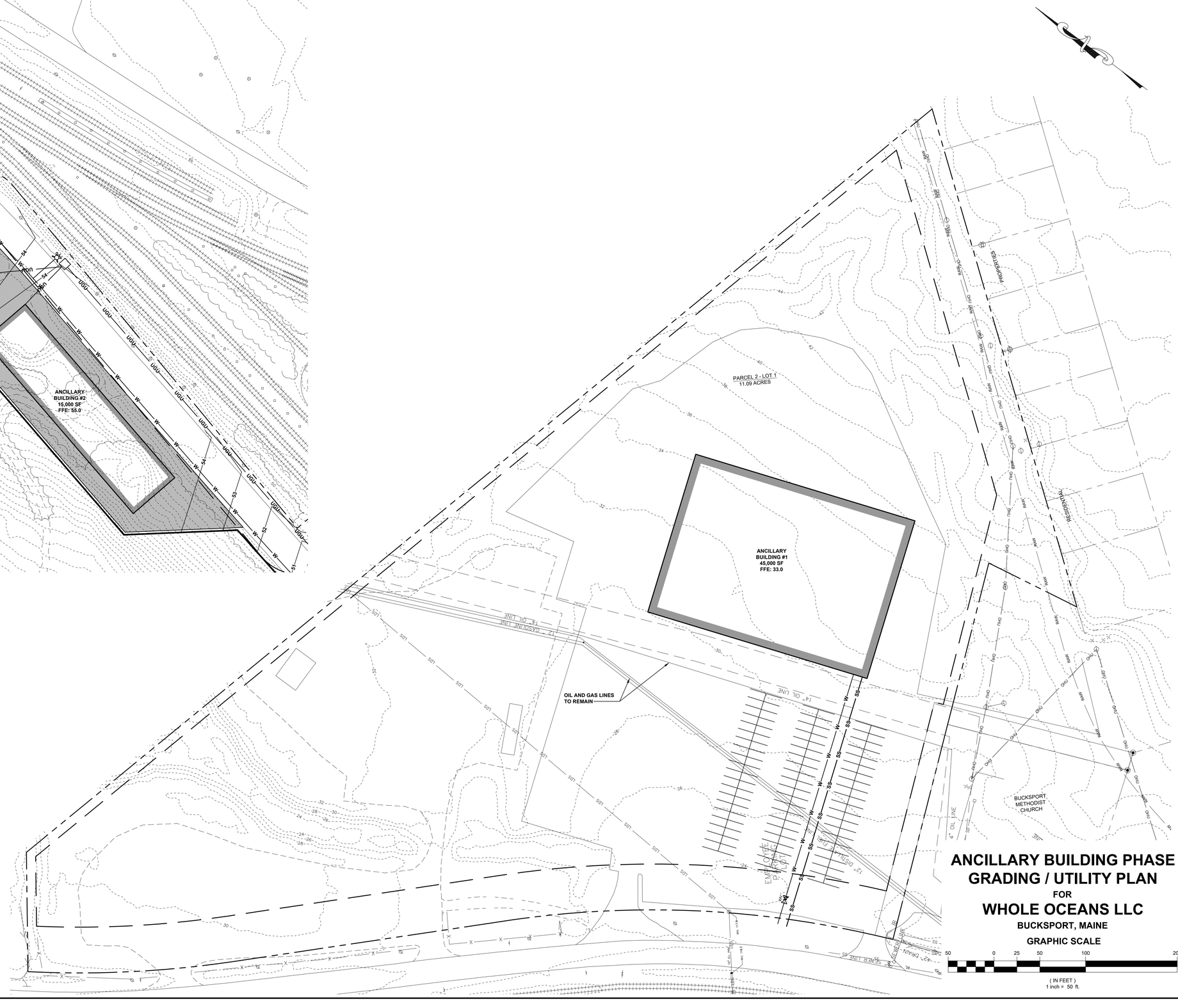


WAREHOUSE INSET
SCALE: 1"=50'



ANCILLARY BUILDING PHASE GRADING / UTILITY PLAN

FOR

WHOLE OCEANS LLC

BUCKSPORT, MAINE

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

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Brewer
85 Franklin Main Street
PO Box 639
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Machias
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PROJECT TITLE
WHOLE OCEANS LLC
BUCKSPORT, MAINE

SHEET TITLE
ANCILLARY BUILDING PHASE GRADING / UTILITY PLAN

REV.	DESCRIPTION	DATE	DRAWN BY	CHECKED BY
R7				
R6				
R5				
R4				
R3				
R2				
R1				

ISSUE STATUS
ISSUED FOR PERMITTING

STATE OF MAINE
JON H. WHITTEN JR.
No. 10414
07/02/2019
LICENSED
PROFESSIONAL ENGINEER

SCALE	1"=50'
DATE	2019-06-06
DRAWN BY	WAB
CHECKED BY	CTM
DESIGNED BY	
APPROVED BY	
JOB NUMBER	12340.002
DRAWING NUMBER	C106

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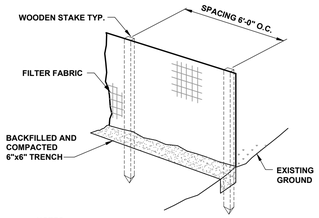
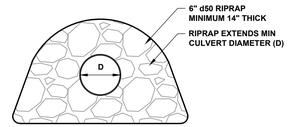


NOTES:

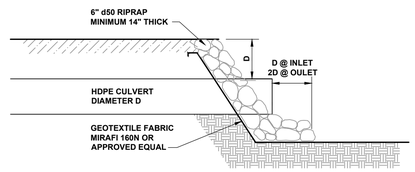
1. KEY FABRIC IN A 6"x6" TRENCH W/BACKFILL AND COMPACT.
2. SILT FENCE SHALL BE A 3' FENCE WITH A MINIMUM GRAB STRENGTH OF 120 LBS.

SILT FENCE DETAIL

N.T.S.



ELEVATION

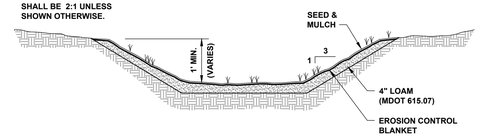


PROFILE VIEW

TYPICAL CULVERT INLET/OUTLET PROTECTION DETAIL

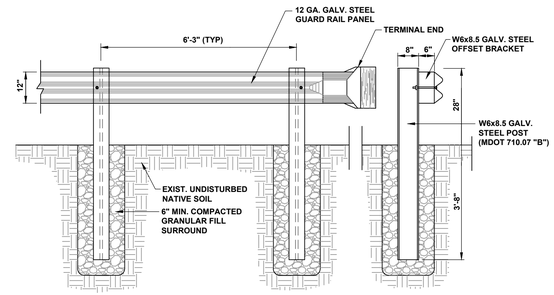
N.T.S.

NOTE:
MINIMUM SIDESLOPE SHALL BE 2:1 UNLESS SHOWN OTHERWISE.



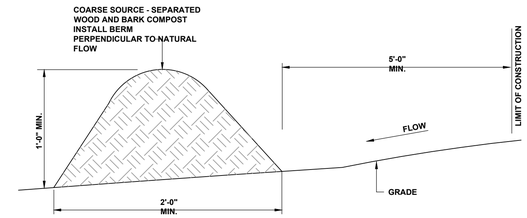
TYPICAL GRASS LINED DITCH DETAIL

N.T.S.



STEEL GUARDRAIL DETAIL

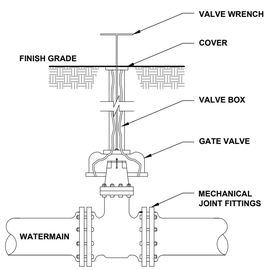
N.T.S.



NOTE:
THE EROSION CONTROL MIX MUST BE WELL-GRADED WITH AN ORGANIC COMPONENT THAT IS BETWEEN 50 AND 100% OF DRY WEIGHT, AND THAT IS COMPOSED OF FIBROUS AND ELONGATED FRAGMENTS. THE MINERAL PORTION OF THE MIX SHOULD BE NATURALLY INCLUDED IN THE PRODUCT WITH NO LARGER ROCKS (>4") OR LARGE AMOUNTS OF FINES (SILTS AND CLAYS). IN STUMP GRINDING, THE MINERAL SOIL ORIGINATES FROM THE ROOT BALL AND SHOULD NOT BE REMOVED BEFORE GRINDING. THE MIX SHOULD BE FREE OF REFUSE, MATERIAL TOXIC TO PLANT GROWTH OR UNSUITABLE MATERIAL (BARK CHIPS, GROUND CONSTRUCTION DEBRIS OR REPROCESSED WOOD PRODUCTS).

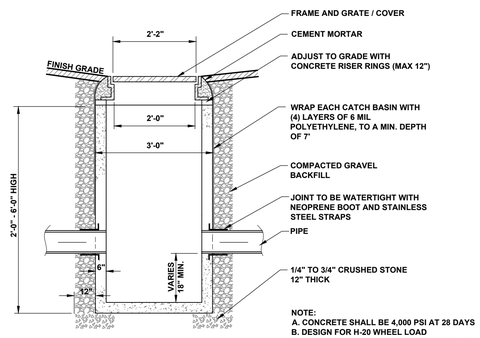
EROSION CONTROL MIX BERM DETAIL

N.T.S. (MAY BE USED AS AN ALTERNATE TO SILT FENCE)



TYPICAL GATE VALVE DETAIL

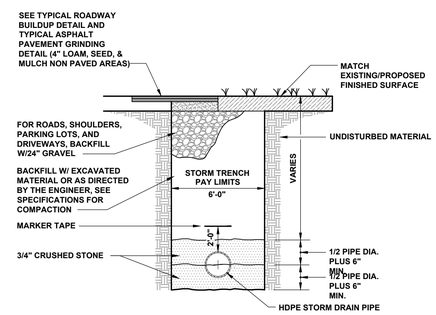
N.T.S.



NOTE:
A. CONCRETE SHALL BE 4,000 PSI AT 28 DAYS
B. DESIGN FOR H-20 WHEEL LOAD
C. REINFORCE CONCRETE TO 0.12 IN/S.F. L.F.

TYPICAL TYPE 'F' CATCH BASIN DETAIL

N.T.S.

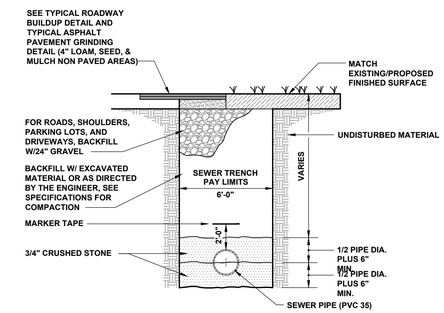


NOTE:

1. MATCH EXISTING SURFACE FINISH, EXCEPT WHERE NOTED. IN LAWN AREAS INSTALL 4" OF LOAM AND SEED AND MULCH.

TYPICAL STORM DRAIN TRENCH DETAIL

N.T.S.

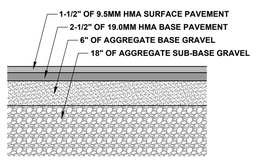


NOTE:

1. MATCH EXISTING SURFACE FINISH, EXCEPT WHERE NOTED. IN LAWN AREAS INSTALL 4" OF LOAM AND SEED AND MULCH.

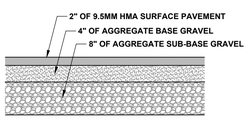
TYPICAL SEWER TRENCH DETAIL

N.T.S.



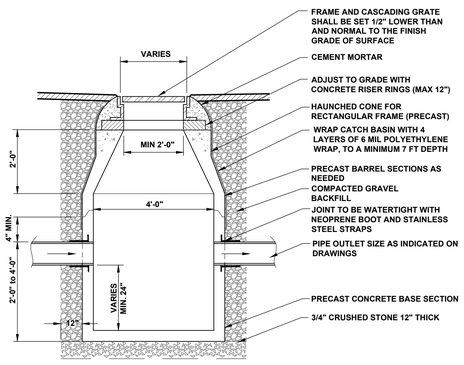
TYPICAL PAVEMENT BUILDUP DETAIL

N.T.S.



TYPICAL ASPHALT SIDEWALK BUILDUP DETAIL

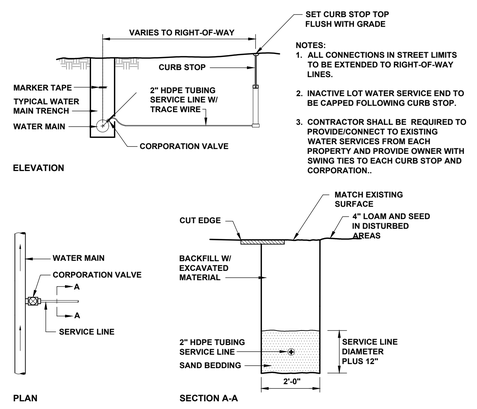
N.T.S.



NOTE:
A 4'-0" PRECAST BASE W/12" PIPE OPENINGS MAY BE USED WHEN IT WILL PROVIDE A 2'-0" SUMP AND 12"± RING ABOVE ALL OPENINGS INTO THE BASE.

TYPICAL CATCH BASIN DETAIL

N.T.S.

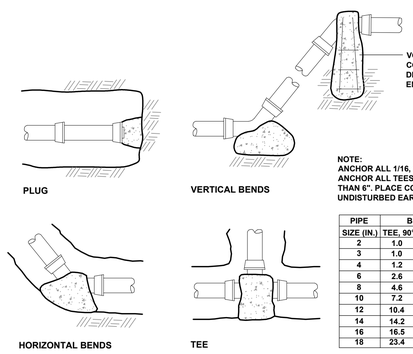


NOTES:

1. ALL CONNECTIONS IN STREET LIMITS TO BE EXTENDED TO RIGHT-OF-WAY LINES.
2. INACTIVE LOT WATER SERVICE END TO BE CAPPED FOLLOWING CURB STOP.
3. CONTRACTOR SHALL BE REQUIRED TO PROVIDE/CONNECT TO EXISTING WATER SERVICES FROM EACH PROPERTY AND PROVIDE OWNER WITH SWING TIES TO EACH CURB STOP AND CORPORATION..

TYPICAL WATER SERVICE DETAIL

N.T.S.



NOTE:
ANCHOR ALL 1/16, 1/8, AND 1/4" BENDS
ANCHOR ALL TEES W / BRANCH LARGER THAN 6". PLACE CONCRETE AGAINST UNDISTURBED EARTH OR COMPACTED FILL.

PIPE	BEARING SURFACE, FT.^{2}			
SIZE (IN.)	TEE, 90°	45°	22 1/2°	11 1/4°
2	1.0	1.0	1.0	1.0
3	1.0	1.0	1.0	1.0
4	1.2	1.0	1.0	1.0
6	2.6	1.4	1.0	1.0
8	4.6	2.5	1.4	1.0
10	7.2	3.9	2.0	1.0
12	10.4	5.6	2.8	1.5
14	14.2	7.7	3.9	2.0
16	16.5	10.0	5.0	2.5
18	23.4	12.7	6.4	3.3

ANCHORAGE DETAILS

N.T.S.

Brewer
Brewer Platinum Main Street
PO Box 639
Brewer, ME
T 207-989-4824
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Presque Isle
4 Main Street
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Machias
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F 207-255-8367

CES INC
Engineers • Environmental Scientists • Surveyors

PROJECT TITLE
WHOLE OCEANS LLC
BUCKSPORT, MAINE

SHEET TITLE
SITE DETAILS

REV.	DESCRIPTION	DATE	DRAWN BY	CHECKED BY
R7				
R6				
R5				
R4				
R3				
R2				
R1				

ISSUE STATUS
ISSUED FOR PERMITTING

STATE OF MAINE
JON H. WHITTEN, JR.
No. 10414
07/02/2019
LICENSED
PROFESSIONAL ENGINEER

SCALE	NTS
DATE	2019-05-22
DRAWN BY	WAB
CHECKED BY	CTM
DESIGNED BY	
APPROVED BY	
JOB NUMBER	12340.002
DRAWING NUMBER	C501

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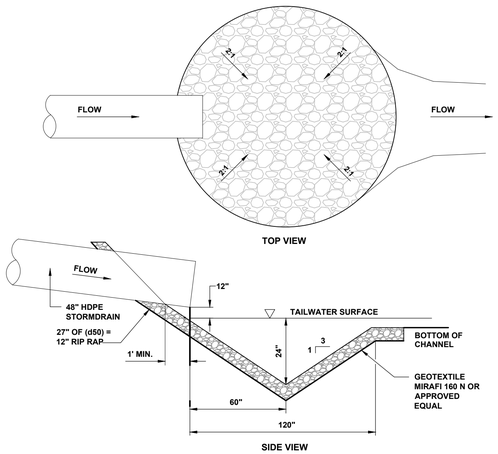
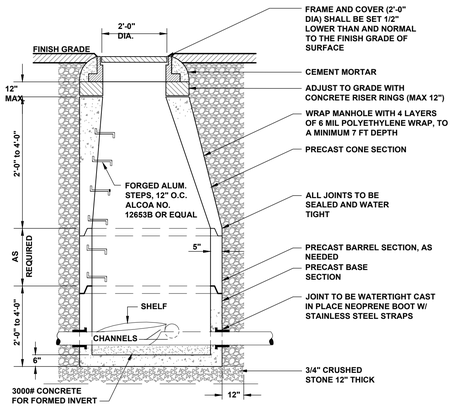


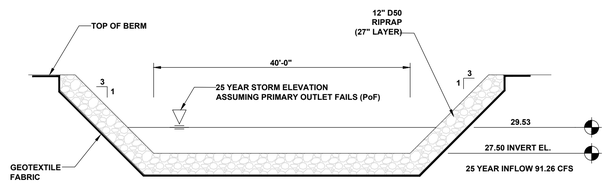
TYPICAL PLUNGE POOL DETAIL

N.T.S.



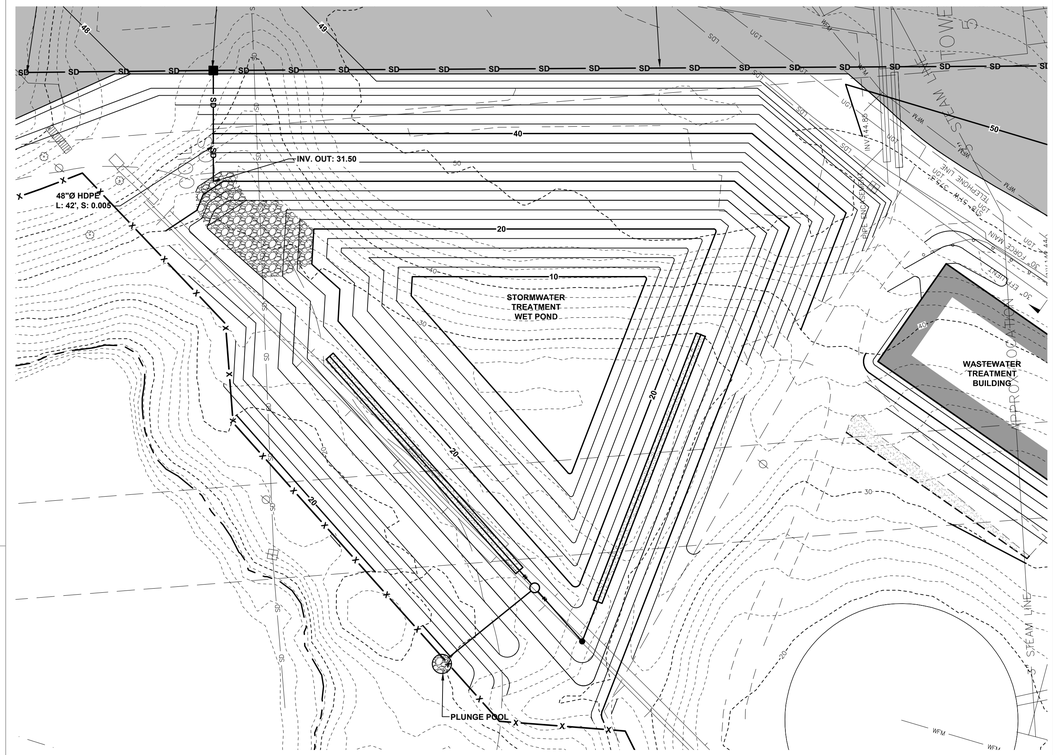
TYPICAL MANHOLE DETAIL

N.T.S.



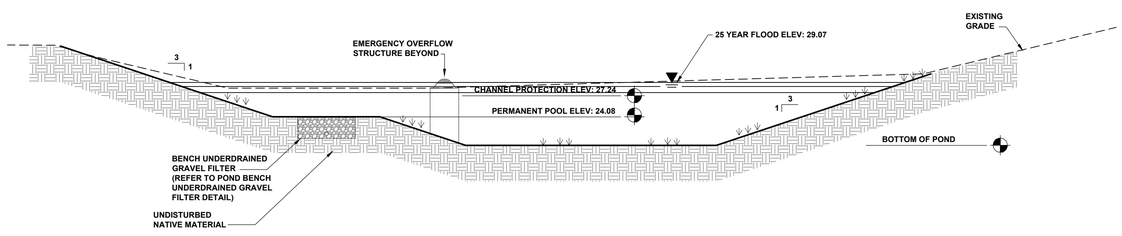
WET POND EMERGENCY SPILLWAY DETAIL

N.T.S.



WET POND PLAN

SCALE: 1"=30'



WET POND SECTION

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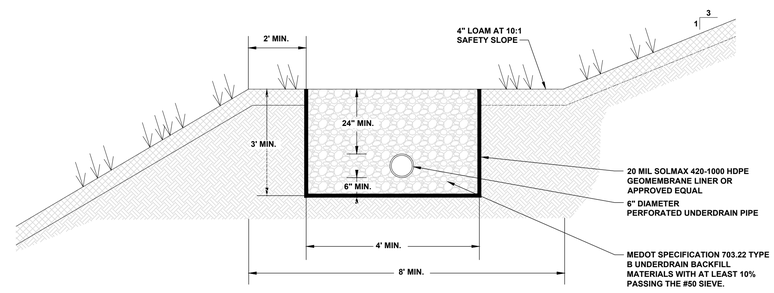

POND BENCH UNDERDRAINED GRAVEL FILTER DETAIL

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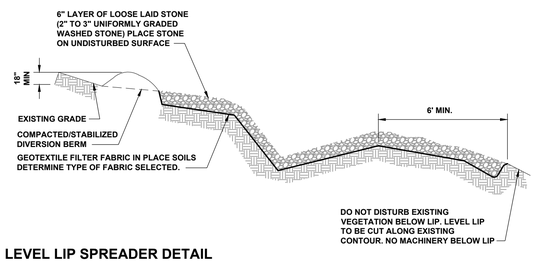
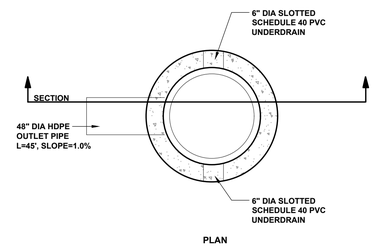


LEVEL LIP SPREADER DETAIL

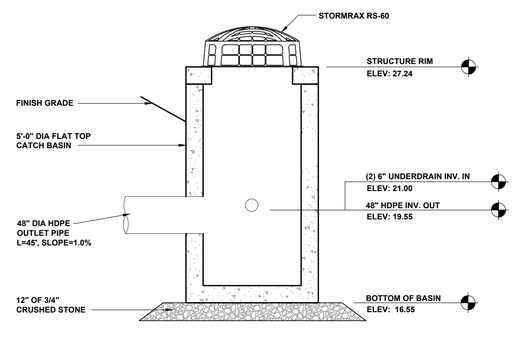
N.T.S.

NOTES:

1. SPREADERS SHALL BE INSTALLED WITH A LEVEL INSTRUMENT. CONSTRUCT LEVEL UP TO 0% GRADE TO ENSURE UNIFORM SHEET FLOW. LEVEL SPREADER SHALL BE CONSTRUCTED ON UNDISTURBED SOIL (NOT FILL).
2. SELECT GEOTEXTILE FABRIC BASED ON UNDISTURBED SOILS (SANDS, SILTS, CLAYS, ETC.)
3. PLACE 6" LAYER OF UNIFORMLY GRADED STONE 2" TO 3" IN DIA. RAKE TO FORM SMOOTH UNIFORM SURFACE. DO NOT FILL VOIDS IN STONE.
4. THE INLET DITCH SHALL NOT EXCEED A 1% GRADE FOR AT LEAST 20 FEET BEFORE ENTERING THE SPREADER.
5. STORM RUN-OFF CONVERTED TO SHEET FLOW ACROSS OUTLET APRON SHALL FLOW ONTO STABILIZED AREAS. RUN-OFF SHALL NOT BE RECONCENTRATED IMMEDIATELY BELOW THE POINT OF DISCHARGE.
6. PERIODIC INSPECTION AND REQUIRED MAINTENANCE SHALL BE PROVIDED.
7. CONSTRUCTION OF LEVEL UP SPREADER SHALL BE FROM UPHILL SIDE ONLY. LEVEL UP & AREA BELOW SPREADER SHALL BE AT EXISTING GRADES & UNDISTURBED BY EARTHWORK OR EQUIPMENT.
8. CONSTRUCT SPREADER WITH LIP AT EXISTING ELEVATION AS SPECIFIED.
9. DOWNGRADIENT RECEIVING AREA MUST BE NATURALLY WELL VEGETATED.
10. DISCHARGE NOT PERMITTED WITHIN 25' OF A STREAM OR WETLAND. CONSULT DEP IF STRUCTURE MUST BE WITHIN 75' OF STREAM OR WATER BODY.



PLAN



SECTION

WET POND OUTLET STRUCTURE DETAIL

N.T.S.

Brewer
Brewer Museum Main Street
PO Box 639
Brewer, ME
T 207-989-4824
F 207-989-4881

Presque Isle
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CES INC
Engineers • Environmental Scientists • Surveyors

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WHOLE OCEANS LLC
BUCKSPORT, MAINE

SHEET TITLE
SITE DETAILS

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PROFESSIONAL ENGINEER

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JOB NUMBER	12340.002
DRAWING NUMBER	C502

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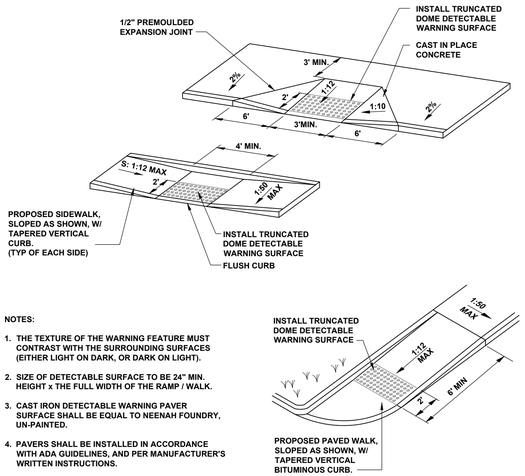
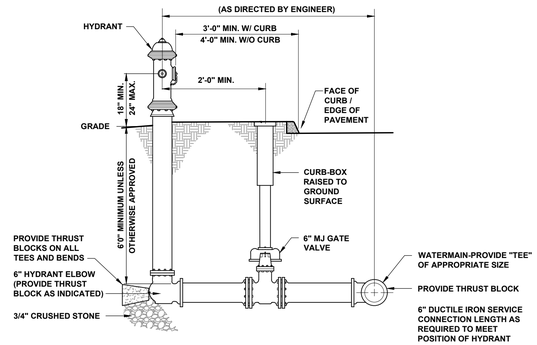


NOTES:

1. THE TEXTURE OF THE WARNING FEATURE MUST CONTRAST WITH THE SURROUNDING SURFACES (EITHER LIGHT ON DARK, OR DARK ON LIGHT).
2. SIZE OF DETECTABLE SURFACE TO BE 24" MIN. HEIGHT x THE FULL WIDTH OF THE RAMP / WALK.
3. CAST IRON DETECTABLE WARNING PAVER SURFACE SHALL BE EQUAL TO NEENAH FOUNDRY, UN-PAINTED.
4. PAVERS SHALL BE INSTALLED IN ACCORDANCE WITH ADA GUIDELINES, AND PER MANUFACTURER'S WRITTEN INSTRUCTIONS.

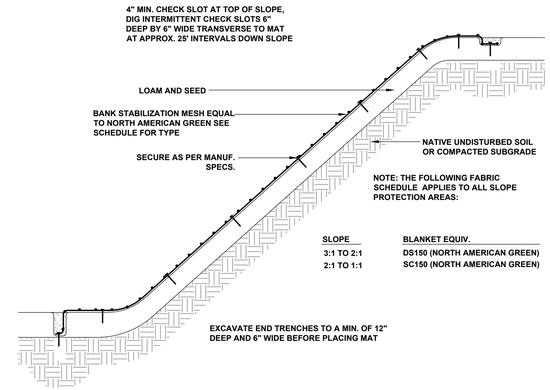
TYPICAL HANDICAP CURB RAMP DETAILS

N.T.S.



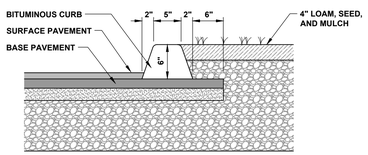
TYPICAL HYDRANT ASSEMBLY DETAIL

N.T.S.



BANK STABILIZATION DETAIL

N.T.S.

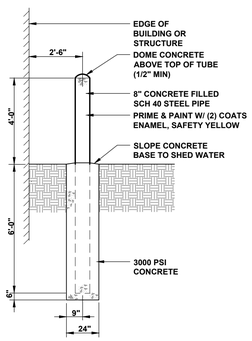


NOTES:

1. MATCH EXISTING BUILDUP OF ADJACENT SURFACES WHERE REPLACING ITEMS DISTURBED DURING CONSTRUCTION.

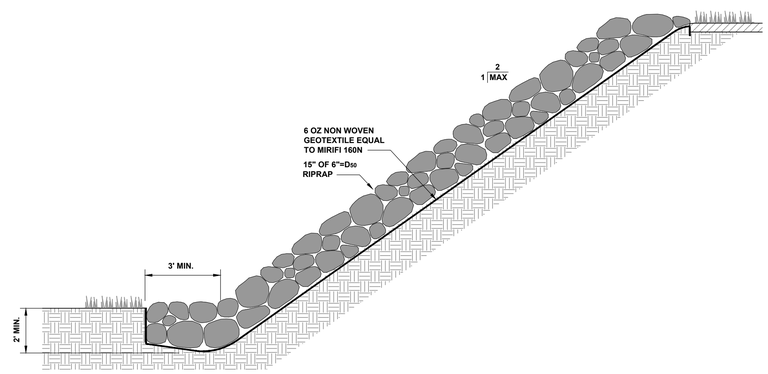
BITUMINOUS CURB DETAIL

N.T.S.



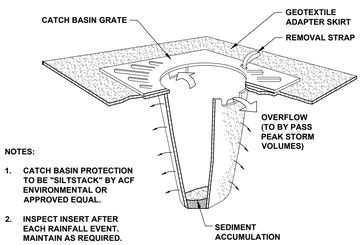
STEEL BOLLARD DETAIL

N.T.S.



RIP RAPPED SLOPE STABILIZATION DETAIL

N.T.S.

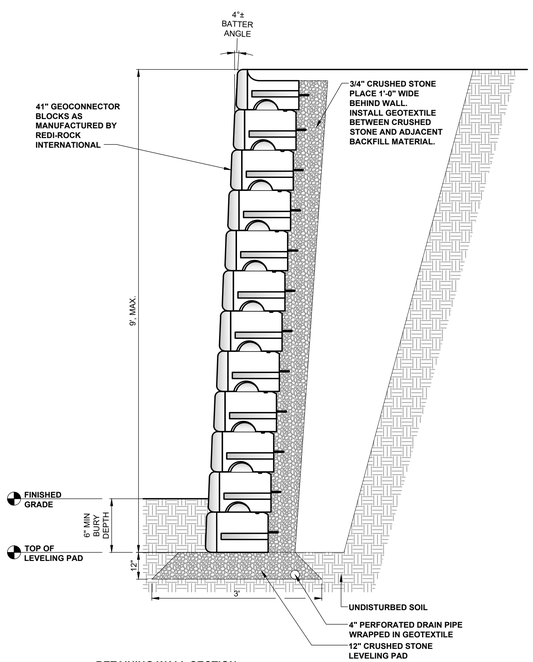


NOTES:

1. CATCH BASIN PROTECTION TO BE "SILTSTACK" BY ACF ENVIRONMENTAL OR APPROVED EQUAL.
2. INSPECT INSERT AFTER EACH RAINFALL EVENT. MAINTAIN AS REQUIRED.
3. SEDIMENT WITHIN INSERT SHALL BE EMPTIED WHEN 1/2 FULL.

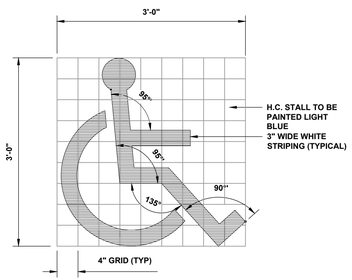
SEDIMENT SACK INLET PROTECTION DETAIL

N.T.S. (MAY BE USED AS AN ALTERNATE TO HAY BALES)



RETAINING WALL SECTION

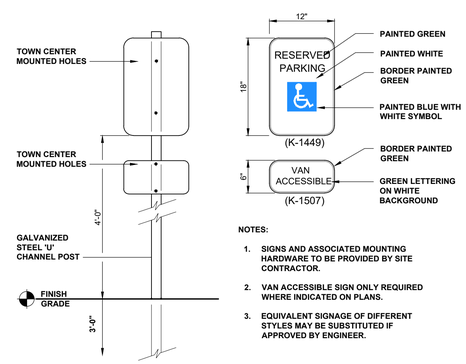
N.T.S.



NOTE: CENTER SYMBOL WITHIN PARKING STALL

TYPICAL HANDICAP PARKING STALL SYMBOL

N.T.S.

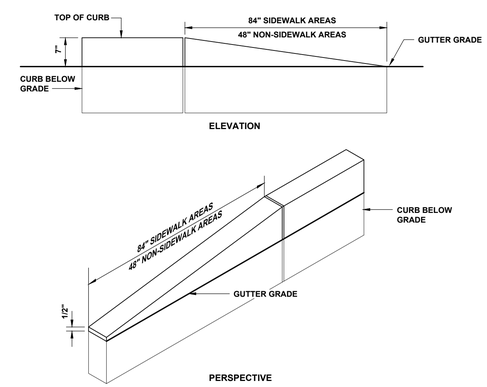


NOTES:

1. SIGNS AND ASSOCIATED MOUNTING HARDWARE TO BE PROVIDED BY SITE CONTRACTOR.
2. VAN ACCESSIBLE SIGN ONLY REQUIRED WHERE INDICATED ON PLANS.
3. EQUIVALENT SIGNAGE OF DIFFERENT STYLES MAY BE SUBSTITUTED IF APPROVED BY ENGINEER.

TYPICAL HANDICAP PARKING SIGN DETAIL

N.T.S.



TYPICAL CURB TERMINATION DETAIL

N.T.S.

Waterville
44 Maine Street
Suite 204
Waterville, ME
T 207-680-2202
F 207-680-2204

Presque Isle
4 Main Street
PO Box 827
Presque Isle, ME
T 207-764-8412
F 207-764-8414

Lewiston
640 Main Street
Lewiston, ME
T 207-795-6009
F 207-795-6108

Brewer
1 Spectrum Main Street
PO Box 639
Brewer, ME
T 207-989-4824
F 207-989-4881

Machias
P.O. Box 87
Machias, ME
T 207-255-3270
F 207-255-8367

Bar Harbor
1386 State Hwy. 102
Bar Harbor, ME
T 207-288-0387
F 207-288-0588

CES INC
Engineers • Environmental Scientists • Surveyors

PROJECT TITLE
WHOLE OCEANS LLC
BUCKSPORT, MAINE

SHEET TITLE
SITE DETAILS

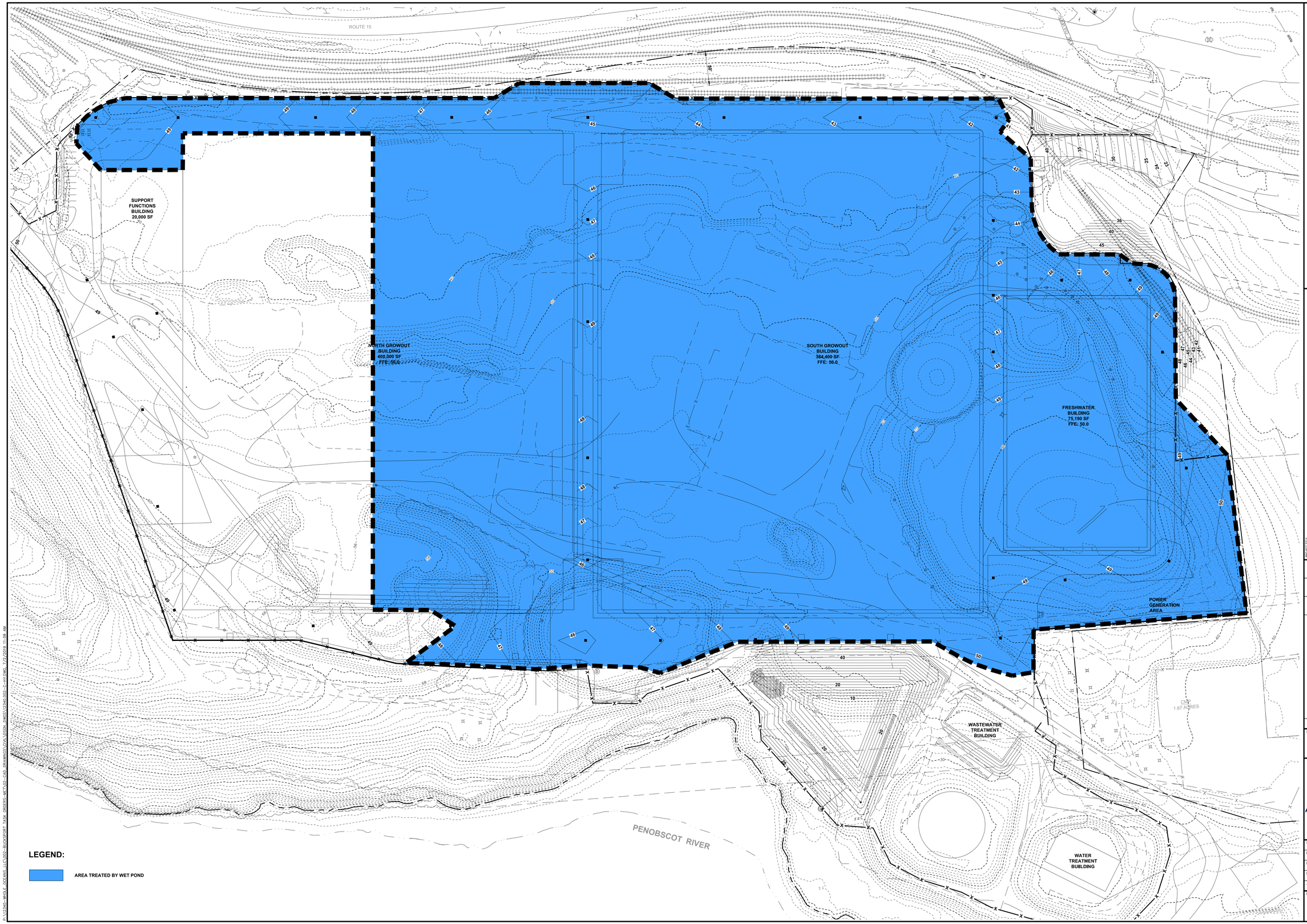
REV.	DESCRIPTION	DATE	DRAWN BY	CHECKED BY
R7				
R6				
R5				
R4				
R3				
R2				
R1				

ISSUE STATUS
ISSUED FOR PERMITTING

STATE OF MAINE
WHITTEN, JR.
No. 10414
07/02/2019
LICENSED
PROFESSIONAL ENGINEER

SCALE	NTS
DATE	2019-05-22
DRAWN BY	WAB
CHECKED BY	CTM
DESIGNED BY	
APPROVED BY	
JOB NUMBER	12340.002
DRAWING NUMBER	C503

P:\12340-WHOLE OCEANS_LLC\002-BUCKSPORT FACIL ORDERS-MET\02-CAD_DRAWINGS\CIVIL\DESIGN_PLANS\12340.002-C-SITEINFO, 7/2/2019 11:01 AM



CES INC
Engineers • Environmental Scientists • Surveyors

Brewer
Kenduskeag Main Street
Suite 1
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Brewer, ME
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F 207-989-4881

Presque Isle
4 Main Street
PO Box 827
Presque Isle, ME
T 207-764-8412
F 207-764-8414

Waterville
4 Main Street
Suite 204
Waterville, ME
T 207-680-2202
F 207-680-2204

Machias
1191 Broadway
P.O. Box 457
Machias, ME
T 207-255-3270
F 207-255-8367

Bar Harbor
1386 State Hwy 102
Bar Harbor, ME
T 207-288-0387
F 207-288-0688

Lewiston
640 Main Street
Lewiston, ME
T 207-795-6009
F 207-795-6128

PROJECT TITLE
WHOLE OCEANS LLC
BUCKSPORT, MAINE

SHEET TITLE
STORMWATER TREATMENT PLAN

REV.	DESCRIPTION	DATE	DRAWN BY	CHECKED BY
R7				
R6				
R5				
R4				
R3				
R2				
R1				

ISSUE STATUS
ISSUED FOR PERMITTING

STATE OF MAINE
CHARLES M. WHITTEN, JR.
No. 10414
07/02/2019
LICENSED
PROFESSIONAL ENGINEER

SCALE	1"=60'
DATE	2019-06-26
DRAWN BY	WAB
CHECKED BY	CTM
DESIGNED BY	
APPROVED BY	
JOB NUMBER	12340.002
DRAWING NUMBER	C701

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