Maggie Goodlander and Jake Sullivan
86 New Castle Avenue
Portsmouth, New Hampshire
03801

March 26, 2019

To Whom It May Concern,

We hereby authorize West Environmental to act as our agent for this application.

Respectfully,

Jake Sullivan

Maggie Goodlander

WEST ENVIRONMENTAL INC.
48 Stevens Hill Road, Nottingham, NH 03290
603-734-4298 ♦ mark@westenv.net

Jake Sullivan
86 New Castle Ave
Portsmouth, NH o3801

March 27, 2019

RE: Wetland Conditional Use Permit for 86 New Castle Ave Portsmouth, NH

SUBJ: Wetland Impact Assessment Report

Dear Jake:

West Environmental, Inc. flagged the inland and tidal wetland boundaries on your property on January 15, 2019 with no snow cove. A follow-up inspection was conducted on March 20th to photo document the site and conduct a wetland evaluation. The wetlands were delineated according to the following standards:

- **US Army Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1 (January 1987).**
- **Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (2012).**
- **National List of Plant Species That Occur in Wetlands: Northeast (Region 1). U.S. Fish and Wildlife Service (May 1988).**
- **Code of Administrative Rules. Wetlands Board, State of New Hampshire (Current).**

We evaluated soil probes and plant communities to determine the edge of wetland. The inland wetland is a ditched wet meadow with areas of scrub-shrub that drains into the tidal wetland through a culvert under a berm. This area was dominated by wetland dependent plant species and hydric soils. There are paths with culverts through this wetland to the berm. There is some invasive purple loosestrife pants present but the wet meadow is dominated by grasses, sedges and wildflowers. Shrub species observed include silky dogwood, buttonbush, and northern arrowwood. There are a few invasive multiflora rose present in this wetland. The soils are silt loams under-laid by clay. There is a very small pond in the wetland that drains into the ditch system.

We have attached photo documentation of the wetlands and the inland upland buffer zone where the proposed addition and patio are planned.

Wetland Function

The wetland was evaluated utilizing a wetland assessment methodology developed by the US Army Corps of Engineers New England Divisions Highway Methodology Workbook Supplement. This evaluation is based on collection of data on the physical characteristics of the wetland through field inspections, research of existing information and best professional judgment. This methodology provides a better understanding of the physical characteristics of each wetland for both its functions and values.

The physical features were evaluated to determine if a function is present. The wetland is then evaluated to determine if the function present is a principal function of that wetland based on comparison to other wetlands in the region and using professional judgment. This assessment evaluated the following wetland functions:

- ***Groundwater Recharge/Discharge*** *– This function includes the ability of a wetland to provide recharge of surface water into the ground and/or discharge groundwater into surface waters.*

This wetland has dense soils that do not allow for groundwater recharge.

- ***Flood-flow Alteration*** *– This function considers the effectiveness of the wetland in reducing flood damage by attenuation of floodwaters for prolonged periods following precipitation events.*

This wetland provides some flood storage, but the ditching reduces the effectiveness of this function.

Sediment/Toxicant/Pathogen Retention *– The presence of this function reduces or prevents degradation of water quality because the wetland acts as a trap for sediments, toxicants or pathogens.*

This wetland provides some of this function, but the ditching reduces the resident time of stormwater in this wetland.

- ***Nutrient Removal/Retention Transformation*** *– This function relates to the effectiveness of the wetland to prevent adverse effects of excess nutrients entering surface waters or aquifers.*

The lack of organic soils and shallow or deep marsh habitat limit this function.

- ***Product Export*** *– This function relates to the effectiveness of the wetland to produce food or usable products for human or other living organisms.*

This function is provided to a small degree by the fruit bearing shrubs in this wetland

- ***Sediment/Shoreline Stabilization*** *– This function relates to the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.*

This function is present in the form of stable wet meadow banks along the ditched stream.

- ***Wildlife Habitat*** *– This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with the wetland and the wetland edge (includes resident and migratory species).*

Due to the location in a residential setting this function is moderate to low. The presence of the small stream and proximity to tidal wetlands prevent it from lower function.

Restoration Stabilization Potential *– This assessment includes evaluating the restoration potential of wetlands that have ecological deterioration due to human activity. This includes water quality impacts, invasive species, ditching and fill from erosion or human disturbance.*

There is an opportunity to restore some function by removing the culverts in this wetland and replacing them with small wooden bridges.

Wetland Impacts

There are no direct wetland impacts associated with this project. The impacts to 100-foot inland wetland buffer include 405 SF of house addition most of which in located over an existing deck and 630 SF of pervious pavers for a patio and walk ways located over lawn and landscaped areas. There are 1,729 SF of temporary impacts to lawn and landscaped areas most of which will be planted with native flowers and shrubs.

The closest temporary impacts are 39 feet away from the wetland. The closest permanent impacts are 59 feet away for the pervious patio and 63 feet for the addition. The proposed landscaping plan will re establish a vegetated buffer to the wetland in addition to the trees and shrubs that will remain in the buffer. These activities will not have a significant impact to the functions of the wetland due to the nature of the landscaped impact areas and the distance to the resource area.

Mitigation

The proposed landscaping will help mitigate wetland buffer impacts and the applicant can also remove the culverts in the ditched stream to provide unrestricted flow. We have contacted the NHDES staff and Peter Britz and both agree that this is a good restoration plan to mitigate buffer zone impacts.

This completes our report and we hope that it meets your needs. Please call our office if you have any questions or require additional information.

Sincerely,
West Environmental, Inc.

Mark C. West,
NH Certified Wetland Scientist #10

1. Looking south towards the wetland from the proposed terrace location with the studio on the right.

2. Looking north towards the house from the edge of the inland wetland.

3. Looking west at the deck where the addition is proposed. The temporary impacts will start on the other side of this landscape bed.

4. Looking north at the deck where the addition will go and the lawn area where the patio will go in front of the addition.

5. Looking south down the path through the wetland towards the tidal wetland.

6. This is a view of one of the culverts to be removed.

7. This is a view of the berm between the inland wetland and the tidal wetland on the left.

8. Looking north across the inland wetland from the berm with house in background.


86 New Castle Ave
April 2013
86 New Castle Ave
Legend
86 New Castle Ave
Google Earth
N
100 ft


86 New Castle Ave
May 2018
86 New Castle Ave
Legend
86 New Castle Ave
Google Earth
N
100 ft

WEST ENVIRONMENTAL INC

48 Stevens Hill Road, Nottingham, NH 03290
603-734-4298 ♦ mark@westenv.net

Landscaping Plant Species for 86 New Castle Road, Portsmouth 3-27-19

Below is a list of species to be planted in the temporary impact areas within the inland wetland buffer zone. Existing plants and shrubs should be salvaged prior to construction if possible.

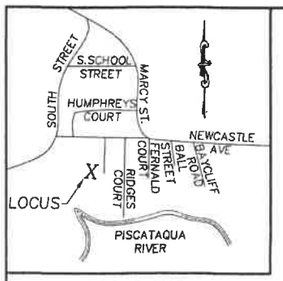
Shrubs

Arrowwood Viburnum
Azalea
Bigleaf Hydrangea
Highbush Blueberry
Lowbush Blueberry
Inkberry
Large Cranberry
Northern Bayberry
Rhododendron
Shrubby Cinqufoil
Sweet Pepperbush
Virginia Rose

Perennials and Annuals
Asters
Goldenrods
Lavender and other herbs
Anemone
Milkweed
Bachelors button
Carolina Lupine
Trillium
And many others

Wetland Restoration Notes

The culverts will be removed during low flow-dry conditions mostly by hand tools except for the concrete pipe. All exposed soils will be seeded with a native wetland seed mix and straw mulched to prevent erosion.



LOCUS MAP
NOT TO SCALE

NOTES:

1) THIS PLAN DOES NOT SHOW ANY UNRECORDED OR UNWRITTEN EASEMENTS WHICH MAY EXIST. A REASONABLE AND DILIGENT ATTEMPT HAS BEEN MADE TO OBSERVE ANY APPARENT VISIBLE USES OF THE LAND; HOWEVER, THIS DOES NOT CONSTITUTE A GUARANTEE THAT NO SUCH EASEMENTS EXIST.
2) THIS PARCEL LIES PARTIALLY WITHIN AN AE (ELEVATION 9) FLOOD ZONE, SEE F.I.R.M. COMMUNITY PANEL 33015C 0259 E DATE MAY 17, 2005.
3) ELEVATIONS SHOWN HEREON ARE BASED ON THE N.G.V.D. 1929.

PLAN REFERENCE

"PLAN OF LAND FOR WILLIAM M. & LOIS CYNEWSKI, DOROTHEA E. MARCONI, ROLAND ROUTHIER & MARY ANN MARCONI AND EDWARD F. & LOUISE D. SMITH BRACKETT ROAD / NEWCASTLE AVE" SCALE: 1"=40 DATE: JANUARY 27, 1988 BY: RICHARD P. MILLETTE AND ASSOCIATES D-17724

RECORD OWNERS

(207/70)
JACOB SULLIVAN & MARGARET GOODLANDER
86 NEWCASTLE AVENUE
PORTSMOUTH, NH 03801
BK. 5960 PG. 2666
37,536 S.F.
0.86 ACRES
AREA WITHIN OLD PAPER STREET
7,000 S.F.
0.16 ACRES
EXISTING SEALED SURFACE
4,258 S.F.
9.5%

ZONING DISTRICT

SRB

MINIMUM REQUIREMENTS

AREA	15,000 S.F.
MIN. LOT AREA/DWELLING UNIT	15,000 S.F.
MIN. OPEN SPACE	40%
MAX. BUILDING COVERAGE	20%
MAX. HEIGHT	35'/30'
FRONTAGE	100'

BUILDING SETBACKS

FRONT	30'*
SIDE	10'*
REAR	30'*

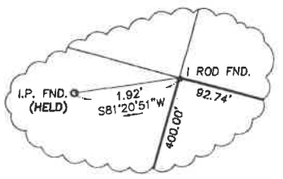
* AS PER THE CITY OF PORTSMOUTH THIS LOT (MAP 207, LOT 70) DOES NOT HAVE FRONTAGE ON AN ACCEPTED STREET OR RIGHT OF WAY AND THEREFOR IS SUBJECT TO SIDE YARD SETBACKS ON ALL SIDES.

EXISTING OPEN SPACE 90.4%
EXISTING BUILDING COVERAGE 5.9%

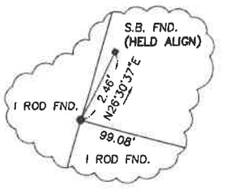
AVERAGE GRADE ELEV.=17.4
RIDGE ELEV.=37.9
EAVE ELEV.=25.8
MEAN ROOF ELEV.=31.8
EXISTING MEAN ROOF HEIGHT = 14.4'

RIGHT OF WAY NOTE:

AS PER THE CITY OF PORTSMOUTH – "IT DOESNT APPEAR THAT THE PAPER STREET WAS EVER ACCEPTED. IT WAS SUBDIVIDED 1914 (PLAN D-0188). THEN IN THE D-7855 PLAN, THE LOTS ACROSS THE PAPER STREET CLAIM TO THE MIDDLE OF THE STREET. OWNERSHIP BY REVERSION OF THE UNDEVELOPED STREET"



DETAIL
NOT TO SCALE



DETAIL
NOT TO SCALE

(101/33)
N/F
TIMOTHY & ALEXANDRA LIETO
50 NEWCASTLE AVE
PORTSMOUTH, NH 03801
BK. 5901 PG. 2097

(101/31)
N/F
NBO/TDK FAMILY TRUST FUND B
70 NEWCASTLE AVE
PORTSMOUTH, NH 03801
BK. 5341 PG. 2689

(207/71)
N/F
TIMOTHY & ALEXANDRA LIETO
50 NEWCASTLE AVE
PORTSMOUTH, NH 03801
BK. 5901 PG. 2097

(101/30)
N/F
PAMELA & ROBERT BOLEY
88 NEWCASTLE AVE
PORTSMOUTH, NH 03801
BK. 3054 PG. 0001

(207/67)
N/F
ELLEN M. HEPP REV. TRUST
28 RIDGES COURT
PORTSMOUTH, NH 03801
BK. 4640 PG. 2367

(207/66)
N/F
JOHN & SHEILA SHEA
34 RIDGES COURT
PORTSMOUTH, NH 03801
BK. 3753 PG. 1455

(207/68)
N/F
KATHLEEN Y. THOMSON REV. TRUST
56 RIDGES COURT
PORTSMOUTH, NH 03801
BK. 5938 PG. 2320

(207/69)
N/F
KATHLEEN Y. THOMSON REV. TRUST
56 RIDGES COURT
PORTSMOUTH, NH 03801
BK. 5938 PG. 2322

(207/63)
N/F
KATHLEEN Y. THOMSON REV. TRUST 2006
56 RIDGES COURT
PORTSMOUTH, NH 03801
BK. 4731 PG. 2542

(207/62)
N/F
PETER & LEE VANDERMARK
86 RIDGES COURT
PORTSMOUTH, NH 03801
BK. 2744 PG. 2766

(207/72)
N/F
DANIEL & SHEA COOK
308 THONTON STREET
PORTSMOUTH, NH 03801
BK. 5860 PG. 2754

NEWCASTLE AVENUE
BRACKETT ROAD
PISCATAQUA RIVER
35' R.O.W.
EDGE OF PAVEMENT (TYP.)
I ROD FND.
I.P. FND. (HELD)
92.74'
CHAIN LINK FENCE
S 76°06'20"E
I.P. FND.
S 74°29'51" E
17.50'
CRUSHED STONE WALK
ELECTRIC BOX
ELEC. METER
PAVERS
GAS METER
#86 EXISTING DWELLING
DOOR SILL ELEV.=19.2
DECK TO BE REMOVED
100' WETLAND BUFFER
PLANTER
ACC.
GARDEN
LANDSCAPE
SEE RIGHT OF WAY NOTE
100'
250' SHORELAND BUFFER
EXISTING BUILDING
PORCH
DECK
W1
W3
W6
W9
W11
W14
W17
N 15°49'14" E
130.00'
400.00'
S 15°30'09" W
400.00'
S 15°30'09" W
BUILDING SETBACK (TYPICAL)
PATH
100' SHORELAND BUFFER
S.B. FND. (HELD ALIGN)
N 75°05'30" W
99.08'
I ROD FND.
I.P. FND.
I ROD FND.
I.P. FND.
ZONE X
ZONE AE (EL 9)
H.O.T.L.
94.96'
N 75°05'06" W
I.P. FND.
N 74°29'51" W
17.50'
"T.B.M." TOP OUTSIDE CORNER CONCRETE PAD ELEV.=17.88 (N.G.V.D. OF 1929)
I.P. FND.
AREA TO OLD PAPER STREET BELIEVED TO BE OWNED IN FEE (SULLIVAN & GOODLANDER). LEGAL OPINION IS BEING SOUGHT. SEE RIGHT OF WAY NOTE
D-17724

LEGEND

■ S.B.	STONE BOUND
○ I.P.	IRON PIPE
• I ROD FND.	IRON ROD FOUND
0/00	ASSESSORS MAP AND PARCEL
	UTILITY POLE
—E—	UNDERGROUND ELECTRIC (APPROXIMTE LOCATION)
—o—	CHAIN LINK FENCE
W1	WETLAND FLAG
	WETLAND
H.O.T.L.	HIGHEST OBSERVABLE TIDE LINE

WETLANDS DELINEATION BY
WEST ENVIRONMENTAL
48 STEVENS HILLROAD
NOTTINGHAM, NH 03290

IN ACCORDANCE WITH THE 1987 CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL, AS REQUIRED BY THE DES WETLANDS BUREAU.

I CERTIFY:

THAT THIS ACTUAL SURVEY WAS MADE ON THE GROUND IN JANUARY OF 2019.

THAT THIS SURVEY CONFORMS TO THE REQUIREMENTS FOR ACCURACY FOR N.H. URBAN SURVEY.

STATE OF NEW HAMPSHIRE LICENSED LAND SURVEYOR No. 804 HENRY H. BOYD, JR.

03-27-2019
LICENSED LAND SURVEYOR DATE

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 INCH = 20'

UTILITIES NOTE

THE LOCATION OF UTILITIES SHOWN HEREON IS BASED ON INFORMATION PROVIDED BY OTHERS, AND WHERE POSSIBLE FROM MEASUREMENTS TAKEN IN THE FIELD, AND ARE FOR INFORMATIONAL PURPOSES ONLY. THE CONTRACTOR SHALL CONTACT "DIGSAFE" AT 1-888-344-7233 AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION TO REQUEST MARKING OF UNDERGROUND UTILITIES. MILLENNIUM ENGINEERING, INC., ASSUMES NO RESPONSIBILITY FOR ANY DAMAGES INCURRED DIRECTLY OR INDIRECTLY RESULTING THEREFROM.

EXISTING CONDITIONS

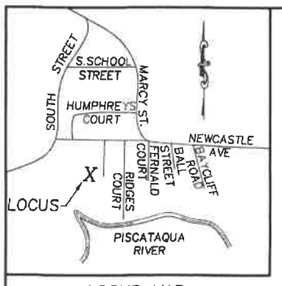
PLAT OF LAND
IN
PORTSMOUTH, NH

SHOWING
EXISTING CONDITIONS
AT 86 NEWCASTLE AVENUE
(ASSESSORS MAP 207 LOT 70)

RECORD OWNERS
JACOB SULLIVAN & MARGARET GOODLANDER
86 NEWCASTLE AVENUE PORTSMOUTH, NH 03801

MILLENNIUM ENGINEERING INC.
ENGINEERS AND LAND SURVEYORS
P.O. BOX 745 13 HAMPTON ROAD EXETER, NH 03833
PHONE:(603)778-0528 FAX:(603)772-0689 WWW.MEI-NH.COM

SCALE: 1"=20'	DRWN. BY: P.D.B.	PROJECT: E192257
DATE: MAR. 27, 2019	CHKD. BY: H.H.B.	



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ZONING DISTRICT
SRB

MINIMUM REQUIREMENTS	
AREA	15,000 S.F.
MIN. LOT AREA/DWELLING UNIT	15,000 S.F.
MIN. OPEN SPACE	40%
MAX. BUILDING COVERAGE	20%
MAX. HEIGHT	35'/30'
FRONTAGE	100'
BUILDING SETBACKS	
FRONT	30'
SIDE	10'
REAR	30'

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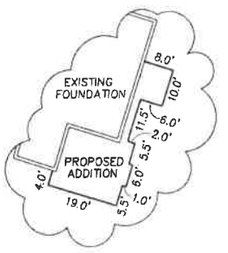

PROPOSED ADDITION
DIMENSION DETAIL

LEGEND

■ S.B.	STONE BOUND
O I.P.	IRON PIPE
• I ROD FND.	IRON ROD FOUND
0/00	ASSESSORS MAP AND PARCEL
○	UTILITY POLE
—E—	UNDERGROUND ELECTRIC (APPROXIMTE LOCATION)
—o—	CHAIN LINK FENCE
W1	WETLAND FLAG
	WETLAND
H.O.T.L.	HIGHEST OBSERVABLE TIDE LINE
	TEMPORARY IMPACT AREA

EXISTING WETLAND AND BUFFER AREAS ON LOT

TIDAL WETLAND	687 S.F.
250' SHORELAND BUFFER	11,844 S.F.
INLAND WETLAND	15,044 S.F.
100' INLAND BUFFER	11,844 S.F.

PROPOSED IMPACT AREAS

PROPOSED ADDITION	405 S.F.
PERVIOUS PAVERS	+ 630 S.F.
PERMANENT NEW IMPACT	1,035 S.F.
TEMPORARY IMPACT	1,729 S.F.

♣ TEMPORARY IMPACT AREAS ARE TO BE LANDSCAPED WITH MULCH AND PLANTINGS.

I CERTIFY:

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STATE OF NEW HAMPSHIRE — No. 904 HENRY H. BOYD, JR. — LICENSED LAND SURVEYOR

SIGNATURE

03-27-2019
LICENSED LAND SURVEYOR — DATE

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
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D–17724

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IN
PORTSMOUTH, NH

SHOWING
EXISTING CONDITIONS
AT 86 NEWCASTLE AVENUE
(ASSESSORS MAP 207 LOT 70)

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PHONE:(603)778–0528 FAX:(603)772–0689 WWW.MEI–NH.COM

SCALE: 1"=20'	DRWN. BY: P.D.B.	PROJECT: E192257
DATE: MAR. 27, 2019	CHKD. BY: H.H.B.	SHEET: 2 OF 2