



**Civil  
Site Planning  
Environmental  
Engineering**

133 Court Street  
Portsmouth, NH  
03801-4413

October 15, 2018

Ms. Juliet Walker, Planning Director  
City of Portsmouth Municipal Complex  
Planning Department  
1 Junkins Avenue  
Portsmouth, New Hampshire 03801

**Re: Application for Site Plan Review and Conditional Use Permit  
Port City Nissan  
Assessor's Map 236, Lot 33  
120 Spaulding Turnpike  
Altus Project #P3980**

Dear Ms. Walker:

On behalf of Two-Way Realty, LLC and Port City Nissan (PCN), Altus Engineering, Inc. (Altus) is pleased to submit an application for Site Plan Review Approval and a Conditional Use Permit for the modest expansion to their facility at 120 Spaulding Turnpike.

In 2012, PCN obtained permits to consolidate the abutting two lots and expand their facility south towards Rockingham Avenue. The work was completed in the spring of 2015. Since then they have continued to operate their business. PCN business operations require additional space to provide improved customer service and provide additional storage of vehicles. In July 2018, the Portsmouth Zoning Board of Adjustment granted PCN zoning relief to expand their facility into the Single Residence B District and the extension of the district.

The parcel is highly constricted by zoning constraints, wetland and wetland buffers and utility easements. As such, we believe that we have designed the site to balance all the constraints while minimizing the impacts to the abutters and the environment.

In September we attended the TAC Workshop and discussed the project. The plans have been advanced to address your comments and meet the Site Plan Review design criteria. We request that we are placed on the October 30<sup>th</sup> TAC meeting and the November 14<sup>th</sup> Conservation Commission meeting agendas.

A building permit was previously filed with the Board of Adjustment Application. Enclosed please find the following:

**SITE PLAN REVIEW DOCUMENTS**

- Site Plan Review Application (10 copies)
- Site Plan Review checklist (10 copies)
- Site Plans (4 full sized, 6 reduced sets)

Juliet Walker, Planning Director  
October 15, 2018  
Page 2

- Letter of Authorization
- Drainage Study (2 full copies, 8 executive summaries)
- "Green" Statement (10 copies)
- Eversource letter dated April 20, 2018 (10 copies)
- Application fee sitework estimate
- Application fee check in the sum of \$2,168.75 (\$1,168.75 SPR + \$1,000 CUP)

**CONDITIONAL USE PERMIT APPLICATION DOCUMENTS (10 copies)**

Note: Upon a favorable recommendation from the Conservation Commission 12 additional copies will be provided for the Planning Board

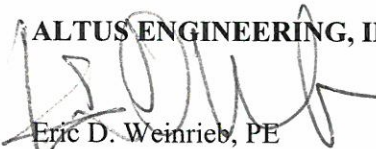
- Application for Conditional Use Permit for Use, Activity or Alteration in a Wetland or Wetland Buffer
- Project plans
  - Overall Plan
  - Conditional Use Permit Plan
- Conditional Use Permit Application Memorandum of Support
- 2012 Wetland Functions and Values Assessment by GZA
- October 2018 Wetlands Report by Michael Cuomo
- Drainage Study Executive Summary

CD with pdf copies of the full application package

We look forward to presenting the application to both the Conservation Commission and the Technical Advisory Committee. Please call or email me should you have any questions or need any additional information.

Sincerely,

**ALTUS ENGINEERING, INC.**

  
Eric D. Weinrieb, PE  
President

wde/3980 City SPR -CUP cvr ltr 10-15-18

Enclosure

Ecopy: Two Way Realty, LLC

City of Portsmouth  
 Application for Conditional Use Permit  
 For Use, Activity or Alteration in a Wetland or Wetland Buffer  
 [Zoning Ordinance – Section 10.1010 – Wetlands Protection]

Date Submitted: October 15, 2018  
 Site Address: 120 Spaulding Turnpike  
 Zoning District: GB & SRB

Fee: \_\_\_\_\_  
 Map 236 Lot 33  
 Lot area: 10.22 ac. sq. ft.

Owner		Applicant	
Name	<u>Two Way Realty, LLC</u>	Name	<u>Altus Engineering, Inc.</u>
Address	<u>120 Spaulding Turnpike</u> <u>Portsmouth, NH 03801</u>	Address	<u>133 Court St.</u> <u>Portsmouth, NH 03801</u>
Phone	<u>(603) 498-1502</u>	Phone	<u>(603) 433-2335</u>
Email	<u>rpf91@aol.com</u>	Email	<u>eweinrieb@altus-eng.com</u>

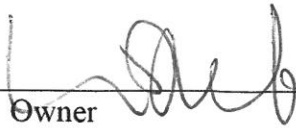
<p>Proposed Activity (check all that apply):</p> <p><input type="checkbox"/> New structure</p> <p><input type="checkbox"/> Expansion of existing structure</p> <p><input checked="" type="checkbox"/> Other site alteration (specify):  <u>Additional Parking Area</u></p>	<p>Impacted Jurisdictional Area(s) (check all that apply):</p> <p><input type="checkbox"/> Inland wetland    <input checked="" type="checkbox"/> Inland wetland buffer</p> <p><input type="checkbox"/> Tidal wetland    <input type="checkbox"/> Tidal wetland buffer</p>
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Total area of inland wetland (both on and off the parcel):	<u>93,217</u>	sq. ft.
Distance of proposed structure or activity to edge of wetland:	<u>5</u>	ft.
	Total Area on Lot	Area to be Disturbed
Inland wetland	<u>70,478</u> sq. ft.	<u>0</u> sq. ft.
Tidal wetland	<u>0</u> sq. ft.	<u>0</u> sq. ft.
Wetland buffer	<u>245,003</u> sq. ft.	<u>8,135</u> sq. ft.

Description of site and proposed construction: \_\_\_\_\_

Proposed expansion of vehicle storage parking lot (porous pavement) and building expansion for the automotive dealership service (no new impervious).

See reverse side for Submission Requirements and Information for Applicant.  
 Both sides must be signed to complete this form.

Owner  For two way realty Date: 10/15/18

Applicant (if different) \_\_\_\_\_ Date: \_\_\_\_\_



### Submission Requirements

The applicant must file 22 copies (10 copies for the Conservation Commission and 12 copies for the Planning Board) of a stamped and folded Site Plan to scale showing the location of the proposed structure, use, activity or alteration in relation to the wetland, as determined by on-site inspection by a certified wetland scientist at a time when conditions are favorable for such inspection and delineation. The plan shall include all information specified in Section 10.1017.20 of the Zoning Ordinance, and shall include a locus map with a north arrow.

### Information for Applicant

If there is any question, however slight, of the presence of wetlands on the site, the applicant should consult the City Wetlands Map on file in the Planning Department. If it appears that wetlands might exist on site, the applicant should become familiar with the provisions of Section 10.1010 of the Zoning Ordinance.

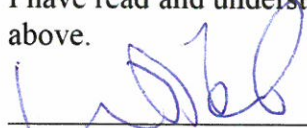
### Review by Independent Certified Wetland Scientist

In the majority of cases the Planning Board will require the opinion of a qualified independent certified wetland scientist. In such cases the procedure is that the Board applies to the Rockingham County Conservation District for the services of such an individual. The findings of the certified wetland scientist will include, but are not limited to, the suitability of the site for the proposed use and the effect of the project on the wetlands on site and in the vicinity.

The certified wetland scientist will render a report to the District, with copies to the Planning Board and the Conservation Commission. The District will bill the City directly for the services of the certified wetland scientist. The owner /applicant shall forward a check to the City made payable to Rockingham County Conservation District prior to the petition being reviewed by either the Conservation Commission or the Planning Board.

Following the receipt of the report from the Rockingham County Conservation District, the Conservation Commission will review the application and will make a recommendation to the Planning Board. Once such a recommendation is made by the Conservation Commission, the Planning Board will schedule a Public Hearing.

I have read and understand the above information. I will pay any additional fees due as required above.

 For two-way Realty Date: 10/15/18  
Owner \_\_\_\_\_ Date: \_\_\_\_\_  
Applicant (if different) \_\_\_\_\_





**Civil  
Site Planning  
Environmental  
Engineering**

133 Court Street  
Portsmouth, NH  
03801-4413

**Two Way Realty LLC  
120 Spaulding Turnpike  
Assessor's Parcel 236-33**

*Port City Nissan*

**Conditional Use Permit  
Inland Wetland Protection District  
Memorandum of Support**

*October 2018*

Port City Nissan (PCN) is proposing to expand their facility along the Spaulding Turnpike. The development area on the parcel is extremely limited as there is a 300-foot wide Eversource Easement running along the eastern boundary. The Residential Zoning District SRB generally follows the Eversource easement. There are three City jurisdictional Wetlands on or adjacent to the property that impact the development area. There is very little area to expand their operations outside the wetland buffer. On site wetlands and wetland buffers encumbers over 70 percent of the entire lot.

Two areas have been identified potential expansion areas. One area is close to Farm Lane, the other is in the location that the proposed parking lot is shown. Approximately 15-years ago, PCN proposed to expand their operations in the Eversource easement area adjacent to Farm Lane. That expansion was met with strong opposition from the nearby residential property owners that resulted in a court ruling in favor of the abutters.

On July 24, 2018, the Portsmouth Zoning Board of Adjustment voted to grant a variance to allow the expansion of the parking lot in the residential district. The proposal brought forward included expanding the parking lot to within 187-feet of the nearest residential structure. The BOA did not support the application as presented. However, they voted to approve the development with a modification requiring that the parking lot be 200-feet from the nearest residential property. Thus, the project went from developing a 12,000 SF parking lot down to a 6,200 SF parking surface. They also voted to approve the construction of a 1,200 SF building addition for a drive thru service bay which is in the residential district extension area. The building expansion is entirely within existing paved surfaces and the wetland buffer.

The wetlands were delineated in 2011 by Jamie Long of GZA. On behalf of the City of Portsmouth, Michael Cuomo completed an independent peer review of the work. Since, the

4. *Alteration of the natural vegetative state or managed woodland will occur only to the extent necessary to achieve construction goals.*

There will be no new permanent impacts to the vegetated buffer. The impacts for the building will be within existing paved surfaces.

5. *The proposal is the alternative with the least adverse impact to areas and environments under the jurisdiction of this section.*

The proposed design is the least impacting as reasonably possible. From the parking lot expansion all runoff from paved surfaces will be treated using best management practices.

The porous parking lot will reduce temperature of the runoff discharging to the wetland buffer. The reduction in pavement associated with the building expansion will also reduce both the runoff and improve the quality of runoff. Drip edges will improve the potential for infiltration during smaller storm events.



**Michael Cuomo, Soil Scientist**  
6 York Pond Road, York, Maine 03909  
207 363 4532  
mcuomosoil@gmail.com

Eric Weinrieb, P.E.  
Altus Engineering, Inc.  
133 Court Street  
Portsmouth, NH 03801-4413

4 October 2018

Dear Mr. Weinrieb;

This letter is in reference to the Port City Nissan property, located at 120 Spaulding Turnpike, in Portsmouth, NH. On 18 September 2007 I conducted a wetland delineation on this property. On 1 October of this year I returned to the site to review the wetland delineation to determine if it needed to be updated.

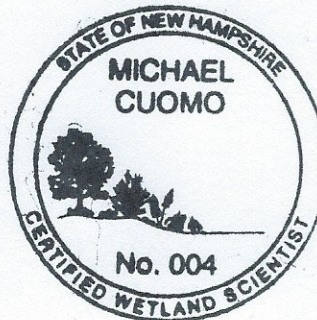
Most of the old flags could not be found. I viewed the wetland lines in numerous locations to observe the soils and vegetation. I reconstructed the previous wetland delineation based on site features and am confident the the 2013 wetland delineation meets current standards. No changes were made or are needed.

Please call if you have questions regarding this work.

Sincerely,



Michael Cuomo  
NH Wetland Scientist #4  
NH Soil Scientist #6





# **DRAINAGE ANALYSIS**

**FOR**

## **Port City Nissan Site Expansion**

**120 Spaulding Turnpike  
Portsmouth, NH**

**Tax Map 236 Lot 33**

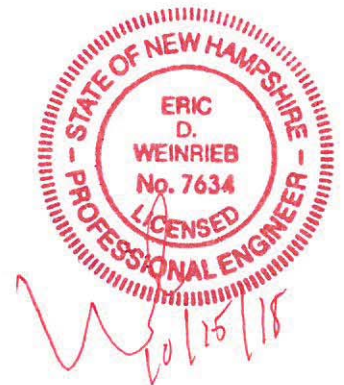
**October 15, 2018**

*Prepared For:*

**Two-Way Realty, LLC  
120 Spaulding Turnpike  
Portsmouth, NH 03801**

*Prepared By:*

**ALTUS ENGINEERING, INC.  
133 Court Street  
Portsmouth, NH 03801  
Phone: (603) 433-2335**



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Appendix B: Hydrologic Data

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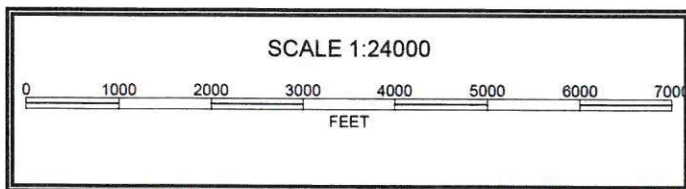
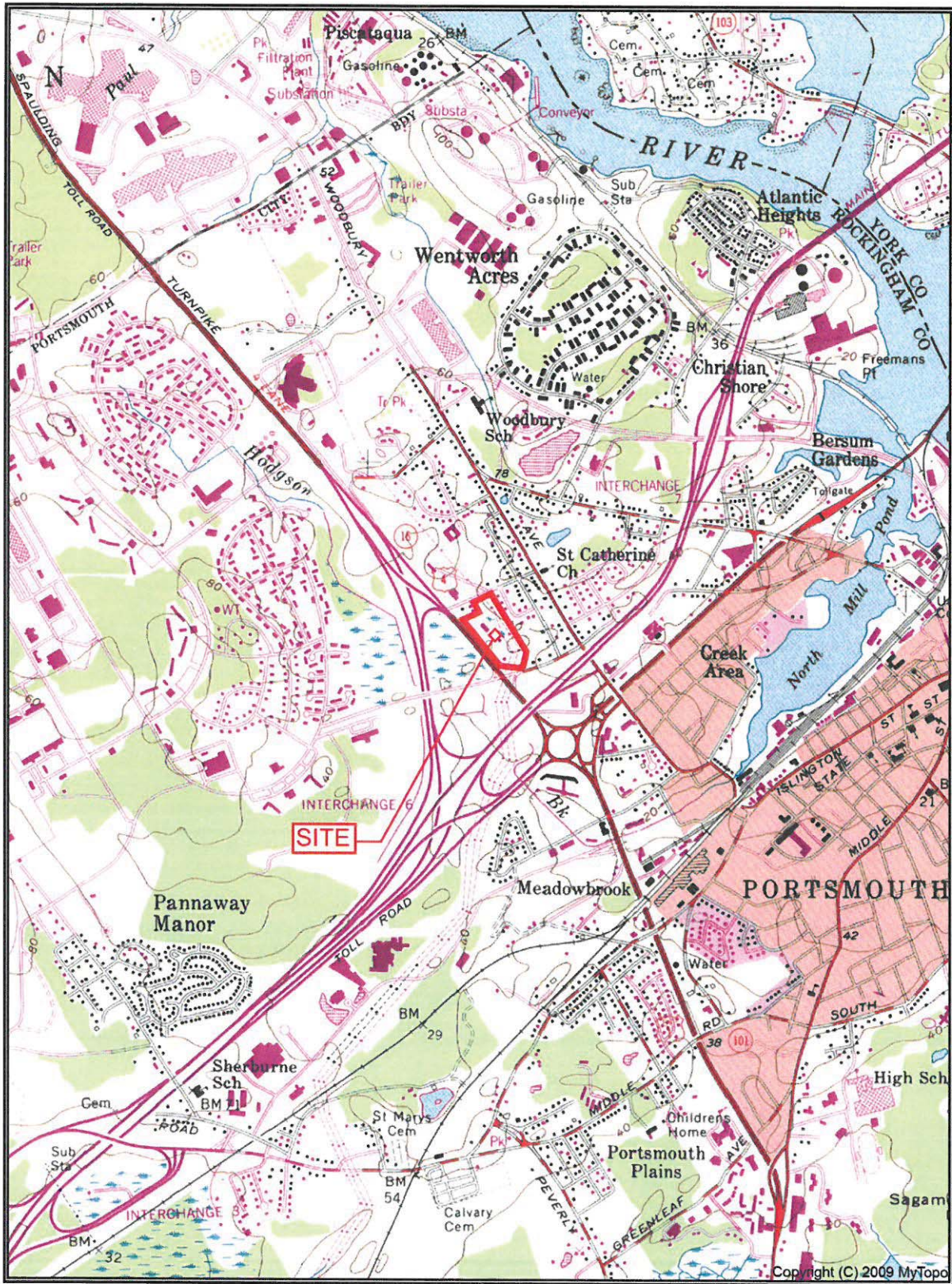
Appendix D: Stormwater Operations and Maintenance Plan  
(Amended to Include Porous Pavement)

Appendix E: Watershed Plans

Pre-Development Watershed Plan

Post-Development Watershed Plan







Soil Map—Rockingham County, New Hampshire  
(PORT CITY NISSAN)



Map Scale: 1:2,150 if printed on A portrait (8.5" x 11") sheet.

0 30 60 120 180 Meters

0 100 200 400 600 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84





## PROJECT DESCRIPTION

### *Site Overview*

120 Spaulding Turnpike is proposing to expand their existing operation through construction of a new service bay and additional on site parking. The new service bay will be constructed in an area where there is currently paved parking stalls, thus no there will not be an increase increasing in impervious area. There will actually be a slight decrease of 1,285 SF of impervious surface area due to the construction of three landscaped islands and the removal of 375 SF of pavement. The proposed parking lot expansion area will be 6,200 sf in size and will be constructed of porous pavement to minimize impacts to the adjacent wetlands.

The existing site was permitted in 2012 and includes three raingardens in combination with both closed and open drainage systems. The primary components of the 2012 improvements were the demolition of the abandoned residential/retail building, the construction of a new paved parking and display area, the conversion of the abandoned bookstore to an auto reconditioning facility, the reconstruction of the shared access drive to the Spaulding Turnpike, associated utilities and extensive stormwater infrastructure designed to treat all new paved areas as well as a significant portion of the existing untreated dealership site.

The three raingardens provide treatment prior to discharging surface flows off-site. The existing site drains to two large NHDOT cross culverts under the Spaulding Turnpike to the west. These culverts in turn drain to ditches tributary to the Hodgson Brook. In combination, the existing system provides treatment for the majority of site's impervious areas and allows for decreased peak rates of runoff as a result of the raingardens on site.

The existing effective impervious area is 24.0% and will be decreased to 23.7% as a result of the proposed site improvements.

### *Site Soils*

The NRCS indicates that the subject property consists of several primary soil classifications:

799 – Urban Land-Canton Complex, 3 to 15% slopes, Hydrologic Soil Group (HSG) B

Given the presence of poorly-drained soils within the site and its contributing watershed areas, uplands were treated as HSG B while wetlands were designated HSG C for the purposes of this analysis.

### ***Proposed Site Design***

The existing site was permitted in 2012 and includes both open and closed drainage systems to collect the majority of the stormwater from the parking and display areas and convey it to three raingardens for treatment prior to discharging off-site.

Raingarden #1, located to the south of the service building handles runoff from a portion of the parking area behind the building as well as the small parking and accessway in front of it. This raingarden directs its runoff to an existing pipe draining from a catch basin at the existing entrance to the abutting parcels. Two deep sump catch basins at the reconstructed driveway also direct runoff to this pipe.

Raingarden #2, this pond collects some of its incoming runoff in a tributary swale that acts as a sediment forebay.

Raingarden #3, located above and draining to Raingarden #2, serves the majority of the paved parking and display areas. Some runoff is directed to this facility by way of two depressed landscape islands equipped with deep sump catch basins with raised rims that provide additional pre-treatment to some areas of the parking lot.

In combination, the system provides excellent treatment for the site's new impervious areas, provides treatment of existing paved areas that currently have none, and allows for decreased peak rates of runoff for all analyzed storms.

The proposed site improvements include 6,200 SF of new porous pavement for the parking lot expansion. The improvements at the new service bay will reduce the effective impervious by 1,285 SF. Therefore, the net impact of the proposed improvements is a reduction in the stormwater runoff.

The Following Changes were made to the existing drainage model permitted in 2012:

1. Rainfall Intensities were updated to current NE Climate Center Extreme Precipitation data and a 15% increase was added as a Seacoast Community, per AOT guidelines.
2. 6,200 SF Porous Pavement Area was added as Drainage Area (DA) 31S.
3. 4,350 SF of brush was moved from DA 2S to DA 4S based on grading revisions.
4. 290 SF of brush was moved from DA 2S to DA 21S based on grading revisions.
5. 1,285 SF of impervious from DA 2S was converted to grass for new landscaping areas and the removal of 375 SF of pavement.

Site topography, existing features, proposed site improvements, proposed grading, drainage and erosion control measures are shown on the accompanying plans. Recommended erosion control measures are based upon the December 2008 edition of the "*New Hampshire Stormwater Manual Volumes 1 through 3*" prepared by NHDES and Comprehensive Environmental, Inc. as amended.



## SUMMARY

### *Drainage Analysis*

The modeled subcatchments and points of analysis are delineated on the accompanying “Existing Conditions Watershed Plan” which illustrates the existing site conditions. Two point of analysis (POA) were identified for comparison of pre-development and post-development conditions. Reach #100 is the existing NHDOT cross culvert in the northwest corner of the site, and Reach #200 is a similar cross culvert at the south west corner of the site.

The “Proposed Conditions Watershed Plan” illustrates the proposed stormwater management system. The original subcatchments have been divided into additional areas to emulate the proposed grading and site improvements for this project. The post-development conditions were analyzed at the same primary discharge points examined in the pre-development modeling.

### *Drainage Analysis*

A complete summary of the drainage model is included later in this report. The following table compares pre- and post-development peak rates of runoff for all analyzed storm events (all rates are rounded to the nearest tenth to reflect the accuracy of the modeling techniques used):

**Stormwater Modeling Summary**  
**Peak Q (cfs) for Type III 24-Hour Storm Events**

	<b>2-Year Storm (3.68 inch)</b>	<b>10-Year Storm (5.59 inch)</b>	<b>25-Year Storm (7.08 inch)</b>	<b>50-Year Storm (8.49 inch)</b>
<b><u>Reach #100</u></b>				
<b>NW NHDOT Culvert</b>				
Pre	10.16	26.46	37.29	48.41
Post	9.98	26.00	37.11	47.56
<b>Net Change</b>	<b>-0.18</b>	<b>-0.46</b>	<b>-0.51</b>	<b>-0.85</b>
<b><u>Reach #200</u></b>				
<b>SW NHDOT Culvert</b>				
Pre	11.75	29.38	42.87	52.59
Post	11.83	29.56	43.09	52.79
<b>Net Change</b>	<b>0.08</b>	<b>0.18</b>	<b>0.22</b>	<b>0.20</b>
<b>TOTAL CHANGE</b>	<b>-0.10</b>	<b>-0.28</b>	<b>-0.29</b>	<b>-0.65</b>

NOTE: Rainfall Intensities obtained from Northeast Regional Climate Center’s Extreme Precipitation Tables and includes a 15% increase for NH Seacoast communities, per NHDES requirements.

As the above table demonstrates, the proposed peak rates of runoff will match or be decreased from the existing conditions of the site at the analysis points for all analyzed storm events.

## CONCLUSION

This proposed expansion of the project site located east of the Spaulding Turnpike in Portsmouth, NH will have minimal adverse effect on abutting properties and infrastructure as a result of stormwater runoff or siltation. Post-construction peak rates of runoff from the site will be lower than the existing conditions for all analyzed storm events. Appropriate steps will be taken to properly mitigate erosion and sedimentation through the construction of a drainage system consisting deep-sump catch basins, depressed landscape islands, a sediment forebay, three raingardens with stormwater detention capability and the use of temporary and permanent Best Management Practices for sediment and erosion control. Large areas of the site that currently receive no stormwater treatment will be conveyed to one of the three raingardens prior to discharging to adjacent wetland systems. Overall, the project will be highly beneficial to these wetlands and the downstream Hodgson Brook.

## CALCULATION METHODS

The drainage study was completed using the USDA SCS TR-20 Method within the HydroCAD Stormwater Modeling System. Reservoir routing was performed with the Dynamic Storage Indication method which automates the calculation of Tailwater conditions. A Type III 24-hour rainfall distribution was utilized in analyzing the data for the 2, 10, 25 and 50 Year - 24-hour storm events using rainfall data provided by NH Department of Environmental Services.

### *Disclaimer*

Altus Engineering, Inc. notes that stormwater modeling is limited in its capacity to precisely predict peak rates of runoff and flood elevations. Results should not be considered to represent actual storm events due to the number of variables and assumptions involved in the modeling effort. Surface roughness coefficients ( $n$ ), entrance loss coefficients ( $k_e$ ), velocity factors ( $k_v$ ) and times of concentration ( $T_c$ ) are based on subjective field observations and engineering judgment using available data. For design purposes, curve numbers ( $C_n$ ) describe the average conditions. However, curve numbers will vary from storm to storm depending on the antecedent runoff conditions (ARC) including saturation and frozen ground. Also, higher water elevations than predicted by modeling could occur if drainage channels, closed drain systems or culverts are not maintained and/or become blocked by debris before and/or during a storm event as this will impact flow capacity of the structures. Structures should be re-evaluated if future changes occur within relevant drainage areas in order to assess any required design modifications.



**WETLAND FUNCTIONS AND  
VALUES ASSESSMENT**

**TAX MAP 236, LOT 33  
SPAULDING TURNPIKE  
PORTSMOUTH, NEW HAMPSHIRE**

**PREPARED FOR:**

Altus Engineering, Inc.  
Portsmouth, New Hampshire

**PREPARED BY:**

GZA GeoEnvironmental, Inc.  
Manchester, New Hampshire

June 2012  
File No. 04.0029410.00



June 28, 2012  
File No. 04.0029410.00



Mr. Eric Weinrieb  
Altus Engineering, Inc.  
133 Court Street  
Portsmouth, New Hampshire 03801

Re: Wetland Functions and Values Assessment Report  
Tax Map 236, Lot 33  
Spaulding Turnpike  
Portsmouth, New Hampshire

Dear Eric:

380 Harvey Road  
Manchester  
New Hampshire  
03103-3347  
603-623-3600  
FAX 603-624-9463  
www.gza.com

In accordance with our proposal dated August 24, 2011, GZA GeoEnvironmental, Inc. is pleased to provide the attached Wetland Functions and Values Assessment Report for the above-referenced Site. This assessment was completed in accordance with the guidelines described in the United States Army Corps of Engineers' "Highway Methodology Workbook Supplement" (September 1999). Wetland areas were classified according to "Classification of Wetlands and Deepwater Habitats of the United States" (United States Fish and Wildlife Service, 1979).

If you need any additional information, please call Sergio Bonilla at 232-8738 or James Long at 232-8756.

Very truly yours,

GZA GEOENVIRONMENTAL, INC.

A handwritten signature in black ink, appearing to read 'Sergio Bonilla', written in a cursive style.

Sergio Bonilla  
Wetland/Wildlife Ecologist

A handwritten signature in black ink, appearing to read 'James H. Long', written in a cursive style.

James H. Long, CWS, CSS  
Senior Technical Specialist

A handwritten signature in black ink, appearing to read 'Lawrence E. Morse', written in a cursive style.

Lawrence E. Morse  
Associate Principal

A handwritten signature in black ink, appearing to read 'Ronald A. Breton', written in a cursive style.

Ronald A. Breton  
Consultant/Reviewer

SB /JHL/LEM/RAB:erc

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Attachment Wetland Functions and Values Assessment Report

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## 1.0 INTRODUCTION



This report provides an assessment of functions and values for freshwater wetlands performed by GZA GeoEnvironmental, Inc. (GZA) on property located at 120, 100, and 80 Spaulding Turnpike in Portsmouth, New Hampshire. This report was compiled for Altus Engineering, LLC, in support of future expansion of property owned or controlled by Port City Nissan.

The subject parcel is approximately 10 acres in size and is identified as Tax Map 236, Lot 33 (Site). The Site is currently occupied by Port City Nissan and two commercial buildings to the east. It is bounded to the west by the Spaulding Turnpike (Route 4/Route 16), to the east by Clover Lane and Meadow Road, to the south by Rockingham Avenue, and to the north by Farm Lane. There is a 300-foot-wide Public Service Company of New Hampshire (Public Service) easement across the property. The surrounding land use is commercial and/or residential. Land use directly adjacent to the Spaulding Turnpike consists of commercial buildings with associated parking, and stormwater structures.

It is our understanding the proposal to redevelop the site will not require direct impacts to wetland resources on site but will require alteration of wetland buffers adjacent to them. This assessment has been conducted to assess the functions and values of the wetland systems adjacent to the areas of proposed buffer disturbance. Existing features of the site are depicted by an Existing Conditions Plan prepared by MSC Engineers and Surveyors, Inc and the proposed redeveloped condition for the site are depicted by a Grading and Drainage Plan and a Conditional Use Permitting Plan prepared by Altus Engineering, Inc. (see **Figures 1, 2 and 3**, respectively).

## 2.0 METHODOLOGY

Fieldwork associated with the delineation of wetlands on the Site was conducted in September 2011 by GZA in accordance with the United States Army Corps of Engineers' (ACOE's) 1987 *Wetlands Delineation Manual, Technical Report Y-87-1*, and the *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual North Central and Northeast Region*, dated October 2009. For purposes of identification, three of the wetlands on the Site adjacent to the proposed redevelopment were evaluated by this assessment and have been designated as Wetland 1, Wetland 2, and Wetland 3 (see **Appendix A, Photo Location Plan**).

Functions and values of the Site wetlands were assessed by GZA on September 27, 2011 using the *Highway Methodology Workbook Supplement* (ACOE, September 1999). The functions and values assessment was also evaluated in the context of Article 10, Section 10.1010 Wetlands Protection, under the City of Portsmouth Zoning Ordinance. Wetland areas were classified according to *Classification of Wetlands and Deepwater Habitats of the United States* (United States Fish and Wildlife Service, 1979). Each assessed area, with associated functions and values, is described in detail in the functions-values evaluation forms (see **Appendix B, Wetland Functions-Values Evaluation Forms**). A general summary of wetland functions and values is also provided in the attached summary table (**Table 1, Functions-Values Summary Table**) and in the discussions below.

Functions and values assessed for each wetland system include: groundwater recharge/discharge, floodflow alteration, fish/shellfish habitat, sediment/toxicant retention, nutrient removal, production export, sediment/shoreline stabilization, wildlife habitat, recreation, education/scientific value, visual quality/aesthetics, uniqueness/heritage and endangered species



habitat. Functions and values are considered “principal” if they are determined to be an important component of a wetland ecosystem. Functions and values may be considered “capable” if a wetland can provide any given function or value on a limited basis. The rationale for the assignment of functions as principal or capable is based upon professional judgment, with guidance provided by a list of considerations outlined in the ACOE methodology. In addition, lists of observed plant species (**Appendix C**), as well as potential and observed wildlife species (**Appendix D**) are attached.

A photographic log documenting typical wetland conditions within each of the assessed wetlands is included with this report (**Appendix E, Photographs**). The New Hampshire Natural Heritage Bureau (NHB) database was consulted relative to any records of Endangered or Threatened species of special concern and/or exemplary natural communities being present on or near the Site. The NHB database search results are included with this report (**Appendix F, New Hampshire Natural Heritage Bureau Database Review**). The capability of the wetland systems on Site to provide habitat for these species or communities was evaluated based on the assessed characteristics of these wetlands and the known preferences of these species or communities.

### 3.0 DISCUSSION

#### 3.1 WETLAND 1

Wetland 1 consists of a small, isolated wetland system that has been fragmented due to the surrounding development and the Public Service easement. It is dominated by narrow-leaved cattail (*Typha angustifolia*), and the edges between the upland and wetland are scrub shrub. The wetland is classified as a palustrine dominantly emergent system mixed with a scrub shrub system that is seasonally flooded or saturated (PEM/SS1E). Hydrology supporting Wetland 1 is provided by surface water and stormwater runoff generated by the surrounding development and utility right-of-way (ROW). The soils are poorly-drained marine silts and clays. Drainage from this wetland system is directed to a drainage structure which passes underneath the Spaulding Turnpike and enters Hogsdon Brook. Plant species within the wetland include, but are not limited to, narrow-leaved cattail, purple loosestrife (*Lythrum salicaria*), sensitive fern (*Onoclea sensibilis*), golden rod (*Solidago* spp.), jewelweed (*Impatiens capensis*), boneset (*Eupatorium perfoliatum*), northern arrowwood (*Viburnum recognitum*), glossy buckthorn (*Rhamnus frangula*), multiflora rose (*Rosa multiflora*), Russian olive (*Elaeagnus angustifolia*), and staghorn sumac (*Rhus typhina*). The portion of Wetland 1 adjacent to the Spaulding Turnpike is periodically maintained for visibility by the New Hampshire Department of Transportation and the remainder of the wetland on site is subject to periodic utility ROW vegetation management practices by Public Service Company of New Hampshire.

Wetland 1 is capable of providing three functions and values: Sediment /Toxicant Retention, Nutrient Removal, and Production Export. Although this wetland’s dense vegetation has the ability to provide these functions, its size and location adjacent to development/management activities limits any of these functions in being considered as principal functions. There are no known endangered species or exemplary communities associated with Wetland 1.

The existing undeveloped buffer of Wetland 1 consists of scrub shrub vegetation and approximately 20 feet of maintained lawn area behind and on the southerly side of the a building and paved parking area located adjacent to the Spaulding Turnpike. In the existing condition, the portion of the buffer area between the existing development and Wetland 1 is limited to providing minimal sediment/toxicant retention and nutrient removal in the form of sheet flow filtering





through maintained lawn and shrub areas. The redevelopment proposal impacts 11,889 square feet of the 100 foot Wetland Buffer established per Article 10.1014.22 of the City of Portsmouth Zoning Ordinance as amended through May, 2012 (City Wetland Buffer). Note that a majority of the area requested to be impacted is already developed. Most of the site runoff generated by the proposed condition that flows toward Wetland 1 is being directed to Raingarden 1, to be constructed south of the adjacent building, where it will be treated. Discharge from the raingarden is directed into the existing storm drainage system along the Spaulding Turnpike.

### 3.2 WETLAND 2

Wetland 2 consists of a small, isolated system that has been fragmented due to the surrounding development. The majority is under the Public Service easement and subject to periodic utility ROW vegetation management practices. Drainage flows off of Clover Lane, into and through Wetland 2, and then enters Wetland 3 via a closed pipe drainage system. The majority of Wetland 2 is classified as a palustrine persistent emergent system that is seasonally flooded or saturated (PEM1E). The central portion and southern end are dominated by broad-leaved cattail and purple loosestrife. The northwest portion is dominated by common reed (*Phragmites australis*). Hydrology supporting Wetland 2 is provided by surface water and stormwater run-off. The soils are poorly drained marine silts and clays. Plant species in Wetland 2 include, but are not limited to, narrow-leaved cattail, broad-leaved cattail, purple loosestrife, common reed, silky dogwood (*Cornus amomum*) and willow (*Salix* spp.). Wetland 2 is capable of providing three functions and values: Sediment /Toxicant Retention, Nutrient Removal, and Production Export. As with Wetland 1, although this wetland's dense vegetation has the ability to provide these functions, its size and location adjacent to development/management activities limits any of these functions in being considered as principal functions. There are no known endangered species or exemplary communities associated with Wetland 2.

The existing undeveloped buffer of Wetland 2 consists of scrub shrub vegetation and some maintained lawn areas behind the existing buildings and associated paved areas. In addition, there are existing dumpsters (proposed to be removed), propane tanks and a picnic area containing tables. Similar to Wetland 1, the existing condition of the undeveloped buffers is limited to providing minimal sediment/toxicant retention in the form of sheet flow filtering through maintained lawn areas as well as nutrient removal and uptake capabilities. The redevelopment proposal impacts 16,654 square feet of the City Wetland Buffer. A majority of the area requested to be impacted is already developed. Most of the site runoff that is generated by impervious surfaces in the proposed condition is being collected and directed to Raingarden 3, to be constructed along the front of the property adjacent to the Spaulding Turnpike, where it will be treated. Discharge from the raingarden is directed into another raingarden system (Raingarden 2) to be constructed adjacent to the Spaulding Turnpike along the front of the existing Port City Nissan property.

### 3.3 WETLAND 3

Wetland 3 consists of a small, isolated, manmade drainage structure which is adjacent to the Spaulding Turnpike near the northwest end of the property. The majority of the wetland is on State-owned property associated with the Spaulding Turnpike. The wetland is mowed except for the area northwest of the concrete drainage structure that provides an outlet to the wetland, which flows underneath the Spaulding Turnpike and then enters Hogsdon Brook. The wetland is classified as a palustrine persistent emergent system that is seasonally flooded or saturated, that has been excavated (PEM1Ex). It is dominated by broad-leaved cattail and purple loosestrife. Hydrology supporting Wetland 3 is provided by surface water and stormwater run-off. Wetland 3 also receives run-off from a drainage structure that is located underneath the parking lot and



receives the discharge from Wetland 2. The soils in Wetland 3 are poorly drained marine silts and clays. Wetland 3 is capable of providing two functions and values: Sediment/Toxicant Retention and Nutrient Removal. As with Wetlands 1 and 2, this wetland's dense vegetation, coupled with its proximity to the Spaulding Turnpike, results in its ability to provide these functions. It's very small size, however, limits any of these functions in being considered principal functions. There are no known endangered species or exemplary communities associated with Wetland 3.

The existing buffer of Wetland 3 consists of maintained lawn along the frontage of the dealership and the Spaulding Turnpike. In the existing condition the undeveloped buffers are limited to providing minimal sediment/toxicant retention as well as nutrient removal and uptake capabilities in the form of sheet flow filtering through the maintained lawn areas. The redevelopment proposal impacts 14,489 square feet of the City Wetland Buffer. Only 94 square feet will be replaced with impervious surfaces. The majority of site run-off that is generated by impervious surfaces in the proposed condition is being collected and directed to Raingarden 2, to be constructed along the front of the property adjacent to the Spaulding Turnpike, where it will be treated.

#### **4.0 CONCLUSION**

The wetlands present on the site were assessed based on their capacity to provide functions and values according to the ACOE's "Highway Methodology Workbook Supplement." The site contains three low-quality, isolated wetlands that have been fragmented due to the surrounding development and vegetation management activities. No principal functions were identified, although all three are capable of providing sediment/toxicant retention and nutrient removal, and two are capable of providing production export. These functions are supported primarily by the wetlands' vegetation density but are diminished due to their fragmentation by the surrounding development, a major highway (Spaulding Turnpike) adjacent to the wetlands and vegetation management activities associated with the turnpike and utility ROW.

The capable functions and values provided by these wetlands are associated with their ability to remove pollutants from run-off generated within their watersheds. The additional impacts to the City Wetland Buffers requested by the proposed redevelopment of the site will not result in a direct impact to the wetlands themselves and therefore will not result in a direct impact to these functions and values. It is GZA's professional opinion that the three proposed raingardens incorporated into the design will replace and improve upon the limited capabilities of the existing undeveloped buffers to provide stormwater treatment for sediment/toxicant retention and nutrient removal before entering the adjacent wetland systems. In addition the design of the raingardens provides the potential for thermal attenuation of the stormwater generated by the site before it is discharged to the wetlands and eventually enters nearby Hogsdon Brook.

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## **TABLES**

**WETLAND FUNCTION-VALUE SUMMARY TABLE**

**Tax Map 236, Lots 33, 37 and 38  
Portsmouth, New Hampshire**

Plan ID	Wetland ID	Classification (1) (Cowardin et. al 1979)	Functions and Values (2)													Proposed Impact (3) (sq. ft.)
			GW	FA	FH	STR	NR	PE	SS	WH	RE	ES	UH	VQ	ESH	
?	01	PEM/SS1E				X	X	X								U
?	02	PEM1E				X	X	X								U
?	03	PEM1Ex				X	X									U

**(1) Key to classifications:**

P = palustrine wetland system  
 FO = forested, SS = scrub-shrub; 1 = deciduous  
 EM = emergent; 1 = persistent  
 OW = open water  
 E = saturated or seasonally flooded, J = intermittently flooded  
 R = riverine wetland system; 2 = lower perennial; OW = open water

**Key to function/value occurrence symbols:**

Blank space = function/value is not occurring in wetland  
 X = wetland is capable of performing this function/value  
 P = function/value is considered principal in wetland

**(2) Key to functions and values:**

GW = groundwater recharge/discharge	FA = floodflow alteration	FH = fish and shellfish habitat
STR = sediment/toxicant retention	NR = nutrient removal	PE = production export (nutrient)
SS = sediment/shoreline stabilization	WH = wildlife habitat	RE = recreation
ES = educational/scientific value	UH = uniqueness/heritage	VQ = visual quality/aesthetics
ESH = endangered/threatened species habitat		

**(3) Proposed wetland impact areas (in square footage) are based on jurisdictional wetland delineations (performed by GZA using the 1987 Corps of Engineers Wetlands Delineation Manual and Interim Regional Supplement) and final design of the proposed project. Impacts include direct (permanent and temporary) and secondary impacts (tree removal).**

U = unknown at this time



## **FIGURES**



**LEGEND**

- AC AIR CONDITIONER
- BK.2562/PG.2783 BOOK NO./PAGE NO.
- CMP CORRUGATED METAL PIPE
- INV INVERT
- HDPE HIGH DENSITY POLYETHYLENE
- N/F NOW OR FORMERLY
- RCP REINFORCED CONCRETE PIPE
- RCRD ROCKINGHAM COUNTY REGISTRY OF DEEDS
- R.O.W. RIGHT OF WAY
- S.F. SQUARE FEET
- PSNH PUBLIC SERVICE OF NEW HAMPSHIRE
- NET NEW ENGLAND TELEPHONE
- PVC POLYVINYL CHLORIDE
- ▲ CATCHBASIN
- ◻ WETLAND FLAG LOCATION
- FENCE
- HANDICAP PARKING
- PARKING COUNTER
- UTILITY POLE
- GUY POLE/WIRE
- LIGHT POLE
- MAP 236 LOT 36 ASSESSORS MAP & PARCEL NUMBER
- WETLAND SETBACK LINE
- PROPERTY LINE
- SEWER MANHOLE
- DRAIN LINE
- SEWER LINE
- EASEMENT
- SETBACK
- ZONE LINE
- WETLAND
- 30' CONTOUR
- SHRUB LINE
- TREE LINE

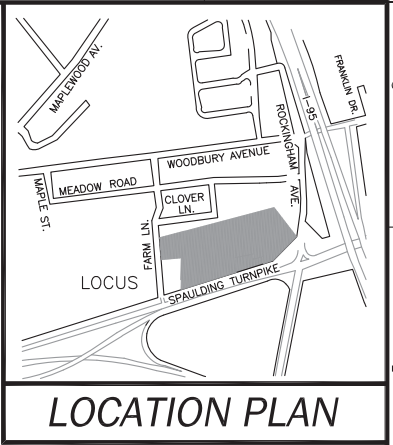
**NOTES**

1. THE PARCEL IS LOCATED IN THE GENERAL BUSINESS (GB) AND THE SINGLE RESIDENCE B (SRB) ZONES AS SHOWN.
2. THE PARCELS ARE SHOWN ON THE CITY OF PORTSMOUTH ASSESSOR'S MAP 236 AS LOTS 33, 37 AND 38.
3. THE PARCELS ARE LOCATED IN FLOOD ZONE X (AREAS OF MINIMAL FLOODING) AS SHOWN ON INSURANCE RATE MAP COMMUNITY - PANEL NUMBER 33015C0430E WITH AN EFFECTIVE DATE MAY 17, 2005.
4. OWNER OF RECORD:
  - MAP 236 LOT 33: RICHARD P. FECTEAU, 120 SPAULDING TURNPIKE, PORTSMOUTH, NH 03801, RCRD BK.3054 PG. 760
  - MAP 236 LOT 37: TWO WAY REALTY, L.L.C., 120 SPAULDING TURNPIKE, PORTSMOUTH, NH 03801, RCRD BK.4248 PG. 2745
  - MAP 236 LOT 38: FIVE WAY REALTY, LLC, 120 SPAULDING TURNPIKE, PORTSMOUTH, NH 03801, RCRD BK.5201 PG. 1779
5. ZONING REQUIREMENTS: GENERAL BUSINESS: SINGLE RESIDENCE B:
 

MINIMUM AREA:	43,560 S.F.	15,000 S.F.
MINIMUM FRONTAGE:	200'	100'
MINIMUM DEPTH:	100'	100'
SETBACKS:		
FRONT:	30'	30'
SIDE:	30'	30'
REAR:	50'	30'
MAXIMUM HEIGHT OF STRUCTURE:	60'	35'
MAXIMUM STRUCTURE COVERAGE PER LOT:	30%	20%
MINIMUM OPEN SPACE PER LOT:	20%	40%

**PLAN REFERENCES:**

1. "PLAT OF LAND FOR PORT CITY NISSAN IN PORTSMOUTH, N.H.", BY PARKER SURVEY ASSOC., INC. 13 HAMPTON RD, EXETER, N.H., DATED: SEPT. 1995, SCALE: 1"=50. PLAT NOT RECORDED.
2. "SITE PLAN FOR PORT CITY NISSAN IN PORTSMOUTH, N.H.", BY PARKER SURVEY ASSOC., INC. 13 HAMPTON RD, EXETER, N.H., DATED: MAY 1997, SCALE: 1"=50. SITE PLAN NOT RECORDED.
3. "REQUEST FOR VARIANCE FOR PORT CITY NISSAN/SUZUKI. 120 SPAULDING TURNPIKE, COUNTY OF ROCKINGHAM, PORTSMOUTH, NH" BY MILLETTE, SPRAGUE & COLWELL, INC. DECEMBER 1, 2004
4. "SITE PLAN FOR JANICE WOOD. SPAULDIN TURNPIKE, PORTSMOUTH, N.H." RICHARD P. MILLETTE AND ASSOCIATES, SEPTEMBER 14, 1983.
5. "A SURVEY AND PLAT OF RIGHT-OF-WAY EASEMENT OVER LAND OF ROBERT M. & BARBARA B. BAIRD. SITUATED IN THE CITY OF PORTSMOUTH, N.H." PREPARED BY: R.S.L. LAYOUT & DESIGN, INC. JULY 12, 1995, REVISED TO JULY 19, 1995. SAID PLAN RECORDED AT RCRD PLAN D-24063.



**MSC**  
CIVIL ENGINEERS &  
LAND SURVEYORS, INC.

PHONE: 603-431-2222  
FAX: 603-431-0910  
www.msceingr.com

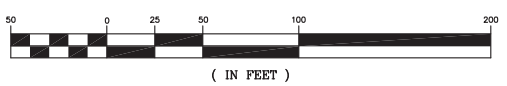
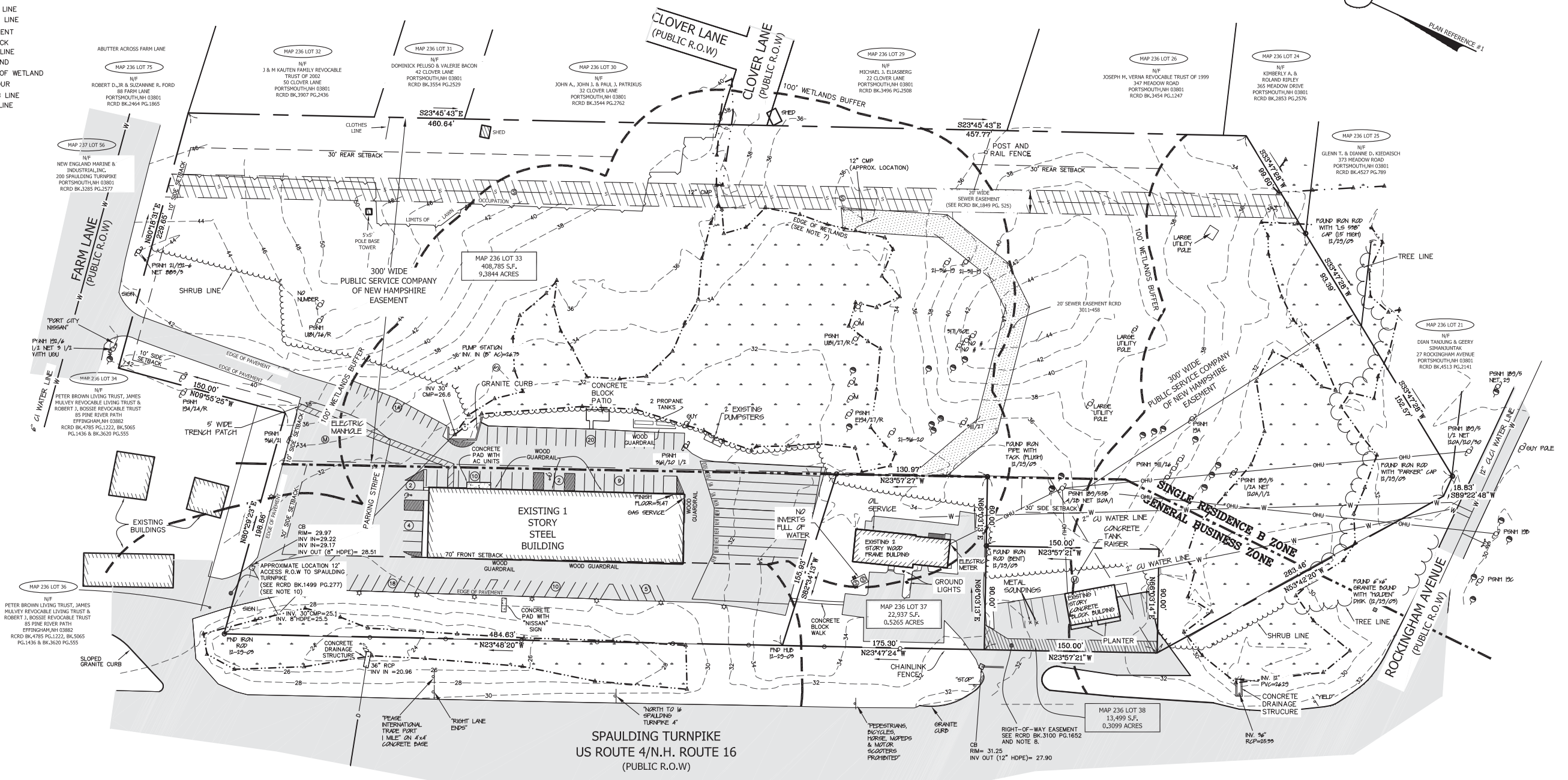
170 COMMERCE WAY  
SUITE 102  
PORTSMOUTH, NH 03801

**EXISTING FEATURES PLAN**

REV.	DATE	DESCRIPTION
1	10-19-11	REVISE PER CLIENT REVIEW
		DRAWN BY: SMO
		CHECKED BY: JCC

**TAX MAP 236 LOTS 33, 37 & 38**  
**PROPERTY OF RICHARD P. FECTEAU, TWO WAY REALTY, LLC & FIVE WAY REALTY, LLC**  
**120, 100 & 80 SPAULDING TURNPIKE**  
**COUNTY OF ROCKINGHAM**  
**NEW HAMPSHIRE**

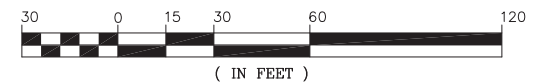
DATE: SEPTEMBER 20, 2011  
PROJECT NO. 11052  
SCALE: 1" = 50'



**FIGURE 1**

NOT FOR CONSTRUCTION

GRAPHIC SCALE

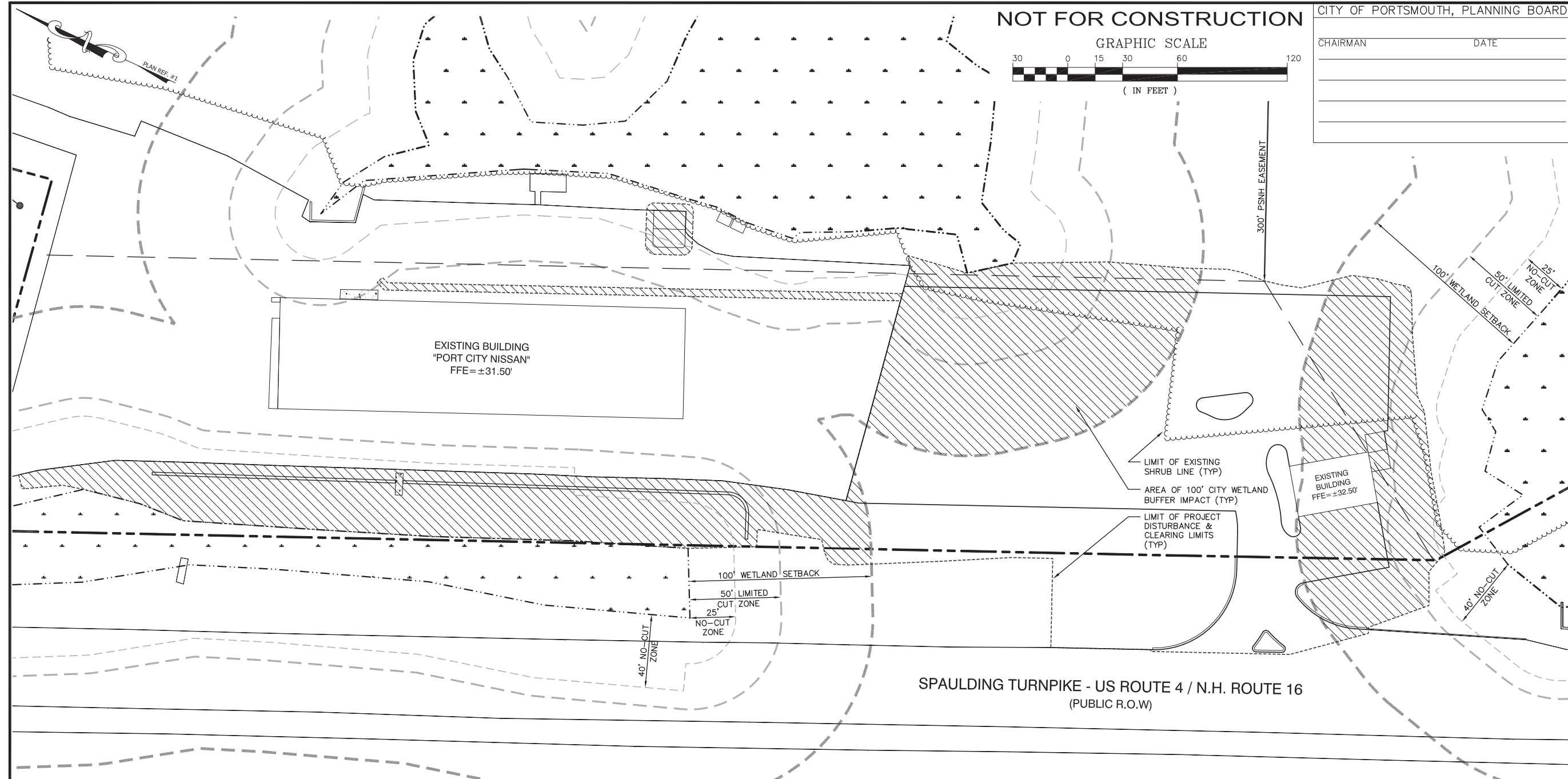


CITY OF PORTSMOUTH, PLANNING BOARD

CHAIRMAN \_\_\_\_\_ DATE \_\_\_\_\_



133 COURT STREET PORTSMOUTH, NH 03801  
(603) 433-2335



THIS DRAWING HAS NOT BEEN RELEASED FOR CONSTRUCTION

ISSUED FOR: TAC

ISSUE DATE: JUNE 18, 2012

REVISIONS NO.	DESCRIPTION	BY	DATE
0	TAC	EBS	06/18/12

DRAWN BY: EBS  
APPROVED BY: EDW  
DRAWING FILE: 3980-SITE.DWG

SCALE: 22"x34" 1" = 30'  
11"x17" 1" = 60'

OWNERS/APPLICANTS:  
**80, 100, 120 SPAULDING TURNPIKE, LLC**  
120 SPAULDING TURNPIKE  
PORTSMOUTH, NH 03801

PROJECT:  
**PORT CITY NISSAN SITE EXPANSION**  
MAP 236 LOT 33  
120 SPAULDING TURNPIKE  
PORTSMOUTH, NH

TITLE:  
**CONDITIONAL USE PERMITTING PLAN**

SHEET NUMBER:  
**C-5**

**WETLAND BUFFER ANALYSIS**

- ZONING SECTION 10.1017 - CONDITIONAL USE PERMIT FROM PORTSMOUTH PLANNING BOARD REQUIRED FOR GRADING AND THE INSTALLATION OF DRAINAGE INFRASTRUCTURE WITHIN THE 100' CITY WETLAND SETBACK.
- WETLANDS DELINEATION BY GZA GEOENVIRONMENTAL, INC., ON 09/01/11.
- EXISTING LOT SIZE (WITH THREE LOTS COMBINED): 445,222 SF (10.22 AC.)
- ON-SITE WETLAND AREA: 70,478 SF (1.62 AC.).
- NO WETLAND IMPACTS ARE PROPOSED FOR THIS PROJECT.
- CITY WETLAND SETBACKS (FOR WETLANDS 10,000 SF OR GREATER OR TIDAL):
 

WETLAND SETBACK:	100'
WET LIMITED CUT ZONE:	50'
WET BUFFER/NO-CUT ZONE:	25' (40' WHERE SLOPES > 10% FOR > 10') (40' REQUIRED IN SOME LOCATIONS)
- 100' CITY WETLAND SETBACK DATA:
 

TOTAL ONSITE SETBACK AREA:	245,003 SF
0 - 25/40' NO-CUT ZONE:	67,007 SF
25/40 - 50' LIMITED CUT ZONE:	57,509 SF
50 - 100' REMAINDER:	120,487 SF

- PROPOSED CONSTRUCTION ACTIVITIES IN 100' WETLAND SETBACK:
 

TOTAL PROPOSED SETBACK DISTURBANCE:	42,331 SF
0 - 25/40' NO-CUT ZONE:	13,439 SF
25/40 - 50' LIMITED CUT ZONE:	8,209 SF
50 - 100' REMAINDER:	20,683 SF
TOTAL PROPOSED TREE/SHRUB CLEARING:	8,094 SF
0 - 25/40' NO-CUT ZONE:	1,312 SF
25/40 - 50' LIMITED CUT ZONE:	1,334 SF
50 - 100' REMAINDER:	5,448 SF
TREE/SHRUB CLEARING IN PSNH EASEMENT:	4,916 SF
PROPOSED EARTHWORK:	
TOTAL FILL:	208 CY
TOTAL CUT:	550 CY
NET (CUT):	342 CY
- TOTAL AREA OF PROJECT DISTURBANCE LESS THAN 100,000 SF, NHDES ALTERATION OF TERRAIN PERMIT NOT REQUIRED.
- TOTAL AREA OF PROJECT DISTURBANCE GREATER THAN 43,560 SF (1 ACRE). PROJECT SUBJECT TO EPA NPDES PHASE II. NOI, SWPPP AND MINIMUM WEEKLY INSPECTIONS REQUIRED.
- SEE SHEET C-6 FOR LEGEND.

P-3980

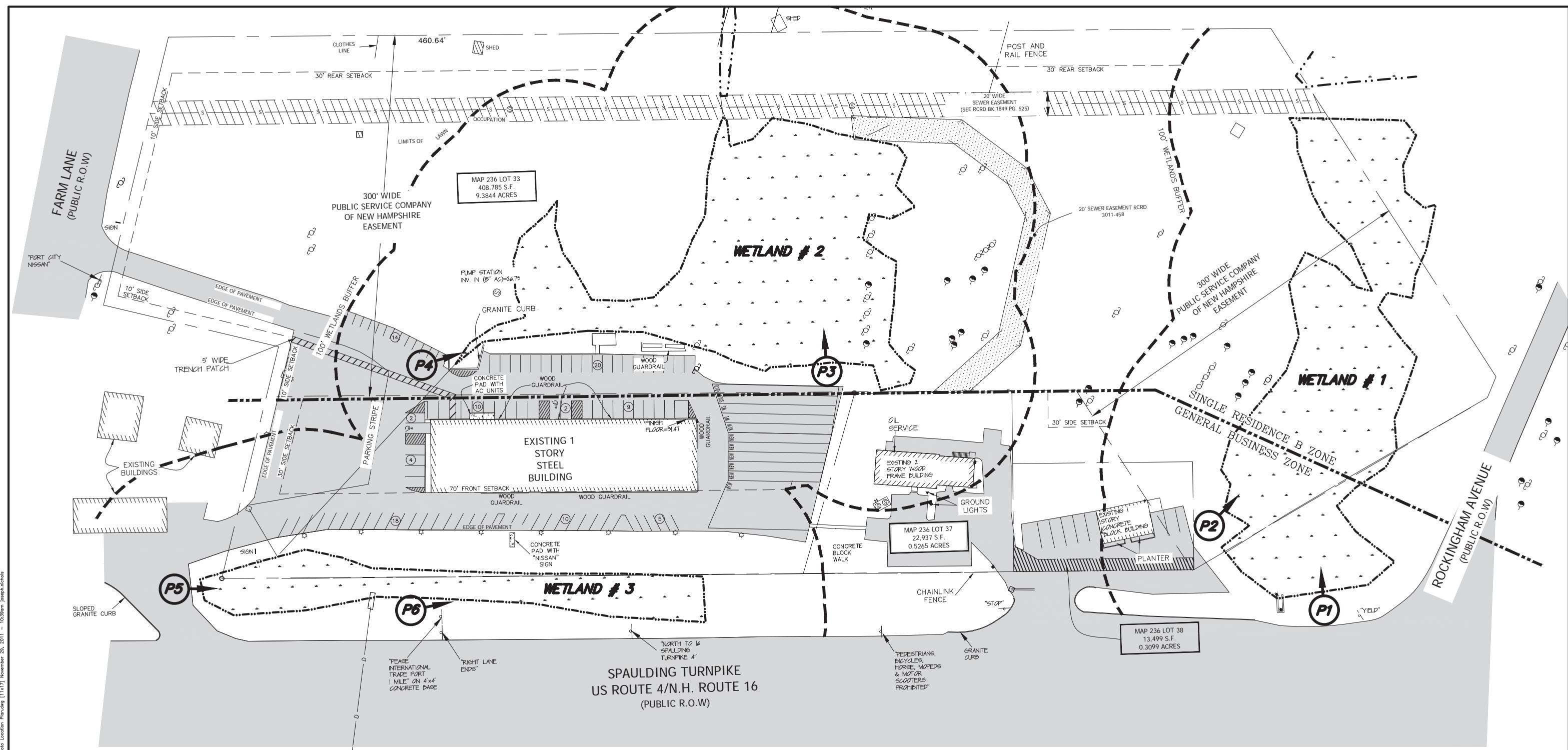
FIGURE 3



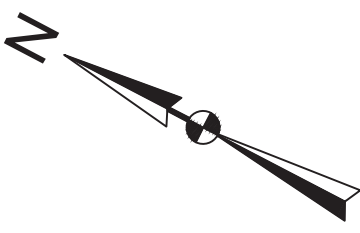
## **APPENDIX A**

### **WETLAND IDENTIFICATION AND PHOTO LOCATION PLAN**





© 2008 - GZA GeoEnvironmental, Inc. GZA-P1 (Subs) 02/29/08 (01.0029410.00) Figure 3 - Photo Location Plan.dwg [11/17] November 29, 2011 - 10:39am Joseph Nicholas



**LEGEND:**



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NO.	ISSUE/DESCRIPTION	BY	DATE
<b>PORT CITY NISSAN PROPERTY</b> <b>SPAULDING TURNPIKE</b> <b>US ROUTE 4 / N.H. ROUTE 16</b> <b>PORTSMOUTH, NEW HAMPSHIRE</b>			
<b>PHOTO LOCATION PLAN</b>			
<b>PREPARED BY:</b> GZA GeoEnvironmental, Inc. Engineers and Scientists 380 HARVEY ROAD MANCHESTER, NEW HAMPSHIRE 03103 (603) 623-3600		<b>PREPARED FOR:</b> <b>ALTUS ENGINEERING, INC.</b>	
<b>PROJ MGR:</b> JHL <b>DESIGNED BY:</b> JPN <b>DATE:</b> SEPTEMBER 2011	<b>REVIEWED BY:</b> JHL <b>DRAWN BY:</b> JPN <b>PROJECT NO.:</b> 04.0029410.00	<b>CHECKED BY:</b> LEM <b>SCALE:</b> 1" = 100' <b>REVISION NO.:</b>	<b>FIGURE</b> <b>3</b> <b>SHEET NO.</b>



## **APPENDIX B**

### **WETLAND FUNCTIONS-VALUES EVALUATION FORMS**

# Wetland Function-Value Evaluation Form

Total area of wetland 39,400 <sup>sq ft.</sup> Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"?

Adjacent land use Commercial / Residential Distance to nearest roadway or other development 0

Dominant wetland systems present PEM/SSIE Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? W. 2  
*Wetlands connected to catch basins and drainage structure.*

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. 1

Latitude \_\_\_\_\_ Longitude \_\_\_\_\_

Prepared by: JHL Date 9-27-11

Wetland Impact:  
 Type \_\_\_\_\_ Area \_\_\_\_\_

Evaluation based on:  
 Office X Field X

Corps manual wetland delineation completed? Y X N \_\_\_\_\_

Function/Value	Suitability		Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
	Y	N			
Groundwater Recharge/Discharge		N	1, 2, 6, 15	N	Wetland soils are partly drained marine silts and clays, therefore the capability to recharge groundwater is limited.
Floodflow Alteration		N	4, 5, 6, 9, 18	N	Wetland is not associated with a water course within a designated flood zone, also limited due to small size.
Fish and Shellfish Habitat		N		N	No Fish or Shellfish habitat present.
Sediment/Toxicant Retention	Y		1, 2, 4, 5, 6, 8	N	Dense wetland vegetation is capable of trapping excess sediments and toxicants, however limited by small size.
Nutrient Removal	Y		3, 4, 7, 8, 9, 10	N	Dense wetland vegetation is capable of utilizing nutrients limited by small size and lack of open water.
Production Export	Y		1, 2, 4, 7, 12	N	Wildlife food sources available on small scale for Sg/Sarban wildlife.
Sediment/Shoreline Stabilization		N		N	Non- Wetland is not associated with a water course, life of pond.
Wildlife Habitat		N	8, 13, 19		Wetland is surrounded by development and is small in size. Wetlands are fragmented.
Recreation		N		N	Wetland is small in size and offers no recreational opportunities.
Educational/Scientific Value		N		N	Wetland is surrounded by urban land and fragmented. There are no educational or scientific value.
Uniqueness/Heritage		N	1, 2	N	Wetlands are not locally rare or unique.
Visual Quality/Aesthetics		N	4, 11, 12	N	Wetland can be viewed from Route 16, Power lines and development reduce the visual quality of wetland.
Endangered Species Habitat		N		N	None observed or known to occur.
Other					

Notes: Wetland Under 300' PSNR Power Line Vegetation is subject to change as directed by power line maintenance

\* Refer to backup list of numbered considerations.



# Wetland Function-Value Evaluation Form

Total area of wetland 40,000 <sup>sq. ft</sup> Human made?        Is wetland part of a wildlife corridor? No or a "habitat island"?       

Adjacent land use Urban developed Distance to nearest roadway or other development 100'

Dominant wetland systems present PEWIE Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? no If not, where does the wetland lie in the drainage basin? mid

How many tributaries contribute to the wetland? Wetlands connected by drainage structure Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. 2

Latitude        Longitude       

Prepared by:        Date 9-2-11

Wetland Impact:  
Type        Area       

Evaluation based on:  
Office  Field

Corps manual wetland delineation completed? Y  N       

Function/Value	Suitability		Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
	Y	N			
Groundwater Recharge/Discharge		N	1, 2, 6, 15	N	Wetland soils are poorly drained marine, silts & clays
Floodflow Alteration		N	4, 5, 6, 9, 18	N	Wetland is not associated within a large water course or wetlands, limited flood zones
Fish and Shellfish Habitat		N		N	Hydroperiod too short for Sapping Fish & shellfish
Sediment/Toxicant Retention	Y		1, 2, 4, 5, 6, 9	N	Wetland vegetation is capable of trapping excess sediment and toxins, however limited by size
Nutrient Removal	Y		3, 4, 7, 8, 9, 10	N	Dense Wetland vegetation is capable of removing nutrients, limited by size and lack of open water
Production Export	Y		1, 2, 4, 2, 12	N	On site production export is limited to food removal by suburban wildlife
Sediment/Shoreline Stabilization		N		N	Wetland is not associated with a water course, little erosion
Wildlife Habitat		N	8, 13, 19		Wetland is surrounded by development and limited in size provides habitat for suburban wildlife.
Recreation		N			Wetland is on private property, surrounded by development and is not open to the public
Educational/Scientific Value		N			
Uniqueness/Heritage		N	1, 2		Wetland has been degraded by surrounding development and is fragmented. It is not considered unique.
Visual Quality/Aesthetics			4, 11		Wetland can be screened from Route 16 power lines and development reduce the visual quality of the wetland
Endangered Species Habitat					
Other					

Notes: Wetland, pl. prairie, sedge  
marshy down, cattail

SSI PEWIE

\* Refer to backup list of numbered considerations.

Wetland under power line 300' PEWIE

# Wetland Function-Value Evaluation Form

Total area of wetland 13,505 sq ft Human made?  Is wetland part of a wildlife corridor? \_\_\_\_\_ or a "habitat island"? \_\_\_\_\_

Adjacent land use Road 16 & Developed land Distance to nearest roadway or other development 0'

Dominant wetland systems present PEmix Contiguous undeveloped buffer zone present no

Is the wetland a separate hydraulic system? Yes If not, where does the wetland lie in the drainage basin? Mid

How many tributaries contribute to the wetland? 20 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. 3

Latitude \_\_\_\_\_ Longitude \_\_\_\_\_

Prepared by: JNL Date 9-27-11

Wetland Impact:  
Type \_\_\_\_\_ Area \_\_\_\_\_

Evaluation based on:  
Office \_\_\_\_\_ Field \_\_\_\_\_

Corps manual wetland delineation completed? Y \_\_\_\_\_ N \_\_\_\_\_

Function/Value	Suitability Y N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	N	1, 2, 6, 15	N	Wetland soils are poorly drained marine silts and clays. Area has been excavated. Man-made drainage should be installed.
Floodflow Alteration	N	4, 5, 6, 9, 10	N	Wetland is not associated with a large water course or within a designated flood zone.
Fish and Shellfish Habitat	IX		IX	Hydro period too short to support fish/shellfish.
Sediment/Toxicant Retention	Y	1, 2, 4, 5, 6, 8	N	Wetland vegetation is capable of trapping excess sediments and toxicants however limited by species.
Nutrient Removal	Y	3, 4, 7, 8, 9, 10	N	Dense wetland vegetation exists in the form of a mowed lawn which is capable of cleaning nutrients limited by species.
Production Export	N		N	Majority is a mowed lawn at wetland end dominated by Co. Hail 93 species with man-made drainage nearby.
Sediment/Shoreline Stabilization	N		N	Wetland is not associated with water bodies, lake or pond.
Wildlife Habitat	IX		N	Wetland is a man-made drainage structure adjacent to Road 16.
Recreation	IX		IX	Wetland is on private property adjacent to Road 16.
Educational/Scientific Value	N		N	"
Uniqueness/Heritage	IX		IX	"
Visual Quality/Aesthetics	N		IX	"
ES Endangered Species Habitat	N			
Other				

Notes: PEmix  
Mowed lawn, man-made drainage nearby

\* Refer to backup list of numbered considerations.



**APPENDIX C**  
**PLANT SPECIES**



## PLANT SPECIES LIST

Wetland Function and Values Assessment  
Tax Map 236, Lots 33, 37, and 38  
Portsmouth, New Hampshire

### WETLAND 01

#### COMMON NAME

#### SCIENTIFIC NAME

##### Herbaceous layer:

Narrow-leaved cattail	<i>Typha angustifolia</i>
Golden rod	<i>Solidago spp.</i>
Purple loosestrife	<i>Lythrum salicaria</i>
Boneset	<i>Eupatorium perfoliatum</i>
Jewelweed	<i>Impatiens capensis</i>
Wool grass	<i>Scirpus cyperinus</i>
Common reed	<i>Phragmites australis</i>
Sensitive fern	<i>Onoclea sensibilis</i>
Cinnamon fern	<i>Osmunda cinnamomea</i>
Tussock sedge	<i>Carex stricta</i>
Sedges	<i>Carex spp.</i>
Royal fern	<i>Osmunda regalis</i>
Sphagnum moss	<i>Sphagnum spp.</i>
Goldthread	<i>Coptis trifolia</i>
Bristly dewberry	<i>Rubus hispidus</i>
Partridgeberry	<i>Mitchella repens</i>
Teaberry	<i>Gaultheria procumbens</i>
Wild sarsaparilla	<i>Aralia nudicaulis</i>
Blue flag iris	<i>Iris versicolor.</i>
Hayscented fern	<i>Dennstaedtia punctilobula</i>
Black cherry	<i>Prunus serotina</i>
Tree clubmoss	<i>Lycopodium obscurum</i>
Canada mayflower	<i>Maianthemum canadense</i>
Starflower	<i>Trientalis borealis</i>
Reed canary grass	<i>Phalaris arundinacea</i>
Scouring rush	<i>Equisetum arvense</i>
Wood anemone	<i>Anemone quinquefolia</i>

##### Shrubs:

Silky dogwood	<i>Cornus amomum</i>
Russian olive	<i>Elaeagnus angustifolia</i>
Multiflora rose	<i>Rosa multiflora</i>
Staghorn sumac	<i>Rhus typhina</i>
Common buckthorn	<i>Rhamnus frangula</i>
Willow	<i>Salix spp.</i>
Highbush blueberry	<i>Vaccinium corymbosum</i>
Beaked hazelnut	<i>Corylus cornuta</i>
American beech	<i>Fagus grandifolia</i>
Winterberry holly	<i>Ilex verticillata</i>
Black birch	<i>Betula lenta</i>
White pine	<i>Pinus strobus</i>
Red maple	<i>Acer rubrum</i>
Elderberry	<i>Sambucus canadensis</i>

## PLANT SPECIES LIST

### Wetland Function and Values Assessment Tax Map 236, Lots 33, 37, and 38 Portsmouth, New Hampshire

#### *(Wetland 01 Shrubs, continued)*

Eastern hemlock	<i>Tsuga canadensis</i>
Skunk currant	<i>Ribes glandulosum</i>
Northern arrowwood	<i>Viburnum dentatum</i>
Lowbush blueberry	<i>Vaccinium angustifolium</i>
Musclewood	<i>Carpinus caroliniana</i>
Morrow's honeysuckle	<i>Lonicera morrowii</i>
Wild raisin	<i>Viburnum cassinoides</i>
Sheep laurel	<i>Kalmia angustifolium</i>
Steeplebush	<i>Spiraea tomentosa</i>
Meadowsweet	<i>Spiraea latifolia</i>

## PLANT SPECIES LIST

### Wetland Function and Values Assessment Tax Map 236, Lots 33, 37, and 38 Portsmouth, New Hampshire

#### WETLAND 02

<u>COMMON NAME</u>	<u>SCIENTIFIC NAME</u>
<b>Herbaceous layer:</b>	
Broad leaved cattail	<i>Typha latifolia</i>
Narrow-leaved cattail	<i>Typha angustifolia</i>
Golden rod	<i>Solidago</i> spp.
Purple loosestrife	<i>Lythrum salicaria</i>
Boneset	<i>Eupatorium perfoliatum</i>
Jewelweed	<i>Impatiens capensis</i>
Wool grass	<i>Scirpus cyperinus</i>
Common reed	<i>Phragmites australis</i>
Sensitive fern	<i>Onoclea sensibilis</i>
Cinnamon fern	<i>Osmunda cinnamomea</i>
Tussock sedge	<i>Carex stricta</i>
Sedges	<i>Carex</i> spp.
Royal fern	<i>Osmunda regalis</i>
Sphagnum moss	<i>Sphagnum</i> spp.
Goldthread	<i>Coptis trifolia</i>
Bristly dewberry	<i>Rubus hispidus</i>
Partridgeberry	<i>Mitchella repens</i>
Teaberry	<i>Gaultheria procumbens</i>
Wild sarsaparilla	<i>Aralia nudicaulis</i>
Blue flag iris	<i>Iris versicolor</i> .
Hayscented fern	<i>Dennstaedtia punctilobula</i>
Black cherry	<i>Prunus serotina</i>
Tree clubmoss	<i>Lycopodium obscurum</i>
Canada mayflower	<i>Maianthemum canadense</i>
Starflower	<i>Trientalis borealis</i>
Reed canary grass	<i>Phalaris arundinacea</i>
Scouring rush	<i>Equisetum arvense</i>
Wood anemone	<i>Anemone quinquefolia</i>
<b>Shrubs:</b>	
Silky dogwood	<i>Cornus amomum</i>
Russian olive	<i>Elaeagnus angustifolia</i>
Multiflora rose	<i>Rosa multiflora</i>
Staghorn sumac	<i>Rhus typhina</i>
Common buckthorn	<i>Rhamnus frangula</i>
Willow	<i>Salix</i> spp.
Highbush blueberry	<i>Vaccinium corymbosum</i>
Beaked hazelnut	<i>Corylus cornuta</i>
American beech	<i>Fagus grandifolia</i>
Winterberry holly	<i>Ilex verticillata</i>
Black birch	<i>Betula lenta</i>
White pine	<i>Pinus strobus</i>



## PLANT SPECIES LIST

### Wetland Function and Values Assessment Tax Map 236, Lots 33, 37, and 38 Portsmouth, New Hampshire

#### *(Wetland 02 Shrubs, continued)*

Red maple	<i>Acer rubrum</i>
Elderberry	<i>Sambucus canadensis</i>
Eastern hemlock	<i>Tsuga canadensis</i>
Skunk currant	<i>Ribes glandulosum</i>
Northern arrowwood	<i>Viburnum dentatum</i>
Lowbush blueberry	<i>Vaccinium angustifolium</i>
Musclewood	<i>Carpinus caroliniana</i>
Morrow's honeysuckle	<i>Lonicera morrowii</i>
Wild raisin	<i>Viburnum cassinoides</i>
Sheep laurel	<i>Kalmia angustifolium</i>
Steeplebush	<i>Spiraea tomentosa</i>
Meadowsweet	<i>Spiraea latifolia</i>

## PLANT SPECIES LIST

### Wetland Function and Values Assessment Tax Map 236, Lots 33, 37, and 38 Portsmouth, New Hampshire

#### WETLAND 03

<u>COMMON NAME</u>	<u>SCIENTIFIC NAME</u>
<b>Herbaceous layer:</b>	
Narrow-leaved cattail	<i>Typha angustifolia</i>
Golden rod	<i>Solidago spp.</i>
Purple loosestrife	<i>Lythrum salicaria</i>
Boneset	<i>Eupatorium perfoliatum</i>
Jewelweed	<i>Impatiens capensis</i>
Wool grass	<i>Scirpus cyperinus</i>
Common reed	<i>Phragmites australis</i>
Sensitive fern	<i>Onoclea sensibilis</i>
Cinnamon fern	<i>Osmunda cinnamomea</i>
Tussock sedge	<i>Carex stricta</i>
Sedges	<i>Carex spp.</i>
Royal fern	<i>Osmunda regalis</i>
Sphagnum moss	<i>Sphagnum spp.</i>
Goldthread	<i>Coptis trifolia</i>
Bristly dewberry	<i>Rubus hispidus</i>
Partridgeberry	<i>Mitchella repens</i>
Teaberry	<i>Gaultheria procumbens</i>
Wild sarsaparilla	<i>Aralia nudicaulis</i>
Blue flag iris	<i>Iris versicolor.</i>
Hayscented fern	<i>Dennstaedtia punctilobula</i>
Black cherry	<i>Prunus serotina</i>
Tree clubmoss	<i>Lycopodium obscurum</i>
Canada mayflower	<i>Maianthemum canadense</i>
Starflower	<i>Trientalis borealis</i>
Reed canary grass	<i>Phalaris arundinacea</i>
Scouring rush	<i>Equisetum arvense</i>
Wood anemone	<i>Anemone quinquefolia</i>
<b>Shrubs:</b>	
Silky dogwood	<i>Cornus amomum</i>
Russian olive	<i>Elaeagnus angustifolia</i>
Multiflora rose	<i>Rosa multiflora</i>
Staghorn sumac	<i>Rhus typhina</i>
Common buckthorn	<i>Rhamnus frangula</i>
Willow	<i>Salix spp.</i>
Highbush blueberry	<i>Vaccinium corymbosum</i>
Beaked hazelnut	<i>Corylus cornuta</i>
American beech	<i>Fagus grandifolia</i>
Winterberry holly	<i>Ilex verticillata</i>
Black birch	<i>Betula lenta</i>
White pine	<i>Pinus strobus</i>

## PLANT SPECIES LIST

### Wetland Function and Values Assessment Tax Map 236, Lots 33, 37, and 38 Portsmouth, New Hampshire

#### *(Wetland 02 Shrubs, continued)*

Red maple	<i>Acer rubrum</i>
Elderberry	<i>Sambucus canadensis</i>
Eastern hemlock	<i>Tsuga canadensis</i>
Skunk currant	<i>Ribes glandulosum</i>
Northern arrowwood	<i>Viburnum dentatum</i>
Lowbush blueberry	<i>Vaccinium angustifolium</i>
Musclewood	<i>Carpinus caroliniana</i>
Morrow's honeysuckle	<i>Lonicera morrowii</i>
Wild raisin	<i>Viburnum cassinoides</i>
Sheep laurel	<i>Kalmia angustifolium</i>
Steeplebush	<i>Spiraea tomentosa</i>
Meadowsweet	<i>Spiraea latifolia</i>



**APPENDIX D**  
**WILDLIFE SPECIES**



POTENTIAL AND OBSERVED WILDLIFE SPECIES LIST

Wetland Function and Values Assessment  
 Tax Map 236, Lots 33, 37, and 38  
 Portsmouth, New Hampshire

Wildlife Species					
Common Name	Scientific Name	Status*	Wetland 01	Wetland 02	Wetland 03
Eastern American toad	<i>Bufo americanus</i>		X	X	X
Northern spring peeper	<i>Psuedacris crucifer</i>				
Gray treefrog	<i>Hyla versicolor</i>		X	X	
Green frog	<i>Rana clamitans melanota</i>		X	X	X
Bullfrog	<i>Rana catesbiana</i>		X	X	X
Four-toed salamander	<i>Hemidactylum scutatum</i>				
Painted turtle	<i>Chrysemys picta</i>		X		X
Northern brown snake	<i>Storeria d. dekayi</i>				
Eastern garter snake	<i>Thamnophis s. sirtalis</i>		X	X	X
Sharp-shinned hawk	<i>Accipiter striatus</i>				
Red-tailed hawk	<i>Buteo jamaicensis</i>		X	X	X
Ruffed grouse	<i>Bonasa umbellus</i>		X		
American woodcock	<i>Scolopax minor</i>		X	X	
Wild turkey	<i>Meleagris gallopavo</i>		X	X	X
Mourning dove	<i>Zenaida macroura</i>		X	X	X
Great horned owl	<i>Bubo virginianus</i>		X	X	X
Northern saw whet owl	<i>Aegolius acadicus</i>				
Barred owl	<i>Strix varia</i>				
Black-throated blue warbler	<i>Dendroica caerulescens</i>				
Swamp sparrow	<i>Melospiza georgiana</i>		X	X	X
Cedar waxwing	<i>Bombycilla cedrorum</i>		X	X	X
Great crested flycatcher	<i>Myiarchus crinitus</i>				
Red-winged blackbird	<i>Agelaius phoeniceus</i>		X	X	X
American redstart	<i>Setophaga ruticilla</i>				
Common yellowthroat	<i>Geothlypis trichas</i>		X	X	X
Alder flycatcher	<i>Empidonax alnorum</i>		X	X	X
Eastern phoebe	<i>Sayornis phoebe</i>		X	X	X
Downy woodpecker	<i>Picoides pubescens</i>		X	X	X
Hairy woodpecker	<i>Picoides villosus</i>		X	X	X
Pileated woodpecker	<i>Drycopus pileatus</i>		X	X	X
Red-eyed vireo	<i>Vireo olivaceus</i>				
Blue jay	<i>Cyanocitta cristata</i>		X	X	X
American crow	<i>Corvus brachyrhynchos</i>		X	X	X
Black-capped chickadee	<i>Poecile articapillus</i>		X	X	X
Tufted titmouse	<i>Baeolophus bicolor</i>		X	X	X
White-breasted nuthatch	<i>Sitta carolinensis</i>		X	X	X
American robin	<i>Turdus migratorius</i>		X	X	X
Veery	<i>Catharus fuscensens</i>		X	X	X
Wood thrush	<i>Hylocichla mustelina</i>		X	X	X
Yellow warbler	<i>Dendroica petechia</i>		X	X	X
Chipping sparrow	<i>Spizella passerina</i>		X	X	X
Scarlet tanager	<i>Piranga olivacea</i>				
Northern oriole	<i>Icturus galbula</i>		X	X	X
Northern short-tailed shrew	<i>Blarina brevicauda</i>		X	X	X
Star-nosed mole	<i>Condylura cristata</i>		X	X	X
Eastern pipstrelle	<i>Pipistrellus subflavus</i>				

**POTENTIAL AND OBSERVED WILDLIFE SPECIES LIST**

**Wetland Function and Values Assessment  
Tax Map 236, Lots 33, 37, and 38  
Portsmouth, New Hampshire**

<b>Wildlife Species</b>					
<b>Common Name</b>	<b>Scientific Name</b>	<b>Status*</b>	<b>Wetland 01</b>	<b>Wetland 02</b>	<b>Wetland 03</b>
Red fox	<i>Vulpes vulpes</i>		X	X	X
Little brown myotis	<i>Myotis lucifugus</i>		X	X	X
Virginia opossum	<i>Didelphis virginiana</i>		X	X	X
Eastern coyote	<i>Canis latrans</i>		X	X	X
Raccoon	<i>Procyon lotor</i>		X	X	X
White-tailed deer	<i>Odocoileus virginianus</i>		X	X	X

A species is considered observed when an animal is seen or presence is verified by tracks, scat, call or song. Observed species are indicated by an "O" and potential species (i.e. those that may use the property based on available habitat types) are indicated by an asterisk (\*). Species that are listed as Threatened, Endangered, or Species of Special Concern are indicated by a "T", "E", and "S", respectively. "X".



**APPENDIX E**  
**PHOTOGRAPHS**

## PHOTOGRAPHS

**Tax Map 236, Lots 33, 37, and 38  
Portsmouth, New Hampshire**

Photographs taken September 27, 2011



PHOTOGRAPH NO. 1 - From Spaulding Turnpike looking north at Wetland 1 dominated by narrow-leaved cattail.



PHOTOGRAPH NO. 2 - Looking east at Wetland 1.



## PHOTOGRAPHS

**Tax Map 236, Lots 33, 37, and 38  
Portsmouth, New Hampshire**

Photographs taken September 27, 2011



PHOTOGRAPH NO. 3 - Looking north at Wetland 2 dominated by broad-leaved cattail.



PHOTOGRAPH NO. 4 - Looking north at Wetland 2 dominated by Phragmites.

## PHOTOGRAPHS

### Tax Map 236, Lots 33, 37, and 38 Portsmouth, New Hampshire

Photographs taken September 27, 2011



PHOTOGRAPH NO. 5 - Looking east at Wetland 3 dominated by broad-leaved and narrow-leaved cattail.



PHOTOGRAPH NO. 6 - Looking east at Wetland 3 ( maintained drainage swale).

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## **APPENDIX F**

### **NEW HAMPSHIRE NATURAL HERITAGE BUREAU DATABASE REVIEW**



NEW HAMPSHIRE NATURAL HERITAGE BUREAU  
NHB DATACHECK RESULTS LETTER

---

**To:** Sergio Bonilla, NHSC, Inc.  
202 Kent PLace

Newmarket, NH 03857

**From:** NH Natural Heritage Bureau

**Date:** 10/12/2011 (valid for one year from this date)

**Re:** Review by NH Natural Heritage Bureau of request submitted 9/30/2011

**NHB File ID:** NHB11-2060

**Applicant:** Eric Weinrieb

**Location:** Portsmouth

Tax Maps: M236, L33; M236, L37; M236, L38

**Project**

**Description:** Port-City Nissan is proposing to expand their parking lot area

The NH Natural Heritage database has been checked by staff of the NH Natural Heritage Bureau and/or the NH Nongame and Endangered Species Program for records of rare species and exemplary natural communities near the area mapped below. The species considered include those listed as Threatened or Endangered by either the state of New Hampshire or the federal government.

It was determined that, although there was a NHB record (e.g., rare wildlife, plant, and/or natural community) present in the vicinity, we do not expect that it will be impacted by the proposed project. This determination was made based on the project information submitted via the NHB Datacheck Tool on 9/30/2011, and cannot be used for any other project.





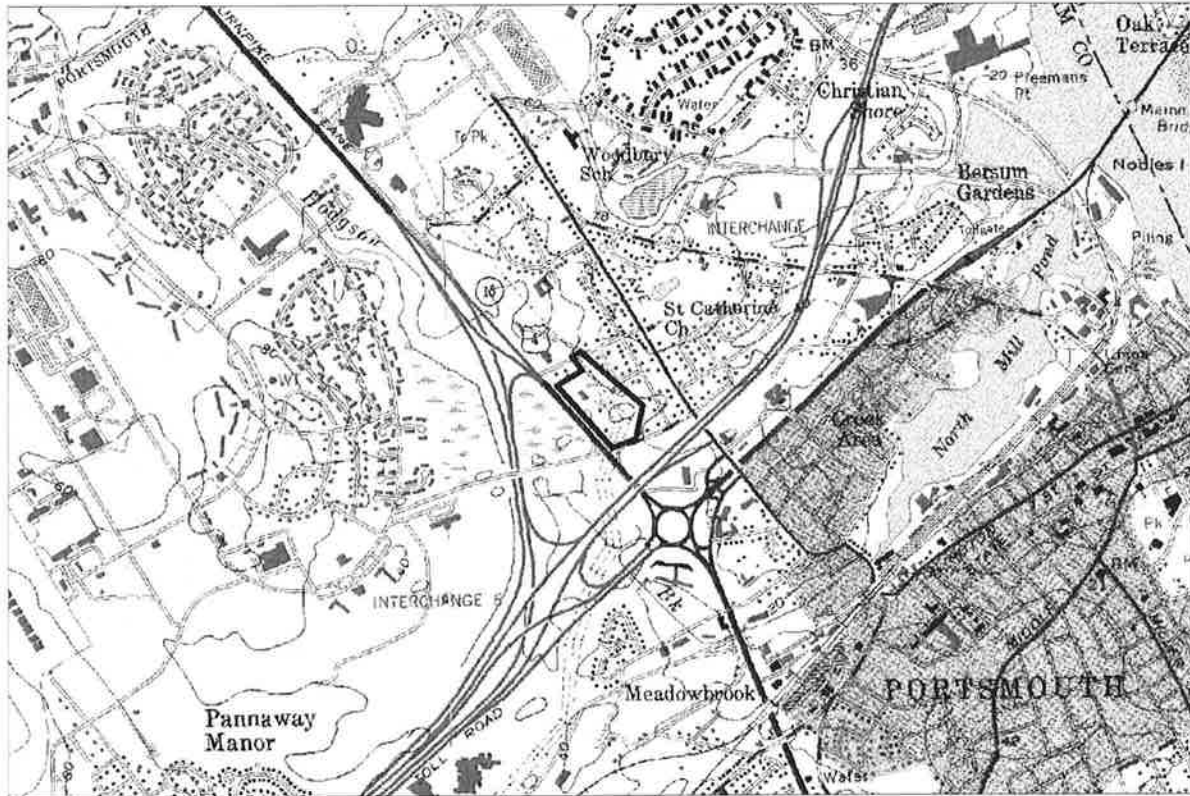
NEW HAMPSHIRE NATURAL HERITAGE BUREAU  
NHB DATA CHECK RESULTS LETTER

MAP OF PROJECT BOUNDARIES FOR: **NHB11-2060**

NHB11-2060



NH NATURAL HERITAGE BUREAU



1:1000

Valid for one year from this date 12 Oct 2011



**APPENDIX G**  
**LIMITATIONS**



## **NATURAL RESOURCE SURVEY AND ASSESSMENT LIMITATIONS**

### Use of Report

1. GZA GeoEnvironmental, Inc. (GZA) has prepared this report on behalf of, and for the exclusive use of Altus Engineering ("Client") for the stated purpose(s) and location(s) identified in the report. Use of this report, in whole or in part, at other locations, or for other purposes, may lead to inappropriate conclusions; and we do not accept any responsibility for the consequences of such use(s). Further, reliance by any party not identified in the agreement, for any use, without our prior written permission, shall be at that party's risk, and without any liability to GZA.

### Standard of Care

2. GZA's findings and conclusions are based on the work conducted as part of the Scope of Services set forth in the Report and/or proposal, and reflect our professional judgment. These findings and conclusions must be considered not as scientific or engineering certainties, but rather as our professional opinions concerning the data gathered and observations made during the course of our work. Conditions other than described in this report may be found at the subject location(s).
3. GZA's services were performed using the degree of skill and care ordinarily exercised by qualified professionals performing the same type of services, at the same time, under similar conditions, at the same or a similar property. No warranty, expressed or implied, is made.

### Limits to Observations

4. Natural resource characteristics are inherently variable. Biological community composition and diversity can be affected by seasonal, annual or anthropogenic influences. In addition, soil conditions are reflective of subsurface geologic materials, the composition and distribution of which vary spatially.
5. The observations described in this report were made on the dates referenced and under the conditions stated therein. Conditions observed and reported by GZA reflect the conditions that could be reasonably observed based upon the visual observations of surface conditions and/or a limited observation of subsurface conditions at the specific time of observation. Such conditions are subject to environmental and circumstantial alteration and may not reflect conditions observable at another time.
6. The conclusions and recommendations contained in this report are based upon the data obtained from a limited number of surveys performed during the course of our work on the site, as described in the Report. There may be variations between these surveys and other past or future surveys due to inherent environmental and circumstantial variability.

#### Reliance on Information from Others

7. Preparation of this Report may have relied upon information made available by Federal, state and local authorities; and/or work products prepared by other professionals as specified in the report. Unless specifically stated, GZA did not attempt to independently verify the accuracy or completeness of that information.

#### Compliance with Regulations and Codes

8. GZA's services were performed to render an opinion on the presence and/or condition of natural resources as described in the Report. Standards used to identify or assess these resources as well as regulatory jurisdiction, if any, are stated in the Report. Standards for identification of jurisdictional resources and regulatory control over them may vary between governmental agencies at Federal, state and local levels and are subject to change over time which may affect the conclusions and findings of this report.

#### New Information

9. In the event that the Client or others authorized to use this report obtain information on environmental regulatory compliance issues at the site not contained in this report, such information shall be brought to GZA's attention forthwith. GZA will evaluate such information and, on the basis of this work, may modify the conclusions stated in this report.

#### Additional Services

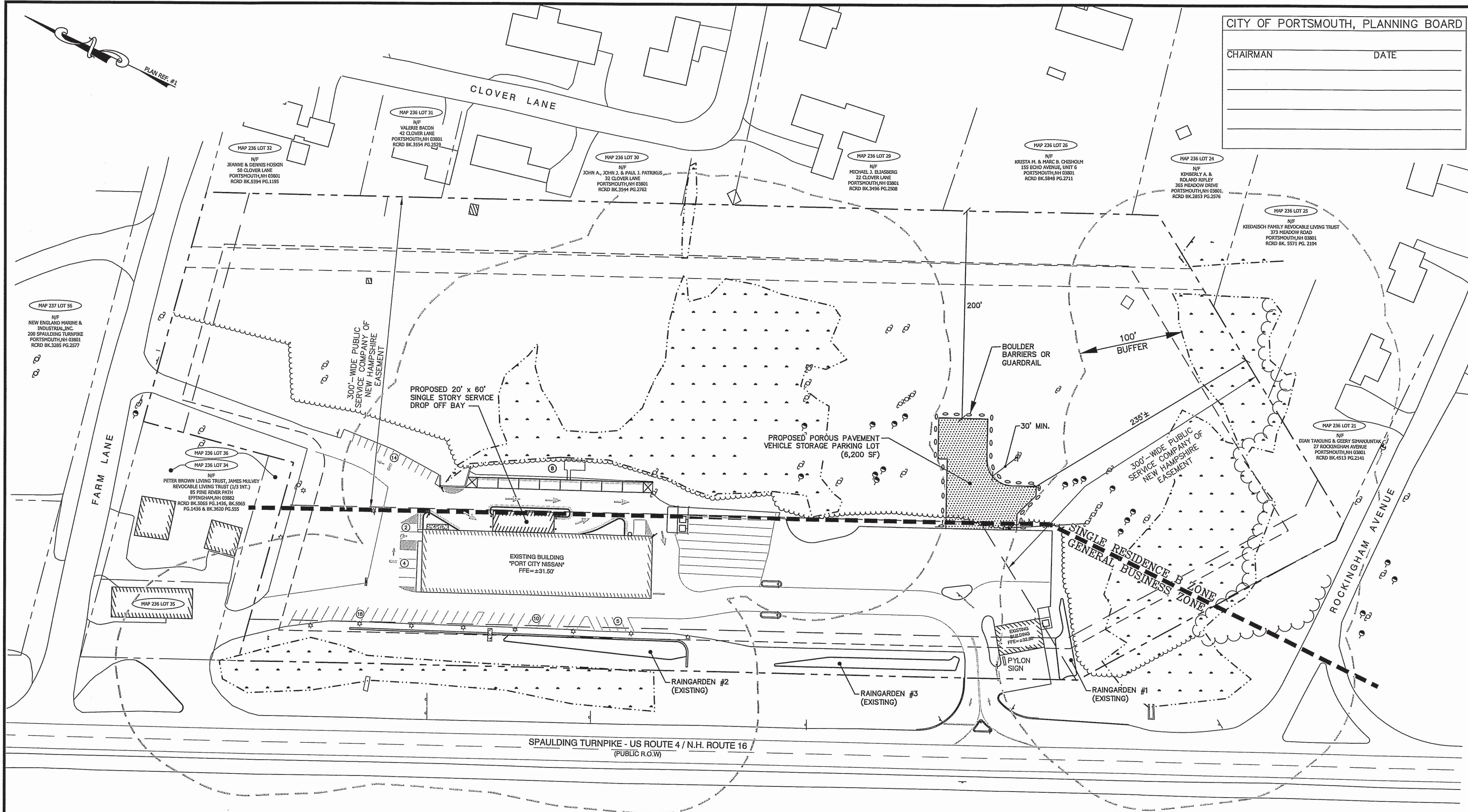
10. GZA recommends that we be retained to provide further investigation, if necessary, which would allow GZA to (1) observe compliance with the concepts and recommendations contained herein; (2) evaluate whether the manner of implementation creates a potential new finding; and (3) evaluate whether the manner of implementation affects or changes the conditions on which our opinions were made.

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CITY OF PORTSMOUTH, PLANNING BOARD

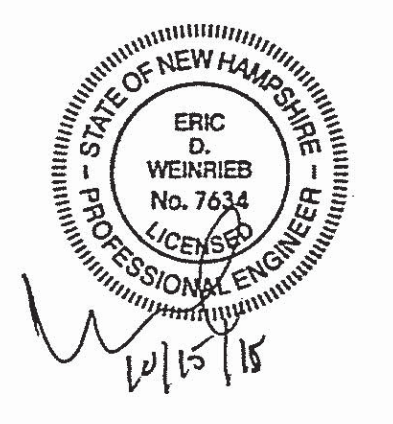
CHAIRMAN \_\_\_\_\_ DATE \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**ALTUS**  
ENGINEERING, INC.

133 COURT STREET PORTSMOUTH, NH 03801  
(603) 433-2335



THIS DRAWING HAS NOT BEEN RELEASED FOR CONSTRUCTION

ISSUED FOR: TAC

ISSUE DATE: OCTOBER 15, 2018

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	EDW	9/04/18
1	TAC	EDW	10/15/18

DRAWN BY: RLH

APPROVED BY: EDW

DRAWING FILE: 3980-PARK-EXP.DWG

SCALE: 22"x34" 1" = 50'

OWNERS/APPLICANTS: TWO-WAY REALTY, LLC

120 SPAULDING TURNPIKE  
PORTSMOUTH, NH 03801

**SITE NOTES**

- DESIGN INTENT - THIS PLAN IS INTENDED TO DEPICT THE PROJECT SITE TO INCLUDE THE ADDITION OF A ±1200 S.F. DRIVE UP SERVICE BAY AND 6,200 SF VEHICLE STORAGE AREA. SEE DETAILED SITE PLAN FOR ADDITIONAL SITE IMPROVEMENTS.
- THE BASE PLAN USED HEREON WAS DEVELOPED FROM "EXISTING FEATURES PLAN FOR 120, 100 & 80 SPAULDING TURNPIKE" BY MSC, REVISED THROUGH 10/19/11 & "PORT CITY NISSAN SITE EXPANSION" PLANS BY ALTUS ENGINEERING, INC., DATED FEBRUARY 13, 2013.
- ABUTTING HOUSES, DRIVEWAYS, AND PROPERTY LINES WERE OBTAINED FROM THE PORTSMOUTH DPW'S GIS DATABASE. THEY ARE NOT SURVEY LOCATED, SHOULD NOT BE CONSIDERED COMPLETELY ACCURATE, AND ARE SHOWN HERE ONLY FOR THE PURPOSE OF DEFINING THE SURROUNDING CONTEXT OF THE PROJECT SITE.
- WETLAND DELINEATION BY JAMES LONG, 9/1/2011. DELINEATION CONFIRMED IN BY MICHAEL CUOMO, CERTIFIED WETLAND SCIENTIST No. 004, OCTOBER 2018.
- ZONE: GB & SRB (GENERAL BUSINESS & SINGLE RESIDENCE B)

**6. DIMENSIONAL REQUIREMENTS (GB ZONE):**

	REQUIRED	EXISTING	PROPOSED
MIN. LOT AREA:	43,560 S.F. (1 AC.), **	87,120 (2 AC.) REQUIRED FOR VEHICLE SALES (445,222 S.F./10.22 AC. PROVIDED)	
MIN. STREET FRONTAGE:	200'	809'±	809'±
MIN. LOT DEPTH:	100'	450'±	450'±
FRONT SETBACK:	30'	69'±/22'±	69'±/22'±
SIDE SETBACK:	30'	136'±/289'±	136'±/289'±
REAR SETBACK:	50'	320'±/390'±	320'±/372'±
FRONT PARKING:	40'	36'±/0'	36'±/0'
WETLANDS BUFFER:	100'	46'±/62'±(BLDG)	46'±/44'±
WET LIMITED CUT ZONE:	50'	2'±(PAVEMENT)	2'±
WET VEGETATED BUFFER:	25'	2'±(PAVEMENT)	2'±
MAX. BUILDING HEIGHT:	60'	< 60'	< 60'
MAX. BUILDING COVERAGE:	30%	3.29%	3.51%
MIN. OPEN SPACE:	20%	(14,651 S.F.)*	(15,641 S.F.)
		76.0%	76.1%
		(350 S.F. ADD'L PAVEMENT IN GB ZONE)	(338,365 S.F.) (338,790 S.F.)
		(775 S.F. ADD'L LANDSCAPING - GB ZONE)	

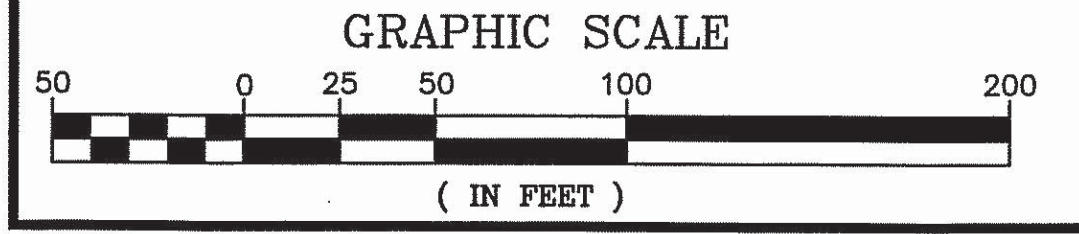
\* PER PREVIOUSLY APPROVED PLANS, NOT AS-BUILT  
\*\* 15,000 S.F. MIN. LOT AREA REQUIRED FOR SINGLE RESIDENCE B ZONE

**DIMENSIONAL REQUIREMENTS (SINGLE RESIDENCE B ZONE):**

	REQUIRED	EXISTING	PROPOSED
MIN. STREET FRONTAGE:	100'	229'±	229'±
MIN. LOT DEPTH:	100'	300'± ****	300'± ****
FRONT SETBACK:	30'	N/A ***	N/A ***
SIDE SETBACK:	10'	N/A ***	N/A ***
REAR SETBACK:	30'	N/A ***	N/A ***
(IN THE AREA OF PROPOSED VEHICLE STORAGE AREA)			
WETLANDS BUFFER:	100'	100'±	100'
WET LIMITED CUT ZONE:	50'	50'	50'
WET VEGETATED BUFFER:	25'	25'	25'
MAX. BUILDING HEIGHT:	35'	N/A ***	N/A ***
MAX. BUILDING COVERAGE:	20%	0% ****	0% ****
MIN. OPEN SPACE:	40%	76.0% *	74.7%
		(338,365 S.F.)	(326,930 S.F.)
		(5,850 S.F. ADDITIONAL PAVEMENT & 315 S.F. ADDITIONAL LANDSCAPING IN SINGLE RESIDENCE ZONE)	

\*\*\* IN SINGLE RESIDENCE B ZONE ONLY.  
\*\*\*\* NOT INCLUDING SHED & STRUCTURE ENCROACHMENTS ON PARCEL OF 150 SF±.

- THE FOLLOWING VARIANCES WERE GRANTED ON APRIL 17, 2012:
- SECTION 10.571 - ACCESSORY USE IN THE FRONT YARD SETBACK.
  - SECTION 10.592.20 - VEHICLE SALES USE WITHIN 200' OF ANY RESIDENTIAL OR MIXED RESIDENTIAL DISTRICT.
  - SECTION 10.843.21 - VEHICLE SALES USE, PARKING, OUTDOOR STORAGE AND OUTDOOR DISPLAY OF VEHICLES OR EQUIPMENT WITHIN 40' OF STREET RIGHT-OF-WAY.
  - SECTION 10.1113.31 - OFF-STREET PARKING AREAS, ACCESSWAYS, MANEUVERING AREAS AND TRAFFIC AISLES WITHIN 100' OF A RESIDENTIAL DISTRICT.
  - SECTION 10.1113.41 - OFF-STREET PARKING AREAS, ACCESSWAYS, MANEUVERING AREAS AND TRAFFIC AISLES WITHIN 40' OF FRONT LOT LINE.
  - SECTION 10.1243 - MORE THAN ONE FREESTANDING SIGN PER LOT.
- THE FOLLOWING VARIANCES WERE GRANTED ON JULY 24, 2018:
- SECTION 10.591 - TO ALLOW VEHICLE STORAGE WITHIN A RESIDENTIAL ZONE WHERE 100 FEET IS REQUIRED.
  - SECTION 10.592.20 - TO ALLOW A MOTOR VEHICLE DEALERSHIP TO BE LESS THAN 200 FEET FROM A RESIDENTIAL DISTRICT.
  - SECTION 10.440 - USE #10.60 TO ALLOW OUTDOOR MOTOR VEHICLE STORAGE IN A RESIDENTIAL DISTRICT.



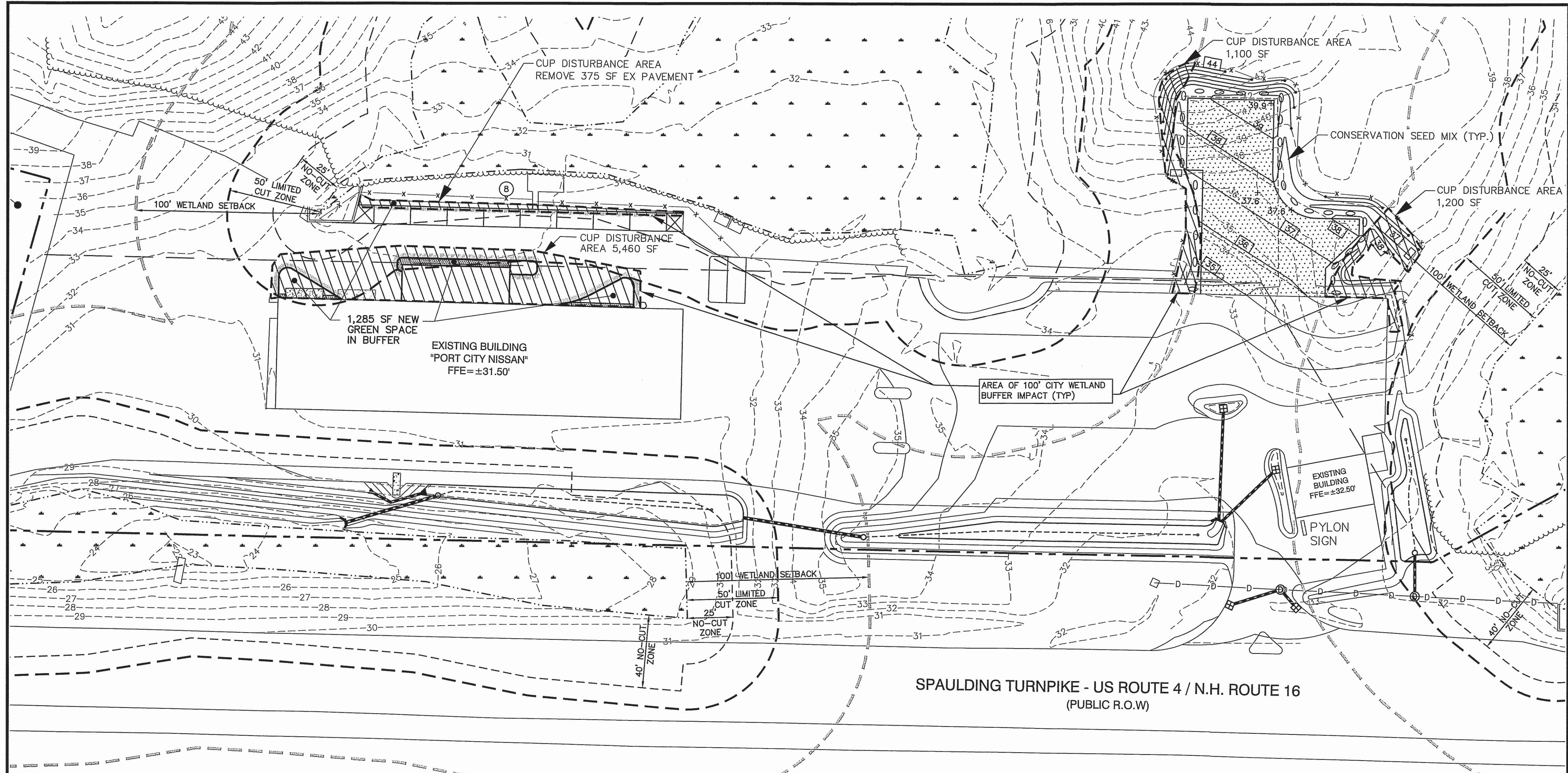
PROJECT: PORT CITY NISSAN DRIVE UP SERVICE BAY AND VEHICLE STORAGE PARKING

MAP 236 LOT 33  
120 SPAULDING TURNPIKE  
PORTSMOUTH, NH

TITLE: OVERALL PLAN

SHEET NUMBER: C-1





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ISSUED FOR:  
**CONDITIONAL USE PERMIT**  
ISSUE DATE:  
**OCTOBER 15, 2018**

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	EDW	10/15/18

DRAWN BY: RLH  
APPROVED BY: EDW  
DRAWING FILE: 3980 PARK-EXP SITE.DWG

SCALE: 22"x34" 1" = 30'  
11"x17" 1" = 60'

OWNERS/APPLICANTS:  
**TWO-WAY REALTY, LLC**  
120 SPAULDING TURNPIKE  
PORTSMOUTH, NH 03801

PROJECT:  
**PORT CITY NISSAN  
DRIVE UP SERVICE BAY  
AND VEHICLE STORAGE  
PARKING**  
MAP 236 LOT 33  
120 SPAULDING TURNPIKE  
PORTSMOUTH, NH

TITLE:  
**CONDITIONAL  
USE PERMITTING  
PLAN**

SHEET NUMBER:  
**CU-1**

**WETLAND BUFFER ANALYSIS**

- ZONING SECTION 10.1017 - CONDITIONAL USE PERMIT FROM PORTSMOUTH PLANNING BOARD REQUIRED FOR GRADING AND THE INSTALLATION OF DRAINAGE INFRASTRUCTURE WITHIN THE 100' CITY WETLAND SETBACK.
- WETLANDS DELINEATION BY GZA GEOENVIRONMENTAL, INC., ON 09/01/11.
- EXISTING LOT SIZE: 445,222 SF (10.22 AC.)
- ON-SITE WETLAND AREA: 70,478 SF (1.62 AC.)(15.83% OF SITE)
- NO WETLAND IMPACTS ARE PROPOSED FOR THIS PROJECT.
- TOTAL AREA OF PROJECT DISTURBANCE LESS THAN 100,000 SF, NHDES ALTERATION OF TERRAIN PERMIT NOT REQUIRED.
- TOTAL AREA OF PROJECT DISTURBANCE LESS THAN 43,560 SF (1 ACRE). PROJECT IS NOT SUBJECT TO EPA NPDES PHASE II. NOI, SWPPP AND MINIMUM WEEKLY INSPECTIONS ARE NOT REQUIRED.
- CITY WETLAND SETBACKS (FOR WETLANDS 10,000 SF OR GREATER OR TIDAL):**  
WETLAND SETBACK: 100'  
WET LIMITED CUT ZONE: 50'  
WET BUFFER/NO-CUT ZONE: 25' (40' WHERE SLOPES > 10% FOR > 10') (40' REQUIRED IN SOME LOCATIONS)
- 100' CITY WETLAND SETBACK DATA:**  
TOTAL ONSITE SETBACK AREA: 245,003 SF (55.03% OF SITE)  
0 - 25/40' NO-CUT ZONE: 67,007 SF  
25/40 - 50' LIMITED CUT ZONE: 57,509 SF  
50 - 100' REMAINDER: 120,487 SF

**10. PREVIOUSLY APPROVED CONSTRUCTION ACTIVITIES IN THE 100' CITY WETLAND SETBACK:**

<b>BUFFER DISTURBANCE: 42,815 SF</b>	
0 - 25/40' NO-CUT ZONE:	13,297 SF
25/40 - 50' LIMITED CUT ZONE:	8,726 SF
50 - 100' REMAINDER:	20,792 SF

<b>TREE/SHRUB CLEARING: 7,685 SF</b>	
0 - 25/40' NO-CUT ZONE:	903 SF
25/40 - 50' LIMITED CUT ZONE:	1,334 SF
50 - 100' REMAINDER:	5,448 SF

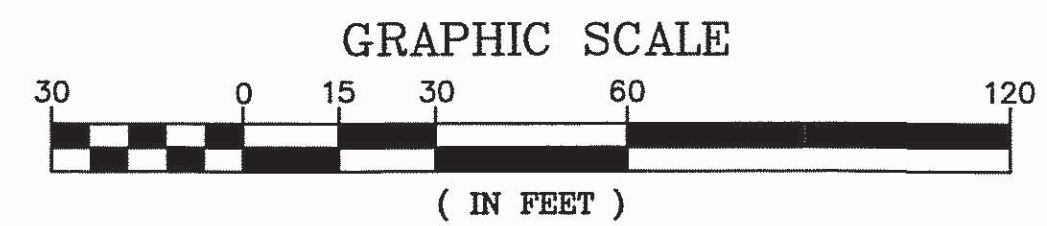
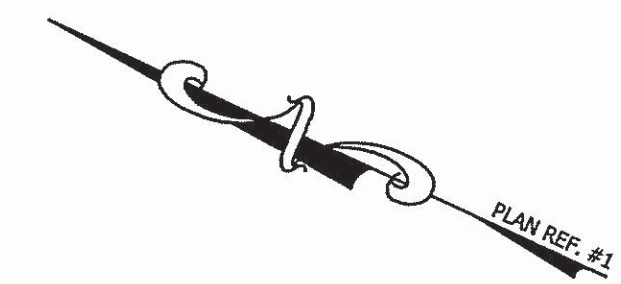
**PORTION OF TOTAL CLEARING IN PSNH EASEMENT: 4,916 SF**

<b>SURFACE TREATMENT:</b>	
IMPERVIOUS AREAS -	19,250 S.F. (+2,842 S.F.)
GREEN SPACE -	22,675 S.F. (-2,842 S.F.)

**11. 2018 PROPOSED ACTIVITIES IN WETLANDS BUFFER:**

0 - 25/40' NO-CUT ZONE:	375 SF OF PAVEMENT REMOVAL
0 - 100' REMAINDER:	8,135 SF TOTAL

**12. ALL WETLAND BUFFER ACTIVITIES ARE WITHIN PREVIOUSLY DISTURBED AREAS.**



CITY OF PORTSMOUTH, PLANNING BOARD

CHAIRMAN	DATE