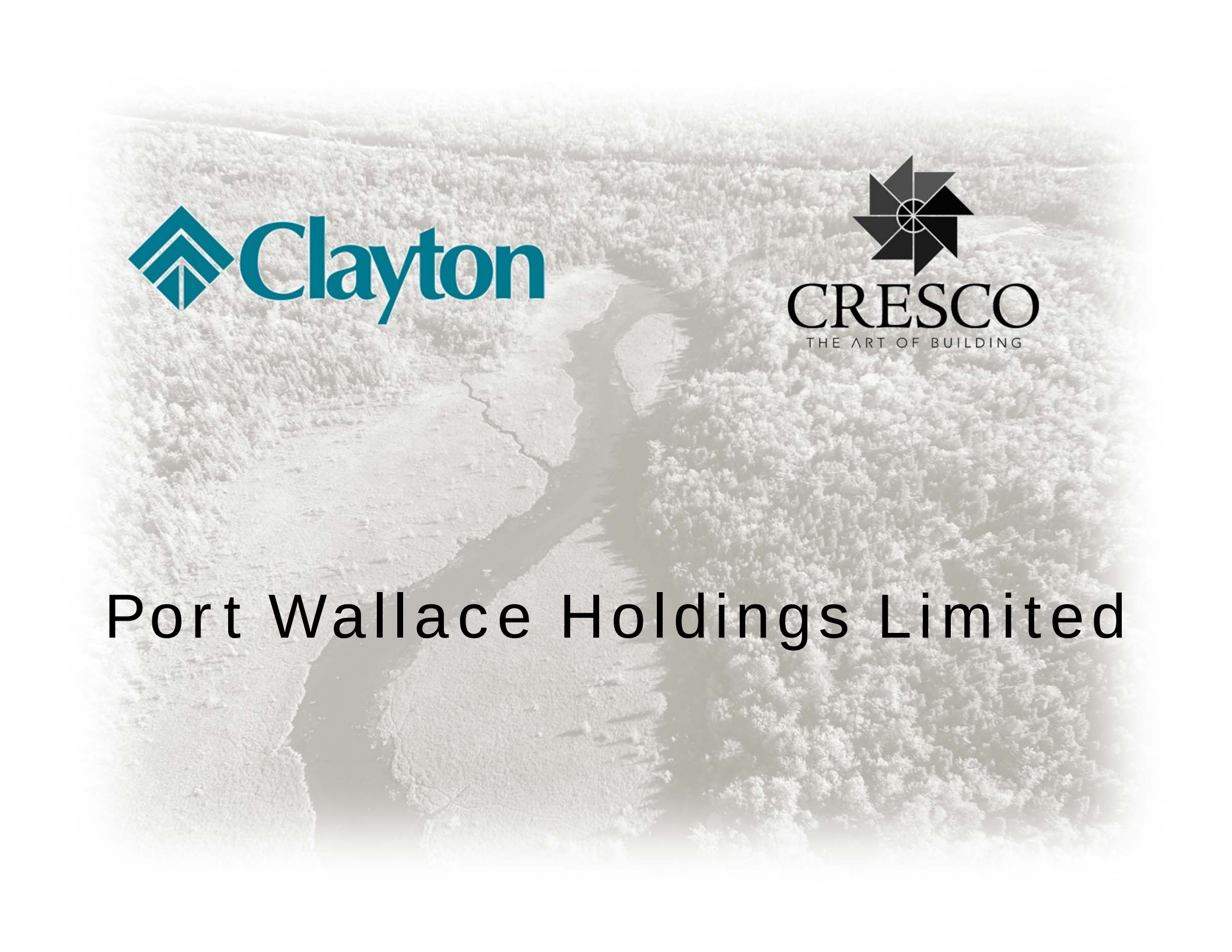
Port Wallace Master Plan

Welcome

November 3, 2016



Port Wallace Holdings Limited

THE PARKS OF WEST BEDFORD
EMBRACING NATURE... ENJOYING LIFE.

the Ravines OF BEDFORD SOUTH

RUSSELL LAKE West

PORTLAND HILLS
A CLAYTON COMMUNITY

Clayton

THE SHAW GROUP

Clayton Developments Limited is a subsidiary of the The Shaw Group.

Clayton Developments Limited has been operation since 1959. To date, Clayton has developed eight master planned communities throughout Halifax Regional Municipality. These communities provide residential homes for over 75,000 people and include over 1.5 million square feet of office space, retail stores, and institutional uses.

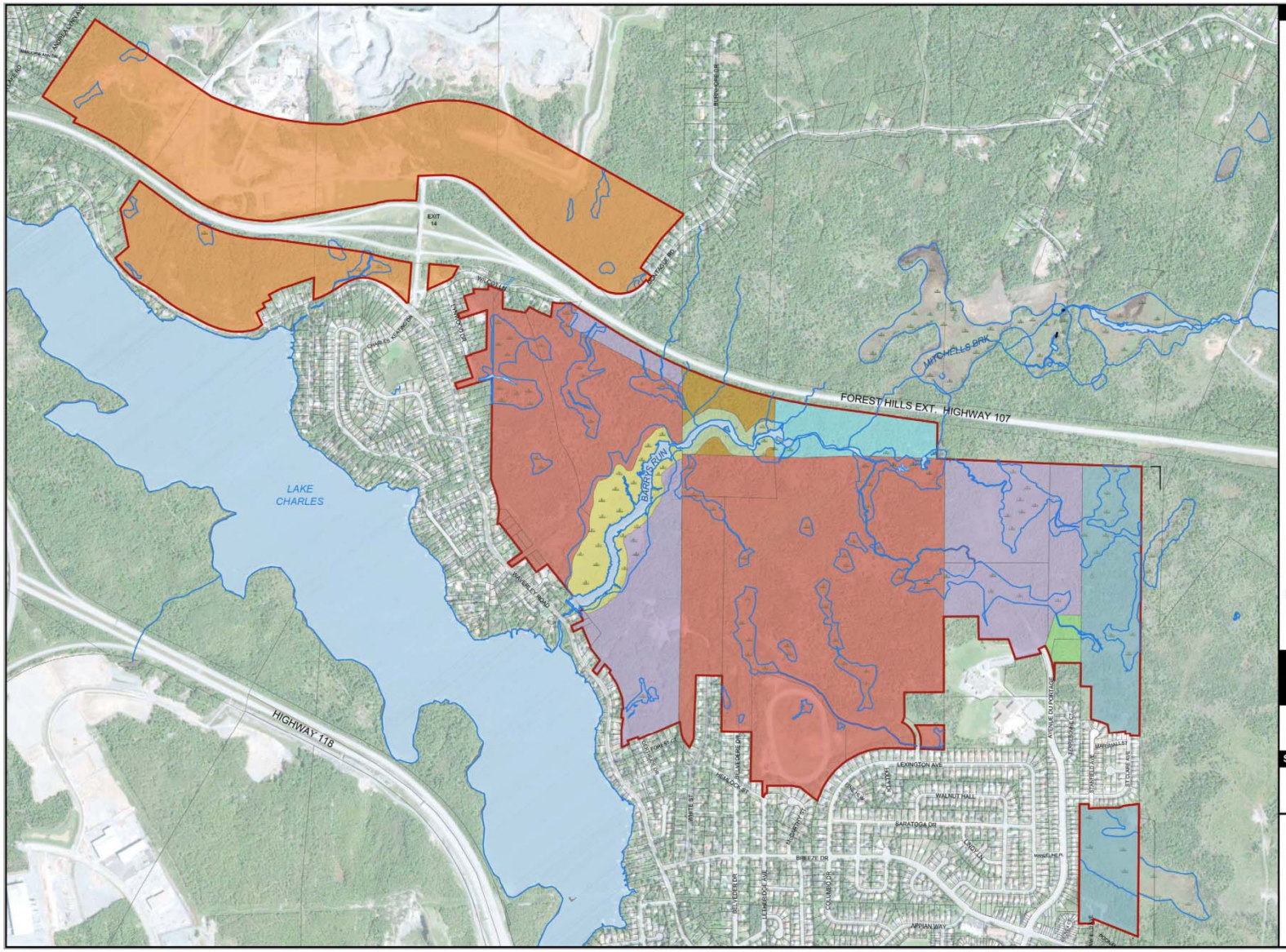
CRESCO
THE ART OF BUILDING

Cresco – Since 1989, Cresco has been redefining The Art of Building. This has been verified by the multiple awards received from the Nova Scotia Home Builders' Association and the Canadian Home Builders' Association. Cresco is Nova Scotia's leaders in energy-efficient housing, and have been recognized as Builder of the Year 3 times in 10 years.

An important partner for the past 15 years in the development of Bedford South and The Parks of West Bedford.

Discussion Items

- Land Use
- Transportation
- Environment



LEGEND

- Study Area Boundary
- Property Boundaries
- Watercourse
- Wetlands

LAND INTEREST BY PARTIES

- Conrad Brothers Ltd
- Unknown Owner
- Armco Capital
- Mukund & Sumitria Unia
- Port Wallace Holdings Ltd
- Pinnacle Properties Ltd
- Halifax County
- George & Roy Cooper
- Whebby
- Open Water

NOTES:

- Property lines approximate only. Site subject to survey

SOURCES:

- Service Nova Scotia and Municipal Relation Online Property Database
- Province of Nova Scotia Digital Topographic Series

STUDY AREA

FIGURE 1.3-2
LAND INTEREST BY PARTIES
DARTMOUTH, NOVA SCOTIA

PORT WALLACE SECONDARY PLANNING STUDY AREA

OCTOBER 26, 2015 B07057-127-OWNERS

SCALE 200 100 0 100 200 300 m

1 : 12,500

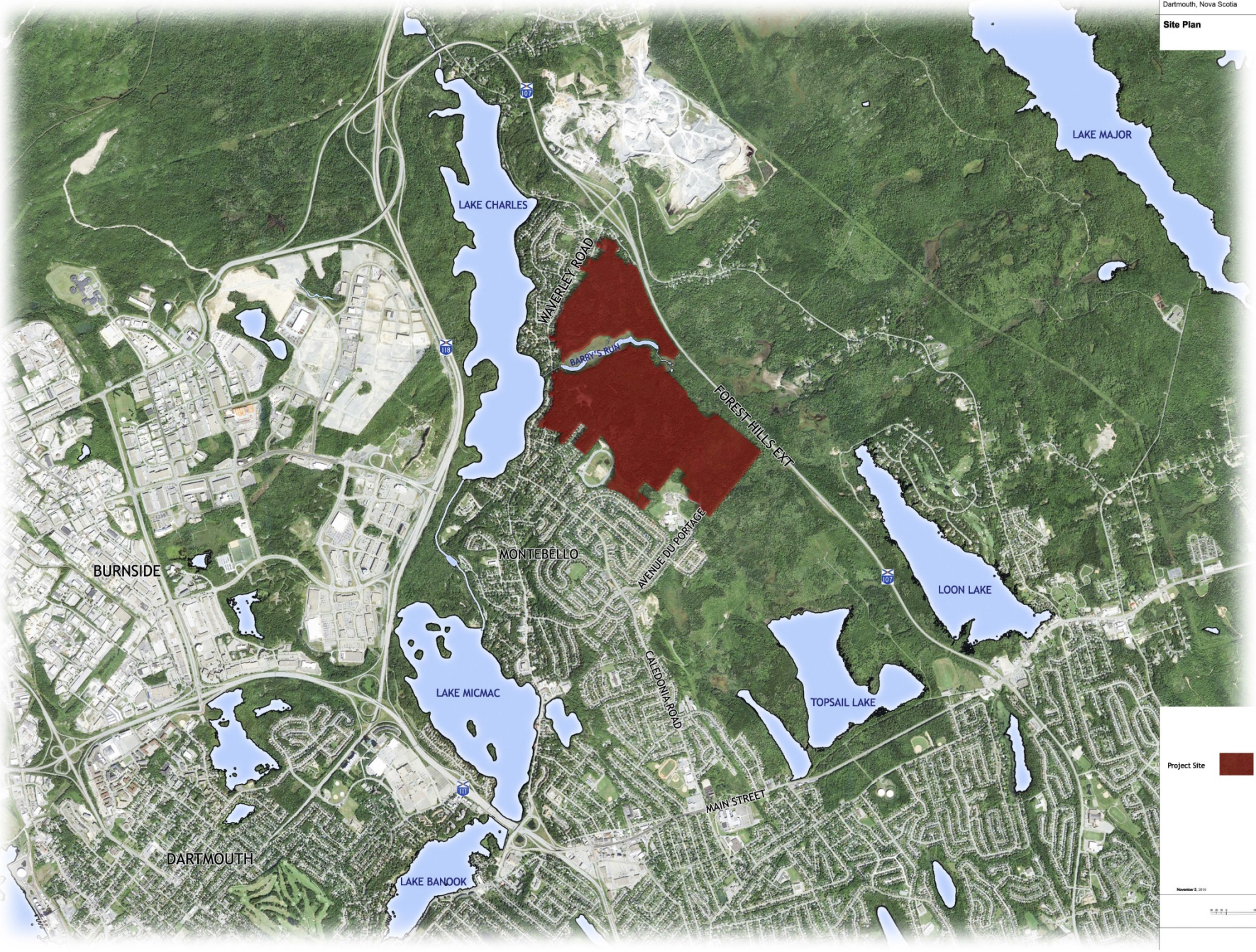
NORTH

WSP
1 SPECTACLE LAKE DRIVE
DARTMOUTH, NOVA SCOTIA CANADA, B3B 1X7
PHONE: 902 835-9955 - FAX: 902 835-1645 - WWW.WSPGROUP.COM

PORT WALLACE

CONCEPT
Dartmouth, Nova Scotia

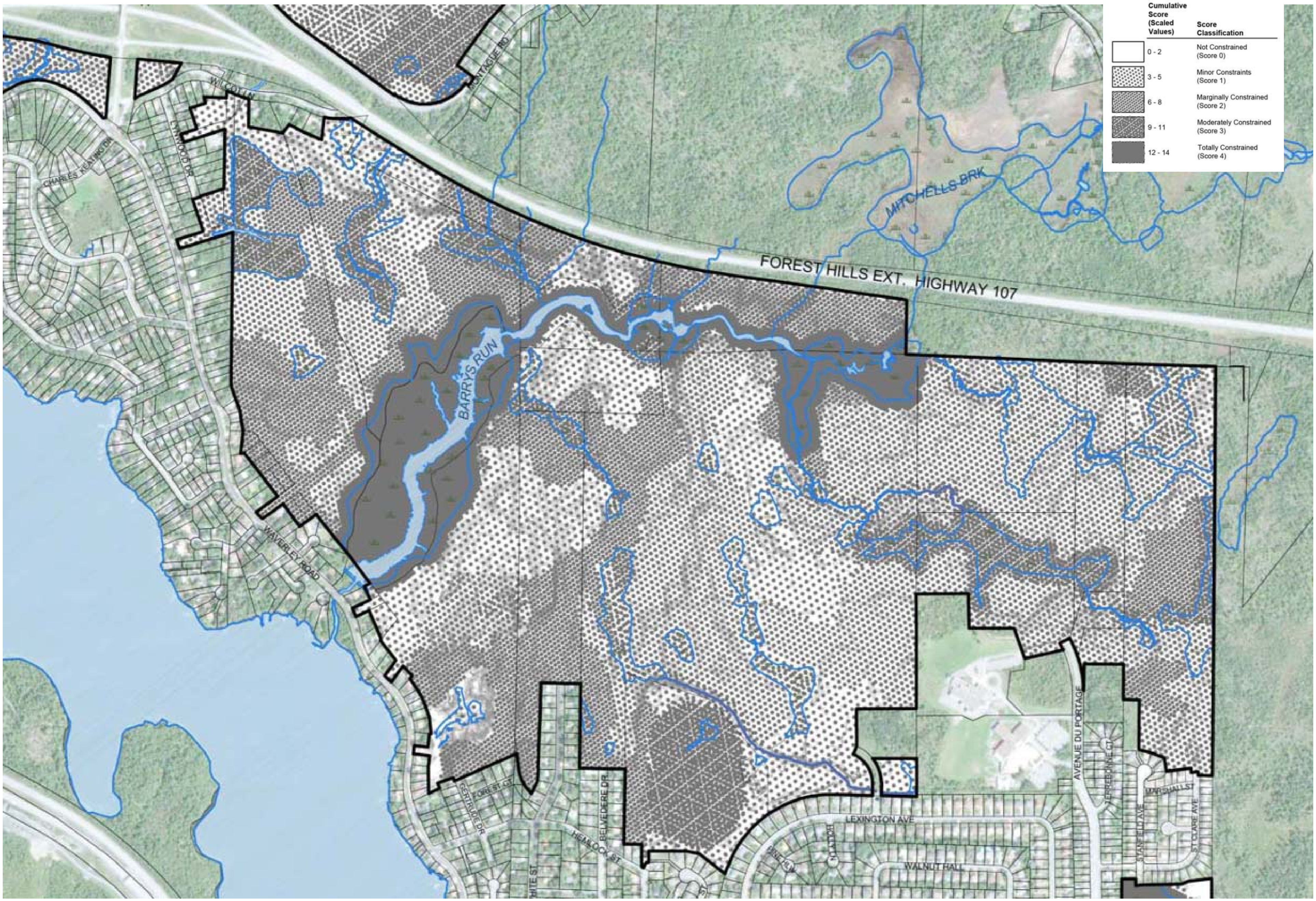
Site Plan



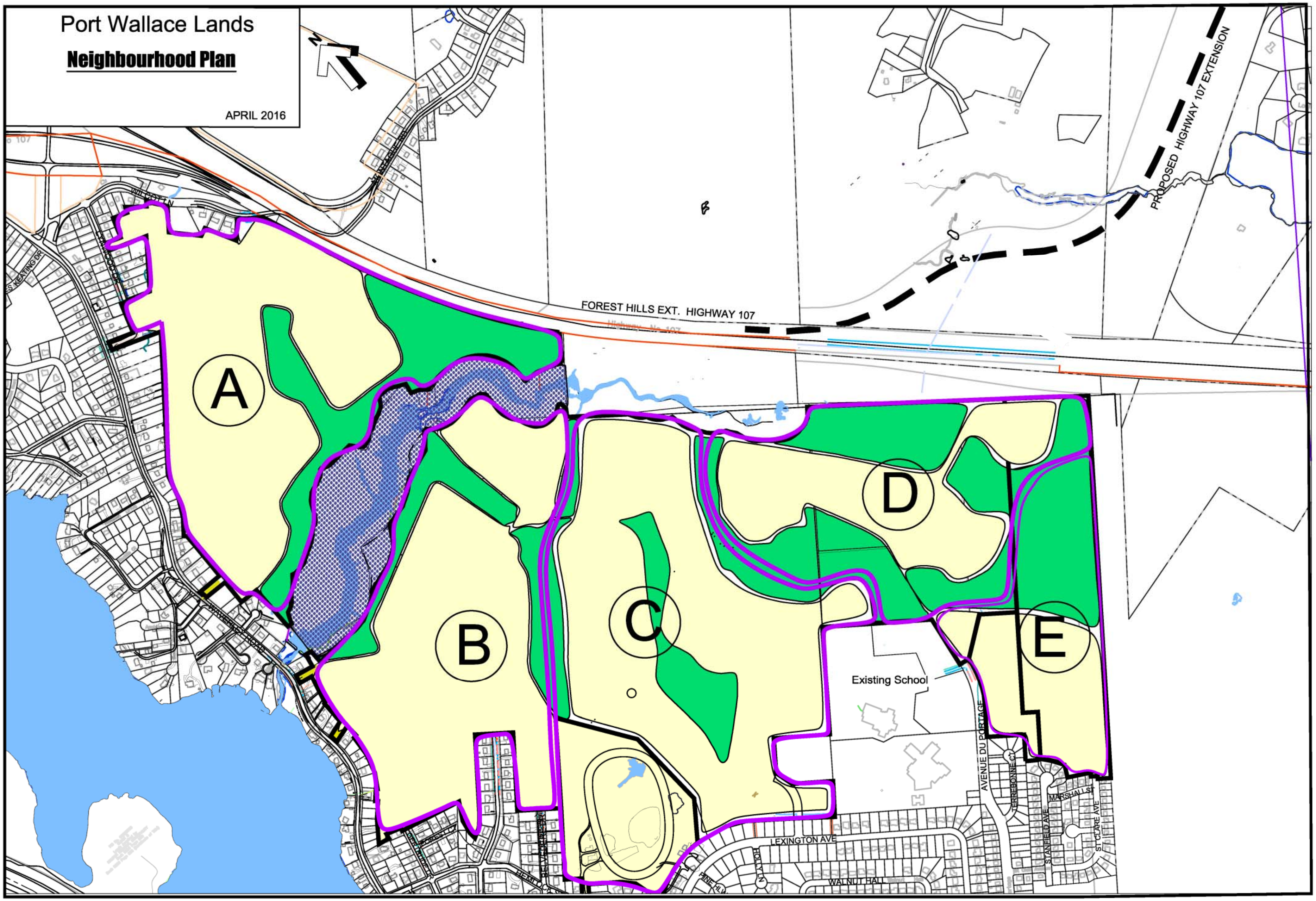
Project Site

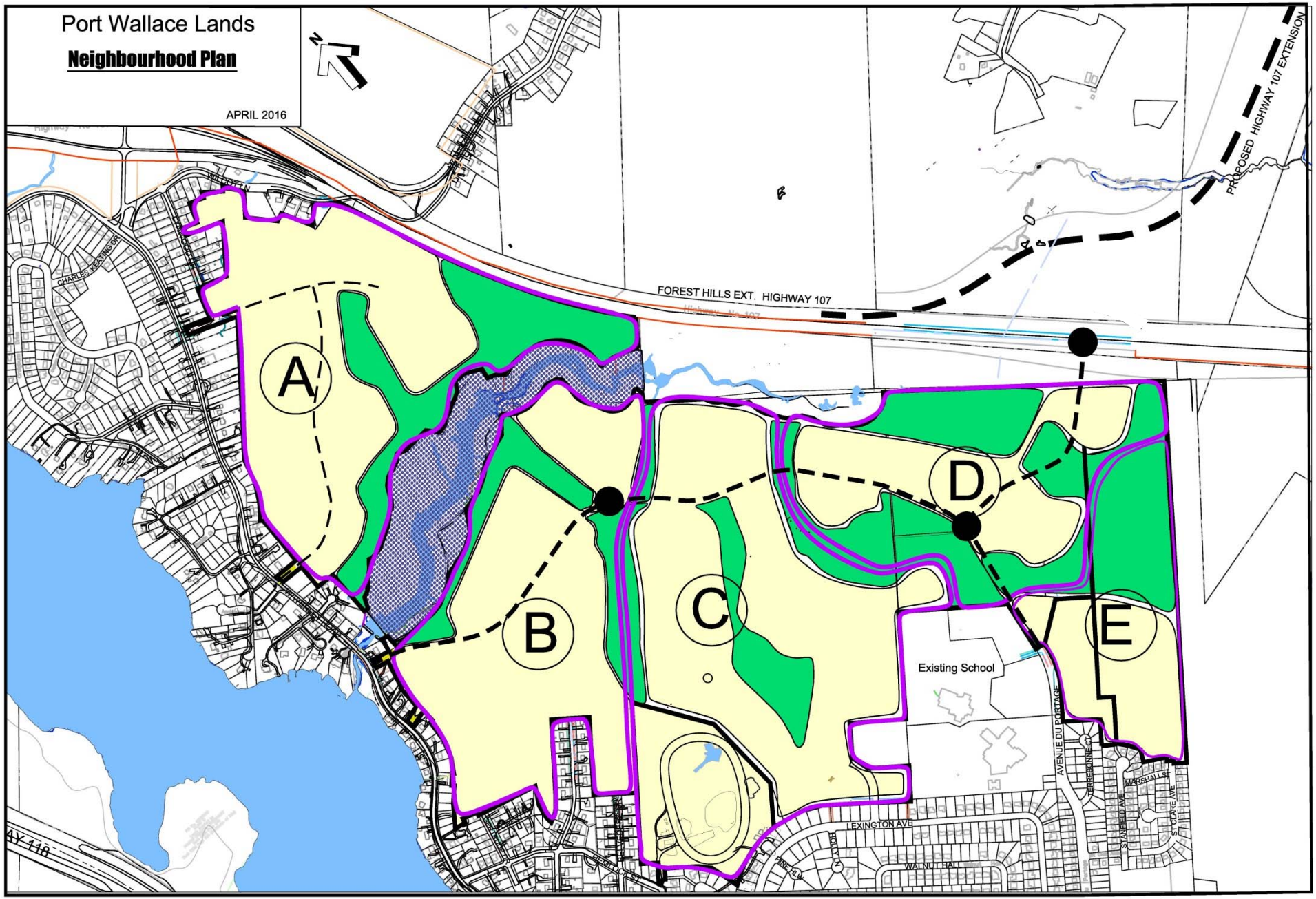
November 2, 2016

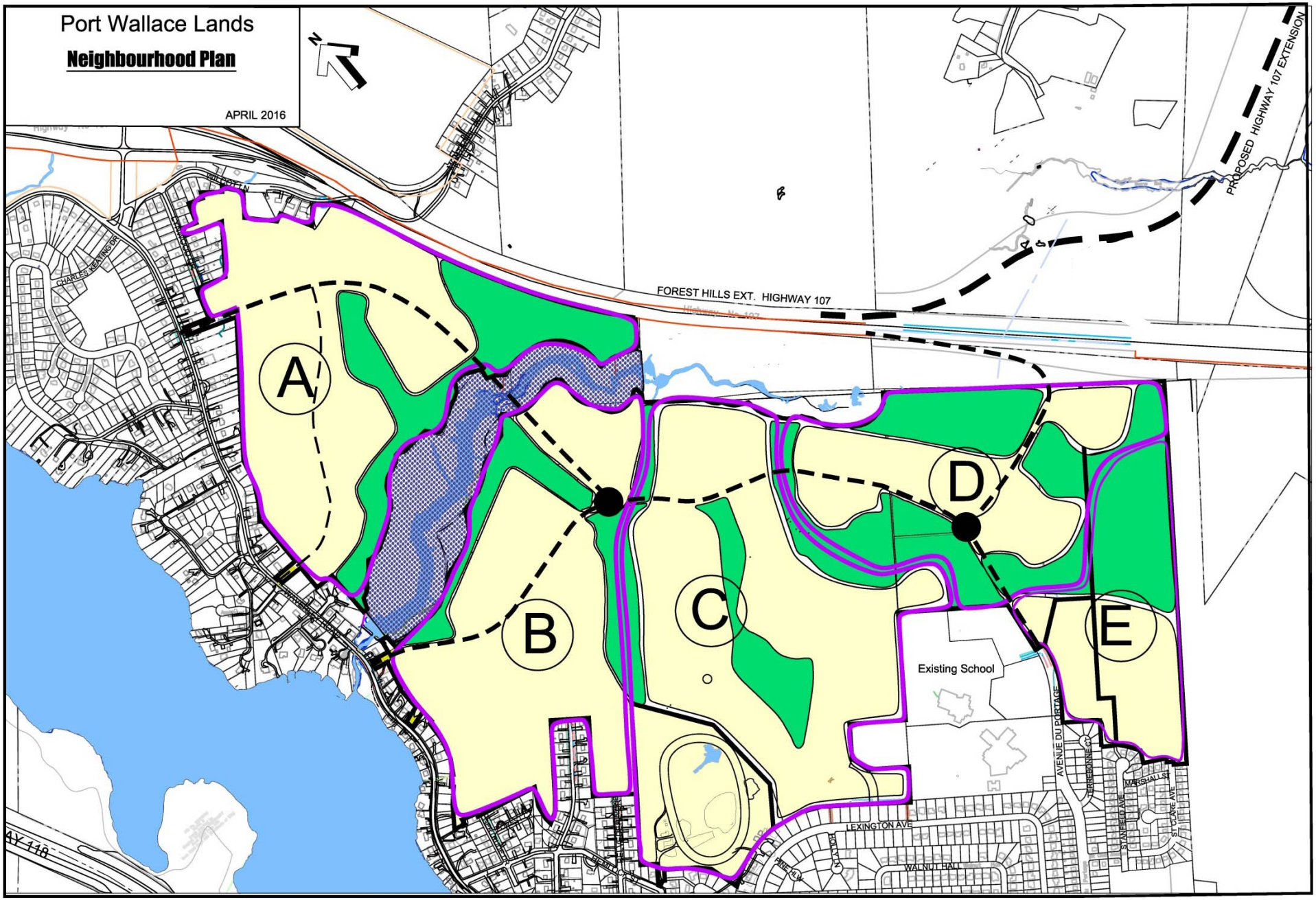
Land Use

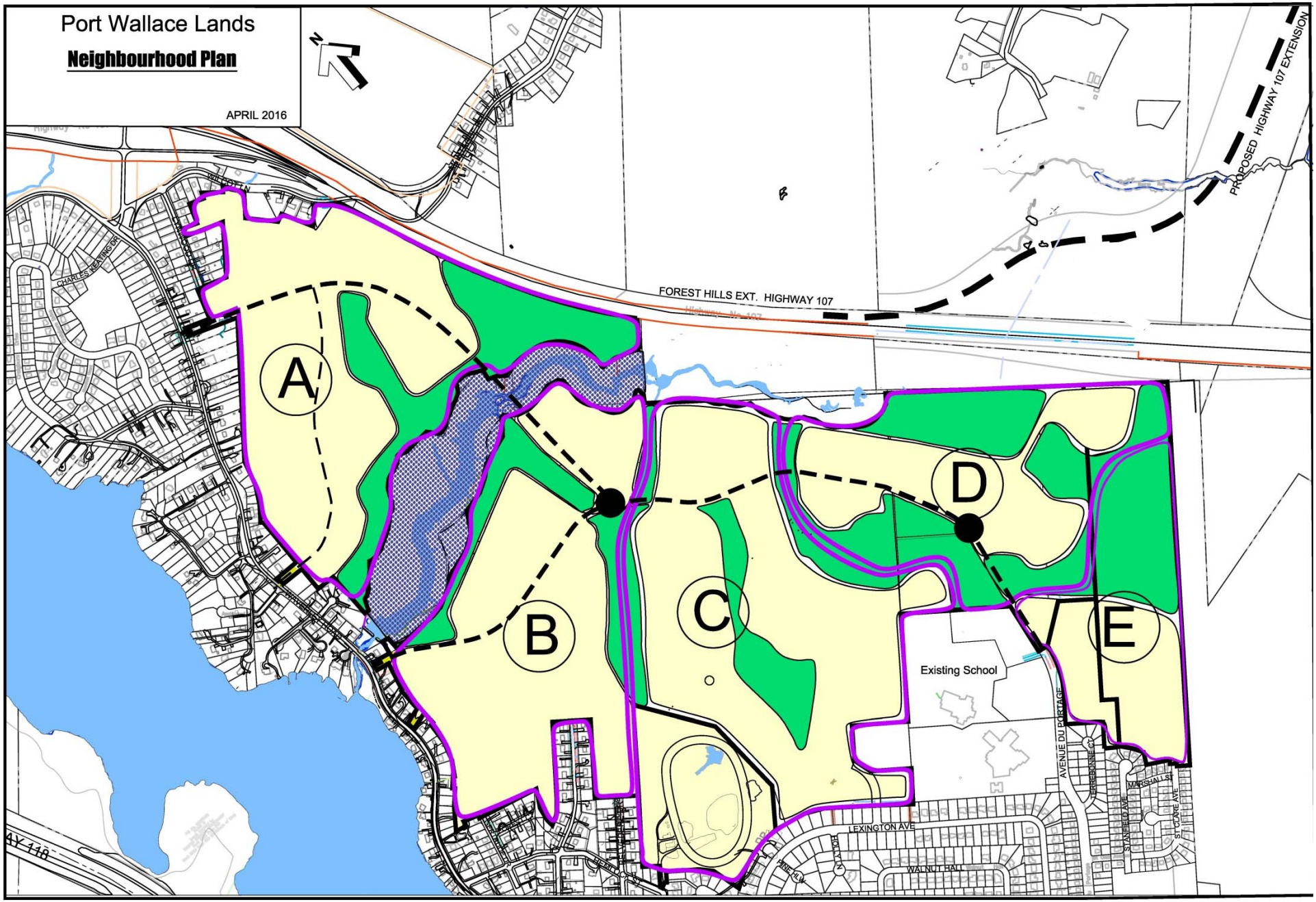


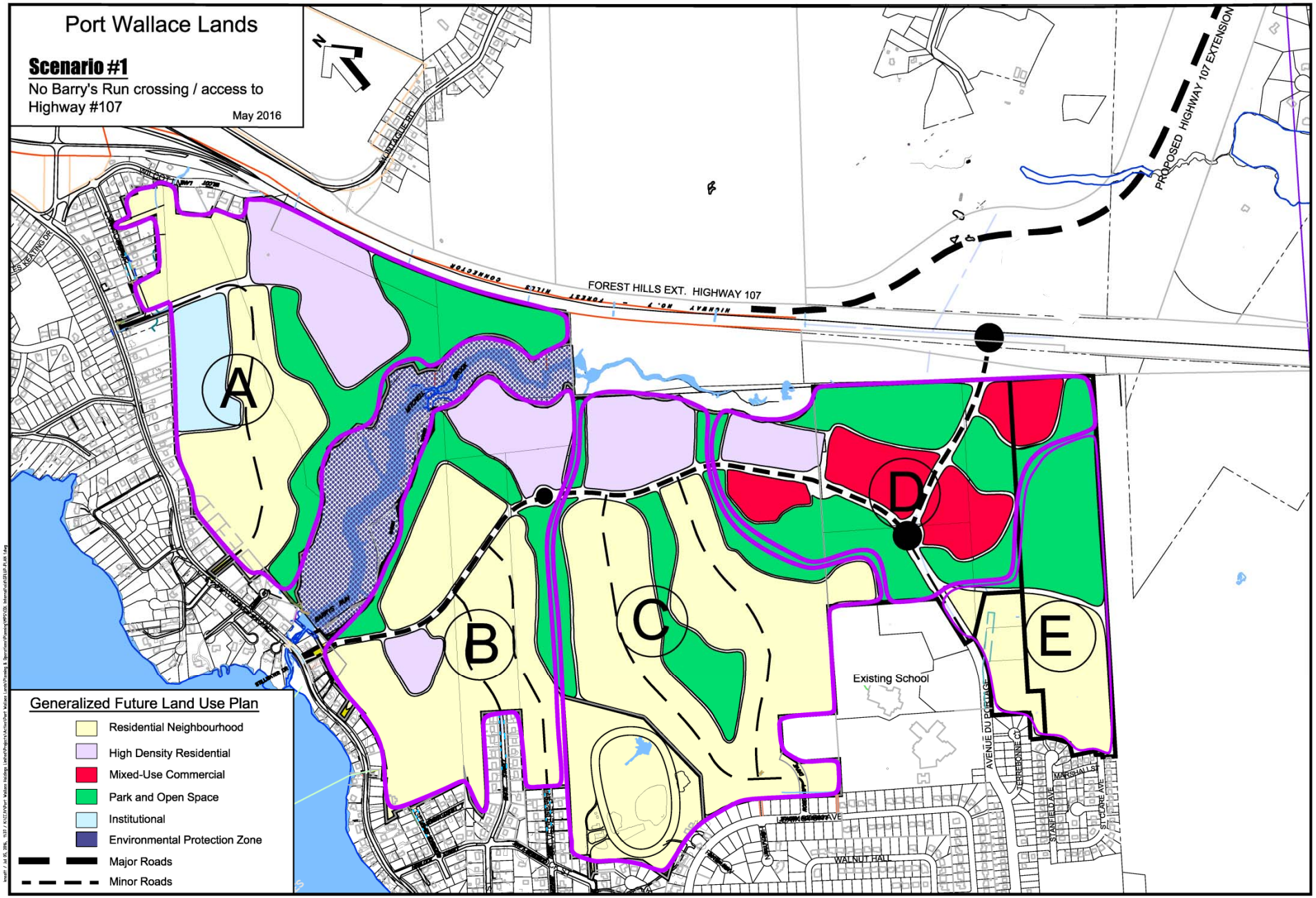
Cumulative Score (Scaled Values)
Score Classification
0 - 2
Not Constrained (Score 0)
3 - 5
Minor Constraints (Score 1)
6 - 8
Marginally Constrained (Score 2)
9 - 11
Moderately Constrained (Score 3)
12 - 14
Totally Constrained (Score 4)
FOREST HILLS EXT. HIGHWAY 107
MITCHELLS BRK
BARRYS RUN
WAVERLEY ROAD
LEXINGTON AVE
WALNUT HALL
AVENUE DU PORTAGE
BELVEDERE DR
MARSHALL ST
ST CLARE AVE

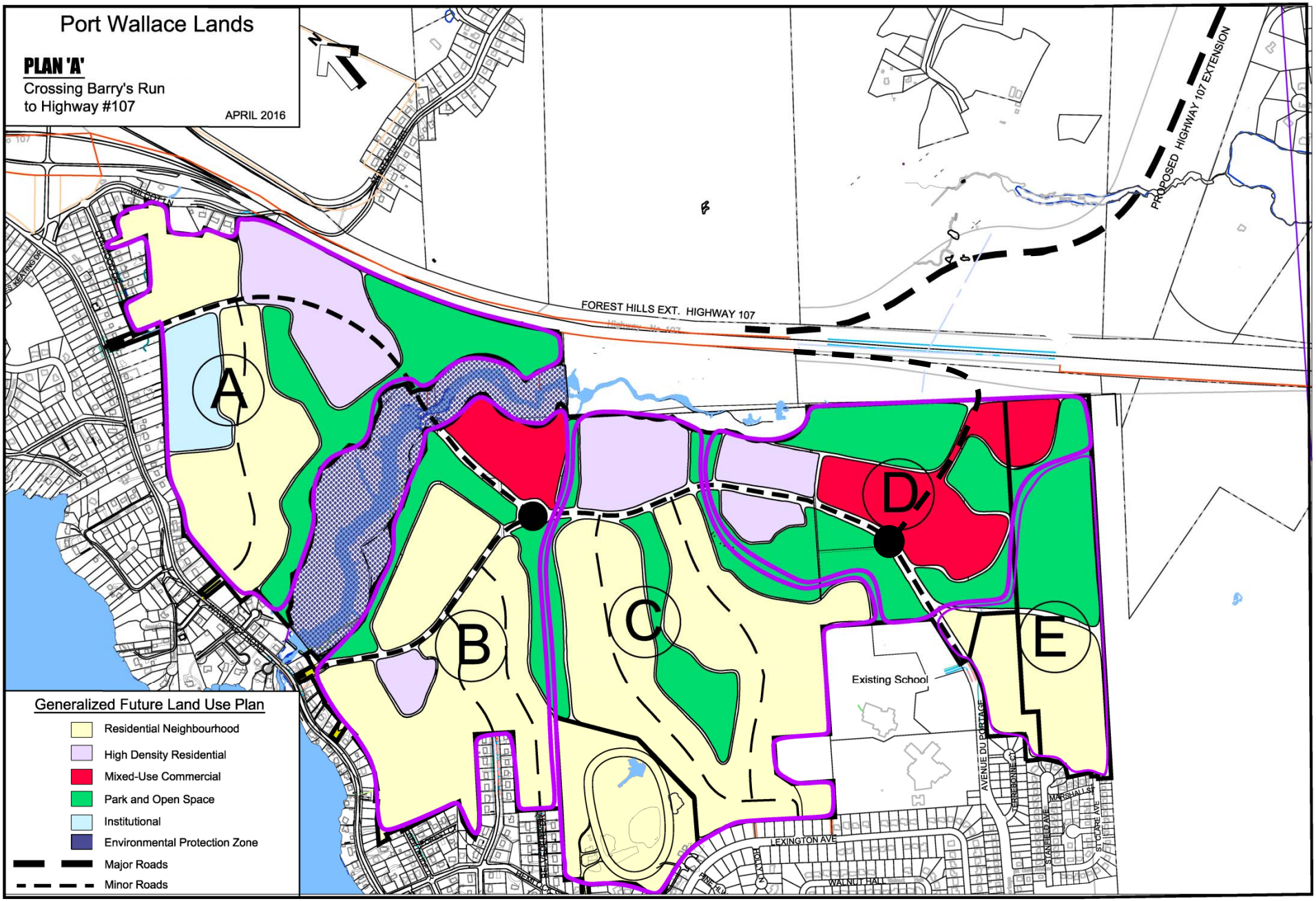

Port Wallace Lands
Neighbourhood Plan
APRIL 2016
FOREST HILLS EXT. HIGHWAY 107
PROPOSED HIGHWAY 107 EXTENSION
A
B
C
D
E
Existing School
AVENUE DU PORTAGE
LEXINGTON AVE
WALNUT HALL
MARSHALL ST
ST CLARE AVE
STANFIELD AVE


Port Wallace Lands
Neighbourhood Plan
APRIL 2016
FOREST HILLS EXT. HIGHWAY 107
PROPOSED HIGHWAY 107 EXTENSION
A
B
C
D
E
Existing School
LEXINGTON AVE
WALNUT HALL
AVENUE DU PORTAGE
MARSHALL ST
ST CLAIR AVE
AY 118


Port Wallace Lands
Neighbourhood Plan
APRIL 2016
FOREST HILLS EXT. HIGHWAY 107
PROPOSED HIGHWAY 107 EXTENSION
A
B
C
D
E
Existing School
LEXINGTON AVE
WALNUT HALL
AVENUE DU PORTAGE
MARSHALL ST
ST CLARE AVE
CHARLES MEATING DR


Port Wallace Lands
Neighbourhood Plan
APRIL 2016
FOREST HILLS EXT. HIGHWAY 107
PROPOSED HIGHWAY 107 EXTENSION
A
B
C
D
E
Existing School
LEXINGTON AVE
WALNUT HALL
AVENUE DU PORTAGE
MARSHALL ST
STANFIELD AVE
STCLAIR AVE
CHARLES KEATING DR
AY 118


Port Wallace Lands
Scenario #1
No Barry's Run crossing / access to Highway #107
May 2016
FOREST HILLS EXT. HIGHWAY 107
PROPOSED HIGHWAY 107 EXTENSION
A
B
C
D
E
Existing School
WALNUT HALL
AVENUE DU PORTAGE
Generalized Future Land Use Plan
Residential Neighbourhood
High Density Residential
Mixed-Use Commercial
Park and Open Space
Institutional
Environmental Protection Zone
Major Roads
Minor Roads


Port Wallace Lands
PLAN 'A'
Crossing Barry's Run
to Highway #107
APRIL 2016
FOREST HILLS EXT. HIGHWAY 107
PROPOSED HIGHWAY 107 EXTENSION
A
B
C
D
E
Existing School
LEXINGTON AVE
WALNUT HALL
AVENUE DU PORTAGE
MARSHALL ST
ST CLARE AVE
Generalized Future Land Use Plan
Residential Neighbourhood
High Density Residential
Mixed-Use Commercial
Park and Open Space
Institutional
Environmental Protection Zone
Major Roads
Minor Roads

PORT WALLACE

CONCEPT PLAN
Dartmouth, Nova Scotia

Version 100

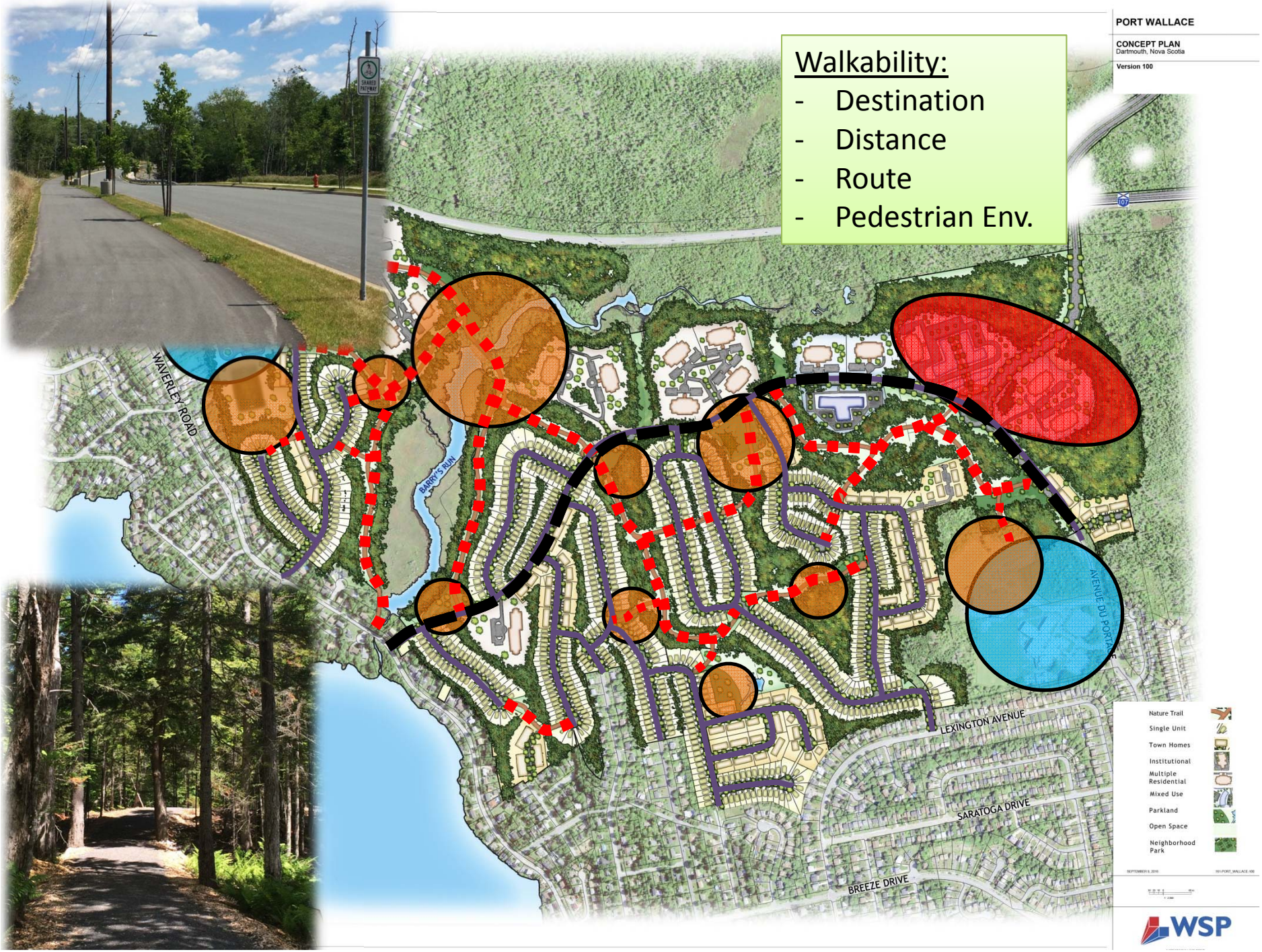
SEPTEMBER 9, 2016

101-PORT_WALLACE-100

WSP


PORT WALLACE
CONCEPT PLAN
Dartmouth, Nova Scotia
Scenario 1
FOREST HILLS EXT
MITCHELL BROOK
BARRY'S RUN
WAVERLEY ROAD
LAKE CHARLES
AVENUE DU PORTAGE
LEXINGTON AVENUE
SARATOGA DRIVE
BREEZE DRIVE
Nature Trail
Single Unit
Town Homes
Institutional
Multiple Residential
Mixed Use
Parkland
Open Space
Neighborhood Park
OCTOBER 26, 2016
101-PORT_WALLACE-SCENARIO-1
2716 Units = 7,600 People


PORT WALLACE
CONCEPT PLAN
Dartmouth, Nova Scotia
Scenario 1A
N
107
FOREST HILLS EXT
MITCHELL BROOK
WAVERLEY ROAD
BARRY'S RUN
LAKE CHARLES
AVENUE DU PORTAGE
LEXINGTON AVENUE
SARATOGA DRIVE
BREEZE DRIVE
Nature Trail
Single Unit
Town Homes
Institutional
Multiple Residential
Mixed Use
Parkland
Open Space
Neighborhood Park
OCTOBER 29, 2018
161-PORT_WALLACE-SCENARIO-1A


Walkability:
- Destination
- Distance
- Route
- Pedestrian Env.
PORT WALLACE
CONCEPT PLAN
Dartmouth, Nova Scotia
Version 100
WAVERLEY ROAD
BARRY'S RUN
LEXINGTON AVENUE
SARATOGA DRIVE
BREEZE DRIVE
AVENUE DU PORTAGE
Nature Trail
Single Unit
Town Homes
Institutional
Multiple Residential
Mixed Use
Parkland
Open Space
Neighborhood Park
WSP

PORT WALLACE

CONCEPT
Dartmouth, Nova Scotia

Walkability Plan

FOREST HILLS EXT

MITCHELL BROOK

BARRY'S RUN

WAVERLEY ROAD

LAKE CHARLES

LEXINGTON AVENUE

SARATOGA DRIVE

BREEZE DRIVE

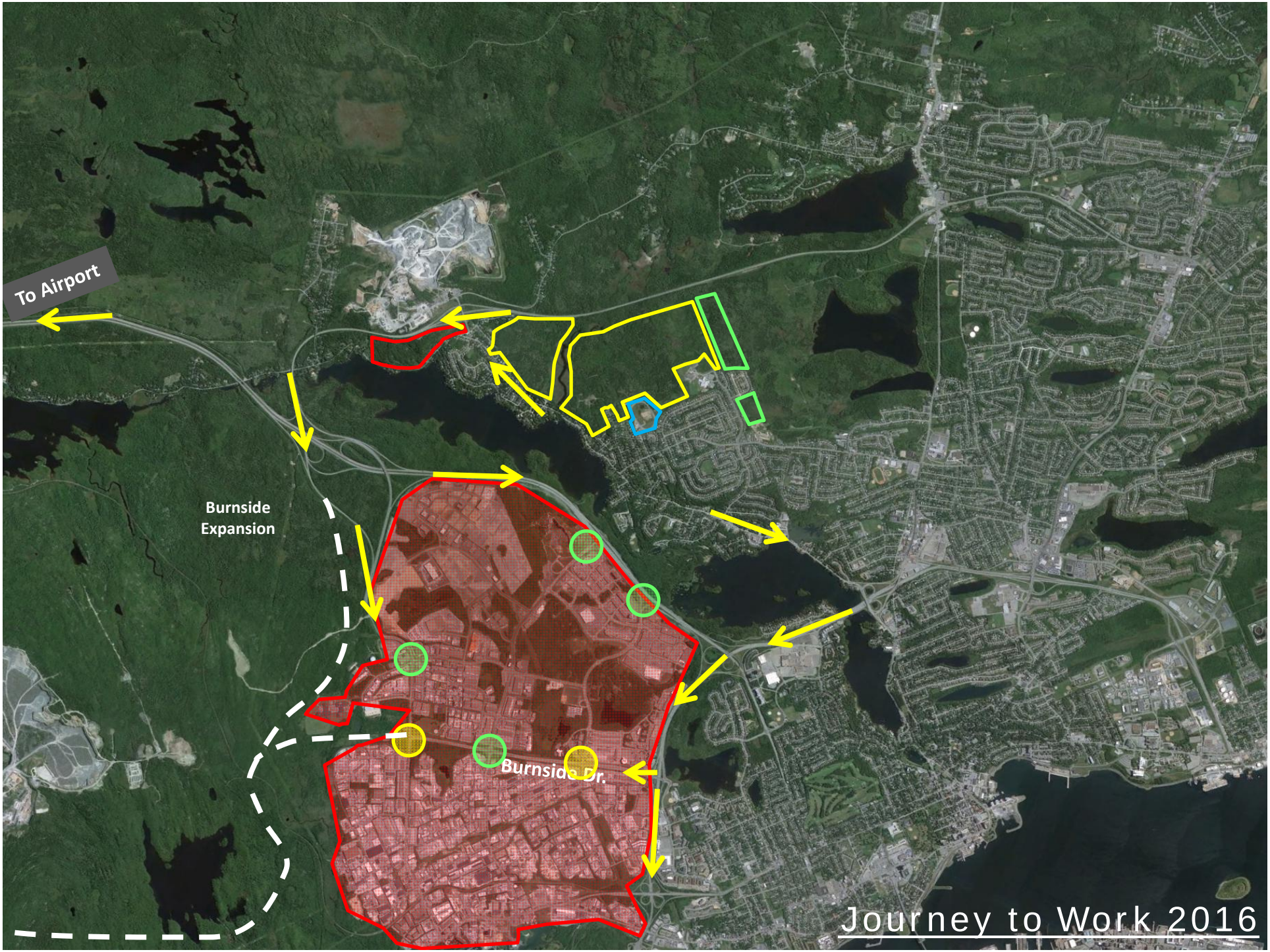
AVENUE DU PORTAGE

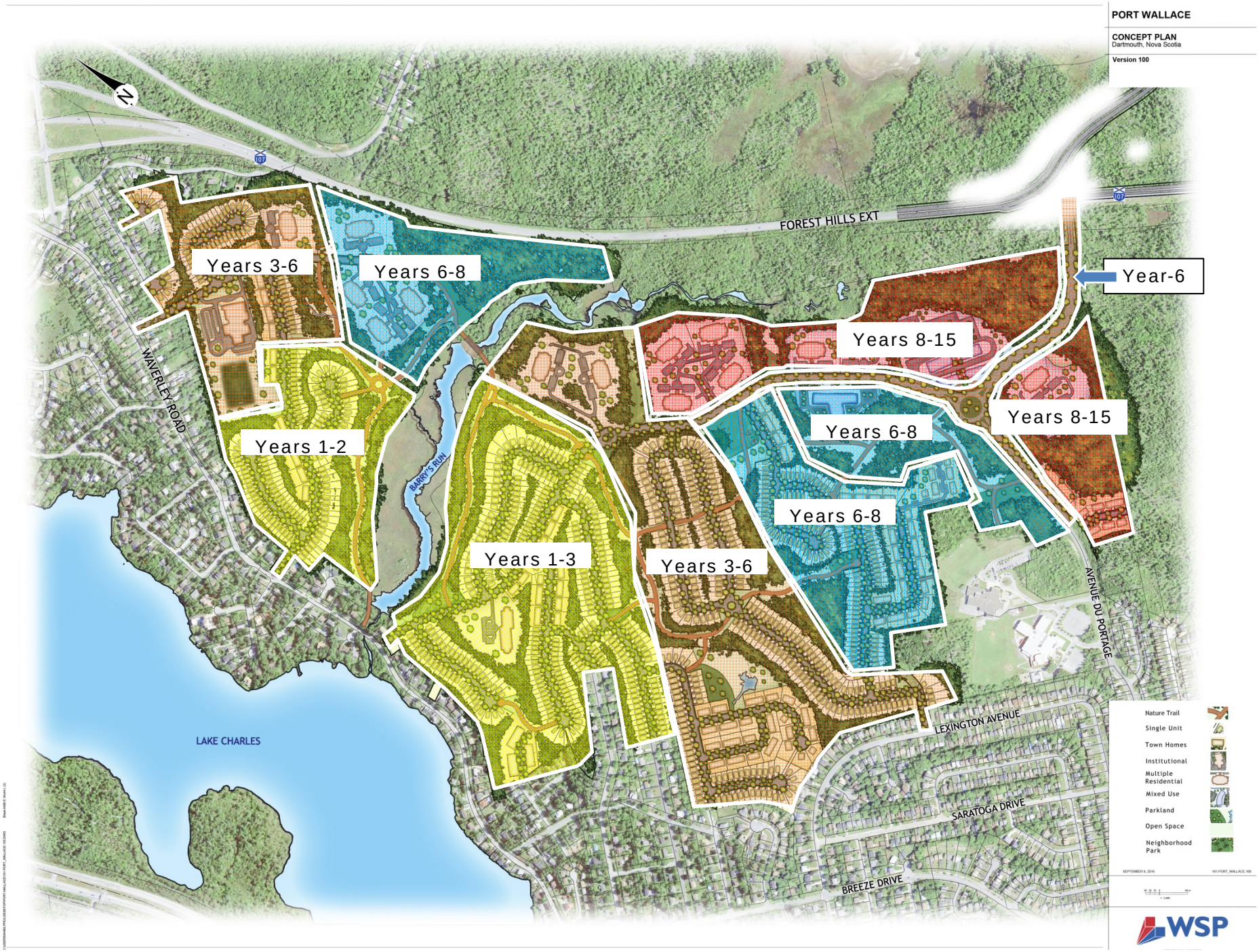
- Primary AT Trail
- Neighbourhood Sidewalk
- Secondary AT Trail
- Destination - Park
- Destination - Institutional
- Destination - Commercial

November 2, 2015

161-PORT_WALLACE-SCENARIO-1A

Transportation


To Airport
Burnside Expansion
Burnside Dr.
Journey to Work 2016


PORT WALLACE
CONCEPT PLAN
Dartmouth, Nova Scotia
Version 100
N
FOREST HILLS EXT
Years 3-6
Years 6-8
Year-6
Years 8-15
Years 8-15
Years 6-8
Years 6-8
Years 1-2
Years 1-3
Years 3-6
WAVERLEY ROAD
BARRY'S RUN
LAKE CHARLES
AVENUE DU PORTAGE
LEXINGTON AVENUE
SARATOGA DRIVE
BREEZE DRIVE
Nature Trail
Single Unit
Town Homes
Institutional
Multiple Residential
Mixed Use
Parkland
Open Space
Neighborhood Park
WSP

Preservation of the Natural Environment


General Commercial
Community Commercial
Higher Density
Park
Existing Bedford South School
South Gate Dr
Institutional/Community Commercial
BICENTENNIAL HIGHWAY


PORT WALLACE

CONCEPT PLAN
Dartmouth, Nova Scotia

Version 100

SEPTEMBER 9, 2016

101-PORT_WALLACE-100

WSP

Infrastructure / Storm Water

acques
Whitford

Consulting Engineers
Environmental Scientists
Risk Consultants

ter Stormwater Management Plan for Wentworth/Bedford South Development

BEDFORD SOUTH
CONCEPTUAL PLAN JULY 2002

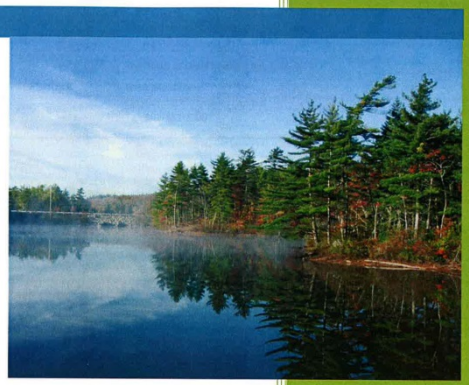
Cresco Group

Clayton

Clayton Developments Ltd.

Jacques Whitford
NAWE

Jacques Whitford NAWE, Inc.
4444 Centerville Road, Suite 140
White Bear Lake, Minnesota 55127
Phone: 651-255-5050
Fax: 651-255-5060
www.nawe-pa.com
www.jacqueswhitford.com



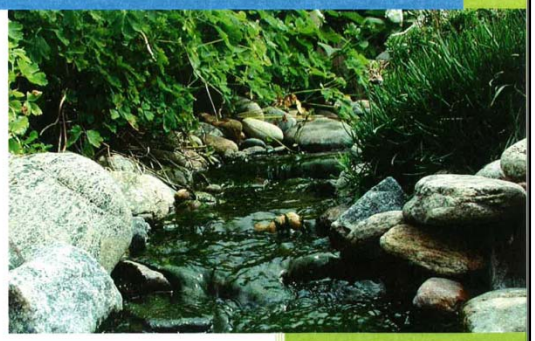
Master Stormwater Management Plan for The Parks of West Bedford Sub Area 2

West Bedford Holdings Limited
Project No. 1036719

April 2008

Jacques Whitford
NAWE

Jacques Whitford NAWE, Inc.
4444 Centerville Road, Suite 140
White Bear Lake, Minnesota 55127
Phone: 651-255-5050
Fax: 651-255-5060
www.nawe-pa.com
www.jacqueswhitford.com



Master Stormwater Management Plan for The Parks of West Bedford Subareas 3, 4, and 6

West Bedford Holdings Limited
Project No. 1030792

December 2007

West Bedford Holdings Limited

Master Stormwater Management Plan Area 7 & 8

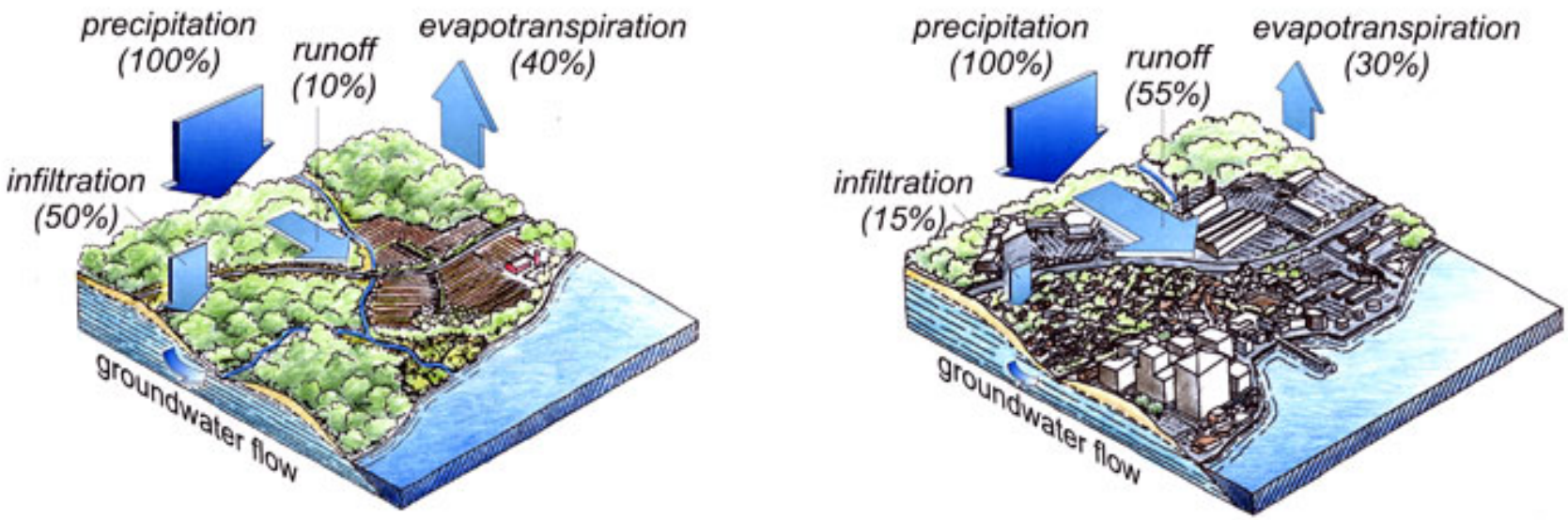
Report

Date: February 2013
Ref. N°: 15727

LVM | Maritime Testing


PORT WALLACE
CONCEPT
Dartmouth, Nova Scotia
Green Network Plan
N.
107
FOREST HILLS EXT
MITCHELL BROOK
BARRY'S RUN
WAVERLEY ROAD
LAKE CHARLES
AVENUE DU PORTAGE
LEXINGTON AVENUE
SARATOGA DRIVE
BREEZE DRIVE
Parkland
Natural Open Space
November 2, 2015
151-PORT_WALLACE-SCENARIO 1A

LOW IMPACT DEVELOPMENT (LID)



- **LID combines conservation practices with distributed storm water source controls, and pollution prevention, to maintain or restore watershed functions.**
- **The objective is to disperse LID devices uniformly across a site to minimize the generation of runoff.**
- **LID reintroduces the hydrologic and environmental functions that are altered with conventional storm water management.**

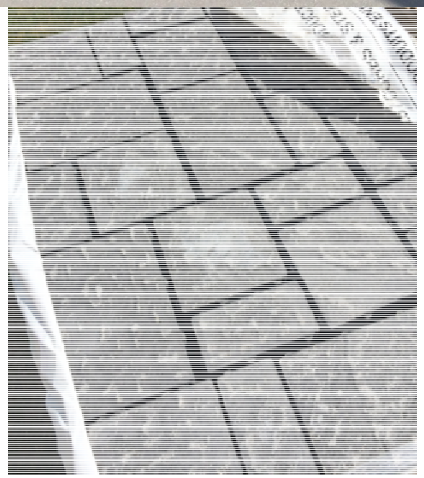
PORT WALLACE

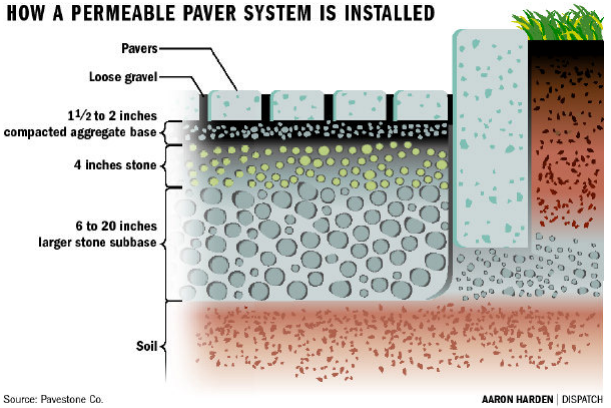
CONCEPT
Dartmouth, Nova Scotia

Stormwater System Plan

November 2, 2016 161-PORT_WALLACE-SCENARIO-1A

Permeable Pavers in Driveways





Bio-swales in Road Right-Of-Way

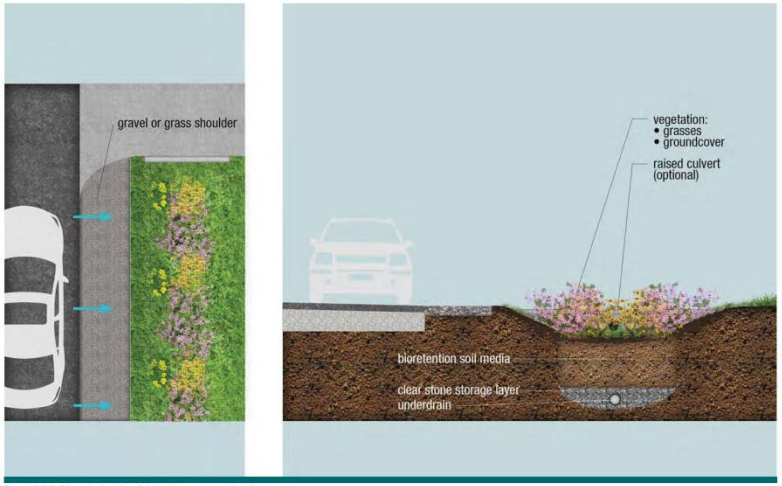
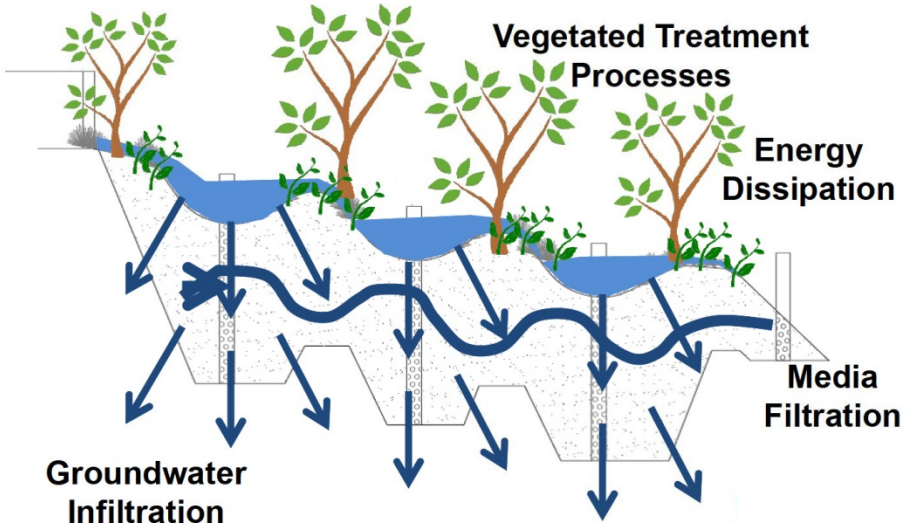


Figure 2.2.5: Bioswale plan view [left] and cross-section [right]

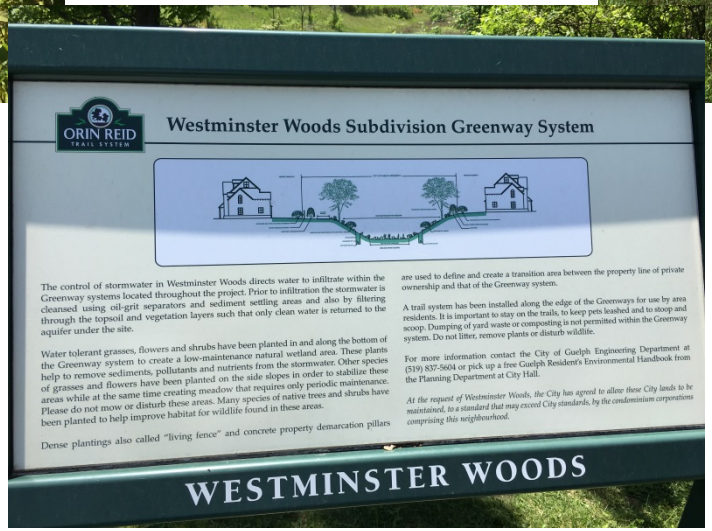
Regenerative Storm Water Swales

Regenerative Storm Water Swales

RSCs are… a series of pools and riffles designed to convey, manage, and treat stormwater runoff



Infiltration Basins



Education & Community Engagement

The Parks of West Bedford

Lawn Care Best Management Practices

Home Owners' Guide

THE PARKS
OF WEST BEDFORD
EMBRACING NATURE... ENJOYING LIFE.

West Bedford Holdings Limited

Stop Runoff

Use a Rain Barrel -

Rain barrel usage can be important to the overall success of the stormwater management system. The benefits of using a rain barrel include:

- Stormwater that washes off rooftops and into downspouts is caught and retained.
- Homeowners use the water in the rain barrel as needed during the growing season.
- Water can be reused as needed in the garden or lawn landscape.
- Reduces stormwater runoff and pollution by providing treatment to the "first flush" of contaminants.
- Easy Installation – suitable for all property types.
- Reduces water bills by not using potable water for irrigation.
- Water generated is very soft (low in minerals), which is good for plant growth.

The proper design, siting and maintenance practices are necessary to ensure that the rain barrel is functioning appropriately and not becoming a nuisance or mosquito breeding ground in the development. The following guidance is intended to provide the proper siting, mosquito control and maintenance practices for your rain barrel.

Finding the best location for your rain barrel -

To find the best location for your rain barrel, the following techniques are recommended:

- Place rain barrel on a hard, level, and pervious surface. Concrete blocks, bricks, decorative blocks, or flagstones work well as a base.
- Locate rain barrel at downspout nearest to the garden you want to irrigate.
- Rain barrels work using gravity to drain – The garden to be irrigated should be lower in elevation that the rain barrel.
- Ensure that the rain barrel overflow location directs water towards your yard and not your neighbors.

What about those pesky mosquitoes?

Many homeowners worry that rain barrels will create a breeding ground for mosquitoes. The following is a list of tried and trusted techniques that can be employed to control mosquitoes:

- Ensure that the mosquito proof screen on the rain barrel is installed and functioning correctly.
- Ensure that the base is pervious, so overflow does not collect and leave standing water for mosquito breeding.
- Inspect rain barrel weekly – ensure that the lid is securely closed and the water is free of organic material.
- Mosquito larvae require 6-9 days to hatch. Completely drain the barrel once per week and clean if necessary to prevent the formation of stagnant water.

When properly encased with a mosquito proof screen, rainbarrels will keep out any mosquitoes from breeding

How do I take care of my rain barrel?

To properly care for your rain barrel, the following techniques are recommended:

- Keep spigot closed when not using water.
- Routinely inspect gutters, downspouts, rain barrel intake and mosquito screens for debris.
- Keep lid secured and screens clear of debris. Make sure the overflow tube and hose are functioning correctly.
- If odours develop, drain the rain barrel and spray with a hose until clean.
- Completely drain rain barrel before winter – leave spigot open during the cold months so water does not accumulate and freeze.
- Ensure that the overflow is draining properly and not causing erosion of the rain barrel base. An example overflow valve is shown in the above figure.
- Rain barrel water is not potable – *do not drink the water*.

Go-Toxic Free

Lawn Fertilizer

There are many natural ways to fertilize a lawn before reaching for a store-bought fertilizer. Compost and grass clippings are a cost-effective and environmentally friendly way to provide your lawn with nutrients. If you feel the need to purchase a fertilizer to care for your lawn, use organic fertilizers or slow release fertilizers.

- Clean Nova Scotia indicates that generally a 4:1:2 (the ratio of nitrogen to phosphorous to potassium) fertilizer applied at rate of 1 kilogram nitrogen per 100 square metres (2 pounds per 1000 square feet) provides the proper balance of nutrients.
- Combine the fertilizer with organic material (a mixture of good-quality soil, sand and a source of humus) and add this to your lawn's surface.
- Use a slow release or organic fertilizer before a rain (follow labels). If rain is not expected, water the lawn prior to fertilizing.
- Know your nutrient needs by understanding your soil and lawn conditions (most people apply too much fertilizer and this impacts water quality as well as lawn health).
- Go natural! Forget chemical fertilizers and replace your lawn with native plantings. There are over 1,500 to choose from for our region!

Organic fertilizers are often overlooked as an effective method for lawn care and maintenance

Pet Clean-Up

Pet waste is a health hazard and a pollutant as it contains excess phosphorus and harmful bacteria which can harm lake water quality. The following guidelines will provide for the proper cleanup of pet waste and the elimination of any health concerns due to contact concerns.

- Clean up all animal waste whether on your lot or on trails or other places in the community.
- During walks, bring a bag and dispose of the waste in the toilet, garbage, or a designated pet compost area.
- In your yard, encourage pets to use one location. This will make clean-up easier and this area can be isolated from the rest of yard, which can prevent accidental contact with the pet waste.
- Do not feed geese - It encourages them to frequent your yard and generate waste in your yard, driveway, or sidewalks.
- Pick up after pets before cleaning patios, sidewalks or driveways. Do not spray waste onto streets or into gutters.

Pesticide Use

Pesticides should be applied only as a last resort, or not at all. The major source of pesticides in urban streams is home applications to kill insects and weeds in the lawn and garden. If you need pesticides, certain pesticides may be permitted. Call Clean Nova Scotia (902) 420-6593 or visit the HRM website http://www.halifax.ca/pesticides/rules.html for more information.

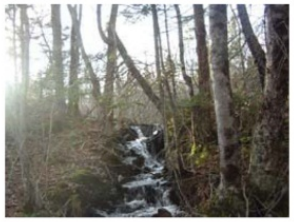
Naturalize

Use Native Species

Many native species are suited to growing in a wide range of ecological conditions and they are usually best suited to the Nova Scotia climate. Because of this, once they are established they usually require less care and are a key element in creating a low maintenance and sustainable landscape. The species listed below are considered to be the types of species that would most usually be found in the Parks of West Bedford area, however, use of other native species may also be appropriate. Final planting decisions should be made based on specific site conditions, species availability, and advice from landscape specialists.

Native Trees best suited for certain site conditions -

- Dry/Poor Sites: Black Spruce, Balsam Fir, White Pine, Red Pine, White Birch, Grey Birch, Red Oak, Trembling Aspen, and Largetooth Aspen.
- Moist/Poor Sites: Black Spruce, Red Maple, Eastern Larch, and Balsam Fir.
- Average Sites: Red Spruce, White Spruce, Eastern Hemlock, White Pine, White Birch, Yellow Birch, Red Oak, Red Maple, and Sugar Maple.
- Moist/Rich Sites: Red Spruce, White Spruce, Eastern Hemlock, Yellow Birch, Red Maple, Sugar Maple, White Ash, and Ironwood.
- Native Shrubs: Wild Raisin, Serviceberry, False Holly, Canada Holly, Velvet-Leaf Blueberry, Lowbush Blueberry, Lambkill, Bush Honey Suckle, Huckleberry, Witch Hazel, Speckled Alder, Labrador Tea, Rhodora, Mountain Ash, Teaberry, Spirea, Striped Maple, Mountain Maple, and Beaked Hazelnut.



Create Rain Gardens

A rain garden is a landscaping feature you can build to manage runoff. A rain garden will collect rain water and slowly filter water into the ground. They are usually a constructed depression (10-20 cm deep) that are designed to look like a natural area, but it will accept, infiltrate and clean stormwater. The rain garden will typically fill up with a few inches of water after a storm and within 1-2 days, the water will slowly filter into the ground. It is planted with wet and dry tolerant plants to absorb rain water. This technique encourages the recharge of the groundwater aquifer and uses the soil to filter out any pollutants before the infiltrating water reaches the local groundwater table. When combined with a disconnected roof leader (downspout), the stormwater can be conveyed into the rain garden via a vegetated swale creating a high value natural landscape.

Rain gardens serve both a practical and aesthetic purpose; to clean and manage water run off, while creating a more beautiful landscape

Keep it Green

Lawn Irrigation

One of the key ways you can help to keep lawn care more sustainable is by thinking about how you keep your lawn irrigated. Turf grasses and other plants in a native landscape need water for growth and development. By implementing proper irrigation practices, lawn quality and aesthetics will be improved, while at the same time, lowering water bills. By watering infrequently and deeply you can help improve the health of your lawn. The following techniques will put you on the path to proper lawn irrigation practices and prevent over watering:

- A typical turfgrass requires 2.5 cm of water per week (through rainfall or irrigation), which will soak the upper 10 cm of soil.
- Monitor your irrigation by placing a can in path of sprinkler flow and stop irrigation once 2.5 cm of water has accumulated in the can.
- Ideal irrigation times are when temperatures are cooler in the early morning or early evening and when wind speeds are low.
- Let lawn completely dry out between irrigation intervals. The soil should be difficult to penetrate before irrigation.
- Lawns require water when the grass turns light-green to brown in colour and the stalks remain bent over after being walked on.
- Stop irrigation when puddling or runoff occurs. Excessive moisture can potentially cause fungal disease in grasses and also prevents grasses from extending deep roots.
- Where possible, reuse collected stormwater from rain barrels for irrigation of gardens or smaller areas.
- Use sprinklers with uniform water application patterns. Do not aim sprinklers in a pattern that will water sidewalks, driveways, or the sides of homes.
- Without watering, most lawn grasses will go dormant over the hot summer months. This should not be a concern and the grasses will begin growing again during the cool season months.

Lawn Mowing

The frequency, height, pattern and condition of a lawn mower can impact the quality and sustainability of a lawn landscape. The following items provide a recommendation for maintaining your lawn through proper lawn mowing practices:

- Always use a sharp blade – A dull blade will damage the remaining grass blades, potentially stunting future growth.
- Always mow when the grass is dry
- Mow at regular intervals (every 5-7 days).
- Cut grasses to a height of 6-8 cm. Higher cut grass will shade out weeds and encourages deep root growth.
- Never mow more than 1/3 of the grass blade – This puts additional stress on the grass, potentially stunting growth.
- Use a mulching lawn mower and leave grass clippings on yard. The cut grass will contribute nitrogen to the soil and reduce fertilizer use on the yard.
- Avoid mowing when turf is under heat and drought stress.
- Alter the pattern with each mowing event to reduce wear on the grass surface.
- Wear appropriate safety gear, which includes long pants and shirt and eye/ear protection.
- Use a low emission lawn mower. According to Canada's Clean Air Foundation, a standard gas mower will emit the same amount of air pollutants in one hour as driving a new car for over 550 kilometers.


HIGHWAY 107
HIGHWAY 118
HIGHWAY 111

PORT WALLACE

CONCEPT PLAN
Dartmouth, Nova Scotia

Version 100

SEPTEMBER 9, 2016

101-PORT_WALLACE-100

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Thank You
Questions?