

MAJOR SUBDIVISION APPLICATION

(a total of four or more lots)

City of Rochester, New Hampshire

Date:	Is a conditional needed? Yes: No: Unclear: Unclear: (If so, we encourage you to submit an application as soon as possible.)
Proporty information	(,,,,,,,
Tax map #: : Lot	#('s): : Zoning district:
Property address/location:	······································
Name of project (if applicab	e):
Size of site: acres:	Overlay zoning district(s)?
Property owner	, , ,
Name (include name of indi	vidual):
Mailing address:	·
Telephone #:	Email:
Applicant/developer (if	different from property owner)
Name (include name of indi	vidual):
Mailing address:	
Telephone #:	Email:
Engineer/surveyor	
Name (include name of indi	vidual):
Mailing address:	
Telephone #:	Fax #:
Email address:	Professional license #:
Proposed project	
Number of proposed lots:	; estimated length of new roads:
Number of cubic yard of ear	th being removed from the site?
City water? yes no	_; How far is city water from the site?
City sewer? yes no	_; How far is city sewer from the site?
If city water, what are the es	st. total gal. per day?; Are there pertinent covenants?
Where will stormwater be di	scharged?

Page 1 (of 2 pages)

vielianus. Is any mi proposed:, area to be mieu, buner impact:	Wetlands:	Is any fill	proposed?	;	area to be filled:	;	buffer impact?
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Comments

Please feel free to add any comments, additional information, or requests for waivers here:

Submission of application

This application must be signed by the property owner, applicant/developer (if different from property owner), *and/or* the agent.

I(we) hereby submit this Subdivision application to the City of Rochester Planning Board pursuant to the <u>City of Rochester Subdivision Regulations</u> and attest that to the best of my knowledge all of the information on this application form and in the accompanying application materials and documentation is true and accurate. As applicant/developer (if different from property owner)/as agent, I attest that I/am duly authorized to act in this capacity.

p		,,,,,,,, .
Signature of property owner:		
· · · · ·		Date [.]
	ν	
Signature of applicant/developer:		
	1	Date:
Signature of agent:		
ç ç	W ///	Date:
	ν	

Authorization to enter subject property

I hereby authorize members of the Rochester Planning Board, Zoning Board of Adjustment, Conservation Commission, Planning Department, and other pertinent City departments, boards and agencies to enter my property for the purpose of evaluating this application including performing any appropriate inspections during the application phase, review phase, post-approval phase, construction phase, and occupancy phase. This authorization applies specifically to those particular individuals legitimately involved in evaluating, reviewing, or inspecting this specific application/project. It is understood that these individuals must use all reasonable care, courtesy, and diligence when entering the property.

Signature of property owner:

Date: Page 2 (of 2 pages)

<u>Major Subdivision Checklist</u> (Major subdivisions a total of 4 or more lots)

* <u>To be filled out by applica</u>	nt/age	e <u>nt</u> (wit	th notes	s to be inserted	l by staff)
See regulations City of Rochester P	s for of Iannin	ther sp a & De	ecific revelopn	equirements nent Departme	nt
Project Name:		_ Map	:	Lot:	Date:
Applicant/agent:		_ Sign	ature:	/	₩ <i>′// //</i>
(Staff review by:		_ Date	:	l	
<u>General items</u>	Yes	No	N/A	Waiver Requested	Comments
<u>4</u> sets completed application	X				
Total application fee	x				
<u>4</u> copies of narrative	x				
<u>3</u> sets of full-size plans	x				
2 sets of 11 X 17 reductions	x				
Completed abutters list	x				
Copy of existing covenants, easements,			x		
and deed restrictions					
<u>Plan Information</u>	_	_	_	_	
Basic information including:	x				
Ittle sheet Name of project					
Date					
North arrow					
Scale	x				
Legend	X				
Revision block	x				
 Vicinity sketch - no less than 1" = 1,000 	x				
Approval block (for signature by staff attesting to Planning Board approval)	X				
Name and address of developer/applicant	X				
Name, stamp, and NH license # of	x				

Name, stamp, and NH license # of licensed land surveyor for platting

General items Continued	N	NI -	N 1/A	Waive	r 	0
Name, stamp, and NH license # of licensed engineer for streets, utilities and drainage	Yes				sted	Comments
City tax map & lot #'s	X					
Subdivision approval	X					
statement (per regulations) Notation on plans: "For more information about this subdivision contact"	x					
References to neighboring plans and subdivisions	X					
 Information on abutting properties: owner name owner address tax map and lot # square footage of lots approximate building footprints use 	X X X X X X X					
Zoning Zoning designations of subject tract	X					
 and in vicinity of tract Zoning requirements for district: frontage lot dimensions/density all setbacks lot coverage Zoning overlay districts 	X X X X X					
Existing Topographic Features	V					
Soil types and boundaries						
Soil test pit locations, profiles, and	x					
depth to water table and ledge Percolation test locations and results	x					

Existing Topographic Features Continu	ed Vac	Na	N1/A	Waiver	, ata d	Commonto
Water features (ponds, streams)	x					Comments
Wetlands including name of certified wetlands scientist & license # who delinear	x ted					
Statement whether located in flood area, and if so, 100 year flood elevation	x					
Delineation of treed and open areas	X					
Overview of types of trees and vegetation	X					
Location of rock outcroppings	x					
Stone walls and archaeological features	х					
Locations of trails and paths	X					
Other natural/cultural resources (productive farmland, habitats, scenic views, historic structures, etc.)	X					
Existing buildings/structures	x					
Existing driveways and access points	X					
 <u>Platting</u> Surveyed property lines including: existing and proposed bearings existing and proposed distances existing and proposed pins 	X X X					
Existing and proposed location of:monumentsbenchmarks	X X					
Proposed square footage for each lot Subdivision # on each lot (1, 2, 3, etc.) Include error of closure statement	X X X					

<u>Streets</u>	Vas	No	NI/A	Waive	r stod	Comments
Street plan (including utilities)	X					Comments
Street profiles including vertical data and street stations and utilities	x					
Street cross sections including (if appropriate):	x					
 width of pavement travel and parking lanes striping curbing lawn strips sidewalks street trees drainage structure of base and pavement all utilities 	X X X X X X X X X					
Curb, intersection, and cul de sac radii	x					
Limits of construction/ground disturbance	X					
Traffic control devices (stop signs, etc.)	x					
Street light locations and details	x					
Spacing, species, specifications for street trees	X					
Landscaped island in cul de sacs	x					
Proposed street names	X					
<u>Utilities</u> Show existing and proposed for all subjec	t lots a	nd with	nin righ	t of way.	. Include į	olans, profiles, sizes,

materials, and all appropriate details. Water lines/well (with appropriate radius)

Water lines/well (with appropriate radius)	Х
Sewer lines/septic and leaching areas	X

Utilities Continued		Wa			Waiver		
	Yes	No	N/A	Reques	sted	Comments	
Pump stations	X						
Stormwater management system: pipes, culverts, catch basins, detention/ retention basins, swales, rip rap, etc.	X						
Fire hydrant locations and details	X						
Electric, telephone, cable TV (underground)	X						
Gas lines	Х						
Other Elements							
Phasing plan, if appropriate			x				
Traffic study, if appropriate	x						
Drainage study with calculations, storm water impact analysis, and mitigation plan	x						
Grading plan	x						
Earth being removed from site(in cubic yards	s)x						
Erosion and sedimentation plan	X						
Mitigation plan for environmental impacts during construction	x						
Proposed open space areas	X						
Proposed recreation facilities on site	x						
School bus pickup/drop off plan	X						
Proposed covenants, easements, and deed restrictions	x						
Fiscal impact study (if requested)			x				
Road Acceptance Policy and Procedure: Is there a public road proposed?	x						
If yes, Have you read and understand the Road acceptance procedure?	x						
Additional Comments:							



BERRY SURVEYING & ENGINEERING

335 Second Crown Point Road Barrington, NH 03825 Phone: (603) 332-2863 Fax: (603) 335-4623 www.BerrySurveying.Com crberry@metrocast.net

October 24, 2023

City of Rochester Office of Planning & Development Attention: Shanna Saunders, Director 33 Wakefield Street Rochester, NH 03867,

Re: RBV Realty LLC 324 Blackwater Road 9 Lot Major Conservation Subdivision

Ms. Saunders,

On behalf of our client, RBV Realty LLC & Managing Member Rebecca Mathews, Berry Surveying & Engineering (BS&E) is submitting for TRG, a subdivision application to discuss a proposed 9 Lot Major Conservation Subdivision at 324 Blackwater Road.

Background and General Narrative:

RBV owns the parcel at 324 Blackwater Road in Rochester, NH (Tax Map 264, Lot 11). Berry Surveying & Engineering has conducted a complete on-site survey of the parcel which includes a topographic analysis as well as a wetlands analysis and delineation. Wetlands were found in the central area of the parcel and along Clark Brook, which creates the rear boundary of the parcel. The remainder of the site consists of gentle slopes which contain good soils groups A and B. C soil groups are found adjacent to the wetland's areas. There are some 25% slopes found onsite, mostly located within the wetland buffer areas. Deidra Benjamin CWS, delineated the wetlands on site and John P. Hayes CWS, CSS has conducted a site-specific soils map (SSSM) for the project.

The Proposal:

The proposal is to construct a short cul-de-sac less than 620.95 linear feet to the neck and develop 9 single family lots along the new infrastructure. The proposed units are clustered around the end of the roadway, which allows the units to be furthest from abutting land owners as well as environmentally sensitive areas. The plan provides the yield plan calculations using the adjusted tract acreage approach. This calculation finds that the permitted density of the project is 11.43 units, however the project design proposes 9 in an effort to de-congest the site. This allows for many of the other ideals and objectives of the Conservation Subdivision to be maintained.

The entrance roadway is proposed to be offset from the abutting boundary line to the north, along 316 Blackwater Road, owned by Mr. O'leary. By providing a wider right of way, the center of the road can be shifted south slightly to allow for the required grading and provide a buffer along the boundary line. The buffer is currently proposed to be constructed of a 6' stockade fence which was agreed to by the applicant and the abutter.

The clustering of the proposed units is designed to provide a minimum of a 25' buffer to the abutting boundary line to the north, along the Arbor Way development. Based on this design the closest abutting housing unit is 75' to the corner of the first proposed lot in the proposed subdivision. Based on the designed shape of the clustered group, the open space increases in depth along the boundary line, which incrementally increases the distance between the remaining abutting housing unit and the proposed development lots.

A balance was made between the wetland setback around the internal wetland system and the wetland system adjacent to Clark Brook. Separation to the internal system remains to allow for the construction of a stormwater Rain Garden, which is intended to provide for treatment and ground water recharge. The design is careful not to provide for private lots to extend into the wetland setback boundary in an effort to dissuade private land owners from manipulating the buffer. It was noted however, in a preliminary meeting with the Planning Staff, that providing larger lots over the minimum required area is preferred in this case to ensure there is adequate tillage area around each home. This is specifically important at the rear of each home site. The smallest proposed lot is 7,200 Sq.Ft., in size and each lot provides 30-35' from the shown deck to the rear lot line. The project design is careful to provide direct access to the open space from each lot.

Based on the NFPA water availability requirements, the applicant is proposing residential sprinklers in the homes within the subdivision. There is no public water supply in the area of the project, and a cistern for this project type and layout is not practical. The fire truck design is provided at the rear of the plan set to ensure the cul-de-sac is adequate as well as the entrance radii.

Based on the initial TRG meeting concerning the former project design, the applicant has hired Abigail Thompson Fopiano, P.G. to review the existing well on the site for use as a common well for the proposed community. Based on her initial review and findings it was determined that one well servicing the project is a better alternative to multiple wells throughout the site. The project now proposes three less single-family users on the site and thus reduces the overall water consumption demand. Use of the existing well is being evaluated with a secondary location chosen in close proximity if needed. Based on the load, the well is not considered a community well. If filtering is needed in the system having one well on-site may simplify this process and allow for ease of maintenance with the HOA in the future.

Based on the proposed lot sizes, and to simplify construction, the applicant is proposing a common sewer collection system which is routed to a common effluent disposal field. Each



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home will be equipped with a septic tank which will connect to the community EDA. Each tank is proposed to be two chambers to provide only effluent discharge to the EDA. There is a clarification tank provided ahead of the EDA for an additional level of protection to promote longevity in the field.

The project requires a gravel wetland to be placed in the front southern corner of the property to provide the required treatment for the standards of Chapter 218 as well as NHDES Alteration of Terrain. This will provide treatment, attenuation and volume control prior to discharge into the local 50' buffer. The design is careful to place the gravel wetland north of the abutting boundary line in an effort to provide some separation and potential for landscaping post construction. The current design schematic allows for a 20' wooded buffer to remain. The flow from this gravel wetland enters the central wetland and then flows along the eastern boundary line in a constructed swale partially on the subject parcel and partially on the abutting parcel prior to discharge into Clark Brook. The design is cognizant of the need to reduce flows and volumes to this shared swale so as not to affect the abutting land owner or downstream infrastructure. An infiltration area is designed up slope of the gravel wetland to capture flow from the proposed recreation space and infiltrate that into the ground.

A gravel wetland is proposed against the cul-de-sac to treat and attenuate flow from the developed area of the cul-de-sac. This area flows to the center wetland and then to the discharge point noted above. The remainder of the developed site is directed to an infiltration rain garden at the rear of the project site.

In addition to the required open space, free of infrastructure encumbrances, the project proposes a larger open field area to be used by the community. The applicant proposes to grade and gently slope this area to be used for field space. A dedicated parking area is proposed at the recreation space which includes the mail kiosk, sight lighting, sitting areas and a bike rack. A robust landscaping package along the roadway is provided with buffer enhancements reviewed in key areas. There are no encroachments into the wetland buffer and there are no proposed wetlands crossings.

As intimated above, the project will require an HOA be formed to maintain the Stormwater treatment areas, sewer and water systems, recreation space and manage the open space areas. Wetland buffers will be monitored by the HOA for performance with the City of Rochester Zoning requirements.

Respectfully submitted, BERRY SURVEYING & ENGINEERING

Christopher R. Berry, SIT

Principal, President



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335 Second Crown Point Road Barrington, NH 03825 Phone: (603) 332-2863 Fax: (603) 335-4623 www.BerrySurveying.Com

October 23, 2023

City of Rochester Office of Planning and Development Attention: Shanna Saunders, Director 33 Wakefield Street Rochester, NH 03867

RE: RBV Realty LLC 324 Blackwater Road 9 Lot Major Conservation Subdivision Waiver Request(s)

Chairperson & Members of the Rochester Planning Board:

In accordance with the Subdivision Regulations, the following waiver is hereby requested:

- 1. Identification of Waiver Request: Section 6.4.1 Minimum Drainage Pipe Cover
 - Due to the existing topography of the site and the elevation of the discharge locations the culvert pipes within the subdivision are designed to have 2' of cover.

Explanation:

The site topography has shallow outlet elevations to the natural flow patterns and restrictions on infiltration based on the elevation of the seasonal high-water tables. The project is designed so the culverts have 2' of cover which is a common depth in well drained soil areas and areas where under drain is proposed to ensure the gravels stay dry during all seasons. An alternative to the project design would be to encroach within the wetland buffer to reach a lower elevation to discharge. This was avoided with the use of 2' of cover. Alternatively the entire site could be lifted to achieve the cover requirements over some of the culverts but not all of them, specifically the entrance culverts.

Waiver Justification:

a. Granting the waiver will properly carry out the purpose and intent of the regulations.

The intent of this regulation is to ensure adequate cover of the pipe to ensure the least amount of heaving as possible. In this case the applicant is proposing under drains in areas that would ordinarily not require them to ensure the select gravel material remains dry and reduces the freeze-thaw effect. In areas where appropriate reinforced concrete culvert is used.

324 Blackwater Road, Waiver Requests

b. Strict conformity to the regulations would pose an unnecessary hardship to the applicant.

Strict conformity to this regulation would require either additional fill, which would require additional overall impact on the land or disturbance within the wetland buffers, which was specifically avoided with this design.

In accordance with the Chapter 218 Regulations, the following waiver is hereby requested:

2. Identification of Waiver Request: 218-10.F(2)d

• To permit CB #3 and DI #1 to have cleaning velocities less than prescribed.

Explanation:

The applicant is proposing two basins which do not meet the prescribed cleaning velocity due to the contributing land area being small. Placement of the basins are based on the entrance profile sag and corresponding swale line.

Waiver Justification:

a. Granting the waiver will properly carry out the purpose and intent of the regulations.

The intent of this regulation is to typically ensure there is adequate cleaning velocity within cross culverts which receive larger volumes of sediment from unpaved contributing areas to ensure inlet and outlets do not become clogged with debris. In this case the entrance sag is designed with a curb and a basin whereas it presents a nicer design solution than an open swale. The contributing area is small and therefore the sediment load is also small and cleaning velocities are less important. The drop inlet is proposed in a swale which will provide for a larger level of sediment removal and therefore the velocity requirement in the DI is not required.

b. Strict conformity to the regulations would pose an unnecessary hardship to the applicant.

Strict conformity to this regulation would require a less superior design change which is a hardship on the project.

BERRY SURVEYING & ENGINEERING Christopher R. Berry, SIT, Project Manager Principal, President



<u>Conditional Use Permit Application</u> City of Rochester, New Hampshire

Date:
Property information Tax map #: <u>264</u> ; Lot #('s): <u>11</u> ; Zoning district: <u>AG</u>
Property address/location:
Name of project (if applicable): Benjamin Drive
Property owner Name (include name of individual): RBV Realty LLC, Rebecca Mathews
Mailing address: 40 Province Road, Strafford, NH 03884
Telephone #: 603-953-3455 Fax Becky-mathews@outlook.com
Applicant/developer (if different from property owner) Name (include name of individual): Same Mailing address:
Telephone #: Fax #:
Engineer/designer Name (include name of individual): Berry Surveying & Engineering, Christopher R. Berry PM Mailing address: <u>335 Second Crown Point Road, Barrington, NH 03825</u>
Telephone #: <u>603-332-2863</u> Fax #:
Email address: <u>k.berry@berrysurveying.com</u> Professional license #: <u>LLS 805, PE 14243</u> <u>crberry@metrocast.net</u>
Proposed Project Please describe the proposed project: <u>The use of Conservation Subdivision Ordinance</u> CUP Criteria 275-21.3

Please describe the existing conditions: Vacant Land with 1 Single Family Home

Submission of application

This application must be signed by the property owner, applicant/developer (if different from property owner), *and/or* the agent.

I(we) hereby submit this Conditional Use application to the City of Rochester Planning Board pursuant to the <u>City of Rochester Zoning Ordinance</u> and attest that to the best of my knowledge all of the information on this application form and in the accompanying application materials and documentation is true and accurate. As applicant/developer (if different from property owner)/as agent, I attest that I am duly authorized to act in this capacity.

Signature of property owner:

Date: 11-7-23

Signature of applicant/developer:

Signature of agent [.]	Date:
0 0 -	Date: <u>11-7-23</u>



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335 Second Crown Point Road Barrington, NH 03825 Phone: (603) 332-2863 Fax: (603) 335-4623 www.BerrySurveying.Com crberry@metrocast.net November 6, 2023

City of Rochester Planning and Development Attention: Shanna Saunders, Director 33 Wakefield Street Rochester, NH 03867

RE: RBV Realty LLC 324 Blackwater Road 9 Lot Major Conservation Subdivision

Mr. Chairman and Members of the Rochester Planning Board,

Enclosed are the criteria laid out in Chapter 42.21 for a conditional use permit as it pertains to a Conservation Subdivision in Chapter 42.33.

- A. Compliance of the applicable requirements contained in this chapter.
 - a. It is the applicant's belief that through the TRG review that there is compliance with the chapter, and where there is variation from the subdivision regulations the applicant has requested waivers.
- B. The results of any special investigative or scientific studies prepared in association with the proposed development.
 - a. The applicant reviewed 4 key things when laying out and developing the Conservation Subdivision.:
 - i. Clark Brook and the wetlands surrounding it were considered of highest value and therefore placing the development furthest from the largest portion of it was a design requirement employed. This keeps as much contiguous upland area adjacent to the brook as possible on the project site.
 - ii. Proximity of the development to the internal wetland was important to consider. This wetland flows onto private lands and then to Clark Brook. Ensuring the wetlands are not touched as well as the 50' setback was a design element that keeps the largest amount of unfragmented lands adjacent to the brook and abutting land owners.
 - iii. Keeping the housing units as far from abutting land owners as possible was a key design element. Maintaining buffers

that are not held on private lands ensures the vegetation will remain into the future.

- iv. Stormwater features. The design chose areas of higher infiltrating soils for ground water recharge for a larger portion of the development. The two subsurface gravel wetlands were chosen due to the low profile they provide and allowance to outlet at an existing grade while providing attenuation and a high level of treatment.
- C. Special reports or analysis of the project or its impacts, prepared by the City or consultants.
 - a. The project narrative and stormwater analysis provide a good perspective on the project design philosophy. The soils report and analysis provide justification for placement of stormwater BMP's in relation to the open space and developed areas.
- D. The findings, goals and objectives of the City's Master Plan
 - a. The master plan is the guide for the writing of the ordinance. To the objective of itemizing out key areas to remain as open space, the applicant has done this, and discussed it openly with the planning staff, TRG and Conservation Commission. An onsite review will be conducted by the Conservation Commission to ensure there are no further critical recourses in the are to be developed.
- E. The relationship of the development to the timing, location and cost of public improvements scheduled in the Capital Improvements Program and improvements necessitated by the development.
 - a. Specific capital improvements have been reviewed in the City of Rochester CIP, Department of Public Works expenditure line and none were found within the project area. The project is very careful in its design to reduce flows and volumes so as to not create any additional burden on public infrastructure or abutting land owners.
- F. Testimony and evidence introduced at the public hearing on application
 - a. Testimony, and written evidence is submitted as part of the application process for the Design Review. A meeting was held with the applicant and the abutting land owners where the layout, design and philosophy was presented and accepted. Due to this there as no further public input at the Design Review hearing.
- G. Any other appropriate information or documentation.
 - a. The following is submitted for the planning staff's review as well as the planning board.



BERRY SURVEYING & ENGINEERING 335 Second Crown Pt. Rd., Barrington, NH 03825 (603) 332-2863 / (603) 335-4623 FAX www.BerrySurveying.Com

324 Blackwater Road, CUP Conservation Subdivision

- Drainage Analysis and Sediment & Erosion Control Plan
- Construction Adverse Effect Mitigation Program (CAEMITP)
- Traffic Impact Analysis

Respectfully Submitted,

Berry Surveying & Engineering

Christopher R. Berry Principal, President



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REASONABLE FASCIMILE









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335 Second Crown Point Road Barrington, NH 03825 Phone: (603) 332-2863 Fax: (603) 335-4623 www.BerrySurveying.Com





RE: Memorandum Traffic Impact Analysis & Distribution Benjamin Drive (9-Lot Single Family Detached Subdivision) RBV Realty LLC Tax Map 264, Lot 11 (324 Blackwater Road) Rochester, NH 03867

Ms. Saunders,

Pursuant to the City of Rochester Subdivision Regulations, Berry Surveying & Engineering (BS&E), on behalf of RBV Realty LLC, has prepared a Traffic Analysis the construction of nine (9) single family homes on Tax Map 264, Lot 11. There is one point of analysis; the proposed intersection of Benjamin Drive and Blackwater Road. The following conclusions were reached as a result Traffic Impact Analysis:

- A total of 110 vehicles trips (55 enter/55 exit) are predicted to occur on a weekday. A total of 8 vehicle trips (2 enter/6 exit) are predicted to occur at the weekday AM peak hour and 12 vehicle trips (7 enter/5 exit) at the PM peak hour of adjacent street traffic for Benjamin Drive.
- According to the NHDOT MS2 Transportation Data Management System, Blackwater Road is a major collector road, with a 2022 Annual Average Daily Traffic (AADT) of 1,158 vehicles/day.
- Benjamin Drive is accessed from a portion of Blackwater Road that bisects Tebbetts Road (local road 4,556 AADT, 2022) and Old Rochester Road (minor arterial, 4,344 AADT, 2022). The intersection of Blackwater Road and Tebbetts Road is partial stop controlled (Blackwater Road leg). The intersection of Blackwater Road and Old Rochester Road is under flashing light traffic control.
- Sight Distance from Benjamin Drive meets Rochester Subdivision Regulations. It is recommended that the surrounding infrastructure will be sufficient to handle the projected increase in vehicle trips and peak hour and all other hours.

21-132, RBV Realty LLC, 324 Blackwater Road Rochester, NH	
Traffic Impact Analysis, Benjamin Drive	October 20, 2023

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21-132, RBV Realty LLC, 324 Blackwater Road Rochester, NH	_
Traffic Impact Analysis, Benjamin Drive	October 20, 2023

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October 20, 2023

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October 20, 2023

Proposed Development & Introduction

The proposal is subdivide and redevelop Tax Map 264, Lot 11 to contain nine (9) single family detached homes. The existing 12.37 Ac. +/- site contains an unoccupied mobile home with two driveway cuts on Blackwater Road. The proposed access to the site is a 24-foot-wide roadway, known as Benjamin Drive, with 20-foot pavement entrance radii for vehicle turning. Benjamin Drive is 621 LF in length to the neck of the cul-de-sac provided (1,145 LF total). Benjamin Drive will be stop controlled at the intersection of Blackwater Road with a stop sign, stop bar, and 20' double yellow line for intersection lane alignment. The purpose of this analysis is to determine the maximum number of trips coming to and leaving the proposed project site during certain peak periods of the day. This information is then used in determining the impact on safety as it relates to the existing roadway infrastructure. The following components of the analysis are typical for a project of this size pursuant to the Institute of Traffic Engineers (ITE) manual.

Existing Conditions

Existing Site Description

The subject parcel is known as Tax Map 264, Lot 11, containing 538,838 Sq. Ft. (12.37 Ac. +/-) of land. Tax Map 264, Lot 11 currently contains a contains an unoccupied mobile home with two driveway cuts on Blackwater Road at the front of the lot with the remaining parcel wooded to the Clark Brook at the rear of the site. The subject parcel is located in the Agricultural District and contains lot frontage on Blackwater Road. There are several driveways and local roads surrounding the subject parcels, which are discussed later in the analysis. The two driveway cuts will be closed in favor of a roadway cut at the northern edge of the subject parcel.

Blackwater Road Roadway Description

Blackwater Road is a two-lane major collector road at the subject parcel, according to the NHDOT MS2 Transportation Management System (NHDOT). This portion of Blackwater Road is not under NHDOT jurisdiction. Blackwater Road runs north to south parallel with N.H. Route 16 (crosses under near subject parcel) and provides access to Rochester (NH Route 16 & 125) to the north and Somersworth & Dover (N.H. Routes 16, 16B & 108) to the south. It has an Average Annual Daily Traffic (AADT) of approximately 1,158 (2022) divided between north and south in the data provided by the NHDOT.



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Blackwater Road in the area of the project is composed of a twenty-four-footwide paved surface (edge of pavement to edge of pavement) with eleven-foot northbound southbound lanes. There is a variable width paved and gravel shoulder and swales on the east and west side of the road. There is centerline delineation and fog / edge lines provided. The posted speed limit of the roadway is 30 miles per hour (MPH). The geometry of Blackwater Road is relatively straight and relatively flat (+/-3% grade) in the project location. There are no public transit opportunities or other pedestrian amenities such as sidewalks within a ¼ mile+ of Benjamin Drive or on Blackwater Road in Rochester.



Figure 1: Blackwater Road with surrounding roadways (NHDOT)

Existing Traffic Volumes

According to traffic counts recorded by the NHDOT for August 2nd - August 4th 2022, the Blackwater Road AM and PM weekday combined directional volume peaks were 119 trips and 129 trips, respectively. It is shown that this portion of Blackwater Road has an AADT 1,158 (2022) divided between north and south in the data provided by the NHDOT.





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The highest weekday peak hour combined directional traffic volume on this section of Blackwater Road NB/SB combined occurred from 7:00-8:00 AM with 119 vehicles and from 4:15-5:15 PM with 129 vehicles. Table #1 shows the traffic direction breakdown of Blackwater Road and Figures #1 is graphical representations of the traffic variations occurring throughout the day. As only northbound/southbound combined traffic counts are available in 2022 at this location from the NHDOT, traffic counts from 2016 that show northbound and southbound directional data has been utilized for the directional distribution. Table #2 shows the calculated directional distribution utilized from 2016 data.

It can be seen from the directional percent distribution that the primary direction of travel during the Weekday AM peak hour is south towards Somersworth & Dover (62%/38%). The primary direction of travel during the PM peak hour is northbound towards Rochester (59%/41%). From these ratios, a conclusion can be drawn that a large percentage of the peak hour traffic observed on Blackwater Road is residential commuter traffic. Traffic counts of Blackwater Road, Tebbetts Road, and Old Rochester Road provided by the NHDOT are included in Appendix A as Figures #5-#17.

Traffic Distribution Blackwater Road (2023)							
Date	Two-V	Vay					
Tuesday 8/2/22	AM Peak	119					
Tuesuay of 2/22	PM Peak	129					
Wednesday 9/2/22	AM Peak	99					
weunesuay of 5/22	PM Peak	102					
Thursday 9/4/22	AM Peak	103					
Thursday 0/4/22	PM Peak	100					
Average Peak Hour	AM Peak	107					
Traffic	PM Peak	110					

Table 1: Calculation of average NB/SB combined trips occurring on Blackwater Road



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Traffic Distribution Blackwater Road 2016 (Directional Distribution Use Only)										
Date	Northb	ound	Southbou	und	Two-Way					
Tuesday 9/9/16	AM Peak	33	AM Peak	56	AM Peak	87				
Tuesday 0/ 5/ 10	PM Peak	74	PM Peak	56	PM Peak	115				
Wednesday	AM Peak	36	AM Peak	66	AM Peak	94				
8/10/16	PM Peak	71	PM Peak	40	PM Peak	94				
Thursday 9/11/16	AM Peak	38	AM Peak	54	AM Peak	92				
mursuay o/11/10	PM Peak	57	PM Peak	42	PM Peak	99				
Average Peak Hour	AM Peak	36	AM Peak	59	AM Peak	91				
Traffic	PM Peak	67	PM Peak	46	PM Peak	103				
% Distribution	AM Peak	37.8	AM Peak	62.2						
	PM Peak	59.4	PM Peak	40.6						

Table 2: Directional breakdown of trips occurring on Blackwater Road (2016)



Figure 2: Blackwater Road 2022 NB/SB combined hourly traffic variation

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Existing Vehicle Speeds

As previously mentioned, the posted speed limit of Blackwater Road is 30 MPH. For the purposes of the safety analysis below, the 85th percentile of speed is required. This particular section of Blackwater Road was observed by Berry Surveying & Engineering to analyze the pass by traffic, reviewing speed. Excessive speeds did occur, with most operators obeyed the posted speed limits within a deviation of 10 MPH. This is consistent with speeds found on urban roads. The 85th percentile derived by observation and consistency with general practice is 40 MPH.

Surrounding Roadways & Signalized Intersections

There are several local roadways within a half mile of proposed Benjamin Drive. To the north, local roads include: Arbor Way, Kipling Rock Road and England Road. To the south, local roads include Horton Way. These intersections are all stop controlled at the minor residential legs.

Larger roadway intersections include the intersection of Blackwater Road with Tebbetts Road, 1.4 miles to the north, and Blackwater Road with Old Rochester Road, 1.7 miles to the south. Tebbetts Road is a local roadway according to the NHDOT, with a 2022 AADT of 4,556 (2022). The intersection of Blackwater Road and Tebbetts Road is stop controlled at the Blackwater Road leg, with a chevron style intersection sign. Old Rochester Road is a minor arterial roadway according to the NHDOT, with a 2022 AADT of 4,344 (2022). The intersection of Blackwater Road and Old Rochester Road Road is flashing traffic light controlled, with both Blackwater Road legs being under stop control.

Proposed Trip Generation

The 11th Edition ITE Trip Generation Manual was used to determine the proposed volume of trips. Included is the percentage of entrance-to-exit traffic experienced during the weekday AM & PM peak hours between 7 and 9 AM and 4 and 6 PM, and total weekday volume. Land Use Code Single Family Detached Housing (210) was used in deriving the proposed trip generation from the project site. Table #3 provides average trip rate, total trips generated, enter to exit ratio, and the enter to exit distribution for the proposed trips at Benjamin Drive.



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Single Family Detached Housing Benjamin Drive:

Time Method	Weekday Total Dwelling Units		Time Method	AM Pea	AM Peak Adj. Street Traffic Dwelling Units		Time Method	PM Peak Adj. Street Traffic Dwelling Units		t Traffic s	
# Units		9		# Units	#Units 9			# Units		9	
Equation	Ln(1	Ln(T)=0.92Ln(X)+2.68		Equation	Ln(T)=0.91Ln(X)+0.12		Equation	Ln(T)=0.94Ln(X)+0.27		0.27	
Total Trips		110		Total Trips	Trips 8			Total Trips		10	
% Enter	50	Total Enter	55	% Enter	25	Total Enter	2	% Enter	63	Total Enter	7
% Exit	50	Total Exit	55	% Exit	75	Total Exit	6	% Exit	37	Total Exit	3

Table 3: (Benjamin Drive) Peak hr of adjacent street traffic AM, PM, & weekday total

Build Traffic Projections and Turning Visual

Traffic data obtained from the NHDOT in 2022 has been projected to 2024 and ten years further to 2034. This has been done using an August peak seasonal adjustment factor of 1.00 (Urban Highways Group 4, AM & PM) and using an annual growth rate of 1%, compounded annually. Urban highway group was selected due to the majority commuter traffic of Blackwater Road. The derivation of the peak seasonal adjustment factor comes from an average series of values from other urban highways from across New Hampshire, which can be found as Table #6 in Appendix B. Figures #3 and #4 show the build turning movements to and from Benjamin Drive during weekday AM and PM peak hours. A visual of these turning movements is shown in the following figures. Vehicle trips to or from the north will likely be travelling through the partial stop controlled (Blackwater Road leg) intersection of Blackwater Road and Tebbetts Road. Vehicle trips to or from the south will likely be traveling through the flashing light-controlled intersection of Blackwater Road and Old Rochester Road.







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Tables #4 & #5 show in a tabular format the total trips that are calculated to occur to and from Benjamin Drive are shown at the weekday peak hours analyzed in a build situation. These trips are further broken down into enter and exit to and from the site as well as percentage of left and right turns.

Time	AM Peak Hour	# Trips	Turn Type	% Distribution
Total Trips	8			
Trips Ente	er from Blackwater Road Northbound	0.8	Right	9.5
Trips Ente	er from Blackwater Road Southbound	1.2	Left	15.5
Trips Ex	kit to Blackwater Road Northbound	2.3	Right	28.4
Trips Ex	kit to Blackwater Road Southbound	3.7	Left	46.6

Table 4: Weekday AM peak hour build turning movements Benjamin Drive

Time	PM Peak Hour	# Trips	Turn Type	% Distribution
Total Trips	10			
Trips Ent	er from Blackwater Road Northbound	4.2	Right	41.6
Trips Ent	er from Blackwater Road Southbound	2.8	Left	28.4
Trips E	xit to Blackwater Road Northbound	1.8	Right	17.8
Trips E	xit to Blackwater Road Southbound	1.2	Left	12.2

Table 5: Weekday PM peak hour build turning movements Benjamin Drive



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Sight Distance and Safety Analysis

Sight distance on Blackwater Road to the north and south, as well as roadway alignment are the two determining factors of safety. Benjamin Drive sight distance to the north un-obstructed for 275 feet minimum (measured), while sight distance to the south is un-obstructed for 275 feet minimum (measured). In this instance both the northerly and southerly sight distances meet the Rochester Subdivision Regulation Requirements for an 85th percentile speed of 40 MPH, with a driver at 3.5' looking at an object 0.5' tall in the roadway. There are no improvements required to obtain this sight distance.

It is of note that by using the standards put forth from "A Policy of Geometric Design of Highways and Streets" by AASHTO, 2012 7th Edition, a longer sight distance of the 275' feet measured could be provided. When using this standard in determining the measurement of stopping sight distance, AASHTO Chapter 3.2.6 should be utilized. The height of the driver's eye is shown to be at 3.5' per Chapter 3.2.6.1 (origin of the 3.5' driveway sight distance height selection as well) and the height of the object in the roadway was selected at 2.0' per Chapter 3.2.6.2, as opposed to the object at 0.5' tall in the roadway from the Rochester Subdivision Regulations. By utilizing a vehicle approaching with drivers' eye at 3.5' observing an object in the road at 2' tall, stopping sight distance that could be provided utilizing these standards is in excess of 400'.

With respect to general safety of Blackwater Road in relation to the peak hour trip generation and AADT, it is our assessment that the cross section of pavement and shoulder widths are appropriate.



BERRY SURVEYING & ENGINEERING 335 Second Crown Pt. Rd., Barrington, NH 03825 (603) 332-2863 / (603) 335-4623 FAX www.BerrySurveying.Com

Conclusions and Recommendations

- A total of 110 vehicles trips (55 enter/55 exit) are predicted to occur on a weekday. A total of 8 vehicle trips (2 enter/6 exit) are predicted to occur at the weekday AM peak hours and 12 vehicle trips (7 enter/5 exit) at the PM peak hours of adjacent street traffic for Benjamin Drive.
- 2) According to the NHDOT MS2 Transportation Data Management System, Blackwater Road is a major collector road, with a 2022 Annual Average Daily Traffic (AADT) of 1,158 vehicles/day.
- 3) Benjamin Drive is accessed from a portion of Blackwater Road that bisects Tebbetts Road (local road 4,556 AADT, 2022) and Old Rochester Road (minor arterial, 4,344 AADT, 2022). The intersection of Blackwater Road and Tebbetts Road is partial stop controlled (Blackwater Road leg). The intersection of Blackwater Road and Old Rochester Road is under flashing light traffic control.
- 4) Sight Distance from Benjamin Drive meets Rochester Subdivision Regulations. It is recommended that the surrounding infrastructure will be sufficient to handle the projected increase in vehicle trips and peak hour and all other hours.

Respectfully Submitted, BERRY SURVEYING & ENGINEERING

Kevin R. Poulin, PE Design Engineer

opher R. Berry, SIT

Principal, President

Kenneth A. Berry, PE, LLS, CPSWQ, CPESC, CESSWI Principal, VP-Technical Operations Engineer of Record



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21-132, RBV Realty LLC, 324 Blackwater Road Rochester, NH Traffic Impact Analysis, Benjamin Drive

October 20, 2023

Appendix A

Traffic Counts

New Hampshire Department of Transportation Home Login List View All DIRs							TCDS) TCDS) Dortatio	→ on Dat	a Mar All E Aut	152 nagement System mail This o-Locate OFF
C Record	H	1		of 1	Goto I	Record		go		
Location ID	82125040						P	IPO ID		
Туре	SPOT						H	PMS ID		
On NHS	No						On	HPMS	Yes	
LRS ID	L3890083						LRS	Loc Pt.		
SF Group	04					▲	Rout	е Туре		
AF Group	04					•		Route		
GF Group	E					•		Active	Yes	
Class Dist Grp	Default					•	Са	tegory	3	
Seas Clss Grp	Default					•				
WIM Group	Default					•				
QC Group	Default									
Fnct'l Class	Major Collec	tor					м	ilepost		
Located On	Blackwater F	۲d								
Loc On Alias	BLACKWAT	ER RD AT RO	OCHESTER	R TL						
More Detail										
Directions: 2-WAY NB SB 2										
AADT 🕐										
Year	AADT	DHV-30	Κ%		0%	P	A	В	С	Src

AADT	~							
	Year	AADT	DHV-30	K %	D %	PA	BC	Src
	2022	1,158	130	11		1,085 (94%)	73 (6%)	
	2021	1,041 ³		11		947 (91%)	94 (9%)	Grown from 2020
	2020	939 ³		11		853 (91%)	86 (9%)	Grown from 2019
	2019	1,112	118	11		1,018 (92%)	94 (8%)	
	2018	983 ³				906 (92%)	77 (8%)	Grown from 2017
<<	<	> >>	1-5 of 1	7				

Figure 5: History of AADT values and classification for Blackwater Road

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October 20, 2023

Two-Way Veh	icle Count	Two-Way Veh	icle Count	Two-Way Vehicle Count		
Tuesday 8	/2/22	Wednesday	y 8/3/22	Thursday 8	/4/22	
7:00:00 AM	33	7:00:00 AM	21	7:00:00 AM	19	
7:15:00 AM	20	7:15:00 AM	22	7:15:00 AM	28	
7:30:00 AM	36	7:30:00 AM	35	7:30:00 AM	27	
7:45:00 AM	30	7:45:00 AM	19	7:45:00 AM	25	
8:00:00 AM	25	8:00:00 AM	22	8:00:00 AM	23	
8:15:00 AM	18	8:15:00 AM	23	8:15:00 AM	16	
8:30:00 AM	23	8:30:00 AM	16	8:30:00 AM	19	
8:45:00 AM	22	8:45:00 AM	26	8:45:00 AM	25	
4:00:00 PM	26	4:00:00 PM	24	4:00:00 PM	15	
4:15:00 PM	38	4:15:00 PM	30	4:15:00 PM	22	
4:30:00 PM	23	4:30:00 PM	24	4:30:00 PM	21	
4:45:00 PM	28	4:45:00 PM	24	4:45:00 PM	31	
5:00:00 PM	40	5:00:00 PM	24	5:00:00 PM	26	
5:15:00 PM	15	5:15:00 PM	24	5:15:00 PM	17	
5:30:00 PM	24	5:30:00 PM	23	5:30:00 PM	21	
5:45:00 PM	15	5:45:00 PM	24	5:45:00 PM	14	
AM Peak Veh	119	AM Peak Veh	99	AM Peak Veh	103	
PM Peak Veh	129	PM Peak Veh	102	PM Peak Veh	100	

Figure 6: Blackwater Road 2022 NB/SB Combined 15 Min Interval Calculation



BERRY SURVEYING & ENGINEERING
All DIRs

October 20, 2023



C Record	i 🙀 ┥ 1 🕨 💓 of 1 Goto Record	go				
Location ID	82389036	MPO ID				
Туре	SPOT	HPMS ID				
On NHS	No	On HPMS	No			
LRS ID	L3890085	LRS Loc Pt.				
SF Group	04	Route Type				
AF Group	04	Route				
GF Group	E	Active	Yes			
Class Dist Grp	Default	Category	3			
Seas Clss Grp	Default					
WIM Group	Default					
QC Group	Default					
Fnct'l Class	Local	Milepost				
Located On	Tebbetts Rd					
Loc On Alias	TEBBETS RD OVER SPAULDING TURNPIKE (EB-WB) (81389150-81389151)					
More Detail 🕨						
STATION DAT	ΓΑ					

Directions: 2-WAY EB WB 😧

List View

AADT 🕐								
	Year	AADT	DHV-30	Κ%	D %	PA	BC	Src
	2022	4,556	551	12	53	4,156 (91%)	400 (9%)	
	2021	3,859 ³		11	52	3,508 (91%)	351 (9%)	Grown from 2020
	2020	3,480 ³		11	52	3,167 (91%)	313 (9%)	Grown from 2019
	2019	4,123	466	11	52	3,776 (92%)	347 (8%)	
	2018	4,387 ³		10	54	4,045 (92%)	342 (8%)	Grown from 2017
<<	<	> >>	1-5 of 1	8				

Figure 7: History of AADT values and classification for Tebbetts Road

BERRY SURVEYING & ENGINEERING



All DIRs

October 20, 2023



C Record	i 🙀 ┥ 1 🕨 💓 of 1 Goto Record	go				
Location ID	82389066	MPO ID				
Туре	SPOT	HPMS ID				
On NHS	No	On HPMS	No			
LRS ID	N4150042	LRS Loc Pt.				
SF Group	04	Route Type				
AF Group	04	Route				
GF Group	E	Active	Yes			
Class Dist Grp	Default	Category	3			
Seas Clss Grp	Default					
WIM Group	Default					
QC Group	Default					
Fnct'l Class	Minor Arterial	Milepost				
Located On	Old Rochester Rd					
Loc On Alias	OLD DOVER RD AT SOMERSWORTH TL					
More Detail						
STATION DATA						

Directions: 2-WAY NB SB 2

List View

AADT 🕐								
	Year	AADT	DHV-30	Κ%	D %	PA	BC	Src
	2022	4,344	464	11	60	4,070 (94%)	274 (6%)	
	2021	4,490 ³		16	60	4,082 (91%)	408 (9%)	Grown from 2020
	2020	4,049 ³		16	60	3,686 (91%)	363 (9%)	Grown from 2019
	2019	4,797	764	16	60	4,392 (92%)	405 (8%)	
	2018	4,671 ³		11	60	4,308 (92%)	363 (8%)	Grown from 2017
<<	<	> >>	1-5 of 1	9				

Figure 8: History of AADT values and classification for Old Rochester Road

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October 20, 2023



+ Locate All

Auto-Locate OFF

Home Back Login

Volume Count Report

LOCATION INFO					
Location ID	82125040				
Туре	SPOT				
Fnct'l Class	5				
Located On	Blackwater Rd				
Loc On Alias	BLACKWATER RD AT ROCHESTER TL				
Direction	2-WAY				
County	STRAFFORD				
Community	ROCHESTER				
MPO ID					
HPMS ID					
Agency	New Hampshire DOT				

COUNT DATA INFO				
Count Status	Accepted			
Holiday	No			
Start Date	Tue 8/2/2022			
End Date	Wed 8/3/2022			
Start Time	12:00:00 AM			
End Time	12:00:00 AM			
Direction				
Notes	nhdot			
Station	821250400000			
Study				
Speed Limit				
Description				
Sensor Type	Axle/Tube			
Source				
Latitude,Longitude				

INTERVAL:15-MIN					
	1	15-min Interval			Hourdy
Time	1st	2nd	3rd	4th	Count
0:00-1:00	2	0	0	0	2
1:00-2:00	1	0	0	1	2
2:00-3:00	2	2	0	0	4
3:00-4:00	1	0	1	1	3
4:00-5:00	2	2	5	1	10
5:00-6:00	4	4	5	9	22
6:00-7:00	13	16	12	17	58
7:00-8:00	33	20	36	30	119
8:00-9:00	25	18	23	22	88
9:00-10:00	23	25	27	13	88
10:00-11:00	25	19	33	22	99
11:00-12:00	19	23	15	18	75
12:00-13:00	26	11	21	19	77
13:00-14:00	26	20	19	31	96
14:00-15:00	36	26	21	29	112
15:00-16:00	27	26	27	24	104
16:00-17:00	26	38	23	28	115
17:00-18:00	40	15	24	15	94
18:00-19:00	15	19	17	13	64
19:00-20:00	13	10	9	9	41
20:00-21:00	12	11	5	5	33
21:00-22:00	9	7	6	4	26
22:00-23:00	3	1	2	1	7
23:00-24:00 🔳	2	2	1	1	6
Total					1,345
AADT					1,175
AM Peak				07	:00-08:00
				10	119
PM Peak	10:15-17:15				

Count Navigation: << > >>

Count Type: VOLUME V

Directions: 2-WAY NB SB 📀

Figure 9: Tuesday August 2, 2022 Blackwater Road NB/SB Combined traffic count

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October 20, 2023



System

Auto-Locate OFF

Volume Count Report

LOCATION INFO					
Location ID	82125040				
Туре	SPOT				
Fnct'l Class	5				
Located On	Blackwater Rd				
Loc On Alias	BLACKWATER RD AT ROCHESTER TL				
Direction	2-WAY				
County	STRAFFORD				
Community	ROCHESTER				
MPO ID					
HPMS ID					
Agency	New Hampshire DOT				

COUNT DATA INFO				
Count Status	Accepted			
Holiday	No			
Start Date	Wed 8/3/2022			
End Date	Thu 8/4/2022			
Start Time	12:00:00 AM			
End Time	12:00:00 AM			
Direction				
Notes	nhdot			
Station	821250400000			
Study				
Speed Limit				
Description				
Sensor Type	Axle/Tube			
Source				
Latitude,Longitude				

INTERVAL:15-MIN					
	15-min Interval				Hourly
Time	1st	2nd	3rd	4th	Count
0:00-1:00	3	2	0	0	5
1:00-2:00	0	0	0	4	4
2:00-3:00	0	0	0	2	2
3:00-4:00	0	0	2	1	3
4:00-5:00	1	2	4	5	12
5:00-6:00	3	7	11	7	28
6:00-7:00	15	10	17	16	58
7:00-8:00	21	22	35	19	97
8:00-9:00	22	23	16	26	87
9:00-10:00	23	22	16	19	80
10:00-11:00	20	19	23	28	90
11:00-12:00	25	17	21	24	87
12:00-13:00	24	16	16	19	75
13:00-14:00	19	21	21	15	76
14:00-15:00	15	27	30	20	92
15:00-16:00	24	40	35	34	133
16:00-17:00	24	30	24	24	102
17:00-18:00	24	24	23	24	95
18:00-19:00	24	13	14	13	64
19:00-20:00	17	13	8	18	56
20:00-21:00	19	5	12	12	48
21:00-22:00	6	10	9	8	33
22:00-23:00	3	3	2	1	9
23:00-24:00 🔳	1	2	1	1	5
Total					1,341
AADT	1,153				
AM Peak	07:30-08:30 99				
PM Peak				15	:00-16:00 133

Count Navigation: << > >>

Count Type: VOLUME V

Directions: 2-WAY NB SB 2

Figure 10: Wednesday August 3, 2022 Blackwater Road NB/SB Combined traffic count





October 20, 2023



Volume Count Report

LOCATION INFO					
Location ID	82125040				
Туре	SPOT				
Fnct'l Class	5				
Located On	Blackwater Rd				
Loc On Alias	BLACKWATER RD AT ROCHESTER TL				
Direction	2-WAY				
County	STRAFFORD				
Community	ROCHESTER				
MPO ID					
HPMS ID					
Agency	New Hampshire DOT				

COUNT DATA INFO					
Count Status	Accepted				
Holiday	No				
Start Date	Thu 8/4/2022				
End Date	Fri 8/5/2022				
Start Time	12:00:00 AM				
End Time	12:00:00 AM				
Direction					
Notes	nhdot				
Station	821250400000				
Study					
Speed Limit					
Description					
Sensor Type	Axle/Tube				
Source					
Latitude,Longitude					

INTERVAL:15-N	IIN				
	15-min Interval Hourt			Hourly	
Time	1st	2nd	3rd	4th	Count
0:00-1:00	0	1	2	0	3
1:00-2:00	0	0	1	1	2
2:00-3:00	0	0	2	1	3
3:00-4:00	0	1	0	2	3
4:00-5:00	1	1	2	6	10
5:00-6:00	3	4	11	16	34
6:00-7:00	14	18	9	21	62
7:00-8:00	19	28	27	25	99
8:00-9:00	23	16	19	25	83
9:00-10:00	27	27	23	33	110
10:00-11:00	17	20	14	20	71
11:00-12:00	24	20	29	19	92
12:00-13:00	29	17	25	13	84
13:00-14:00	27	31	35	24	117
14:00-15:00	28	28	35	24	115
15:00-16:00	29	31	29	33	122
16:00-17:00	15	22	21	31	89
17:00-18:00	26	17	21	14	78
18:00-19:00	19	13	12	16	60
19:00-20:00	19	17	16	9	61
20:00-21:00	8	8	6	7	29
21:00-22:00	7	7	5	2	21
22:00-23:00	3	2	0	4	9
23:00-24:00 🔳	0	5	5	3	13
Total					1,370
AADT					1,148
AM Peak				09	00-10:00: 110
PM Peak				15	:00-16:00 122

Count Navigation: < > >>

Count Type: VOLUME 🗸

Directions: 2-WAY NB SB 😮

Figure 11: Thursday August 4, 2022 Blackwater Road NB/SB Combined traffic count



BERRY SURVEYING & ENGINEERING

October 20, 2023

21-132, RBV Realty LLC, 324 Blackwater Road Rochester, NH Traffic Impact Analysis, Benjamin Drive



M52

Transportation Data Management System

> + Locate All Auto-Locate OFF

Volume Count Report

LOOTION	
LOCATION INF	-0
Location ID	82125040_NB
Туре	SPOT
Fnct'l Class	5
Located On	Blackwater Rd
Loc On Alias	BLACKWATER RD AT ROCHESTER TL
Direction	NB
County	STRAFFORD
Community	ROCHESTER
MPO ID	
HPMS ID	
Agency	New Hampshire DOT

COUNT DATA INFO		
Count Status	Accepted	
Holiday	No	
Start Date	Tue 8/9/2016	
End Date	Wed 8/10/2016	
Start Time	12:00:00 AM	
End Time	12:00:00 AM	
Direction		
Notes	nhdot	
Station	821250405010	
Study		
Speed Limit		
Description		
Sensor Type	Tube Class	
Source		
Latitude,Longitude		

INTERVAL:60-MIN		
Time	Hourly Count	
(b) 0:00-1:00	3	
1:00-2:00	2	
2:00-3:00	1	
3:00-4:00	1	
4:00-5:00	2	
5:00-6:00	16	
6:00-7:00	16	
7:00-8:00	33	
8:00-9:00	21	
9:00-10:00	33	
10:00-11:00	25	
11:00-12:00	29	
12:00-13:00	42	
13:00-14:00	36	
14:00-15:00	37	
15:00-16:00	55	
16:00-17:00	74	
17:00-18:00	59	
18:00-19:00	38	
19:00-20:00	35	
20:00-21:00	26	
21:00-22:00	22	
22:00-23:00	9	
23:00-24:00 🔳	10	
Total	625	
AM Peak	07:00-08:00 33	
PM Peak	16:00-17:00 74	

Count Navigation: > >> Count Type: VOLUME V

Directions: 2-WAY NB SB 😢

Figure 12: Tuesday August 9, 2016 Blackwater Road northbound traffic count **BERRY SURVEYING & ENGINEERING**



October 20, 2023



Volume Count Report

LOCATION INF	-0
Location ID	82125040_SB
Туре	SPOT
Fnct'l Class	5
Located On	Blackwater Rd
Loc On Alias	BLACKWATER RD AT ROCHESTER TL
Direction	SB
County	STRAFFORD
Community	ROCHESTER
MPO ID	
HPMS ID	
Agency	New Hampshire DOT

COUNT DATA INFO		
Count Status	Accepted	
Holiday	No	
Start Date	Tue 8/9/2016	
End Date	Wed 8/10/2016	
Start Time	12:00:00 AM	
End Time	12:00:00 AM	
Direction		
Notes	nhdot	
Station	821250405010	
Study		
Speed Limit		
Description		
Sensor Type	Tube Class	
Source		
Latitude,Longitude		

INTERVAL:60-MIN		
Time	Hourly Count	
(b) 0:00-1:00	3	
1:00-2:00	1	
2:00-3:00	2	
3:00-4:00	1	
4:00-5:00	2	
5:00-6:00	24	
6:00-7:00	43	
7:00-8:00	54	
8:00-9:00	56	
9:00-10:00	27	
10:00-11:00	21	
11:00-12:00	30	
12:00-13:00	35	
13:00-14:00	34	
14:00-15:00	33	
15:00-16:00	49	
16:00-17:00	40	
17:00-18:00	56	
18:00-19:00	28	
19:00-20:00	23	
20:00-21:00	13	
21:00-22:00	15	
22:00-23:00	10	
23:00-24:00 🔳	5	
Total	605	
AM Peak	08:00-09:00 56	
PM Peak	17:00-18:00 56	

Count Navigation: |<< | > >>|

Count Type: VOLUME V

Directions: 2-WAY NB SB

Figure 13: Tuesday August 9, 2016 Blackwater Road southbound traffic count

BERRY SURVEYING & ENGINEERING



October 20, 2023

21-132, RBV Realty LLC, 324 Blackwater Road Rochester, NH Traffic Impact Analysis, Benjamin Drive





Transportation Data Management System

> + Locate All Auto-Locate OFF

Volume Count Report

LOCATION INF	0
LUCATION INF	-0
Location ID	82125040_NB
Туре	SPOT
Fnct'l Class	5
Located On	Blackwater Rd
Loc On Alias	BLACKWATER RD AT ROCHESTER TL
Direction	NB
County	STRAFFORD
Community	ROCHESTER
MPO ID	
HPMS ID	
Agency	New Hampshire DOT

COUNT DATA INFO		
Count Status	Accepted	
Holiday	No	
Start Date	Wed 8/10/2016	
End Date	Thu 8/11/2016	
Start Time	12:00:00 AM	
End Time	12:00:00 AM	
Direction		
Notes	nhdot	
Station	821250405010	
Study		
Speed Limit		
Description		
Sensor Type	Tube Class	
Source		
Latitude,Longitude		

INTERVAL:60-MIN		
Time	Hourly Count	
(b) 0:00-1:00	6	
1:00-2:00	0	
2:00-3:00	2	
3:00-4:00	0	
4:00-5:00	1	
5:00-6:00	13	
6:00-7:00	18	
7:00-8:00	28	
8:00-9:00	36	
9:00-10:00	24	
10:00-11:00	17	
11:00-12:00	32	
12:00-13:00	32	
13:00-14:00	31	
14:00-15:00	41	
15:00-16:00	41	
16:00-17:00	71	
17:00-18:00	48	
18:00-19:00	34	
19:00-20:00	38	
20:00-21:00	24	
21:00-22:00	22	
22:00-23:00	12	
23:00-24:00 🔳	6	
Total	577	
AM Peak	08:00-09:00 36	
PM Peak	16:00-17:00 71	

Count Navigation: < < > >>

Count Type: VOLUME V

Directions: 2-WAY NB SB

Figure 14: Wednesday August 10, 2016 Blackwater Road northbound traffic count BERRY SURVEYING & ENGINEERING





October 20, 2023



System

+ Locate All Auto-Locate OFF

Volume Count Report

LOCATION INF	0
Location ID	82125040_SB
Туре	SPOT
Fnct'l Class	5
Located On	Blackwater Rd
Loc On Alias	BLACKWATER RD AT ROCHESTER TL
Direction	SB
County	STRAFFORD
Community	ROCHESTER
MPO ID	
HPMS ID	
Agency	New Hampshire DOT

COUNT DATA INFO		
Count Status	Accepted	
Holiday	No	
Start Date	Wed 8/10/2016	
End Date	Thu 8/11/2016	
Start Time	12:00:00 AM	
End Time	12:00:00 AM	
Direction		
Notes	nhdot	
Station	821250405010	
Study		
Speed Limit		
Description		
Sensor Type	Tube Class	
Source		
Latitude,Longitude		

INTERVAL:60-MIN						
Time	Hourly Count					
(b) 0:00-1:00	4					
1:00-2:00	1					
2:00-3:00	2					
3:00-4:00	2					
4:00-5:00	4					
5:00-6:00	23					
6:00-7:00	47					
7:00-8:00	66					
8:00-9:00	45					
9:00-10:00	36					
10:00-11:00	27					
11:00-12:00	28					
12:00-13:00	36					
13:00-14:00	23					
14:00-15:00	27					
15:00-16:00	29					
16:00-17:00	37					
17:00-18:00	40					
18:00-19:00	24					
19:00-20:00	17					
20:00-21:00	25					
21:00-22:00	19					
22:00-23:00	11					
23:00-24:00 🔳	6					
Total	579					
AM Peak	07:00-08:00 66					
PM Peak	17:00-18:00 40					

Count Navigation: << > >>

Count Type: VOLUME V

Directions: 2-WAY NB SB

Figure 15: Wednesday August 10, 2016 Blackwater Road southbound traffic count BERRY SURVEYING & ENGINEERING







Volume Count Report

LOCATION INF	- 0
Location ID	82125040_NB
Туре	SPOT
Fnct'l Class	5
Located On	Blackwater Rd
Loc On Alias	BLACKWATER RD AT ROCHESTER TL
Direction	NB
County	STRAFFORD
Community	ROCHESTER
MPO ID	
HPMS ID	
Agency	New Hampshire DOT

COUNT DATA INF	0
Count Status	Accepted
Holiday	No
Start Date	Thu 8/11/2016
End Date	Fri 8/12/2016
Start Time	12:00:00 AM
End Time	12:00:00 AM
Direction	
Notes	nhdot
Station	821250405010
Study	
Speed Limit	
Description	
Sensor Type	Tube Class
Source	
Latitude,Longitude	

INTERVAL:60-M	IN
Time	Hourly Count
(b) 0:00-1:00	3
1:00-2:00	2
2:00-3:00	3
3:00-4:00	0
4:00-5:00	2
5:00-6:00	18
6:00-7:00	16
7:00-8:00	38
8:00-9:00	34
9:00-10:00	31
10:00-11:00	26
11:00-12:00	26
12:00-13:00	36
13:00-14:00	34
14:00-15:00	36
15:00-16:00	62
16:00-17:00	56
17:00-18:00	57
18:00-19:00	38
19:00-20:00	38
20:00-21:00	24
21:00-22:00	18
22:00-23:00	6
23:00-24:00 📵	9
Total	613
AM Peak	07:00-08:00 38
PM Peak	15:00-16:00

Count Navigation: < > >>

Count Type: VOLUME V

Directions: 2-WAY NB SB 😲

Figure 16: Thursday August 11, 2016 Blackwater Road northbound traffic count





October 20, 2023

21-132, RBV Realty LLC, 324 Blackwater Road Rochester, NH Traffic Impact Analysis, Benjamin Drive





Transportation Data Management System

> + Locate All Auto-Locate OFF

Volume Count Report

LOCATION INF	0
Location ID	82125040_SB
Туре	SPOT
Fnct'l Class	5
Located On	Blackwater Rd
Loc On Alias	BLACKWATER RD AT ROCHESTER TL
Direction	SB
County	STRAFFORD
Community	ROCHESTER
MPO ID	
HPMS ID	
Agency	New Hampshire DOT

COUNT DATA INFO				
Count Status	Accepted			
Holiday	No			
Start Date	Thu 8/11/2016			
End Date	Fri 8/12/2016			
Start Time	12:00:00 AM			
End Time	12:00:00 AM			
Direction				
Notes	nhdot			
Station	821250405010			
Study				
Speed Limit				
Description				
Sensor Type	Tube Class			
Source				
Latitude,Longitude				

INTERVAL:60-M	IN
Time	Hourly Count
(b) 0:00-1:00	2
1:00-2:00	1
2:00-3:00	1
3:00-4:00	2
4:00-5:00	4
5:00-6:00	27
6:00-7:00	35
7:00-8:00	54
8:00-9:00	43
9:00-10:00	39
10:00-11:00	31
11:00-12:00	28
12:00-13:00	30
13:00-14:00	26
14:00-15:00	37
15:00-16:00	37
16:00-17:00	31
17:00-18:00	42
18:00-19:00	30
19:00-20:00	32
20:00-21:00	24
21:00-22:00	14
22:00-23:00	11
23:00-24:00 🔳	5
Total	586
AM Peak	07:00-08:00 54
PM Peak	17:00-18:00 42

Count Navigation: < < > >

Count Type: VOLUME V

Directions: 2-WAY NB SB

Figure 17: Thursday August 11, 2016 Blackwater Road southbound traffic count BERRY SURVEYING & ENGINEERING



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Appendix B

Miscellaneous

Group 4 Averages:		Year 2019 Monthly Data Urban Highways					
		Adjustment to					
<u>Month</u>	<u>ADT</u>	Average	Peak				
January	11,431	1.12	1.23				
February	11,848	1.08	1.18				
March	12,141	1.06	1.15				
April	12,860	1.00	1.09				
May	13,551	0.95	1.03				
June	13,785	0.93	1.02				
July	13,942	0.92	1.01				
August	14,016	0.92	1.00				
September	13,379	0.96	1.05				
October	13,339	0.96	1.05				
November	12,265	1.05	1.14				
December	11,496	1.12	1.22				
Average ADT:	12,838						
Peak ADT:	14,016						

Table 6: Derivation of the seasonal peaking factor

DESIGN SPEED (MPH)	MIN. STOPPING SIGHT DISTANCE (FEET)
20	125
25	150
30	200
35	225
40	275
45	325
50	400
55	450

The AASHTO recommendations are based on the height of the driver's eye at 3 feet 6 inches above the road surface and the height of the object to be observed at 6 inches above the road surface.

Figure 18: Rochester Subdivision Regulations sight distance requirements

BERRY SURVEYING & ENGINEERING 335 Second Crown Pt. Rd., Barrington, NH 03825 (603) 332-2863 / (603) 335-4623 FAX www.BerrySurveying.Com



Appendix C

Trip Generation Derivation

Land Use: 210 Single-Family Detached Housing

Description

A single-family detached housing site includes any single-family detached home on an individual lot. A typical site surveyed is a suburban subdivision.

Specialized Land Use

Data have been submitted for several single-family detached housing developments with homes that are commonly referred to as patio homes. A patio home is a detached housing unit that is located on a small lot with little (or no) front or back yard. In some subdivisions, communal maintenance of outside grounds is provided for the patio homes. The three patio home sites total 299 dwelling units with overall weighted average trip generation rates of 5.35 vehicle trips per dwelling unit for weekday, 0.26 for the AM adjacent street peak hour, and 0.47 for the PM adjacent street peak hour. These patio home rates based on a small sample of sites are lower than those for single-family detached housing (Land Use 210), lower than those for single-family attached housing (Land Use 251), and higher than those for senior adult housing -- single-family (Land Use 251). Further analysis of this housing type will be conducted in a future edition of *Trip Generation Manual*.

Additional Data

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (<u>https://www.ite.org/technical-resources/topics/trip-and-parking-generation/</u>).

For 30 of the study sites, data on the number of residents and number of household vehicles are available. The overall averages for the 30 sites are 3.6 residents per dwelling unit and 1.5 vehicles per dwelling unit.

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Arizona, California, Connecticut, Delaware, Illinois, Indiana, Kentucky, Maryland, Massachusetts, Minnesota, Montana, New Jersey, North Carolina, Ohio, Ontario (CAN), Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Vermont, Virginia, and West Virginia.

Source Numbers

100, 105, 114, 126, 157, 167, 177, 197, 207, 211, 217, 267, 275, 293, 300, 319, 320, 356, 357, 367, 384, 387, 407, 435, 522, 550, 552, 579, 598, 601, 603, 614, 637, 711, 716, 720, 728, 735, 868, 869, 903, 925, 936, 1005, 1007, 1008, 1010, 1033, 1066, 1077,1078, 1079

Figure 19: ITE Trip Generation, 11th Edition

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Figure 20: ITE Trip Generation, 11th Edition

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Figure 21: ITE Trip Generation, 11th Edition

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ABBRE	EVIATION L	EGEND:				EX_{-}	ISTING L	EGEND:				
BITUM.	BITUMINOUS					0	IRON BOU DRILL HOL	ND/REBAR ~ .e ~FND~	FND~			
E.O.P.	EDGE OF PA	VEMENT				Ŏ	IRON PIPE	OR GUN BA	RREL ~FND~			
V.G.C.	vertical gr	ANITE CURB				ව ව ව	UTILITY F	POLE				
E.S.H.W.T	ESTIMATED S	STIMATED SEASONAL HIGH WATER TABLE				SIGNAGE						
TYP.	TYPICAL	YPICAL					TEST PIT					
U.G.C.	UNDER GROU	ND ELECTRIC / UTILITY	/				TEMPORA	RY BENCHMA	RK (T.B.M.)			
U.D.	UNDER DRAIN	١				(3)	BLAZED/F	PAINTED TRE	E			
C.O.	CLEAN OUT			_		· · · · _	RIU DING SETRACK LINE					
IN V.	INVERT			-			STREAM	RAINED JURI	SDICTIONAL WETLAN	D		
ELEV.	ELEVATION			=			25' WETLA	ND BUFFER	SETRACK LINE"	-		
F.E.S.	FLARED END	SECTION		• <			STONE W	ALL DELINEATI				
HDPE	HIGH DENSIT	Y POLYETHYLENE		=			SITE SPEC	CIFIC SOIL LI	NE			
RCP	REINFORCED	CONCRETE PIPE		_		- OHU OHU-		DUTILITIES L				
СМР	CORRUGATED	METAL PIPE	_	-	UGE-	D UGE	EXISTING	DRAIN CUL	VERT			
RECR	ROLLED EROS	SION CONTROL BLANKE	I		242	240	CONTOUR	MINUR, EXIS	STING			
F.G.	FINISHED GRA	ADE		_			CEN IERLII SURVEY	ne stream/ Te line	BOUNDARY LINE			
E.G.	EXISTING GRA			. (TREELINE					
E.I.W.	EDGE OF IRA	AVELED WAY		=	-DeB		NRCS SOI SITE SPE	L DELINEATIO CIFIC SOILS I	ON LINE & LABEL MAP SOIL LINE			
т.в.к.	IU BE REMU	VED		—		DeB	LIMIT OF SITE SPE	SOIL SURVE' CIFIC SOILS I	Y MAP SOIL SERIES			
	FRUPERIT LI					S.C.R.D.	STRAFFOF	ND COUNTY				
	DICUT OF WA					TYP.	REGISTRY TYPICAL	OF DEEDS				
Ω.Ο. W.	CENTER LINE	N 1				FND	FOUND					
CE CE	CUBIC FEFT					PR	OPOSED	LEGEND:				
P.C.	POINT OF CU	IRVATURF				-	4"X4" GF	ANITE BOUN	ID ~TBS~			
P.T.	POINT OF TA	NGENCY				•	3/4" REI	BAR W/ ID	CAP ~TBS~			
P.V.C.	POINT OF VE	RTICAL CURVATURE				•	I/Z EA:	SEMENT REB.	AR W/ ID CAP ~1	R2~		
P.V.I.	POINT OF VE	RTICAL INTERSECTION					PROPOSE	D EASEMEN	IN LINE LINE			
P.V.T.	POINT OF VE	RTICAL TANGENCY				¢	LAMP "A	" STREET LI	ЭНТ			
EX.	EXISTING						LAMP "B SIGNAGE	" MOUNTED	on unit			
PROP.	PROPOSED						CHECK D Flow ar	AM—MATERIA ROW	AL AS SPECIFIED			
STA.	STATION						WELL					
'/.	F00T / F00 ⁻	Т			' <i>'</i> MVI	E6	DETAIL SHEET / DETAIL					
{ } SSL (() ~ {SIZE} S () ~ {SIZE} D	INGLE SOLID LINE (COL	OR W=WHITE, Y=YELL	.OW) LOW)	17 PA 64034	1920 V K 26.) 26.	NE NAF					
{ } SSB ($() \sim \{S ZE\} S$	SINGLE SOLID W/ BROKE	EN LINE (COLOR W=W	(HITE, Y=YELLOW)			STORMWA	ATER BEST N	IANAGEMENT PRAC	CTICE (BMP)		
{ } DBL ($() \sim {SIZE} D$	OUBLE BROKEN LINE (COLOR W=WHITE, Y=Y	ELLOW)	1		BEKM					
) DRAIN MANHOLE W/ STRUCTURE					
) CATCH BASIN W/ STRUCTURE					
						X	STORMWATER BMP OUTLET STRUCTURE					
ABUTT	ERS WITHIN 2	ABUITERS WI	WIN & ROSCOE PHILLIP) TERMINAL FLUSHING MANHOLE W/ STRUCTURE					
CBDA D	DEVELOPMENT LL	LITTLEFIELD JR. .C 310 BLACKWATE				E175.31	EXISTING PROPOSE	SPOT ELEVA D SPOT ELE	ATION VATION			
1662 E MANCH	ELM ST IESTER, NH 0310 AB 256 A LOT	ROCHESTER, NH 1 BOOK 3975, PA 66 TAY MAP 264	03867 AGE 863			wv >>	gate va	LVE				
JEFFRE	Y S & SHARON	L COPP MICHAEL POULIN	N			\$° \$	CURB ST POST HY	OP DRANT				
344 BL ROCHES	ACKWATER RD STER, NH 03867	288 BLACKWATE ROCHESTER, NH	ER RD 1 03867			F241	THRUST CONTOUF	BLOCKS MINOR, PR	OPOSED			
DAWN ((AP 264, LUI 1 Chestnut	3 BOOK 1469, PA TAX MAP 264,	LOT 5		+	- F240	CONTOUF DRAIN CI	R MAJOR, PR JLVERT, PRC	OPOSED POSED			
332 BL ROCHES	ACKWATER RD STER, NH 03867	GEORGE B & EI 333 BLACKWATE	LIZABETH JENNESS ER RD				SHOULDE ROAD CE	R INTER LINE				
BOOK 4 TAX M	4229, PAGE 375 [AP 264, LOT 1	ROCHESTER, NH BOOK 2364, PA	03867 GE 469				BUILDING	SETBACK	LINE Ell Radius (nhdi	- <)		
JUSTIN 316 BL	OLEARY ACKWATER RD	BRANDON M. &	AMY L. BURKE				NITRATE	SETBACK				
ROCHES BOOK 4	STER, NH 03867 4734, PAGE 665	321 BLACKWATE ROCHESTER, NH	ER RD 03867	=:	: = : : = : UGE =	• • • • • • • • • • • • • • • • • • •	UNDERGE	RMER / J.B.	JX Y			
	(AP 264, LOT 1	0 BOOK 4525, PA <i>TAX MAP 264,</i>	GE 233 . <i>Lot 37—1</i>	===	••••••••••••••••••••••••••••••••••••••	•=••=••=••• <i>U.D</i> •••=••= •	SILT FEN	CE / EROSI	ON MIX BERM			
10 ARB ROCHES	STER, NH 03867	KEVIN & STEPH 313 BLACKWATE	ANIE BURKE ER RD	—	— SS 9	SS SS P/c	 FILTREXX PERIMETE 	8" - 12" 5 R CONTROL	SILT SOXX AS SPE (SEE E-101)	CIFIED		
BOOK 1 TAX M	1405, PAGE 254 [AP 264, LOT 7	ROCHESTER, NH BOOK 993, PAG	03867 E 622	_	— C — _ (c c	CONSTRL PROPOSE	ICTION FENC D WATER M	e ain line			
		TAX MAP 264,	, LUT 37				 PROPOSE PROPOSE 	.D WATER SE .D EFFLUENT	RVICE FORCEMAIN			
							UG LP T	ANK				
1												
SIGN II	D NUMBER	SIGN SIZE	SIGN		NO. OF	BACKGROUND	LEGEND	BORDER	POST SIZE &			
∎ ⊨		(WIDTH X HEIGHT)			SIGNS				QUANTITY			
		701*		SEE STANDARD HIGHWAY SIGNS	4							
	rı—1	30"x30 "	LSTOP J	2004 EDITION PUBLISHED BY		RED	WHILE	WHILE	SQUARE (1)	SIGN SI7F		
				USDOT - FHWA						(WIDTH x HEI		
				SEE STANDARD								
1	W14-2	30"x30"		HIGHWAY SIGNS 2004 EDITION	1	YELLOW	BLACK	BLACK	SQUARF	30"x12"		
	··· -			USDOT - FHWA					(1)			
	R6-1R	36"~1 7"		HIGHWAY SIGNS	1	BLACK W/	BI ACK	WHITE	SOLIARE	∆" ∨ ∆ "		
		JU AIZ		PUBLISHED BY USDOT - FHWA		WHITE			(1)			
										I		

R2-1

24"x30"

speed limit 25

WHITE

SEE STANDARD HIGHWAY SIGNS 2004 EDITION PUBLISHED BY USDOT - FHWA

GREEN GREEN U-CHANNEL (0)



E IGHT)	SIGN	TEXT DIMENSIONS	NO. OF SIGNS	BACKGROUND	LEGEND	BORDER	POST SIZE & QUANTITY	SIGN SIZE (WDTH x HEIGHT)	SIGN	TEXT DIMENSIONS	NO. OF SIGNS	
,	Benjamin drive		1	GREEN	WHITE	GREEN	U-CHANNEL (1)	4"×4"	OPEN SPACE		22	
	CITY OF ROCHESTER WETLAND BUFFER	SEE STANDARD SIGN TO BE PURCHASED AT THE CITY OF ROCHESTER PLANNING OFFICE	TBD IN FIELD	GREEN	WHITE	WHITE	U-CHANNEL OR TREE	24"×30"	STORMWATER & OPEN SPACE ACCESS ROAD NO PARKING		1	
	INFILTRATION RAIN GARDEN AND INFILTRATION SYSTEM		2	GREEN	WHITE	WHITE	U–CHANNEL (2)					

STANDARD SITE PLAN NOTES:

1.) OWNER: RBV REALTY LLC 40 PROVINCE ROAD STRAFFORD, NH 03884

- 2.) TAX MAP 264, LOT 11
- 3.) S.C.R.D. BOOK 4904, PAGE 469
- 4.) LOT AREA: 538,838 Sq. Ft. \pm , 12.37 Ac. \pm
- 5.) AS BUILT PLANS OF SITE SHALL BE SUBMITTED ON PAPER AND IN A DIGITAL FORMAT IN A PDF AND AUTOCAD DWG, AUTOCAD DXF OR AN ERSI FORMAT TO THE CITY OF ROCHESTER DEPARTMENT OF PUBLIC WORKS UPON COMPLETION OF PROJECT, AS-BUILT PLANS SHALL BE PREPARED AND CERTIFIED CORRECT BY A L.L.S. OR P.E. DIGITAL FILES SHALL BE GEO-REFERENCED TO NEW HAMPSHIRE STATE PLANE COORDINATES NAD83 AND SHALL BE EXPRESSED IN FEET.
- 6.) ALL ON-SITE UTILITIES SHALL BE INSTALLED UNDERGROUND, EXCEPT ONE REQUIRED DROP POLE.
- 7.) THE SUBJECT PARCEL IS SERVICED BY ON SITE WATER AND ON SITE SEPTIC.
- 8.) ALL EROSION CONTROL NOTES SHALL INCLUDE PROVISIONS FOR CONSTRUCTION SEQUENCING, TEMPORARY EROSION CONTROL MEASURES, AND PERMANENT STANDARDSSUCH AS LOAM SPREAD RATE FOR DISTURBED AREAS, RATES OF LIME, TYPE AND RATES FOR FERTILIZER, AND SEED AND MULCH MIXTURE WITH RATES OF APPLICATION.
- 9.) THE LIMITS OF CONSTRUCTION ALONG THE 50' WETLAND BUFFER SHALL BE STAKED, FLAGGED AND CLEARLY IDENTIFIED PRIOR TO THE COMMENCEMENT OF SITE WORK.
- 10.) ALL TREATMENT SWALES TO BE CONSTRUCTED SHALL HAVE SOD BOTTOMS. THIS IS ONLY APPLICABLE 8.) IN THE EVENT THE SITE CONTRACTOR REQUIRES THE USE OF A SWALE DURING THE CONSTRUCTION PROCESS FOR DIVERSION OR DE-WATERING. IF A SWALE IS NEEDED AND CAN BE STABILIZED WITHOUT THE USE OF SOD THIS IS TO BE COORDINATED WITH THE SWPPP INSPECTOR
- 11.) A LETTER OF CREDIT FOR THE COST OF RE-VEGETATING ALL TO BE DISTURBED AREAS ON THE SITE SHALL BE SUBMITTED PRIOR TO ANY EARTH DISTURBING ACTIVITY OCCURS, COORDINATE WITH THE CITY OF ROCHESTER DEPARTMENT OF PLANNING & DEPARTMENT OF PUBLIC WORKS.
- 12.) A PRE-CONSTRUCTION CONFERENCE WITH THE DEVELOPER, THE DESIGN ENGINEER, THE EARTHWORK CONTRACTOR, AND THE TECHNICAL STAFF FROM THE DEPARTMENT OF PUBLIC WORKS SHALL OCCUR PRIOR TO ANY EARTH DISTURBING ACTIVITY.
- 13.) BUILDING ADDRESSES SHALL BE ASSIGNED BY THE PLANNING DEPARTMENT DEPARTMENT AT THE TIME OF PLAN SIGNING AND RECORDING. A PLAN IS TO BE SUBMITTED TO THE PLANNING DEPARTMENT SHOWING 50' STATIONING ALONG WITH A STREET NAME APPLICATION. ONCE THE NAME APPROVED THE STREET SIGN MUST BE INSTALLED PER THE DESIGN PLANS PRIOR TO THE FIRST CERTIFICATE OF
- 14.) THE ROADWAY INFRASTRUCTURE AND DRAINAGE FEATURES ARE TO BE BUILT AND STABILIZED BEFORE LOT DEVELOPMENT MAY COMMENCE. NO DISTURBANCE IS PERMITTED OUTSIDE OF THE AREAS SHOWN DURING THE ROAD CONSTRUCTION PHASE.
- 15.) ALL CONSTRUCTION SHALL CONFORM TO THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION DATED 2016. CONSTRUCTION SHALL ALSO CONFORM TO THE CITY OF ROCHESTER POLICIES AND PRACTICES.
- 16.) CALL DIG SAFE PRIOR TO BEGINNING WORK (1-888-344-7233).
- 17.) CONTRACTOR SHALL COORDINATE ALL ELECTRICAL INSTALLATIONS WITH EVERSOURCE AT (603 436-7708. ALL ELECTRIC CONDUIT INSTALLATION SHALL BE INSPECTED BY EVERSOURCE PRIOR TO BACKFILL. A 48-HOUR MINIMUM NOTICE IS REQUIRED.
- 18.) CONTRACTOR SHALL COORDINATE ALL TELECOMMUNICATIONS INSTALLATIONS WITH CONSOLIDATED COMMUNICATIONS AT (888) 941-1064 OR BREEZELINE AT (844) 456-3082.
- 19.) ALL UNPAVED DISTURBED AREAS ARE TO RECEIVE 4" QUALITY LOAM AND SEED.
- 20.) SITE CONSTRUCTION HOURS SHALL BE LIMITED TO MONDAY-FRIDAY 7AM-6PM, SATURDAY 9AM-4PM WITH NO SUNDAY OR FEDERAL HOLIDAY HOURS. HOURS OF CONSTRUCTION SHALL BE DOCUMENTED ON A SITE CONSTRUCTION SIGN ALONG WITH THE CONTACT INFORMATION FOR THE GENERAL CONTRACTOR.
- 21.) FROM GROUND BREAKING THE SITE SHALL REMAIN ACCESSIBLE YEAR ROUND IN ALL WEATHER CONDITIONS.
- 22.) THIS SITE DESIGN HAS BEEN REVIEWED FOR COMPLIANCE WITH THE APPLICABLE ACCESSIBILITY REGULATIONS IN ACCORDANCE WITH NH RSA 11-A:5
- 23.) WRITTEN DIMENSION ON THIS PLAN TAKE PRECEDENCE OVER SCALED DIMENSIONS. THE CONTRACTOR SHALL USE CAUTION WHEN SCALING REPRODUCED PLANS. IN THE EVENT OF A CONFLICT BETWEEN THIS PLAN SET AND ANY OTHER DRAWINGS AND/OR SPECIFICATIONS, THE ENGINEER SHALL BE NOTIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR IS TO CONFIRM ALL ELEVATIONS. CONFLICTS WILL BE REPORTED TO THE DESIGN ENGINEER PRIOR TO CONSTRUCTION.
- 24.) FOR MORE INFORMATION ABOUT THIS SITE PLAN PLEASE CONTACT THE CITY OF ROCHESTER PLANNING OFFICE AT 603-335-1338.
- 25.) DATUM: PROJECT DATUM IS BASED ON GPS COORDINATES ESTABLISHED WITH A CARLSON BRX7 RECEIVER AND REPRESENTED IN NEW HAMPSHIRE STATE PLANE COORDINATES NAD 1983 AND VERTICALLY BY NAVD 1988.
- 26.) THE LIMITS OF CONSTRUCTION DISTURBANCE AND TREE CLEARING LIMITS ARE TO BE MARKED OUT AND APPROVED BY THE CITY PRIOR TO THE START OF WORK.
- 27.) THE FOLLOWING FEDERAL AND STATE PERMITS HAVE BEEN ISSUED FOR THE SUBJECT PROPERTY: NHDES STATE SUBDIVISION: PENDING NHDES ALTERATION OF TERRAIN: PENDING US EPA NOI & SWPPP: PENDING
- NATURAL HERITAGE BUREAU: PENDING NH DIVISION OF HISTORICAL RESOURCES: PENDING
- 28.) ALL LAMPS ARE TO BE SIGMA SERIES.
- 29.) STREET TREES ARE PROVIDED FOR WITHIN THIS PLAN SET. THREE SPECIES ARE SUGGESTED. IT SHOULD BE NOTED THAT A MIX OF THESE SPECIES IS REQUIRED. AN ALTERNATING PATTERN IS PREFERRED
- 30.) ALL PROPOSED STREET TREES ARE TO BE AT LEAST 15' FROM ALL UTILITIES AND STORM DRAINS.
- 31.) THE PROJECT PROPOSES 225,000 Sq.Ft., (5.17 Ac.) OF DISTURBANCE AS THE LIMITS OF DISTURBANCE DEMONSTRATE ON THE EROSION & SEDIMENT CONTROL PLANS. UNLESS THE LOT IS SHOWN TO BE REQUIRED FOR STOCK PILING OR MATERIAL STORAGE, LOTS ARE NOT TO BE OPENED AND DISTURBED PRIOR TO THE STABILIZATION OF THE ROADWAY AND DRAINAGE INFRASTRUCTURE. THERE IS A 5 ACRE MAXIMUM TO BE OPEN AT ANY ONE TIME THAT HAS NOT BEEN STABILIZED. DURING THE WINTER MONTHS THE MAXIMUM AREA ALLOWED TO BE OPEN IS 1 ACRE. THE CONTRACTOR IS TO BE MINDFUL OF THE MEANS AND METHODS USED FOR CONSTRUCTION AND THE TIME OF YEAR IN WHICH ASPECTS ARE BEING CONSTRUCTED.
- 32.) IF ANY STONE WALL EXIST IN THE PROJECT WORK AREA, THEY ARE TO EITHER REMAIN IN PLACE OR ARE TO BE RELOCATED WITHIN THE PROJECT DISTURBANCE LIMITS. THERE ARE NO KNOWN STONE WALLS WITHIN THE PROJECT LIMITS. BUT IF FOUND DURING CONSTRUCTION THE APPLICANT / SITE CONTRACTOR IS TO WORK WITH THE DESIGN ENGINEER AND PLANNING DEPARTMENT TO DETERMINE THE BEST PLACEMENT
- 33.) ORANGE CONSTRUCTION FENCING IS REQUIRED FOR ANY WORK THAT IS LOCATED WITHIN 100' OF WETLANDS.
- 34.) IN ADDITION TO WETLANDS BUFFER STAKES BEING REQUIRED PRIOR TO CONSTRUCTION, THE WETLAND BOUNDARY WILL BE STAKED AND FLAGGED WITH PINK AND BLACK STRIPED WETLAND FLAGS SO IT IS VISIBLE TO THE CONTRACTOR.
- 35.) SALT APPLICATIONS ARE TO BE CONDUCTED BY GREEN SNOW-PRO CERTIFIED APPLICATORS.

STANDARD CONSTRUCTION NOTES:

- 1.) SEE EROSION & SEDIMENT CONTROL PLANS FOR DETAILS ON PERIMETER CONTROL (MULCH BERM / FENCE / SILT SOXX).
- 2.) FOUR ON SITE BENCHMARKS ARE PROVIDED. BS&E IS TO PROVIDE ADDITIONAL BENCHMARKS PRIOR TO CONSTRUCTION AS NEEDED.
- 3.) EXISTING AND PROPOSED CONTOURS ARE PROVIDED AT 1' INTERVALS WITH DRAINAGE FEATURES AT MORE PRECISE INTERVALS.
- 4.) SEE UTILITY PLANS FOR DETAILS ON THE PROPOSED WATER, AND UNDERGROUND ELECTRIC LINES SHOWN.
- 5.) EXISTING CONDITIONS INFORMATION IS BASED ON A SURVEY PERFORMED BY BERRY SURVEYING & ENGINEERING AND IS ENCLOSED IN THIS PACKAGE.
- 6.) CONTRACTOR SHALL TAKE SPECIAL CARE IN NOT DISTURBING EXISTING MONUMENTS BOUNDS, AND OR BENCHMARKS WITHOUT FIRST MAKING PROVISIONS FOR RELOCATION.
- 7.) THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO LOCATE EXACTLY AND TO PRESERVE ANY AND ALL UNDERGROUND UTILITIES CALL "DIG-SAFE" 1-888-DIGSAFE (344-7233) AT LEAST 72 HOURS BEFORE COMMENCING CONSTRUCTION.
- WHERE AN EXISTING UNDERGROUND UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED TO THE ENGINEER FOR RESOLUTION OF THE CONFLICT.
- 9.) THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION AND ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE AND ANY OTHER PRIVATE UTILITIES BY THE UTILITY COMPANIES.
- 10.) AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE. DISTURBANCE OUTSIDE AREAS SHOWN TO BE APPROVED BY DESIGN ENGINEER.
- 11.) THE TERM "PROPOSED" (PROP.) MEANS WORK TO BE CONSTRUCTED USING NEW MATERIALS. OR, WHERE APPLICABLE, RE-USING EXISTING MATERIALS IDENTIFIED AS "REMOVE & RESET" (R & R)
- 12.) ALL SYMBOLS, WORDS, TRANSVERSE MARKINGS (STOP BARS, CROSSWALK LINES, AND RAILROAD SYMBOLS), LANE LINES, AND ALL OTHER MARKINGS NOTED WITH $\{T\}$ SHALL BE THERMOPLASTIC.
- 13.) ALL ELEVATIONS TO BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. THE DESIGN ENGINEER IS TO BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCY. TEMPORARY BENCHMARKS (T.B.M.) ARE TO BE PROVIDED BY THE DESIGN ENGINEER.
- 14.) NOTE THAT THE PROJECT IS SUBJECT TO THE EPA NPDES PHASE II. THE NOTICE OF INTENT (NOI) MUST BE FILED ALONG WITH A STORMWATER POLLUTION PREVENTION PLAN (SWPPP). WEEKLY INSPECTIONS WILL BE CONDUCTED BY THE DESIGN ENGINEER OR AFTER A STORM EVENT OF GREAT THAN 0.25".
- 15.) UPON FINAL COMPLETION AND 85% STABILIZATION THE DRAINAGE SYSTEM IS TO BE CLEANED OF ALL DEBRIS TO INCLUDE THE PUMPING OF THE BASINS.
- 16.) WRITTEN DIMENSION ON THIS PLAN TAKE PRECEDENCE OVER SCALED DIMENSIONS. THE CONTRACTOR SHALL USE CAUTION WHEN SCALING REPRODUCED PLANS. IN THE EVENT OF A CONFLICT BETWEEN THIS PLAN SET AND ANY OTHER DRAWINGS AND/OR SPECIFICATIONS, THE ENGINEER SHALL BE NOTIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR IS TO CONFIRM ALL ELEVATIONS.
- 17.) SEE DETAILS CONCERNING SITE LAYOUT, UTILITY, AND SEDIMENT AND EROSION CONTROLS.
- 18.) ALL DRAINAGE PIPE IS TO BE HDPE N-12, EXCEPT FOR WHERE EXISTING PIPE IS PROPOSED TO BE REUSED. INDIVIDUAL PIPE SIZES ARE SPECIFIED, RECYCLED PIPE IS APPROVED FOR PROJECT SITE. RECYCLED HDPE PIPE "GREEN PIPE" IS ACCEPTABLE FOR THIS PROJECT SITE.
- 19.) ALL BASINS AND DRAINS ARE PROPOSED WITH NO SUMPS OR HOODS. BASINS WITHIN ANY GRASS LINED AREAS OUTSIDE THE ROADWAY WILL HAVE "BEE HIVE" GRATES TO NOT ALLOW FOR ENTRAPMENT OF ANIMALS IN THE STRUCTURE. OUTLET CONTROL STRUCTURES WILL NOT HAVE SUMPS. IF REQUIRED TO BE INSTALLED DURING THE PRE-CASTING PROCESS, THEY ARE TO BE FILLED WITH STONE ON SITE. BASINS ARE TO HAVE NH STANDARD FRAMES AND GRATES MADE IN NORTH AMERICA. PLEASE NOTE SOME GRATES ARE SPECIALIZED FOR THE LOCATION AND USE AND ARE CALLED OUT ON THE GRADING PLANS. GRATES ARE TO BE INSTALLED BINDER FLUSH PRIOR TO BASE PAVE. UPON PROJECT COMPLETION FRAMES AND GRATES ARE TO BE CUT AND RIM RAISED TO FINAL PAVEMENT SURFACE. THIS IS TO ENSURE STORMWATER ENTERS THE SYSTEM AS DESIGN DURING THE INTERIM CONSTRUCTION PERIOD.
- 20.) SUMP PUMP CONNECTIONS TO THE STREET SEWER SYSTEM IS ILLEGAL. SEE REQUIRED UNDERDRAIN SYSTEM.
- 21.) VEHICLE FUELING LOCATIONS ARE SHOWN ON THE EROSION AND SEDIMENT CONTROL PLANS AND MAY BE MODIFIED DURING CONSTRUCTION WITH INPUT FROM THE SWPPP INSPECTOR.
- 22.) AFTER CLEARING AND GRUBBING THE STUMPAGE IS TO EITHER BE REMOVED FROM THE PROJECT SITE OR GROUND AND USED FOR THE REQUIRED MULCH BERM FOR THE PROJECT SITE. STUMPS ARE NOT TO BE BURIED ON THE PROJECT SITE.
- 23.) AS THE BUILDING SITES ARE BUILT OUT THERE IS TO BE AN ONSITE DUMPSTER SUFFICIENT IN SIZE TO CONTAIN AND CONTROL THE CONSTRUCTION DEBRIS, SOLID WASTE AND LITTER GENERATED FROM EACH HOME SITE. PER THE EPA CGP THIS DUMPSTER IS TO BE COVERED DURING INCLEMENT WEATHER. DURING THE ROAD CONSTRUCTION PHASE THE ON SITE CONTRACTOR WILL MAKE PROVISIONS FOR REFUSE DISPOSAL EITHER THROUGH THE USE OF AN ON SITE DUMPSTER, WITH REQUIREMENTS NOTED ABOVE, OR BY REMOVING REFUSE MATERIALS FROM THE PROJECT SITE ON A DAILY, WEEKLY OR MONTHLY BASIS AS MAY BE REQUIRED. PROJECT TASK SPECIFIC CHEMICALS ARE TO BE KEPT IN A JOB SITE TRAILER, CONTRACTOR VEHICLE, OR WITHIN THE HOME UNDER CONSTRUCTION, AND ARE NOT TO BE LEFT OUTSIDE OPEN TO THE ELEMENTS.
- 24,) CONCRETE WASHOUT NEEDED FOR THE CURBING, FOOTINGS, FROST WALLS AND FOUNDATIONS WILL BE DONE IN ACCORDANCE WITH THE EPA CCP. THE ON SITE CONTRACTOR IS TO PROVIDE A WASHOUT HOLE LARGE ENOUGH TO CONTAIN THE SLURRY THE MATERIAL IS TO BE BACKFILLED AND STABILIZED. THESE WASHOUT AREAS ARE TO BE OUTSIDE OF IMMEDIATE HOME SITES, OUTSIDE THE ROAD RIGHT OF WAY AND STORM WATER DRAINAGE SYSTEMS.
- 25.) THE PROJECT IS PROPOSED AS A STANDARD SUBDIVISION ROADWAY SYSTEM, TO BE REQUESTED FOR ACCEPTANCE BY THE CITY OF ROCHESTER. SNOW STORAGE AREAS ARE ALONG THE ROAD SIDE ALIGNMENT. THE CUL-DE-SAC IS DESIGNED AS A SIMPLE DEPRESSED DETENTION SYSTEM AND WILL ACCOMMODATE THE ADDITIONAL SNOW GENERATED FROM THE AREA.
- 26.) IF DEICING MATERIALS ARE USED DURING THE CONSTRUCTION PHASE AND ARE TO NEEDING TO BE STORED ON SITE, THEY ARE TO BE STORED UNDER COVER.
- 27.) CERTIFIED PLOT PLANS WILL BE PROVIDED TO THE BUILDING DEPARTMENT WITH THE BUILDING PERMIT APPLICATIONS TO ENSURE COMPLIANCE WITH THE REQUIRED SETBACKS. FOUNDATION CERTIFICATIONS WILL BE REQUIRED ONCE THE FOUNDATION IS POURED TO ENSURE THE CONSTRUCTED PRODUCT IS IN COMPLIANCE WITH THE REQUIRED SETBACKS.

STANDARD UTILITY NOTES:

- UNDERGROUND UTILITY LOCATIONS ARE BASED UPON BEST AVAILABLE EVIDENCE AND ARE NOT FIELD VERIFIED. LOCATING AND PROTECTING ANY ABOVE AND BELOW GROUND UTILITIES IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. ANY UTILITY CONFLICTS SHOULD BE REPORTED IMMEDIATELY TO THE DESIGN ENGINEER.
- 2. THE CONTRACTOR SHALL CALL AND COORDINATE WITH DIGSAFE 1-888-344-7233 AT LEAST 72 HOURS PRIOR TO COMMENCING ANY EXCAVATION ON PUBLIC OR PRIVATE PROPERTY.
 - PROTECTION OF SUBGRADE: THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN STABLE, DEWATERED SUBGRADES, TRENCHES, AND OTHER AREAS DURI CONSTRUCTION. SUBGRADE DISTURBANCE MAY BE INFLUENCED BY EXCAVATION METHODS, MOISTURE, PRECIPITATION, GROUNDWATER CONTROL, AND CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL TAKE PRECAUTIONS T PREVENT SUBGRADE DISTURBANCE. SUCH PRECAUTIONS MAY INCLUDE DIVERTING STORMWATER RUNOFF AWAY FROM CONSTRUCTION AREAS, REDUCING TRAFFIC IN SENSITIVE AREAS, AND MAINTAINING AN EFFECTIVE DEWATERING PROGRAM. SOILS EXHIBITING HEAVING OR INSTABILITY SHALL BE OVER EXCAVATED TO MORE COMPETENT BEARING SOIL AND REPLACED WITH FREE DRAINING STRUCTURAL FILL MEETING THE ENGINEERS SPECIFIC RECOMMENDED CRITERIA.
 - IF THE EARTHWORK IS PERFORMED DURING FREEZING WEATHER (NOT ALLOWED IN CITY R.O.W.), EXPOSED SUBGRADES ARE SUSCEPTIBLE TO FROST. NO FILL OR UTILITIES SHALL BE PLACED ON FROZEN GROUND. THIS WILL LIKELY REQUIRE REMOVAL OF A FROZEN SOIL CRUST AT THE COMMENCEMENT OF EACH DAY'S OPERATION. THE FINAL SUBGRADE ELEVATION WOULD ALSO REQUIRE AN APPROPRIATE DEGREE OF INSULATION AGAINST FREEZING
- FINAL UTILITY LOCATIONS TO BE COORDINATED BETWEEN THE CONTRACTOR, ALL APPROPRIATE UTILITY COMPANIES AND THE ROCHESTER DPW
- CONTRACTOR TO CONTACT ROCHESTER DPW A MINIMUM OF TWO WEEKS PRIOR TO ANY CONSTRUCTION TO COORDINATE ALL WORK CONCERNING INSTALLATION OF ANY PROPOSED WATER LINE IMPROVEMENTS.
- ALL WATER MAIN AND SERVICE INSTALLATIONS SHALL CONFORM TO CITY OF ROCHESTER STANDARDS. ALL HIGHWAY CONSTRUCTION WILL MEET THE CITY OF ROCHESTER STANDARDS.
- CONTRACTOR SHALL COORDINATE ALL ELECTRICAL INSTALLATIONS WITH EVERSOURCE AT (800) 662-7764. ALL ELECTRIC CONDUIT INSTALLATION SHALL BE INSPECTED BY EVERSOURCE PRIOR TO BACKFILL. A 48-HOUR MINIMUM NOTICE IS REQUIRED.
- ALL SEWER INSTALLATIONS SHALL CONFORM TO THE REQUIREMENTS OF NHDES & 9 ROCHESTER DPW SEWER DIVISION STANDARDS. ALL PVC SEWER PIPE IS TO CONFORM WITH ENV-WQ 704.05 (c)-(e) FOR SDR 35 GRAVITY SEWER PIPE, CONFORM WITH ENV-WQ 704.08 FOR SDR 11 FORCE MAIN PRESSURE PIPE, AND CONFORM WITH ASTM D3034. PVC JOINT SEALS SHALL CONFORM WITH ASTM D3121. THE FORCE MAIN SHALL BE TESTED IN ACCORDANCE WITH ENV-WQ
- 10. ALL WATER SERVICES ARE TO BE WITNESSED WITH A 2"X4" PAINTED BLUE.
- 11. CURB BOXES SHOULD BE PLACED IN THE LAWN AREA, OR IF PLACED IN PAVEMENT, A ROAD BOX IS REQUIRED.
- 12. SEE EXISTING CONDTIONS PLAN FOR DATUM. VERTICAL DATUM BASED ON NAVD88 ELEVATIONS. HORIZONTAL DATUM BASED ON NAD83 STATE PLANE COORDINATES GATHERED USING TOPCON HIPER SR SURVEY GRADE GPS.
- 13. CONTRACTOR TO TRANSFER TEMPORARY BENCHMARK TO A SUITABLE BENCHMARK TO CONTROL CONSTRUCTION. ANY ELEVATION DISCREPANCIES ARE TO BE REPORTED TO THE THE DESIGN ENGINEER IMMEDIATELY.
- 14. PROPANE UTILITY TO BE PROVIDED VIA UNDERGROUND TANK LOCATED NO CLOSER THAN 10' TO EACH STRUCTURE.
- 15. ALL SEWER MANHOLE RIMS & COVERS ARE TO BE LIFTMATE R-1743-LM AND MADE IN NORTH AMERICA.
- 16. ALL SEWER AND WATER CROSSINGS ARE TO MAINTAIN A 1.5' OF SEPARATION AND 10' HORIZONTAL CLEARANCE BETWEEN WATER AND SEWER.
- 17. SEE U-103 FOR SIMPLEX EFFLUENT PUMP STATION DESIGN INFORMATION FOR HE SUBDIVISION LOTS. NO PUMP SUBSTITUTIONS ARE ALLOWED WITHOUT DESIGN ENGINEER APPROVAL AND WITHOUT DESIGN REAPPROVAL BY CITY OF ROCHESTER. EACH LOT WILL UTILIZE A LIBERTY FL50 EFFLUENT PUMP TO TRANSPORT EFFLUENT TO THE COMMUNITY EFFLUENT DISPOSAL AREA.
- EACH HOUSE IS TO BE SPRINKLED. A WATER STORAGE TANK IS TO BE PROVIDED AT EACH HOUSE FOR FIRE SUPPRESSION PURPOSES. TANK TO BE SIZED BY FIRE PROTECTION ENGINEER.

STANDARD EROSION & SEDIMENT CONTROL NOTES:

- 1.) EROSION AND SEDIMENT CONTROL INSPECTIONS TO BE CONDUCTED ONCE PER EVERY SEVEN DAYS AN 24-HOURS OF A 0.25 INCH RAIN EVENT. INSPECTIONS TO BE CONDUCTED BY A "QUALIFIED PERSON" REPORTS SUBMITTED TO THE CITY OF ROCHESTER, NH, ENGINEERING DEPARTMENT WITHIN 24 HOURS OWNER FOR A PERIOD OF THREE YEARS AFTER THE PROJECT IS COMPLETED.
- 2.) PER EPA CGP Z.1.2.2 (INSTALL PERIMETER CONTROL), "YOU MUST INSTALL SEDIMENT CONTROLS ALONG RECEIVE STORMWATER FROM EARTH DISTURBING ACTIVITIES." AS A RESULT OF SWPPP INSPECTIONS, CONTROLS TO MEET THIS REQUIREMENT. THE E&SC PLAN IS INITIAL GUIDANCE AS TO THE ANTICIPATE RESPONSIBILITY TO ENSURE THAT STORMWATER VIOLATION DO NOT OCCUR. (CGP - CONSTRUCTION GE
- 3.) CITY OF ROCHESTER: IN ACCORDANCE WITH SITE PLAN REVIEW REGULATIONS THE FOLLOWING STORMW
 - A.) ALL PROPOSED BMPs WILL CONFORM TO THE NH STORMWATER MANUAL VOLUME 3. B.) EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY SOIL LAND
 - BY COMMUNITY SERVICE. C.) TEMPORARY STABILIZATION MEASURES SHOULD BE IN PLACE WITHIN FIVE CALENDAR DAYS FOR FEET OF A SURFACE WATER BODY OR A WETLAND AND NO MORE THAN 14 CALENDAR DAYS FOR ALL IN PLACE WITHIN THREE CALENDAR DAYS FOLLOWING COMPLETION OF FINAL GRADING OF EXPOSED SO D.) ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED IN FUNCT ACCOMPLISHED.
- E.) DEPARTMENT OF PUBLIC WORKS OR THEIR DESIGNATED AGENT SHALL HAVE ACCESS TO THE NOTIFIED 24-HOURS PRIOR TO INSTALLATION OF A STORMWATER BMP IN ORDER TO SCHEDULE AN INS F.) THE PLANNING BOARD OR ENGINEERING DEPARTMENT MAY REQUIRE THE DESIGN ENGINEER AND OVERSIGHT OF THE CONSTRUCTION OF STORMWATER MANAGEMENT FACILITIES AND EROSION AND SEDIM APPLICANT IS RESPONSIBLE FOR ALL FEES ASSOCIATED WITH INSPECTIONS. G.) ALL SWPPP INSPECTIONS MUST BE CONDUCTED BY A QUALIFIED PROFESSIONAL AS DEFINED BY
- 4.) CONTRACTOR IS REQUIRED TO HAVE A CONSTRUCTION ENTRANCE. 3" ANGULAR STONE IS REQUIRED.
- 5.) CONTRACTOR IS RESPONSIBLE FOR SWEEPING THE ROADWAY, SIDEWALKS AND ANYTHING DISTURBED, BLACKWATER ROAD.
- 6.) CONTRACTOR IS RESPONSIBLE FOR CLEANING AND MAINTAINING THE INLET PROTECTION ONCE INSTALLE
- 7.) FUGITIVE DUST IS TO BE CONTROLLED THROUGHOUT THE CONSTRUCTION PROCESS IN ACCORDANCE WI
- 8.) CONTRACTOR IS TO MEET THE REQUIREMENTS SPECIFIED IN RSA 430:51-57 AND AGR 3800, RELATING
- 9.) CONTRACTOR IS RESPONSIBLE FOR PROTECTING THE WATER QUALITY FROM ANY RUN OFF DURING THE ENV-WQ 1507, IN ORDER TO PREVENT VIOLATIONS OF THE STORM WATER QUALITY STANDARDS.
- 10.) WINTER STABILIZATION NOTES ARE INCLUDED ON SHEET E-102 TO INCLUDE THE LIMIT OF ONE ACRE

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		THINGSTONAL ENGINE
		SHEET 2 OF 54







TEST PIT DATA: TEST PIT #1 0-12 "10YR 3/2 VERY DARK GRAYISH BROWN, LOAM FINE SAND, GRANULAR, FRIABLE 12-15 7.5YR 5/6 STRONG BROWN, LOAMY SAND, GRANULAR, FRIABLE 15-20 10YR 5/6 YELLOWISH BROWN, LOAMY SAND, GRANULAR, FRIABLE 20-64 10YR 6/2 LIGHT BROWNISH GRAY, SAND WITH REDOX. FEAT. PRESENT, LOOSE, SINGLE GRAIN E.S.H.W.T. @ 20" RESTRICTIVE LAYER @ N/A ground water @ 48" TERMINATED @ 64" REFUSAL @ N/A PERC RATE = 14 MIN/INCH TEST PIT #2 0-10 10YR 3/2 VERY DARK GRAYISH BROWN, LOAM FINE SAND, GRANULAR, FRIABLE 10-14 7.5YR 5/6 STRONG BROWN, LOAMY SAND, GRANULAR, FRIABLE 14-20 10YR 5/6 YELLOWISH BROWN, LOAMY SAND, GRANULAR, FRIABLE 20-70 10YR 6/2 LIGHT BROWNISH GRAY, SAND WITH REDOX. FEAT. PRESENT, LOOSE, SINGLE GRAIN E.S.H.W.T. @ 20" RESTRICTIVE LAYER @ N/A ground water @ 53" TERMINATED @ 70" REFUSAL @ N/A PERC RATE = 14 MIN/INCHTEST PIT #3 0-12 10YR 3/2 VERY DARK GRAYISH BROWN, LOAM FINE SAND, GRANULAR, FRIABLE 12–15 7.5YR 5/6 STRONG BROWN, LOAMY SAND, GRANULAR, FRIABLE 15-20 10YR 5/6 YELLOWISH BROWN, LOAMY SAND, GRANULAR, FRIABLE 20-72 10YR 6/2 LIGHT BROWNISH GRAY, SAND WITH REDOX. FEAT. PRESENT, LOOSE, SINGLE GRAIN E.S.H.W.T. @ 20" RESTRICTIVE LAYER @ N/A ground water @ 50" TERMINATED @ 72" REFUSAL @ N/A PERC RATE = 14 MIN/INCHTEST PIT #4 0-8 10YR 3/2 VERY DARK GRAYISH BROWN, LOAM FINE SAND, GRANULAR, FRIABLE 8-12 7.5YR 5/6 STRONG BROWN, LOAMY SAND, GRANULAR, FRIABLE 12-18 10YR 5/6 YELLOWISH BROWN, LOAMY SAND, GRANULAR, FRIABLE 18-22 10YR 5/4 YELLOWISH BROWN, LOAMY SAND, GRANULAR, FRIABLE 22-70 10YR 6/2 LIGHT BROWNISH GRAY, SAND WITH REDOX. FEAT. PRESENT, LOOSE, SINGLE GRAIN E.S.H.W.T. @ 22" RESTRICTIVE LAYER @ N/A GROUND WATER @ 52" TERMINATED @ 70" REFUSAL @ N/A PERC RATE = 12 MIN/INCHTEST PIT #5 0-12 10YR 3/2 VERY DARK GRAYISH BROWN, LOAM FINE SAND, GRANULAR, FRIABLE 12-15 7.5YR 5/6 STRONG BROWN, LOAMY SAND, GRANULAR, FRIABLE 15-20 10YR 5/6 YELLOWISH BROWN, LOAMY SAND, GRANULAR, FRIABLE 20-81 10YR 6/2 LIGHT BROWNISH GRAY, SAND WITH REDOX. FEAT. PRESENT, LOOSE, SINGLE GRAIN E.S.H.W.T. @ 20" RESTRICTIVE LAYER @ N/A GROUND WATER @ 58" TERMINATED @ 81" REFUSAL @ N/A PERC RATE = 12 MIN/INCHTEST PIT #6 0-8 10YR 3/2 VERY DARK GRAYISH BROWN, LOAM FINE SAND, GRANULAR, FRIABLE 8-12 7.5YR 5/6 STRONG BROWN, LOAMY SAND, GRANULAR, FRIABLE 12-20 10YR 5/6 YELLOWISH BROWN, LOAMY SAND, GRANULAR, FRIABLE 20–26 10YR 5/4 YELLOWISH BROWN, LOAMY SAND, GRANULAR, FRIABLE 26-84 10YR 6/2 LIGHT BROWNISH GRAY, SAND WITH REDOX. FEAT. PRESENT, LOOSE, SINGLE GRAIN E.S.H.W.T. @ 26" RESTRICTIVE LAYER @ N/A ground water @ 48" terminated @ 84" REFUSAL @ N/A PERC RATE = 12 MIN/INCHTEST PIT #7 0-8 10YR 3/2 VERY DARK GRAYISH BROWN, LOAM FINE SAND, GRANULAR, FRIABLE 8-12 7.5YR 5/6 STRONG BROWN, LOAMY SAND, GRANULAR, FRIABLE 12–24 10YR 5/6 YELLOWISH BROWN, LOAMY SAND, GRANULAR, FRIABLE 24-34 10YR 5/4 YELLOWISH BROWN, LOAMY SAND, GRANULAR, FRIABLE 34-80 10YR 6/2 LIGHT BROWNISH GRAY, SAND WITH REDOX. FEAT. PRESENT, LOOSE, SINGLE GRAIN E.S.H.W.T. @ 34" RESTRICTIVE LAYER @ N/A GROUND WATER @ N/A terminated @ 80" REFUSAL @ N/A PERC RATE = 8 MIN/INCH test pit #8 0-8 10YR 3/2 VERY DARK GRAYISH BROWN, LOAM FINE SAND, GRANULAR, FRIABLE 8-12 7.5YR 5/6 STRONG BROWN, LOAMY SAND, GRANULAR, FRIABLE 12-18 10YR 5/4 YELLOWISH BROWN, LOAMY SAND, GRANULAR, FRIABLE 18-80 10YR 6/2 LIGHT BROWNISH GRAY, SAND WITH REDOX. FEAT. PRESENT, LOOSE, SINGLE GRAIN E.S.H.W.T. @18" RESTRICTIVE LAYER @ N/A GROUND WATER @ 44" TERMINATED @ 80" REFUSAL @ N/A PERC RATE = 18 MIN/INCHTEST PIT #9 0-8 10YR 3/2 VERY DARK GRAYISH BROWN, LOAM FINE SAND, GRANULAR, FRIABLE 8-12 7.5YR 5/6 STRONG BROWN, LOAMY SAND, GRANULAR, FRIABLE 12-24 10YR 5/6 YELLOWISH BROWN, LOAMY SAND, GRANULAR, FRIABLE 24-34 10YR 5/4 YELLOWISH BROWN, LOAMY SAND, LOOSE, SINGLE GRAIN 34-80 10YR 6/2 LIGHT BROWNISH GRAY, SAND WITH REDOX. FEAT. PRESENT, LOOSE, SINGLE GRAIN E.S.H.W.T. @ 34" RESTRICTIVE LAYER @ N/A ground water @ n/a terminated @ 80" REFUSAL @ N/A PERC RATE = 8 MIN/INCHTEST PIT #10 E.S.H.W.T. @ N/A RESTRICTIVE LAYER @ N/A ground water @ n/a terminated @ 18" REFUSAL @ 18"

TEST PIT DATA: TEST PIT #11 0-8 10YR 3/2 VERY DARK GRAYISH BROWN, LOAM FINE SAND, GRANULAR, FRIABLE 8-12 7.5YR 5/6 STRONG BROWN, LOAMY SAND, GRANULAR, FRIABLE 12-28 10YR 5/6 YELLOWISH BROWN, LOAMY SAND, GRANULAR, FRIABLE 28-52 10YR 5/4 YELLOWISH BROWN, SAND, LOOSE, SINGLE GRAIN 52-84 10YR 6/2 LIGHT BROWNISH GRAY, SAND WITH REDOX. FEAT. PRESENT, LOOSE, SINGLE GRAIN E.S.H.W.T. @ 52" RESTRICTIVE LAYER @ N/A GROUND WATER @ N/A TERMINATED @ 84" REFUSAL @ N/A PERC RATE = 4 MIN/INCHTEST PIT #12 0-8 10YR 3/2 VERY DARK GRAYISH BROWN, LOAM FINE SAND, GRANULAR, FRIABLE 8-12 7.5YR 5/6 STRONG BROWN, LOAMY SAND, GRANULAR, FRIABLE 12-30 10YR 5/6 YELLOWISH BROWN, LOAMY SAND, GRANULAR, FRIABLE 30-52 10YR 6/4 YELLOWISH BROWN, SAND, GRANULAR, FRIABLE E.S.H.W.T. @ N/A RESTRICTIVE LAYER @ N/A GROUND WATER @ N/A TERMINATED @ 52" REFUSAL @ 52" PERC RATE = 4 MIN/INCHTEST PIT #13 0-8 10YR 3/2 VERY DARK GRAYISH BROWN, LOAM FINE SAND, GRANULAR, FRIABLE 8-12 7.5YR 5/6 STRONG BROWN, LOAMY SAND, GRANULAR, FRIABLE 12–28 10YR 5/6 YELLOWISH BROWN, LOAMY SAND, GRANULAR, FRIABLE 28-62 10YR 6/4 YELLOWISH BROWN, SAND, GRANULAR, FRIABLE 62-85 10YR 6/2 LIGHT BROWNISH GRAY, SAND WITH REDOX. FEAT. PRESENT, LOOSE, SINGLE GRAIN E.S.H.W.T. @ 62" RESTRICTIVE LAYER @ N/A GROUND WATER @ 44" TERMINATED @ 85" REFUSAL @ N/A PERC RATE = 4 MIN/INCHTEST PIT #14 0-8 10YR 3/2 VERY DARK GRAYISH BROWN, LOAM FINE SAND, GRANULAR, FRIABLE 8-12 7.5YR 5/6 STRONG BROWN, LOAMY SAND, GRANULAR, FRIABLE 12-28 10YR 5/6 YELLOWISH BROWN, LOAMY SAND, GRANULAR, FRIABLE 28-58 10YR 6/4 YELLOWISH BROWN, SAND, GRANULAR, FRIABLE 58-80 10YR 6/2 LIGHT BROWNISH GRAY, SAND WITH REDOX. FEAT. PRESENT, LOOSE, SINGLE GRAIN E.S.H.W.T. @ 58" RESTRICTIVE LAYER @ N/A GROUND WATER @ N/A TERMINATED @ 80" REFUSAL @ N/A PERC RATE = 4 MIN/INCHTEST PIT #15 0-8 10YR 3/2 VERY DARK GRAYISH BROWN, LOAM FINE SAND, GRANULAR, FRIABLE 8-12 7.5YR 5/6 STRONG BROWN, LOAMY SAND, GRANULAR, FRIABLE 10YR 5/6 YELLOWISH BROWN, LOAMY SAND, GRANULAR, FRIABLE 12-22 22-30 10YR 5/4 YELLOWISH BROWN, LOAMY SAND, GRANULAR, FRIABLE 30-78 10YR 6/2 LIGHT BROWNISH GRAY, SAND WITH REDOX. FEAT. PRESENT, LOOSE, SINGLE GRAIN E.S.H.W.T. @ 30" RESTRICTIVE LAYER @ N/A GROUND WATER @ 54" TERMINATED @ 78" REFUSAL @ N/A PERC RATE = 8 MIN/INCH TEST PIT #16 0-8 10YR 3/2 VERY DARK GRAYISH BROWN, LOAM FINE SAND, GRANULAR, FRIABLE 8-12 7.5YR 5/6 STRONG BROWN, LOAMY SAND, GRANULAR, FRIABLE 12-18 10YR 5/4 YELLOWISH BROWN, LOAMY SAND, GRANULAR, FRIABLE 18-74 10YR 6/2 LIGHT BROWNISH GRAY, FINE SAND WITH REDOX. FEAT. PRESENT, MASSIVE, FRIABLE E.S.H.W.T. @18" RESTRICTIVE LAYER @ N/A GROUND WATER @ 20" TERMINATED @ 74" REFUSAL @ N/A PERC RATE = 16 MIN/INCH TEST PIT #17 0-8 10YR 3/2 VERY DARK GRAYISH BROWN, LOAM FINE SAND, GRANULAR, FRIABLE 8-12 7.5YR 5/6 STRONG BROWN, LOAMY SAND, GRANULAR, FRIABLE 12-24 10YR 5/6 YELLOWISH BROWN, LOAMY SAND, GRANULAR, FRIABLE 24–36 10YR 6/4 YELLOWISH BROWN, SAND, GRANULAR, FRIABLE 36-80 10YR 6/2 LIGHT BROWNISH GRAY, SAND WITH REDOX. FEAT. PRESENT, LOOSE, SINGLE GRAIN E.S.H.W.T. @ 36" RESTRICTIVE LAYER @ N/A GROUND WATER @ N/A TERMINATED @ 80" REFUSAL @ N/A PERC RATE = 8 MIN/INCHTEST PIT #18 0-8 10YR 3/2 VERY DARK GRAYISH BROWN, LOAM FINE SAND, GRANULAR, FRIABLE 8-12 7.5YR 5/6 STRONG BROWN, LOAMY SAND, GRANULAR, FRIABLE 12-18 10YR 5/6 YELLOWISH BROWN, LOAMY SAND, GRANULAR, FRIABLE 18-24 10YR 5/4 YELLOWISH BROWN, LOAMY SAND, GRANULAR, FRIABLE 24-88 10YR 6/2 LIGHT BROWNISH GRAY, FINE SAND WITH REDOX. FEAT. PRESENT, MASSIVE, FRIABLE E.S.H.W.T. @ 24" RESTRICTIVE LAYER @ N/A GROUND WATER @ N/A TERMINATED @ 88" REFUSAL @ N/A PERC RATE = 10 MIN/INCHTEST PIT #19 0-8 10YR 3/2 VERY DARK GRAYISH BROWN, LOAM FINE SAND, GRANULAR, FRIABLE 8-12 7.5YR 5/6 STRONG BROWN, LOAMY SAND, GRANULAR, FRIABLE 12-70 10YR 6/2 LIGHT BROWNISH GRAY, SAND WITH REDOX. FEAT. PRESENT, LOOSE, SINGLE GRAIN E.S.H.W.T. @ 12" RESTRICTIVE LAYER @ N/A GROUND WATER @ 22" TERMINATED @ 70" REFUSAL @ N/A PERC RATE = 24 MIN/INCHTEST PIT #20 0-3 10YR 3/2 VERY DARK GRAYISH BROWN, LOAM FINE SAND, GRANULAR, FRIABLE 3-18 7.5YR 5/6 STRONG BROWN, GRAVELLY LOAMY SAND, GRANULAR, FRIABLE 18-22 10YR 5/4 YELLOWISH BROWN, LOAMY SAND, GRANULAR, FRIABLE 22-72 10YR 6/2 LIGHT BROWNISH GRAY, FINE SAND WITH REDOX. FEAT. PRESENT, MASSIVE, FRIABLE E.S.H.W.T. @ 24" RESTRICTIVE LAYER @ N/A ground water @ 36" TERMINATED @ 72"

REFUSAL @ N/A

PERC RATE = 10 MIN/INCH

Total Total Lot Load Total A Total Lot Loadin Total Area

		REVISED PER TRG COMMENT DESCRIPTION
		#1 11-6-23 REVISION DATE
		TEST PIT DATA LAND OF LAND OF RBV REALTY LLC 324 BLACKWATER RD ROCHESTER, N.H. TAX MAP 264, LOT 11
CALCULATION Total Lot Loading Area Winds or (Sq. Ft.) 80,335 Total Area Windsor (Sq. Ft.) 80,335 Total GPD Winds or 3,408 Total Lot Loading Area Muck & Peat (Sq. Ft.) 0 Total Area Muck & Peat (Sq. Ft.) 35,929 Total GPD Muck & Peat 0 Total Lot Loading Area Saugatuck (Sq. Ft.) 44,579		BERRY SURVEYING 2 CNGINEERING 335 SECOND CROWN POINT ROAD 335 SECOND CROWN POINT ROAD 50 SECOND CROAD CROWN POINT ROAD 50 SECOND CROWN POINT ROAD 50 SECOND CRO
44,579 Total Area Saugatuck (Sq. Ft.) 44,579 Total GPD Saugatuck 682 ea Parcel (Sq. Ft.) 30 cel (Sq. Ft.) 38 bject Pracel		No. No. No. No. No. No. No. No.
	CALCULATION Total Lot Loading Area Winds or (Sq. Ft.) 90,335 Total Area Winds or (Sq. Ft.) 80,335 Total GPD Winds or 3,408 Total Lot Loading Area Muck & Peat (Sq. Ft.) 9,629 Total Area Muck & Peat (Sq. Ft.) 9,629 Total Area Muck & Peat (Sq. Ft.) 9,629 Total Area Sugatuck (Sq. Ft.) 9,629 Total Area Sugatuck (Sq. Ft.) 9,629 Total Area Sugatuck (Sq. Ft.) 9,629 Total Area Sugatuck (Sq. Ft.) 10,64,679 9,629 Total Area Sugatuck (Sq. Ft.) 10,64,679 9,054 10,627 1	CALCULATION Total Lot Loading Area Winds or (Sq. Ft.) 80,335 Total Area Winds or (Sq. Ft.) 80,335 Total Area Muck Seraet (Sq. Ft.) 80,335 Total Area Muck Seraet (Sq. Ft.) 80,335 Total Area Muck & Peat (Sq. Ft.) 9 Total Area Muck & Peat (Sq. Ft.) 9 Total GPD Muck & Peat 0 Total Area Muck & Peat (Sq. Ft.) 9 Total GPD Muck & Peat 0 Total Chading Area Saugatuck (Sq. Ft.) 9 10 10 10 10 10 10 10 10 10 10








































T = 186.60 StOP, S = 0.005'/, T ENDED BASE (102) D14 (1)4	#104 1 SIDE SLOPE ATE BOLTED A 48" NCRETE BASIN ALLA CODE OR NUAL. W/ DOME PE N-12 = 187.25	
BERRY SURVEYING BERRY SURVEYING 335 SECOND CROWN POINT ROAD 335 SECOND CROWN POINT ROAD 335 SECOND CROWN POINT ROAD BARRINGTON, NH 03825 (603)332-2863 SCALE : 1 IN. EQUALS 20 FT. DATE : 0CTOBER 20, 2023 FILE NO. : DB 2021-132	DETENTION POND #104 LAND OF RBV REALTY LLC 324 BLACKWATER RD ROCHESTER, N.H. TAX MAP 264, LOT 11	#111-6-23REVISED PER TRG COMMENTREVISIONDATEDESCRIPTION

Vehice Date FIRST FIRSTON FIRST FIRSTON HAMABRAHRZD	GRAPHIC SCA	LE		
FIRE TRUCK FIRE TRUCK HAMMERHEAD FIRE TRUCK HAMMERHEAD Vende Brite Pasciption Fire Engine Wheel Length Note Item 11500 Vehick Width 8330 Rear Overhang 13.580 Rear Overhang 13.580 Rear Overhang 13.580 Rear Avie Offset 3.200 Section Type Fear Truck		80		
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FIRE TRUCK HAMMERHEAD	++			
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Rear Axle Count 2 Rear Axle Offset 4.200 Section Type Fire Truck	Tire Diameter	3.330	Overnang Length Ove	mang
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S, SEDIMENT TRAPS, ETC. MULCH MEASURES DURING CONSTRUCTI FESSIONAL ENGINEER (PE), A CER M WATER INSPECTOR (CESSWI), () TO THE ENGINEERING DEPARTME	AND SEED AS REQUIRE ON. ALL SWPPP INSPECT TIFIED PROFESSIONAL IN OR A CERTIFIED PROFESS INT. INSPECTIONS SHALL	D. TIONS MUST EROSION SIONAL IN BE CONDU	BE AND SEDIMENT STORM WATER JCTED WEEKLY		ILS		
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<i>INITION OF ST</i>	'ABLE:				LANI RBV RE	ROCHES	X MAP 2
GRAVELS HAVE BEEN INSTA 35 PERCENT VEGETATED G 3 INCHES OF NON-EROSIV BEEN INSTALLED. ONTROL BLANKETS HAVE E	ALLED IN AREAS TO ROWTH HAS BEEN E MATERIAL SUCH BEEN PROPERLY INS	D BE PA ESTABLI: AS STON STALLED.	VED. SHED NE OR		EROSION &	ָּרָ רָּ ו	TA
OTHER APPROVED METHO WLY GRADED AREAS. ALL JLCHED WITHIN 72 HOURS AREAS SHALL BE EITHER AREAS WHERE FINAL GRAE MEASURES SHOULD BE IN JSED SOIL AREAS THAT AF TER BODY OR A WETLAND	DS SHALL BE USED CUT AND FILL SLO AFTER THEIR CONS TEMPORARILY OR NING HAS NOT OCCI PLACE WITHIN SEVE RE WITHIN ONE HUN AND NO MORE TH,	D TO COI OPES SH STRUCTIC PERMAN URRED, EN (7) C NDRED (1 AN 14 C	NTROL ALL BE IN. ENTLY TEMPORARY ALENDAR 00) FEET OF ALENDAR				
3) CALENDAR DAYS FOLLC	WING COMPLETION	OF FINA	L GRADING		21NG Road 332-2863		5
							2023
VEGETATIVE COVERAGE PRIC R ACRE. ALL SIDE SLOPES, WITH BIODEGRADABLE/PHOT L BE MULCHED AND TACKE HALL NOT OCCUR OVER EXIS ON DISTURBED AREAS SHA	DR TO OCTOBER 15T STEEPER THAN 4:1 ODEGRADABLE "JUTE D AT A RATE OF 3- STING SNOW COVER. LL BE REMOVED, Pf	H SHALL , THAT A MATTING -4 TONS IF THE RIOR TO	BE ARE NOT G" PER SITE IS SPRING	I I R V/F YI	ENGINI CROWN PC H 03825 (6	NOTED	TOBER 20,
TATION SHALL BE EITHER LI , STONE CHECK DAMS WILL RMANENT LINERS OR RIPRA ON AS THEY ARE PROPERLY	NED WITH TEMPORAF BE MAINTAINED TH P WITH ENGINEERING GRADED AND SHAF	RY JUTE IROUGHOU FABRIC, PED.	MATTING JT THE THIS		SECOND NGTON, N	: AS	:
HALL BE BROUGHT UP TO A POSED TO REMAIN BELOW T 3" LAYER OF CRUSHED GI IFF AND WILL REDUCE ROAD SHALL HAVE BETWEEN 15-	AND THROUGH THE E HE PROPOSED SUBG RAVEL SHALL BE PL/ WAY EROSION. THIS 25% PASSING THE #	BANK RU RADE ELE ACED AN S CRUSHE #200 SIEV	N EVATION, D D ME AND		335 335 BARRII	SCALE	DATE
E AFTER UCTOBER ISTH, A	NY ACCUMULATED SI	NOW SHA	LL BE			HANC	
RAGE GROWING SEASON, NO I WILL BE LEFT UNDISTURBE	ADDITIONAL LOAM S	SHALL BE ALL BE S	; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ;		KENNE	TH	SF III

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REQUIRED BLASTING AND EXCAVATION NOTES:

BEST MANAGEMENT PRACTICES FOR BLASTING. ALL ACTIVITIES RELATED TO BLASTING SHALL FOLLOW BEST MANAGEMENT PRACTICES (BMPS) TO PREVENT CONTAMINATION OF GROUNDWATER INCLUDING PREPARING, REVIEWING AND FOLLOWING AN APPROVED BLASTING PLAN; PROPER DRILLING, EXPLOSIVE HANDING AND LOADING PROCEDURES; OBSERVING THE ENTIRE BLASTING PROCEDURES; EVALUATING BLASTING PERFORMANCE; AND HANDLING AND STORAGE OF BLASTED ROCK.

(1) LOADING PRACTICES. THE FOLLOWING BLASTHOLE LOADING PRACTICES TO MINIMIZE ENVIRONMENTAL EFFECTS SHALL BE FOLLOWED:

(a) DRILLING LOGS SHALL BE MAINTAINED BY THE DRILLER AND COMMUNICATED DIRECTLY TO THE BLASTER. THE LOGS SHALL INDICATE DEPTHS AND LENGTHS OF VOIDS, CAVITIES, AND FAULT ZONES OR OTHER WEAK ZONES ENCOUNTERED AS WELL AS GROUNDWATER CONDITIONS.

(b) EXPLOSIVE PRODUCTS SHALL BE MANAGED ON SITE SO THAT THEY ARE EITHER USED IN THE BOREHOLE, RETURNED TO THE DELIVERY VEHICLE, OR PLACED IN SECURE CONTAINERS FOR

(c) SPILLAGE AROUND THE BOREHOLE SHALL EITHER BE PLACED IN THE BOREHOLE OR CLEANED UP AND RETURNED TO AN APPROPRIATE VEHICLE FOR HANDLING OR PLACEMENT IN SECURED

(d) LOADED EXPLOSIVES SHALL BE DETONATED AS SOON AS POSSIBLE AND SHALL NOT BE LEFT IN THE BLASTHOLES OVERNIGHT, UNLESS WEATHER OR OTHER SAFETY CONCERNS REASONABLY DICTATE THAT DETONATION SHOULD BE POSTPONED.

(e) LOADING EQUIPMENT SHALL BE CLEANED IN AN AREA WHERE WASTEWATER CAN BE PROPERLY CONTAINED AND HANDLED IN A MANNER THAT PREVENTS RELEASE OF CONTAMINANTS TO THE

(f) EXPLOSIVES SHALL BE LOADED TO MAINTAIN GOOD CONTINUITY IN THE COLUMN LOAD TO PROMOTE COMPLETE DETONATION. INDUSTRY ACCEPTED LOADING PRACTICES FOR PRIMING, STEMMING, DECKING AND COLUMN RISE NEED TO BE ATTENDED TO.

(2) EXPLOSIVE SELECTION. THE FOLLOWING BMPS SHALL BE FOLLOWED TO REDUCE THE POTENTIAL FOR GROUNDWATER CONTAMINATION WHEN EXPLOSIVES ARE USED:

(a) EXPLOSIVE PRODUCTS SHALL BE SELECTED THAT ARE APPROPRIATE FOR SITE CONDITIONS AND

(b) EXPLOSIVE PRODUCTS SHALL BE SELECTED THAT HAVE THE APPROPRIATE WATER RESISTANCE FOR THE SITE CONDITIONS PRESENT TO MINIMIZE THE POTENTIAL FOR HAZARDOUS EFFECT OF

(3) PREVENTION OF MISFIRES: APPROPRIATE PRACTICES SHALL BE DEVELOPED AND IMPLEMENTED

(4) MUCK PILE MANAGEMENT. MUCK PILES (THE BLASTED PIECES OF ROCK) AND ROCK PILES SHALL BE MANAGED IN A MANNER TO REDUCE THE POTENTIAL FOR CONTAMINATION BY

(a) REMOVE THE MUCK PILE FROM THE BLAST AREA AS SOON AS REASONABLY POSSIBLE.

(b) MANAGE THE INTERACTION OF BLASTED ROCK PILES AND STORMWATER TO PREVENT

(5) SPILL PREVENTION MEASURES AND SPILL MITIGATION. SPILL PREVENTION AND SPILL MITIGATION MEASURES SHALL BE IMPLEMENTED TO PREVENT THE RELEASE OF FUEL AND OTHER RELATED SUBSTANCES TO THE ENVIRONMENT. THE MEASURES SHALL INCLUDE AT A MINIMUM:

(a) THE FUEL STORAGE REQUIREMENTS SHALL INCLUDE:

SECURE STORAGE AREAS AGAINST UNAUTHORIZED ENTRY.

COVER REGULATED CONTAINERS IN OUTSIDE STORAGE AREAS.

WHEREVER POSSIBLE, KEEP REGULATED CONTAINERS THAT ARE STORED OUTSIDE MORE THAN 50 FEET FROM SURFACE WATER AND STORM DRAINS, 75 FEET FROM PRIVATE WELLS, AND 400 FEET

STORED OUTSIDE, EXCEPT FOR ON PREMISE USE HEATING FUEL TANKS, OR ABOVEGROUND OR UNDERGROUND STORAGE TANKS OTHERWISE REGULATED.

(a) THE FUEL HANDLING REQUIREMENTS SHALL INCLUDE:

EXCEPT WHEN IN USE, KEEP CONTAINERS CONTAINING REGULATED SUBSTANCES CLOSED AND

HAVE SPILL CONTROL AND CONTAINMENT EQUIPMENT READILY AVAILABLE IN ALL WORK AREAS. USE FUNNELS AND DRIP PANS WHEN TRANSFERRING REGULATED SUBSTANCES. 5. PERFORM TRANSFERS OF REGULATED SUBSTANCES OVER AN IMPERVIOUS SURFACE.

(a) THE TRAINING OF ON-SITE EMPLOYEES AND THE ON-SITE POSTING OF RELEASE RESPONSE INFORMATION DESCRIBING WHAT TO DO IN THE EVENT OF A SPILL OF REGULATED SUBSTANCES.

(b) FUELING AND MAINTENANCE OF EXCAVATION, EARTHMOVING AND OTHER CONSTRUCTION RELATED EQUIPMENT WILL COMPLY WITH THE REGULATIONS OF NHDES [NOTE THESE REQUIREMENTS ARE SUMMARIZED IN WD-DWGB-22-6: "BEST MANAGEMENT PRACTICES FOR FUELING AND MAINTENANCE OF EXCAVATION AND EARTHMOVING EQUIPMENT" OR ITS SUCCESSOR

THE ROCHESTER FIRE DEPARTMENT SHALL BE NOTIFIED PRIOR TO ANY BLASTING ACTIVITIES AND A BLASTING PERMIT FROM THE DOVER FIRE DEPARTMENT MUST BE OBTAINED.

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AMERICAN BUMBLE BEE

IDENTIFICATION/DESCRIPTION:

BOMBUS PENSYLVANICUS IS A LARGE BUMBLE BEE WITH THE QUEEN MEASURING 1 IN, THE WORKER FROM 0.5 IN, AND THE MALE FROM 0.75 IN IN LENGTH. THE QUEEN IS MOSTLY BLACK, INCLUDING THE LEGS, SPURS AND TEGULAE (BASE OF WING). TERGITE 1. OR THE MOST ANTERIOR BACK PORTION OF THE QUEEN IS OFTEN YELLOW ESPECIALLY IN THE MIDDLE. WORKER BEES' MIDDLE TERGITES ARE YELLOW, THE TAIL BLACK, AND FACE LONG. THEIR CHEEKS ARE SLIGHTLY LONGER THAN BROAD, AND THE CLYPEUS (NOSE) HAS LARGE PUNCTURES EXCEPT ON THE MID LINE. THE HAIR ON THE TOP OF THE HEAD IS BLACK, SHORT AND EVEN. MALES HAVE A YELLOW ABDOMEN WITH A BLACK HEAD AND BLACK STRIPING IN THE LOWER THORAX.

BLANDINGS TURTLE IDENTIFICATION/DESCRIPTION: A 7- TO 9-INCH TURTLE WITH YELLOW SPECKLES THAT OFTEN RUN TOGETHER TO FORM STREAKS ON THE CARAPACE. EASILY IDENTIFIED WHEN BASKING FROM ITS CHARACTERISTIC YELLOW THROAT AND CHIN.

LITTLE BROWN BAT

IDENTIFICATION/DESCRIPTION:

THE LITTLE BROWN BAT IS A SMALL MAMMAL WITH A BODY LENGTH OF 2 1/2 - 4"AND WEIGHING APPROXIMATELY 1/8 TO 1/2 AN OUNCE. THE WINGSPAN OF LITTLE BROWN BATS RANGE FROM 9 – 11". BATS ARE THE ONLY MAMMALS THAT ENGAGE IN TRULY ACTIVE FLIGHT. AS THEIR NAME SUGGESTS THEY ARE GLOSSY BROWN ABOVE WITH A LIGHTER GRAY COLOR BELOW. THESE BATS CAN LIVE 20 TO 30 YEARS.

TRI-COLORED BAT

IDENTIFICATION / DESCRIPTION:

THE TRICOLORED BAT, FORMERLY KNOWN AS THE EASTERN PIPISTRELLE (PIPISTRELLUS SUBFLAVUS), IS A SMALL BAT WEIGHING 0.2 TO 0.3 OUNCES (5 TO 8 GR) AND HAS A WINGSPAN OF 8 TO 10 INCHES. THE TERM "TRICOLORED" REFERS TO THE BAT'S YELLOWISHBROWN COAT THAT IS DARK AT THE BASE, YELLOWISH-BROWN IN THE MIDDLE, AND DARK AT THE TIPS. THE WING MEMBRANES ARE BLACKISH, BUT THE FACE AND EARS HAVE A PINKISH COLOR. AN OBVIOUS IDENTIFYING CHARACTERISTIC OF THIS SPECIES IS THE PINK COLOR OF THE SKIN ON THE RADIUS BONE. THE FEET ARE ALSO RELATIVELY LARGE COMPARED TO ITS BODY SIZE.

NORTHERN LONG-EARED BAT

IDENTIFICATION / DESCRIPTION:

HE NORTHERN LONG-EARED BAT IS A MEDIUM-SIZED BAT WITH A BODY LENGTH OF TO 3.7 INCHES BUT A WINGSPAN OF 9 TO 10 INCHES. THEIR FUR COLOR CAN BE MEDIUM TO DARK BROWN ON THE BACK AND TAWNY TO PALE-BROWN ON THE UNDERSIDE. AS ITS NAME SUGGESTS, THIS BAT IS DISTINGUISHED BY ITS LONG EARS, PARTICULARLY AS COMPARED TO OTHER BATS IN ITS GENUS, MYOTIS

<u>SPOTTED TURTLE</u> IDENTIFICATION / DESCRIPTION: A SMALL 3-5 INCH TURTLE RECOGNIZED BY NUMEROUS YELLOW SPOTS COVERING A DARK CARAPACE. THE NUMBER OF SPOTS IS VARIABLE. SPOTS CAN ALSO BE FOUND ON THE HEAD AND LIMBS.

NORTHERN BLACK RACER

IDENTIFICATION / DESCRIPTION:

A SLENDER BLACK SNAKE MEASURING 36-60 INCHES. BLACK RACERS ARE GLOSSY BLACK ON THE TOP AND BOTTOM WITH A WHITE THROAT AND CHIN. YOUNG RACERS ARE PATTERNED WITH BROWN OR REDDISH PATCHES ON A LIGHTER BASE OF GRAY.

IDENTIFICATION / DESCRIPTION:

EASTERN SMALL-FOOTED BAT

IDENTIFICATION / DESCRIPTION:

THE EASTERN SMALL-FOOTED BAT HAS BROWNISH FUR, OFTEN WITH A GOLDEN SHEEN, THAT CONTRASTS WITH ITS BLACKISH FACE AND EARS, AND BLACKISH-BROWN WINGS AND TAIL MEMBRANE. IT CAN BE DISTINGUISHED FROM OTHER MYOTIS SPECIES BY ITS BLACK MASK AND SMALL SIZE. THE BODY IS LITTLE MORE THAN 31/2 INCHES LONG, INCLUDING A 11/2-INCH TAIL. ITS SMALL FEET, WHICH PROVIDE THE COMMON NAME, ARE LESS THAN A HALF-INCH AND ITS WINGSPAN RANGES FROM 8¼ TO 9¾INCHES. THIS SPECIES FLIES SLOWLY AND ERRATICALLY, USUALLY ABOUT ONE TO THREE YARDS ABOVE THE GROUND.

IDENTIFICATION / DESCRIPTION:

WOOD TURTLE IDENTIFICATION/DESCRIPTION: A 5-8 INCH TURTLE CHARACTERIZED BY ITS HIGHLY SCULPTED SHELL WHERE EACH LARGE SCUTE TAKES AN IRREGULAR PYRAMIDAL SHAPE. THE NECK AND FORELIMBS ARE ORANGE.

(218-9) CONSTRUCTION SITE EROSION CONTROL DESIGN STANDARDS

TEMPORARY CONSTRUCTION STORMWATER MANAGEMENT DESIGN THE FOLLOWING DESIGN STANDARDS SHALL BE APPLIED IN PLANNING FOR STORMWATER MANAGEMENT AND EROSION CONTROL AS RELATED TO CONSTRUCTION. (NOTE: THESE STANDARDS ARE IN ADDITION TO REQUIREMENTS THAT MAY BE FOUND IN OTHER SECTIONS OF THE SITE PLAN, SUBDIVISION, AND OTHER LAND USE REGULATIONS OR ORDINANCES. THESE STANDARDS ARE ALSO IN ADDITION TO REQUIREMENTS SET FORTH IN THE NH SMALL MS4 NPDES GENERAL PERMIT, NPDES GENERAL PERMIT FOR DISCHARGES FROM CONSTRUCTION ACTIVITIES, NHDES WETLANDS PERMITS [RSA 482-A] AND THE NHDES ALTERATION OF TERRAIN RULES [RSA 485-A:17]). (1) ALL MEASURES IN THE PLAN SHALL MEET, AS A MINIMUM, THE BMPS SET FORTH IN THE NEW HAMPSHIRE

STORMWATER MANUAL, VOLUME 3 (2008 OR AS UPDATED) A COPY OF THE NEW HAMPSHIRE STORMWATER MANUAL IS AVAILABLE FROM THE NHDES WEBSITE AT: HTTPS://WWW.DES.NH.GOV/WATER/STORMWATER NOTE: THE MANUALS AND WEBSITE LINKS IN THIS SECTION ARE PROVIDED FOR INFORMATION AND ARE SUBJECT TO CHANGE. THE MOST CURRENT VERSION OF THE MANUAL AND LINK REFERENCE SHOULD BE USED BY THE APPLICANT.

EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY SOIL DISTURBANCE AND SHALL BE REVIEWED AND APPROVED BY DPW PRIOR TO ANY LAND DISTURBANCE. WHENEVER PRACTICAL, NATURAL VEGETATION SHALL BE MAINTAINED, PROTECTED, OR SUPPLEMENTED.

STRIPPING OF VEGETATION SHALL BE DONE IN A MANNER THAT MINIMIZES SOIL EROSION. NATURAL BUFFERS SHALL BE MAINTAINED

(4) THE AREA OF DISTURBANCE SHALL BE KEPT TO A MINIMUM AND BE LIMITED TO AN AREA ONLY LARGE ENOUGH TO ACCOMMODATE CONSTRUCTION ACTIVITIES FOR A PARTICULAR CONSTRUCTION PHASE.

MEASURES SHALL BE TAKEN TO CONTROL EROSION WITHIN THE PROJECT AREA. SEDIMENT IN STORMWATER RUNOFF SHALL BE TRAPPED AND RETAINED WITHIN THE PROJECT AREA. WETLAND AREAS AND SURFACE WATERS SHALL BE PROTECTED FROM SEDIMENT. SOIL DISTURBANCE SHALL BE AVOIDED WITHIN ESTABLISHED BUFFER SETBACKS AS DEFINED AND CONSISTENT WITH THE PROVISIONS INCLUDED IN THE CONSERVATION OVERLAY DISTRICT (ZONING ORDINANCE § 27512).

OFF-SITE SURFACE WATER AND STORMWATER RUNOFF SHALL BE DIVERTED AWAY FROM AREAS OF LAND DISTURBANCE WHERE FEASIBLE OR IMPLEMENT MEASURES TO CONVEY STORMWATER THROUGH THE PROJECT AREA WITHOUT CAUSING EROSION OF SEDIMENT SHALL BE INCLUDED. INTEGRITY OF DOWNSTREAM DRAINAGE SYSTEMS SHALL BE MAINTAINED.

(7) PERIMETER CONTROLS (a) INSTALL SEDIMENT CONTROLS ALONG ANY PERIMETER AREAS OF THE SITE THAT WILL RECEIVE STORMWATER

(b) PERIMETER CONTROLS SHALL NOT BE PLACED WITHIN WETLAND AREAS, STREAM CHANNELS, OR WETLAND **BUFFERS**.

(8) STABILIZATION (a) IN AREAS WHERE FINAL GRADING HAS NOT OCCURRED, TEMPORARY STABILIZATION MEASURES SHOULD BE IN PLACE WITHIN 5 CALENDAR DAYS FOR EXPOSED SOIL AREAS THAT ARE WITHIN 100 FEET OF A SURFACE WATERBODY OR A WETLAND AND NO MORE THAN 14 CALENDAR DAYS FOR ALL OTHER AREAS. PERMANENT STABILIZATION SHOULD BE IN PLACE WITHIN 3 CALENDAR DAYS FOLLOWING COMPLETION OF FINAL GRADING OF

(b) STABILIZATION MEASURES SHALL BE PROVIDED WITH THE SUBMISSION FOR ANY DISTURBANCE ON SLOPES EQUAL TO OR STEEPER THAN 3H:1V.

(c) SPECIFY PERMANENT AND TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES, SEEDING MIXTURES AND RATES, TYPES OF SOD, METHODS OF SEEDBED PREPARATION, EXPECTED SEEDING DATES (OR LIMITATIONS ON SEEDING TIMEFRAMES), TYPE AND RATE OF LIME AND FERTILIZER APPLICATION, AND TYPE AND QUANTITY OF MULCHING FOR TEMPORARY AND PERMANENT CONTROL FACILITIES.

(9) WINTER CONSTRUCTION (a) FOR CONSTRUCTION DURING THE WINTER SEASON, AN ADDITIONAL EROSION AND SEDIMENTATION CONTROL PLAN AND TIMELINE SHALL BE SUBMITTED BY SEPTEMBER 1 TO THE DPW.

(b) ADDITIONAL TEMPORARY STABILIZATION SHALL BE DEPLOYED FOR THE WINTER SEASON CONSISTENT WITH NEW HAMPSHIRE STORMWATER MANUAL GUIDELINES FOR LAND DISTURBANCE THAT ARE NOT PERMANENTLY STABILIZED BY OCTOBER 1 OR IMPLEMENTED PER THE DISCRETION OF DPW.

(c) ACTIVE CONSTRUCTION AREAS SHOULD BE LIMITED TO THE AREA NECESSARY TO GAIN ACCESS AND SUSTAIN PLANNED IMPROVEMENTS THAT WILL BE COMPLETED DURING THE WINTER SEASON.

(10) SEDIMENT BASINS AND TRAPS (a) USE OF TEMPORARY SEDIMENT BASINS SHOULD AVOID ANY ADDITIONAL VEGETATION CLEARING OR SITE DISTURBANCE NOT OTHERWISE NEEDED FOR POST-CONSTRUCTION. SEDIMENT BASIN LOCATIONS SHALL BE REVIEWED BY DPW PRIOR TO CONSTRUCTION AND SHALL CONSIDER THE POTENTIAL FOR OFF-SITE IMPACTS, INCLUDING PUBLIC SAFETY, ESPECIALLY AS IT RELATES TO SEDIMENT MOVEMENT OR SEDIMENT BASIN FAILURE, AND ALTERNATIVE SEDIMENT CONTROLS APPROVED BY DPW SHALL BE USED WHERE SITE LIMITATIONS PRECLUDE A SAFE DESIGN.

(11) WASTE CONTRO (a) PROCEDURES SHALL BE IMPLEMENTED TO CONTROL WASTE SUCH AS DISCARDED BUILDING MATERIALS, CONCRETE TRUCK WASHOUT, CHEMICALS, LITTER, AND SANITARY WASTE DURING THE CONSTRUCTION PROCESS THAT MAY CAUSE ADVERSE IMPACTS TO WATER QUALITY.

(12) INSPECTION SCHEDULE (a) ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED IN FUNCTIONING CONDITION UNTIL FINAL SITE STABILIZATION IS ACCOMPLISHED. A PROPOSED INSPECTION SCHEDULE, IN ACCORDANCE WITH THE GUIDELINES OF THE NEW HAMPSHIRE STORMWATER MANUAL, OR NPDES GENERAL PERMIT FOR DISCHARGES FROM CONSTRUCTION ACTIVITIES SHALL BE INCLUDED IN THE SUBMITTAL.

(13) REMOVAL OF TEMPORARY CONTROLS (a) ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED AFTER THE SITE IS STABILIZED UNLESS THE MEASURES ARE INTENDED TO BE LEFT IN PLACE AND APPROVED BY DPW ON A CASE-BY-CASE BASIS. TRAPPED SEDIMENT AND OTHER DISTURBED SOIL AREAS RESULTING FROM THE REMOVAL OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED WITHIN THREE (3) CALENDAR DAYS UNLESS CONDITIONS DICTATE OTHERWISE.

(218–10) POST CONSTRUCTION STORMWATER MANAGEMENT DESIGN STANDARDS NO PERSON SHALL LOCATE, STORE, DISCHARGE, OR PERMIT THE DISCHARGE OF ANY TREATED, UNTREATED, OR

- INADEQUATELY TREATED LIQUID, GASEOUS, OR SOLID MATERIALS OF SUCH NATURE, QUANTITY, NOXIOUSNESS, TOXICITY, OR TEMPERATURE THAT MAY RUN OFF, SEEP, PERCOLATE, OR WASH INTO SURFACE WATER OR GROUNDWATER SO AS TO CONTAMINATE, POLLUTE, HARM, IMPAIR, OR NOT MEET WATER QUALITY STANDARDS OF SUCH WATERS.
- 2.) ALL STORAGE FACILITIES FOR FUEL, CHEMICALS, CHEMICAL OR INDUSTRIAL WASTES, AND BIODEGRADABLE RAW MATERIALS SHALL MEET THE REGULATIONS OF NHDES, INCLUDING THOSE INVOLVING UNDERGROUND STORAGE TANKS, ABOVEGROUND STORAGE TANKS, HAZARDOUS WASTE, AND REQUIRED BMPS FOR GROUNDWATER PROTECTION (ENV-WQ
- 3.) THE PHYSICAL, BIOLOGICAL, AND CHEMICAL INTEGRITY OF THE RECEIVING WATERS SHALL NOT BE DEGRADED BY THE STORMWATER RUNOFF FROM THE DEVELOPMENT SITE.

4.) DEICING MATERIAL STORAGE AREAS SHALL BE LOCATED UNDER COVER AND LOADING, AND OFFLOADING AREAS SHALL BE DESIGNED AND MAINTAINED SUCH THAT UNTREATED STORMWATER RUNOFF IS NOT DISCHARGED TO RECEIVING WATERS. SNOW STORAGE AREAS SHALL BE LOCATED SUCH THAT NO DIRECT UNTREATED DISCHARGES TO RECEIVING WATERS ARE POSSIBLE FROM THE STORAGE SITE. STORMWATER RUNOFF FROM SNOW AND DEICING STORAGE AREAS

SHALL ENTER TREATMENT AREAS AS SPECIFIED ABOVE BEFORE BEING DISCHARGED TO RECEIVING WATERS OR ALLOWED TO INFILTRATE INTO THE GROUNDWATER. SEE NHDES GUIDANCE FACTS SHEET ON STORAGE AND MANAGEMENT OF DEICING MATERIALS, A COPY OF WHICH IS AVAILABLE ON THE NHDES WEBSITE AT: HTTPS://WWW4.DES.STATE.NH.US/NH-MS4/WP-CONTENT/UPLOADS/2020/11/SALTSTORAGE.PDF

(218–11) INSTALLATION, CONSTRUCTION, MAINTENANCE AND INSPECTION REQUIREMENTS AND RESPONSIBILITY A. REQUIREMENTS

SITE DEVELOPMENT SHALL NOT BEGIN BEFORE THE SMECP HAS BEEN REVIEWED AND APPROVED BY THE CITY AND ϵ' APPLICABLE, ALL PLANNING BOARD CONDITIONS HAVE BEEN FULFILLED. BMPS SHALL BE INSTALLED AS DESIGNED AND SCHEDULED AS A CONDITION OF FINAL APPROVAL OF THE SMECP. IN CASES WHERE A SWPPP IS PROVIDED TO COMPLY WITH THE EPA CONSTRUCTION GENERAL PERMIT, THE SWPPP CONTENTS CAN BE USED TO FULFILL COMPONENTS OF THE SMECP IN THE FINAL REVIEW AND APPROVAL OF THE SMECP. IN ADDITION, SITE DEVELOPMENT SHALL NOT BEGIN UNTIL A NOI HAS BEEN ACKNOWLEDGED BY THE EPA (IF APPLICABLE).

(2) THE DPW OR DEPARTMENT OF PLANNING AND DEVELOPMENT MAY REQUIRE A BOND OR OTHER SECURITY WITH SURETY CONDITIONS IN AN AMOUNT SATISFACTORY TO THE CITY, PROVIDING FOR THE ACTUAL CONSTRUCTIO INSTALLATION, AND REMOVAL OF SUCH MEASURES WITHIN A PERIOD SPECIFIED BY THE CITY AND EXPRESSED IN THE BOND OR THE SECURITY.

(3) THE DEPARTMENT OF PLANNING AND DEVELOPMENT, DPW, OR OFFICE OF CODE ENFORCEMENT MAY REQUIRE THE OWNER OR HIS/HER AUTHORIZED AGENT TO DEPOSIT IN ESCROW WITH THE CITY AN AMOUNT OF MONEY SUFFICIENT TO COVER THE CITY'S COST FOR INSPECTION AND ANY PROFESSIONAL ASSISTANCE REQUIRED FOR SITE COMPLIANCE AND MONITORING.

(4) THE OWNER OF RECORD OF THE PROPERTY SHALL RECORD THE NOTICE OF DECISION AND A STORMWATER INSPECTION AND MAINTENANCE AGREEMENT AT THE REGISTRY OF DEEDS. THE STORMWATER INSPECTION AND MAINTENANCE AGREEMENT SHALL INCLUDE A MAINTENANCE AND INSPECTION PLAN MEETING ALL REQUIREMENTS IN PART E(1), BELOW.

B. RESPONSIBILITY

(1) RESPONSIBLE PARTIES DURING CONSTRUCTION COMMERCIAL AND INDUSTRIAL DEVELOPMENT AND/OR REDEVELOPMENT THE OWNER, AND OWNER'S LEGALLY DESIGNATED REPRESENTATIVE (IF ANY) SHALL ALL HOLD RESPONSIBILITY FOR IMPLEMENTING THE SMECP. THIS INCLUDES BUT IS NOT LIMITED TO THE INSTALLATION, CONSTRUCTION, INSPECTION, AND MAINTENANCE OF ALL STORMWATER MANAGEMENT AND EROSION CONTROL MEASURES REQUIRED BY THE PROVISIONS OF THIS CHAPTER.

(b) RESIDENTIAL DEVELOPMENT AND REDEVELOPMENT THE OWNER IS RESPONSIBLE FOR IMPLEMENTING THE SMECP. EXCLUDING ANY POST-DEVELOPMENT REQUIREMENTS OF PLAN IMPLEMENTATION, THERE ARE TWO WAYS FOR THE CITY TO CONSIDER AN OWNER TO BE REMOVED AS THE RESPONSIBLE PARTY (THE OWNER MAY ALSO BE REQUIRED TO COMPLY WITH OTHER REGULATING ENTITIES' ADDITIONAL REQUIREMENTS): (i) THE OWNER COMPLETES THE PROJECT IN A MANNER SATISFACTORY TO THE CITY AND IF A NOI HAS BEEN FILED FOR THE PROJECT, THE NOI PERMITTEE FILES A NOTICE OF TERMINATION (NOT WITH THE EPA IN ACCORDANCE WITH THE TERMS OF THE FEDERAL REQUIREMENTS.

(ii) THE OWNER PASSES LEGAL RESPONSIBILITY FOR THE SMECP TO ANOTHER COMPETENT PARTY. IN THE CASE OF A NEW SUBDIVISION WHERE LOTS MAY BE TRANSFERRED TO A DIFFERENT ENTITY FOR CONSTRUCTION OF THE BUILDINGS, IT IS THE OWNER'S RESPONSIBILITY TO ENSURE THAT THE OWNER HAS A LEGAL BASIS TO REQUIRE COMPLIANCE BY THE NEW ENTITY.

(c) INDIVIDUAL HOMEOWNER DEVELOPMENT

THE HOMEOWNER OR A HOMEOWNER WHO HAS TAKEN CONTROL OF A SUBDIVIDED PROPERTY BEARS RESPONSIBILITY FOR COMPLIANCE WITH THE APPROVED SMECP. IF THE HOMEOWNER IS CONTRACTING BUILDING SERVICES TO ANOTHER PERSON OR ENTITY, THE HOMEOWNER MAY CHOOSE TO PASS LEGAL RESPONSIBILITY OF COMPLIANCE TO THE CONTRACTED ENTITY. IF THE RESPONSIBILITY IS NOT PASSED, THE HOMEOWNER REMAINS THE RESPONSIBLE PARTY AND SHALL COMPLY WITH THE TERMS OF THE ORIGINAL SMECP.

(2) RESPONSIBLE PARTIES – POST-CONSTRUCTION / LONG-TERM MAINTENANCE. LONG-TERM MAINTENANCE OF APPROVED STORMWATER PRACTICES SHALL BE ENSURED THROUGH THE STORMWATER INSPECTION AND MAINTENANCE PLAN AS DESCRIBED IN PART D(1), BELOW. RESPONSIBILITY FOR IMPLEMENTING THE INSPECTION AND MAINTENANCE PLAN IS AS FOLLOWS:

(a) COMMERCIAL AND INDUSTRIAL DEVELOPMENT AND/OR REDEVELOPMENT THE OWNER, AND OWNER'S LEGALLY DESIGNATED REPRESENTATIVE (IF ANY) SHALL ALL HOLD RESPONSIBILITY FOR IMPLEMENTING THE MAINTENANCE AND INSPECTION PLAN. THE RESPONSIBLE PARTY(IES) MAY CONTRACT WITH ONE OR MORE THIRD PARTIES TO CONDUCT THE INSPECTION AND MAINTENANCE ACTIVITIES BUT SHALL REMAIN RESPONSIBLE FOR ENSURING LONG-TERM EFFECTIVENESS AND MAINTAINING RECORDS AS REQUIRED BY PART D(1), BELOW.

(b) RESIDENTIAL DEVELOPMENT AND/OR REDEVELOPMENT FOR RESIDENTIAL DEVELOPMENT AND/OR REDEVELOPMENT WHERE A HOMEOWNERS' ASSOCIATION WILL NOT BE ESTABLISHED, THE INDIVIDUAL HOMEOWNERS SHARE JOINT AND SEVERAL LIABILITY FOR IMPLEMENTING THE MAINTENANCE AND INSPECTION PLAN. FOR RESIDENTIAL DEVELOPMENTS WHERE A HOMEOWNERS' ASSOCIATION WILL BE ESTABLISHED THE FOLLOWING APPLIES:

(i) THE HOMEOWNERS' ASSOCIATION SHALL ASSUME RESPONSIBILITY AND BE SPECIFIED AS SUCH IN THE DOCUMENTATION THAT ESTABLISHES THE ASSOCIATION.

(ii) IF THE HOMEOWNERS' ASSOCIATION IS DISSOLVED OR DISCONTINUED, THE INDIVIDUAL HOMEOWNERS SHARE JOINT AND SEVERAL LIABILITY FOR MAINTENANCE AND INSPECTION ACTIVITIES. THE RESPONSIBLE PARTY(IES) MAY CONTRACT WITH ONE OR MORE THIRD PARTIES TO CONDUCT THE INSPECTION AND MAINTENANCE ACTIVITIES BUT SHALL REMAIN RESPONSIBLE FOR ENSURING LONG-TERM EFFECTIVENESS AND MAINTAINING RECORDS AS REQUIRED BY PART D(1), BELOW.

C. POST-CONSTRUCTION INSPECTION AND MAINTENANCE

THE STORMWATER INSPECTION AND MAINTENANCE AGREEMENT SHALL INCLUDE AN INSPECTION AND MAINTENANCE PLAN FOR POST-CONSTRUCTION MONITORING OF STORMWATER BMPS TO ENSURE LONG-TERM PERFORMANCE AND FUNCTIONALITY, INCLUDING THE FOLLOWING: (a) DETAILS OF EACH BMP, INCLUDING A PLAN SHOWING THE LOCATION OF EACH BMP

(b) NAME OF RESPONSIBLE PARTY FOR INSPECTIONS AND MAINTENANCE

(c) PROPOSED SCHEDULE OF INSPECTION FREQUENCY CONSISTENT WITH THE NEW HAMPSHIRE STORMWATER MANUAL

(d) INSPECTION CHECKLIST AND PHOTO DOCUMENTATION REQUIREMENTS

(e) A SAMPLE LOG TO DOCUMENT EACH INSPECTION AND MAINTENANCE ACTIVITY

(f)A SAMPLE DEICING LOG TO TRACK AMOUNT AND TYPE OF DEICING MATERIALS APPLIED TO THE SITE

DESCRIPTION OF MAINTENANCE RESPONSE ACTIONS, INCLUDING ACTIONS TO BE TAKEN IF INVASIVE SPECIES BEGIN TO GROW IN THE BMPS

(h) DOCUMENTATION OF HOW REPORTS WILL BE COMPLETED, SUBMITTAL AND RETENTION PROCEDURES, AND CONTINGENCY PLANS IF FUTURE MAINTENANCE IS REQUIRED

(2) THE OWNER OF RECORD OF THE PROPERTY SHALL RECORD THE APPROVED STORMWATER INSPECTION AND MAINTENANCE AGREEMENT AT THE REGISTRY OF DEEDS.

(3) INSPECTIONS SHALL BE CONDUCTED BY A THIRD PARTY, QUALIFIED PROFESSIONAL.

SOON AS POSSIBLE; HOWEVER, NO LATER THAN THE NEXT BUSINESS DAY FOLLOWING AN EVENT.

(4) RESPONSIBLE PARTY(IES) SHALL REMAIN RESPONSIBLE FOR ENSURING LONG-TERM EFFECTIVENESS AND MAINTAINING RECORDS AS REQUIRED BY THE INSPECTION AND MAINTENANCE PLAN.

(5) INSPECTIONS OF THE POST-CONSTRUCTION BMPS SHALL BE CONDUCTED AT THE FREQUENCY SPECIFIED IN THE INSPECTION AND MAINTENANCE PLAN. COPIES OF INSPECTION REPORTS SHALL BE MADE AVAILABLE UPON REQUEST TO

. PROVIDING SITE ACCESS FOR MAINTENANCE AND INSPECTION MUNICIPAL STAFF OR THEIR DESIGNATED AGENT SHALL HAVE SITE ACCESS TO COMPLETE ROUTINE INSPECTIONS TO ENSURE COMPLIANCE WITH THE APPROVED SMECP. SUCH ACCESS SHALL BE IMPLIED WITH THE ISSUANCE OF A SWP AND/OR AS INDICATED IN DEVELOPMENT APPROVALS. SUCH INSPECTIONS SHALL BE CONDUCTED AT A TIME AGREED UPON WITH THE OWNER OF RECORD. IF PERMISSION TO INSPECT IS DENIED BY THE LANDOWNER, IT SHALL BE DEEMED A VIOLATION. MUNICIPAL STAFF OR THEIR DESIGNATED AGENT RESERVE THE RIGHT TO SECURE AN ADMINISTRATIVE INSPECTION WARRANT FROM THE DISTRICT OR SUPERIOR COURT UNDER RSA 595-B ADMINISTRATIVE INSPECTION WARRANTS. EXPENSES ASSOCIATED WITH INSPECTIONS SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNER,

E. NOTIFICATION FOR SPILLS OR OTHER NON-STORMWATER DISCHARGES AS SOON AS ANY OWNER, OWNER'S AGENT, OR DESIGNATED PERSON RESPONSIBLE FOR A FACILITY, SITE, ACTIVITY, OR OPERATION HAS INFORMATION OF ANY KNOWN OR SUSPECTED RELEASE OF POLLUTANTS OR NON-STORMWATER DISCHARGES WHICH ARE RESULTING OR MAY RESULT IN ILLICIT DISCHARGES OR POLLUTANTS DISCHARGING INTO STORMWATER, THE MUNICIPAL STORM DRAIN SYSTEM, STATE WATERS, OR WATERS OF THE UNITED STATES, SAID PERSON SHALL TAKE ALL NECESSARY STEPS TO ENSURE THE DISCOVERY, CONTAINMENT, AND CLEANUP OF SUCH RELEASE TO MINIMIZE THE EFFECTS OF THE DISCHARGE. IF SAID INDIVIDUAL IS NOT COMPETENT TO ASSESS, CONTAIN, OR CLEAN UP, THAT PERSON SHALL IMMEDIATELY NOTIFY ANOTHER COMPETENT INDIVIDUAL OR FIRM. IF THE SUBSTANCE POSES AN IMMEDIATE HEALTH OR SAFETY CONCERN (EMERGENCY SITUATION), THE CITY OF ROCHESTER EMERGENCY SERVICES SHALL IMMEDIATELY BE NOTIFIED, AND THEN NOTIFICATION SHALL BE MADE TO THE CITY OF ROCHESTER OFFICE OF BUILDING, ZONING AND LICENSING SERVICES, AND THE DPW. NOTIFYING THE CITY OF ROCHESTER DOES NOT PRECLUDE, SUPERSEDE, OR PROVIDE ANY LIABILITY COVERAGE FOR ANY FEDERAL- OR STATE REQUIRED NOTIFICATIONS RELATED TO MATERIAL SPILLS. IN NONEMERGENCY SITUATIONS, NOTIFICATION SHOULD BE MADE AS

