

KREBS & LANSING

Consulting Engineers, Inc.

RECEIVED

JUL 13 2016

TOWN OF ESSEX
COMMUNITY DEV. OFFICE

164 Main Street, Suite 201

Colchester, VT 05446

Telephone (802) 878-0375, Fax 878-9618

email@krebsandlansing.com

July 12, 2016

Sharon Kelley
Community Development
Town of Essex
81 Main Street, 2nd Floor
Essex Junction, Vermont 05452
skelley@essex.org

Re: Champlain Housing Trust - Ethan Allen Apartments

Dear Sharon,

Please find enclosed a sketch/final subdivision application for Ethan Allen Apartments off Ethan Allen Avenue. Champlain Housing Trust has prepared a project description - see attached. As requested, Krebs and Lansing has calculated lot coverage for all new lots - see attached.

The applicant is proposing to utilize the storage area on the north side of Unit 1 - North for commercial storage. We want to make sure this application does not create an impediment to that possible use.

Thank you for your assistance. Please call if you have any questions or comments.

Sincerely,



William H. Nedde III, P.E.

WHN/kee

Enclosure

CC: Rob Leuchs
Nancy Goodrich

The Champlain Housing purchased 12 historic buildings from UVM along Ethan Allen Avenue in early 2016. The 12 buildings are historic, brick duplexes, triplexes and four-plexes in the historic Fort Ethan Allen and are divided into 31 apartments. The 31 apartments are a mix of 9 three BR units and 22 two BR units.

CHT plans to create an upper tier condominium association consisting of two units. One condominium unit will remain owned by CHT and will include 3 buildings and 12 units (1005, 1006, and 1007) along with the land south of Burlington Road, which includes the community garden and playground, as well as the land above Winooski Road. These are labeled Unit 1 North and Unit 1 South on the site plan. CHT plans to continue operating these 12 apartments as rentals.

The other condominium unit will include 9 buildings (1002, 1003, 1004, 1110, 1111, 1112, 1113, 1114 and 1115) consisting of 19 units on both sides of Ethan Allen Ave. This is labeled Unit 2 North and Unit 2 South on the site plan. Unit 2 will also be declared a condominium, creating 19 homeownership opportunities. We plan to offer these homes as part of CHT's shared equity program, whereby buyers who earn below the median income for the county receive down payment assistance to help them purchase these homes as well as resale restrictions designed to make sure that they will be permanently affordable.

CHT plans minimal rehab on these units – exterior painting, siding, and roof repair as well as painting, vinyl flooring replacement, and energy efficiency upgrades. We do not plan to alter the historic exteriors of the buildings.

Lastly, in the Northern part of the property there are two large storage sheds that are in poor shape. CHT is considering either repairing or replacing these sheds and using them for public storage.

KREBS & LANSING

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164 Main Street, Suite 201
Colchester, VT 05446
Telephone (802) 878-0375, Fax 878-9618
email@krebsandlansing.com

Champlain Housing Trust - Ethan Allen Apartments

Existing Impervious

Calculated by: TJB

June 14, 2016

Unit 2 - South

Total Area = 0.66 Acres =	<u>28,750 SF</u>
Existing Building =	7,170 SF
Ex. Impervious Other =	<u>3,544 SF</u>
Total Impervious =	10,714 SF = 37.3%

Unit 1 - South

Total Area = 2.76 Acres =	<u>120,226 SF</u>
Existing Building =	6,540 SF
Ex. Impervious Other =	<u>27,335 SF</u>
Total Impervious =	33,875 SF = 28.2%

Unit 2 - North

Total Area = 0.79 Acres =	<u>34,412.4 SF</u>
Existing Building =	8,642 SF
Ex. Impervious Other =	<u>2,761 SF</u>
Total Impervious =	11,403 SF = 33.1%

Unit 1 - North

Total Area = 2.36 Acres =	<u>102,801.6 SF</u>
Existing Building =	6,330 SF
Ex. Impervious Other =	<u>31,130 SF</u>
Total Impervious =	37,460 SF = 36.4%

*Emailed to RLeuchs
8/30*

Memorandum

To: Sharon Kelley, Town Zoning Administrator
Greg Duggan, Town Planner
From: Dennis E. Lutz, P.E., Public Works Director
Aaron K. Martin, P.E., Utilities Director / Town Engineer
Date: August 02, 2016
Subject: 1002-1115 Ethan Allen Avenue
Sketch and Final Subdivision Plan

The Public Works department has reviewed the proposed Sketch / Final subdivision plan for 1002 – 1115 Ethan Allen Drive and offers the following comments.

Transportation

1. The existing housing units are accessed from Ethan Allen Avenue and two private drives, Winooski Road and Burlington Road. Both roads are severely deteriorated. Both private drives not only provide vehicular access to each of the housing units, but allow for emergency vehicles to have full access around each of the housing units. Public Works recommends that all of the existing potholes and areas of missing pavement be repaired now as part of this approval. Furthermore, the association documents must provide for the operation and maintenance of both private drives and finance future upgrade projects.
2. There needs to be a defined cost by the applicant's engineer to bring these roads up to an acceptable level of performance. Funds need to be identified and set aside for these improvements and a timetable for making the improvements. This "package" needs to be identified in the project approval and made a condition of the approval.
3. There will be no substantial change of use for the project as proposed with the exception of Unit 1 North. The applicant proposes to utilize this area for a commercial storage area. The two existing structures are in various stages of disrepair and do not appear to be in use. Public Works recommends that the storage facility be reviewed as a separate project.
4. In discussions last winter with the Champlain Valley Trust, the Town was requested to plow the sidewalks in front of these buildings along Ethan Allen Avenue. These sidewalks had previously been cleared by UVM as the property owner. The request was denied. The location is well outside the sidewalk plow routes of the Town. With the Town's limited sidewalk plow equipment and manpower, these walks are outside the capability of the Town to maintain.

A condition needs to be placed on the applicant that they will be responsible for winter maintenance on these walks. Any sidewalk repair or replacement is the responsibility of the Town.

Water and Sewer

1. Town records show that five of the existing buildings, (1002, 1003, 1005, 1006, and 1007), have only one water meter. If each of these buildings is to have multiple units, the applicant shall provide internal plumbing to meter each unit separately. Being each condominium unit will be individually owned, the ability to shut off and isolate the water service for each unit must be provided in order to properly operate and maintain the Town's water infrastructure. As an alternative to separate metering, the applicant can provide language within the association documents that addresses central responsibility for metering and payment of water and sewage usage.
2. Per the Town of Essex Water Use Ordinance, the applicant shall install a dual check valve on each of the water services to ensure backflow protection into the Town water system. The backflow device shall be a Wilkins Model 700XL or approved equal. If backflow devices are in place, the applicant shall provide certification that each unit is properly working.
3. All condominium units will be currently served by sanitary sewer owned and maintained by the Town of Essex. The Town of Essex will assign sewer allocation for each housing unit in accordance with the Town of Essex Sewer Use Ordinance. All condominium units with a non-shared building entrance shall be assigned 140 GPD of water and sewer allocation regardless of the number of bedrooms. All condominium units with a shared common entrance shall be assigned water and sewer allocation as follows; 100 GPD for 2 Bedroom units and 140 GPD for 3 bedroom units. The applicant must provide the Public Works Department a full accounting of condominium units based on the criteria above.

Storm water

1. The plans do not show the storm water system on the site that exists from the open area behind Unit 1-south and discharges over the bank east of Unit 1 north. See attached Town storm water plan.
2. Sunderland Brook is an impaired stream, for which a recent Flow Restoration Plan (FRP) was developed as required by MS4 Permit. UVM was a partner in developing this FRP. One of the locations selected for future installation of a storm water treatment system to meet the stream TMDL is located on the property being conveyed by UVM as part of this project. Originally, UVM indicated that the area where a subsurface infiltration could be built was unavailable due to future UVM plans as noted on their Master Plan. However, with the release of the property to CHT, this is no longer an issue.

- ((((
3. An easement needs to be provided to the Town, with the exact size to be determined by the project design engineer to enable the construction of the planned facility in the location as noted in the FRP. This land is of no value for future development purposes and would provide a location to convert the three storm water outfalls (1 Town and 2 from the CHT site) to a treatment facility. The cost of the treatment facility (leach field) would not be borne by CHT but by the Town. CHT would still be responsible for all pipes discharging from their property to the system.

Green Mountain
Realty LLC
Volume 944 Page 651
October 23, 2015

A&C Realty, LLC
Volume 453 Page 578
January 3, 2001

S60°04'33"E
396.98

S60°06'27"E
134.78

Existing Building Building #1105

CM2
4"x4" Concrete
monument,
found 4"
exposed at
top of bank

Gravel

950

Ex. woods

Existing Building Building #1104

Unit 1 - North

Total Area = 2.36 Acres

Ex. woods

Common Element
of Ethan Allen
Upper Tier
Condominiums

Area for
concrete
12" CMP
storm
pipe. Source
of pipe
unknown

6" capped
and
abandoned
storm pipe

Location of 12"
SDR storm pipe.
Outlet unknown

Inv. 12"
SDR

Existing
Shed

Dumpster
pad and
enclosure

Inv. 12"
pvc

Winooski Road
S41°49'19"E
192.85'

71.37'

S24°09'33"W
111.17'

Payne Street

1113A 1113B
Existing
Building
Porch

1113A 1113B
Existing
Building
Porch

1113A 1113B
Existing
Building
Porch

Unit 2
Total Area

N41°06'02"W
102.50'

N36°48'02"W
99.41'

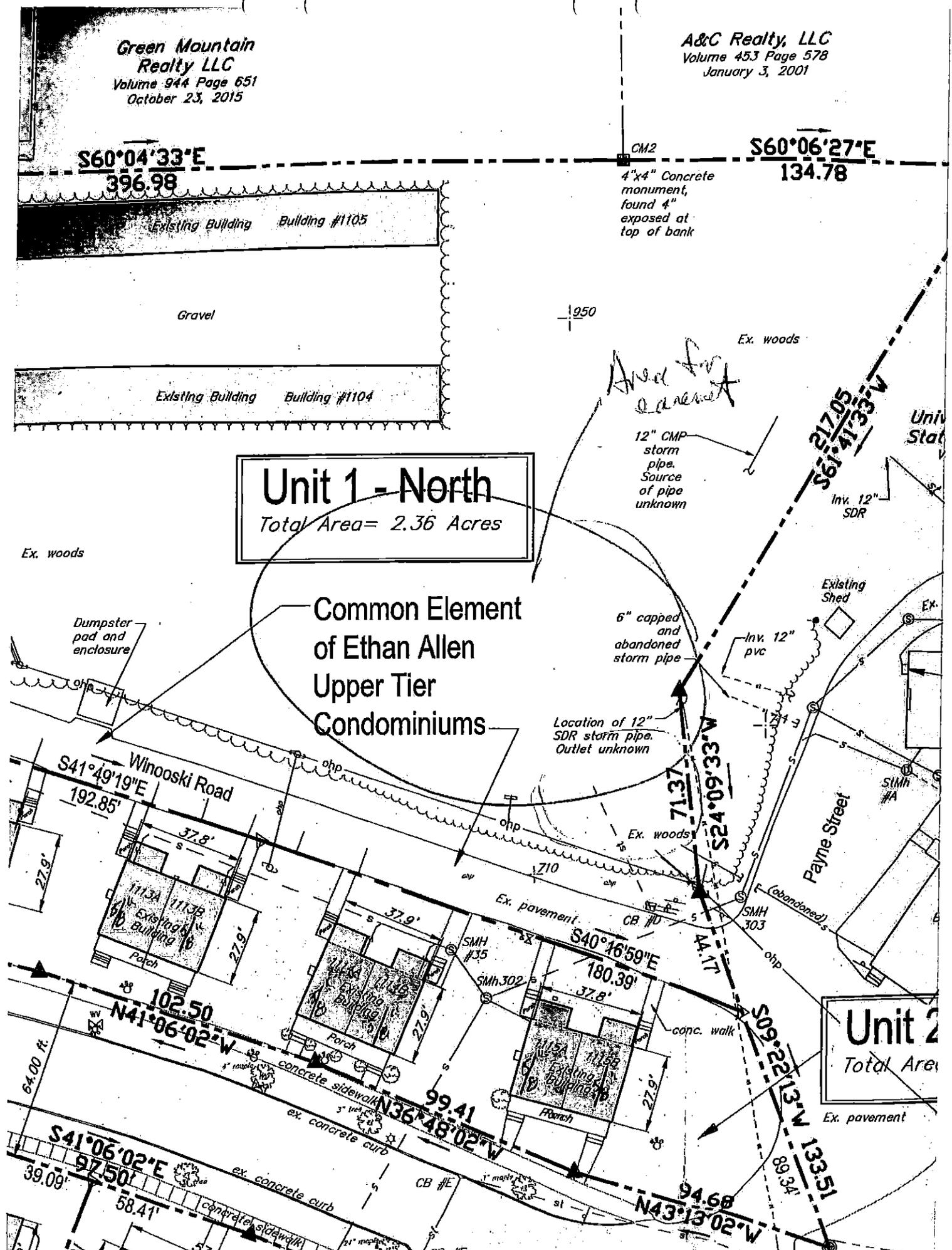
S06°22'13"W
133.51'

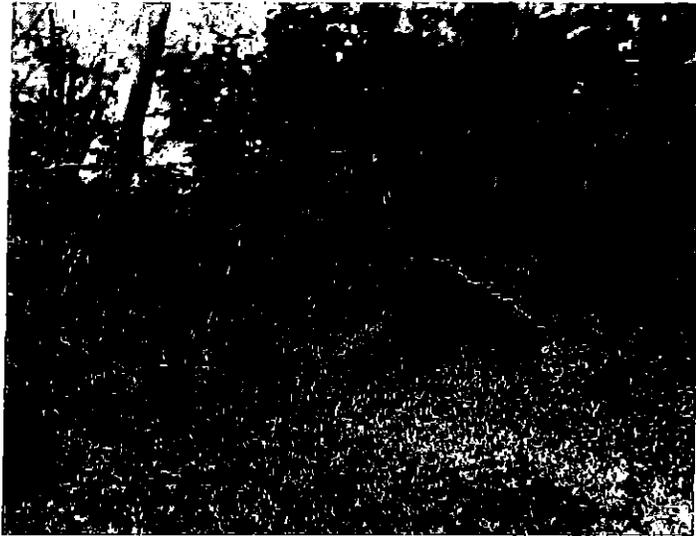
S41°06'02"E
97.50'

58.41'

N43°13'02"W
94.68'

Ex. pavement





SUNDERLAND BROOK FLOW RESTORATION PLAN

MS4 General Permit Requirement (IV.C.1)

July 24th, 2015

Prepared for:
Town of Essex,
81 Main St.
Essex Junction, VT 05452



Prepared by:
Watershed Consulting Associates, LLC
P: 802.497.2367
andres@watershedca.com



In Partnership with:

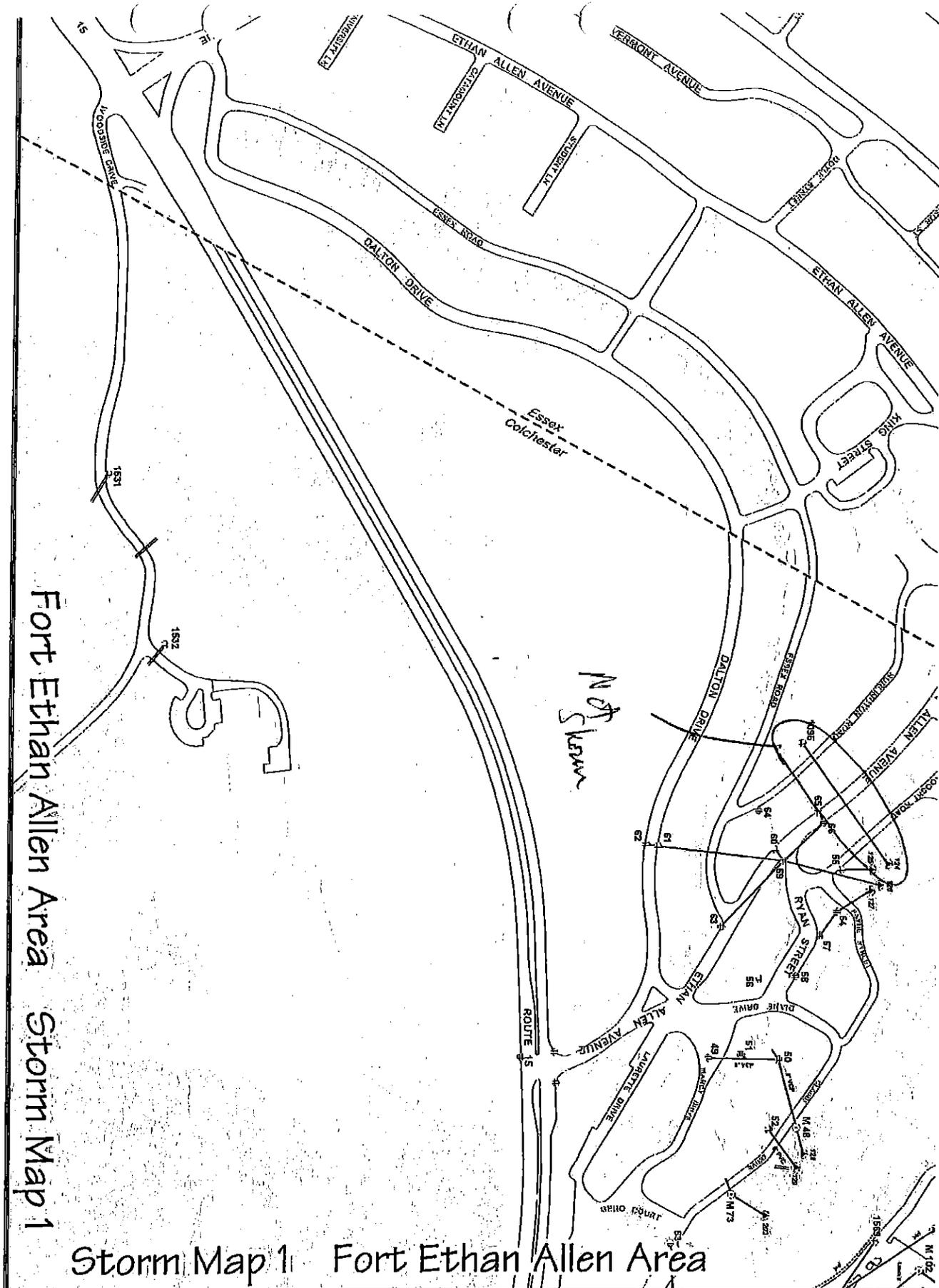
Town of Essex, VT
Village of Essex
Junction, VT

Town of Colchester, VT
Vermont Department of
Transportation



I. Disclaimer

The intent of this plan is to present the data collected, evaluations, analysis, designs, and cost estimates for the Sunderland Brook Flow Restoration Plan (FRP) Project, completed under a contract between the Town of Essex and the hired consultant team, Watershed Consulting Associates, LLC and Aldrich & Elliott, PC. The Sunderland Brook FRP was prepared to meet the compliance requirement for the Sunderland Brook impervious surface owners, including the Town of Essex, Village of Essex Junction, Town of Colchester, University of Vermont, and the Vermont Agency of Transportation (VTRANS) under the National Pollutant Discharge Elimination System (NPDES) General Permit 3-9014 (VTDEC 2012) for stormwater discharges to impaired waters. The presented plan is in draft form, and will be revised by the Town of Essex and MS4 partners, as needed. **At this time, the MS4s are not bound in any way to the proposed BMP list.**



Fort Ethan Allen Area Storm Map 1

Storm Map 1 Fort Ethan Allen Area

Sunderland Brook Flow Restoration Plan

Table 7: Final Proposed BMPs for the Sunderland Brook FRP

Site Name (*Note)	MS4 owner of Impervious draining to practice	Ownership of Land where BMP is located	BMP Type (*Key)	Permit #	Drainage Area, DA (acres)	Imp Acres Managed (ac)	Channel Protection Volume (CPv) Managed above Base Condition*		Percent of High-Flow Target Managed %	Cumulative Percent of High-Flow Target Managed %	Retrofit Description
							CF	Ac-ft			
Existing Post2002 BMPs	Varies	Varies	Varies	---	---	74.53	213792	4.908	214% ¹	214%	Varies
Tracy Rd. -Fort Ethan Allen-	VTrans/Col chester	VTRANS	IB	6363- INDS	4.97	3.94	18513	0.425	36%	249%	Long Infiltration Trench/Bioretention
Outfall 126: Fort Ethan Allen	Town Essex/UVM	Public (Town/ UVM)	UIB	NP	20.42	9.84	25134	0.577	48%	298%	Excessively eroded outfall. Constrained by UVM property. Proposed Infiltration basin with perforated pipe within existing terraced area upslope the channel.
Outfall 31- Morse Dr.	Town Essex	Private	UIB	NP	4.98	3.56	12937	0.297	25%	323%	Replace pipe and add infiltration gallery.
Outfall 199- Morse Dr.	Town Essex	Private	UIB	NP	8.18	5.18	5924	0.136	11%	334%	Retrofit roundabout upslope from outfall with infiltration practice.
Route 15/Pearl St.	Village of Essex	Private	UIB	2-0950	4.25	2.32	3877	0.089	7%	342%	Redirect Route 15 Stormline to Underground Infiltration BMP.
Forman Dr. Roundabout	Colchester	ROW	IB	NP	3.14	1.34	2047	0.047	4%	346%	Infiltration on edge of existing roundabout. Assess stability of slope as part of project feasibility.
Kimberly Drive (O3, O4)	Town Essex	Private	IB	1-0250	33.06	7.90	9997	0.230	19%	365%	Infiltration basin at outfall.
David Dr. Outfall	Town Essex	ROW	UIB	1-0896, 1-0552, 1-1463	32.21	15.96	61028	1.40	118%	482%	Underground Infiltration basin in roundabout up the stormline from the existing outfall.
TOTAL:						50.04		3.20			

1. See Table 6. The existing BMPDSS model run estimated 214% of the flow target is addressed with existing BMPs.
 *Note: All projects except David Dr. Outfall were included in Credit 1. David Dr. Outfall was added to the Credit 2 run.
 *Key: BMP Type: DB= Detention Basin, USC= Underground/Covered Storage Chamber, UIB= Underground Infiltration Basin, IB= Vegetated Infiltration Basin
 * Channel Protection Volume Managed above Base condition = New Storage Volume - Existing Volume pre2002

5.3 Town of Essex Proposed BMPs

Outfall 126- Fort Ethan Allen

The Fort Ethan Allen Property in the Town of Essex is owned by the University of Vermont, with the exception of the road and stormwater collection system, which is owned by the Town of Essex. The Fort was identified as a priority retrofit due to evidence of significant erosion on the bank at the confluence of three stormwater outfalls (Town O126, O125, O124), draining approximately 21.22 acres of residential area.



Figure 3: Additional view of eroded channel at Outfall 126, and bank destabilization.

Several alternative options were investigated for this site. The first option was to construct a detention basin in the existing gully, collecting runoff from all three outfalls. This option would require a portion of UVM owned land, which UVM has set aside for future build-out capacity.

The second option was to create two retrofit systems. One system would mitigate the 1-year storm runoff volume from a 3.13 ac area of Dalton Dr. via a new dry well on the South side of Dalton Drive. Overflow would bypass the practice and drain to the existing collection system and enter the channel via Outfall 126. The second system would include an underground storage chamber installed at the intersection of Ethan Allen Ave. and Ryan St. to store the 1-year storm volume from a 6.57 ac area, with a high-flow bypass to Outfall 126. The erosion in the existing channel would also be stabilized. While this option would avoid using UVM land, there is concern of significant utility issues under the roadway, potentially limiting project feasibility.

The third option assessed, which was selected for 30% design, includes an infiltration basin in the terraced area just uphill of the existing gully, with a network of perforated pipe to increase storage capacity. The system would manage up to the 100 year storm volume from the existing collection system draining to Outfall 126, as well as a new catch basin along Winoski Rd. A separate dry well for the Dalton Dr. drainage is proposed. In addition, the existing catch basin in the UVM owned grass field will be cut off and replaced with a dry well. This option would likely be the most cost effective. Additionally, the work to stabilize the existing erosion in the gully can be completed concurrently to this retrofit alternative, rather than as a separate project.

Sent William &
Champlain Housing
8/4/16

Jennifer Booker

From: Brad Larose
Sent: Thursday, August 04, 2016 11:31 AM
To: Jennifer Booker
Subject: RE: Ethan Allen Ave 1002-1115

Jenn -

The PD has no concerns.

Chief Bradley J. LaRose
Essex Police Department
145 Maple Street
Essex Junction, Vermont 05452
blarose@essex.org
(802) 857-0093 direct

From: Jennifer Booker
Sent: Wednesday, August 03, 2016 12:13 PM
To: Aaron Martin; Charlie Cole; Brad Larose
Subject: FW: Ethan Allen Ave 1002-1115

Comments back please

From: Jennifer Booker
Sent: Tuesday, July 19, 2016 2:55 PM
To: Charlie Cole
Subject: Ethan Allen Ave 1002-1115

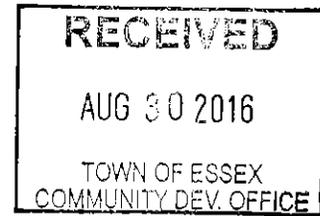
Sketch/ Final Subdivision, please have comments back by Aug 1, 2016.
Thanks,

Jenn Booker
Community Development Secretary
81 Main Street. Essex Junction VT 05452
802-878-1343
Jbooker@essex.org

Sent Champlain
William
8/30/16

Jennifer Booker

From: Essex Fire Chief <ccole183@comcast.net>
Sent: Tuesday, August 30, 2016 12:16 PM
To: Allyson Vile; Aaron Martin; Jennifer Booker
Cc: Gregory Duggan
Subject: Re: Ethan Allen Ave 1002-1115



Please ensure all residences are labeled with their street addresses in contrasting reflective colors.

Charles J. Cole, Chief
Essex Fire Department
www.essexfire.com

----- Original Message -----

From: Jennifer Booker
To: Allyson Vile, Aaron Martin, Charlie Cole
Cc: Gregory Duggan
Sent: August 30, 2016 at 10:46 AM
Subject: FW: Ethan Allen Ave 1002-1115

Please send Comments over for Ethan Allen Ave 1002-1115 ASAP!
Attached are the plans again.
Thanks,

Jenn Booker
Community Development Secretary
81 Main Street. Essex Junction VT 05452
802-878-1343
Jbooker@essex.org

From: Jennifer Booker
Sent: Wednesday, August 03, 2016 12:13 PM
To: Aaron Martin; Charlie Cole; Brad Larose
Subject: FW: Ethan Allen Ave 1002-1115

Comments back please

From: Jennifer Booker
Sent: Tuesday, July 19, 2016 2:55 PM
To: Charlie Cole
Subject: Ethan Allen Ave 1002-1115

Sketch/ Final Subdivision, please have comments back by Aug 1, 2016.
Thanks,

Jenn Booker
Community Development Secretary