



# FY17 Vermont Better Roads Grant Application

Please complete this page ONCE and return with your Grant Category Application(s)

Town/Organization: Town of Roxbury Contact Person(s): David McShane

Address: 1664 Roxbury Road, Roxbury VT 05669  
Street Address Town Zip

Email: townrox@tds.net Phone: (802) 485-7860

DUNS #: 036265684 Fiscal Year End Month (MM): 06

Accounting System:  Automated  Manual  Combination

Please use the suggested documentation checklist below to ensure that all of the relevant items regarding your application have been included.

- Grant application cover sheet (Only submit one)
- Grant application form (One per category/project)
- Itemized Cost estimate for labor, equipment, and materials (see enclosed Cost Estimate Worksheet). If applicable, please break down funding by source (i.e. different grant sources)
- Project Location Map (please show location of affected water)
- Sketch of proposed erosion control measures or other management practices, including distances in feet  
Also show approximate location of town/other right-of-way and/or property lines
- Photo(s) of the project area
- Letters of Support (RPC, VT Trans District Technical Staff, ANR Rivers and Streams Engineers, etc.)
- If Category C River/Road Conflict or Category D River/Stream Structure or Culvert, you must attach ANR/ACOE consultation



# Vermont Better Roads Grant Program Application

Please complete one application per category and/or project you are applying for. You may make copies of the application for multiple applications per category and/or multiple categories.

Please check the Category you are applying for:

- B. Correction of a Road Related Erosion Problem and/or Stormwater Mitigation Retrofit for both gravel and paved roads
- C. Correction of a Stream Bank or Slope Related Problem
- D. Structure/culvert upgrades

Town/Organization: Town of Roxbury

Project Name: Cruickshank Road Stream Bank Stabilization

Road Name: Cruickshank Road TH #: 14 Structure # (if applicable): \_\_\_\_\_

Road Type: Paved or Unpaved (circle one) Curbed or Uncurbed (circle one)

Class 1 Class 2 Class 3 Class 4 (circle one)

Watershed: \_\_\_\_\_

Please provide a thorough description of the problem (ex. Roadway has steep slope with no ditch which is causing roadway erosion):

See attached.

Description of Project and how you plan to complete the work (ex. Stone line 500' of ditch by reshaping ditch and stone lining, working from the top of the project down to the bottom):

See attached

Expected Effects (+ & -) on water quality (ex. Erosion will be eliminated by placing the stone ditch):

See attached



Distance from end of project to nearest water (stream, lake, or stormwater system that outlets directly to water). Please circle one: 0-50' 50-250' 250'+

Progress to Date:

None

Is there an emergency reason this project must be completed quickly? If yes, please explain:

High water threatens Cruickshank Road

Has this project been identified through a municipal road inventory, capital budget plan, tactical basin plan, culvert inventory, or other management plan? If yes, please list which.

Yes: \_\_\_\_\_

No

Please list any professionals you may have contacted for assistance with this project (ANR River Management Engineer, Army Corps of Engineers, VTrans District Technical staff, Basin Planner etc.):

Agency of Natural Resources - Jaron Borg

See attached letter

Is the project located in the town "Right of Way?" Yes, No, Both (if "Both" please explain further).

In right-of-way; slope extends into town right-of-way from brook,

Will the town road crew complete this work? Yes, No, Some (if "some" please explain further).

Removal of trees



Describe how the grant funds will be spent and/or attach a project budget: \_\_\_\_\_

This project will be sub contracted out - this is the cost estimate - see attached

How do you plan to meet the required 20% match on this grant?:

Town employee labor + equipment  
(Tree removal)

Requested Grant Amount (\$20,000 max Category B, \$40,000 max Categories C & D): \$ 15,061.89

Estimated Total Project Cost (including 20% local match): \$ 5,020.63

Estimated Completion Date: 10/01/2016

REQUIRED ATTACHMENTS:

- Itemized Cost Estimate (labor, equipment, materials)  
(For assistance, call Better Backroads at 802-828-4585)
- Project Location Map  
(Please show location of affected water; 1:12,000 USGS map, if possible)
- Sketch of proposed erosion control measures, including:
  - Distances (ft.)
  - Estimate of waste & borrow quantities
  - Approx. location of town/other right-of-way and/or property lines
- Photo(s) of the project area.
- Agreement for Entry and/or Deed of Easement (if project is outside Town ROW).
- If project involves stream or river/road conflict, include documentation of consultation with a River Management Engineer.
- Other appropriate supporting documents.

By signing this application I certify that all the information provided is accurate to the best of my knowledge. We will comply with all the requirements of the grant including making our books available for audit if required.

SIGNATURE OF APPLICANT: (Must be Town Administrator/Manager or Select Board Chair)

Name: [Signature] Title: Chair

BETTER BACK ROADS GRANT

CATEGORY C - STREAM BANK STABILIZATION

TOWN OF ROXBURY

PROJECT NAME: CRUICKSHANK ROAD STREAM BANK STABILIZATION

ROAD NAME: CRUICKSHANK ROAD TH #14

STREAM BANK STABILIZATION AT THE INTERSECTION OF CRUICKSHANK ROAD AND BULL RUN ROAD

PROJECT STARTS APPROXIMATELY 50' FROM BRIDGE #49 ON BULL RUN ROAD

DESCRIPTION OF PROBLEM:

THE SLOPE IS ERODING AND BULL RUN BROOK IS MIGRATING TOWARDS CRUICKSHANK ROAD. THIS SITE HAS BEEN IDENTIFIED AS HGH RISK SITE FOR EROSION.

DESCRIPTION OF PROJECT:

THE WORK CONSISTS OF:

BY THE TOWN OF ROXBURY

1) TREE REMOVAL

BY CONTRACTOR

2) STUMP REMOVAL AND DISPOSAL

3) EXCAVATE AND INSTALL KEYWAY

4) EXCAVATE AND INSTALL STONE SLOPE

5) INSTALL 50' 18 " CPEP PIPE AND EXTEND THROUGH STONE SLOPE

6) GRUBBING MATERIAL, SEED AND MULCH

COST ESTIMATE:

2015 STATE AVERAGES

#1 STUMP REMOVAL \$2,817.50

#2 EXCAVATE AND INSTALL KEYWAY

COMMON EXCAVATION 4 X 4 X 60

35.5 YARDS @ \$8.90 = \$315.95

TYPE IV STONE

35.5 YARDS @ \$41.78 = \$1,483.19

#3 EXCAVATE AND INSTALL STONE SLOPE

COMMON EXCAVATION 15 X 60 X 2.5

83.3 YARDS @ \$8.90 = \$741.66

TYPE IV STONE

134 YARDS @ \$41.78 = \$5,598.52

#4 INSTALL 50' 18" CPEP

50 @ \$31.13 = \$1,556.50

#5 GRUBBING MATERIAL

25 X 75

208 SQUARE YARDS @ \$7.83 = \$1,631.12

#6 EROSION MATTING

PERMANANT

208 SQUARE YARDS @ \$4.51 = \$938.08

TREE REMOVAL 5 LARGE TREES

5 @ \$1,000.00 = \$5,000.00

BUDGET

#1	\$ 2,817.50
#2	\$ 1,799.14
#3	\$ 6,340.18
#4	\$ 1,556.50
#5	\$ 1,631.12
#6	\$ 938.08
TREES	\$ 5,000.00

TOTAL \$20,082.52

TOWN SHARE

\$ 5,020.63 (TREE REMOVAL BY TOWN)



**Vermont Department of Environmental Conservation**

Watershed Management Division  
1 National Life Drive, Main 2  
Montpelier VT 05620-3522  
www.watershedmanagement.vt.gov

*Agency of Natural Resources*

[phone] 802-828-1535  
[fax] 802-828-1544

Attn: Loren Bent, Foreman  
Roxbury Town Offices  
1664 Roxbury Road  
P.O. Box 53  
Roxbury, VT 05669

**Project Assessment:** Jct. Cruickshank Rd. & Bull Run Rd.

Re: Bank Armor Bull Run Brook for protection of Cruickshank Rd.

Loren,

Thank you for taking the time to meet with me last Friday (01/22/2016) regarding the junction of Cruickshank Rd and Bull Run Rd in East Roxbury. At the time of our visit signs of erosion on the right bank of Bull Run Brook were evident. A section approximately 200' from the crossing of Bull Run Rd was recently armored to prevent further erosion into the shoulder of Cruickshank Rd. Downstream of this section more recent erosion was evident along an approximately 70' section, with clearing of some of trees taking place in 2013 after a large storm event to minimized local erosion points. In the present plan geometry of the stream it is expected that Bull Run Brook will migrate laterally toward Cruickshank Rd. This expected to destabilize the roadway and pose an increased risk to public safety at this location. Although there is not an immediate need for bank protection, given the history of stream movement at this location, it is expected to need work in the near future. Additionally, work conducted with the present channel geometry will result in less of an impact to the stream as encroachment into the developed channel will be minimized. If an application to appropriately repair the 70' section of eroding bank were submitted, it would be permissible under the State of Vermont's Stream Alteration General Permit. If you have any questions or comments regarding this letter please do not hesitate to contact me.

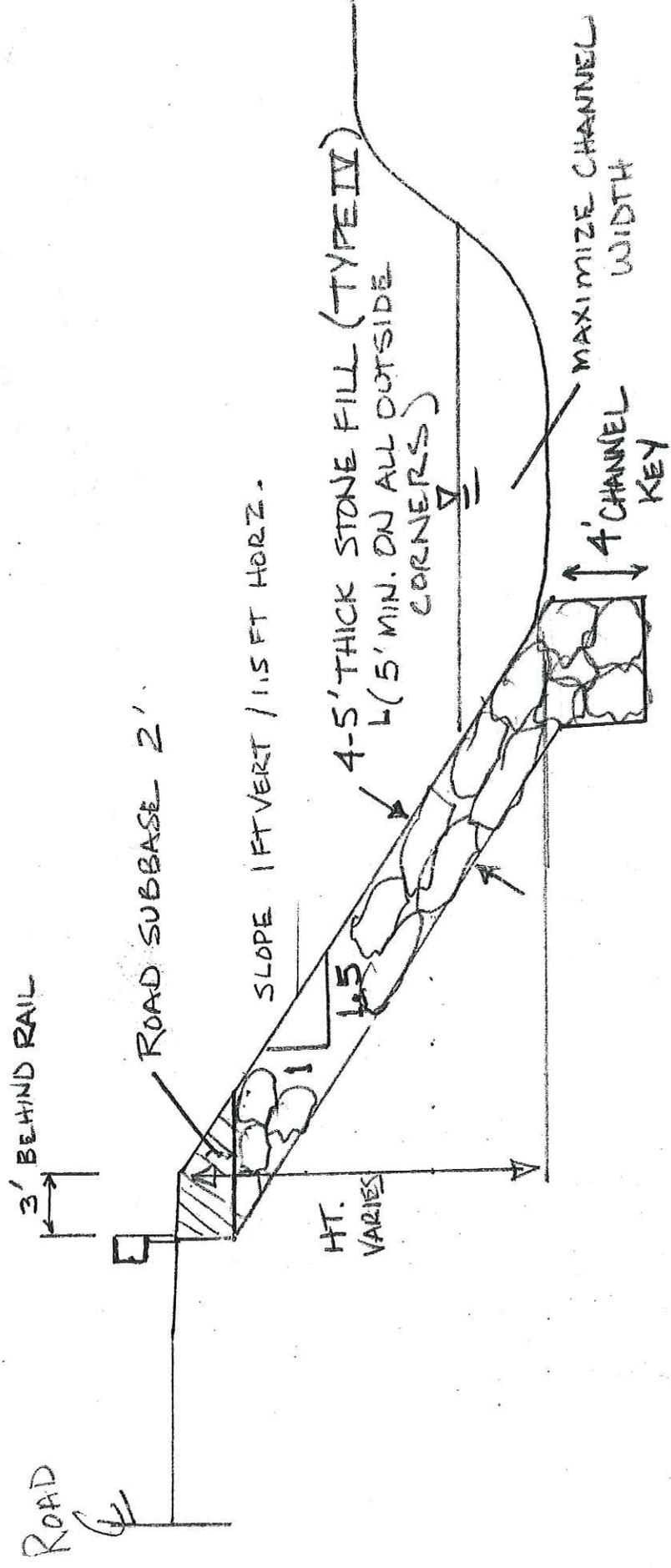
Sincerely,

A handwritten signature in black ink, appearing to read "Jaron Borg", written over a horizontal line. The signature is stylized and somewhat abstract.

Jaron Borg, River Management Engineer

Dated January 26, 2016

# FIELD SKETCH OF STONE SLOPE WORK



NOTE: 1.) BRING TYPE IV STONE FILL UP WITHIN 2' OF FINISH GRADE. CAP STONE FILL W/ SUBBASE MATERIAL.

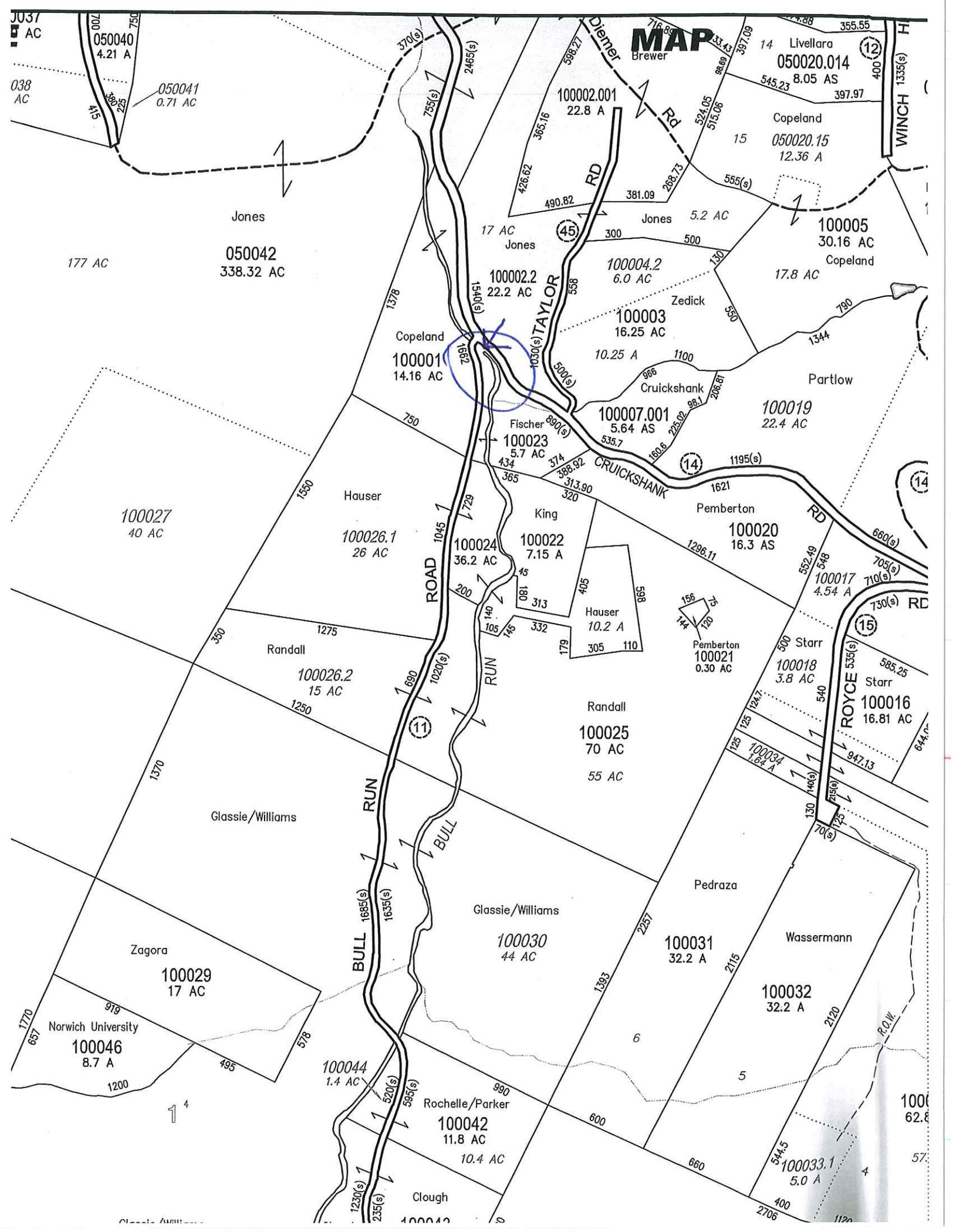
2.) MAXIMIZE CHANNEL WIDTH

3.) KEY STONE FILL 4' INTO THE BED

4.) STONE SLOPE 1'V:1.5'H

NOT TO SCALE.

PATRICK ROSS, P.E.  
# 279-1143



**MAP**  
Brewer

J037  
AC  
050040  
4.21 A  
038  
AC  
050041  
0.71 AC

14 Livellara  
050020.014  
8.05 AS  
545.23 397.97  
400  
12  
400  
1335(s)  
WYNCH

Jones  
177 AC  
050042  
338.32 AC

100002.001  
22.8 A  
365.16  
426.62  
490.82  
588.27  
508.27  
RD  
524.05  
515.06  
397.09  
381.09  
288.73  
555(s)  
17 AC Jones  
100004.2  
6.0 AC  
100003  
16.25 AC  
10.25 A  
1100  
965  
Cruickshank  
100007.001  
5.64 AS  
535.7  
180.6  
223.09  
98.1  
206.81  
14

100001  
14.16 AC  
1378  
1540(s)  
1691  
1030(s) TAYLOR  
500(s)  
100005  
30.16 AC  
Copeland  
17.8 AC  
Zedick  
1344  
790  
Partlow  
100019  
22.4 AC  
1195(s)  
1621  
1296.11  
14

100027  
40 AC  
1550  
Hauser  
100026.1  
26 AC  
100024  
36.2 AC  
1045  
729  
100022  
7.15 A  
100023  
5.7 AC  
434  
365  
374  
386.92  
313.90  
320  
CRUICKSHANK  
156  
144  
120  
54  
Pemberton  
100021  
0.30 AC

100020  
16.3 AS  
552.49  
548  
705(s)  
100017  
4.54 A  
710(s)  
730(s) RD  
15  
500 Starr  
100018  
3.8 AC  
540  
100016  
16.81 AC  
585.25  
Starr  
100034  
1.64 A  
125  
124.7  
125  
144(s)  
130  
146(s)  
70(s)  
947.13  
644.06

Randall  
100026.2  
15 AC  
1275  
1250  
1370  
Glassie/Williams  
100029  
17 AC  
919  
Norwich University  
100046  
8.7 A  
1200  
495  
578  
1770  
637

100025  
70 AC  
55 AC  
Randall  
100030  
44 AC  
1583  
2257  
100031  
32.2 A  
2115  
6  
100032  
32.2 A  
2120  
5  
Pedraza  
Wassermann  
100033.1  
5.0 A  
544.5  
400  
2706  
1120

Zagora  
100029  
17 AC  
919  
Norwich University  
100046  
8.7 A  
1200  
495  
578  
1770  
637  
1  
4

100044  
1.4 AC  
1230(s)  
235(s)  
520(s)  
585(s)  
990  
Rochelle/Parker  
100042  
11.8 AC  
10.4 AC  
Clough  
100043  
10.4 AC  
600  
660  
400  
2706  
1120  
1000  
62.8  
57





