



# 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: City of Montpelier

Project Name: Gould Hill Ditching

Road Name: Gould Hill TH #: 154 Structure # (if applicable): \_\_\_\_\_

Road Type: Unpaved Uncurbed  
Class 4

Watershed: North Branch

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

Gould Hill is a steep roadway with little to no ditching causing roadway erosion. The existing ditch is insufficient and needs to be shaped in order to properly convey storm water. Driveway cross culverts are undersized.

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):

We plan on installing approximately 1500' of stone line ditch along the length of the road, starting from the top of the hill and working toward the bottom. Driveway culverts are not properly sized or aligned and will be replaced. As part of our regular grading maintenance we will regrade the road so that water will be able to enter the ditch.

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

Erosion at this project location will be significantly reduced. Erosion will not be completely eliminated until a second phase project is completed. A second phase project would include an additional 1500' of ditching and upgrades to both driveway and cross culverts.





Distance from end of project to nearest water (stream, lake, or stormwater system that outlets directly to water). 250'+

Progress to Date:

Design Work Complete, No ROW needed

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

No

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: Storm Water Master Plan (In-progress)

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.):

Julie Moore- Stone Environmental

Ann Smith- Friends of the Winooski River

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

Yes.

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

Some, the work will be completed by using a combination effort from our town road crew and Parks staff.



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

See attached project cost estimate

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

We plan to meet the 20% grant match by providing labor and equipment for ditching.

Requested Grant Amount (\$20,000 max Category B, \$40,000 max Categories C & D): \$ 15,100.00

Estimated Total Project Cost (including 20% local match): \$ 20,100.00

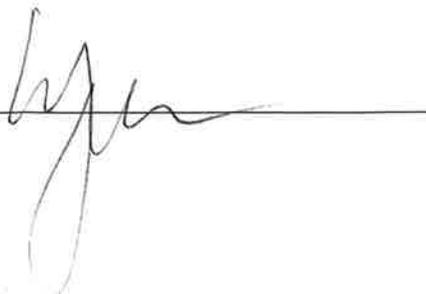
Estimated Completion Date: 10/15/2016

**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:  Title: City Manager



**Cost Estimate Worksheet**  
 Town and Road Name: City of Montpelier

Project Name: Gould Hill Ditching

Labor	Rate	# Hours	Total (Rate x Hours)
Town Crew	\$25/Hr	100	\$2,500
Labor Total			\$2,500
Equipment	Rate	# Hours	Total (Rate x Hours)
Tractor with Backhoe	\$25/Hr	80	\$2,000
Town Truck	\$20/Hr	30	\$600
Equipment Total			\$2,600
Materials	Rate	Amount	Total (Rate x Amount)
Type 1 Stone	\$20/CY	300	\$6,000
1-1/2" Clean Stone Bedding	\$20/CY	150	\$3,000
Filter Fabric	\$4/SY	1000	\$4,000
18" HDPE Culvert	\$20/LF	100	\$2,000
Materials Total			\$15,000
Miscellaneous	Rate	Amount	Total (Rate x Hours)
Miscellaneous Total			

Grand Total \$20,100  
 Match \$5,000



April 11, 2016

Alan May  
Agency of Transportation  
Municipal Assistance Bureau  
1 National Life Drive  
Montpelier, Vermont 05633

Dear Grants Review Committee,

I am writing in support of City of Montpelier's Better Roads grant application to improve drainage along Gould Hill Road. Stone Environmental is currently working for the City of Montpelier to develop a stormwater master plan. This on-going effort involves identifying existing stormwater-related water quality problem areas through a combination of GIS-based analysis of physical watershed characteristics, windshield and walking surveys and interviews with key local officials.

Through this effort, the existing drainage along Gould Hill Road identified as a stormwater concern; specifically, road-related erosion was found to be contributing sediment pollution to the North Branch of the Winooski River. A copy of the Problem Area Data Sheet prepared for Gould Hill Road is attached to this letter.

As someone who is personally and professionally committed to water quality, I am thrilled that the City is taking the initiative to pursue funding that would support improved stormwater management along this steep, gravel road. Please do not hesitate to contact me if you have questions or if I can provide additional information.

Sincerely,

Julia S. Moore, P.E.  
Water Resources Group Leader  
*Direct Phone / 802.229.1881*  
*Mobile / 802.279.5323*  
*E-Mail / jmoore@stone-env.com*

# Problem Area Data Sheet

<b>Problem Area ID:</b> NB-10	<b>Latitude:</b> 44.287871	<b>Longitude:</b> -72.574495
<b>Watershed:</b> _____ North Branch _____	[Aerial photograph of the problem area showing a road and surrounding terrain.]	
<b>Location:</b> _____ Gould Hill Road _____		
<b>Problem Type:</b> _____ Erosion, drainage _____		
<b>Identification Source:</b> _____ SWMP Assessment/VTRANS _____		
<b>Ownership:</b> _____ Public/Private _____		
<b>Classification:</b> _____ 4/5 _____		

**Date of Field Data Collection:** September 28, 2015

**Description of Observed Conditions:**  
 Rock-lined ditch at lat/long listed above needs improved stabilization (Photo 1). Oversteepened embanks are also causing roadside erosion is significant in places as well (Photo 2). Drainage along gravel portion of road is poor, partly due to challenging terrain. Significant gully observed below cross culvert outlet at 574 Gould Hill Rd. Boards and asphalt berms under guardrails further concentrate flows. Additionally, culvert 23055127 is classified in VOBCIT as being in "poor" condition.

**Field Photos**



Photo 1. Rock-lined ditch in need of improvement.

Photo 2. Erosion along the road.

Prioritization Ranking Factors							
Relative Impact	Frequency	Current Condition	Urgency	Impact to public infrastructure?	Realistic to fix?	Impacts beyond water resources?	Part of a larger or systemic problem?
3	2	3	2	Y	Y	Y	Y



**Friends of the Winooski River**

PO Box 777  
Montpelier VT 05601

info@winooskiriver.org • 802-882-8276

April 12, 2016

Zach Blodgett, E.I.T.  
Staff Engineer  
City of Montpelier, VT  
Department of Public Works  
39 Main Street, City Hall 05602

Dear Zach:

The Friends of the Winooski River is pleased to provide this letter of support for the City of Montpelier's Better Back Roads application. Dirt roads are a major source of sedimentation and associated pollutants to our streams and rivers. It is great to see the City taking action to reduce road runoff.

Gould Hill Road, like so many Vermont roads, has a steep grade and is in close proximity to a water way. Due to this, the road was identified as a road erosion risk by the ANR road analysis as well as identified in the City's stormwater master plan. It is encouraging to see the City use both of these tools to identify priority projects.

The Friends currently have a grant to do stormwater education in Barre-Montpelier. This education includes highlighting the impact of roads and municipal actions.

We hope the City is successful in its grant application. We look forward to hearing more about the project.

Sincerely,

Ann Smith

# City of Montpelier

PUBLIC WORKS



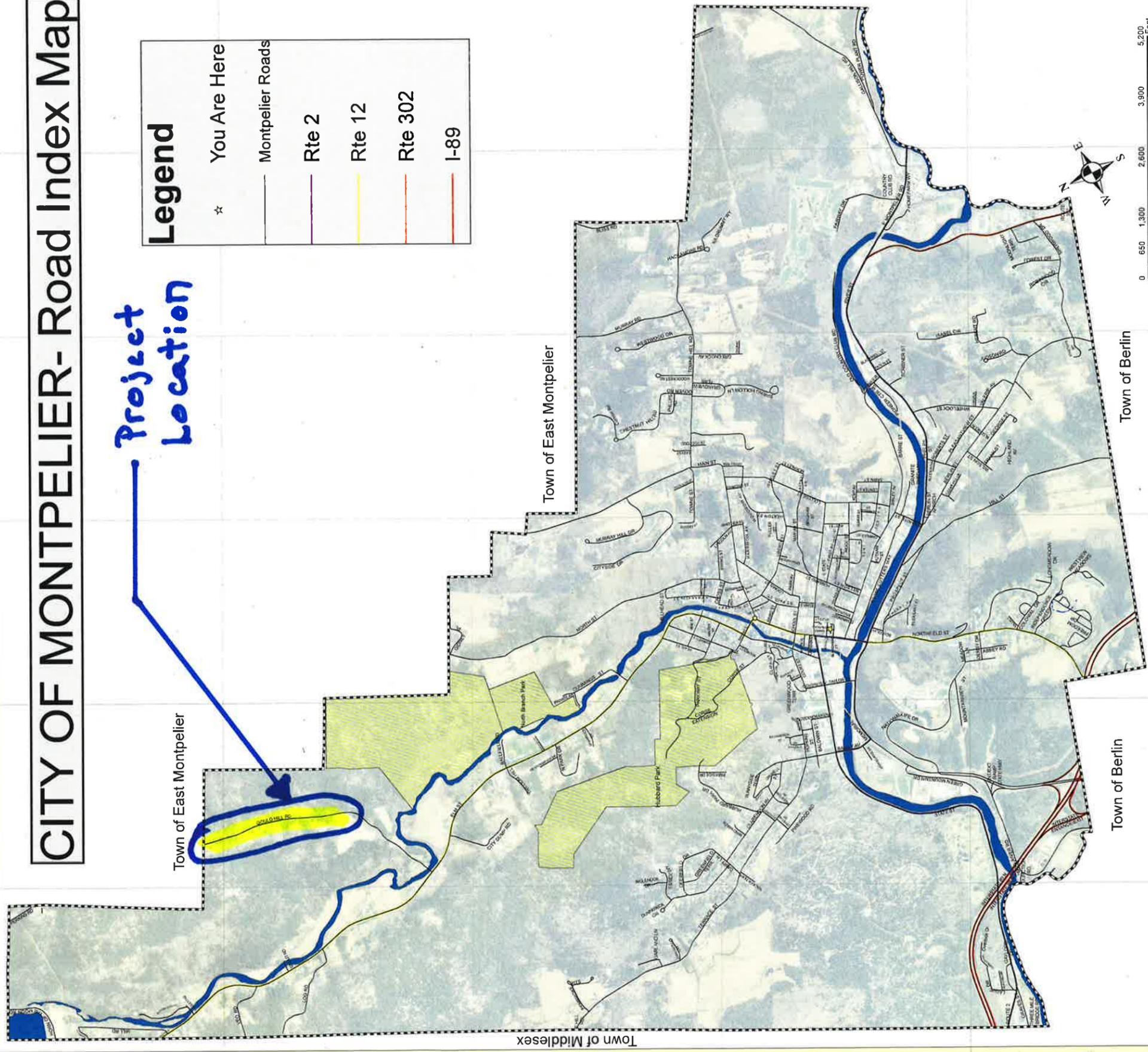
# Better Roads Grant Application

## CITY OF MONTPELIER- Road Index Map

Project Location

**Legend**

- ☆ You Are Here
- Montpelier Roads
- Rte 2
- Rte 12
- Rte 302
- I-89



### City of Montpelier Road Index Legend

Abbey Rd	C3	Freedom Dr	C5	Hillhead St	C3	Mechanic St	C3	Plateau Dr	E5	Sunset Ave	C3
Allen Row	D4	Fuller St	C4	Hillside Ave	C4	Memorial Dr	C4	Pleasant St	C4	Tarlin St	C4
Arsenal Dr	D4	Garrison Hill Rd	E4, F3, F4	Hinkley St	D4	Merrill Terr	D4	Pleasantview St	D4, D5	Taylor St	B4, C4
Baliley Ave	B4, C4	Gayford Ln	A3	Holmes Ct	C4	Mill St	C4	Point Ridge Rd	E5	Terrace St	A3, A4, B4
Baldwin St	C4	George St	D5	Hopkins St	B4	Moonglight Terr	E5	Poplar St	E5	Third St	B5, C5
Barre St	B4, C4	Glennway Pl	C2	Hubbard Park Dr	B3, B4	Mountainview St	B4, C4, C5	Prospect St	C4	Third St Ext	C5
Barre St	C4, D4, D5	Glinney Pl	C4	Hubbard St	C4	Mtgr Crossby Ave	C4	Pumam St	C4	Three Mile Bridge Rd	A5
Berlin State Hwy	E5	Gov Alken Ave	B4	Independence Green	B1, B2, A2	Murray Hill Dr	C3, C4	Quassel Dr	A5	Towne Hill Rd	D3, E3, F3
Bingham St	C4	Gov Alken Ave	B4	Inglebrook Dr	A3	N College St	C3, D3, E3	Redstone Ave	B4	Tracey St	C4
Blackwell St	D4	Gov Daniels Ave	B4	Isabel Cr	D4, D5	N Franklin St	D3, C3, C4	Ridge St	B4	Tremont St	C4
Blanchard Ct	C4	Graham Terr	C4	Jay St	C4	National Life Dr	B4, C4	Robinson Cr	E5	Trillium Hill	B3
Bliss Rd	E3	Granite Shad Ln	D3, D4	Jordan St	B4	Nelson Dr	C4, B5	Sabin St	D4	Valerie Ave	D5
Blown St	C4	Granite St	C4, D4	Junction Rd	A5	North Park Dr	B3	Salem Ln	D4	Valley View	D5
Cedar Dr	E5	Green Mountain Dr	B4, B5, E5	Kemp Ave	C4, D4	North St	C3, C4	School Ave	C4	Vero Rd	A2
Cedar Hill Ln	D4	Greenfield Terr	B3	Kerr St	C4	Northfield St	C4, C5	Schoonhouse Rd	C3	Walker Terr	A4
Cedar St	C4	Greenwood Terr	D3, D4	Laigue Dr	A5	Northview Rd	C2	Scrimmer St	D4	Waverly Pl	C4
Center Rd	C3, C4	Greenwood Terr	B4, C4	Leaping Hollow Ln	D3	Old Country Club	D4, E4	Sherrwood Dr	B5, C5	West St	C4
Center St	B4	Groat Rd	A2	Leisurewood Terr	C4	Overlook Dr	E5	Sherrwood Dr	D5, E5	Whitlock St	D4, D5
Champan Rd	B4	Guernsey Ave	E3	Liberty St	C4, D4	Park Ave	C4	Shippam Pl	C4	Whittier St	C4
Charles St	C4	Haddamone Rd	A1	Lincoln Ave	C3, C4	Parkside Dr	B3, B4, C3, C4	Shirley Ave	A5	Wilson St	D5
Cherry Ln	C4	Harrison Ave	C4	Lug Rd	A2	Partridge Rd	C4	Sparrow Farm Rd	C4	Witter St	C3, C4
Chestnut Hill Rd	D5	Harry Sheridan Ave	C4	Longmeadow Dr	C3	Peck Pl	C4	Spring Hollow Ln	D4	Witt Pl	C4
City Dump Rd	B2, B3	Hazen Pl	D4	Loonville St	C4	Pembroke Hb	C3, C4, D3, D4	Spring St	C4	Woodcrest Rd	D3
Clyde Dr	C3	Heaton St	C4	Main St	C4	Perkins St	A1, B1	Spruce St	E5	Woodrow Ave	C4, D4
Carendon Ave	B4	Herbert Rd	D5, E5	Maple St	E5	Perkins Rd	D4	State St	C4	Private Road	
Cliff St	C4, D4	Hershey Rd	D5, E5	Maplewood Rd	F3	Phillips Rd	D3	State St	C4		
College St	B5	High School Dr	B4	Marvin St	C4	Phillips Rd	B4	Stone Cutters Way	C4		
Colonial Dr	C5	Highland Ave	D5	McIntosh St	D4	Pioneer Center	D4	Summer St	C3, C4		
Conledge St	D3	Hill St	C4, D5, C5	McIntosh St	D4	Pioneer St	D4	Summit St	C4		
Connor Rd	D3	Hill St Ext	D5	Meadow Ln	C5	Pitkin Ct	C1	Summit St	C4		
Corse St	C4	Hillcrest Dr	C5	Meadowbrook Dr	B3	Pitkin Ct	C1	Sunnyside Terr	B4		

# GOULD HILL DITCHING

