

**2012-2013 GREEN RFP PROGRAM
STUDENT ORGANIZATION SUSTAINABILITY INITIATIVE FUNDING PROPOSAL**

Part I- General Information:

Name of Student Organization	Environmental Coalition
Contact/Responsible Person	Grace Friedhoff
Contact Office Held/Title	Senior Advising Member
Contact Email Address	GraceF89@vt.edu
Contact Telephone Number	732.757.7683

Part II- Project Cost Information:

Estimated Cost of this Proposal See III.C. below

Estimated Savings - See III.D. below

Net Cost of this Proposal =

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Part III- Supporting Information

A. Please describe your sustainability initiative and attach supporting documentation.

The proposed sustainability initiative is to have recycling bins present next to every garbage can on campus.

Teaching and instilling responsible life choices is an integral part of a college campus. While Virginia Tech strives to be a leader in sustainability, it is currently limited in its options for the students. Most would choose to recycle if the option was given alongside the landfill option, but the sustainable options are minimal with just a few pre-existing recycling bins on campus. For our Virginia Tech community to be a leader in sustainability, we need to have the sustainable choice available for all users. Not only will the presence of outdoor recycling bins showcase Virginia Tech's commitment to sustainability to the public, it will instill in students and staff how commonplace recycling needs to be in their daily activities. In addition, installing more recycling bins will save the university money; recycling is the cheaper option to waste management as it costs the university roughly twice as much for a ton of trash as it does for a ton of Bottles & Cans.

According to the Comprehensive Waste Management Plan for Virginia Tech, "Waste management activities, and specifically the visibility of recycling receptacles is to a large extent how the success of campus sustainability programming is perceived and judged. While it is difficult to see energy reduction measures, the presence of recycling bins provides a visual designation of a university's commitment to sustainability to both members of the campus community and visitors. The act of recycling is typically the first step taken on an individual level in moving towards more sustainable behavior. Recycling serves as gateway to other behavior changes such as energy and water use reduction. It is therefore critical for all campus sustainability activities that the university devotes adequate resources to meet the challenges and achieve the waste reduction goals set by both the Commonwealth of Virginia and the Virginia Tech Climate Action Commitment and Sustainability Plan. The management of every material stream on campus has an associated cost. The disposal of trash has been and will continue to be the most expensive method of waste disposal. Diverting waste to other streams such as recycling and reuse will decrease waste management costs for the university."

There are 100 Renaissance Metal garbage cans on campus, spaced throughout the campus. These receptacles are quite prevalent and so this proposal calls for permanently providing a matching commingled container directly next to every garbage bin.

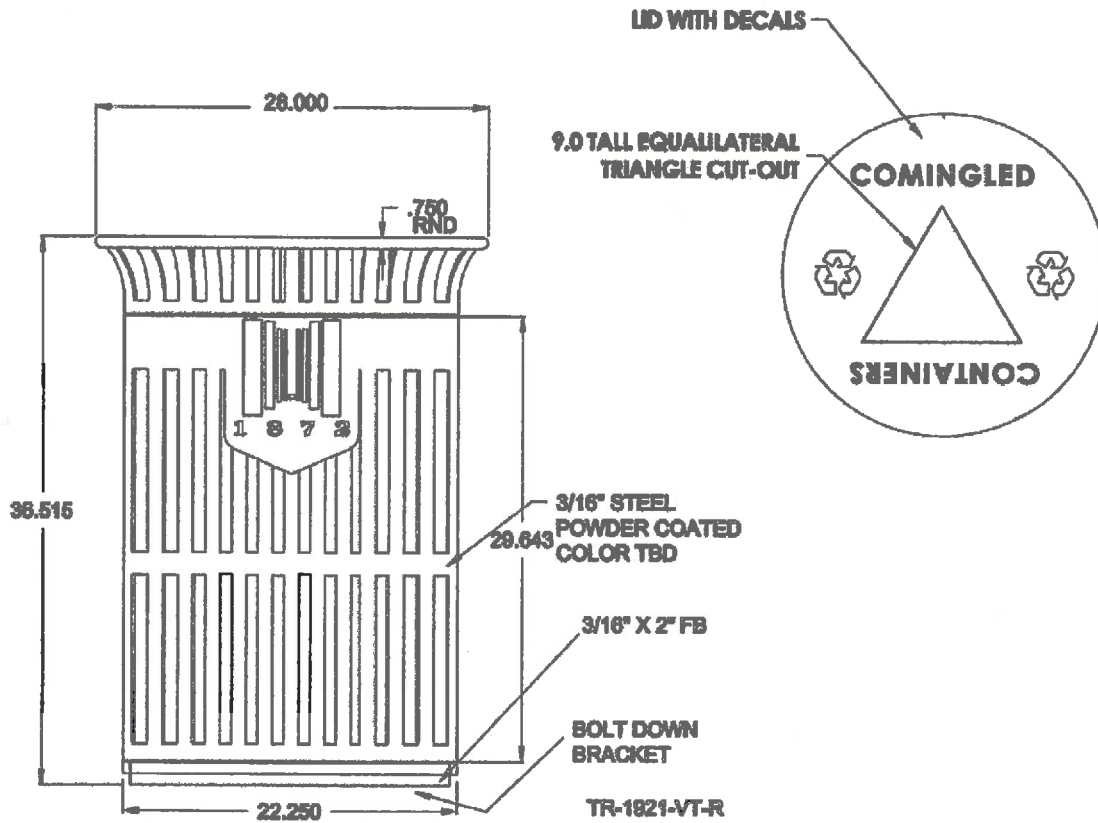
Section C, outlines the suggestion of phasing the installation of recycling bins. **For the first phase of funding, 25 recycling bins are requested.** These bins will be placed in the highest traffic areas of Virginia Tech's campus.

Please see Appendix 1 for a map of suggested locations.

Please see Appendix 2 for supporting photographs.

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Proposed Recycling Bin Design: Pre-approved by Virginia Tech



Example of existing condition that is similar to proposal. (Rarely found on campus)



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B. How does this initiative help to achieve the goals of the Virginia Tech Climate Action Commitment Resolution and Sustainability Plan?

In recent years the university has achieved the Virginia Tech Climate Action Commitment goal of a 35% recycling rate by 2012. Virginia Tech must now focus on reaching the next state designated benchmark of a 50% waste reduction by 2025. The goals of both the Virginia Tech Climate Action Commitment Resolution and the Sustainability Plan are to lead by example. Students and faculty should be aware of their environmental footprint and the impact it has on campus, as well as Blacksburg. Virginia Tech will be able to lead by example and show how reducing waste can have an immense positive effect on the environment by implementing recycling bins on campus. This project directly achieves three of the goals of the VTCAC.

First of all, Virginia Tech will be a leader in Campus Sustainability through the conscientious actions of students. Providing easy access to recycling bins will reduce the amount of garbage we create and will encourage students to recycle, contributing to Campus Sustainability at Virginia Tech. Secondly, installing one recycling bin for every trash can currently on campus is the only way to achieve goal number eight; "the university will adopt at least 4 reduction measures in the Waste Minimization component of the national RecycleMania competition. Virginia Tech Recycling will adopt a goal of 35% recycle rate by 2012 and 50% by 2025." The only way to increase the recycling rate is to make the option of recycling available to students and faculty and raise awareness. The final goal of the VTCAC that is supported by this recycling initiative is to encourage involvement; we can fulfill this goal by installing recycling bins next to trashcans, making the sustainable option convenient and desirable. The Sustainability Plan works to involve students and raise awareness of the environmental impact of their current behavior in hopes that they will change. Page 74 of the Sustainability Plan specifically states that in order to change student behavior and campus life, a reduction of waste and an increase of recycling options must be brought to residence and dining halls. In order to have the student body actively do their part, recycling and waste reduction must be brought to them and made easily accessible. The best way to achieve this is to place a recycling bin next to every trash can currently on campus in order to give students the opportunity to do their part and invent the future by leading through example.

The VTCAC in the Housing Services and Residence Life Prospective Actions calls to increase recycling availability in and around residence halls. It states: "Providing more convenient, accessible locations for recycling bins in and around the residence halls will inspire students to recycle more, diverting materials from the landfill, saving energy and resources." The VTCAC also states that increasing recycling availability serves as an important first step toward increasing sustainable behavior.

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C. What is the cost of your proposal? Please describe in adequate detail the basis for your cost estimate.

The first stage of the Green RFP proposes the funding of 25 Virginia Tech approved recycling bins for the campus. This will add up to a total of \$13,225 to be spent on the first round of recycle bin purchases.

The cost of the proposal is dependent upon the decision of which recycling bin to choose. The proposal group has researched alternative/cheaper options to the existing campus approved recycle bins. However there is an understanding that the University will solely use the pre-approved metal bins supplied from Renaissance in Roanoke. The university has excellent relationships with the local firm, Renaissance, who make our small brown colored metal fabricated outdoor trash containers. Renaissance can fabricate commingled containers for bottle and can recycling that are essentially the same design as the trash containers, but they have a removable lid. The charge per container is \$529. Using this company eliminates the need for Virginia Tech to conduct a separate review to see if the product conforms to the campus standard design. Additionally, by placing the recycling bins next to the trashcans ensures that there is already a concrete pad for placement, yet again reducing costs. Renaissance uses 90% recycled steel in their durable containers, and they are warranted for 5 years. The total estimated cost of the proposal to provide recycling bins next to every garbage can on campus is $100 \times 529 = \$52,900$. This relates to Section E, which indicates that the proposal will require ongoing funding.

Additionally, it is proposed that after 2 years of installing recycling bins at the suggested rate of 25 bins per year, the university evaluate the need for added bins. By that time, if there are a total of 50 recycling bins around campus, one at every other garbage bin, it may be determined whether installation need continue based on the needs and recycling capacity of the campus.

Please see Appendix 3, which lists possible alternate recycling bin options as well as their prices and benefits. Under the assumption that there will be 100 recycling bins purchased (approximately the number of existing metal garbage cans) the estimated cost of using the alternative bin, at a price of \$160 each, amounts to \$16,000.

D. Will your proposal produce cost savings for the University? If so, how much? Please describe in adequate detail the basis for your savings estimate.

The university will experience significant cost savings if it increases recycling rates and decreases land filling rates. Virginia Tech's trash and principal recycling materials are collected by the Montgomery Regional Solid Waste Authority (MRSWA) and sent to a location in Christiansburg. **It costs the university twice as much to collect a ton of trash as it does a ton of Bottles & Cans; trash costs the university \$51 a ton while Bottles and Cans costs just \$32 a ton.**

The potential savings for Virginia Tech come specifically from the reduced amount of money spent on trash removal as recycling increases. The specific monetary savings are currently unknown, but they could be estimated with the appropriate information. According to the 2011 Comprehensive Waste Management Plan for Virginia Tech, municipal solid waste (MSW) disposal is the most expensive form of waste disposal. One cost associated with the disposal of MSW is the fee charged for the removal of each ton of waste. By reducing the amount of post-consumer food waste and recyclable waste that is disposed of as municipal solid waste, the proposed recycling stations will produce cost savings for the university. These recycling stations will also help students and employees understand where their waste is going. This awareness will help further reduce campus waste cost over time as the community becomes more aware and educated about the life cycle of its waste.

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E. Is this funding request an Ongoing or One-Time change (please check one)?

One-time

Ongoing

Understanding that the proposed number of garbage cans is substantial and there is limited funding for this year's Green RFPs, this proposal suggests the recycling initiative will be most effective if the funding request is ongoing. Having all recycling bins installed at once would be optimal, but in lieu of that option having the recycling bins installed over a number of years would ensure that Virginia Tech moves towards being an efficient recycling campus while retaining the funds to fulfill other Green RFPs.

F. Is funding available for this request from another source? If yes, describe the funding (source, amount, etc.)

No, no known funding is available for this request from another source.

Part IV - Requestors/Reviewers

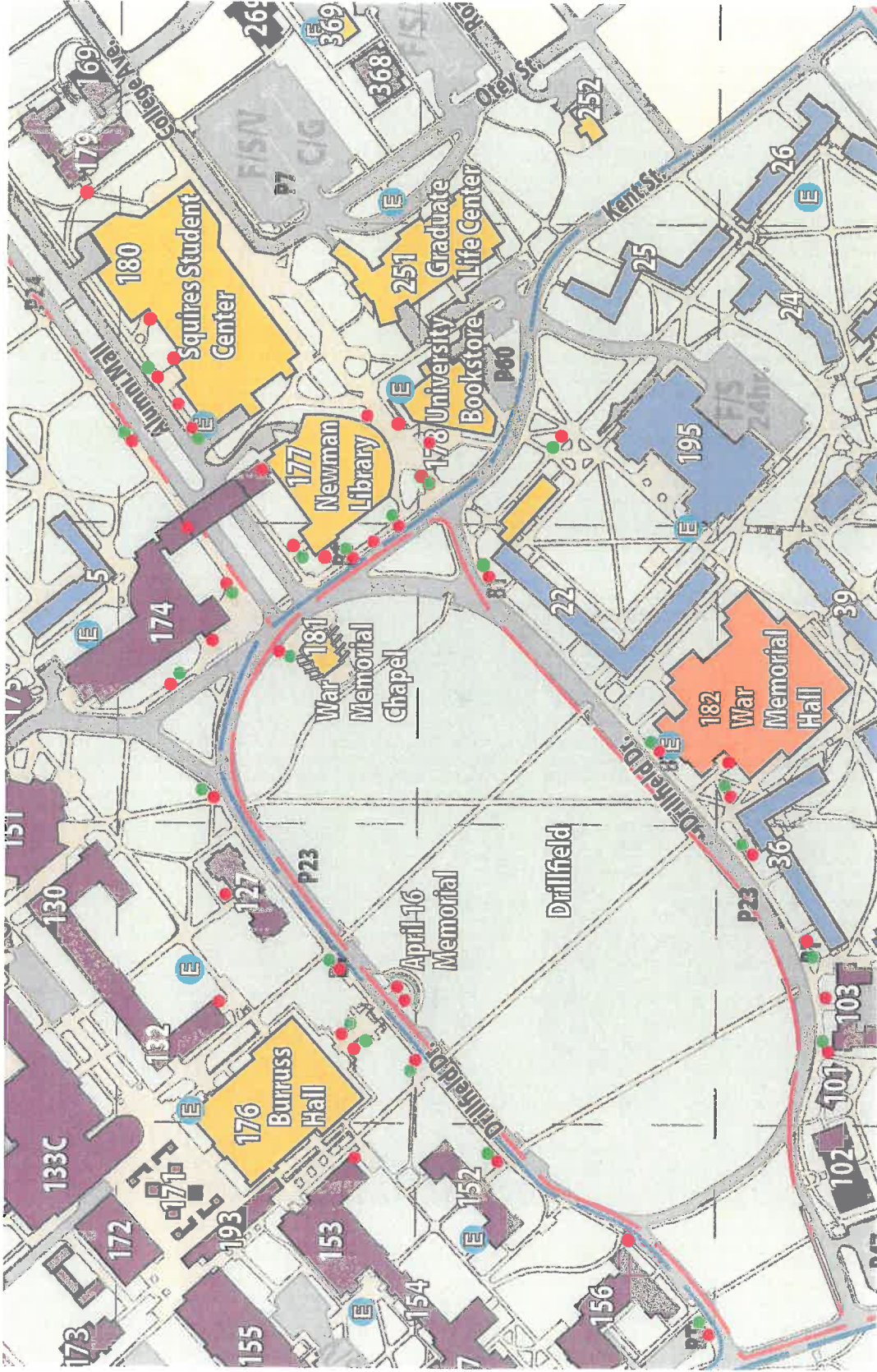
Prepared By (Name of Contact for Student Organization)
Grace Friedhoff

(Date)
October 21, 2012

Reviewed By (Name of Office of Energy and Sustainability Representative)

(Date)
Dec 5, 2012

Appendix 1: Map of Suggested Recycling Bin Locations



- Existing Trash Receptacles seen along Drillfield and Alumni Mall
- Suggested Locations for Proposed 25 Recycling Receptacles for Phase 1.