

Date: April 8, 2019

To: Charles Stewart, Associate Dean and Chief Librarian

From: Gabriella Pieniadz, Civil Engineering Undergraduate
Anedale Dimalanta, Mechanical Engineering Undergraduate
Vince John Plasencia, Civil Engineering Undergraduate
Adam Almodovar, Electrical Engineering Undergraduate
Omer Amray, Civil Engineering Undergraduate

Subject: Proposal for Installing Voltmeters onto Electrical Outlets in the NAC Library

Commented [SP1]: Excellent layout, organization and title. Add page numbers. Add APA style running head.

Purpose

The purpose of our proposal is to suggest the installment of voltmeters onto the electrical outlets in the NAC library in order to create a long-term solution to the persisting issue of faulty outlets.

Commented [SP2]: Good, but be aware that the reader is intrigued by how voltmeters can constitute a long-term solution for faulty outlets. Maybe add a sentence something like this (see sentence in purple):

Summary

The NAC Cohen library is used by most students and is in use for the majority of the day. People usually require an outlet to either charge their phone, laptop, or any other use they might have. However, although there is a large necessity for outlets to work in the library, ~~there is~~ a good percentage of ~~these that~~ do not work. This means that many students will have an issue finding one that does work, and might not even find one at all. Our team proposes the idea of attaching voltmeters to each outlet that show how much voltage the outlet is producing. This will bring about an ease in students as they will be able to find a working outlet much more easily, and the engineers that are there to fix the outlets to find and repair only the necessary outlets. Our plan is simple. First obtain a basic understanding of the electrical situation of the library, then determining and purchasing whichever voltmeter would prove best, then the installation of said voltmeters, and finally the repair of faulty outlets. For the last step, to save cost, it could become a task for engineering students to do.

The purpose of our proposal is to suggest the installment of voltmeters onto the electrical outlets in the NAC library in order to facilitate prompt detection of outlets in need of repair and thus provide a long-term solution to the persisting issue of faulty outlets.

Commented [SP3]: Excellent summary

Introduction

Several weeks ago, English 21007 B instructor Sabina Pringle tasked us with identifying a technical issue afflicting The City College of New York campus. After several suggestions, we decided upon the faulty power outlets in the North Academic Center (NAC), proposed by our project manager, Gabriella Pieniadz.

The problem was brought to the team's attention after Ms. Pieniadz relayed her experiences with struggling to find a functioning power outlet in the NAC Cohen Library, often in times of emergencies. The team decided to gather empirical data regarding this problem by dividing the five floors of the library between each member and testing the functionality of the power outlets on each floor. Table 1 below lists the results of surveying the available outlets per floor for functionality. These do not include the outlets that are being used to power the computers for public-use in the first and second floors of the library.

Table 1. Number of non-functioning outlets per floor of the NAC library.

Floor	# Outlets Tested	# Faulty Outlets
1	20	0
2	20	0
3	20	2
4	20	7
5	20	15

As seen in the data, the number of non-functioning outlets slowly increase as you go to higher floors in the library. Although the first two floors of the library show no signs of having faulty outlets, the numbers slowly go up between the third and fourth floors, leaping to a staggering 15 faulty outlets in the fifth floor. Cumulatively, this data shows that approximately 24% of the power outlets in the library do not work, with most of them being located on the fifth floor. This is a concerning percentage, considering how many individuals this problem inconveniences. Our

Commented [SP4]: "Afflicting" is a bit strong. How about

a technical issue affecting the City College of New York campus.

or

a technical issue affecting the City College of New York community.

or

a technical issue on the City College of New York campus in need of a solution.

Commented [SP5]: I don't think you need to start a new paragraph here

proposal aims to promote a long-term solution as opposed to replacing all power outlets in the library indiscriminately.

[still waiting to get response about environmental scan]

In the following sections, we will be discussing our proposed tasks to deal with this issue, the budget, our schedule, as well as our qualifications relevant to this proposal.

Proposed Tasks

With approval from the Office of Buildings and Grounds, we would perform the following four tasks to determine the best course of action to improve the inefficiency of the power outlets in the Cohen Library on the City College Campus.

Task 1. ~~Obtain~~Acquire a basic understanding of the current electrical current situation in the Cohen Library through an electrical inspection.

We already have begun our research by reaching out to the departments of Environmental Health, Occupational Safety and Information Technology. We still have not received any responses from these departments.

~~Taking it upon ourselves~~, we decided to see how efficient the power outlets are on 5 floors of the Cohen Library. Through our observations we came to the conclusion that a good portion of these outlets lacked efficiency. Based on the City College's budget, we would have to either hire an electrical engineer to conduct an inspection or we could also have assistance from our colleges colleagues at the Grove School of Engineering. Using engineering students ~~would~~ will not only save a good portion of money but ~~it would~~ will also benefit the undergraduate and graduate students ~~of by providing them with~~ a hands-on engineering opportunity right on campus.

Task 2. Purchasing and determining a brand of voltmeters for future installation.

Based on our overall budget we ~~would have to~~ will determine what brand of voltmeters and how many voltmeters we ~~would be able to~~ will purchase. We have once again reached out to the departments of Environmental Health, Occupational Safety and Information Technology but still have not received any responses that ~~would help us~~ foresee a budget to help with this task. There are plenty of outlets in the Cohen Library and the goal would be to purchase a voltmeter that would display an accurate reading of the outlet voltage. We would start out with purchasing 20

Commented [SP6]: I look forward to reading about the findings of your environmental scan. It will be useful to know how City College responds to faulty outlets at present.

Commented [SP7]: Excellent introduction.

Commented [SP8]: Put all of this in the past simple: we began, we did not receive. Go on to say, Therefore, we decided to...

Commented [SP9]: Put this in the future rather than the subjunctive, because even though it has not been agreed that this will happen, using "will" rather than "would" conveys an optimistic and affirmative stance and is therefore more persuasive.

Commented [SP10]: Could be clearer: you propose to purchase voltmeters and determine a different brand for future purchase and installation? I think that determining which brand is best should be part of your research for this proposal, so it is not a task you are going to carry out because you have already done this research and determined the best brand.

Commented [SP11]: Here the subjunctive is good usage because you are not at all sure that you will receive responses.

Do an environmental scan of voltmeters on the market. Find the best voltmeter (or voltmeters) in terms of quality and price, explain why it is (or they are) the best and recommend purchasing this voltmeter.

voltmeters per floor in the first phase of this task. Amazon has an abundance of highly rated digital voltmeters that would fulfill our needs. Some inexpensive voltmeters we that fit under this category -would be the DROK Voltage Test Monitor and the DROK Volt Panel Meter.

Commented [SP12]: I would really prefer not recommending purchasing from Amazon.

Commented [SP13]: Good. Explain why these voltmeters are good for our purposes. Provide some technical specificities. See if they can be purchased elsewhere than Amazon.

Task 3. Installing voltmeters on the floors of the Cohen Library.

The placement of voltmeters in the Cohen Library will benefit everyone as it will save time and money in the long run. After receiving the green light to start the process of installing the voltmeters, the wall would will have to be cut somewhere near an outlet for the voltmeters to be displayed. The best place would be above the outlet so that people can see which outlet has the most power running into it. Then some wiring is needed to actually make the voltmeter function correctly, but the wiring is applying the positive and negative wires of the voltmeter on their respective areas on the actual outlet to give a reading. As stated above, we plan on starting with 20 volt-meters per floor so it would be easier for students to know which ones work before plugging in their chargers. Also, it would help the engineers identify an issue if the voltmeters get too low and fix it before anymore outlets go bad. It would benefit the budget and time for the engineers to fix a few outlets as opposed to redoing wiring and attempting to fix something that is not broken.

Commented [SP14]: Put this sentence somewhere else, maybe in the introduction or conclusion.

Commented [SP15]: Can you describe the process of putting the voltmeter in the wall more clearly? The wall has to be cut, then what?

Commented [SP16]: Can you explain this more clearly? I don't understand what the areas of the positive and negative wires on the outlet are.

Commented [SP17]: What is "it?" Help the reader by restating what.

Commented [SP18]: Or "cease to function?" "Completely cease to function?"

Commented [SP19]: What is "it?" Help the reader by restating what.

Commented [SP20]: Very good

Task 4. Implementing a routine of annual electrical inspections.

This is not a project that you do once and it will work forever, someone needs to keep up with outlets. This is why we also propose an annual electrical inspection. The inspection would consist of engineers documenting which outlets work and which do not so that there is no inconvenience when it is time to use the outlets. The job is simple but tedious as every outlet would need to be checked. However, the addition of voltmeters would will make this process very simple as all the inspector would will need to do is record the readings that the voltmeter (which is already in the wall) gives. Having an annual inspection would will help engineers figure out which outlets have little to no power and they can will be able to track the deterioration of the outlets over time and fix the issue before the outlet becomes obsolete.

Commented [SP21]: Are you sure CCNY doesn't already do this? See my comments in the introduction. We need to know what CCNY does at present to address this problem. If the Office of Facilities Management doesn't provide you with this information, find another way to get this information. This information should go in the introduction.

Commented [SP22]: Engineers or engineering students?

Scheduling

April 9th	'Final draft date'	May 12th	May 18th	June 4th	December 2nd
Team checks outlets for faulty and working ones	Proposal is sent out to school board. Problem is read and taken into consideration	Voltmeter type and model and decided and bought	Voltmeters are installed	Engineers are brought in to fix faulty outlets	If it is decided that students will complete fixing of outlets as final project, they will fix it for their grade at this time.

Commented [SP23]: Revise in accordance with comments above

Commented [SP24]: If it is not decided that students will do this work, who will do it?

Budget & Environmental Scan

[still waiting for a response from facilities]

City College has a lot of expenses to cover such as our libraries, the electricity, computers, and etc. In order to help cover the cost of buying the voltmeters and installing them, we can implement a project in which senior electrical engineering students can gain experience of installing them on outlets. Some students are unable to do internships because they may not have enough timetime, or they just do not get accepted. If we were to implement this project throughout the school, we not only provide hands-on experience for electrical engineering students, but we may even induce other students to join the Grove School of Engineering by allowing other students to watch. We save money by allowing students to help with problems around the school and may even gain more money by implementing a project that can popularize the engineering major.

Commented [SP25]: If you don't get a response from the Office of Facilities Management, and probably also if you do because I doubt that the Office of Facilities Management will write your budget for you, you need to calculate how much this will probably cost in materials, labor and other work, and present these costs as the proposed budget.

Experience

All members of the team are aspiring engineers belonging to The Grove School of Engineering at The City College of New York.

- Gabriella
- Anedale

Commented [SP26]: This is a great idea. It should go in the introduction, not the budget section. The budget section should tell Charles Stewart how much the installation of voltmeters in the Cohen Library will cost.

- Vince
- Adam
- Omer

References

[filler]

Commented [SP27]: No bullet points. One short paragraph for each team member. The paragraphs should be short bios stating relevant experience and academic preparation which qualifies them for carrying out this project. For example, did you go to a technical high school? Did you work on any team projects in high school, college or in your community? Have you done any electrical work or assisted anyone in doing any electrical work, even if this was at home? Your bio should start with your full name and major if you have decided on your major.