

## **2019 Dane County Departmental SMART Fund**

### **Funding Opportunity Description**

The Sustainability Subcommittee of the Public Works and Transportation Committee is responsible for distributing grant money to county departments from a dedicated fund in the county's capital budget. This fund supports the county's goal of becoming more sustainable by, for example, investing in initiatives that reduce greenhouse gas emissions by implementing systems that result in more efficient energy use and investments in renewable energy production at county facilities. The fund is a foundational part of the county's continued efforts to ensure that important natural resources and ecosystem services are maintained for current and future generations while working to increase equity and inclusion in all that we do. The fund can be used by your department to help you implement strategies identified in the [Dane County Government Sustainable Operations Plan](#), to supplement current budget items that do not have enough funds to incorporate additional sustainable measures, or to fully fund projects that are not in the current budget, but that will improve the sustainability of county operations and reduce long-term costs.

The subcommittee will select projects to fund based on their consistency with the sustainability principles adopted by the Dane County Board (on October 18, 2012) to guide county government management, operations, and policy making, as well as based on their ability to further implement the [Dane County Government Sustainable Operations Plan](#). The subcommittee will consider applications that might not provide a large financial return on investment but that can be demonstrated by the applicant department to incorporate strong sustainability education benefits for county staff and the public. The subcommittee will also look favorably at innovative pilot projects that test new sustainability technologies in county operations and that can be demonstrated by the applicant department to hold promise for additional future benefits for county facilities.

### **Benefits of this fund:**

- Alignment of departments and staff toward a common understanding of sustainability
- Clarity and consistency in assessing and organizing actions and programs for sustainable government operations
- Enhanced policies and programs incorporating a sustainability perspective
- Enhanced reputation as a proactive contributor to a more sustainable community
- Education of county staff and public on sustainability issues
- Reduced operating costs

### **Dane County's Sustainability Principles:**

Dane County strives to operate in a sustainable way that will:

- Reduce and eventually eliminate county government's contribution to fossil fuel dependence and to wasteful use of scarce metals and minerals;
- Reduce and eventually eliminate county government's contribution to dependence upon persistent chemicals and wasteful use of synthetic substances;
- Reduce and eventually eliminate county government's contribution to encroachment upon nature and harm to life-sustaining ecosystems (e.g., land, water, wildlife, forest, soil, ecosystems); and
- Reduce and eventually eliminate county government's contribution to conditions that undermine people's ability to meet their basic human needs.

### **Eligible Applicants:**

Dane County Departments

**Award Information:**

**Application Deadlines:** There are 3 application deadlines for 3 rounds of funding. Solicitations for applications will go out via email about 1 month before each deadline.

1. **February 6, 2019** — At this time up to 50% of the funds will be awarded.
2. **June 3, 2019** — At this time up to an additional 25% of the funds will be awarded.
3. **October 9, 2019** — At this time the remainder of the funds will be awarded.

The subcommittee generally makes award decisions within a couple of weeks of the application deadline depending on complexity of the proposals and the subcommittee meeting schedule.

**Examples of types of projects that would be eligible:**

- Renewable energy or energy efficiency improvement investments for county facilities, such as solar lighting, LED lighting upgrades, energy efficient boilers, etc.
- Purchase of new or upgraded equipment that will improve the overall efficiency of facilities and reduce greenhouse gas emissions, reduce the use and disposal of toxic products, reduce maintenance costs and/or staff time using the equipment, and/or facilitate better tracking, measurement, and verification of sustainable outcomes in county operations
- Water conservation improvements

**Application and Submission Information:**

Apply electronically to Lisa MacKinnon at [Mackinnon@countyofdane.com](mailto:Mackinnon@countyofdane.com) and Greg Brockmeyer at [Brockmeyer@countyofdane.com](mailto:Brockmeyer@countyofdane.com).

Please include the following in your application:

- 1) A detailed description of your proposed project
  - 2) How the project, if carried out, will meet the county's sustainability principles
  - 3) How the project, if carried out, will implement specific goals, objectives, and strategies identified in the [Dane County Sustainable Operations Plan](#). Indicate which goals, etc.
  - 4) How the county might build upon the sustainability outcomes of the proposed project
  - 5) How your department intends to track and measure the outcomes of the project, if funded, such as cost savings, energy reductions, maintenance reductions, etc., who will be responsible for measurement and verification, and an estimated timeline for delivery of measurement and verification of outcomes.
  - 6) Budget Sheet: Include all costs of achieving the objectives of the project.
  - 7) Estimated cost savings to the county due to implementation of the project and the payback period.
- NOTE: Include here information on estimated Focus on Energy incentive savings if your project is eligible for FOE incentives (see <https://focusonenergy.com/business> or contact Lisa MacKinnon for assistance in getting this information) or other financial incentives that will offset the cost to the county

Questions are to be directed to Lisa MacKinnon at 267-1529 or Greg Brockmeyer at 266-4519.

**Project Information:**

Please provide the following information (take as much space as you need to provide details):

Department: <b>Waste &amp; Renewables</b> Address: <b>1919 Alliant Energy Center Way, Madison WI</b>	Total project costs: <b>\$100,000</b> Funding amount in current budget: <b>\$30,000 for related outreach efforts and additional salary dollars for staff support and implementation</b> Funding amount requested: <b>\$100,000</b>
Project Title: <b>Mobile Sustainability and Environmental Education Lab</b>	
Project Location: <b>Dane County Landfill, 7102 US-12, Madison, WI 53718</b>	
<p><b>Project Description:</b> The mission of the Dane County Department of Waste &amp; Renewables (Department) is to provide environmentally sound and sustainable waste and energy solutions for current Dane County residents and future generations. This mission can only be achieved through education and promotion of reduced consumption, recycling, renewable energy, and environmental stewardship. The Department hosts over 800 visitors each year for tours (the majority of which are students) at the County's landfill and renewable natural gas (RNG) plant. Our tours offer an excellent opportunity for lessons in environmental stewardship, science, engineering, and technology.</p> <p>Although our tours reach a large number of students, the Department would like to interact with a more diverse set of schools and organizations. We hope to achieve this through increasing student engagement before, during, and after our tours and through promotion of our bus fee subsidy program.</p> <p>To increase engagement and improve the experience students have while on-site, the Department is partnering with the Wisconsin Energy Institute to develop pre and post lesson plans and to create interactive museum style displays that could be housed in a mobile Sustainability and Environmental Education Lab.</p> <p>Through the partnership with Wisconsin Energy Institute, we have already submitted a grant application to Energy to Educate (application attached) for development of the lesson plans and interactive displays. <b>The funding received through this application for the Dane County SMART Fund is intended to be used for acquisition and custom finishing of a trailer to serve as the mobile educational lab.</b> The mobile educational lab will primarily be housed at the Dane County Landfill site; however, the lab will also be available for use by other County Departments and the Wisconsin Energy Institute/UW-Madison for special events.</p> <p>In an additional effort to increase the level of engagement with a more diverse set of schools, the Department has implemented a program to pay for transportation costs (up to \$250 per group) for schools that find transportation fees a barrier to visiting our site. Information about this program was distributed to superintendents around the state via a flyer (flyer attached) and information about the program will be included on the Department's website that is currently under re-development.</p>	

Describe how the proposed project moves the county toward meeting the following Sustainability Principles. (See the guiding questions in the box below.) Responses to this section will be used to determine the relative level of sustainability for each project.

- Reduce and eventually eliminate county government's contribution to fossil fuel dependence and to wasteful use of scarce metals and minerals;
- Reduce and eventually eliminate county government's contribution to dependence upon persistent chemicals and wasteful use of synthetic substances;
- Reduce and eventually eliminate county government's contribution to encroachment upon nature and harm to life-sustaining ecosystems (e.g., land, water, wildlife, forest, soil, ecosystems); and
- Reduce and eventually eliminate county government's contribution to conditions that undermine people's ability to meet their basic human needs.

Include in your description any estimated reductions of GHGs / CO2 equivalent emissions related to your proposal. Please use the following calculator to do this: <http://www.epa.gov/cleanenergy/energy-resources/calculator.html>

**Outreach and education to our community members will help achieve each of the sustainability principles listed above. Through building awareness of the issues: waste, chemicals, ecosystems, and human wellbeing, we will encourage area youth, our future decision making residents, to make informed lifestyle and consumption choices. We are also setting the foundation for the next generation of creative solutions.**

**The interactive displays will focus on waste minimization, management of organics, the creation and science behind biogas and its use as a renewable energy, and sustainable materials management through reduced consumption, reuse, and recycling. Additional displays that demonstrate the impacts of improper management of waste and hazardous materials have on the ecosystem and human health will also be developed.**

**The design and materials for the trailer itself will also be sustainable and accessible. Through the design and construction of the mobile lab, the team will incorporate all aspects of the County's Sustainability Plan from minimizing the environmental footprint to employee engagement. Although we are still in the process of developing a design; however some examples of [mobile labs](#) are attached. For the trailer the team will prioritize the following:**

- **Can the trailer itself be fabricated from reclaimed materials? The team is actively looking for used trailers, shipping containers, or other materials that may be adequate for this project.**
- **When choosing interiors, the finishes will be low-VOC, PVC-free, and sustainably sourced or reclaimed when possible.**
- **If a power source is incorporated into the trailer, renewable options will be incorporated. In addition, large windows and skylights will be used for natural lighting and ventilation.**
- **ADA-accessibility will be a requirement for any design**
- **The most sustainable aspect of any project is life span, functionality and meaningful use. The Department will make every effort to increase engagement and make this project a success. We have leadership commitment to this mission, we currently dedicate staff time for organizing our tour program, and we have allocated additional resources for projects of this nature [the Department has already onboarded an LTE to focus on this project (her resume is attached)].**

Describe how the proposal furthers implementation of the Dane County Government Sustainable Operations Plan goals, objectives, and strategies in your department and/or countywide. Please identify specific plan goals, objectives, and strategies accomplished.

**The goal of the project is to engage and educate our visitors on the topics of reduced consumption, recycling, renewable energy, and environmental stewardship which aligns with the County's goal to connect employees and members of the public to the County's sustainability efforts.**

**Our objective is to engage with area schools and organizations and increase the number and diversity of institutions we reach. We will achieve this through:**

- 1. increased outreach and promotion of on-site tours,**
- 2. increased engagement of our visitors**
- 3. additional outreach at special events.**

**We have a goal of increasing the number of organizations we interact with by 50% in 2020 and 100% in 2021 (2021 being the first full year we could presumably offer the mobile education lab). After the first two years of the program our successes and metrics may be reevaluated and re-defined.**

<b>Year</b>	<b>Number of Organizations Reached</b>	<b>Number of Schools with over 40% Free and Reduced Lunch</b>
<b>Pre 2019</b>	<b>10 (approx.)</b>	<b>1 (approx.)</b>
<b>2020</b>	<b>15</b>	<b>5</b>
<b>2021</b>	<b>20</b>	<b>7</b>

**In addition, with the help of the Wisconsin Energy Institute, we will also measure the following relevant metrics (other proposed metrics included in attached Energy to Educate Grant):**

- Track total number of youth reached**
- Track contact minutes/hours spent teaching each youth**
- Measure the number of students participating in field trips**
- Track the number of special events that the mobile lab attends**
- Measure the number of students volunteering to support the outreach efforts**

**The Department will track these metrics and provide status reports back to the SMART fund program 6-months after the funding is distributed and then again 6-months after implementation of the project. Additional program updates will be reported on the Department's web-site and through annual Equity & Inclusion and Budget Memos.**

Describe how the county might build upon the outcomes of the proposed project to work toward greater sustainability.

**The County could easily expand this program to achieve greater sustainability. The mobile education lab could travel with the Library Department's Bookmobile or to the County Parks' or Extension Office's outreach events.**

**In addition, the interactive displays could be continually refined to meet the current needs for education and outreach, stay up to date with technology and County's initiatives, and maintain the level of engagement with students.**

**Additional partnerships with Madison Metropolitan Sewerage District (MMSD) and local recycling facilities could be formed to offer a more complete picture of our waste systems. Ideas for this partnership include offering tours of the landfill, recycling center, and waste water treatment plant together and working to coordinate special hazardous waste collection events with MMSD.**

Does the proposed project include a strong sustainability education component? If yes, describe the educational component, who it will reach, and how it will be communicated.

**Based on our current level of engagement with students and by the Wisconsin Energy Institutes' assessments, we expect that our project has the potential to reach over 2,300 students in a calendar year. We expect that to include about:**

**40% Elementary & Middle School (Grades K-8)  
35% High School (Grades 9-12)  
15% Four-Year College or University  
10% Adults (Ages 18-64, excluding college students)**

**We also hope to reach a more diverse set of organizations and have metrics in place to try to reach those goals.**

**Our message and materials will be communicated through on-site tours at the landfill, at special events, by our partners at the Wisconsin Energy Institute/UW-Madison and through our website which is currently under development.**

Does the proposed project pilot an innovative new sustainability-advancing technology in county operations and can it be demonstrated by the applicant department to hold promise for additional future applications in county facilities? If yes, describe the elements of the innovative technology being proposed.

**There are many opportunities for expanding this program through development of new and additional displays for the exhibits. Also, the mobile lab will be available for use to other Departments for outreach events and special projects.**

Describe how your department will track and measure outcomes of the proposed project (i.e., annual cost savings, annual energy savings, resource use reductions, maintenance reductions, etc.). Include a timeline for measurement and reporting outcomes, and the staff member contact who is responsible for conducting the tracking and measurement and reporting back.

**The Department will track the proposed metrics related to the project and provide status reports back to the SMART Fund program 6-months after the funding is distributed and 6-months after implementation of the project. Additional program updates will be reported on the Department's web-site and through annual Equity & Inclusion and Budget Memos.**

Contact person:  
**Roxanne Wienkes, Deputy Director**

Phone: **(608) 266-4029**  
E-mail: **Wienkes.Roxanne@countyofdane.com**

**Guiding questions for the project description.** Applicants should include a detailed discussion of the work planned and/or the technical approach used that illustrates what the project will achieve and how it will comply with and implement the county's four sustainability principles and the Dane County Government Sustainable Operations Plan. The following questions provide a guideline to help your department frame and describe the project. Please feel free to address additional issues.

- Will this project reduce wasteful dependence upon fossil fuels, underground metals, and minerals?
- Will this project ensure that the smallest possible amount of resources is used?
- Has the proposal included green procurement standards for required goods, materials, and services?
- Will this project lead to a decrease in greenhouse gas emissions?
- Will this project reduce the need for fossil fuel-dependent transport, increase public transit use, or increase walking and bicycling?
- Will this project support businesses that emit less polluting or hazardous substances to air, water, soil and ecosystem services?
- Will this project raise awareness about waste prevention and recycling and will it help reduce the amount of waste going into the landfill?
- Will this project still be relevant when looking at the demographic changes ahead?
- Will this project consider the most up-to-date technology for recycling and waste reduction?
- Will this project use products that are non-polluting or come from an environmentally friendly source that will reduce negative impacts of the project on the environment, e.g., FSC wood, non-toxic, and non bio-accumulative chemicals?
- Will this project avoid the risks of water, air, and soil contamination?
- Will this project support the provision of environmental and social services in a certain area (e.g., flood prevention, water purification, air cleaning)?
- Will this project be beneficial in helping the county to adapt to the effects of climate change (e.g., changes in precipitation, flood and drought risks, heat emergencies, etc.)?
- Is this project avoiding negative impacts on water bodies, wetlands, etc., and is this project supporting the establishment and management of protected areas in water bodies, wetlands, etc.?
- Is this project proposing activities to raise awareness about water scarcity, water conservation, or water recycling and will this lead to an improvement of the water quality of a certain water body?
- Will this project still be beneficial once the funding is used and what, if any, public funding will need to be used for ongoing maintenance?
- Will this project support jobs in the eco-technology field and/or does this project include training for relevant stakeholders in renewable energy and other clean and sustainable technology?
- Has this project developed a strategy for measuring anticipated outcomes of the project?
- Has this project developed a strategy for how to disseminate results or best practices?
- Will this project improve equity outcomes for everyone?
- Will this project improve access to community services and facilities for all people of the community?



Updated January 2019

## **Energy To Education Grant Application**

## Confirmation of Application Receipt:

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Your proposal was successfully submitted to Exelon. No further action on your part is required and you can expect to receive notice of your proposal's status shortly. To print a copy of this completed application go to 'File', then 'Print' on your browser toolbar. Click here to [return to the homepage](#) when you are finished.

## Organization Information

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- \* Legal Name    UNIVERSITY OF WISCONSIN FOUNDATION
- AKA Name
- \* Address    1848 University Avenue
- Address 2
- \* City    Madison
- \* State    Wisconsin
- \* Zip/Postal Code    53726
- \* Country    United States
- \* Exelon Board Members    None
- \* Main Telephone    6082634545
- \* Main Email Address    giftmatch@supportuw.org
- \* Website Address    supportuw.org
- \* Mission Statement    The mission of the University of Wisconsin Foundation is to promote the welfare of and advance the objectives of the University of Wisconsin-Madison by encouraging the interest, engagement, and financial support of alumni, donors, and

friends in the life of the University and with each other.

The University of Wisconsin-Madison is the original University of Wisconsin, created at the same time Wisconsin achieved statehood in 1848. It received Wisconsin's land grant and became the state's land-grant university after Congress adopted the Morrill Act in 1862. It continues to be Wisconsin's comprehensive teaching and research university with a statewide, national and international mission, offering programs at the undergraduate, graduate and professional levels in a wide range of fields, while engaging in extensive scholarly research, continuing adult education and public service.

The primary purpose of the University of Wisconsin-Madison is to provide a learning environment in which faculty, staff and students can discover, examine critically, preserve and transmit the knowledge, wisdom and values that will help ensure the survival of this and future generations and improve the quality of life for all. The university seeks to help students to develop an understanding and appreciation for the complex cultural and physical worlds in which they live and to realize their highest potential of intellectual, physical and human development.

It also seeks to attract and serve students from diverse social, economic and ethnic backgrounds and to be sensitive and responsive to those groups which have been underserved by higher education.

## Contact Information

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\* Salutation Mr.

\* First Name Scott

Middle Name

\* Last Name Williams

Suffix

\* Title Research and Education Coordinator

\* Telephone 6088902199

\* Email Address spwilliams@wisc.edu

\* Address 1552 University Ave.

Address 2 2162 Wisconsin Energy Institute

\* City Madison

\* State Wisconsin

\* Zip/Postal Code 53726

Country United States

## Organization Details

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\* Executive Director First Name Timothy

\* Executive Director Last Name Donohue

\* Executive Director Title Director, Wisconsin Energy Institute

\* Executive Director Phone w/ Extension (608) 262-4663

Executive Director Fax

\* Executive Director Email tdonohue@bact.wisc.edu

\* Exelon Employee Involvement None

Number of Board Members

Board of Directors Diversity Strategy

\* Organization Annual Budget \$646,000.00

\* Previous Exelon Funding The Wisconsin Energy Institute has not received prior funding from Exelon. Other departments or programs at the University of Wisconsin-Madison have received gifts from Exelon in the past but are not involved in this proposal.

\* How did you hear about us? Other (please specify below)

List Other Method	GrantForward web service
* Non-Discrimination Agreement	I agree

## Program Information

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* Operating Company	Constellation
* Program Area	----Education - K 12 STEM
* Grant Purpose	Specific Program Support
* Project Title	Waste-to-Energy Stewardship and Science
* Project Start Date	01/06/2020
* Project End Date	06/30/2021
* Project Description	<p>Wisconsin has long been at the forefront in the use of waste-to-energy technologies, especially anaerobic digesters and landfill gas utilization. Despite this leadership, as an agricultural state with a large dairy industry, Wisconsinites continue to face daunting waste management challenges. Wisconsin citizens are affected by the management (or mismanagement) of organic wastes such as manure, and sustainable strategies are increasingly crucial in the light of threats to ground and surface water health. Additionally, the costs of landfilling organic municipal solid waste will only increase as landfills reach capacity. This multi-pronged proposal addresses a lack of public understanding around these topics, and outlines several strategies for developing waste-to-energy education in Wisconsin.</p>

The first pillar of our proposal is a partnership between the Wisconsin Energy Institute (WEI) at the University of Wisconsin-Madison (UW-Madison) and the Dane County, Wisconsin Landfill - a national leader in waste-to-energy technology. In 2019, the landfill installed a system to convert landfill gas to renewable natural gas (RNG) and inject it into an interstate pipeline; it is the first facility in the nation to also accept RNG from off-site producers. The landfill welcomes 750+ school children/year to tour their facilities. They've demonstrated commitment to education and aim to increase visitor numbers by initiating a school bus subsidy program in fall 2019.

In alignment with these goals, landfill staff, WEI staff, and UW-Madison students will develop scaled, standards-aligned pre- and post- lessons on the science of waste management and waste-to-energy technologies. These lessons will be given to classrooms for use before and after their visit to the landfill and will also be used in a variety of public outreach efforts, most notably at the 2020 Youth 4H Conference where hundreds of students convene for educational workshops and skills building.

Next, we will develop interactive displays and materials for hands-on educational activities for use during tours and at science fairs and festivals reaching 1,500+ students/year. UW-Madison students will be trained to facilitate teaching with the displays at public outreach events, and the landfill will incorporate the developed materials into a mobile museum. These activities will focus on the science of waste management, current Wisconsin waste-to-energy innovation, and other relevant messages encouraging sustainable waste disposal practices. Importantly, these activities and the lessons outlined above will be made publicly available and shared through a variety of educator networks to provide widespread support for waste-to-energy education.

The final pillar of our proposal is to increase awareness of local waste-to-energy innovations among UW-Madison students and to encourage better stewardship of organic waste at the university. WEI will collaborate with student organizations that have a sustainability mission to arrange student field trips to either the landfill, waste water treatment plant, or a local manure digester. Students will see first-hand how their waste is managed, the technologies involved, and the opportunities for sustainable waste-to-energy solutions.

Participating students would also be encouraged to help expand campus involvement in waste-to-energy practices. In 2018, the UW-Madison Office of Sustainability established a Compost Stewards program, in which students and staff in campus buildings can voluntarily collect food scraps and dispose in the proper collection bins for transport to a local digester. While a handful of buildings have participated in Compost Stewards, many others have yet to participate. Students collaborators would help identify potential buildings and individual champions for expansion. A Compost Stewards Toolkit would also be developed to help new buildings launch and manage their own compost program with buy-in from

building occupants.

* Requested Amount	\$24,931.50
* Total Project Budget	\$24,931.50
* Committed Funding Sources	None
* Pending Funding Sources	None
* Target Population Served	Multi (targets more than one group)
* Number Of People Benefiting	2300
* Gender	51%Female 49%Male
* Ethnicity	5%African-American 5%Asian-American 79%Caucasian 6%Hispanic/Latino 1%Native American 4%Other
* Age Group	40%Elementary & Middle School (Grades K-8) 35%High School (Grades 9-12) 15%Four-Year College or University 10%Adults (Ages 18-64, excluding college students)
* Primary Geographic Area Served	Wisconsin
* Measuring Success and Previous Success	<p>Success will be measured in a variety of both qualitative and quantitative ways. Progress will coordinated and tracked using the Waste-to-Energy Education Logic Model (included in additional attachments).</p> <p>To track success for our pre- and post- lessons, we will:</p> <ul style="list-style-type: none"><li>- Measure the number of students who visit landfill, percentage increase over past years</li><li>- Measure the number of classrooms/students being exposed to pre- and post-tour lessons in addition to the landfill tour</li><li>- Gather feedback from educators on who have used pre- and post-tour lessons on their effectiveness. Lessons will be</li></ul>

adapted accordingly.

To track success of our interactive activities and youth workshops, we will:

- Use formative assessment during field trips and at the 4H Youth Conference
- Update and adapt lessons accordingly
- Track total number of youth reached
- Track contact minutes/hours spent teaching each youth

To track success of UW-Madison campus efforts, we will:

- Measure the number of students participating in field trips
- Measure the number of students volunteering to support Compost Stewards efforts
- Track the number of additional buildings participating in Compost Stewards (and occupancy of those buildings)

Additionally, an important indicator of success is the enhanced collaboration between UW-Madison and the Dane County Landfill. By partnering on these goals, these groups will be better equipped to collaborate and make collective efforts regarding community education, outreach, and engagement surrounding waste management. We will measure the effectiveness by tracking additional partnering opportunities that arise due to this program.

\* Relationships with Other Organizations

The Wisconsin Energy Institute (WEI) is UW-Madison's home for broad, cross-disciplinary energy research and education. WEI fosters projects across disciplines, prepares the energy leaders of today and tomorrow, and enhances public understanding of energy issues. WEI will serve as the lead partner for the grant, coordinating the collaborations and guiding the timeline. The Education and Outreach Team will track objectives, hire and supervise undergraduate workers, and dedicate approximately 100 hours each of their work time to grant efforts. WEI is an active member of UW-Madison's Science Outreach group, Science Alliance. This group will aid in identifying and coordinating the use of developed educational materials at science fairs and science outreach events around the state, including partnerships with many elementary schools and community organizations.



The Dane County Landfill was recently recognized by the American Association for the Advancement of Science for its waste-to-energy innovations as part of that organization's national "How We Respond" initiative to share the diverse ways communities across the United States are using science to respond to climate change. The landfill will serve as a primary partner in developing and implementing educational materials for pre- and post-tour lessons as well as hands-on waste-to-energy and waste management educational activities. These activities will take place both on-site at the Dane County Landfill and the Wisconsin Energy Institute as well as off-site around the community and state.

Area educators, both formal K-12 Educators and informal educators, will be provided with information about the Dane County Landfill tours and pre- and post-tour lessons, and they will be surveyed for feedback on lesson development. These survey responses will direct lesson adaptations. A network of educators will be developed first from educators already involved in the educational opportunities at the landfill and WEI, and will grow with marketing efforts. In addition to sharing the developed lesson plans and materials publicly on the WEI website, the Ag in the Classroom Coordinator from the Wisconsin Farm Bureau will help distribute information about waste-to-energy educational opportunities and lesson plans to formal and informal educators around the state. Developed materials will also be used with students and youth leaders participating in the 2020 WI 4H & Youth Conference.

The UW-Madison Office of Sustainability is charged with fulfilling UW-Madison's sustainability mission to align research and education on sustainability with campus operations in the service of environmental, economic and social responsibility to people and the planet. The office conducts a number of initiatives to encourage sustainable practices across campus, from classrooms and residence halls to research labs and office spaces. The Office of Sustainability also interacts with several registered student organizations that have a sustainability or environmental mission, and would help identify which of these organizations would be the most appropriate partners for offering field trips and assisting with the Compost Stewards program. The Office of Sustainability will also assist WEI in disseminating the Compost Stewards Toolkit to additional campus buildings.

## Attachments

* W-9 File	<ul style="list-style-type: none"><li>• <a href="#">UWF Form W-9 3-13-18.pdf (585.33 K)</a>, uploaded by Scott Williams on 10/01/2019</li></ul>
List of Donors File	
* Board of Trustees File	<ul style="list-style-type: none"><li>• <a href="#">UW Foundation Board of Directors June 1 2019.pdf (179.35 K)</a>, uploaded by Scott Williams on 10/01/2019</li></ul>
* Project Budget File	<ul style="list-style-type: none"><li>• <a href="#">E2 Budget WEI.pdf (47.78 K)</a>, uploaded by Scott Williams on 10/01/2019</li><li>• <a href="#">E2 Budget.xlsx (19.54 K)</a>, uploaded by Scott Williams on 10/01/2019</li></ul>
* Operating Budget File	<ul style="list-style-type: none"><li>• <a href="#">WEI_Ops_Budget.pdf (48.83 K)</a>, uploaded by Scott Williams on 09/26/2019</li></ul>
Additional Attachment(s)	<ul style="list-style-type: none"><li>• <a href="#">E2 LM_WorksheetFlowchart.pdf (121.97 K)</a>, uploaded by Scott Williams on 09/26/2019</li><li>• <a href="#">DaneCountyLandfill_Letter of Support_9_2019.pdf (464.01 K)</a>, uploaded by Scott Williams on 09/26/2019</li><li>• <a href="#">Dane Co Landfill Tour_ School Bus Fee Waiver_2019.pdf (437.97 K)</a>, uploaded by Scott Williams on 09/27/2019</li></ul>

## Outcomes

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### Outcomes Instructions

Number of Traditional Media Impressions

Number of Exelon Traditional Media Impressions

Number of Online/Electronic Impressions

Number of Exelon Online Impressions

Number of Schools Engaged in Program 30

Number of School-Aged Children Engaged in Program 2000

Number of Teachers Receiving Professional Development Through the Program

Student Summary After participating in our programs, both college and 6-12-grade students will understand:

- How organic waste is managed and how it impacts our communities.
- The science behind the creation of biogas (e.g. anaerobic digestion) and the technology involved in converting it to fuel for human consumption.
- Steps they can take as individuals and as communities to handle waste in a more sustainable manner, especially by encouraging the use of digester facilities to handle organic wastes for nutrient management and more efficient capture of biogas.

Lessons and activities will be adapted depending on age group and length of engagement. See the Measuring Success section for more details on how learning objectives will be assessed.

Payee Information

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\* Payee Name 1 UNIVERSITY OF WISCONSIN FOUNDATION

Payee Name 2 Wisconsin Energy Institute Fund - 112347617

Payee Country United States

Payee Address 1 1848 University Avenue

Payee Address 2

Payee City Madison

Payee State Wisconsin

Payee Province

Payee Zip/Postal Code 53726

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Updated January 2019

## **School Bus Waiver Flyer**



WANT YOUR STUDENTS TO LEARN ABOUT  
WASTE AS A RESOURCE AND SEE

# WHERE WASTE GOES?

## ABOUT OUR FACILITY

The Dane County Department of Waste & Renewables operates an active landfill, household hazardous waste collection facility (Clean Sweep), construction and demolition waste recycling facility, and renewable gas plant at our location at 7102 USH 12 in Madison, WI (across from Yahara Hills Golf Course). Each year, we host nearly 750 students (of all ages) for tours of our facilities. Our tours offer an excellent opportunity for lessons in environmental stewardship, science, engineering, and technology.

**250,000**  
**TONS**

of waste is responsibly  
landfilled each year.  
This is equivalent to the  
weight of over

**40,000**  
elephants!

**3,000,000**  
**GALLONS**

of renewable vehicle fuel will  
be produced each year from  
landfill gas. This is enough to  
power

**6,000**  
cars for a year!



## BUS FEE WAIVER PROGRAM

The Department of Waste & Renewables will pay for transportation costs (up to \$250 per group) for schools that find transportation fees a barrier to visiting our site. The bus fee waiver is subject to the need of the school and preference will be given for schools with over 40% of students approved for free and reduced meals.

## CONTACT US

Email [younes@countyofdane.com](mailto:younes@countyofdane.com) for additional information about the program and to set up a tour.

Updated January 2019

## **Mobile Lab Example**





CLICK HERE TO RETURN TO OUR NEW SITE! ([HTTPS://URBANGREENLAB.ORG](https://urbangreenlab.org))



## Community Festivals & Events

Community Events are always more fun when they are sustainable! The Mobile Lab encourages discussion and inspiration for sustainable behaviors. Community members can explore the lab at their leisure and interact with our friendly volunteers and staff. We do request a donation for community events, this donation helps us develop all our educational programming.





## WE BUILT NASHVILLE'S FIRST MOBILE SUSTAINABILITY LAB

The Mobile Lab reaches diverse and underserved populations to enhance middle and high schools' science and technology curricula and inspire sustainable behaviors.

### A VEHICLE OF INSPIRATION

Urban Green Lab's Mobile Sustainability Laboratory ("Mobile Lab") is a custom-built, state-of-the-art, 40-foot classroom on wheels delivering access to holistic sustainable living education in community-wide. Started in 2016 with support from Nissan and other sponsors, the Lab is our ultimate vehicle of inspiration, traveling to fairs and festivals throughout Nashville and beyond to fill a gap in sustainability education by strengthening waste reduction literacy, fostering behavioral change strategies in the classroom, household, and future workplaces, and instilling a greater sense of individual responsibility.

### REINFORCING STEAM EDUCATION

The Mobile Lab is designed to reinforce academic standards for the Next Generation Curriculum as well as STEAM (Science, Technology, Engineering, Arts, & Mathematics). Advised by our Curriculum Advisory Panel of area teachers and administrators, the Lab features nine educational panels with lessons drawn from our sustainable living curriculum around energy waste, water waste, food waste, and ecosystem changes, even green careers. Through newly-revised panels, worksheets, pre/post tests, and fun activities, people learn how sustainability improves health, saves money, and protects our natural resources.

### GREEN MACHINERY OF ITS OWN

Often, the Mobile Lab is someone's first exposure to the concept AND experience of sustainability. Many educational panel inside the Lab include a hands-on, interactive feature to boost the message, like a composting game or bulb wattage calculator. The Lab was intentionally built with real-life sustainable features of its own as an

example of green building, like roof solar panels and batteries that store and power the classroom, natural light and interstory windows, LED lighting, bamboo displays, zero paint VOCs, and recycled content in the panel floors.



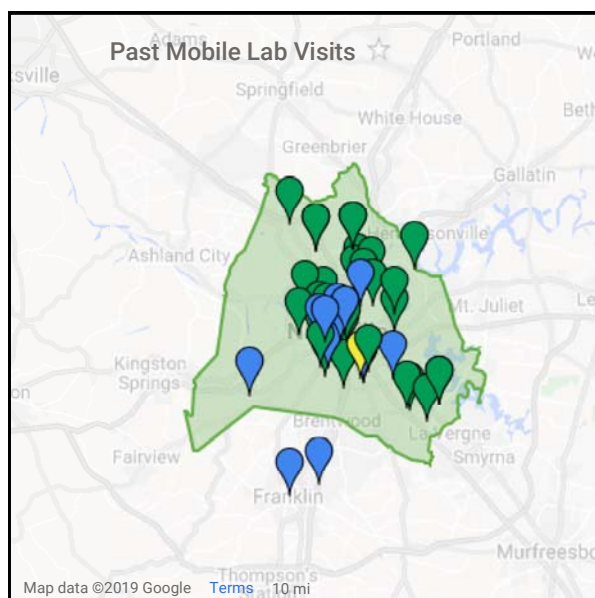
[CLICK HERE TO RETURN TO OUR NEW SITE! \(HTTPS://URBANGREENLAB.ORG\)](https://urbangreenlab.org)

## WANT THE LAB TO COME TO YOU?

Check out the criteria below to see if the Mobile Lab will be a good fit for your community event!

- A total of **sixteen** people can be inside the Lab at any given time
- For larger groups, we include hands-on activities outside of the Lab and circulate everyone through both the Lab and outdoor activities.

**EMAIL [CONNECT@URBANGREENLAB.ORG](mailto:CONNECT@URBANGREENLAB.ORG) WITH ANY QUESTIONS**



“

I learned there  
are a lot of  
simple things  
that we can do  
that make a big  
impact.

- Student  
testimonial

## MEET OUR GENEROUS MOBILE LAB SPONSORS



# NISSAN

CLICK HERE TO RETURN TO OUR NEW SITE! ([HTTPS://URBANGREENLAB.ORG](https://urbangreenlab.org))

(<http://www.nissanusa.com>)



(<http://www.12pointdesignworks.com>)



(<http://www.landscape-solutions.com>)



(<http://www.lightwavesolar.com>)



(<http://www.lipscomb.edu>)



(<http://www.memorialfoundation.org>)



(<https://www3.ej>)



(<http://www.schneider-electric.com>)



sesco lighting



SnapNrack Solar Mounting Solutions



TecNiq Changing the Shape of Light



(<http://www.tn.gov/Human->)



TENNESSEE SOLAR SOLUTIONS



oliq



(<http://www.wearwell.com>)



ov/twra/)

(C) 2019 URBAN GREEN LAB

P.O. BOX 68348, NASHVILLE, TN, 37206

(615)-442-7072 [CONNECT@URBANGREENLAB.ORG](mailto:CONNECT@URBANGREENLAB.ORG) ([MAILTO:CONNECT@URBANGREENLAB.ORG](mailto:CONNECT@URBANGREENLAB.ORG))

Updated January 2019

## **Budgetary Cost Estimate**

SMART Application Budget Worksheet

Project: **Mobile Sustainability and Environmental Education Lab**

**Estimated Costs**

- Acquisition of trailer or shipping container..... \$25,000
- Trailer Customization..... \$75,000
  - o Window/Skylight Install
  - o Flooring
  - o Wall Coverings
  - o Counters
  - o Electrical wiring
  - o ADA Accessibility
  - o Power generation (solar)
  - o Screens/technology
- **Total Estimated Cost.....\$100,000**

**Email correspondence with LDV Custom Specialty vehicles, Dane County's partner for the Bookmobile, included.**

## Wienkes, Roxanne

---

**From:** Cory Weithaus <cweithaus@ldvusa.com>  
**Sent:** Tuesday, October 08, 2019 9:24 AM  
**To:** Wienkes, Roxanne  
**Subject:** Mobile Classroom  
**Attachments:** Houston Public Library (TX) 290266 As Built Prod Dwg.pdf

CAUTION: External Email - Beware of unknown links and attachments. Contact Helpdesk at 266-4440 if unsure

Hi Roxanne,

Thanks for reaching out and considering us for the upcoming project. I will attach a layout of a current project that we are working on for Houston Library. This is a self-contained vehicle, and not a trailer, but has some similar features that we discussed. Its purpose is multi-functional for educational and classroom type programming. This build with the vehicle was roughly \$300,000. There was an abundance of technology on board and was built on a larger platform of vehicle. I have not quoted many trailer type applications for this, but would have to guess we would be well over \$100,000 depending on the configuration and size. Please see my contact information below and let me know you thoughts.

*Cory Weithaus*

Medical – Outreach Sales

LDV, Inc.

180 Industrial Drive • Burlington • WI 53105

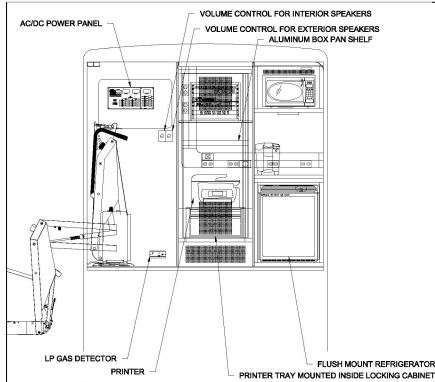
Office: (262) 757-2430

Cell: (262) 492-6547

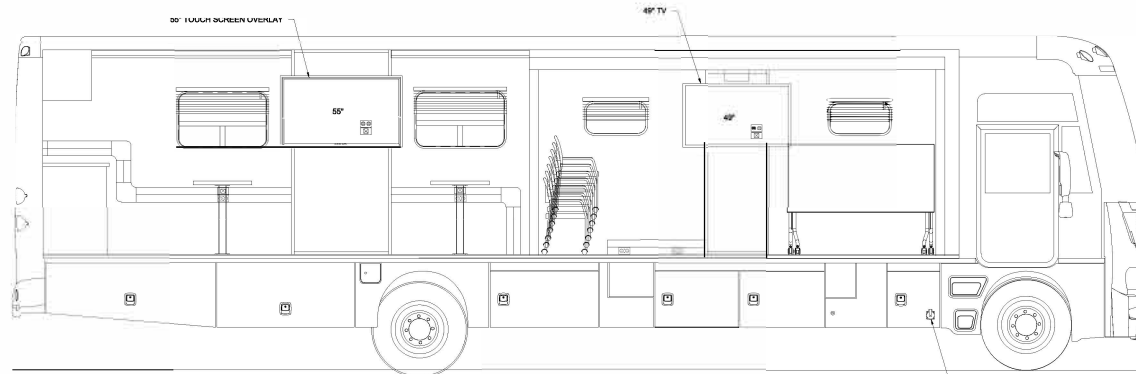
[www.ldvusa.com](http://www.ldvusa.com)



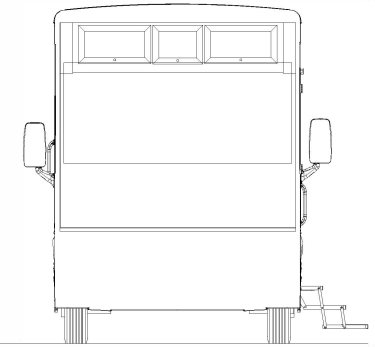
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REAR

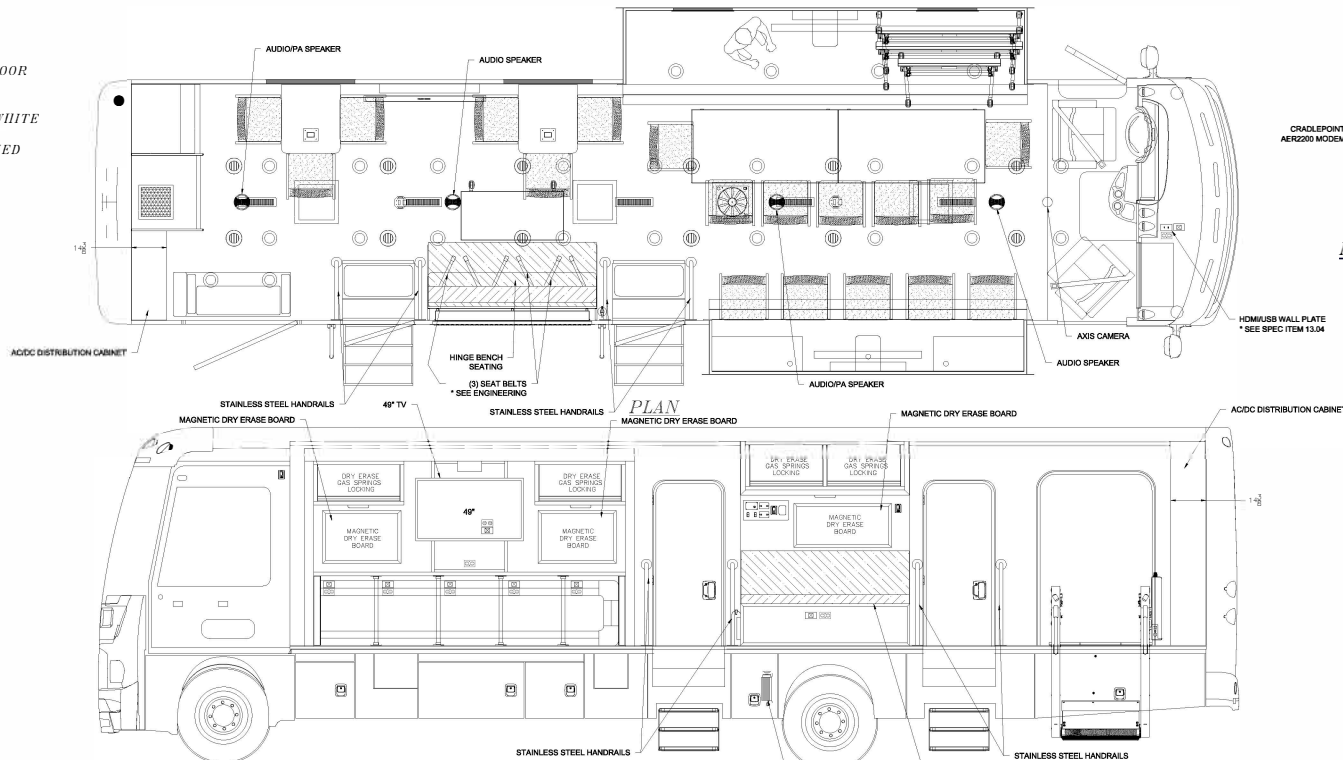


STREET SIDE

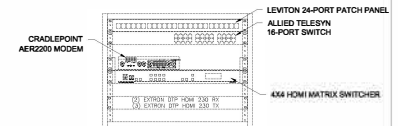


FRONT

- NOTE:**
- SEE HEAT VENTS ON SEPARATE FLOOR VENT LAYOUT DRAWING
  - WALLS TO BE FRP LINING
  - CEILING TO BE REWRAPPED WITH WHITE VINYL
  - CHAIRS AND TABLES TO BE SUPPLIED BY CUSTOMER
  - SCENE LIGHTS CONTROLLED BY A SWITCH ON THE DASH



CURB SIDE



ELECTRONICS RACK

LED CEILING LIGHT (WHITE)	120 VAC	HDMI PORT
LED CEILING LIGHT (WHITE, RED OR BLUE)	120 VAC WITH DUAL USB PORTS	RJ-45 NETWORK JACK
ON DURING REDUCED MODE	120 VAC C.F.I.	RJ-11 TELEPHONE JACK
	INVERTER	TV ANTENNA
	12 VDC	SPEAKER VOLUME
	QUANTITY: 12 (SEE SPECIFICATIONS)	SWITCH
	120 VAC (NON-DETERMINED)	MONITOR
	120 VAC (NON-DETERMINED)	AC THERMOSTAT
	120 VAC (NON-DETERMINED)	ESPAR FURNACE THERMOSTAT

TPD INTERIOR INTEL-TOUCH PANE	ALARM SYSTEM CONTROL
TPS EXTERIOR INTEL-TOUCH PANE	WATER/WASTE TANK LEVEL MONITOR
SURVEILLANCE CAMERA	CO/SMOKE DETECTOR
EXTERIOR TIR WIPER (S.A.)	SPEAKER
AC THERMOSTAT	BACK-UP CAMERA
ESPAR FURNACE THERMOSTAT	PERIMETER CAMERA

SOME ITEMS SHOWN MAY BE CUSTOMER SUPPLIED OR OPTIONAL. REFER TO SPECIFICATIONS FOR DETAILS.

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**LDV**

HOUSTON PUBLIC LIBRARY (TX)  
290266

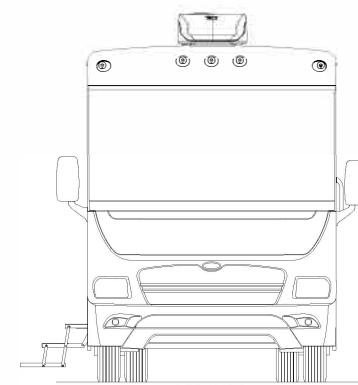
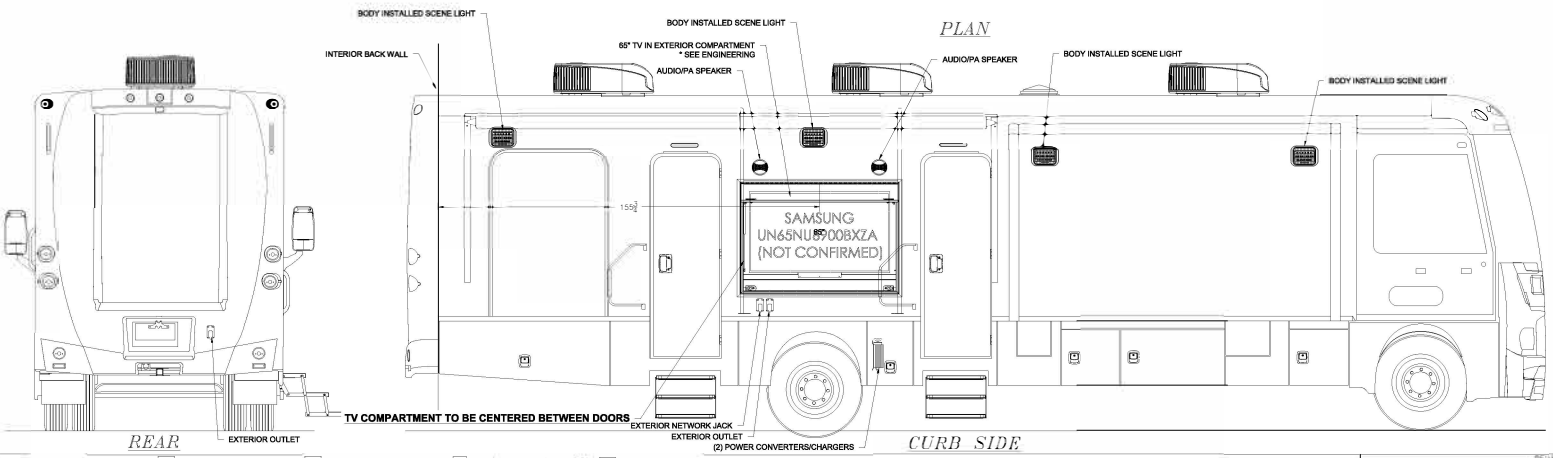
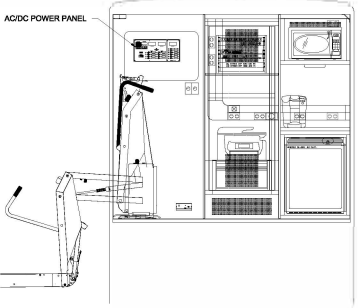
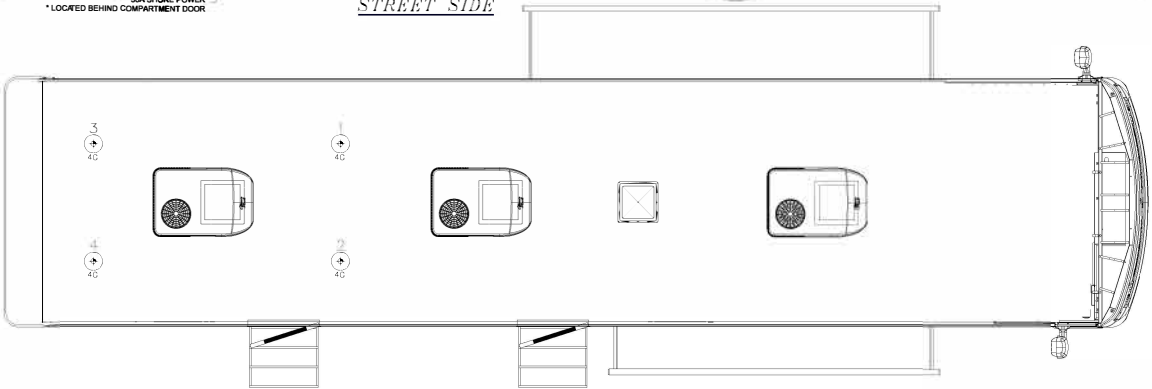
DATE: 08/28/19  
SCALE: 1/2" = 1'-0"  
DRAWN: J.B. BULLT PRODUCTION



- BUILD:**
- SEAT BELT BRACKET (SEE ENGINEERING)
  - INSTALL GENERATOR IN REAR COMPARTMENT
  - STREET SIDE SCENE LIGHTS
  - EXTERIOR TV COMPARTMENT (SEE ENGINEERING)

**DO NOT BUILD:**

**NOTE:**  
SCENE LIGHTS CONTROLLED BY A SWITCH ON THE DASH



- REAR**
- LED CEILING LIGHT (WHITE)
  - LED CEILING LIGHT (WHITE, RED OR BLUE)
  - ON DURING REDUCED MODE
  - 120 VAC
  - 120 VAC WITH DUAL USA PORTS
  - 120 VAC C. F. I.
  - INVERTER
  - 12 VDC
  - QUANTITY INDICATED IN DRAWING
  - 120 VAC (3-DETERMINED/RECOMMENDED)
  - 120 VAC (NON-DETERMINED)
  - 120 VAC (DET/NOT DET/WH/WH/WH)
  - HDMI PORT
  - RJ-45 NETWORK JACK
  - RJ-11 TELEPHONE JACK
  - TV ANTENNA
  - SPARE PLATE
  - SPEAKER VOLUME
  - SWITCH
  - MICROPHONE
  - TPD INTERIOR INTEL-L-TOUCH PAH
  - TPS EXTERIOR INTEL-L-TOUCH PAH
  - WATER/WASTE TANK LEVEL MONITOR
  - CO/SMOKE DETECTOR
  - SPK/SMOKE
  - AC THERMOSTAT
  - ESP/RR FURNACE THERMOSTAT

- ALARM SYSTEM CONTROL
- WATER/WASTE TANK LEVEL MONITOR
- CO/SMOKE DETECTOR
- SPK/SMOKE
- AC THERMOSTAT
- ESP/RR FURNACE THERMOSTAT

- TPD INTERIOR INTEL-L-TOUCH PAH
- TPS EXTERIOR INTEL-L-TOUCH PAH
- WATER/WASTE TANK LEVEL MONITOR
- CO/SMOKE DETECTOR
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Updated January 2019

## **Staff Resume For Project Implementation**

## EDUCATION

- Master of Arts, Social Innovation & Sustainability Leadership- Edgewood College** Spring 2021
- Bachelor of Science, Civil & Environmental Engineering, University of Houston-Honors College** Spring 2017
- Cornell University's Online Civic Ecology Lab** Fall 2017-Spring 2018
- Received certificate of completion for the Environmental Education Outcomes Course
  - Received certificate of completion for the Urban Environmental Education Course

## EXPERIENCE

- ECO AmeriCorps-** Department of Environmental Conservation, Vermont Fall 2017- Fall 2019
- Served as the *Outreach & Education Assistant* with the Lamoille Regional Solid Waste Management District
  - Assisted local businesses & neighborhoods in discovering the best ways to recycle and compost at home and at work
  - Built & sustained waste-reduction advocacy networks that unite community leaders together to divert waste from the landfill
  - Led the Waste Warriors, a 16 person group of volunteers that teach the local community about the new recycling & composting laws found in Act 148
- Resident Assistance-** University of Houston, Houston, Texas Spring 2015- Spring 2017
- Helped set students up for academic success by developing living-learning environment of over 50 students through relationship building, activities that promoted greater campus engagement, and by modeling ethical leadership
- Research Assistant, Environmental Engineering- UH** Fall 2015
- Worked with a team of graduate students & professors to examine the effects of graphene on wastewater treatment
- Utah Forests Ecology Intern-** Grand Canyon Trust (GCT), Castle Valley, Utah Summer 2015
- Analyzed biological soil crust to determine the impacts of land use for cattle grazing in Grand Staircase- Escalante
  - Ran multiple transects for various projects including beaver dam surveys in Monroe Mt., native and exotic grass composition in Elk Ridge, and aspen browse analysis in post-fire recovery area
  - Presented research findings to a group of 15-20 scientists at a research poster presentation event
- Doris Duke Conservation Scholars Program -** Northern Arizona University, Flagstaff, Arizona Spring 2014-Spring 2016
- Researched and presented findings on habitat patch dynamics, fragmentation, and restoration
  - Investigated invasive species impact; their management and control
  - Studied biodiversity, conservation writing techniques, GIS, diversity and mathematics in conservation
  - Discussed landscape analysis, modeling techniques, and prioritization of conservation action
- Research Internship on Post Fire Habitat Conversion-** Bandelier, New Mexico Summer 2014
- Determined what vegetation recolonizes a landscape after a fire and why
  - Lived and camped in the back country with research team while collecting field data

## RECOGNITION

- Critical Language Scholarship Recipient, U.S Department of State- Jaipur, India Summer 2016
- The Oxford Consortium for Human Rights: Development and Human Rights Fellowship Fall 2016
- Udall Honorable Mention Spring 2015

## SKILLS

Applications: Microsoft Excel Programming, Matlab Basics, AutoCAD Languages: English, Nepalese, Basic Hindi, Basic Spanish

## ORGANIZATION AFFILIATIONS

- Volunteer Firefighter, Morrisville Fire Department** Fall 2017- Fall 2019
- Voting Member, Sustainability Committee- UH Student Government Board** Fall 2015- Spring 2017
- Create and develop the structure and policy for a wide range of sustainability projects across campus
  - Led successful end of semester donation drive project in campus residence halls to curb amount of waste sent to landfills