Budget

U S Grant (062802) - Clermont County - 2016 - Straight A Fund - Rev 0 - Straight A Fund - Application Number (58)

U.S.A.S. Fund #: 466

Plus/Minus Sheet (opens new window)

Object Code / Purpose Code	Salaries 100	Retirement Fringe Benefits 200	Purchased Services 400	Supplies 500	Capital Outlay 600	Other 800	Total
Instruction	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Support Services	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Governance/Admin	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Prof Development	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Family/Community	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Safety	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Facilities	0.00	0.00	0.00	0.00	781,000.00	0.00	781,000.00
Transportation	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Indirect Cost						0.00	0.00
Total	0.00	0.00	0.00	0.00	781,000.00	0.00	781,000.00
						Adjusted Allocation	0.00
						Remaining	-781,000.00

Application

U S Grant (062802) - Clermont County - 2016 - Straight A Fund - Rev 0 - Straight A Fund - Application Number (58)

Please respond to the prompts or questions in the areas listed below in a narrative form.

A) APPLICANT INFORMATION - General Information

1. Project Title:
Green Energy -Geothermal Heating and Cooling

2. Project Summary: Please limit your responses to no more than three sentences.
Replacing existing electric RTU's in the Southwest Wing with Geothermal HVAC or ground source heat pumps to save the district significant op

This is an ultra-concise description of the overall project. It should only include a brief description of the project and the goals it hopes to achieve.

3. Estimate of total students at each grade level to be directly impacted each year.

*This is the number of students that will receive services or other benefits as a **direct result** of implementing this project. This does not include students that may be impacted if the project is replicated or scaled up in the future. It excludes students who have merely a tangential or indirect benefit (such as students having use of improved facilities, equipment etc. for other uses than those intended as a part of the project). The Grant Year is the year in which funds are received from the Ohio Department of Education. Years 1 through 5 are the sustainability years during which the project must be fiscally and programmatically sustained.*

Grant Year				
Pre-K Special Education	K	1	2	3
4	5	6	7	8
9	10	175 11	175 12	

Year 1				
Pre-K Special Education	K	1	2	3
4	5	6	7	8
9	10	175 11	175 12	

Year 2				
Pre-K Special Education	K	1	2	3
4	5	6	7	8
9	10	175 11	175 12	

Year 3				
Pre-K Special Education	K	1	2	3
4	5	6	7	8
9	10	175 11	175 12	

Year 4				
Pre-K Special Education	K	1	2	3
4	5	6	7	8
9	10	175 11	175 12	

Year 5				
Pre-K Special Education	K	1	2	3
4	5	6	7	8

9	10	175 11	175 12

4. Explanation of any additional students to be impacted throughout the life of the project.
This includes any students impacted or estimates of students who might be impacted through future scale-ups or replications that go beyond the scope of this project.

Every student who enters the doors of the Career Center will be impacted through on-site green energy educational resources. Having on-site Ground Source Heat Pumps will give science teachers the ability to teach about sustainable energy in their classrooms with a hands-on example. Each year, over 350 students will be exposed to green energy solutions. In addition, engineering students will be exposed to civil, electrical, mechanical, environmental, and electronics engineering related to Geothermal Energy. Construction Technologies students will be exposed to multiple construction careers in sustainable energy infrastructure development.

5. Lead applicant primary contact: - Provide the following information:

First and last name of contact for lead applicant
Lisa Tuttle-Huff

Organizational name of lead applicant
US Grant CTPD

Address of lead applicant
718 West Plane Street Bethel, OH 45106

Phone Number of lead applicant
513-734-6222

Email Address of lead applicant
lisa.tuttle-huff@grantcareer.com

Community School Applicants: After your application has been submitted and is in Authorized Representative Approved status an email will be sent to your sponsoring entity automatically informing the sponsor of your application.

6. Are you submitting your application as a consortium? - Select one checkbox below

☐ Yes

☑ No

If you are applying as consortium, please list all consortium members by name on the "Consortium Member" page by clicking on the link below. If an educational service center is applying as the lead applicant for a consortium, the first consortium member entered must be a client district of the educational service center.

Add Consortium Members

7. Are you partnering with anyone to plan, implement, or evaluate your project? - Select one checkbox below

☑ Yes

☐ No

If you are partnering with anyone, please list all partners (vendors, service providers, sponsors, management companies, schools, districts, ESCs, IHEs) by name on the "Partnering Member" page by clicking on the link below.

Add Partnering Members

B) PROJECT DESCRIPTION - Overall description of project and alignment with goals

8. Describe the innovative project: - Provide the following information

The response should provide a clear and concise description of the project and its major components. The following questions will address specific outcomes and measures of success.

a. The current state or problem to be solved; and

US Grant Career Center is an all-electric facility. This costs the school district and community a significant amount of money that could be utilized in the classroom for students on a more direct basis. US Grant has a total of eleven rooftop heating and cooling units in the south west wing which are 18 years old and at the end of their useful life. All of these need to be replaced within the next five years. The annual maintenance costs for these units has been over $5000 yearly. Electrical expenses for the district for the last fiscal year of 2015 were $135,000 with a total kilowatt usage of 1,742,145 kwh. In addition, there are five career tech labs and classrooms that have no cooling units, and the district will need to add these units at an estimated cost of $75,000. US Grant needs to convert one high-bay lab to a bioscience classroom and improve comfort for students and staff in the additional labs. The transition to geothermal energy would not only save the district money, but it would also expose our rural students to technology that will be a part of their future. Most of our rural students have not been exposed to sustainable energy sources beyond the textbook, and this would allow them to have first-hand knowledge of this technology.

b. The proposed innovation and how it relates to solving the problem or improving on the current state.

Geothermal HVAC is the most energy efficient way to heat and cool a building and is a renewable and sustainable method. It moves heat from the earth to the building and vice versa, by using the constant temperature of the earth to provide water for heating and cooling, rather than creating heat by combusting a fuel. We will be using geothermal heat pumps to heat and cool an entire wing of our district. A partnership between US Grant and Melink to install geothermal ground source heat pumps will result in a $39,500 a year reduction in operating and maintenance cost for actual decreases in KWh usage by 507,000 KWh per year at an average cost of $.078/KWh. Over the life of this project, we also estimate there would be a savings of around $5,000 per year in maintenance for an on-going savings of $44,500. per year. In addition, Duke Energy, our electrical provider, will incentivize the project with an estimated $49,000 energy efficiency rebate. The savings resulting from this green energy can free up more valuable resources for direct classroom instruction, will be environmentally friendly, and make good economic sense for the community and the long-term operation of the school. This innovative technology will provide teachers with effective learning opportunities. Through the on-site geothermal energy source, teachers will help students to explore the different roles engineers who work in renewable energy fields have in creating a sustainable environment - an environment that contributes to greater health, happiness and safety. Engineering pedagogy such as Civil, Electrical, Electronic, Environmental, and Mechanical Engineering, which is all vital to geothermal and green energy projects will specifically be taught in Grant Career Center's Engineering Program, as well as the Engineering Physics class. Science occupations such as Environmental Scientists, who produce environmental impact studies necessary for geothermal installation, will be explored by students in Grant Career Center's Environmental Biology classes. Construction occupations such as Carpenters, Construction Equipment Operators, Laborers, Managers, Electricians, Plumbers, Pipefitters, and Steam Fitters are necessary for supporting the infrastructure of geothermal and green energy development. Construction occupations will specifically be taught in Grant Career Center's Construction Technology Program, as well as in Environmental Biology class. Renewable energy is an ideal topic for science classrooms. Teachers can teach basic scientific principles, such as conversion of energy from one form to another or electricity generation. Social studies teachers can show relationships between renewable energy and our current marketplace and how political decisions are made. When our current students reach adulthood most will be consuming some type of sustainable energy power; therefore, an understanding of sustainable energy will be crucial. Building Automation Software will be provided to allow students to see the operation of the geothermal system from a monitor for educational purposes. Melink will also provide our teachers with classroom resources for educating students about sustainable energy. By providing students with information about energy usage of their devices, they can see the relationship between saving money and utilizing conveniences they desire.

9. Select which (up to four) of the goals your project will address. For each of the selected goals, please provide the requested information to demonstrate your innovative project. - (Check all that apply)

☐ a. Student achievement

i. List the desired outcomes.
Examples: fewer students retained at 3rd grade, increase in graduation rate, increased proficiency rate in a content area, etc.

ii. What assumptions must be true for this outcome to be realized?
Examples: early diagnosis and intervention are needed to support all children learning to read on grade level; project-based learning results in higher levels of student engagement and learning, etc.

iii. Describe any early efforts you have made to test these assumptions (pilot implementation, etc), or how these are well-supported by the literature.

iv. List the specific indicators that you will use to measure progress toward your desired outcome.
These should be measurable changes, not merely the accomplishment of tasks. Example: Teachers will each implement one new project using new collaborative instructional skills, (indicates a change in the classroom) NOT; teachers will be trained in collaborative instruction (which may or may not result in change).

v. List and describe pertinent data points that you will use to measure student achievement, providing baseline data to be used for future comparison.

vi. How are you prepared to alter the course of your project if assumptions prove false or outcomes are not realized?

☑ b. Spending reductions in the 5 year forecast

i. List the desired outcomes.
Examples: lowered facility cost as a result of transition to more efficient systems of heating and lighting, etc.; or cost savings due to transition from textbook to digital resources for teaching.

The desired outcome is to significantly lower operating cost by replacing existing rooftop units that are at the end of their useful life with a more energy efficient heating and cooling system. A geothermal system will have a higher up-front cost but yield the lowest life cycle cost. We expect to reduce the current kWh required for heating and cooling of the South West wing by 60%.

ii. What assumptions must be true for this outcome to be realized?
Example: transition to "green energy" solutions produce financial efficiencies, etc.; or available digital resources are equivalent to or better than

previously purchased textbooks.

The assumptions are: the KWh savings can be realized, the technology of geothermal is sound, and the ground bores will deem that the district is a suitable application for geothermal. By installing geothermal, we estimate that our heating efficiency will increase from 100% to 410% and our cooling efficiency will increase from a 9 Seasonal Energy Efficiency Ratio (SEER) to a 23.1 SEER. In other words, our cooling efficiency would increase from about 237% to 562%. It is conservatively estimated that replacing our conventional rooftop units with ground-source heat pumps and a ground heat exchanger would save over 507,000 kWh/year. At an average cost of $.078/kWh, this would result in energy savings of $39,500. An additional $5,000/year in maintenance savings is also expected due to the older units being replaced.

iii. Describe any early efforts you have made to test these assumptions (pilot implementation, etc), or how these are well-supported by the literature.

Representatives from US Grant Career Center sought out Melink to discuss the benefits of geothermal installation to replace current aging all-electric \consuming HVAC systems. The district is experiencing high operating systems expenses. Geothermal taps into the constant 55 degree temperature of the ground, hundreds of feet below the surface, and does not require the burning of fossil fuels. Typically geothermal systems are 4 to 5 times more energy efficient in heating mode, and more than twice as efficient in cooling mode. This is because geothermal systems exchange heat with the ground, rather than creating heat by combusting fossil fuels, or exchanging heat with extremely hot or cold air temperatures. According to the EPA, Geothermal or Ground Source Heat Pump Systems are "The most energy efficient, environmentally clean, and cost effective space conditioning system available today".The International Ground Source Heat Pump Association (IGSHPA) estimates geothermal systems typical save between 25-50% on energy consumption and will reduce peak electrical demand. The American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) recently conducted a 2 year study from 2011 to 2013 to study the efficiencies between a Geothermal Heat Pump system and a Variable Refrigerant Flow System (VRF). These two systems were previously thought to be comparable in terms of energy-efficiency and were considered the most energy efficient systems available. The study revealed the geothermal system "used 29 percent less energy in the summer and 63 percent less energy in the winter/shoulder seasons than the VRF system while maintaining similar zone temperatures". When differences in floor space were normalized, the energy use (kilowatt-hours per square foot) of the geothermal system was an average 44 percent less than that of the VRF system. Since US Grant has previously had bore samples for recent building projects, the likelihood of success for geothermal sampling is high.

iv. List the specific indicators that you will use to monitor progress toward your desired outcome.
These should be specific dollar savings amounts. THESE MUST MATCH THE COST SAVINGS AS PROJECTED IN THE FINANCIAL IMPACT TABLE (FIT).

Based upon the current roof-top specifications, we estimate replacing these units with geothermal HVAC units will result in an annual reduction of 507,000 Kwh,. Our current blended rate for generation and distribution from our utility provider is roughtly $0.078 per Kwh hour, This rate is market driven and will be increasing effective January 1, 2016 to a higher rate due to the expiration of our current agreement from a third party vendor. Using the current lower rate, we anticipate savings of $39,500 per year in reduced electricity costs. In addition, the units that would be replaced cost the district an estimated $5,000 per year to maintain. We can monitor the actual kWh usage from Duke Energy Electric Invoices and weather data over the measurement period compared to previous years usage under the existing system. The vendor also provides a software monitoring program that will track electric usage on a real-time basis. This system will allow us to monitor the efficiency of the system.

v. List and describe pertinent data points that you will use to measure spending reductions, providing baseline data to be used for future comparison.

Monthly KWh usage from the Duke Energy and weather data.

vi. How are you prepared to alter the course of your project if assumptions prove false or outcomes are not realized?

The system will be independently commissioned to ensure proper installation. If the desired savings are not being achieved, US Grant and Melink will work with the design engineers, heat pump manufactures, and other contractors to pinpoint possible problems.

☐ c. Utilization of a greater share of resources in the classroom

i. List the desired outcomes.
Example: change the ratio of leadership time spent in response to discipline issues to the time available for curricular leadership.

ii. What assumptions must be true for this outcome to be realized?
Examples: improvements to school and classroom climate will result in fewer disciplinary instances allowing leadership to devote more time to curricular oversight.

iii. Describe any early efforts you have made to test these assumptions (pilot implementation, etc), or how these are well-supported by the literature.

iv. Please provide the most recent instructional spending percentage (from the annual Ohio School Report Card) and discuss any impact you anticipate as a result of this project.
Note: this is the preferred indictor for this goal.

v. List any additional indicators that you will use to monitor progress toward your desired outcome. Provide baseline data if available.
These should be specific outcomes, not just the accomplishment of tasks. Example: fewer instances of playground fighting.

vi. How are you prepared to alter the course of your project if assumptions prove false or outcomes are not realized?

☐ d. Implementing a shared services delivery model

i. List the desired outcomes.
Examples: increase in quality and quantity of employment applications to districts; greater efficiency in delivery of transportation services, etc.

ii. What assumptions must be true for this outcome to be realized?
Example: neighboring districts have overlapping needs in administrative areas that can be combined to create efficiencies.

iii. Describe any early efforts you have made to test these assumptions (pilot implementation, data analysis etc), or how these are well-supported by the literature.

iv. List the specific indicators that you will use to monitor progress toward your desired outcomes.
These should be measureable changes, not the accomplishment of tasks.
Example: consolidation of transportation services between two districts.

v. List and describe pertinent data points that you will use to evaluate the success of your efforts, providing baseline data to be used for future comparison.
Example: change in the number of school buses or miles travelled.

vi. How are you prepared to alter the course of your project if assumptions prove false or outcomes are not realized?

10. Which of the following best describes the proposed project? - (Select one)

☑ a. New - Never before implemented

☐ b. Existing - Never implemented in your community school or school district but proven successful in other educational environments

☐ c. Replication - Expansion or new implementation of a previous Straight A Project

☐ d. Mixed Concept - Incorporates new and existing elements

☐ e. Established - Elevating or expanding an effective program that is already implemented in your district, school or consortia partnership

C) BUDGET AND SUSTAINABILITY

11. Financial Information: - All applicants must enter or upload the following supporting information. The information in these documents must correspond to your responses in questions 12-19.

a. Enter a project budget in CCIP (by clicking the link below)

Enter Budget

b. If applicable, upload the Consortium Budget Worksheet (by clicking the Upload Documents link below)

c. Upload the Financial Impact Table (by clicking the Upload Documents link below)

Upload Documents

The project budget is entered directly in CCIP. For consortia, this project budget must reflect the information provided by the applicant in the Consortium Budget Worksheet. Directions for the Financial Impact Table are located on the first tab of the workbook. Applicants must submit one Financial Impact Table with each application. For consortium applications, please add additional sheets instead of submitting separate Financial Impact Tables.

781,000.00 12. What is the amount of this grant request?

13. Provide a brief narrative explanation of the overall budget.
Responses should provide a rationale and evidence for each of the budget items and associated costs outlined in the project budget. In no case should the total projected expenses in the budget narrative exceed the total project costs in the budget grid.

The cost of the system will be $781,000 for ground testing, drilling of geothermal wells, and purchase andinstall of ground source heat pumps and ground heat exchanger. The ground-source heat pumps have a warranty of one year, and are expected to last about 20 years. The high-density polyethylene piping that is used to construct the Ground Heat Exchanger has a 50 year warranty, and could last for over 100 years. There is no additional cost expected within the first 5 years compared to a traditional HVAC system.

14. Please provide an estimate of the total costs associated with maintaining this program through each of the five years following the initial grant implementation year (sustainability costs). This is the sum of expenditures from Section A of the Financial Impact Table.

0.00	a. Sustainability Year 1
0.00	b. Sustainability Year 2
0.00	c. Sustainability Year 3
0.00	d. Sustainability Year 4
0.00	e. Sustainability Year 5

15. Please provide a narrative explanation of sustainability costs.
Sustainability costs include any ongoing spending related to the grant project after June 30, 2017. Examples of sustainability costs include annual professional development, staffing costs, equipment maintenance, and software license agreements. To every extent possible, rationale for the specific amounts given should be outlined. The costs outlined in this narrative section should be consistent and verified by the financial documentation submitted and explained in the Financial Impact Table. If the project does not have sustainability costs, applicants should explain why.

Geothermal systems typically require less maintenance over the life of the system than conventional HVAC systems. We do not expect to incur additional maintenance cost compared to our current system. Around year 20 we expect to start replacing ground-source heat pumps, and the pump which moves the water throughout the building and ground heat exchanger. We do not expect to have any cost associated with the ground heat exchanger, which is a significant first cost, but doesn't require maintenance or replacement.

100 16. What percentage of these costs will be met through cost savings achieved through implementation of the program?

Total cost savings from section B of the Financial Impact Table divided by total sustainability cost from section A of the Financial Impact Table. If the calculated amount is greater than 100, enter 100 here.

17. Please explain how these cost savings will be derived from the program.
Applicants who selected spending reductions in the five-year forecast as a goal must identify those expected savings in questions 16 and 17. All spending reductions must be verifiable, permanent, and credible. Explanation of savings must be specific as to staff counts; salary/benefits; equipment costs, etc.

The spending reduction is a combination of lower usage estimated to be about 507,000 Kwh/per year at current rate of $0.078/Kwh plus $5,000 per year in reduced maintenance/replacement cost of existing rooftop units that are at least eighteen years old.

0 18. What percentage of sustainability costs will be met through reallocation of savings from elsewhere in the general budget?

Total reallocation from section C of the Financial Impact Table divided by total sustainability cost from section A of the Financial Impact Table
Note: the responses to questions 16 and 18 must total 100%

19. Please explain the source of these reallocated funds.
Reallocation of funds implies that a reduction has been made elsewhere in the budget. Straight A encourages projects to determine up front what can be replaced in order to ensure the life of the innovative project.

N/A

D) IMPLEMENTATION

20. Please provide a brief description of the team or individuals responsible for the implementation of this project, including other consortium members or partners.

This response should include a list of qualifications for the applicant and others associated with the grant. Please list key personnel only. If the application is for a consortium or a partnership, the lead should provide information on its ability to manage the grant in an effective and efficient manner. Include the partner/consortium members' qualifications, skills and experience with innovative project implementation and projects of similar scope.

Enter Implementation Key Personnel information by clicking the link below:

Add Implementation - Key Personnel

For Questions 21-23 please describe each phase of your project including its timeline, and scope of work.

A complete response to these questions will demonstrate awareness of the context in which the project will be implemented and the time it will take to implement the project with fidelity. A strong plan for implementing, communicating and coordinating the project should be apparent, including coordination and communication in and amongst members of the consortium or partnership (if applicable). Not every specific action step need be included, but the outline of the major steps should demonstrate a thoughtful plan for achieving the goals of the project. The timeline should reflect significant and important milestones in an appropriate time frame.

21. Planning

a. Date RangeWinter 2016-Spring 2016

b. Scope of activities - include all specific completion benchmarks.

A A Formation Thermal Conductivity Test will first be completed to test the ground characteristics and provide data for proper ground heat exchanger design. This test will take 1-2 weeks. Then engineering, permit drawing, applications process, and the ground heat exchanger

design will begin. This will take 2-3 weeks. Final approval for design of HVAC system and location of ground heat exchanger will be required for all parties.

22. Implementation(grant funded start-up activities)

a. Date RangeSummer 2016

b. Scope of activities - include all specific completion benchmarks

1 week demo old RTU's 2 weeks total for Ceiling removal / reinstallation 2 weeks to install new Geothermal RTU's 1 week for new Geo Water Pump Package 2-3 weeks Electrical Power Wiring 3-4 weeks for new piping infrastructure 2-3 weeks for Controls Some of the activities above will overlap. Total Geothermal HVAC installation will take 8-10 weeks.

23. Programmatic Sustainability (years following implementation, including institutionalization of program, evaluation and communication of program outcomes)

a. Date RangeSummer 2017-ongoing

b. Scope of activities - include all specific completion benchmarks

In terms of evaluating energy savings: A statistical model will be created, based on 2 previous years of site electricity usage and weather data. This model will be used for measurement and verification purposes and will be able to monitor site energy reductions. The data will be collected on a monthly basis. Due to monthly fluctuations in energy reductions and varying schedules, the savings will be evaluated over a yearly basis. The model will be monitored continuously to ensure proper operation and savings.

E) SUBSTANTIAL IMPACT AND LASTING VALUE

24. Describe the expected changes to the instructional and/or organizational practices in your institution.

The response should illustrate the critical instructional and/or organizational changes that will result from implementation of the grant and the impact of these changes. These changes can include permanent changes to current district processes, new processes that will be incorporated or the removal of redundant processes. The response may also outline the expected change in behaviors of individuals (changes to classroom practice, collaboration across district boundaries, changes to a typical work day for specific staff members, etc.). The expected changes should be realistic and significant in moving the institution forward.

Please enter your response below:

We expect to be able to save a considerable amount of district funds by reducing our energy usage in the forseeable future, as this solution will decrease our consumption of electricity from the grid and hedge against future price increases from the utility. A geothermal installation will expose our students and community to a "green" energy source that studies have shown to be a long-term solution for effective management of heating and cooling in an industrial setting that will save our residents considerable tax dollars. Our specific results can be measured and shared with others, as well as the process we used to achieve our goal of reduced consumption of purchased electricity. .

25. Please provide the name and contact information for the person and/or organization who will oversee the evaluation of this project.

Projects may be evaluated either internally or externally. However, evaluation must be ongoing throughout the entire period of sustainability and have the capacity to provide the Ohio Department of Education with clear metrics related to each selected goal.

Please enter your response below:

Lisa Tuttle-Huff, Superintendent Grant Career Center 718 West Plane Street Bethel, Ohio 45106 Phone: 513-734-6222, lisa.tuttle-huff@grantcareer.com Seth Parker, Project Engineer Melink Corporation 5140 River Valley Road Milford, Ohio 45150 513-965-7348 sparker@melinkcorp.com

26. Describe the overall plan for evaluation, including plans for data collection, underlying research rationale, measurement timelines and methods of analysis.

This plan should include the methodology for measuring all of the project outcomes. Applicants should make sure to outline quantitative approaches to assess progress and measure the overall impact of the project proposal. The response should provide a clear outline of the methods, process, timelines and data requirements for the final analysis of the project's progress, success or shortfall. The applicant should provide information on how the lessons learned from the project can and will be shared with other education providers in Ohio. Note: A complete and comprehensive version of the evaluation plan must be submitted to ODE by all selected projects.

In terms of evaluating energy savings: A statistical model will be created, based on 2 previous years of site electricity usage and weather data. This model will be used for measurement and verification purposes and will be able to monitor site energy reductions. The data will be collected on a monthly basis. Due to monthly fluctuations in energy reductions and varying schedules, the savings will be evaluated over a yearly basis. The model will be monitored continuously to ensure proper operation and savings.

27. Please describe the likelihood that this project, if successful, can be scaled-up, expanded and/or replicated. Include a description of potential replications both within the district or collaborative group, as well as an estimation of the probability that this solution will prove useful to others. Discuss the possibility of publications, etc., to make others aware of what has been learned in this project.

The response should provide an explanation of the time and effort it would take to implement the project in another district, as well as any plans to share lessons learned with other districts. To every extent possible, applicants should outline how this project can become part of a model so that other districts across the state can take advantage of the learnings from this proposed innovative project. If there is a plan to increase the scale and

scope of the project within the district or consortium, it should be noted here.

Since this project can be completed fairly quickly, (Total time of install after thermal conductivity test and design of system should be 8-10 weeks), this project could be replicated in other wings of the district, and as long as an entity had sufficient land to drill geothermal wells, it could be implemented in other institutions. The results of this project can be shared in state publications as a "best practice" in the education industry, and will be publicized locally because the district has plans to eventually offer an adult program to train technicians for installation of geothermal HVAC systems.

By virtue of applying for the Straight A Fund, all applicants agree to participate in the overall evaluation of the Straight A Fund for the duration of the evaluation time frame. The Governing Board of the Straight A Fund reserves the right to conduct an evaluation of the project and request additional information in the form of data, surveys, interviews, focus groups and other related data on behalf of the General Assembly, Governor and other interested parties for an overall evaluation of the Straight A Fund.

PROGRAM ASSURANCES: I agree, on behalf of this applicant, and any or all identified consortium members or partners, that all supporting documents contain information approved by a relevant executive board or its equivalent and to abide by all assurances outlined in the Straight A Assurances (available in the document library section of the CCIP).

I agree, on behalf of this applicant, and any or all identified consortium members or partners, that all supporting documents contain information approved by a relevant executive board or its equivalent and to abide by all assurances outlined in the Straight A Assurances.

Consortium

U S Grant (062802) - Clermont County - 2016 - Straight A Fund - Rev 0 - Straight A Fund

Sections

Consortium Contacts

No consortium contacts added yet. Please add a new consortium contact using the form below.

Partnerships

U S Grant (062802) - Clermont County - 2016 - Straight A Fund - Rev 0 - Straight A Fund

Sections

Partnerships							
First Name	**Last Name**	**Telephone Number**	**Email Address**	**Organization Name**	**IRN**	**Address**	**Delete Contact**
Steve	Melink	513-965-7300	smelink@melinkcorp.com	MELINK Corp		5140 River Valley Road , , Milford, Ohio, 45150	

Implementation Team

U S Grant (062802) - Clermont County - 2016 - Straight A Fund - Rev 0 - Straight A Fund

Sections

Implementation Team								
First Name	**Last Name**	**Title**	**Responsibilities**	**Qualifications**	**Prior Relevant Experience**	**Education**	**% FTE**	**Delete Contact**
Seth	Parker	Project Engineer, Melink Corporation	Will Conduct Formation Thermal Conductivity test, design of ground heat exchanger, overside of GHEX construction and flush/purge/commissioning of GHEX	M. S. Renewable and Clean Energy Engineering, University of Dayton International Ground Source Heat Pump Association Accredited Installer Completed IGSHPA Certified Geo Designer course North American Technician Excellence (NATE) Certified	Completed Master of Science Level Course in Geothermal Completed relevant certification classes required Geothermal Project Engineer at Melink for last seven months	M.S. Renewable and Clean Energy Engineering-University of Dayton	10	
Darryl	Jackson	Director of Sales, Perfection Group	Account Representative, Assist in the development of design, estimating, and implementation of the HVAC scope of work	Associate of Perfection Group, INC for 28 years, with 12 years in various engineering departments, 2 years as project manager, 7 years in sales and estimating, and 7 years as Director of Sales heading up all Construction and Estimating	Geothermal projects of relevant experience include Melink, Butler Rural, American Red Cross Design, and Gardner Publications	University of Cincinnati, Mechanical Engineering technology, computer Science Economics	10	
Lisa	Tuttle-Huff	Superintendent	Oversight and monitoring of system implementation	Superintendent/Chief Executive Officer aned Purchasing Director for District	Three years of Superintendent experience overseeing projects in current district and several large projects in previous district while serving as Director	Doctor of Urban Educational Leadership	100	
Steve	Melink	President, Melink Corporation	Oversee the design, construction, testing, and monitoring of the geothermal heating and cooling system for the career center. The Melink Corporation will turnkey the entire project and deliver a successfully installed and operating geothermal heating and cooling system that not only saves significant energy dollars for the school, but serves as an educational model for students. Geothermal HVAC is a technology that has enormous potential for the commercial and residential building industries going forward, and Grant Career Center will be a major conduit for educating	I have a geothermal heating and cooling system installed at Melink corporate headquarters as well as in my residence. Licensed engineer in the State of Ohio	Founder-Melink Corporation in Cincinnati, Ohio in 1987. The Company has four businesses. Melink T&B which provides HVAC testing and balancing services for national accounts; Intelli-Hood which engineers, manufactures, and installs energy-saving controls for commercial kitchen ventilation systems; Melink Solar which develops solar PV projects for	BSME-Vanderbilt University 1980 MBA-Duke University 1984	10	

			and training the workforce that will be necessary to achieve it's potential.		commercial owners, and Meling Geo which develops geothermal heating and cooling systems for commercial owners. The Company headquarters in Milford, Ohio employs approximately 100 people. Customers include Walmart, McDonalds, Starbucks, Darden, Apple, Google, Microsoft, Facebook, Whole Foods, Hilton, Hyatt, Mariott, the U.S. Army, U.S. Navy, and many more. Steve is a national speaker on energy efficiency and renewable energy. He recently published a book titled "CEO Power & Light-Transcendent Leadership for a Sustainable World".			