

Budget

Worthington City (045138) - Franklin County - 2015 - Straight A Fund - Rev 0 - Straight A Fund - Application Number (142)

U.S.A.S. Fund #:
 Plus/Minus Sheet ([opens new window](#))

Purpose Code	Object 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	313,231.00	0.00	10,543,995.00	0.00	10,857,226.00
Transportation		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.00	0.00	313,231.00	0.00	10,543,995.00	0.00	10,857,226.00
Adjusted Allocation								0.00
Remaining								-10,857,226.00

Application

Worthington City (045138) - Franklin County - 2015 - Straight A Fund - Rev 0 - Straight A Fund - Application Number (142)

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

A) APPLICANT INFORMATION - General Information

1. Project Title:

Reduce Wasteful Watts - Reynoldsburg, Worthington & Waverly City School Districts

2. Executive summary: Please limit your responses to no more than three sentences.

The "Reduce Wasteful Watts" program will reduce energy and maintenance costs and drive increased budget dollars to the classrooms in the Reynoldsburg, Worthington and Waverly City School Districts. Energy audits and detailed engineering have identified permanent technology and efficiency improvements customized for each building. 35 school buildings will be positively impacted, reducing utility costs by \$669,727 per year for the three districts combined.

This is an ultra-concise description of the overall project. It should not include anything other than a brief description of the project and the goals it hopes to achieve.

16795 3. Total Students Impacted:

This is the number of students that will be directly impacted by implementation of the project. This does not include students that may be impacted if the project is replicated or scaled up in the future.

4. Please indicate which of the following grade levels will be impacted:

- | | |
|---|--|
| <input checked="" type="checkbox"/> Pre-K Special Education | <input checked="" type="checkbox"/> Kindergarten |
| <input checked="" type="checkbox"/> 1 | <input checked="" type="checkbox"/> 2 |
| <input checked="" type="checkbox"/> 3 | <input checked="" type="checkbox"/> 4 |
| <input checked="" type="checkbox"/> 5 | <input checked="" type="checkbox"/> 6 |
| <input checked="" type="checkbox"/> 7 | <input checked="" type="checkbox"/> 8 |
| <input checked="" type="checkbox"/> 9 | <input checked="" type="checkbox"/> 10 |
| <input checked="" type="checkbox"/> 11 | <input checked="" type="checkbox"/> 12 |

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

First Name, last Name of contact for lead applicant
Jeff McCuen, Treasurer/CFO

Organizational name of lead applicant
Worthington City School District

Address of lead applicant
200 E Wilson Bridge Road, Worthington Ohio 43085

Phone Number of lead applicant
614.450.6127

Email Address of lead applicant
jmccuen@worthington.k12.oh.us

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 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. Later questions will address specific outcomes and the measures of success.

The current state or problem to be solved; and

Utilities are the districts' second-largest expenditure after salary & benefits. Aging and overly complex heating, cooling and control systems consume increasing budget dollars for electricity, natural gas and water each year. Maintenance and repair costs also divert much-needed dollars away from the classrooms. Further, uncomfortable, noisy or poorly lit classrooms have a negative impact on the classroom learning environment. Oft times this occurs when the maintenance budget is underfunded or overwhelmed by ongoing costs.

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

"Reduce Wasteful Watts" implements energy-friendly systems and technology to permanently reduce electricity, natural gas and water consumed by 35 buildings in three districts while enhancing the learning environments. Overall, the districts will recognize energy savings exceeding 25 percent of their current utility consumption. Comprehensive energy audits and detailed engineering have already determined the best technology for each building's aging systems. Each building will receive the technology appropriate to its specific energy assessment. Web-based graphical energy management systems will enable the districts to manage their buildings' energy usage, adapt quickly to ever-changing energy codes and practices, as well as effectively participate in revenue producing programs such as Electric Demand Response. High-efficiency boilers will reduce both energy use and carbon emissions. High-efficiency lighting will reduce energy use while improving visual clarity in the classrooms. Specialized heating, ventilation and air conditioning system alterations have been designed to reduce both energy and noise, and improve the indoor environment. Specifically at Waverly City Schools, the planned energy-friendly enhancements are truly innovative. Their four buildings are heated and cooled by 300 individual energy-intensive, high-maintenance and failing heat pump units. In order to significantly impact the buildings' energy usage, their systems must be changed. It is rare to completely overhaul mechanical systems in existing buildings, but Sabo/Limbach has designed a unique solution to replace the 300 heat pump units with four or five central systems in each building. Central systems easily consume much less electricity and natural gas than Waverly's 300 heat pumps. The solution will re-purpose a majority of the existing equipment, disable unnecessary equipment and create central systems in each building. Once executed these projects will save the same energy as consumed ANNUALLY by 512 Homes, or 1183 passenger vehicles, 13,376,446 passenger car miles, or the carbon sequestered by 4605 acres of forest land. It also represents 5618 Metric tons of reduced CO2 emissions.

9. Which of the stated Straight A Fund goals does the proposal aim to achieve? - (Check all that apply)

Applicants should select any and all goals the proposal aims to achieve. The description of how the goals will be met should provide the reader with a clear understanding of what the project will look like when implemented, with a clear connection between the components of the project and the stated goals of the fund. If partnerships/consortia are part of the project, this section should describe briefly how the various entities will work together in the project. More detailed descriptions of the roles and activities will be addressed in Question 16.

Student achievement (Describe the specific changes in student achievement you anticipate as a result of this innovation (include grade levels, content areas as appropriate) in the box below.)

Spending reductions in the five-year fiscal forecast or positive performance on other approved fiscal measures (Describe the specific reductions you anticipate in terms of dollars and spending categories over a five-year period in the box below or the positive performance you will achieve on other approved fiscal measures. Other approved fiscal measures include a reduction in spending over a five-year period in the operating budget approved by your organization's executive board or its equivalent.)

The "Reduce Wasteful Watts" program has four primary fiscal goals: 1. Permanently reduce ongoing electric, natural gas and water utility costs through the deployment of Web-based electronic control systems, high-efficiency boilers, advanced lighting systems, energy efficient window films, automatic flush valves and revolutionary / simplifying system alterations Those savings represent \$669,727 annually. With the Straight A Grant, it will be possible to redeploy these wasted energy dollars to the classroom for educational purposes. As utility costs escalate, there will be greater costs avoided. 2. Reduce maintenance costs in the five-year forecast. The 35 buildings have aging and complicated systems that consume budget dollars for maintenance each year. Upgrading and replacing these systems with the most-efficient technologies will reduce the districts' maintenance costs by a combined \$65,684 annually. Specifically the grant will enable the districts to: i. Deploy new heating, ventilating and cooling equipment ii. Reduce system run-hours, thereby reducing normal wear and tear iii. Replace older lighting systems with new lamps and ballasts. iv. Replace flush valves on toilet and urinals with low-flow, automatic-flush equipment v. Enhance building thermal elements to reduce heating and cooling loads vi. Modify service agreements to maintain the newly deployed equipment and energy management systems 3. Continuous energy improvement via Sabo/Limbach's Resource Management Program. This is a multi-year (Minimum of 5 years) collaboration between the Sabo/Limbach energy engineers and the school districts to refine and enhance the energy program as well as share 'lessons learned.' 4. New energy-based revenue streams. As energy markets continue to evolve, opportunities arise for schools to be paid monthly for their energy management efforts. Such programs include Electric Demand Response. The new web-based energy-management systems will automatically reduce each building's electric usage in response to a peak demand on the grid, resulting in payment from the grid operator. Successful efforts can earn districts thousands of dollars annually. Although this revenue stream is not included in the five-year forecast, each school will be positioned to take advantage of this revenue opportunity.

Utilization of a greater share of resources in the classroom (Describe specific resources (Personnel, Time, Course offerings, etc.) that will be enhanced in the classroom as a result of this innovation in the box below.)

Implementing a shared services delivery model (Describe how your shared services delivery model will demonstrate increased efficiency and effectiveness, long-term sustainability, and scalability in the box below.)

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

New - never before implemented

Existing: Never implemented in your community school or school district but proven successful in other educational environments

Mixed Concept: Incorporates new and existing elements

Established: Elevating or expanding an effective program that is already implemented in your district, school or consortia partnership

C) SUSTAINABILITY - Planning for ongoing funding of the project, cost breakdown

11. Financial Documentation: - All applicants must enter or upload the following supporting information. The information in these documents must correspond to your responses in questions 11-14.

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

[Enter Budget](#)

* If applicable, upload the Consortium Budget Worksheet (by clicking the link below)

* Upload the Financial Impact Table (by clicking the link below)

* Upload the Supplemental Financial Reporting Metrics (by clicking the link below)

[Upload Documents](#)

For applicants without an ODE Report Card for 2012-2013, provide a brief narrative explanation of the impact of your grant project on per pupil expenditures or why this metric does not apply to your grant project instead of uploading the Supplemental Financial Reporting Metric.

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. Applicants must submit one Financial Impact Table with each application. For consortium applications, each consortium member must add an additional tab on the Financial Impact Tables. Partners are not required to submit a Financial Impact Table.

Applicants with an "Ohio School Report Card" for the 2012-2013 school year must upload the Supplemental Financial Reporting Metrics to provide additional information about cost savings and sustainability. Directions for the Supplemental Financial Reporting Metrics are located on the first tab of the document. If your organization does not have an "Ohio School Report Card" for the 2012-2013 school year, please provide an explanation in the text box about how your grant project will impact expenditures per pupil or why expenditure per pupil data does not apply to your grant project.

Educational service center, county boards of developmental disabilities, and institutions of higher education seeking to achieve positive performance on other approved fiscal measures should submit the budget information approved by an executive board or its equivalent on the appropriate tabs of the Financial Impact Table. Educational service centers should use the "ESC" tab and county boards of developmental disabilities and institutions of higher education should use the "non-traditional" tab.

12. What is the total cost for implementing the innovative project?

Responses should provide 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.

10,857,226.00 State the total project cost.

* Provide a brief narrative explanation of the overall budget.

The total combined cost to implement this project in 35 buildings in three districts is \$10,857,226. The budget is for the facilities function and split between the object areas of purchased services and capital outlay. The overwhelming majority of the budget is allocated to capital outlay for new and renovation improvements to mechanical systems within each building. The cost to impact 21 buildings in the Worthington City School District is \$4,420,445. This pricing includes building-specific energy audits, detailed engineering (already completed), and proposed energy-related enhancements including high efficiency condensing boilers, window film, improved lighting efficiencies, automated flushing of urinals and water closets, and significant refinements to the web-based control system. This cost also includes a 5-year Resource Management Package to guarantee the annual energy savings, provide engineering resources, and maintain the technologies. The cost to impact 9 buildings in the Reynoldsburg City School District is \$748,644. This budget includes building-specific energy audits and detailed engineering (already completed). It also includes these proposed energy-related enhancements: web-based graphical control systems, upgrade 4 buildings and new system in 1 building; and energy-efficient lighting in 9 buildings. This cost also includes a 5-year Resource

Management Package to guarantee the annual energy savings, provide engineering resources, and maintain the technologies. The cost to impact 5 buildings in the Waverly City School District is \$5,688,137. This budget includes building-specific energy audits and detailed engineering (already completed). It also includes these proposed energy-related enhancements: web-based graphical control systems in 4 buildings; major system modifications to reduce classroom noise, vibration, energy use and on-going replacement costs in 4 buildings; major equipment replacements to reduce outdoor noise impact, energy use and on-going repair costs at 4 buildings; and indoor and outdoor lighting upgrades to the highest-efficiency options to reduce outdoor light pollution and energy use, and increase indoor visual clarity. This cost also includes a 5-year Resource Management Package to guarantee the annual energy savings, provide engineering resources, and maintain the technologies.

13. Will there be any costs incurred as a result of maintaining and sustaining the project after June 30th of your grant year?

Sustainability costs include any ongoing spending related to the grant project after June 30th of your grant year. Examples of sustainability costs include annual professional development, equipment maintenance, and software license agreements. To every extent possible, rationale for the specific amounts given should be outlined. The costs outlined in the 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.

Yes - If yes, provide a narrative explanation of your sustainability costs as detailed in the Financial Impact Table in the box below.

No - If no, please explain why (i.e. maintenance plan included in purchase price of equipment) in the box below.

The Project Costs include 5-Year Resource Management Programs for each district. The Grant will pay, in advance, for these 5-year programs. Resource Management is an ongoing, collaborative effort between each district and Sabo/Limbach Energy Services to guarantee the energy cost savings, provide engineering resources to troubleshoot and maintain the building technologies, and produce annual reports to document the project's actual performance. It is possible for any of the districts to opt for additional years of Resource Management after the 5-year term expires; however, past experience indicates energy cultural changes will have occurred in the first term of the program.

14. Will there be any expected savings as a result of implementing the project?

Yes

No

Applicants with sustainability costs in question 13 or seeking to achieve significant advancement in spending reductions in the five-year forecast must address this response. Expected savings should match the information provided by the applicant in the Financial Impact Table. All spending reductions must be verifiable, permanent, and credible. Applicants may only respond "No" if the project will not incur any increased costs as a result of maintaining and sustaining the project after June 30th of your grant year. The Governing Board will use the cost savings as a tiebreaker between applications with similar scores during its final selection process. Cost savings will be calculated as the amount of expected cost savings less sustainability costs relative to the project budget.

735,411.00 If yes, specify the amount of annual expected savings. If no, enter 0.

If yes, provide details on the expected savings (i.e. staff counts and salary/benefits, equipment to be purchased and cost, etc.). If no, please explain

Electric Cost Savings = \$482,510 annually Natural Gas Cost Savings = \$146,348 annually Water Cost Savings = \$ 40,869 Operations & Maintenance Cost Savings = \$65,684 annually "Reduce Wasteful Watts" is designed specifically to maximize electric and natural gas cost savings at 35 buildings. Most importantly, these cost savings are guaranteed by Sabo/Limbach Energy Services for five years. Sabo/Limbach is legislatively obligated to provide a comprehensive Savings Report to each district annually, detailing the energy cost savings at each building. The program is designed to upgrade and replace aging and overly complicated systems with the most-efficient technologies. These upgrades will reduce the districts' current maintenance costs by a combined \$65,684 annually. In addition to the expected savings, "Reduce Wasteful Watts" positions each district to implement new energy-management based revenue streams. For example, each building will have a new, robust web-based energy management system which is capable of immediately responding to power grid calls for electric usage reduction. Upon successfully responding to the electric reduction calls the grid operator will pay each district for their contribution. These payments can be several thousand dollars annually. Finally, the electric and natural gas utilities offer incentives for the types of energy-reducing measures encompassed by "Reduce Wasteful Watts". Each district will receive substantial utility incentives in the first year after the project construction is complete. Although electric incentives have become common in recent years, this vendor successfully obtained the first natural gas incentive for an Ohio K-12 school, and will apply that knowledge to secure natural gas incentives for the districts in this program. The utility incentives will vary by district, and can be as high as \$250,000.

15. Provide a brief explanation of how the project is self-sustaining.

All Straight A Fund grant projects must be expenditure neutral. For applications with increased ongoing spending as documented in question 11-14, this spending must be offset by expected savings or reallocation of existing resources. These spending reductions must be verifiable, permanent, and credible. This information must match the information provided in your Financial Impact Table. Projected additional income may not be used to offset increased ongoing spending because additional income is not allowed by statute. Please consider inflationary costs like salaries and maintenance fees when considering whether increased ongoing spending has been offset for at least five years after June 30th of your grant year. For applications without increased ongoing spending as documented in questions 11-14, please demonstrate how you can sustain the project without incurring any increased ongoing costs.

For educational service centers and county boards of developmental disabilities that are members of a consortium, any increased ongoing spending at the educational service center or county board of developmental disabilities may also be offset with the verifiable, permanent, and credible spending reductions of other members of the consortium. This increased ongoing spending must be less than or equal to the sum of the spending reductions for the entire consortium.

Explain in detail how this project will sustain itself for at least five years after June 30th of your grant year.

"Reduce Wasteful Watts" is self-sustaining for five years and beyond. After the initial investment implementing the energy-friendly equipment and technologies, the electric, natural gas and water usage will decrease permanently in each of the 35 buildings. The decreased usage will result in \$735,411 in savings for the 35 buildings combined. Sabo/Limbach Energy Services is committed to deliver these savings, and they are guaranteed by Sabo/Limbach Energy Services. If there is any short fall in savings Sabo/Limbach will implement additional energy conservation measures at their cost in order to deliver the committed savings. Or, it is possible for the vendor to provide payment to the district to offset any short fall. It is important to note, over the 16-year period Sabo/Limbach Energy Services has been executing H.B.-264 energy projects, they have always met or exceeded the savings commitment they made. Each district will purchase a 5-Year Resource Management Package. This package provides engineering resources and targeted preventive maintenance services to keep the technologies in good working order throughout the 5-year period. These projects are also environmentally sustainable by reducing these districts' carbon footprints. Once executed these projects will save the same energy as consumed ANNUALLY by 512 Homes, or 1183 passenger vehicles, or 13,376,446 passenger car miles, or the carbon sequestered by 4605 acres of forest land. It also represents 5618 Metric tons of reduced CO2 emissions. Sustainability can also be viewed from the perspective of facility maintenance and equipment life-cycle. In all cases, the energy conservation measures proposed are designed to reduce system complexity (there will be less moving parts), reduce operating hours, or enhance the building envelope. As a result, the use of repair parts, greases, oils, refrigerants, etc. will all be diminished for the life of the equipment. Plus the equipment will last longer.

D) IMPLEMENTATION - Timeline, scope of work and contingency planning

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

This response should include a list of qualifications for the applicant and others associated with the grant. 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 Team information by clicking the link below:

[Add Implementation Team](#)

For Questions 17-19 please describe each phase of your project, including its timeline, scope of work, and anticipated barriers to success.

A complete response to these questions will demonstrate specific awareness of the context in which the project will be implemented, the major barriers that need to be overcome and the time it will take to implement the project with fidelity. A strong plan for implementing, communicating and coordinating the project should be outlined, including coordination and communication in and amongst members of the consortium or partnership (if applicable). It is recognized that specific action steps may not be included, but the outline of the major implementation steps should demonstrate a thoughtful plan for achieving the goals of the project. The time line should reflect significant and important milestones in an appropriate and reasonable time frame.

17. Planning - Activities prior to the grant implementation

* Date Range April 28, 2014 through June 27, 2014

* List of scope of work (activities and/or events including project evaluation discussions, communication and coordination among entities).

All Districts: Districts will execute an Agreement with Sabo/Limbach Energy Services. Sabo/Limbach will also execute Agreements with their design-build lighting and electrical partners. With agreements in place the lighting partner will develop specifications for the replacement light fixtures, lamps and ballasts. The electrical partner will coordinate with Sabo/Limbach to develop all power wiring specifications. Finally, the Sabo/Limbach Project Manager will develop a construction schedule inclusive of equipment lead times, summer janitorial cleaning schedules and summer Capital Improvement Projects being bid by the Districts. Reynoldsburg: Tasks include engineering documents for field installation of the energy management systems at Taylor Road Elementary and energy management system retrofits at Slate Ridge, Hannah Ashton, Waggoner Rd MS, and Waggoner Rd JH. Additionally, an engineering package to correct boiler piping configurations at Hanna Ashton MS and variable speed drives for the Gym air handlers will be developed. Worthington: Tasks include the engineering documents necessary for field installation of Energy Management System retrofits at Kilbourne HS, final engineering documents to add condensing boilers to the systems at: Colonial Hills, Evening Street, Linworth, McCord, Phoenix, Sutter Park, Worthington Park, WEC, and Worthingway. Sabo/Limbach will also develop specifications for automatic, low-flow flush valve replacements and the low-e, reflective window film. Waverly: Tasks include final development of the H.B.-264 submittal. Other planning task include the engineering documents to redesign the heat pump system into a central plant system and necessitates updates to the HVAC drawings and energy management system sequences. Coordination between Sabo/Limbach and the design-build electrical partner will necessary for both the HVAC modifications and lighting retrofits

* Anticipated barriers to successful completion of the planning phase

Barriers Given the detailed nature of the information above, it is important to note this is all typical work, regularly executed by Sabo/Limbach Energy Services. There is only one significant hurdle. The process of obtaining OFCC approval for the Waverly H.B.-264 Energy Submission can be challenging. However, from an approval perspective, Worthington's project had numerous challenges and it was approved by the State in 30 calendar days. In order to obtain approval of the Worthington submittal Sabo/Limbach worked directly with the OFCC and developed a communications process to expedite the review. Waverly and Sabo/Limbach will deploy a similar process for Waverly's project.

18. Implementation - Process to achieve project goals

* Date Range June 30, 2014 through July 1, 2015

* List of scope of work (activities and/or events, including deliverables, project milestones, interim measurements, communication, and coordination).

Implementation is the installation of the retrofit systems. Energy solutions are unique by building because energy using equipment is

building specific. However, elements can be generalized; in a Scope of Work. The Barrier Section describes specific challenges of each project. Excepting funds disbursement, the projects are independent; minimizing 'team' communication. Scope of Work: Communication is the foundation of project implementation. Sabo/Limbach has specific communication meetings, including: 'Internal turn-over', 'Internal engineering', 'client kick-off,' and 'ongoing progress.' A summary of each follows. Internal Turn-Over: Communicates, project scope to Engineering, Project Management, Start-up, and Control staffs. Include the buildings involved, district objectives, savings goals, operations/maintenance, scheduling, and utility rebates. Meeting identifies District representatives and commitments made regarding schedule or equipment brands. All energy conservation measures are discussed. Internal Engineering: Focused on the engineering, the discussion reviews design intent of each Energy Conservation Measure with construction barriers including shut-downs, seasonal issues and scheduling priorities. Client 'Kick-Off': Collaboration with the District to thoroughly understand, safety and security issues with regard to staff, students, public, and construction staff including emergency procedures. Topics include building access, background checks, ID badges, sign-in/out, and 2nd shift work. Logistical discussions include parking, restrooms, lunch areas, etc. Meeting establishes the frequency, location and attendees of progress meetings, and reviews project scope. Ongoing Progress: Meetings are held regularly and reviews/updates topics in the client 'kick-off' meeting. Agenda also includes review of meeting minutes, work completed and a look-ahead schedule for the next two meeting cycles.

* Anticipated barriers to successful completion of the implementation phase.

Barriers include safety, scheduling, work hours and coordination of construction in occupied buildings. Safety is paramount for construction workers and the public. Therefore shifts begin with a safety huddle, including one school staff, focusing on work to be executed that shift. Scheduling is done to maximize summer break while coordinating with the building cleaning schedule and other summer projects. Sabo/Limbach co-authors the schedule with School personnel and it is updated in the Progress Meetings. 2nd shift work is also important because of facility access and safety. Reynoldsburg: The primary barrier at Reynoldsburg is replacement of the existing controls at Taylor Rd. ES. The construction schedule and system changeovers will be fully coordinated with District and Building staff. Worthington: The schedule for Worthington is currently being coordinated with the District. Two critical path items exist at Worthington: 1. In 6 buildings, condensing boilers will be integrated into the existing combined heating/cooling system which uses common distribution piping. Mechanical room modifications require both the heating and cooling systems to be out of service for 2-weeks. Some work will be executed during summer break; other work will be done between the air conditioning and heating seasons in October. 2. Ductwork changes at Kilbourne High School can be managed through coordination and scheduling. Waverly: The work at Waverly presents a significant hurdle because it abandons 300 ceiling-hung heat pump and re-purposes the existing piping and ductwork for new central systems. Piping and ductwork is located in corridors and over classrooms, offices, gyms, cafeterias and other occupied spaces. This work will be carefully coordinated with the district's summer and break schedules. Current plan is to execute work during breaks with increased on-site manpower. "Construction zone" barriers will be deployed to sequester work areas.

19. Summative Evaluation - Plans to analyze the results of the project

* Date Range August 4, 2014 through July 31, 2015

* List of scope of work (activities and/or events, including quantitative and qualitative benchmarks and other project milestones).

Construction project success is confirmed by measurement of task completions against milestone dates. Progress Meetings evaluate schedule progress against critical path milestone dates. Scheduling adjustments can be made to maintain the critical path schedule. The success of an energy conservation project is confirmed through the Measurement and Verification (M&V) process. This process is executed in three phases: Phase one during construction, phase two annually post construction and phase three is Resource Management Phase One: Beginning August 2014, Sabo/Limbach will comparatively track consumption relative to the established baseline developed during the energy audit. Sabo/Limbach has established tools for this analysis to identify if trends are falling short of expectations. If energy consumption remains above the planned consumption, we make adjustments to the project while construction continues. Phase Two: For 5-years post construction, Sabo-Limbach Energy Services authors an Annual M&V Savings Report. The report details current period savings for each utility as compared to baseline consumption. The report will be developed consistent with the industry standard International Performance Measurement and Verification Protocol (IPMVP?) Resource Management: The 5-year program, subsequent to construction, monitors monthly utility consumption. Consumption values are used to generate an annual utility bill auditing report detailing utility costs, benchmarking each building to 700 Ohio school facilities, compares usage trends for 5-years, evaluates weather impacts on consumption, and evaluates Energy Star? benchmarking. It includes an ongoing review of building performance within the web-based energy management system and Sabo/Limbach energy engineers review energy use trends to recommend new practices or system modifications which will promote further energy reductions.

* Anticipated barriers to successful completion of the summative evaluation phase.

Barriers Typically the only barrier experienced in this evaluation process is the timely receipt of natural gas, electric, and water utility bills. However, in the case of the three districts in this consortium, many of the utility bills are available on-line. Therefore Sabo/Limbach will establish electronic calendar dates to extract the necessary utility bills from the Internet on a timely basis, and send reminders to each district's contact for those bills that are not electronically accessible.

20. 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 or duplicative 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:

"Reduce Wasteful Watts" will not only produce significant, guaranteed spending reductions in the five-year fiscal period, but the program will also improve the learning & working environments for each student and staff member. Replacing aging and overly-complicated systems with more efficient, energy-friendly technology will reduce classroom noise and vibration for quieter spaces, replace poorly-lit spaces with enhanced visual clarity, and optimize ventilation airflow to ensure healthy spaces. These healthy enhancements to the learning and work environments will be permanent and sustainable. The "Reduce Wasteful Watts" program includes a 5-Year Resource Management Package

for each district, which provides technical resources to maintain the building technologies. Currently, each district devotes considerable staff time and resources to maintain their aging and complex systems. By design, the new and enhanced systems implemented by this program will require considerably less staff time and resources for maintenance and repair. These staff can now be dedicated to other tasks and building upgrades such as cabinetry, painting and landscaping, which make the buildings more desirable places to work and learn. One component of the Resource Management package engages the staff and students in an Energy Awareness campaign. In addition to providing technical resources for system management and maintenance, Sabo/Limbach works with each district to publicize the energy-friendly improvements to the staff in each building. As the staff understands the correlation between improved efficiency and lower energy costs, they are encouraged to develop sustainable energy habits to help maintain the building's efficiency. These habits include turning lights off when leaving spaces, turning computers off at night, water-conserving handwashing, and proper thermostat management, among others. As the students mimic their teachers and building staff practicing these habits daily, the habits become natural for the students too. In this way, the energy-efficient behaviors become sustainable to the next generation. Sabo/Limbach started the Energy Awareness component of Resource Management in the Worthington City School district fifteen years ago, and it continues to be in effect today.

E) SUBSTANTIAL IMPACT AND LASTING VALUE - Impact, evaluation and replication

The responses in this section are focused on the ability to design a method for evaluating the project's capacity for long-term sustainable results. Therefore, the questions focus on the method of defining the problem(s) the project hopes to solve and the measures that will determine if the problem(s) have been solved.

21. Describe the rationale, research or past success that supports the innovative project and its impact on student achievement, spending reduction in the five-year fiscal forecast or utilization of a greater share of resources in the classroom.

The response should provide a concise explanation of items which provide rationale that will support the probability of successfully achieving the goals of the project. Answers may differ based on the various levels of development that are possible. If the proposal is for a new, never before implemented project, the response should provide logical, coherent explanations of the anticipated results based on some past experience or rationale. For projects that have been implemented on a smaller scale or successfully in other organizations, the response should provide the quantifiable results of the other projects. If available, relevant research in support of this particular proposal should also be included.

Please enter your response below.

"Reduce Wasteful Watts" will achieve the anticipated spending reduction in the five-year fiscal forecasts for the Reynoldsburg, Worthington and Waverly City School Districts. The spending reductions will occur by reducing the electricity, natural gas and water usage at 35 buildings in these districts. The energy reductions are guaranteed by Sabo/Limbach Energy Services, protecting each district's fiscal forecast. Sabo/Limbach Energy Services has been successfully executing energy-friendly system and technology upgrades in the K-12 sector for over 16 years. In that length of time, Sabo/Limbach developed over 100 energy projects in Ohio school districts, and have met or exceeded their energy savings commitment in each and every one. Sabo/Limbach's track record of success predicts the "Reduce Wasteful Watts" program will achieve the committed savings for Reynoldsburg, Worthington and Waverly City Schools too. Sabo/Limbach executed two similar projects in the Union-Scioto and Scioto Valley Local Local School districts. In both cases, the districts opted to pursue an energy project to combat the high energy costs in their fiscal outlooks. ? Before their project, Union-Scioto's electric and natural gas usage was 123.9 kBTU/ft2 at a cost of \$1.88 per square foot. (By comparison, "good" energy-performing schools operate near 50 kBTU/ft2.) Sabo/Limbach added a user-friendly energy management system, innovative waste heat recovery, and mechanical system upgrades at each building. After the project, Union-Scioto's electric and natural gas usage decreased 45% to 68.1 kBTU/ft2. Their costs decreased to \$1.16/ft2, saving them over \$230,000 each year to use on other student-centered priorities. Union-Scioto continues to operate at these lower energy benchmarks four years later, and they have earned Energy Star certification. ? Similarly, Scioto Valley's three buildings started at 126.1 kBTU/ft2 and a cost of \$2.53 per square foot. Sabo/Limbach implemented a new energy management system, waste heat recovery, enhanced lighting and mechanical system upgrades at each building. As with Union-Scioto, Scioto Valley's electric and natural gas usage decreased more than 50%, to 51.8 kBTU/ft2. Energy costs decreased to \$1.19/ft2, returning over \$330,000 annually to the district's classrooms. Scioto Valley also continues to operate at these lower benchmarks, and their buildings also earned Energy Star certification. Similar energy management systems, lighting enhancements and mechanical system upgrades will be implemented in the Reynoldsburg, Worthington and Waverly City School buildings. It is reasonable to expect similar energy performance results. Waverly City Schools currently uses 130.4 kBTU/ft2. In order to significantly impact their energy usage, the planned energy-friendly enhancements are truly innovative. Their four buildings are heated and cooled by 300 individual energy-intensive heat pump units. Significant energy savings cannot occur without changing these systems. It is rare to completely overhaul mechanical systems in existing buildings, but Sabo/Limbach has designed a unique solution to replace the 300 heat pump units with four or five central systems in each building, similar to the central systems in Union-Scioto and Scioto Valley Local Schools. The solution will save a majority of the existing equipment and re-purpose it for central systems. When complete, the new & re-purposed systems will drive down Waverly's energy usage and costs to be comparable to these examples.

22. Describe the overall plan to evaluate the impact of the concept, strategy or approaches used in the project.

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 failure. The applicant should provide information on how the lessons learned from the project can and will be shared with other education providers in Ohio.

* Include the name and contact information of the person who will be responsible for conducting the evaluation and whether this will be an internal or external evaluation.

Sabo/Limbach Energy Services, an external firm, will evaluate the impact of the measures on the 35 buildings in the "Reduce Wasteful Watts" program. Mark Taylor (phone 614-607-8002, mark.taylor@limbachinc.com) and Patty Spangler (phone 614-607-8082, patty.spangler@limbachinc.com) will conduct the review. They will perform the review in a partnership with Cliff Hetzel (Reynoldsburg CSD, 614-501-1025), Jeff McCuen (Worthington CSD, 614-450-6127) and Claudia Zaler (Waverly CSD, 740-947-4770).

* Include the method by which progress toward short- and long-term objectives will be measured. (This section should include the types of data to be

collected, the formative outputs and outcomes and the systems in place to track the project's progress).

The most significant data is contained in the monthly utility bills for each building. These bills list electric usage in kWh and kW demand, electric power factor, natural gas usage in ccf, water usage in gallons, and the corresponding monthly costs for each utility. The schools and Sabo/Limbach will work collaboratively to obtain all bills to calculate and enumerate all savings. Sabo/Limbach will generate a spreadsheet monthly to compare electric, natural gas and water usage against the Base Year's usage. During the grant period, the utility usages are expected to decrease correspondingly as energy-related work is completed. Sabo/Limbach will set quarterly benchmarks in order to track utility reductions during the construction period (ending Summer 2015). Sabo/Limbach will prepare a formal Savings Report for each district six months post-construction, one year post-construction and annually after that. The Savings Report will detail the electric, natural gas and water usage for each building, pre- and post-construction. Sabo/Limbach will apply the calculations and adjustments outlined in the industry-standard International Performance Measurement and Verification Protocol, to adjust usage for weather conditions in both the Base Year and the Savings Period. Along with energy usage, the Savings Reports will confirm the energy cost savings at each of the 35 buildings in this program. Sabo/Limbach will share each district's Savings Reports with the Ohio School Facilities Commission. The OSFC will review the Savings, and may publish the results on-line. As part of an on-line database, the success of the "Reduce Wasteful Watts" program will be readily apparent to other Ohio school districts who are struggling with rising utility costs.

* Include the method, process and/or procedure by which the project will modify or change the project plan if measured progress is insufficient to meet project objectives.

If any building's electric, natural gas or water usage falls short of the quarterly benchmarks, Sabo/Limbach will perform one or more of the following: independent meter reading, detailed engineering review of that building's energy management system, test & inspect selected mechanical equipment, or test & calibrate selected sensors, among others. Sabo/Limbach will also query that building's energy management system for real-time web-based feedback on the setpoints and performance parameters of the energy-using equipment, in order to select equipment and sensors for further troubleshooting. When Sabo/Limbach determines the cause of the performance shortfall, they will take corrective action to align the building's energy usage with the expected benchmark.

23. Describe the substantial value and lasting impact which the project hopes to achieve.

The response should provide specific quantifiable measures of the grant outcomes and how the project will lead to successful attainment of the project goals. Applicants should describe how the program or project will continue after the grant period has expired.

Please enter your response below.

The most quantifiable, substantial value of the "Reduce Wasteful Watts" program is its significant reduction in spending in the five-year fiscal forecasts for Reynoldsburg, Worthington and Waverly City Schools. The guaranteed spending reductions for electricity, natural gas, water and Operations & Maintenance will drive more dollars to the classrooms in these three districts, enhancing educational opportunities for 16,795 total students. The annual spending reductions are: - Reynoldsburg City Schools, \$65,389 per year - Worthington City Schools, \$288,703 per year - Waverly City Schools, \$381,409 per year Sabo/Limbach is committed to generate these reductions in electric, natural gas and water usage. In fact, Sabo/Limbach will guarantee these savings, eliminating all risks of non-achievement. Sabo/Limbach will generate the energy use reductions by implementing energy-friendly measures customized to each of the 35 buildings: web-based graphical energy management systems, high-efficiency boilers, high-efficiency lighting, and specialized heating, ventilation and air conditioning system alterations, among others. The impact of these measures will be confirmed by detailed meter analysis at each building. In addition to the spending reductions, these measures will positively impact the environmental sustainability of each building. Together, these measures will reduce the collective carbon footprint equivalent to the annual usage of 512 Homes, or 1183 passenger vehicles, 13,376,446 passenger car miles, or the carbon sequestered by 4605 acres of forest land. Because these measures are permanent additions to each building's systems, this project will have a lasting positive impact, extending beyond the grant period. At a minimum, the districts will continue to see the reduced energy usage and spending reductions for the life of the buildings. Also, the corresponding carbon footprint reductions will have lasting impacts on the communities surrounding these 35 buildings. Finally, Sabo/Limbach's Resource Management package ensures continuous improvement of the energy usage at each building. This is a multi-year (5-year minimum) collaboration between the Sabo/Limbach energy engineers and the school districts to refine and enhance the energy program as well as share 'lessons learned.'

24. Describe the specific benchmarks, by goal as answered in question 9, which the project aims to achieve in five years. Include any other anticipated outcomes of the project that you hope to achieve that may not be easily benchmarked.

The applicant should provide details on the quantifiable measures of short- and long- term objectives that will be tracked and the source of benchmark comparative data points. Responses should include specified measurement periods and preliminary success points that will be used to validate successful implementation of the project. If a similar project has been successfully implemented in other districts or schools, identification of these comparable benchmarks should be included.

* Student Achievement

* Spending Reduction in the five-year fiscal forecast

For the reduction of utility costs by \$669,727 annually, Sabo/Limbach will guarantee the savings for five years. Also, they will prepare an Annual Savings Report for each district to confirm the reduction in electric, natural gas, and water usage and the corresponding costs. Each district's report will be based on the actual utility meter readings at each building, and normalized to account for variations in weather patterns. Sabo/Limbach will remediate if any buildings fail to meet benchmarks in the first months post-construction. Once remediated, all buildings should continue to perform for the long-term. Sabo/Limbach successfully implemented similar energy-based projects in the Union-Scioto LSD and the Scioto Valley LSD. Union-Scioto's utility usage decreased over 45%, and Scioto Valley's decreased over 50%. Both districts continue to operate at these benchmarks four years later, and both earned Energy Star certification. Similar benchmarks will be applied to the buildings in the RWW program. The annual reduction in maintenance cost by \$65,684 has been benchmarked against current expenditures. Current service and maintenance invoices were catalogued to determine the existing costs. Savings were calculated according ASHRAE-standard frequency of service and repair on the new work. Tracking will occur by logging maintenance invoices in future years and through the web-based energy management system utilized in each district, via 'run-time' logs for equipment.

* Utilization of a greater share of resources in the classroom

* Implementation of a shared services delivery model

* Other Anticipated Outcomes

25. Is this project able to be replicated in other districts in Ohio?

Yes

No

If the applicant selects "Yes" to the first part of the question, 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 the 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 included here.

* Explain your response

Although the specific measures in the "Reduce Wasteful Watts" program are customized to each of the 35 buildings, the energy-friendly concepts can be applied to any K-12 building in the State. At the end of the project, Sabo/Limbach will prepare a Savings Report for each district, detailing the energy and spending reductions for each building in the program. These reports will be shared with the Ohio School Facilities Commission, who will publish the results on-line. When compared to other projects in the database, the success of the "Reduce Wasteful Watts" program will be readily apparent to other Ohio school districts who are struggling with rising utility costs. Each of the three district partners have committed to make themselves available to share their 'lessons learned' with other districts who want to pursue a similar energy-friendly solution. Sabo/Limbach will prepare case-study articles for the three districts in the "Reduce Wasteful Watts" program and submit them to appropriate publications: the OSBA Journal, SBO Quarterly, and Energy Management journal. In addition, the three districts and Sabo/Limbach may present this program and its results at appropriate venues such as the OSBA Capital Conference and the conferences for OASBO and BASA. The innovative approaches in this program, such as the re-purposed mechanical systems at Waverly City Schools and the revenue-producing Demand Response strategies, will be relevant to all Ohio school districts.

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).

Jeffrey S. McCuen, CPA Treasurer/CFO Worthington City School District

Consortium

Worthington City (045138) - Franklin County - 2015 - Straight A Fund - Rev 0 - Straight A Fund

Sections 

Consortium Contacts

First Name	Last Name	Telephone Number	Email Address	Organization Name	IRN	Address	Delete Contact
Claudia	Zaler	740.947.4770	czaler@waverly.k12.oh.us	Waverly City	049148	1 Tiger Dr, Waverly, OH, 45690-8704	
Cliff	Hetzel	614.501.1025	cliff.hetzel@reyn.org	Reynoldsburg City	047001	7244 E Main St, Reynoldsburg, OH, 43068-2014	

Partnerships

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Sections 

Partnerships

First Name	Last Name	Telephone Number	Email Address	Organization Name	IRN	Address	Delete Contact
Mark	Taylor	614.299.2175	mark.taylor@limbachinc.com	Sabe-Limbach		822 Cleveland Ave, , Columbus, Ohio, 43201	

Implementation Team

Worthington City (045138) - Franklin County - 2015 - Straight A Fund - Rev 0 - Straight A Fund

Sections 

Implementation Team

First Name	Last Name	Title	Responsibilities	Qualifications	Prior Relevant Experience	Delete Contact
Claudia	Zaler	Treasurer/CFO	Mrs. Zaler will be responsible for the coordination of all activities related to the grant for Waverly City School District. She will work with the Worthington School's Treasurer to request funds and monitor the progress of the projects in Waverly.	Claudia has been the Treasurer/CFO of Waverly City School District since January 1, 2012. Her current contract runs through July 31, 2019. She has been involved in school finance for 10 years. She is knowledgeable regarding state and federal grant programs and has never had an audit citation regarding the proper use of such funds. Waverly currently has a construction project which functions similar to the grant proposal. We are confident with her knowledge and skills, she can accurately complete her responsibilities for this program.	Mrs. Zaler, prior to her dedication to school finance was an auditor for 2 years. This experience provides a unique skill set for evaluating and monitoring the financial accuracy, reporting and resultant outcomes of the proposed project.	
Cliff	Hetzel	Business Manager	Mr. Hetzel will be responsible for the coordination of all activities related to the grant for Reynoldsburg City School District. He will work with the Worthington School's Treasurer to request funds and monitor the progress of the projects in Reynoldsburg.	Mr Hetzel has been the Business Manager for Reynoldsburg City School District since November of 2012.	Mr Hetzel previously worked for Worthington City School District and has been a part of previous projects of this nature as well as oversight of construction of entire K-12 facilities.	
Mark	Taylor	PE Energy Engineer	Mark will be the Lead Engineer for Worthington City Schools project. Mark will be responsible for oversight of the project and reporting to district officials to ensure the projected savings are met.	Mark has over 30 years' experience in the energy engineering field with a specialty in K-12 schools. He has broad experience in design engineering, utility marketing and design build construction.	Mark Taylor working as part of the Sabo-Limbach team has worked on many similar projects for Ohio school districts including Alexander Local Schools, Bexley City Schools, Canal Winchester Local Schools, Marysville Schools and many others.	
Patty	Spangler	Pe Energy Engineer	Patty will be the Lead Engineer for Waverly and Reynoldsburg City Schools projects. Patty will be responsible for oversight of the project and reporting to district officials to ensure the projected savings are met.	Patty has over 25 years experience in the energy engineering field with a specialty in K-12 schools. He has broad experience in design engineering, utility marketing and design build construction.	Patty Spangler, working as part of the Sabo-Limbach team, has worked on many similar projects for Ohio school districts including Alexander Local Schools, Bexley City Schools, Canal Winchester Local Schools, Marysville Schools and many others.	
Jeffrey	McCuen	Treasurer/CFO	Mr. McCuen as the lead fiscal officer for the grant will be responsible for all aspects of grant reporting for the consortium. this will include cash requests,	Mr. McCuen has been a school finance officer for over 22 years. He has been the Treasurer of Worthington Schools since August 15, 2007. As Treasurer he has overseen many state and federal grant	Mr. McCuen previously worked in Dublin Schools for 13 years and South-Western City Schools prior to being in Dublin. He has been	

issuance of purchase orders and checks and coordination of activities with the Reynoldsburg and Waverly Schools.

programs and implemented many cost savings strategies for the District.

responsible for grant financial reporting in both entities and has overseen similar projects while a member of the Dublin Administrative Team.