



Government - Community and Litter

Grant Year: 2024

Date: 11/29/2023

Applicant Organization

City of Columbus Division of Infrastructure Management
111 N. Front Street
Columbus, OH, 43215
31-6400223

Application Contact

Mr. Timothy Nittle
Management Analyst II
111 N. Front Street
Columbus, OH 43215
US
614-645-7027
tonittle@columbus.gov

Authorizing Official

Director Jennifer Gallagher
Director
Public Service Department
111 N. Front ST
Columbus, OH 43215
614-645-7860
jlgallagher@columbus.gov

Project Contact

Mr. Scott Lucas
Infrastructure Operations Coordinator
Division of Infrastructure Management
1881 E. 25th AVE
Columbus, OH 43219
614-645-6325
SELucas@columbus.gov

Funding Request Details

Project Category	Project Grant Funds Requested	Match Funds Required	Total
C&DD Collection and Processing Equipment	\$200,000.00	\$50,000.00	\$250,000.00
Total	\$200,000.00	\$50,000.00	\$250,000.00

Budget Table Details

Category	Description	Grant Dollars	Match Dollars	Line Item Total
Equipment	Trommel Screen Plant	\$200,000.00	\$50,000.00	\$250,000.00
Total		\$200,000.00	\$50,000.00	\$250,000.00

Additional Match is: \$0.00

The applicant certifies that the total minimum required match funds for the application are available.

County	Ohio EPA Office	SWMD
Delaware	CDO	Delaware-Knox-Marion-Morrow
Fairfield	CDO	Coshocton-Fairfield-Licking-Perry
Franklin	CDO	Solid Waste Authority of Central Ohio

Targeted Materials

For the following project(s):

C&DD Collection and Processing Equipment

The targeted materials are:

Targeted Material	Clean #8 limestone
Quantity in Tons	250
Percentage sourced in Ohio	100
Material Specifications	#8 limestone mixed with litter, and organic material collected during the chip and alley road resurfacing process.
Name of Primary Market	Central Ohio
Primary Market City	Columbus
Primary Market State	OHIO
Primary Market Country	UNITED STATES

Targeted Material	Organic materials
Quantity in Tons	1
Percentage sourced in Ohio	100
Material Specifications	An unknown amount (1 ton listed above as a placeholder of unknown tonnage) of organic materials are currently collected by street sweepers during chip seal maintenance activities; but total amount is unknown as there is no current means of separating and sorting the collected materials
Name of Primary Market	Central Ohio
Primary Market City	Columbus
Primary Market State	OHIO
Primary Market Country	UNITED STATES

Targeted Material	Recycled Asphalt (RAP) graded grindings
Quantity in Tons	500
Percentage sourced in Ohio	100

Material Specifications	RAP graded grindings collected during roadway projects and sorted for use as berm material or chip and seal stone
Name of Primary Market	Central Ohio
Primary Market City	Columbus
Primary Market State	OHIO
Primary Market Country	UNITED STATES

Material Sources

For the following project(s):

C&DD Collection and Processing Equipment

The material sources are:

Material Source	City	State
City of Columbus	Columbus	OH

Open Recycle Ohio Grant(s)

The applicant does not have an open Recycle Ohio Grant(s).

Funding from other Grants

The applicant has not been awarded a Mosquito Control Grant (MCG) or an Ohio Environmental Education Fund (OEEF) grant in the past two years.

The applicant certifies that this project, if awarded, will not be implemented with funds in conjunction with the Mosquito Control Grant (MCG) or Ohio Environmental Education Fund (OEEF).

Project Location Contact(s)

Mr. Scott Lucas
1881 E. 25th Avenue
Columbus, 43219

Narrative

Executive Summary

Provide an overview of the proposed project. This is your chance to sell your proposal! Please include the purpose and scope, job creation and retention, and the specific methods and technologies that will be incorporated to implement your project. Explain if the proposed activities/events are existing or new. If applicable, list the type(s) of scrap tires to be collected (passenger, light truck, semi-truck and/or agricultural). Please be aware text boxes do not allow for inserting graphics, documents, tables, or photos. You will have the opportunity to provide attachments, such as photos and tables, later in the application.

The City of Columbus Division of Infrastructure Management (DOIM) is responsible for maintaining existing roadways and alleys within the corporate limits. Given Columbus' geographic size – approximately 225 square miles, this translates into thousands of miles of roadways and alleys. DOIM's street maintenance program generates hundreds of tons of waste, and also requires hundreds of tons of rock and other materials. The purpose of this project is to prevent hundreds of tons of reusable, recyclable materials used in DOIM's street

maintenance program from being discarded in the landfill due to contamination with litter and organic materials. The requested machinery would allow DOIM to reclaim and reuse hundreds of tons of clean #8 limestone and recycled asphalt (RAP), while also diverting organic materials from the landfill to the appropriate compost facilities.

Chip sealing is one DOIM's primary maintenance techniques for resurfacing roadways and alleys because it is a highly effective and cost-effective maintenance technique that provides longevity and crack sealing properties. Excess and loose stone is removed after the process is completed by street sweepers, and the asphalt cured for several days in order to provide a safe driving surface. In addition to collecting excess and loose stone, the street sweeping process also collects litter and organic materials. Reusing the collected #8 limestone and diverting organic materials are impossible without a mechanical means to sort through the collected materials; and, as a result, materials that could be otherwise reused (#8 limestone) or composted (organic material) are sent to the landfill due to contamination.

The Screen Machine 612T Trommel Screen Plant is ideally suited to sort and separate the stone, organic material, and litter from the street sweeping process to allow the proper processing of litter to the landfill, organic material for composting, and the stone for reapplication in the chip seal process or used elsewhere. In addition to the City of Columbus, other entities and municipalities could use the 612T Trommel Screen to separate their sweepings and provide even greater benefit to the community at large.

The unit can also be used to screen Recycled Asphalt (RAP) so it can be use as chip and seal stone and berm material. DOIM believes the ability to screen RAP will provide significant benefit, as this is a material collected from other capital improvement roadway construction projects that is often sent to the landfill. DOIM collects approximately 250 tons of dirty #8 limestone and 500 tons of RAP that cannot be reused because it has no means to sort the materials and remove contaminants. The trommel would immediately provide DOIM with the means to do this, as well as the potential to expand these numbers even more as DOIM partners with others to sort, reuse, and divert materials collected from maintenance and capital construction projects.

Budget Narrative

Provide a detailed description of budget line items and how they fit within the scope of your project. If it is necessary to include budget information from outside of the grant term, please indicate it will not be covered with grant funds.

The Screen Machine 612T Trommel Screen Plant is necessary for DOIM to have the equipment needed to properly sort the materials collected during roadway maintenance and construction projects. The requested grant funds would be used to purchase the trommel.

DOIM's 25th Avenue Facility already has the yard space and wash out area necessary to handle the trommel. If any additional items or improvements are required, however, DOIM acknowledges that those items or improvements would not be covered with grant funds and will be covered by DOIM funds.

Timeline

Provide a list of activities and events including projected dates with years and the major milestones of grant expenditures. If it is necessary to include timeline information from outside of the grant term, please indicate it will not be covered with grant funds. (Reminder: grant or match funds may not be spent before April 1st of the funding year.)

The Division of Infrastructure Maintenance (DOIM) anticipates all key milestones being completed within calendar year 2024. DOIM would plan to use the STS Ohio contracts, if possible, to purchase the trommel, as this would significantly shorten the procurement

process and there is currently a suitable unit available. DOIM would immediately begin the procurement process once funds are awarded and it is permitted to begin the procurement process. If the STS Ohio contracts could not be used, Columbus' procurement process would take approximately 90 days to advertise and award a procurement contract. Any required final site preparation could be completed within approximately two weeks.

Readiness

What steps have you taken to prepare for this project? Examples include: a secured project location, permits and documentation, finalized quotes/invoices, business plan and route plan. If you are spending money outside of the grant cycle to prepare for your project, please describe (Reminder: grant or match funds may not be spent before April 1st of the funding year).

The Division of Infrastructure Management (DOIM) already has the yard space and staff necessary to operate the trommel, and DOIM's 25th Avenue Facility already stores the materials collected during the street sweeping for the chip and seal maintenance project. DOIM believes any final site work required would take less than two weeks to complete. It is confident the project is ready to proceed, and that the trommel could be sorting and diverting materials shortly after it is delivered onsite.

Project Impact

What is the area impacted by this project? Include your project's site of operation and/or service area (e.g. location for surveillance cameras, drop-off container locations, litter cleanup areas, paving locations, etc.). Who will benefit from this project? Include groups targeted by your project (e.g. community for tire amnesty, neighborhoods for recycling contamination tagging, conference audience, scrap tire generators and transporters, etc.).

This project would benefit the entire City of Columbus and Central Ohio.

The Division of Infrastructure Management serves the entire City of Columbus, which includes more than 225 square miles and portions of 3 counties (Franklin, Delaware, and Fairfield). This project will allow DOIM to save Columbus money by purchasing less new stone, consuming less fuel, and paying fewer landfill tipping fees. It will also benefit Columbus by helping the city achieve Climate Action Plan Goals to decrease waste sent to the landfill by diverting and reusing approximately 750 tons of material from the landfill.

Central Ohio benefits from the project's ability to reduce the landfill material stream. This is a particularly important benefit, as the landfill is beginning to approach the twilight of its useful life. The potential to collaborate with other political entities to use this equipment for their materials would expand this project's impact even further.

These benefits represent the project's floor and not a ceiling for the benefits. DOIM and other agencies collect a significant amount of material every day that ultimately gets sent to the landfill because there is no effective way to sort the materials. As the trommel is integrated into regular operation, DOIM fully expects to identify new ways to use it, and new benefits for both the city and the region.

Collection, Processing and Diversion Rate

Explain the materials sources, method of collection, how the material will be processed, and the processing capabilities built into your project to handle the material. Provide an estimated diversion rate and the amount of materials that will be diverted from landfill for recycling. Include the primary end market for the materials.

The Division of Infrastructure Management already collects and tracks the target materials. The target materials are already collected at the project site and then transported to the DOIM

facility on E. 25th Ave by street sweeper or dump truck. Materials are then stored at E. 25th Ave before they are sent to the landfill because DOIM lacks the ability to reliably and efficiently separate the reusable materials from the other, non-useable or non-compostable materials. The 250 tons of clean #8 limestone and 500 tons of RAP are based on amounts collected in 2022 and ultimately sent to the landfill. DOIM believes that as it develops experience using the trommel and identifies new materials, new sources, and/or new (re)uses for the sorted materials it will be able to increase the project's waste diversion rate.

Project Permits

Describe the Ohio EPA permits, licenses, and other documentation required for your project in relation to your project timeline. It is the applicant's responsibility to verify what permits are required.

DOIM does not believe any would be required.

Financial Need and Project Commitment

Explain the financial need for requesting grant funds and how funding will support the success of your project. Describe your organization's long-term operational and financial commitment to your project. What type of strategies are in place to continue to support your project without additional and/or future grant funding?

The Division of Infrastructure Management already has the staff and yard space to operate and maintain the trommel once it is purchased. It also has the budget to cover the required local match, but it cannot purchase the trommel entirely on its own. This is why grant funding for the initial procurement is necessary.

The project should not require any additional funding beyond the procurement process. The trommel will use existing staff and yard space; and future maintenance costs can be paid, at least in part, through benefits provided by the trommel. These benefits will come in the form of no longer having to pay landfill tipping fees (approx. \$39.79-\$52.79 per ton depending on the facility) for materials that can be reused or diverted; purchasing and hauling less new #8 stone from the quarry; and using less fuel to move stone between the quarry, DOIM yard, job sites, and the landfill.

Recycling Trends and Waste Challenges

Explain the recycling trends and waste challenges impacting your community or organization and how your project addresses these issues.

Regionally, the SWACO landfill is entering the twilight of its useful life at the same time that the Central Ohio region is continuing to experience significant population growth and economic investment. As this new growth and investment continues to put pressure on the landfill's capacity, it is essential for the region to find ways to extend the landfill's useful life as much as possible; and, if that is not possible, to at least find ways to divert enough materials that the region's continued growth does not shorten the landfill's expected useful life.

Locally, there are two trends impacting the Division of Infrastructure Management's pursuit of ways to increase its diversion rate. The first trend is the Columbus Climate Action Plan (CAP), and its action items to reduce landfilled organic waste (Action Item 12.1), and reduce recyclable waste sent to the landfill (Action Item 12.2).

Action Item 12.1 - Targets for reduction in landfilled organic waste:

50% reduction in organic waste by 2030

90% reduction in organic waste by 2050

Action Item 12.2 - Targets for reduction in landfilled recyclable waste:
40% reduction in recyclable waste landfilled by 2030
95% reduction in recyclable waste landfilled by 2050

The second local waste trend is the expectation for Columbus and DOIM to lead by example. Right now, every time DOIM completes a chip and seal maintenance project, it has to pay to purchase new stone from the quarry, it has to pay for the stone to be transported to the job site, it has to pay to collect the excess stone from the job site, and then it has to pay to send the excess new stone to the landfill because it lacks the means to sort through the collected materials and separate the clean stone. This is a significant amount of waste that occurs because DOIM lacks the means to sort the materials.

Regional Waste and/or Organization Sustainability Planning

State how the proposed project supports the strategic and educational goals of the local and state solid waste management plans. Also include any regional or organizational sustainability/waste reduction goals that this project would support. We encourage you to reach out to your local solid waste district if you aren't familiar with their programs. State solid waste district contacts and examples of addressing local and state solid waste plans can be found below.

This project will help advance regional and organizational sustainability goals. The use of the Screen Machine 612T Trommel Screen Plant will reduce the material stream to the Franklin County Landfill, which will help extend the life of the current SWACO landfill. The landfill is beginning to approach its capacity, and diverting any additional waste is essential for trying to maintain/extend its current useful life. This project will also help achieve Columbus Climate Action Plan (CAP) action items to reduce landfilled organic waste (CAP Action Item 12.1), and to reduce recyclable waste sent to the landfill (CAP Action Item 12.2).

Metrics

Explain how the success of your project will be measured and evaluated (e.g. amount of material collected, number of people reached at an event or conference, amount of material reduced, contamination reduced, recycled material versus virgin material, etc.).

The success of the program will be measured in terms of the overall reduction of waste being taken to the landfill for disposal and conversely organic materials being reused in composting efforts and #8 stone and screened RAP being reused in street maintenance efforts. DOIM staff are able to weigh the collected materials before they are sorted by the trommel, and they are able to weigh the materials after sorting is complete. This data will allow DOIM to measure how much it is able to divert, and how much it is able to reuse.

Benefit

Explain how these funds will impact and benefit your community or organization (and markets if applicable). Businesses (Cooperating Enterprises) are required to submit a three-year estimate of future sales and a projected investment payback schedule (ROI) as part of the required financial documents in a separate email. If applicable, please also include a brief summary of the ROI and three-year estimate of future sales.

This project will allow the Division of Infrastructure Maintenance to sort and reuse materials that it already collects. In 2022, this included 250 tons of #8 limestone, and 500 tons of RAP. This project will provide significant cost savings to DOIM by allowing it to purchase less new stone, pay fewer landfill tipping fees, and consume less fuel transporting materials. The project will help achieve the Columbus Climate Action Plan (CAP) goals for reducing waste sent to the landfill (Climate Action Items 12.1 and 12.2). The project will also benefit the entire region by create a new waste diversion stream that will help relieve some of the pressure

being placed on the current SWACO landfill, which is entering the twilight of its useful life. This regional benefit has the potential for significant growth as DOIM is able to find other agencies interested in using the trommel as well.

Education and Outreach Plan

Describe your plan to educate and communicate with the public to promote your project (e.g. how to engage residents for a recycling contamination reduction project, find volunteers for a river clean-up, promote a new drop off location, educate residents on best ways to dispose of tires, etc.).

The Division of Infrastructure Management would use social media primarily to educate the public and promote the project. The Public Service Department frequently uses a mixture of videos, pictures, and the written word to relay information to the public through social media. DOIM believes that showing the public how the trommel works and how it allows them to sort and reuse clean stone and divert organics from the landfill would be a great video that could be used to highlight Columbus' efforts to improve reuse and diversion rates, as well as highlight the Ohio EPA's role in providing the funding necessary to purchase the equipment. An example of a Behind the Scenes Video involving DOIM can be found here: <https://www.facebook.com/ColumbusPublicService/videos/295359086356851>

Committed Partners

List all partnerships involved with your project, including: volunteers and other participants, local businesses, students, donated goods and services, waived tipping fees, time commitment, etc. Describe how these partnerships improve your project. (Reminder: grant or match funds CANNOT be used for salaries, food, travel, or speakers.)

The Division of Infrastructure Management does not currently have any partners committed to the project; but DOIM does anticipate working closely with other agencies within Columbus, as well as external agencies in Central Ohio, to provide access to the trommel for other agencies to use to sort materials collected during maintenance and capital construction projects. These projects generate a significant quantity of materials that can either be diverted from the landfill either by reusing it (e.g. clean #8 limestone) or composting it (e.g. organic material) if the right equipment is available. While the Division of Infrastructure Management generates enough materials to warrant the investment in the trommel (more than 750 tons per year of #8 limestone and RAP alone), it believes the trommel could also be a resource for other regional agencies. DOIM has a number of partnerships with other agencies for snow plowing roads during winter weather events and it is open to finding ways to partner with these agencies (and others) to address other needs, including sorting and diverting materials collected during maintenance and capital construction projects.

Acknowledge Funding Source

Ohio EPA requires you to acknowledge the grant program's participation in your project. How will you incorporate this? (For example, Recycle Ohio logo on all equipment purchased with grant funds, advertisements for litter collection events, signage for scrap tire-related projects, etc.).

A decal or sticker would be affixed to the equipment stating the support of the Ohio EPA in the purchase, and the Division of Infrastructure Management would also acknowledge the grant award through social media posts or other communications about the award.

Attachment Certification

Attachments are required.

I, the undersigned hereby certify the following for this application.

- The facility site details and construction drawings are attached.
- The manufacturing specifications and quotes for equipment purchases are attached.

Authorized Signature

The applicant is at least 18 years old.

SUBMITTAL AUTHORIZATION: I hereby certify that I am authorized by my designated position to submit this Recycle Ohio Grant Application on behalf of the applicant identified above, that the information is complete and accurate to the best of my knowledge, and that it represents the information to be used to determine the potential funding of the grant proposal.

A handwritten signature in blue ink that reads "Timothy Nittle". The signature is fluid and cursive, with a horizontal line extending from the end of the name.

Timothy Nittle
Management Analyst II

11/29/2023
Signature Date