

ATTACHMENT A
to the GRANT AWARD AGREEMENT
between Lexington-Fayette Urban County Government (LFUCG) and
Trane U.S., Inc. a.k.a. Trane

GRANT PROGRAM: FY2016 Stormwater Quality Projects Incentive Grant Program

Class B Infrastructure Projects

- Funded through the LFUCG Water Quality Management Fee
- Administered by the LFUCG Division of Water Quality in the Department of Environmental Quality & Public Works
- Design and Construction Grant

PROJECT TEAM AND CONTACT INFORMATION

Grantee Organization **Trane U.S., Inc.**
And Property Owner: **a.k.a. Trane**

12700 Plantside Drive
Louisville, KY 40299
KY Organization #: 143212

Project Site Location:
1515 Mercer Road
Lexington, KY 40511
PVA # 04012760

Project Manager and **Mr. Ken Bobzien**
Primary Project Contact: 859-457-1745 (phone)
Ken.bobzien@trane.com (email)

Secondary Project Contact: NONE

Design Engineering Firm(s): CDP Engineers
3250 Blazer Parkway
Lexington, KY 40509
859-264-7500 (phone)
Scott Southall, ASLA, AICP, LEED AP BD+C
(Project Manager/Landscape Architect of Record)
southall@cdpengeiners.com (email)

Project Partners: UK Department of Biosystems and Agricultural Engineering (UK
BAE), UK College of Agriculture, EcoGro, Ridgewater, & Stantec

PROJECT PLAN ELEMENTS

1) *STORMWATER CONTROL FACILITIES:*

The purpose of this project is to improve the stormwater quality discharging from the facility by improving a portion of an existing parking lot which holds water during and after rain events.

All improvements shall be located on the property 1515 Mercer Road, Lexington, KY, owned by Trane U.S., Inc., a.k.a. Trane. No other property or Right-of-Way shall be disturbed without the written permission from the property owners and/or LFUCG.

This project element includes design and construction of the stormwater control facilities at the specified site location as seen in Figures 1 and 2. The proposed facilities are listed below and are further described in the Organization's Incentive Grant application. Alterations to these elements can only be made in consultation with the LFUCG Grant Manager. Significant alteration of these elements may require approval by the LFUCG Water Quality Fees Board.

- a) **Concrete Sediment Forebay:** for water quality control. Design and construction of a Concrete Sediment Forebay to collect the majority of accumulated sediment from impervious areas of approximately 152,500 square feet. The design will follow the LFUCG Stormwater Manual, Chapter 10 Section 10.5.3 Surface Sand Filter, for minimum requirements.

- b) Bio-Retention System: water quality and quantity control. This project includes the design and construction of a 3,000 square feet Rain Garden/Bioretenion Cell converted from an existing parking lot shown in Figure 1. Site Data (Proposed BMP's). The rain garden will service approximately 11,500 square feet of drainage area located on the property.
- c) Permeable Pavement: for quality and quantity control. Approximately 17,750 square feet of pavement to be removed and permeable pavement to be installed. The permeable pavement is anticipated to treat/retain a water quality volume of approximately 35,400 square feet of the existing parking lot.
- d) Educational Collaboration:
 - i. The BMP applications will be featured on the Ingersoll Rand website that features a "Sustainability Success" link. The website is not only distributed among its 40,000 employees, but also the global market.
 - ii. The project shall include the installation of an at least one educational/interpretive sign panel to be installed adjacent to the proposed bio-retention area.

2) **DESIGN DOCUMENTS:**

Design Plans shall be provided to the LFUCG Grant Manager for review prior to starting construction phase of the project.

- The permeable pavement system shall be designed in such a way as to meet the LFUCG definition for an Engineered Pervious Surface (i.e. the design shall follow standard engineering principles and practices for permeable pavements).
- The permeable pavement system shall not be installed within 10 feet horizontally of any sanitary sewer line and measures shall be taken to prevent infiltrating water from entering the sanitary sewer trench.
- For the permeable pavement systems, the design shall include barriers and underdrains as necessary to prevent washing, scouring, or damage of any kind to the road base of any adjacent roadway or the proposed improvements. The design shall include an underdrain system to allow for hydraulic relief and prevent ponding of water above the stone base. The design documents for the permeable pavement shall include a description of:
 - i) Profile detail of the proposed surface (e.g. stone to paver) indicating all sizes of stone etc. Only open-graded (e.g. single-sized), certified washed stone is allowed. The Aggregate specification in the design documents shall meet or exceed the following: *"All Base and Bedding aggregates shall be washed with less than 1% passing the No. 200 sieve and certified as clean. Certifications shall be provided to the Engineer or Owner prior to unloading on site"*.
 - ii) Detail of the proposed underdrain system and plan view of its locations and how it will be connected into an existing storm sewer inlet or discharge into an existing gutter or other stormwater control structure. Water shall not be allowed to discharge onto a public sidewalk either directly via a pipe or from seepage coming from the stone base.
 - iii) Slope of the stone base and use of barriers, if necessary, to prevent high velocities and scour within the stone base.
- All existing utilities shall be located and shown on the design plans.
- All existing easements, adjacent property lines, and Rights-of-Way shall be shown on the design plans. If any work is proposed to occur within any easement (i.e. utility, etc.), whether public or private, the Organization shall obtain all necessary encroachment agreements for the authorized agencies prior to the start of construction.
- Any work proposed within or on public right-of-way, easement, or LFUCG-owned property will require one or more permits or approvals. This includes installation permits for

connection into any existing curb inlet or stormwater manhole located within public right-of-way. Please contact the appropriate staff:

Environmental Services (street trees), Tim Queary – tqueary@lexingtonky.gov
Engineering (right-of-way), Dan Kiser – dkiser2@lexingtonky.gov
Engineering (New Development), Hillard Newman - hnewman@lexingtonky.gov
Sanitary Sewers, Rod Chervus – rchervus@lexingtonky.gov
Stormwater, Greg Lubeck – glubeck@lexingtonky.gov

- All federal, state, and local permits, approvals, and agreements required for construction of the proposed improvements shall be obtained prior to the start of construction. If the timing of construction is such that a permit may expire before construction can be completed, then the Organization shall coordinate with the LFUCG Grant Manager and permitting agencies on appropriate timing for permit submittals. The Organization is fully responsible to determine which approvals, permits, and encroachments are required for the project.
- Erosion and sediment control and traffic control measures shall be designed to meet all standards and follow guidelines in the LFUCG Engineering Manuals, and shall be shown on the design plans with appropriate notes.

3) **STORMWATER CONTROL FACILITIES CONSTRUCTION:**

No grant-funded construction activities shall occur until the LFUCG Grant Manager gives notice-to-proceed, in writing, for the start of the construction phase of the project.

- Facilities shall be constructed per the design plans and specifications. Construction of the proposed facilities shall also meet the following stipulations:
- Construction shall not begin until all permits, approvals, agreements, etc. are obtained and copies provided to the LFUCG Grant Manager.
- All existing utilities shall be located, contacted, and coordinated with prior to any work being performed.
- The Stormwater Pollution Prevention Plan, including the Erosion and Sediment Control Plan, shall be provided to the LFUCG Divisions of Water Quality and Engineering for review. The LFUCG Land Disturbance Permit shall be obtained by the contractor after placement of the ESC and traffic control measures.
- Failure to place acceptable erosion and sediment control measures into service prior to start of construction will result in shut-down of the job site until the measures are put in place. Construction practices shall be put in place to prevent the illicit discharge of sediment, dirt, sand, fluids, trash, and any other pollutant into the Municipal Separate Storm Sewer System or Waters of the Commonwealth.
- The Organization shall host a pre-construction/construction meeting with all parties related to the Stormwater Control Facilities. The LFUCG Grant Manager shall be invited 5 days in advance of this meeting.
- The Organization is responsible for providing all construction oversight, administration, and daily inspections. LFUCG shall not provide these services.
- The Organization shall document construction by taking before, during, and after photographs. Photographs shall be provided in digital format to the LFUCG Grant Manager.
- Once constructions of the Stormwater Control Facilities are complete, a final walk-thru inspection shall be performed. The LFUCG Grant Manager shall be invited to this inspection and given 5 days notice. If punch-list items are identified, a second inspection shall be performed once those items are resolved, and the LFUCG Grant Manager shall be invited to this inspection and given 3 days notice.

- The Organization agrees to enter into the *Agreement to Maintain Stormwater Control Facilities Funded by an LFUCG Stormwater Quality Projects Class B Incentive Grant* included in Attachment B of the Grant Award Agreement within 21 calendar days of the final (post punch-list) inspection. This Agreement shall be recorded by LFUCG at the Fayette County Clerk's office. It is anticipated the bio retention system and permeable pavement will be included in Attachment B.

REPORTING REQUIREMENTS

- 1) Prior to Construction, the Organization shall provide the LFUCG Grant Manager 3 hard copies and one digital copy each of the following deliverables, each sealed by a professional licensed to perform such work in accordance with Kentucky Revised Statutes (KRS):
 - Set of all final design calculations.
 - Set of final construction plans, including erosion and sediment control plans, grading plans, etc. (Including one "half-size" set.)
 - Set of final specifications and bidding documents (if applicable).
 - Final detailed engineer's construction cost estimate including quantities and/or bid(s).
 - All local, state or federal required permits, approvals, public or private encroachment agreements etc. received to date for the project.
 - Inspection, Operation, and Maintenance Plan laying out the plan for regular inspection and maintenance of each proposed facility for design performance and safety in accordance with manufacturer's specifications and LFUCG's Stormwater Manual. The O&M Plan must include prohibitions against storage of certain materials on the permeable pavement.
 - Existing Condition photographs.
- 2) The Organization shall allow LFUCG twenty-one (21) calendar days to review the submittals and provide comments. If revised submittals are required, the Organization shall allow LFUCG ten (10) calendar days for review per submittal. LFUCG may choose to have a third party engineering consultant assist LFUCG in review of these submittals.
- 3) If the project is competitively bid, the selected contractor's unit price contract/bid list shall be provided to the LFUCG Grant Manager prior to the start of construction.
- 4) If the project is not competitively bid, the selected contractor's unit price contract shall be provided to the LFUCG Grant Manager prior to the start of construction, along with a justification for any deviations from the engineer's construction cost estimate.
- 5) **The construction phase shall begin only after the LFUCG Grant Manager gives notice-to-proceed, in writing, for the start of the construction phase of the project.**
 - 6) If, during construction, the contractor requests a deviation or addition to the quantities or costs in the construction contract, the LFUCG Grant Manager shall be notified within 2 business days. Additions or modifications to the project that are not directly related to the intended and correct function of the stormwater control project elements as described in the Project Plan Elements listed above and in original incentive grant application are not eligible for Grant reimbursement. Therefore, the Organization is advised that it should coordinate closely with the LFUCG Grant Manager during construction to ensure the work being performed is in compliance with this Agreement. **Note that per the Grant Award Agreement all over-runs that result in the project costs exceeding the Grant amount are the responsibility of the Organization.**
 - 7) After construction is completed, the Project Final Report shall include digital and hard copies of the following:
 - Summary of final construction costs and quantities.
 - Copies of all federal, state, and local permits obtained for the project (if not previously provided) and any permit closure documents.
 - 3 copies of a Record Drawing showing all field changes, and signed and sealed by the professional of record certifying the project as shown meets all original design intent.
 - Copies of final inspection minutes, punchlists, etc.

- Photo documentation of site conditions and improvements before, during, and after construction.
- Inspection, Operation, and Maintenance Plan laying out the plan for regular inspection and maintenance of each proposed facility for design performance and safety in accordance with manufacturer's specifications and LFUCG's Stormwater Manual. The O&M Plan must include prohibitions against storage of certain materials on the permeable pavement.
- Signed Agreement to *Maintain Stormwater Facilities Funded by an LFUCG Stormwater Quality Projects Class B Incentive Grant* (Note: this form will be filled in and provided by LFUCG after construction is completed and final costs determined.).

8) LFUCG shall make final payment of the 10% retainer after acceptance of the Project Final Report.

EDUCATIONAL OPPORTUNITIES

1) Educational Collaboration:

- a. This project looks to provide storm water education to 700 Trane employees as well as members of the general public. In addition, these applications will be featured the Ingersoll Rand (parent company) website, which features a "Sustainability Success" link. The website is not only distributed among its 40,000 employees, but also the global market.
- b. Design and installation of an educational/interpretive sign panel to be installed adjacent to proposed bio-retention area.

PERMANENT FACILITIES/INFRASTRUCTURE

Ownership: The proposed facilities are expected to reside on private property in Fayette County and be owned by the Property Owner.

Future Inspection and Maintenance: The Organization (and/or Property Owner) agrees to sign and abide by the terms of the *Maintenance Agreement for Stormwater Control Facilities Funded by an LFUCG Stormwater Quality Projects Class B Incentive Grant* included as Attachment B to the Grant Award Agreement. The property owner is solely responsible for future maintenance of the grant funded improvements as long as the improvements are in service.

Monitoring by LFUCG: The Organization agrees to allow LFUCG staff future access to any property on which work is performed to monitor the installed features for compliance with this Agreement during the grant period. After the grant period has ended, the Organization agrees to allow LFUCG access for monitoring per the terms of the Maintenance Agreement. Water quality sampling via grab samples or other methods may be employed by LFUCG staff as part of LFUCG's annual reporting requirement of its Kentucky Pollutant Discharge Elimination System (KPDES) MS4 Phase 1 permit.

GRANT PERIOD & PROJECT SCHEDULE

The grant period starts on the date of execution by the Mayor and extends for the time period as listed in the Grant Award Agreement. Any time extensions must be approved in writing by the LFUCG Grant Manager. The project schedule shown in Table 1 is preliminary. Proposed changes to the project which alter this schedule significantly shall be discussed with the LFUCG Grant Manager prior to implementation.

TABLE 1 – PROJECT SCHEDULE

Activity	Start Date	Completion Date
Notice to Proceed	March 2016	
Feasibility Phase	March 2016	May 2016
Design Documents Phase	May 2016	September 2016
Bidding & Contractual Phase	October 2016	November 2016
Construction Phase	December 2016	April 2017
Inspection, Punch Lists, & Construction Administration	February 2017	March 2017
As-Built Documents	April 2017	
Project Closeout	May 2017	July 2017

PROJECT BUDGET – GRANT ELIGIBLE EXPENSES

The project budget is broken into the following components based upon the Organization's incentive grant application:

1. Feasibility & Design Phase: **\$ 50,875.00**
2. Construction Phase: **\$297,881.00**

TOTAL PROJECT COSTS: \$342,756.00
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The Organization has offered to provide a cost share amount above the minimum program requirements of 10% of feasibility and design costs. The total project cost estimate and breakdown of grant to cost share is as follows:

Total Grant Share	\$317,756.00 not to exceed
Estimated Cost Share	<u>\$ 25,000.00</u> Minimum
Est. Total Project Cost	\$342,756.00

Table 2 lists the Eligible Expenses for the design and construction phases of this project. Only properly invoiced items shall be reimbursed with grant monies or counted toward the Organization's cost share.

Any work performed on this project prior to grant award by Urban County Council and Notice-to-Proceed from the LFUCG Grant Administrator is not an eligible expense and shall not be reimbursed or counted toward the cost share with the following exception:

- NONE

Construction cost items given in Table 2 are conceptual and the construction estimate will be revised and submitted to LFUCG Grant Manager for review prior to construction and again once bids are received. The Grant is a not-to-exceed amount, and any cost overruns are the responsibility of the Grantee. Note that the Grant shall not be used to fund any project element that is required by local, state or federal regulation in relation to any new development or re-development unrelated to the stormwater quality improvement project as described herein that were to occur on-site at the same time as this project. Donated professional service hours, valued at the Median Hourly Wage for the expense provided – from the U.S. Department of Labor, Bureau of Labor Statistics, State Occupational Employment and Wage Estimates for Kentucky (current website: http://www.bls.gov/oes/current/oes_ky.htm)

TABLE 2 – ELIGIBLE EXPENSES

Activities	Unit Price	Quantity	Funded by Organization	Funded by Grant	Total Expense	Total by Activity
Feasibility						
1 Site Survey	\$ 4,560.00	LS 1			\$ 4,560.00	
3 Feasibility Analysis	\$ 6,440.00	LS 1			\$ 6,440.00	
			Total Feasibility Expenses ->	\$ 1,100.00	\$ 9,900.00	\$11,000.00
Design						
5 Project Administration	\$ 10,170.00	LS 1			\$ 10,170.00	
6 Contract Documents	\$ 21,780.00	LS 1			\$ 21,780.00	
8 Bidding Contract Negotiations	\$ 7,925.00	LS 1			\$ 7,925.00	
			Total Design Expenses ->	\$ 3,987.50	\$ 35,887.50	\$39,875.00
Construction						
10 General Conditions	\$ 8,500.00	LS 1			\$ 8,500.00	
11 Erosion & Sediment Control Measures	\$ 2,500.00	LS 1			\$ 2,500.00	
12 Construction Staking	\$ 2,000.00	LS 1			\$ 2,000.00	
14 Demolition						
15 Concrete Curb	\$ 8.00	LS 350			\$ 2,800.00	
16 Sawcut Pavement	\$ 4.00	LS 285			\$ 1,140.00	
17 Excavation for Permeable Pavers (17,750 sf)	\$ 16.00	CY 1,350			\$ 21,600.00	
18 Proposed Improvements						
19 Permeable Concrete Pavers	\$ 4.75	SE 17750			\$ 84,312.50	
20 #8 Stone (1")	\$ 28.00	TN 90			\$ 2,520.00	
21 #57 Stone (6")	\$ 28.00	TN 493			\$ 13,804.00	
22 #3 Stone (12")	\$ 28.00	TN 888			\$ 24,864.00	
23 Geotextile - Type IV	\$ 7.25	SY 3950			\$ 28,638.00	
24 Formed Concrete (ribbon/header curb)	\$ 24.00	LF 630			\$ 15,120.00	
25 Concrete Forebay & Pretreatment						
26 Grading / Site Preparation	\$ 5,000.00	LS 1			\$ 5,000.00	
27 Formed Structural Concrete	\$ 900.00	CY 10			\$ 9,000.00	
28 6" Reinforced Concrete Pavement	\$ 120.00	SY 40			\$ 4,800.00	
29 Site Repair	\$ 2,000.00	LS 1			\$ 2,000.00	
30 Bio-Retention						
31 Excavation	\$ 24.00	CY 75			\$ 1,800.00	
32 Erosion Control Blanket	\$ 6.00	SY 100			\$ 600.00	
33 Amended Soil (18")	\$ 65.00	CY 20			\$ 1,300.00	
34 Sand (12")	\$ 75.00	CY 12			\$ 900.00	
35 Plantings	\$ 15,000.00	LS 1			\$ 15,000.00	
36 Miscellaneous						
37 Mobilization & Demobilization (5%)	\$ 12,410.00	EA 1			\$ 12,410.00	
38 12% Contingency	\$ 31,273.00	EA 1			\$ 31,273.00	
39			Construction Expenses ->	\$ 19,912.50	\$ 271,969.00	\$ 291,881.50
40			TOTAL PROJECT BUDGET	\$ 25,000.00	\$ 317,756.50	\$ 342,756.50
41			ORGANIZATION SHARE	7.3%		
42			GRANT SHARE	92.7%		

FIGURE 1 – PROJECT AREA (CONCRETE SEDIMENT FOREBAY)



FIGURE 2 – PROJECT AREA (BIORETENTION & PERMEABLE PAVEMENT)

