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KC WATER
ENGINEERING

Date: July 15, 2025

To: Kenneth C. Morgan, P.E., Director

David Poirier, Acting Deputy Director

From: David Elge, Project Manager DE

Subject: Bid Recommendation – Turkey Creek Pump Station Rehabilitation

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1. **PROJECT NUMBER(S):** 80002523

2. **CONTRACT NUMBER:** 9849

3. **PROJECT DESCRIPTION:**

   The purpose of the project is to find all the assets within the pump station that need repair or replacement and determine whether the current capacity of the station is enough for future demand. This project is seeking to improve and rehabilitate the entire pump station, which includes pumps, piping, valves, electrical systems, and building interior (safety).

4. **SOURCE OF FUNDS:**

   TBD

5. **MBE/WBE GOALS:** 14% MBE / 14% WBE

6. **PROPOSALS RECEIVED:**

   Black & Veatch

   Burns & McDonnell

   CDM Smith

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Lion CSG

Veenstra & Kimm

7. **DESIGN PROFESSIONAL SERVICES SELECTION COMMITTEE:**
8. Kenneth Morgan, Water Services Director
9. Eric Bunch, Councilman District #4
10. Kelly Postlewait, Assistant City Manager

11. **Negotiated Scope and Fee**

Maximum Design Professional Amount	$3,673,700.00
+Optional Services	$0.00
Grand Total	$3,673,700.00
Scope	See Exhibit B

RECOMMENDATIONS:

I recommend the City move forward and award Contract 9849 with CDM Smith for a total sum of $3,673,700.00.

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Approved: DocuSigned by: Blake Anderson 26145A5B61E84A6... 7/16/2025

Blake Anderson, P.E., Facilities and Plants Engineering Division Manager — Date

Approved: DocuSigned by: CDA8BEE0007B4B0... 7/17/2025

David Poirier, P.E., Acting Deputy Director — Date

Approved: Signed by: Kenneth Morgan 47CA3801D3B6446... 7/17/2025

Kenneth Morgan, P.E., Director — Date

cc: David Elge, Project Manager
Delois Moore, Procurement Manager
Nicholas Crafton, Finance Manager
Robbi Jackson, Budget Analyst
Contract File No. 9849

DESIGN PROFESSIONAL SELECTION

Turkey Creek PS Rehabilitation

80002523/9849

Councilman Eric Bunch, City Manager's Office Kelly Postlewait,

Water Services Director Ken Morgan

Date: October, 17 2024

Project	Selected Consultant
Turkey Creek PS Rehabilitation	CDM
Project Number/ Contract Number	**Alternate Consultant**
	Black + Veatch
80002523/ 9849	**Second Alternate Consultant**
	Lion

Eric Bunch, City Councilmember, 4th District ~~at Large~~ 4th - District

Kelly Postlewait, MS, Esq., Assistant City Manager

Kenneth Morgan, P.E., Director of Water Services

Turkey Creek Rehabilitation
Project No. 80002523 / Contract No. 9849

Prime Firms	Black & Veatch	Burns & McDonnell	CDM Smith	Lion CSG	Veenstra & Kimm
Date RFP/Q Recieved	8/6/2024	8/1/2024	8/6/2024	7/23/2024	8/8/2024
Addenda (2 total)	N/A	N/A	N/A	N/A	N/A
TEAM	•Environmental Advisors and Engineers - Architecture •Innovative Integrity in Design - Structural Design •Custom Engineering - Electrical, HVAC and Plumbing •Trekk Design Group - Civil / Utility Survey McCurdy Engineers - PS Design	•Environmental Advisors and Engineers - Architecture •Dubois Consultants - Structural design, Site and Civil •Custom Engineering - Mechanical and Electrical •Trekk Design Group - Utility Survey / Civil KMB Engineering - Electrical and Controls	•Trekk Design Group - Civil / Utility Survey •Wellner Architects & Engineers - Architecture and Consulting Services •Parson and Associates - Community Outreach •Kansas City Testing and Engineering - Geotechnical Engineering •Custom Engineering - Mechanical, Electrical and Plumbing •Environmental Advisors and Engineers - Architecture •She Digs It - Utility Contractor •KMB Engineering - Electrical and Controls	•Trekk Design Group - Civil / Utility Survey •Taliaferro & Browne - Structural Engineering •Premier Engineering - Mechanical •Brown & Caldwell - Mechanical Design •EDCS - Electrical and Controls	•Taliaferro & Browne - Structural Engineering •Environmental Advisors & Engineers - Architecture
PM	Jim Winger, PE	Deron Huck, PE, PMP, ENV SP	Sarah Stewart, PE, PMP	Nicole Young, PE	Mike Schoup, PE
Experience	•Princeton Booster pump station capacity expansion - City Of Irving, TX •Mohawk WTP High Service Pump Replacement and VFD Addition - Tulsa Metropolitan Utility Authority •Vine Street Pumping Staion - Lincoln Water System •268 Other Projects Listed within Proposal	•East Bottoms Pump Station Rehabilitation and Expansion Study - KC Water •Citico Wastewater Pump Station Reliability Improvements and Force Main Rehab - City of Chattanooga, TN •Wichita Northwest Water Facility - City of Wichita, KS •Faraon Street Pump Station Rehabilitation - St. Joseph, MO •Dykes Branch Pump Station - Prairie, KS •MMU North Street Pump Station - Marshall, MO •North Headworks Pump Station - Atchison, KS •Topeka Layne Pump Station Rehabilitation - Topeka, KS •Cedar Lake Lift Station - Olathe, KS •Winnebago Lift Station - Little Blue Valley Sewer District •Pump Station #25 and Forcemain - Lawrence, KS •Pump station 61 Improvements and I/I Investigation - Unified Government of Wyandotte Count	•Monroe Street CSO Lift Station Design & Implementation Assistance - City of Omaha, NB •Springwells High & Low Lift Station Pump Improvements - Great Lakes Water Authority •Jim Miller Pump Station Improvements - Dallas Water Utilities, TX •Plant 2 Final Design - City of Wichita, KS •Scada Programming - City of Wichita, KS •Birmingham WWTP Headworks CPS - KC Water •Private I/I Reduction Phase 5 - KC Water •Mill Creek Influent Pump Station Expansion - Johnson County Wastewater •37th & Norton Green Infrastructure and Sewer Separation Preliminary Engineering - KC Water •Middle Basin WWTP Facility Plan - Johnson County Wastewater •Outfall 054 Amendment 2 - KC Water •MO River Digester Improvements/Engine Generator Replacement - Metropolitan St. Louis Sewer District •Outsourced Information Security Officer - WaterONE •Field Investigation City-Wide Sewer Infrastructure within Waterways Renewal 3 - KC Water •Engineering Design, Bidding and Construction services for 2023 Stormwater Pipe Repair (West) Project - City of Shawnee, KS •Birmingham Feasibility Study - KC Water •Out of Scope Design Services - Great Northwest Wholesale Water Commision	•Chain of Rocks Pump Station - City of St.Louis •Hall Street Manifold Chamber - City of St.Louis •Modeling City System - City of St.Louis •Birmingham PS Screen Replacement - KC Water •Louisa Pump Station - City of St.Louis •Arsenal Pump Station - City of St.Louis •Watkins Creek Pump Station - City of St.Louis •Creve Coeur Creek Pump Station and Force Main - Metropolitan St.Louis Sewer District •Multiple Pump Station Designs - City of Jefferson •Lemay Pump Station 1 & 2 - Metropolitan St.Louis Sewer District •River House Pump Addition & improvements - East St.Louis Water Treatment Plant •Daniel Boone and County Pump Station - St.Charles, MO •Highway D P ump Station and Main - St.Charles, MO •Highway Z Pumping Station Rehabilitation - O'Fallon, MO •West Wastewater Pump Station - City of Farmington, MO •Brooklyn Pump Station - Belleville, IL •Pump Station rehabilitation - City of Union, MO	•Bedford Pump Station Evaluation - North Kansas City, MO •Northwest Booster Station - Ankeny, Iowa •Well No. 22 Improvements - Waterloo Waterworks, Iowa •Well No. 14 Improvements - Waterloo Waterworks, Iowa •Well No. 16 Improvements - Waterloo Waterworks, Iowa •Operations Center Stormwater Pump Station - Des Moines Waterworks •NW Development Area Booster Station - Altoona, Iowa •Well 15 + 17 Improvements- Waterloo Waterworks
Number of Employees	Total Employees: 13,000 Total Employees in Kansas City: 2300+	Total Employees: 14,000+ Total Employees in Kansas City: 5600+	Total Employees: 5700 Total Employees in Kansas City: 61	Total Employees: 11 Total Employees in Kansas City: 0	Total Employees: 200+ Total Employees in Kansas City: 15
Project Approach	**Project management and admin**: preparing invoices, managing subconsultants, conduct initiation meeting, and montly progress meetings to create a comprehensive work schedule. **Site investigations, Assessments and review of existing info/docs**: full facility assessment/controls system assessment, infrared thermography of medium voltage electrical gear, create risk scores and recommendations, hazardous material assessment, electrical systems assessment, site utility survey, Lidar Survey. water quality assessments, 3D laser scanning, real-time water quality monitoring assessment, reliability and resiliency assessment, equipment cooling system assessment, AI assessment, security system assessmentRepurposing unused areas/rooms and reservoir transfer pump hydraulic assessment. **Conceptual design**: evaluation of alternatives and project phasing plan. **Sustainability**. **Prelim Design**: TCPS hydraulic model, pumping unit cap, pumping unit capacity & motor control assessment, transient surge modeling, risk management, basis of design memorandum, probable construction costs, cost of service study, quality assurance and project schedule.	Burns & McDonnell sees the purpose of the project as two pronged 1) identify assets in and around the pump station that are near or at the end of their use life and in need of repair or replacement. 2) Assess whether current station capacity is adequate for future demand and propose alternatives to current pumping systems if future demand cannot be achieved. Currently working with David Elge on condition assessment efforts at TCPS in water master plan.	**Revitalizing aging infrastructure**: help TCPS operate for another 70 years. Structural condition assessment, maintain code compliance, electrical system analysis, SCADA and control system assessment. **Optimize operation**: right sizing the facility and improving operations and controls. Station wide dynamic vibration analysis, lower reservoir optimization, pump starter optimization. **Maintain TCPS operations**: Any improvements at TCPS must maintain service to the southern residents of KC throughout construction. Can the WTP pump directly to upper reservoir allowing for the the lower reservoir to be removed from service. **Embrace Sustainablility Opportunities**: A project of this magnitude creates opportunities to embrace the city's sustainability initiative and to improve TCPS into the future. Stakeholder engagement, incorporating a microgrid utilizing a solar array, energy management.	Planning: project initiation, project kickoff, engineering report, field review meeting. Modeling: unique factors with modeling turkey creek PS, focusing modeling on operations & pump optimization. Engineering disciplines: conceptual design, sustainability design, preliminary design. Operations, Maintainance, & constructability review. Sustainability: sustainable design, envision credits, diversity and inclusion for sustainable community. Lion CSG will assist KC Water in providing solutions for efficient and reliable operations for the Turkey Creek PS Rehabilitation. Our team will work through the process to ensure KC Water has selected alternatives focused on the quadruple bottom line process of environmental community, operations, and economic impacts	Due to the age of the building and facility the pump station has many issues related to process, electrical, mechanical and structural. Veenstra & Kimm will begin the project with a review of current architecture, energy and life safety codes to identify recommended improvements to modernize the building and improve safety for KCMO Water staff. They will take care of peeling paint, moist electrical rooms in process piping areas, replacing electrical gear and modernizing other essential systems and areas.

Quality Assurance	Black & Veatch will use the QMS process based on the ISO 9001 and will prepare project specific quality management plan. They will be performing technical review at important milestones, they will conduct quality review with senior technical staff, independent reviewers will double check all major desicions and criteria, and the subconsultants use similar review methods. Black & Veatch also conducts quality reviews of the subconsultants.	Burns & McDonnell has a 6 step quality assurance process. **1.** The project work plan will be reviewed to evaluate the project approach **2.** A second independent review of the goals and objective will be completed to keep track of project approach **3.** There will be a third party review **4.** Verify compliance with project objectives, review of document accuracy and level of completion **5.** The project management team will verify that all goals of the plan are addressed **6.** An independent party verifies that all the client needs are met and addressed	CDM Smith has a 6 part approach to quality assurance. **1.** Operability: Planning for ease of O&M begins now and continues through delivery **2.** Staffing: An exceptional hand-picked and commited team **3:** Documentation: Maintaining comment logs, QC tracking, independent constructability/cost opinion reviews **4.** Standards: Apply proven resources, tools, and standardization for the city **5.** Communication: weekly design meetings, bi-monthly design process meetings, action item/decision logs for tracking **6.** Coordination: Planned cross-discipline reviews, permitting, and integrated 3D modeling	Lion CSG has defined quality assurance model. Every team member will provide checks and backchecks to make sure that all of KC Water's needs are being met. Objectives are focused on meeting requirements and addressing future needs and expectations. The model is achived through customer focus, leadership, engagement of people, process approach, improvement, evident based decision making and relationship management.	Veenstra & Kimm QA program is based on 2 major elements. 1) Approach to planning and design: Veenstra & Kimm staff members being involved in all aspects of project planning, design and construction. 2) Internal review planning and design documents at 50% and 90% completion levels. The review is by staff not part of the project team. 50% review focuses on the conceptual level and the 90% review focuses on specific details being recommended in the study or design
CREO Goals **M/WBE Goals: 14/14**	Plans to meet recommeneded goals	Plans to meet recommended goals	Plans to meet recommended goals	Plans to meet recommended goals	Plans to meet recommended goals
Sustainability	**Quality of Life**: Be aware of noise and security impacts on neighbors for long term improvements and construction. **Leadership**: make sure ensuring sustainability is a constant consideration from planning to final construction. **Resource allocation**: design variable frequency drive pumps and renewable energy options. **Natural world**: green infrastructure and green roof options. **Climate**: reduced pollutant emissions	**Energy efficiency improvements:** assess and upgrade pumps and motors. conduct evaluation of entire pumping system and identify opportunities for reducing energy consumption, implement VFD's to reduce energy costs. **Infrastructure & equipment:** replace piping to maintain system integrity, update process valves, upgrade lighting and electrical systems. **Water conservation:** use LIDAR to assesss existing infrastructure, perform hydraulic analysis/CFD modeling, and optimize pump operation schedules. **Design and Construction:** develop project phasing plan, identify areas for sustainable infrastructure. **Safety and Compliance:** address safety issues and implement upgrades accordingly. **Data driven descision making:** update PFD's and P&IDs to reflect latest improvements	**Incorporating microgrid utilizing a solar array:** designing and building a solar panel intergrated microgrid on top of the lower and upper reservoirs for a solar farm, it can operated independantly or in conjuction with the main electricity grid. microgrids can respond to price signals, to sell excess power and reduce peak demand. **Energy Management:** review power consumption and demand data, timing water transfer from lower to upper reservoirs at night, using VFD's to ramp up and down large pumps, explore optimization through AI.	**Sustainable design:** using electronic paperwork instead of hard copies, opportunites for sustainable investments will be presented in the preliminary Design Study with cost benefit analysis focusing on the 10% return rate no greater than 10 years, long term operations will focus on efficiency for energy use, replacement and maintenance. **Envision Credits:** enhancing public health and safety, long term monitoring and maintenance, extend useful life, reduce energy consumption, monitor water systems. **Diversity and inclusion for sustainable community:** involve M/WBE partners in important project roles, commit to exceed the 14% M/WBE involvement goal, staff diversity.	Participates in the Envision Certified Program
Project Schedule	Preliminary engineering in 9 months	N/A	1/25 - Prelim Design end of 2025	N/A	9/24 - 9/25
Firm Member Max Possible Time Commitment (%)	Jim Winger, PE - 35% Suzie Carpenter, PE - 50% Jeff Henson, PE - 50% Mike Hall, PE - 50% Raghu Kadava, PE - 40% Karen Marie Dietze, PE - 25% Jacob Schultze, PE - 60% Kevin McCurdy, PE - 40% James Maher, PE - 25% Dave Rosnagel - 20% Renee Whaley - 50% JC Alonzo, ENV SP - 40% Julia Ricks, PE - 20% Bruce, Hellmer, PE - 30% Maurice Bass, PE - 25% Adiel Tauheed, PE - 50% Doug Swift, RA - 75% Justin Likes, PE - 40%	Deron Huck, PE, PMP, ENV SP - 50% Bill Nash, PE, ENV SP - 60% Will Williams, PE, PMP - 80% Jess Borries, PE - 50% Kevin Devoto - 40% Kevin Waddell, PE, DBIA - 25% Ryan Scott, PE - 25% Dana Hinderliter, PE - 25% Andy Sauer, PE, ENV SP - 25%	Sarah Stewart, PE, PMP - 40% Mark Griffin, PE - 50% Chetan Soni, PE - 40% Georgine Grissop, PE, BCEE - 25% Steve Fehniger, PE - 10% Mike Rice, PE, PMP - 15% Jerry Haire, PE - 25% Ali Ashur, PE - 25% Jason Mewes, PE - 75% Alan Hahn, PE, SE - 20% Carl Frizzell, PhD, PE - 40% Stan Plante, PE, BCEE - 25% Greg Sanders, PE - 25% Shannon Ketchum, RA, NCARB, LEED AP - 35% Jefferey Donaldson, PE, PMP - 15% Melody Glasscock, PE, ENV SP - 25% Todd Stalnaker - 10%	Nicole Young, PE - 60% Chris Retzer - 60% Marc Bachetti, PE - 40% Shannon Ryan, ENV SP, Sustainability - 35%	N/A