



November 23, 2022

City of Arkansas City  
PO Box 778  
Arkansas City, Kansas 67005  
Attn: Mr. Rod Philo  
[RPhilo@ArkansasCityks.gov](mailto:RPhilo@ArkansasCityks.gov)

RE: Test Drilling and Well 16 Production Well

Layne Christensen Company (Layne) is pleased to present this scope of work and cost proposal for the above referenced project. Layne's scope of work is outlined below.

### **Phase I – Technical Services**

Layne will prepare specifications by a licensed hydrogeologist. PEC will include these specifications in their project documents for submittal to KDHE.

### **Phase II – Test Drilling Services**

Layne has based this proposal on an estimated depth similar to existing water supply wells in the area. Actual well design and construction will be based on test drilling results. Parameters including but not limited to well depth, diameter of bore hole, screen slot size and placement will be determined to provide the most efficient well given the existing geological conditions.

Layne will mobilize a test drilling rig and crew to complete one (1) test hole at the potential well location identified. Formation samples will be collected at 5-foot intervals within the lower 20-foot of each test hole. The formation samples will be sieved and a recommended well design will be supplied for review by PEC. Layne will then drill, construct, develop, perform a pumping test, and collect water quality samples from the 8-inch diameter PVC test well. Cost for water quality samples have not been included.

Layne has also allowed for abandonment of the test well upon completion of the project; and is itemized separately.

### **Phase III – Production Well**

After confirmation of final production well design by PEC, Layne crews will drill/construct one (1) 18-inch diameter production well with a 54-inch diameter borehole. The production well will be constructed using carbon steel casing and Johnson HI-Q stainless steel wire wrap screen. The well will be gravel packed and sealed to meet local requirements. This well will also be surged, bailed, and surge pumped to maximize development. After final development of the production well a six (6) hour step pumping rate test will be performed followed by recovery



readings. Then, crews will conduct a twenty-four (24) hour pumping test followed by recovery readings. These results will be provided to the city engineer for review for permanent well pump sizing. Total development and pump testing hours have been estimated at approximately 70 crew hours. Layne feels these methods are beneficial for an efficient well.

#### Phase IV – Pumping Equipment

A new Layne water lubricated turbine pump assembly will be supplied and installed in the new well. Final design will be based on the data from the pump testing as stated above. Startup services will be provided once the well is ready to be placed into service. We have assumed the following:

- 15HP vertical hollow shaft motor, 460 volts, 3 phase, standard efficiency with NRR, 1800 RPM
- Discharge head assembly, Christensen Style A, 6 x 16 with steel base plate
- Column assembly Layne type 6" x 1-1/2", 416 SS line shafting, water lubricated, with SS sleeves and combination couplings. 30' of assembly included
- Bowl assembly Christensen Model 10WAHC, 5-stage, water lubricated, with bronze wear rings, and SS bolting and collets
- Concrete pump base is provided by Layne

#### Phase V – Well 4 Abandonment

At the completion of the project, Layne crews will abandon Well 4 per State regulations and cut the casing 3' below grade. Surface demolition and haul off is assumed to be completed by others.

Item	Description	Unit	Est. Qnt'y	Unit Price	Total Est. Price
1	HYDROGEOLOGICAL SERVICES	EA	1	\$5,000.00	\$5,000.00
2	TEST DRILLING/TEST WELL CONSTRUCTION, DEVELOPMENT, TEST PUMPING	EA	1	\$23,706.00	\$23,706.00
3	TEST WELL ABANDONMENT	EA	1	\$7,200.00	\$7,200.00
4	PRODUCTION WELL COMPLETE	EA	1	\$140,545.00	\$140,545.00
5	VERTICAL TURBINE PUMPING EQUIPMENT COMPLETE	EA	1	\$34,647.00	\$34,647.00
6	WELL 4 ABANDONMENT	EA	1	\$9,957.00	\$9,957.00

Along with this scope of work, the following clarifications apply to this offer:



- 1) Based on mutually agreeable terms and conditions.
- 2) Layne will require the well site to be clear of any obstructions and that the site is accessible with truck mounted drilling equipment, pump service equipment and other equipment, as necessary. This may require that access roads and/or site drilling pads be provided depending on the site conditions at the time of drilling.
- 3) Layne will require the static water level to be at least 12-feet below grade to safely proceed with drilling using reverse circulation methods.
- 4) Layne cannot guarantee water quantity or quality.
- 5) Layne has not included the cost of the water quality testing.
- 6) Layne assumes that all drill cuttings and drill fluids can be left on site without the need for containerization or transportation.
- 7) Layne assumes this project site is free of environmental contaminants, and discovery of any such contaminants during field operations will require us to stop work and re-evaluate the scope and price for continuing the work.
- 8) Layne assumes existing city wells will be used as source of water for drilling operations free of charge.
- 9) Layne has not included the following: electrical, pump/motor controls, surface completions, discharge piping, elevated platforms, concrete work, SCADA, and/or site restoration.
- 10) No taxes or bonds have been included.

Sincerely,

*Logan Wartick*

Layne Christensen Company

**Logan Wartick**

Area Manager

620 South 38<sup>th</sup> Street  
Kansas City, KS 66106

**Phone:** 913-321-5000 | **Cell:** 402-960-3527

**Email:** [logan.wartick@gcinc.com](mailto:logan.wartick@gcinc.com)

## TERMS AND CONDITIONS

**LIABILITY OF CONTRACTOR:** *Contractor shall not be liable for any bodily injury, death, or injury to or destruction of tangible property except as the same may have been caused by the negligence of Contractor. In no event shall Contractor be liable for any delays or special, indirect, incidental or consequential damages. Purchaser agrees that the total limit of Contractor's liability (whether based on negligence, warranty, strict liability or otherwise) hereunder, shall not exceed the aggregate amount due Contractor for services rendered under this contract. All claims, including claims for negligence or any other cause whatsoever, shall be deemed waived unless made in writing and received by Contractor within one (1) year after Contractor's completion of work hereunder.*

**INSURANCE:** Contractor shall provide workers' compensation insurance, public liability and property damage insurance covering its employees and operation. Purchaser, at its option, may maintain such insurance as will protect it against claims arising out of the work.

**REIMBURSABLE COST:** In addition to the hourly charge provided on the face of this contract, Purchaser will reimburse Contractor for travel and living expenses necessarily incurred by the Contractor in the performance of the work, minor incidental expenses such as overnight mail, telephone and petty cash expenditures necessarily incurred, cost of removal of all debris if so directed by Purchaser, sales, consumer, use and similar taxes required by law and the cost of permits and all licenses necessary for the execution of the work. The foregoing costs shall be billed at actual cost plus fifteen percent (15%) unless otherwise agreed upon.

**PRICE ADJUSTMENT:** Any cost estimates or time frames stated herein are subject to equitable adjustment in the event of differing or unforeseeable conditions, changes in applicable laws after the date of this contract, unforeseeable delays or difficulties caused by acts of God, Purchaser or any third parties. Prices of goods acquired by Contractor from others shall be adjusted to reflect Contractor's price in effect at time of shipment. The price of Contractor's goods will be adjusted to the price in effect at time of shipment in accordance with Contractor's current escalation policies or as specifically covered in this contract.

**TERMS:** Thirty (30) days net from date of invoice. For extended projects, Contractor shall submit invoices on a monthly basis for any and all work completed and materials or equipment provided during the previous month. Past due invoices shall be subject to a delinquency charge of one and one-half percent (1-1/2%) per month (eighteen percent (18%) per annum) unless a lower charge is required under applicable law, in which case the lower rate shall apply. Purchaser agrees to pay all collection fees, attorneys' fees and costs incurred in the collection of any past due amounts arising out of this contract. Contractor shall have the right to immediately terminate this contract without further liability if Purchaser fails to make timely payment or otherwise materially breaches this contract.

**MATERIAL SHORTAGES AND COST INCREASES:** If any portion of materials or equipment which Contractor is required to furnish becomes unavailable, either temporarily or permanently, through causes beyond the control and without the fault of Contractor, then in the case of temporary unavailability any completion time frames shall be extended for such period of time as Contractor shall be delayed by such above-described unavailability, and in the case of permanent unavailability Contractor shall be excused from the requirement of furnishing such materials or equipment. Purchaser agrees to pay Contractor any increase in cost between the cost of the materials or equipment which have become permanently unavailable and the cost of the closest substitute which is then reasonably available.

**DELAYS:** If Contractor is delayed at any time in the progress of work by labor disputes, fire, unusual delays in transportation, unavoidable casualties, weather, or any cause beyond Contractor's reasonable control, then any completion time frames shall be extended by a reasonable period of time, at least equal to the period of delay.

**CHANGED CONDITIONS:** The discovery of any hazardous waste, substances, pollutants, contaminants, underground obstructions or utilities on or in the job site which were not brought to the attention of Contractor prior to the date of this contract will constitute a materially different site condition entitling Contractor, at its sole discretion to immediately terminate this contract without further liability.

**ESCALATION:** This contract is made with the understanding that Contractor will be able to begin and continuously proceed with its work on or before the proposed start date on the reverse side hereof. In the event Contractor is unable to commence its work on or before said date because the project is not ready for Contractor's work, Contractor will charge Purchaser the amount of increase in Contractor's cost attributable to such delay, plus Contractor's normal overhead percentage.

**GUARANTEE AND LIABILITY:** Contractor warrants that its labor supplied hereunder shall be free from defect and shall conform to the standard of care in effect in its industry at the time of performance of such labor for a period of twelve (12) months after substantial completion of Contractor's work. Contractor agrees, to the extent it is permitted, to pass on any warranties provided by the manufacturers of materials and/or equipment furnished under this contract. Contractor itself provides no warranty, express, implied or otherwise, on any such materials or equipment. Contractor will not be responsible for: work done, material or equipment furnished or repairs or alterations made by others.

*For any breach hereunder, Contractor shall be liable only for the value of the installation work or, if it wrongfully fails to install, then its liability is limited to the difference between the contract price herein, and the value of other similar installation work. If Contractor's breach damages any materials or equipment furnished hereunder, Contractor shall only be liable for the value of such materials or equipment. Under no circumstances will Contractor be liable for consequential, special or indirect damages, including without limitation, any crop loss or damage, damage to other equipment, structures or property, nor for any other similar or dissimilar damages or losses whether due to delay, failure to furnish or install, delay in installation, defective material or equipment, defective workmanship, defective installation, delay in replacing, nor for any cause or breach whatsoever. In any event, Contractor's total liability towards Purchaser for alleged faulty performance or nonperformance under this contract shall be limited to the total contract price. No materials, equipment or services contracted herein carries any guarantee not mentioned in this contract. THE ABOVE WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE HEREBY DISCLAIMED.*

**TITLE AND OWNERSHIP:** In case of default on Purchaser's part, Contractor shall have the right to enter the premises upon which any material or equipment furnished herein have been installed and retake such goods not then paid for and pursue any further remedy provided by law, including recovery of attorneys' fees and any deficiency to the maximum extent and in the manner provided by law. Such materials and equipment shall retain their character as personal property of Contractor until payment in full is received by Contractor, regardless of their mode of attachment. Unless prior specific written instructions are received to the contrary, surplus and replaced materials and equipment resulting from repair or installation work shall become the property of Contractor.

**DELIVERY:** Shipment schedules and dates, expressed or implied, are contingent on normal conditions. Contractor will not be responsible for any delays in shipment or completion caused by factors beyond its control such as, but not limited to, suppliers' failures, accidents, work stoppages or operation of or changes in the law. Shipments will be made as promptly as Contractor's ability to obtain materials and/or equipment and scheduling will permit. No delay in shipments or variances from shipping schedule shall be cause of cancellation or any claim for damage. Any changes in layout or design requested after acceptance of this contract will be made at Purchaser's additional cost. Any such change and/or time taken to supply engineering data or to approve drawings will automatically extend shipping schedules. Equipment will be shipped "knocked down" to the extent Contractor considers necessary, with small parts stripped from equipment and crated. On and after delivery to the carrier for transportation to the Purchaser's site, Purchaser shall be responsible for all loss or damage to materials or equipment due to any cause, including but not limited to loss or damage resulting from casualty.

**INDEMNIFICATION:** *Purchaser agrees to indemnify and hold Contractor, its directors, officers, stockholders, employees, agents and subcontractors, harmless from and against any and all claims, demands, causes of action (including third party claims, demands or causes of action for contribution or indemnification), liability and costs (including attorneys' fees and other costs of defense) asserted and/or filed by Purchaser or any third party(ies), including without limitation Purchaser's employees, and arising out of or as a result of: (i) the presence of Contractor or its subcontractors at the job site, (ii) the work performed by Contractor or its subcontractors, or (iii) any negligent act or omission of Purchaser, its employees, agents, consultants, other contractors or any person or entity under Purchaser's control; except to the extent that such claims, demands, causes of action, liabilities or costs are caused by the negligence of Contractor or its subcontractors.*

**INTERPRETATION:** This contract shall be governed by and construed in accordance with the laws of the state of the job site location. If any term, provision or condition contained herein shall, to any extent, be invalid or unenforceable, pursuant to state law or otherwise, the remainder of the terms, provisions and conditions herein (or the application of such term, provision, or condition to persons or circumstances other than those in respect of which it is invalid or unenforceable) shall not be affected thereby, and each term, provision and condition of this contract shall be valid and enforceable to the fullest extent permitted by law.

**ASSIGNMENT & SUBLETTING:** Purchaser shall not have the right to transfer or assign its rights and/or obligations under this contract to any third party, related or unrelated, without the express written consent of Contractor. Contractor shall have the right to transfer, assign or sublet all or any portion of its rights or obligations hereunder, but such transfer, assignment or subletting shall not relieve Contractor from its full obligations to Purchaser unless such transfer, assignment or subletting is pursuant to the sale of Contractor, or the division of Contractor responsible for this contract, to a third party.

**MISCELLANEOUS:** The terms and conditions set forth herein constitute the entire understanding of the parties relating to the work to be performed, and materials and equipment to be provided, by Contractor for the Purchaser. All previous proposals, offers, and other communications relative to the provisions of the subject work, oral or written, are hereby superseded, except to the extent that they have been expressly incorporated herein. Any modifications or revisions of any provisions herein or any additional provisions contained in any purchase order, acknowledgment, or other form of the Purchaser are hereby expressly objected to by Contractor and shall not operate to modify this contract. This contract shall take effect upon acceptance and execution by both parties.