

TOWN OF CASTLE ROCK
CONSTRUCTION CONTRACT
(Pumping Equipment for Wells CR-232 and CR-233)

THIS CONSTRUCTION CONTRACT (Contract) between the Town of Castle Rock, Colorado (Town), a municipal corporation, 100 N. Wilcox Street, Castle Rock, Colorado 80104 and Hydro Resources – Rocky Mountain, Inc., a Delaware corporation (“Contractor”) 13027 County Road, Unit C, Fort Lupton, Colorado 80621

In consideration of these mutual covenants and conditions, the Town and Contractor agree as follows:

SCOPE OF WORK The Contractor shall execute the entire Work described in the Contract.

CONTRACT The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, written or oral representations and agreements. The Contract incorporates the following Contract Documents. In resolving inconsistencies among two or more of the Contract Documents, precedence will be given in the same order as enumerated.

LIST OF CONTRACT DOCUMENTS

The Contract Documents, except for Modifications issued after execution of this Contract, are:

1. Change Orders;
2. Notice to Proceed;
3. Construction Contract;
4. General Conditions
5. The following Addenda, if any:

Number

Date

Pages

6. Special Conditions of the Contract:

Document

Title

Pages

7. The following Specifications: Well Specification and Tables

8. The following Drawings:

9. Notice of Award;
10. Invitation to Bid;
11. Information and Instructions to Bidders;

12. Notice of Substantial Completion;
13. Notice of Construction Completion;
14. Proposal Forms, including Bid Schedules;
15. Performance, and Labor and Material Payment Bonds;
16. Performance Guarantee; and
17. Insurance Certificates.

CONTRACT PRICE. The Town shall pay the Contractor for performing the Work and the completion of the Project according to the Contract, subject to Change Orders as approved in writing by the Town, under the guidelines in the General Conditions. The Town will pay \$2,293,335.00 (Contract Price), to the Contractor, subject to full and satisfactory performance of the terms and conditions of the Contract. The Contract Price is provisional based on the quantities contained in the (Bid or Proposal) attached as **Exhibit 1**. The final Contract Price shall be adjusted to reflect actual quantities incorporated into the Work at the specified unit prices. The Town has appropriated money equal or in excess of the Contract Price for this work.

COMPLETION OF WORK. The Contractor must begin work covered by the Contract within 30 calendar days, and must complete work within 150-working days from and including the date of Notice to Proceed, according to the General Conditions.

LIQUIDATED DAMAGES. If the Contractor fails to complete the Work by the date set for completion in the Contract, or if the completion date is extended by a Change Order, by the date set in the Change Order, the Town may permit the Contractor to proceed, and in such case, may deduct the sum of \$500 for each day that the Work shall remain uncompleted from monies due or that may become due the Contractor. This sum is not a penalty but is a reasonable estimate of liquidated damages.

The parties agree that, under all of the circumstances, the daily basis and the amount set for liquidated damages is a reasonable and equitable estimate of all the Town's actual damages for delay. The Town expends additional personnel effort in administering the Contract or portions of the Work that are not completed on time, and has the cost of field and office engineering, inspecting, and interest on financing and such efforts and the costs thereof are impossible to accurately compute. In addition, some, if not all, citizens of Castle Rock incur personal inconvenience and lose confidence in their government as a result of public projects or parts of them not being completed on time, and the impact and damages, certainly serious in monetary as well as other terms are impossible to measure.

SERVICE OF NOTICES. Notices to the Town are given if sent by registered or certified mail, postage prepaid, to the following address:

TOWN OF CASTLE ROCK
Town Attorney
100 N. Wilcox Street
Castle Rock, CO 80104

INSURANCE PROVISIONS. The Contractor must not begin any work until the Contractor obtains, at the Contractor's own expense, all required insurance as specified in the General Conditions. Such insurance must have the approval of the Town of Castle Rock as to limits, form and amount.

RESPONSIBILITY FOR DAMAGE CLAIMS. The Contractor shall indemnify, save harmless, and defend the Town, its officers and employees, from and in all suits, actions or claims of any character brought because of: any injuries or damage received or sustained by any person, persons or property because of operations for the Town under the Contract; including but not limited to claims or amounts recovered from any infringements of patent, trademark, or copyright; or pollution or environmental liability. The Town may retain so much of the money due the Contractor under the Contract, as the Town considers necessary for such purpose. If no money is due, the Contractor's Surety may be held until such suits, actions, claims for injuries or damages have been settled. Money due the Contractor will not be withheld when the Contractor produces satisfactory evidence that the Contractor and the Town are adequately protected by public liability and property damage insurance.

The Contractor also agrees to pay the Town all expenses, including attorney's fees, incurred to enforce this Responsibility for Damage Claim clause.

Nothing in the **INSURANCE PROVISIONS of the General Conditions** shall limit the Contractor's responsibility for payment of claims, liabilities, damages, fines, penalties, and costs resulting from its performance or nonperformance under the Contract.

STATUS OF CONTRACTOR. The Contractor is performing all work under the Contract as an independent Contractor and not as an agent or employee of the Town. No employee or official of the Town will supervise the Contractor. The Contractor will not supervise any employee or official of the Town. The Contractor shall not represent that it is an employee or agent of the Town in any capacity. **The Contractor and its employees are not entitled to Town Workers' Compensation benefits and are solely responsible for federal and state income tax on money earned.** This is not an exclusive contract.

THIRD PARTY BENEFICIARIES. None of the terms or conditions in the Contract shall give or allow any claim, benefit, or right of action by any third person not a party to the Contract. Any person, except the Town or the Contractor, receiving services or benefits under the Contract is an incidental beneficiary only.

INTEGRATION. This contract integrates the entire understanding of the parties with respect to the matters set forth. No representations, agreements, covenants, warranties, or certifications, express or implied, shall exist as between the parties, except as specifically set forth in this Contract.

DEFINITIONS. The Definitions in the General Conditions apply to the entire Contract unless modified within a Contract Document.

Executed this _____ day of _____, 201__.

ATTEST:

TOWN OF CASTLE ROCK

Lisa Anderson, Town Clerk

Jason Gray, Mayor

APPROVED AS TO FORM:

Robert J. Slentz, Town Attorney

CONTRACTOR:

By: _____

Title: _____

(Insert either the Corporate or Partnership Certificate, as appropriate)

DRAFT



Rocky Mountain Region
13027 County Road 18, Unit C
Fort Lupton, CO 80621
(303) 857-7540
Fax (303) 857-3826

February 11, 2020

Castle Rock Water
175 Kellogg Court
Castle Rock, CO 80109

ATTN: Heather Justus

Project: Hydro Resources ASR – Power Generation System - Cost Estimate

Ms. Justus,

Hydro Resources (HR) is pleased to present the following proposal for installing permanent pump equipment for Wells 232 & 233 which will include Hydro's downhole generation equipment and Siemens control system. HR has a history of performing successful well constructions and pump installations for Castle Rock and neighboring communities. HR wishes to outline our understanding of the scope of work.

Before reviewing the project details, HR would first like to stress our commitment to the Town of Castle Rock to providing a company committed to making Health & Safety our number one priority on this project. HR has broken down the proposal into the following units:

- I. Project Background**
- II. Equipment Description**
- III. Cost Summary**

I. Project Background

Hydro Resources completed an engineering collaboration with Colorado State University with focus on generating clean electrical power during delivery of treated potable water from surface reservoirs into aquifers. The purpose is to utilize the surface water injection process to generate electrical power through utilization of Hydro Resources' patented downhole control valve and electrical system optimization. The technology not only has a goal of revenue from power generation, but carbon footprint reduction and goals in line with Colorado's renewable energy vision.

The recently completed hydraulic lab study demonstrated the potential for the technology to efficiently generate power for a water utility. The lab-proven technology now requires the next step of testing in an actual well pumping and injection system. Hydro Resources goal is to partner with Castle Rock for a field application of the technology. The collaboration on this project would involve installation of new permanent control and well equipment for Castle Rock with HR providing cost sharing for the implementation and maintenance during the technology proving process. During the testing for this system, HR would be responsible for all the maintenance and labor costs associated with modifications and testing of the system. HR anticipates that the integration of this new technology will require some troubleshooting and modifications (perhaps pulling the pump, changing pumping parameters, etc).

The HR team has developed design parameters for the electrical controls and downhole equipment based on optimizing a successful power generation model for a well application. Hydro Resources' plan is based upon the

implementation of pumping equipment in new Wells 232 & 233 including installation of a variable frequency drive, installation of a generator valve controller and a power controller RTU. HR has worked with Siemens to optimize a drive that will efficiently accommodate Castle Rock's pumping needs.

II. Equipment Description

HR is providing the following equipment list to provide complete pump installations for Wells 232 & 233. The equipment has been enhanced for ASR applications to include stainless steel where applicable. The pump equipment is listed below:

Item	Castle Rock 232 Proposed Pump Equipment	Castle Rock 233 Proposed Pump Equipment
1	Provide/Install 12" Baski Pitless	Provide/Install 12" Baski Pitless
2	SM25000-17 Summit Pump End	SM18500-13 Summit Pump End
3	525HP/2640/128A Summit Motor	500HP/3305/83A Summit Motor
4	Summit Seal Section	Summit Seal Section
5	2375' of Cable #2SOL Rnd 5kv 25GLV	1,675' of Cable #2SOL Rnd 5kv 25GLV
6	2,225' of 6 5/8" Column Pipe 304SS w/316SS Coup.	1,525' of 6 5/8" Column Pipe 304SS w/316SS Coup.
7	ASR Valve (Hydro Design) 3050ft Duplex 2205 Tubing, Hydraulic Gear	ASR Valve (Hydro Design) 3050ft Duplex 2205 Tubing, Hydraulic Gear
8	500PSI Dynotek Transducer, SS Cable 1 1/4" PVC, 1/4" Dbl Airline	500PSI Dynotek Transducer, SS Cable 1 1/4" PVC, 1/4" Dbl Airline
9	10" Motor Cooling Shroud 304SS	10" Motor Cooling Shroud 304SS
10	Downhole Sensor	Downhole Sensor

Service entrance power, transformer, permitting, engineering, installation of electrical is not included. Piping materials, metering vault, enclosure foundation support and underground excavation work is not included. The final pump equipment design and pricing will be based upon the pump test results following the well drilling of Wells 232 & 233.

HR's preferred control system utilizes a Siemens GH180 600 HP VFD and associated controls. This option would eliminate the need for a step transformer for conversion of 480V input to a 4142V output. Further, it eliminates a component that would contribute a 3% to 5% loss across the total system efficiency.

Siemens GH180 600 HP VFD Integration with HR ASR Power Generation System

- Provide and install Siemens GH180 600 HP VFD for each well inside one continuous enclosure
- Provide PLC Controller
- Provide HR ASR Downhole Hydraulic Generation Valve
- Provide hydraulic power unit for valve and associated fittings
- Provide appropriate telemetry
- Provide miscellaneous electrical wiring and components for the installation

III. Cost Summary

HR is providing the following breakdown of costs for complete installation of pump equipment in Wells 232 & 232 and the controls to operate the system:

Item No.	Description	Total Cost
1	Provide & Install Well 232 Pitless Unit	\$ 21,500.00
2	Provide Complete Well 232 Pump Assembly including 500 HP Summit Pump & Motor, 1675' of 6 5/8" 304SS column pipe, ASR Valve, Transducer, downhole sensor, etc.	\$ 580,535.00
3	Well 232 labor for mobilization, installation, startup, and demobilization	\$ 23,900.00
4	Provide & Install Well 233 Pitless Unit	\$ 21,500.00
5	Provide Complete Well 233 Pump Assembly including 500 HP Summit Pump & Motor, 2225' of 6 5/8" 304SS column pipe, ASR Valve, Transducer, downhole sensor, etc.	\$ 441,000.00
6	Well 233 labor for mobilization, installation, startup, and demobilization.	\$ 19,900.00
7	Provide and install Qty. 2 Siemens GH180 600HP VFDs and support electronics in a single enclosure.	\$ 1,185,000.00
Total Project Cost		\$ 2,293,335.00

HR has excluded exterior modifications and outside system modifications that may be required. HR will provide full submittals for all pumping equipment and controls. Hydro Resources will continue to work with Castle Rock to properly design all components of the ASR Generation System prior to final design and implementation. We are confident that the Town of Castle Rock will be impressed with our professional water supply services and look forward to the opportunity to team with the community on this exciting project. Please contact our office at your earliest convenience with any questions or concerns you may have.

Sincerely,

Hydro Resources

Jason Barnum

Jason Barnum
Business Development Manager
Rocky Mountain and West Regions
jbarnum@hydroresources.com