COLORADO
Colorado Water Conservation Board
Department of Natural Resources

1313 Sherman Street, Room 721
Denver, CO 80203

May 4, 2015

South Metro Water Supply Authority
Attn: Eric Hecox, Executive Director
8400 Prentice Ave., Suite 1500
Greenwood Village, CO 80111

RE: Notice to Proceed – WSRA Grant - Amendment #2 – Water Infrastructure & Supply Efficiency (WISE) Partnership: Western Pipeline Connection Engineering/Design

Dear Eric:

This letter is to inform you that the amendment contract request for the above WSRA grant project was approved on April 29, 2015.

With the executed amendment contract, you are now able to proceed with the project and begin invoicing the State of Colorado for costs incurred through December 31, 2016. Upon receipt of your invoice(s), the State of Colorado will provide payment no later than 30 days.

Please forward correspondence and invoices to Derek Johnson, Project Manager.

Sincerely,

/s/

Dori Vigil
Program Assistant II
Colorado Water Conservation Board
Water Supply Planning Section
1313 Sherman St, Rm. 718
Denver CO 80203
(303) 866-3441, ext 350 (office)
dori.vigil@state.co.us

Attachments

CONTRACT AMENDMENT

Amendment #2	Original Contract CMS #61875 C150474	CORE# CTGG1 2015-391 Amendment CMS #78855

1) PARTIES

This Amendment to the above-referenced Original Contract (hereinafter called the Contract) is entered into by and between South Metro WISE Authority (hereinafter called "Contractor"), and the STATE OF COLORADO (hereinafter called the "State") acting by and through the Department of Natural Resources, Colorado Water Conservation Board, (hereinafter called the "CWCB").

2) EFFECTIVE DATE AND ENFORCEABILITY

This Amendment shall not be effective or enforceable until it is approved and signed by the Colorado State Controller or designee (hereinafter called the "Effective Date"), but shall be effective and enforceable thereafter in accordance with its provisions. The State shall not be liable to pay or reimburse Contractor for any performance hereunder, including, but not limited to costs or expenses incurred, or be bound by any provision hereof prior to the Effective Date.

3) FACTUAL RECITALS

The Water Supply Reserve Account provides money for grants and loans to complete water activities, which are broadly defined and include water supply and environmental projects and/or studies. This Grant is will be expended to assist in the development of Water Infrastructure and Supply Efficiency (WISE)
Partnership: Western Pipeline Connection Engineering/Design.

4) CONSIDERATION

Consideration for this Amendment consists of the payments to be made hereunder and the obligations, promises, and agreements herein set forth.

5) LIMITS OF EFFECT

This Amendment is incorporated by reference into the Contract, and the Contract and all prior amendments thereto, if any, remain in full force and effect except as specifically modified herein.

6) MODIFICATIONS.

The Contract and all prior amendments thereto, if any, are modified as follows:

a. 5. TERM and EARLY TERMINATION is amended to read as follows: "The Parties respective performance under this Grant shall commence on the Effective Date. This Grant shall terminate on **December 31, 2016** unless sooner terminated or further extended as specified elsewhere herein.

b. 6. a. Completion: Grantee shall complete the Work and its other obligations as described herein and in the Exhibit A on or before **December 31, 2016**. The State shall not be liable to compensate Grantee for any Work performed prior to the Effective Date or after the termination of this Grant.

c. The Schedule that was included in the Original Contract's Scope of Work shall be replaced by the updated schedule attached hereto as **Schedule C**.

d. 7 a. Maximum Amount: The maximum amount payable under this Grant to Grantee by the State is **$1,570,000**, as determined by the State from available funds. Grantee agrees to provide any additional funds required for the successful completion of the Work. Payments to Grantee are limited to the unpaid obligated balance of the Grant as set forth in **Exhibit A**. The maximum amount payble by the State to Grantee during each State fiscal year of this Grant shall be:

$688,000 in FY2014
$1,570,000 in FY2015, minus any funds expended in FY2014
$1,570,000 in FY2016, minus any funds expended in FY2015 and FY2014
$1,570,000 in FY2017, minus any funds expended in FY2016, FY2015 and FY2014

7) EFFECTIVE DATE OF AMENDMENT

The effective date hereof is upon approval of the State Controller or their delegate.

8) ORDER OF PRECEDENCE

Except for the Special Provisions, in the event of any conflict, inconsistency, variance, or contradiction between the provisions of this Amendment and any of the provisions of the Contract, the provisions of this Amendment shall in all respects supersede, govern, and control. The most recent version of the Special Provisions incorporated into the Contract or any amendment shall always control other provisions in the Contract or any amendments.

9) AVAILABLE FUNDS

Financial obligations of the state payable after the current fiscal year are contingent upon funds for that purpose being appropriated, budgeted, or otherwise made available.

THE PARTIES HERETO HAVE EXECUTED THIS AMENDMENT

*** Persons signing for Contractor hereby swear and affirm that they are authorized to act on Contractor's behalf and acknowledge that the State is relying on their representations to that effect.**

CONTRACTOR
South Metro Water Supply Authority

By: Eric Hecox
Title: Executive Director

Eric B. Heed
*Signature

Date: 4/17/15

STATE OF COLORADO
John W. Hickenlooper, GOVERNOR
Mike King, Department of Natural Resources

By: Rebecca Mitchell

By: Rebecca Mitchell, Section Chief,
Water Supply Planning Section, CWCB
Signatory avers to the State Controller or delegate that Grantee has not begun performance or that a Statutory Violation waiver has been requested under Fiscal Rules

Date: 4-22-15

ALL CONTRACTS REQUIRE APPROVAL BY THE STATE CONTROLLER

CRS §24-30-202 requires the State Controller to approve all State Contracts. This Contract is not valid until signed and dated below by the State Controller or delegate. Contractor is not authorized to begin performance until such time. If Contractor begins performing prior thereto, the State of Colorado is not obligated to pay Contractor for such performance or for any goods and/or services provided hereunder.

STATE CONTROLLER
Robert Jaros, CPA, MBA, JD

By: Susan Borup

Name and Title: Susan Borup, DNR Controller

Date: 4/29/15

Exhibit A-1

Amended Statement of Work

WATER ACTIVITY NAME – Water Infrastructure and Supply Efficiency (WISE) Partnership: Western Pipeline Connection Engineering/Design

GRANT RECIPIENT – South Metro Water Supply Authority (SMWSA)

FUNDING SOURCE – WSRA Metro Basin Account ($157,000) and Statewide Account ($1,413,000) for a total of $1,570,000.

INTRODUCTION AND BACKGROUND

Provide a brief description of the project. (Please limit to **no more than 200 words**; this will be used to inform reviewers and the public about your proposal)

The Water Infrastructure and Supply Efficiency (WISE) Partnership is a regional water supply project between Aurora Water, Denver Water and the South Metro Water Supply Authority (SMWSA) to combine available water supplies and system capacities to create a sustainable new water supply. Through WISE, Aurora Water and Denver Water will provide 7,225 AFY (on average) of fully treated water to South Metro for distribution to its members on a permanent basis. To distribute WISE water to its members, SMWSA is developing the Western Pipeline system including a new pump station at Aurora's Binney Water Purification Facility (BWPF), a new pipeline from this pump station to an existing "Western Pipeline" recently purchased by the WISE Participants, and 45 miles of new pipelines connecting individual WISE participants to the Western Pipeline. This scope of work is for the engineering and design of the connections and controls necessary to connect participants to the Western Pipeline. Figure 1 provides a breakdown of the WISE System Costs and identifies the connection engineering, design, and control implementation costs.

OBJECTIVES

1. Identify and evaluate options for locating each of the connection turnout buildings or valve vaults.
2. Perform the surveying, right-of-way evaluation, engineering, geotechnical, hydraulic, instrumentation and control logic (SCADA), and other analysis necessary for preliminary design of the connections and controls.
3. Perform the surveying, right-of-way evaluation, engineering, geotechnical, hydraulic, and other analysis necessary for the final design of select connections including the Aurora Connection and the Pressure Sustaining Valve.
4. Advance the surveying, right-of-way evaluation, engineering, geotechnical, hydraulic, and other analysis necessary for the design of Ridegate Line, which serves as the connection for several WISE Participants.
5. Final design and implement of the instrumentation and control logic (SCADA) for the Western Pipeline system and connections.

TASKS

TASK 1 – Site Study

Description of Task

Task 1 will identify and assess approximately 3 options for locating the turnout building or valve vault for each of the 8 required turnout facilities along with a pressure sustaining valve, pressure monitoring location, and temporary connection to Aurora Water.

Method/Procedure

8 turnouts were designed along the main transmission line along with a pressure sustaining valve, pressure monitoring location, and connection to Aurora Water. The following will be performed for each site:

- Assess high level space requirements
- Perform high level review of utility conflicts and hydraulics for each site
- Assess property ownership for each site
- Assess approximate property value for each site
- Identify recommended site location for each of the 8 turnouts, pressure sustaining valve, pressure monitoring site, and temporary connection to Aurora Water.

Cost: $92,489.40. This amount has been invoiced and approved for reimbursement by CWCB.

Deliverable

1. Technical Memorandum analyzing site options for each of the 8 turnouts
2. Recommended site location for each of the 8 turnouts

TASK 2 – Design Memorandum and Preliminary Design

Description of Task

Based on the recommended site locations for each of the 8 turnouts from Task 1 (including pressure sustaining valve, pressure monitoring location, and connection to Aurora Water), Task 2 will perform the analysis and produce the plans, document, and drawing necessary for preliminary design of the 8 turnouts and pressure sustaining valve, pressure monitoring location, and temporary connection to Aurora Water.

Method/Procedure

The following will be performed for the 8 recommended turnout site locations from Task 1 and the pressure sustaining valve, pressure monitoring location, and connection to Aurora Water:

- Desktop survey and right-of-way analysis. All sites are assumed to be unique, and standard design options are not available.
- Subsurface utility engineering (SUE) - Level C - utility survey. All sites are assumed to be unique, and standard design options are not available.
- Hydraulics. Pressures will vary at all sites and flows will vary for all turnouts. Standard design options are not available.
- Preliminary civil site layout of pipelines to and from valve house. All sites are assumed to be unique, and standard design options are not available.

- Review the benefits of above grade versus below grade structures. If above grade is selected, develop standardized preliminary architectural theme.
- Preliminary structural layout based on selected value house type.
- Layout basic mechanical plan and section to confirm rough required site dimensions. This will be standardized as much as possible.
- Identify each WISE Participant's desired design criteria: pipe material types, valve type, instrumentation and control interface. This will require input from and coordination with the Participants.
- Develop preliminary process and instrumentation diagram and control strategy. This will be standardized as much as possible.
- Site visits with each WISE Participant to review draft layouts and make preliminary refinements per request.
- Permitting analysis and punch list.
- Preliminary opinion of probable construction costs.

Cost: $281,735.85. This amount has been invoiced and approved for reimbursement by CWCB.

Deliverable

1. Technical Memoranda detailing the results of the above analysis for each of the sites.
2. Drawings, design sheets, plans and reports necessary for preliminary design of each of the sites.

TASK 3 – Final Design

TASK 3A - Final Design of the Aurora Connection and the Pressure Sustaining Valve

Description of Task

Based on the preliminary design as provided under Task 2, Task 3 will perform the analysis and produce the plans, documents, and drawings necessary for the final design of the Aurora Connection and the Pressure Sustaining Valve.

Anticipated Method/Procedure

The following will be performed for the Aurora Connection and the Pressure Sustaining Valve ("sites"):

- Survey for sites.
- Subsurface utility engineering (SUE) - utility survey for sites.
- Potholing and boring samples for geotechnical considerations will be conducted at sites.
- Hydraulics for full system to design sites within required system parameters.
- Civil site layout of pipelines to and from valve house for Aurora Connection.
- Develop mechanical plan and section to confirm required site dimensions.
- Layout required electrical connections and transformers in coordination with Xcel Power Supply.
- Acquire necessary permits.

Cost: $115,582. Based on estimated design costs of $72,866 for the Aurora Connection and $42,716 for the Pressure Sustaining Valve. Costs were estimated by the selected Design-Build team based on a fixed price contract.

	30% Design	60% Design	95% Design	As-built Plans	Total Cost
Pressure Sustaining Valve	$8,363	$14,525	$14,525	$5,303	$42,716
Aurora Connection	$14,114	$25,003	$25,003	$8,746	$72,866

Deliverable

1. 30% Design drawings for Aurora Connection and the Pressure Sustaining Valve
2. 60% Design drawings for Aurora Connection and the Pressure Sustaining Valve
3. 95% Design drawings for Aurora Connection and the Pressure Sustaining Valve
4. As-built drawings for Aurora Connection and the Pressure Sustaining Valve

TASK 3B – Design of the Ridegate Line

Description of Task

The Ridgegate Line is a pipeline that will connect to the Western Pipeline and deliver WISE water to 7 of the 10 WISE Project participants. The line will provide a conduit to deliver WISE water either to individual members located south of E-470, or provide the ability for WISE water to be delivered to Rueter-Hess Reservoir. Design of this infrastructure component will be completed under a design-bid-build approach.

Anticipated Method/Procedure

The following will be performed for the Design of the Ridgegate Line:

- Preliminary Design including:
  - Preliminary design plans
  - Development of basis of design report
  - Conduct hydraulic and surge analysis of pipeline system
  - Develop engineer's estimate of probable construction
  - Develop Draft and Final Preliminary Design Report
- Detailed Design including:
  - Development of 35% design and specifications list
  - Development of 90% design and Grading, Erosion and Sediment Control permit (GESC)
  - Development of 90% specifications
- Final Design Report and Drawings and GESC

Cost: $440,000. This reflects a portion of the total anticipated cost for design ($591,682). Note that additional costs will be incurred in excess of the $591,682 directly relating to the design of the Ridgegate Line. These costs are not shown here but can be provided upon request. The remaining costs will be provided by members participating in the pipeline as a cash match. Costs for this Task were calculated using the hourly rates and estimated hours shown in the Table below:

		Preliminary Design		Detailed Design		**Final Design**		Applied by Grant
	Hourly Rate	Hours	Cost	Hours	Cost	**Hours**	**Cost**	
Management Staff	$ 171.00	319	$ 54,549.00	570	$ 97,470.00	**889**	**$152,019.00**	
Support Staff	$ 134.99	814	$109,882.00	2443	$329,781.00	**3257**	**$439,663.00**	
Total			$164,431.00		$427,251.00		**$591,682.00**	$ 440,000.00

Deliverable

1. Preliminary Design drawings and report
2. Final Design drawings, design sheets, plans and reports

TASK 3C – SCADA/Controls

Description of Task

The WISE System will have inflow and outflow locations as well as monitoring locations at which flows will be monitored and controlled at a central control location. SCADA/Controls design and implementation is required for the full function and operation of the WISE delivery system.

Anticipated Method/Procedure

The following will be performed for the design and implementation of the WISE SCADA/Controls:

- All necessary permits will be acquired
- Locations and type of communications structures will be identified through consideration of data and control needs at each location and consideration of physical site location restrictions
- Design of communication towers will be completed at each site
- Operations and Functions necessary will be defined and at each site and applied to the system design
- SCADA/Controls infrastructure and hardware will be installed/constructed at the identified locations
- SCADA software will be programmed to meet the needs of the WISE Authority and members

Cost: $640,192.75. The total cost as provided by the selected Design-Build team is $902,557 as shown in the table below. Costs were estimated by the selected Design-Build team based on a fixed price contract. Members will pay the remaining cost.

		Grant Funds	Cash Match
Programming	$155,000		
Operator Control and Monitoring Locations	$576,000		
Data Archiving and Information Sharing	$20,147		
I&C Equipment (not already included in other project components):	$9,000		
SCADA Software	$43,000		
Record Drawings (O&M Manuals)	$25,000		
Start-up and Commissioning	$74,410		
Total	$902,557	**$640,192.75**	$262,364.25

Deliverable

1. SCADA Technical Memorandum
2. Final Design documentation
3. Final Construction Plan
4. Final Control System Architecture Diagrams
5. Final O&M Manual

REPORTING AND FINAL DELIVERABLE

Reporting: The applicant shall provide the CWCB a progress report every 6 months, beginning from the date of the executed contract. The progress report shall describe the completion or partial completion of the tasks identified in the statement of work including a description of any major issues that have occurred and any corrective action taken to address these issues.

Final Deliverable: At completion of the project, the applicant shall provide the CWCB a final report that summarizes the project and documents how the project was completed. This report may contain photographs, summaries of meetings, and engineering reports/designs.

BUDGET
Budget for grant funds is shown in the table below. Detailed breakdowns are included in the sections above.

	Cost
Task 1 – Site Study	$92,489.40
Task 2 - Design Memorandum and 30% Preliminary Design	$281,735.85
Task 3 - Final Design	$1,195,774.75
Total	**$1,570,000.00**

SCHEDULE C
Engineering and design of the connections and controls will be completed under the following schedule.

Figure 2: Schedule

Task	Start Date	Finish Date
1	Upon Initial NTP (10/18/2013)	NTP + 180 days
2	Upon Completion of Task 1	Completion of Task 1 + 180 days
3	Upon Contract Amendment NTP	December 31, 2016

NTP = Notice to Proceed

PAYMENT
Payment will be made based on actual expenditures and invoicing by the applicant. Invoices from any other entity (i.e. subcontractors) cannot be processed by the State. The request for payment must include a description of the work accomplished by major task, and estimate of the percent completion for individual tasks and the entire water activity in relation to the percentage of budget spent, identification of any major issues and proposed or implemented corrective actions. The last 5 percent of the entire water activity budget will be withheld until final project/water activity documentation is completed. All products, data and information developed as a result of this grant must be provided to the CWCB in hard copy and electronic format as part of the project documentation. This information will in turn be made widely available to Basin Roundtables and the general public and help promote the development of a common technical platform.