RESOLUTION NO. 3762

A RESOLUTION APPROVING AN AGREEMENT TO FURNISH ENGINEERING SERVICES BETWEEN THE CITY OF MILES CITY AND PECCIA & ASSOCIATES, INC., FOR WASTEWATER ENGINEERING SERVICES

WHEREAS, the City of Miles City is in the process of making required upgrades to the City's wastewater treatment facility;

AND WHEREAS, the City wishes to engage the services of Peccia & Associates, Inc., to provide certain services generally referred to as Task Order Number Four – Design of Ultraviolet Disinfection and Solids Handling Improvements;

NOW THEREFORE BE IT RESOLVED by the City Council of Miles City, Montana, as follows:

1. That the Agreement to Furnish Engineering Services to Miles City, Montana for Wastewater Engineering Services, attached hereto as Exhibit "A," is hereby approved and adopted by the City Council of the City of Miles City;

2. That the Mayor of the City of Miles City is hereby authorized and empowered to execute such Agreement on behalf of the City, and to bind the City thereto;

3. That the Mayor is hereby authorized to execute such additional documents as may be necessary to carry out the terms of said Agreement.

SAID RESOLUTION FINALLY PASSED AND ADOPTED BY A DULY CONSTITUTED QUORUM OF THE CITY COUNCIL OF THE CITY OF MILES CITY, MONTANA, AT A DULY CALLED MEETING THIS 9th DAY OF DECEMBER, 2014.

C.A. Grenz, Mayor

ATTEST:

Lorrie Pearce, City Clerk

AGREEMENT TO FURNISH ENGINEERING SERVICES
to
MILES CITY, MONTANA
for
WASTEWATER ENGINEERING SERVICES

TASK ORDER NUMBER FOUR
DESIGN OF ULTRAVIOLET DISINFECTION AND SOLIDS HANDLING IMPROVEMENTS

This Task Order provides for professional engineering services to be performed by ROBERT PECCIA & ASSOCIATES, INC. (hereinafter the Engineer), for MILES CITY, MONTANA (hereinafter the Owner), in accordance with Article 1 of the Agreement to Furnish Engineering Services to MILES CITY, dated September 14, 2006 (hereinafter the Agreement). This Task Order represents an authorization to proceed with the scope of services, schedule, and compensation described herein. This Task Order, when executed by both parties, shall become a supplement to and part of the basic Agreement.

ARTICLE 1. SCOPE OF SERVICES

The Engineer agrees to furnish professional engineering services in connection with improvements to the Owner's wastewater treatment facility, hereinafter referred to as the Project. Design services include modifications and improvements to the Owner's existing wastewater treatment plant. Anticipated staff-hour estimates for these activities are shown on the accompanying Schedule of Estimated Engineering Costs. Changes in the indicated scope of services shall be subject to renegotiation and implementation through a subsequent Task Order. Plans, Specifications, and Contract Documents for Construction and Bidding will be completed. Major design elements include:

1. Surveying. Conduct all field instrument surveys of existing WWTP as necessary to construct improvements. RPA has surveyed this site as part of past projects and a base map has been created. It is assumed that this existing base map will be utilized and that very little additional surveying is needed as part of this project.

2. Septage Unloading Station. This design task includes design of new septage unloading facility to be located near the Headworks Building. This septage unloading station will serve as an unloading point to deliver septage to the wastewater facility. The station will include coarse screening and a method for tracking septage loads from septic haulers. The design is to include piping which will deliver the septage the existing Headworks through and existing flow meter previously installed for this purpose.

3. Modify half of the existing Chlorine Contact Basin into an aerated sludge holding tank. This design task includes modifying existing wasting piping between the existing Control Building and existing Chlorine Contact Basin, design of aeration system, and modifications and piping to convey sludge from the existing tank to the sludge thickening

process to be designed as part of this project.

4. Sludge Thickening Process. A system for intermittently thickening waste activated sludge upstream of the digestion process will be designed. This system will likely be located in a Solids Handling Building to be included as part of this project. The design will include sludge feed pumps, polymer system, and sludge thickening equipment.

5. Sludge Dewatering Process. A system for intermittently dewatering sludge downstream of the digestion process will be designed. The planned location for this system is within the Solids Handling Building to be included as part of this project. The design will include sludge feed pumps, polymer system, and sludge thickening equipment.

6. Solids Handling Building. This subtask includes the design of a new Solids Handling Building. This structure will house the sludge thickening process, sludge dewatering process. The structure will also include a location and necessary conveyance equipment for loading a truck with dewatered sludge.

7. Design of new Aerobic Digester. Design of a new aerobic digester with an approximate volume of 263,000 gallons. It is anticipated that this digester will have similar operating elevations to that of the existing aerobic digester. This subtask includes design of an aeration system and all necessary piping.

8. Completion of UV Disinfection Design. This subtask includes completing the design of a new ultraviolet disinfection system. This design is currently 75% complete and was taken to this level in the event that regulatory requirements dictated installation prior to commencement of this project. This UV Disinfection system design includes installation of this equipment within half of the existing Chlorine Contact Basin and a building to protect this equipment from freezing.

9. Extension of the Non-Potable Water System. This design includes extending non-potable water service to support the sludge thickening process, and sludge dewatering process. A review of the existing system will be performed to ensure that the system has adequate capacity to support these processes.

10. Produce and Distribute Review Drawings. Preliminary (50%) Design Drawings will be produced and delivered to the Owner for review. It is anticipated that 5 sets of documents will be provided for this purpose.

11. Cost Estimates Based on 50% Design. Prepare a detailed Project cost estimate for the design as presented in the 50% Design Documents. The cost estimate will be circulated to the Owner for review.

12. 50% Plan Review Meeting. Conduct a workshop with the Owner to review the 50% Preliminary Design Documents. Discuss, respond to, and/or incorporate any changes to the design documents requested by the Owner.

13. Prepare Project Specifications (95%). Prepare bid documents and specifications for the work under the Project to a 95% complete status. Specifications will include material and installation requirements for materials and systems to be incorporated into the Project construction.

14. Update Construction Cost Estimate (95%). Update the Project construction cost estimate based on 95% Construction Drawings and Specifications.

15. Prepare Construction Drawings (95%). Produce and distribute documents for review. Construction Drawings, Specifications, and bid documents at a 95% completion stage will be reproduced and delivered to the Owner and appropriate agencies for review. It is anticipated that 10 sets of documents will be provided for this purpose.

16. Submit and Review Plans with MDEQ. Submit 95% Design Documents to MDEQ and any for their review and approval. Prepare Engineering Report, conduct plan review meeting with the agency to explain the scope of the Project and clarify any review questions.

17. Prepare and Produce "Final" Construction Drawings (100%). Revise 95% Construction Drawings to final (100%), incorporating any changes requested by the Owner, agencies, or resulting from internal QA/QC review. Construction Drawings, Specifications, and bid documents at final (100%) completion will be produced and delivered to the Owner and appropriate agencies. It is anticipated that 10 sets of documents will be provided for this purpose.

18. Prepare "Final" Project Specifications (100%). Revise 95% bid documents and specifications for the work to 100% complete status, incorporating any changes requested by the Owner, agencies, or resulting from internal QA/QC review.

19. "Final" Construction Cost Estimate (100%). Update the Project construction cost estimate based on final (100%) Construction Drawings and Specifications.

ARTICLE 2. SCHEDULING

It is anticipated that those services listed above under Article 1, Scope of Services, are to be completed by July 1, 2015.

ARTICLE 3. COMPENSATION

Compensation for the services listed under Article 1--Scope of Services shall be a lump sum of $381,500, as shown in Attachment 1 - Schedule of Estimated Engineering Costs. This amount is in addition to previously executed Task Orders.

DATED this 12th day of November, 2014.

MILES CITY, MONTANA

By: _____

Chris A. Grenz, Mayor

ROBERT PECCIA & ASSOCIATES, INC.

By: _____

Keith Jensen, President

EXHIBIT A
Schedule of Estimated Engineering Costs
Robert Peccia & Associates, Inc.
DESIGN PHASE SERVICES

Work Item	President	Project Manager	Project Engineer	Structural Engineer	CADD Manager	Surveyor	Administrative Assistant	Total Hours
	$59.25	$45.54	$34.24	$45.06	$30.63	$33.23	$21.02	
Surveying		8	16			24		48
Septage Unloading Station to 50%		32	32	16	40			120
Septage Unloading Station to 95%		24	32	16	24			96
Septage Unloading Station to 100%	2	4	8	4	4			22
Aerated Sludge Holding Basin to 50%		24	40	24	64			152
Aerated Sludge Holding Basin to 95%		24	48	16	64			152
Aerated Sludge Holding Basin to 100%	8	4	12	4	4			32
Sludge Thickeing Process to 50%		48	32	16	100			196
Sludge Thickeing Process to 95%		40	24	16	100			180
Sludge Thickeing Process to100%	8	4	8	4	8			32
Sludge Dewatering Process to 50%		48	24	40	100			212
Sludge Dewatering Process to 95%		48	32	32	100			212
Sludge Dewatering Process to 100%	8	4	8	4	12			36
Solids Handling Building to 50%		40	16	60	80			196
Solids Handling Building to 95%		24	8	40	48			120
Solids Handling Building to 100%	8	8	4	8	4			32
Aerobic Digester to 50%		40	48	56	120			264
Aerobic Digester to 95%		24	48	40	60			172
Aerobic Digester to 100%	8	4	12	4	4			32
Complete UV Disinfection Design to 95%		24	40	24	48			136
Complete UV Disinfection Design to 100%	8	8	12	12	8			48
Non-Potable Water System Extension to 50%		12	12		24			48
Non-Potable Water System Extension to 95%		8	8		8			24
Non-Potable Water System Extension to 100%	2	4	4		4			14
Prepare and Distribute 50% Design Drawings		16	12		48		24	100
Prepare Cost Estimate at 50% Complete		24	16	8			2	50
50% Design Review Meeting		16	16					32
Prepare Project Specifications - 95%		24	32	24			8	88
Update Construction Cost Estimate 95%		8	12	4			2	26
Prepare and Distribute 95% Design Drawings		16	16	8	40		4	84
Submit and Review Plans with MDEQ		24	32				4	60
Prepare and Produce Final Construction Drawings		8	16	8	24		4	60
Prepare Final Specifications		16	32	8			8	64
Final Construction Cost Estimate		4	12				2	18
Total Hours	52	664	724	496	1140	24	58	3158
Labor Cost Per Employee	$ 3,081.00	$ 30,238.56	$ 24,789.76	$ 22,349.76	$ 34,918.20	$ 797.52	$ 1,219.16	$ 117,393.96

DIRECT EXPENSES

Mileage	$1,500.00
Per Diem	$200.00
Computer Charges (CAD)	$11,160.00
GPS RTK Survey Machine (2 days)	$800.00
Printing	$1,000.00
Total Direct Expenses	**$14,660.00**
Direct Labor	$117,393.96
Overhead (1.7173 X Direct Labor)	$201,600.65
Sub Total Labor Cost	$318,994.61
Fixed Fee	$47,845.39
Direct Expenses	$14,660.00
Total Engineering Fee	**$381,500.00**