CITY OF
WASILLA
• ALASKA •

Date of Action: 10.13.14	
Approved ☑	Denied ☐
By:	

CITY COUNCIL ACTION MEMORANDUM

AM No. 14-41: Contract Amendment to Hattenburg, Dilley and Linnell in the amount of $89,720 for Wasilla Airport Water Well Engineering Services.

Originator: Public Works Director
Date: September 30, 2014 Agenda of: October 13, 2014

Route to:	Department Head	Signature	Date
X	Public Works Director		9/30/14
X	Finance Director		9-30-14
X	Deputy Administrator		10/1/14
X	City Clerk		10.1.14

Reviewed by Mayor Verne E. Rupright:

Fiscal Impact: ☒yes $89,720 **Funds Available:** ☒yes

Account name/number:

Water Well Drilling/320-4369-436-45-02	$75,000
Wells & Completion of Pump House/320-4369-436-45-61	$14,720

Attachments: HDL Fee Proposal (5 pages)

Summary Statement: This is a continuation of the 4 year Airport Term Contract for engineering services awarded to Hattenburg Dilley and Linnell in 2013. This work includes engineering services to develop a new city well on airport property to add to the city's drinking water supply for future growth. The airport area is the last area within the city limits that has been un-explored for municipal water. A successful well in this area will be able to tie into the newly installed airport water main to add redundancy to the city's water supply. The well drilling will be bid as separate work.

Staff Recommendation: Adopt AM No. 14-41.

HDL HATTENBURG DILLEY & LINNELL
Engineering Consultants

September 29, 2014 File: 84-095

Archie Giddings, Public Works Director
City of Wasilla
290 E. Herning Avenue
Wasilla, AK 99654

Re: Scope & Fee Proposal
City of Wasilla – Airport Well

Dear Mr. Giddings:

Hattenburg Dilley & Linnell (HDL) is pleased to present this fee proposal for professional services to drill and test a new water production well for the City of Wasilla as part of our engineering term contract. We understand that the primary goals of this project are to locate a potential water source for the City near the airport and to drill an 8" diameter test well and 6" monitoring well with the goal of later converting the test well into a water supply.

SCOPE OF WORK

We propose to provide professional services to meet the City's primary goals stated above. Our proposed scope of work is further described below:

Task 1 – Site Selection

HDL will review available local data to select the most practical site for a new water production well. While the City has indicated that they would like to have a new well located in the vicinity of the Airport, an exact location has not been selected.

HDL will compile a base map, complete with topography, wetlands, water utilities, roadways and other information pertinent to locating a viable site for a new water well. We will discuss future facilities which the City may wish to co-locate with the new water source (storage reservoirs, chlorination, booster pumps, etc.) to estimate the footprint required for the future facility. Finally, we will review local groundwater wells to determine a target water bearing zone for the test well.

We will summarize our findings into a brief memo complete with a proposed test well location, facility footprint, and target well depth.

Task 2 – Bidding Assistance

We assume that the target production well production would be on the order of 300 gallons per minute. Based on research of wells in the area, we anticipate needing to drill to depths of up to 300 feet. However, work conducted under Task 1 will evaluate the depth of well needed.

HDL will compile a bid package to drill and develop an 8" diameter exploration/test well and a 6" monitoring well to conduct a sustained flow test based on the City's desired production rate. On behalf of the City, we will prepare the invitation to bid, respond to bidder's questions, attend a pre-bid conference, issue written addendums, tabulate bids and check proposals for

completeness, review bonding and insurance submittals, and provide a written recommendation for award to the City based on the lowest responsive bid.

Task 3 – Well Drilling and Aquifer Evaluation

We will coordinate on-site activities and assist the well driller with any required permits. We will observe the driller's activities on-site and collect representative samples during drilling for inclusion in detailed well logs. We will bring collected samples to our lab for grain size analysis to assist in selection of a well screen. HDL will instrument the wells to gather data before, during and after test pumping operations. We will also gather a representative water sample at the mid-point and end of pump testing for analysis as a Class A drinking water source.

HDL will perform hydraulic analysis of the aquifer using standard well hydraulics methodologies and radial groundwater modeling to estimate future aquifer yields. In addition, we will consult with Jim Munter, a local hydrogeologist, to provide support during target depth selection and peer review of calculations and flow projects.

We will summarize our findings in a memorandum including a complete log of the new well, laboratory testing results, water quality analysis results, aquifer test pumping results, long term aquifer viability analysis, and proposed long term pumping yield rates. We will also perform preliminary pump sizing based on the observed flow rates, depth of well, and pressures required to deliver water to customers within the City's water system.

ASSUMPTIONS

- We will use existing MSB LIDAR and GIS information to establish local topography and wetland areas.
- Detailed site concept planning is not included.
- We have included an estimate of time required for a well driller to install casings for 2 approximately 300-foot deep wells with 60 feet of screened interval in the exploration/test well and time for a 24-hour pump test. If actual well drilling time exceeds our allowance, a fee amendment or reduced effort bay be required.
- Financial analysis and cost estimating is not included.
- Public involvement effort is not included.
- Surveying, environmental assessments, wetland delineations, and cultural resources consultation are not included.

FEE

We propose to provide the aforementioned services on a time and expenses basis at our published hourly labor rates and 10% mark-up of subcontracts and reimbursable expenses for a fee not to exceed **$89,720** as detailed on the attached worksheet.

SCHEDULE

After receipt of a Notice to Proceed, we can begin work on base mapping and site selection immediately. Once a site is selected, we will solicit quotes and anticipate performing drilling activities during frozen ground conditions.

We are excited to assist the City of Wasilla with this project. If you have any questions, please contact me or Chris Bowman at 746-5230.

Sincerely,

HATTENBURG DILLEY & LINNELL, LLC

David Lundin, P.E.
Principal Engineer

Attach: Fee Proposal Worksheet 09-29-14 (2 pages)

FEE PROPOSAL WORKSHEET
for Engineering Services

TASK	ACTIVITY	QTY	RATE	HDL LABOR & DIRECT EXPENSES	REIMBURSABLE EXPENSES	SUB-CONTRACTS	SUBTOTAL	TOTAL
1.0	**Site Selection**							**$19,600**
1.1	Base Mapping/Local Aquifer Research						$10,880	
	Project Manager/Principal Civil Eng.	4 hrs	@ $170	$680				
	Geotechnical Engineer	20 hrs	@ $140	$2,800				
	Civil Engineer	20 hrs	@ $110	$2,200				
	Engineering Assistant	40 hrs	@ $80	$3,200				
	Drafter	20 hrs	@ $100	$2,000				
1.2	Initial Planning Meeting						$1,660	
	Project Manager/Principal Civil Eng.	2 hrs	@ $170	$340				
	Civil Engineer	4 hrs	@ $110	$440				
	Engineering Assistant	8 hrs	@ $110	$880				
1.3	Summary Memo						$7,060	
	Project Manager/Principal Civil Eng.	2 hrs	@ $170	$340				
	Geotechnical Engineer	4 hrs	@ $140	$560				
	Civil Engineer	16 hrs	@ $110	$1,760				
	Engineering Assistant	40 hrs	@ $80	$3,200				
	Drafter	12 hrs	@ $100	$1,200				
2.0	**Bidding Assistance**							**$13,760**
2.1	Prepare Bid Package						$8,340	
	Project Manager/Principal Civil Eng.	2 hrs	@ $170	$340				
	Geotechnical Engineer	16 hrs	@ $140	$2,240				
	Civil Engineer	16 hrs	@ $110	$1,760				
	Engineering Assistant	40 hrs	@ $80	$3,200				
	Drafter	8 hrs	@ $100	$800				
2.2	Bidding Services						$5,420	
	Project Manager/Principal Civil Eng.	4 hrs	@ $170	$680				
	Geotechnical Engineer	8 hrs	@ $140	$1,120				
	Civil Engineer	8 hrs	@ $110	$880				
	Engineering Assistant	24 hrs	@ $80	$1,920				
	Drafter	4 hrs	@ $100	$400				
	Clerical	6 hrs	@ $70	$420				
3.0	**Aquifer Evaluation**							**$55,560**
3.1	8" Exploration/Test Well						$20,500	
	Project Manager/Principal Civil Eng.	4 hrs	@ $170	$680				
	Civil Engineer	12 hrs	@ $110	$1,320				

FEE PROPOSAL WORKSHEET
for Engineering Services

TASK	ACTIVITY	QTY	RATE	HDL LABOR & DIRECT EXPENSES	REIMBURSABLE EXPENSES	SUB-CONTRACTS	SUBTOTAL	TOTAL
	Geotechnical Engineer	20 hrs	@ $140	$2,800				
	Engineering Assistant	100 hrs	@ $85	$8,500				
	Jim Munter	1 allow	@ $2,000			$2,000		
	Laboratory Testing	1 allow	@ $2,500	$2,500				
	Vehicle (1 day rate)	15 days	@ $80	$1,200				
	Misc. Reimbursables	1 allow	@ $1,500		$1,500			
3.2	6" Monitoring Well						$11,740	
	Project Manager/Principal Civil Eng.	4 hrs	@ $170	$680				
	Civil Engineer	16 hrs	@ $110	$1,760				
	Geotechnical Engineer	20 hrs	@ $140	$2,800				
	Engineering Assistant	60 hrs	@ $85	$5,100				
	Vehicle (1 day rate)	5 days	@ $80	$400				
	Misc. Reimbursables	1 allow	@ $1,000		$1,000			
3.3	Aquifer/Water System Evaluation						$23,320	
	Project Manager/Principal Civil Eng.	4 hrs	@ $170	$680				
	Civil Engineer	24 hrs	@ $110	$2,640				
	Geotechnical Engineer	40 hrs	@ $140	$5,600				
	Engineering Assistant	100 hrs	@ $85	$8,500				
	Drafter	24 hrs	@ $100	$2,400				
	Jim Munter	1 allow	@ $3,000			$3,000		
	Misc. Reimbursables	1 sum	@ $500		$500			
Subtotal				**$80,920**	**$3,000**	**$5,000**		**$88,920**
Markup*					$300	$500		$800
Total (Not-to-exceed) Fee				**$80,920**	**$3,300**	**$5,500**		**$89,720**
*10% for subcontracts, 10% for reimbursable expenses								