



City of Broken Arrow
Meeting Agenda
Broken Arrow Municipal Authority

Chairperson Craig Thurmond

Vice Chair Scott Eudey

Trustee Johnnie Parks

Trustee Debra Wimpee

Trustee Christi Gillespie

Tuesday, May 19, 2020

Council Chambers

TIME: Immediately following the City Council Meeting which begins at 6:30 p.m.

1. Call to Order

2. Roll Call

3. Consideration of Consent Agenda

- A. [20-34](#) Approval of the Broken Arrow Municipal Authority Meeting Minutes of May 5, 2020
- B. [20-489](#) Acknowledgement of submittal of the Broken Arrow Municipal Authority's Water Supply Report for the month of March 2020
- C. [20-490](#) Acknowledgement of submittal of the Broken Arrow Municipal Authority's Wastewater Discharge Monitoring Report for the month of March 2020
- D. [20-499](#) Approval of and authorization to execute Amendment No. 1 to Professional Services Agreement with Professional Engineering Consultants, P.A. for County Line Trunk Sewer - Phase 1 (Project No. S.1609)
- E. [20-498](#) Approval of and authorization to execute Amendment No. 1 to Professional Consulting Services Agreement with HDR Engineering, Inc. for the Taste and Odor Mitigation Study at the Verdigris River Water Treatment Plant (Project No. 195425)
- F. [20-492](#) Award the most advantageous bid to Utility Supply Company for the purchase of water line pipes and accessories for construction of water distribution system improvements along West Galveston Street from Main Street to Elm Place
- G. [20-527](#) Ratification of the Claims List Check Register dated May 12, 2020

4. Consideration of Items Removed from Consent Agenda

5. Public Hearings, Appeals, Presentations, Recognitions, Awards - NONE

6. General Authority Business

- A. [20-523](#) Approval of and authorization to purchase a microwave communications system from NASPO Light Speed Technologies, Inc. to replace the existing aging system at the water treatment plant facility, pursuant to the Oklahoma Statewide Contract

7. Remarks and Updates by City Manager and Staff

8. Executive Session - NONE

9. Adjournment

NOTICE:

If you wish to speak at this evening's meeting, please fill out a "Request to Speak" form. The forms are available from the City Clerk's table or at the entrance door. Please turn in your form prior to the start of the meeting. Topics are limited to items on the currently posted agenda, or relevant business.

All cell phones and pagers must be turned OFF or operated SILENTLY during meetings.

Exhibits, petitions, pictures, etc., shall be received and deposited in case files to be kept at the Broken Arrow City Hall. If you are a person with a disability and need some accommodation in order to participate in this meeting, please contact the City Clerk at 918-259-2400 Ext. 5418 to make arrangements.

POSTED this _____ day of _____, _____, at _____
a.m./p.m.

City Clerk



City of Broken Arrow

Request for Action

File #: 20-34, Version: 1

**Broken Arrow City Council
Meeting of: May 19, 2020**

Title:

Approval of the Broken Arrow Municipal Authority Meeting Minutes of May 5, 2020

Background:

Minutes recorded for the May 5, 2020, Broken Arrow Municipal Authority meeting.

Cost: \$0

Funding Source: City Clerk Operational Fund

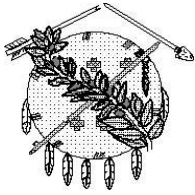
Requested By: Curtis Green, City Clerk

Approved By: City Manager's Office

Attachments: May 5, 2020 Municipal Authority Meeting Minutes. [Click here to enter text.](#)

Recommendation:

Approve the Broken Arrow Municipal Authority meeting minutes of May 5, 2020



City of Broken Arrow
Minutes
Broken Arrow Municipal Authority

City Hall
220 S 1st Street
Broken Arrow OK
74012

Chairperson Craig Thurmond
Vice Chair Scott Eudey
Trustee Johnnie Parks
Trustee Debra Wimpee
Trustee Christi Gillespie

Tuesday, May 5, 2020

Council Chambers

1. Call to Order

Chairperson Craig Thurmond called the meeting to order at approximately 8:23 p.m.

2. Roll Call

Present: 5 - Christi Gillespie, Debra Wimpee, Johnnie Parks, Scott Eudey, Craig Thurmond

3. Consideration of Consent Agenda

- A. 20-33 Approval of the Broken Arrow Municipal Authority Meeting Minutes of April 21, 2020**
- B. 20-458 Ratification of the Claims List Check Register dated April 29, 2020**

Chairperson Thurmond asked if there were any items to be removed from the Consent Agenda. There were none.

MOTION: A motion was made by Scott Eudey, seconded by Debra Wimpee.

Move to approve the Consent Agenda

The motion carried by the following vote:

Aye: 5 - Christi Gillespie, Debra Wimpee, Johnnie Parks, Scott Eudey, Craig Thurmond

4. Consideration of Items Removed from Consent Agenda

No Items were removed from the Consent Agenda; no action was taken or required.

5. Public Hearings, Appeals, Presentations, Recognitions, Awards

There were no Public Hearings, Appeals, Presentations, Recognitions, or Awards.

6. General Authority Business

- A. 20-460 Consideration, discussion and possible award the most advantageous bid proposal to Cascade Engineering Company for the purchase, assembly and distribution of refuse and recycling carts for the new curbside refuse and recycling collection system**
General Services Director Lee Zirk reported in March 2020, BAMA approved the overall curbside refuse and recycling Operational Plan. He stated since that time, in preparation for plan implementation, Staff worked to secure rerouting services, automatic side loading trucks, tippers to be added to the existing refuse trucks and a Recycling Outreach Coordinator. He stated now it was time to secure the refuse and recycling carts to coincide with the start of the program. He stated the procurement included a quantity of carts based upon the projected number of households in 2022, plus 1,000 extra carts. He stated after delivery, Broken Arrow expected to have enough carts on hand for future customers, additional cart requests, replacements, and losses. He stated six vendors submitted proposals

for the carts, as well as assembly, delivery, and a proposed communication and selection strategy to inform customers of the cart and recycling service options. He noted GBB (the refuse and recycling consultant) reviewed and evaluated the proposals and was available to answer questions today. He reported the proposal from Cascade, IPL, and Otto met all required specifications. He noted in price alone, of the qualified proposals, IPL was the lowest being slightly lower than Cascade by \$33,820 dollars; Otto was \$185,033 dollars higher than Cascade and \$218,854 dollars higher than IPL. He reported Cascade had by far the best proposal for outreach; Cascade had a detailed and innovative plan, described creating unique web sites; a phone number; mail-back; and SMS messaging for customers to respond. He noted IPL and Otto provided very little detail and relied on one mailing with an undefined mail-back or phone call system for responses; IPL recommended a completely different approach (swap-out instead of pre-ordering) but still did not provide a detailed description of their recommended alternative. He reported Staff and GBB recommended BAMA award the bid proposal to Cascade Engineering Company for the purchase, assembly and distribution of refuse and recycling carts for the Sanitation Division's new curbside refuse and recycling program.

MOTION: A motion was made by Christi Gillespie, seconded by Johnnie Parks.

Move to award the most advantageous bid proposal to Cascade Engineering Company for the purchase, assembly and distribution of refuse and recycling carts for the new curbside refuse and recycling collection system

The motion carried by the following vote:

Aye: 5 - Christi Gillespie, Debra Wimpee, Johnnie Parks, Scott Eudey, Craig Thurmond

7. Remarks and Updates by City Manager and Staff

There were no remarks or updates by City Manager or Staff.

8. Executive Session

There was no Executive Session.

9. Adjournment

The meeting adjourned at approximately 8:28 p.m.

MOTION: A motion was made by Debra Wimpee, seconded by Christi Gillespie.

Move to adjourn

The motion carried by the following vote:

Aye: 5 - Christi Gillespie, Debra Wimpee, Johnnie Parks, Scott Eudey, Craig Thurmond

Chairperson

Secretary



City of Broken Arrow

Request for Action

File #: 20-489, Version: 1

**Broken Arrow Municipal Authority
Meeting of: 05-19-2020**

Title:

Acknowledgement of submittal of the Broken Arrow Municipal Authority's Water Supply Report for the month of March 2020

Background:

In an effort to provide the Authority and the Public more information with respect to our community's water usage, the Utilities Department staff has prepared a Total Water Supply Report that records total daily water usage, as well as monthly water volume delivered to the community.

The Average Day usage through the end of March is 8.4 MGD. Total water treated at the plant up to the end of March is 261.6 million gallons (MG). Total water purchased from Tulsa for the month of March is 0.5 MG.

This report will be updated on a monthly basis. Staff recommends the Authority acknowledge submittal of the Report.

Cost: None

Funding Source: None

Requested By: Charles Vokes, Utilities Director

Approved By: City Manager's Office

Attachments: Total Water Usage Report-March 2020

Recommendation:

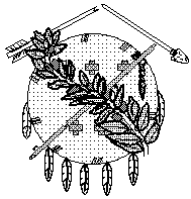
Acknowledge submittal of the March 2020 Monthly Water Usage Report.

Total Water Usage - 2020												
Day\Mon	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	9.2	8.6	8.4									
2	8.2	7.9	8.8									
3	7.9	9.2	8.9									
4	8.1	7.5	8.1									
5	8.4	8.0	8.5									
6	8.2	8.4	9.1									
7	8.3	8.0	8.7									
8	9.0	8.4	8.2									
9	8.4	7.4	8.8									
10	7.5	8.7	7.5									
11	8.1	8.6	8.8									
12	8.0	7.5	8.9									
13	8.2	8.1	7.9									
14	8.5	8.2	8.4									
15	8.0	8.7	7.9									
16	8.1	7.6	8.4									
17	7.8	8.9	7.8									
18	8.0	8.4	8.0									
19	8.4	8.4	8.0									
20	7.9	7.8	8.6									
21	8.5	8.4	7.8									
22	7.4	8.3	8.2									
23	8.3	7.4	8.2									
24	8.0	8.9	8.6									
25	8.3	7.6	8.7									
26	8.1	7.8	9.5									
27	8.8	9.0	8.4									
28	7.5	8.0	9.1									
29	8.4	8.9	8.5									
30	7.7		8.8									
31	8.7		8.1									
Mon. Total	253.9	238.6	261.6									

Plant Avg. Day	8.2	8.2	8.4
Monthly Purchase	5.7	0.5	0.5
Total Month	259.6	239.1	262.1
Total Avg. Day	8.4	8.5	8.5

Verdigris Finished Water (MG):	754.1	Plant Annual Max. Day (MGD):	9.5
Tulsa Purchase Water (MG) ⁽¹⁾ :	6.8	Plant Annual Avg. Day (MGD):	8.3
Total Finished Water (MG):	760.9	Plant Annual Min. Day (MGD):	7.4
		Total System Annual Avg. Day (MGD):	8.5

Notes:
 (1) Actual take is calculated from the billing records for the individual month.



City of Broken Arrow

Request for Action

File #: 20-490, Version: 1

**Broken Arrow Municipal Authority
Meeting of: 05-19-2020**

Title:

Acknowledgement of submittal of the Broken Arrow Municipal Authority's Wastewater Discharge Monitoring Report for the month of March 2020

Background:

In an effort to provide the Authority and the Public more information with respect to our community's wastewater collection and treatment at the City's Lynn Lane Wastewater Treatment Plant, the Utilities Department staff is attaching a copy of the March 2020 Oklahoma Department of Environmental Quality (ODEQ) Discharge Monitoring Report (DMR) submitted to ODEQ on April 15, 2020.

Over the course of the month of March 2020, the total wastewater collected, treated and discharged is 208.696 million gallons (MG). The average flow was 6.560 MG.

This report will be updated on a monthly basis. Staff recommends the Authority acknowledge submittal of the Report.

Cost: None

Funding Source: None

Requested By: Charles Vokes, Utilities Director

Approved By: City Manager's Office

Attachments: March Discharge Monitoring Report
March Monthly Operational Report

Recommendation:

Acknowledge submittal of the March 2020 Monthly Discharge Monitoring Report

**National Pollutant Discharge Elimination System (NPDES)
Oklahoma Department of Environmental Quality Discharge Monitoring Report (DMR)**

PERMITTEE NAME: Broken Arrow, City of
MAILING ADDRESS: NESESES11T17NR14EIM
Broken Arrow, OK 74013
FACILITY: Broken Arrow WWT
LOCATION: NESESES11T17NR14EIM
Broken Arrow, OK 74013

PERMIT NUMBER: OK0040053
MONITORING POINT: 001A

COUNTY: Tulsa

Monitoring Period: 2020-03-01 To: 2020-03-31

NO DISCHARGE FROM SITE: ()

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
		Average	Maximum		Minimum	Average	Maximum				
BOD, 5-DAY (20 DEG. C)	Sample Measurement	1202.04	*****	26 lbs/day	*****	19.70	45.20	19 mg/l	1	Five Per Week	COMP12
PARAM CODE: 00310 Stage Code: 1 Effluent Gross	Permit Requirement	2001.6 Monthly Average	*****		*****	30 Monthly Average	45 Weekly Average			Five Per Week	COMP12
PH	Sample Measurement	*****	*****		7.2	*****	7.4	12 S.U.	0	Daily	GRAB
PARAM CODE: 00400 Stage Code: 1 Effluent Gross	Permit Requirement	*****	*****		6.5 Minimum	*****	9.0 Maximum			Daily	GRAB
SOLIDS, TOTAL SUSPENDED	Sample Measurement	743.92	*****	26 lbs/day	*****	11.57	36.20	19 mg/l	0	Five Per Week	COMP12
PARAM CODE: 00530 Stage Code: 1 Effluent Gross	Permit Requirement	2001.6 Monthly Average	*****		*****	30 Monthly Average	45 Weekly Average			Five Per Week	COMP12
FLOW, IN CONDUIT OR THRU TREATMENT PLANT	Sample Measurement	6.560	10.478	03 MGD	*****	*****	*****		0	Daily	TOTALZ
PARAM CODE: 50050 Stage Code: 1 Effluent Gross	Permit Requirement	Report Monthly Average	Report Maximum Daily		*****	*****	*****			Daily	TOTALZ
CHLORINE, TOTAL RESIDUAL	Sample Measurement	*****	*****		*****	*****	< 0.05	19 mg/l	0	Daily	GRAB
PARAM CODE: 50060 Stage Code: A Disinfection, Process Complete	Permit Requirement	*****	*****		*****	*****	0.099 Instantaneous Maximum			Daily	GRAB
E.COLI	Sample Measurement	*****	*****		*****	50.9	1414.0	30 MPN/100mL	0	Weekly	GRAB
PARAM CODE: 51040 Stage Code: 1 Effluent Gross	Permit Requirement	*****	*****		*****	630 Geometric Mean	2030 Maximum Daily			Weekly	GRAB
SOLIDS, TOTAL DISSOLVED-180 DEG.C	Sample Measurement	26435	*****	26 lbs/day	*****	550	550	19 mg/l	0	Monthly	COMP12
PARAM CODE: 70300 Stage Code: 1 Effluent Gross	Permit Requirement	77929 Monthly Average	*****		*****	1168 Monthly Average	1168 Maximum Daily			Monthly	COMP12

Name/Title of Principal Executive Officer Or Authorized Agent WWTP Mgr.	I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.	Signature of Principal Executive Officer Or Authorized Agent	Telephone No
		David Handy	918-455-4762

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

**National Pollutant Discharge Elimination System (NPDES)
Oklahoma Department of Environmental Quality Discharge Monitoring Report (DMR)**

PERMITTEE NAME: Broken Arrow, City of
MAILING ADDRESS: NESESES11T17NR14EIM
Broken Arrow, OK 74013
FACILITY: Broken Arrow WWT
LOCATION: NESESES11T17NR14EIM
Broken Arrow, OK 74013

PERMIT NUMBER: OK0040053

MONITORING POINT: 001A

COUNTY: Tulsa

Monitoring Period: 2020-03-01 To: 2020-03-31

NO DISCHARGE FROM SITE: ()

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
		Average	Maximum		Minimum	Average	Maximum				
MERCURY, TOTAL (AS HG)	Sample Measurement	0.0024	*****	26 lbs/day	*****	< 0.05	< 0.05	28 ug/l	0	Monthly	COMP12
PARAM CODE: 71900 Stage Code: 1 Effluent Gross	Permit Requirement	0.0635 Monthly Average	*****		*****	0.952 Monthly Average	1.9 Maximum Daily			Monthly	COMP12
Name/Title of Principal Executive Officer Or Authorized Agent		I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.					Signature of Principal Executive Officer Or Authorized Agent		Telephone No		
WWTP Mgr.							David Handy		918-455-4762		

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)



MONTHLY OPERATIONAL REPORT
City of Broken Arrow Lynn Lane Water Reclamation Facility
March-20

WEATHER					INFLUENT							OXIDATION DITCH					SLUDGE WASTING					DIGESTER			FINAL EFFLUENT																	NOTES																																																																																																																																																																																																																																																																																																																			
Date	Day	°F	Rain	Cloud Conditions	Flow (MGD)	RAS (MGD)	°C	pH	Alk.	Sett. Solids	TSS (mg/L)	BOD (mg/L)	D.O. (mg/L)	30 Min. Sett.	SVI (ml/gm)	MLSS (mg/L)	Sl. Age (Days)	WAS (MGD)	THK INFL MLSS (mg/L)	CAKE (%)	LANDFILL (Tons)	LANDFILL (D.M. Tons)	THK EFFL % MLVSS (mg/L)	BP FEED % MLVSS (mg/L)	VECTOR ATT-RED. (%)	°C	D.O. (mg/L)	TDS (mg/L)	TDS (lbs)	pH	Alk.	TSS (mg/L)	TSS (lbs)	BOD (mg/L)	BOD (lbs)	Hg (mg/L)	Hg (lbs.)	E.Coli	Cl2 Res	CL2 lbs/day	Flow (MGD)																																																																																																																																																																																																																																																																																																																				
1	Sun	73	0.00	Cloudy	5.749	4.607	16	7.4	280	18			0.2	380				0.208									16	8.2			7.2	166	3.00	140.44	13.00	608.56				0.05	110	5.613																																																																																																																																																																																																																																																																																																																			
2	Mon	61	0.00	P Cloudy	5.899	4.644	18	7.3	275	18	417	366	0.2	400	164	2,440	4	0.195	4,780	16	19.89	3.09	17,850.00	14,550.00	18	16	7.8	550	26,435	7.2	172	4.00	192.25	9.00	432.57	0.00005	0.0024		0.05	60	5.763																																																																																																																																																																																																																																																																																																																				
3	Tue	67	0.00	P Cloudy	5.642	4.585	18	7.4	285	16	374	284	0.3	390	140	2,780	5	0.195		15	43.23	6.29				18	8.0			7.2	172	4.00	183.51	9.00	412.91			13.0	0.05	60	5.501																																																																																																																																																																																																																																																																																																																				
4	Wed	59	0.00	Cloudy	5.464	4.599	18	7.3	263	17	616	322	0.3	430	146	2,950	4	0.214	4,830	16	41.52	6.45	16,600.00	14,500.00	13	18	8.2		7.2	174	5.00	222.34	12.00	533.63				0.05	60	5.332	ELECTRICAL USAGE : 20,939 LABOR : 38,128 CHEMICAL, LAB SUPPLIES & SERVICES: 18,616 REPAIRS, MAINT., SERVICES & ADMIN : 33,499 SLUDGE (Generation & Transportation) : 20,741 TOTAL COSTS : 131,923																																																																																																																																																																																																																																																																																																																				
5	Thu	67	0.00	Clear	5.345	4.586	17	7.3	286	21	232	412	0.3	370	138	2,690	9	0.212		15	20.67	3.01				17	8.5			7.2	170	5.00	216.30	11.00	475.86				0.05	60											5.187																																																																																																																																																																																																																																																																																																										
6	Fri	63	0.00	Clear	5.307	4.630	17	7.3	262	20	194	354	0.4	460	185	2,480	10	0.193	4,380	15	53.98	7.86	17,100.00		100	17	8.7		7.2	172								0.05	60	5.187	COSTS / 1,000 GAL. TREATED : 0.65																																																																																																																																																																																																																																																																																																																				
7	Sat	67	0.00	Clear	5.103	4.703	15	7.2	272				1.4	470				0.200								16	8.5			7.2	166							0.05	110	4.989																																																																																																																																																																																																																																																																																																																					
8	Sun	64	0.00	Clear	5.232	4.617	15	7.3	275	16			0.3	520				0.197								16	8.4			7.3	171	3.00	127.75	11.00	468.42				0.05	110	5.106	SLUDGE (Generation & Transportation) : 20,741 TOTAL COSTS : 131,923																																																																																																																																																																																																																																																																																																																			
9	Mon	76	0.22	Cloudy	5.428	4.535	18	7.2	286	21	212	246	0.2	400	158	2,534	9	0.200	4,710	15	18.70	2.72	16,650.00	15,050.00	10	18	7.9		7.3	182	4.00	176.67	10.00	441.69				0.05	60	5.296																																																																																																																																																																																																																																																																																																																					
10	Tue	67	0.00	Clear	5.703	4.523	17	7.3	262	19	210	311	0.2	500	199	2,510	8	0.206		15	21.72	3.16				17	8.0			7.4	201	4.00	185.45	9.00	417.26			1.0	0.05	60	5.559	COSTS / 1,000 GAL. TREATED : 0.65																																																																																																																																																																																																																																																																																																																			
11	Wed	77	0.01	Clear	5.313	4.582	17	7.3	293	19	190	211	0.2	390	147	2,660	11	0.218	4,610	15	18.95	2.76	18,250.00	15,250.00	16	19	8.2		7.4	182	3.00	130.28	9.00	390.84				0.05	60	5.207																																																																																																																																																																																																																																																																																																																					
12	Thu	82	0.00	Clear	5.365	4.566	18	7.3	286	19	202	312	0.2	450	170	2,650	10	0.205		15	38.95	5.67				20	7.8			7.4	192	4.00	175.67	9.00	395.27				0.05	60	5.266	Chlorine feed estimated Mar 2-6 and 9-16 while system being worked on.																																																																																																																																																																																																																																																																																																																			
13	Fri	59	0.15	Cloudy	5.004	4.650	18	7.3	294	20	202	314	0.3	460	178	2,590	10	0.212	3,690	15	59.83	8.71	17,700.00	16,150.00	9	18	8.0		7.4	191							0.05	60	4.920																																																																																																																																																																																																																																																																																																																						
14	Sat	51	0.85	Rainy	5.620	4.650	15	7.4	251	22			0.2	480				0.211								16	7.9			7.4	205							0.05	60	5.456	because the autosampler was not reset.																																																																																																																																																																																																																																																																																																																				
15	Sun	49	0.00	Cloudy	7.481	5.486	15	7.4	250	13			2.5	330				0.179								17	8.0			7.2	150	4.00	243.79	15.00	914.23				0.05	60											7.308																																																																																																																																																																																																																																																																																																										
16	Mon	49	0.29	Cloudy	6.393	5.718	15	7.4	276	17	186	243	0.3	390	163	2,390	8	0.217	2,710	14	17.73	2.41	17,000.00	15,000.00	12	16	7.9		7.3	165	8.00	414.20	16.00	828.40				0.05	50	6.208	March 6 did not run the Belt Press; No Vector Reduction calc.																																																																																																																																																																																																																																																																																																																				
17	Tue	61	1.23	Cloudy	7.020	5.689	16	7.4	283	20	232	362	0.2	370	157	2,360	6	0.208		14	37.75	5.13				17	8.2			7.4	174	5.00	282.89	10.00	565.79			34.0	0.05	150											6.784																																																																																																																																																																																																																																																																																																										
18	Wed	76	0.50	Cloudy	7.800	5.666	16	7.2	185	17	356	335	1.2	200	104	1,930	3	0.226	4,590	16	17.08	2.65	13,750.00	14,900.00	-8	17	7.3		7.3	156	47.00	2988.85	67.00	4260.70				0.05	160	7.625	No influent Sett Solid result on Mar 7																																																																																																																																																																																																																																																																																																																				
19	Thu	73	1.00	Cloudy	8.844	5.645	16	7.3	229	9	1098	247	0.2	200	81	2,470	1	0.201		14	39.98	5.43				18	7.3			7.2	150	117.00	8522.46	118.00	8595.30				0.05	180											8.734																																																																																																																																																																																																																																																																																																										
20	Fri	67	0.00	Cloudy	10.542	5.573	17	7.4	241	10	1163	260	0.7	180	64	2,830	1	0.209	5,810	14	36.88	5.01	16,100.00	13,200.00	18	17	7.9		7.3	143							0.05	180	10.478	March 6 did not run the Belt Press; No Vector Reduction calc.																																																																																																																																																																																																																																																																																																																					
21	Sat	56	0.05	Clear	8.697	5.649	16	7.5	247	15			2.5	180				0.204								15	8.8			7.3	153							0.05	180											8.540																																																																																																																																																																																																																																																																																																											
22	Sun	54	0.24	Cloudy	7.901	5.135	15	7.3	239	17			1.2	200				0.213								15	8.0			7.3	164	5.00	318.80	23.00	1466.46				0.05	180	7.645	PARTIAL WEEKLY AVG.NO's																																																																																																																																																																																																																																																																																																																			
23	Mon	62	0.00	Cloudy	8.543	5.157	17	7.4	267	13	454	255	0.2	180	70	2,560	3	0.207	5,840	15	21.49	3.13	16,100.00	13,600.00	16	17	8.0		7.3	154	5.00	351.74	20.00	1406.96				0.05	180	8.435																																																																																																																																																																																																																																																																																																																					
24	Tue	72	0.22	Clear	8.137	5.219	17	7.4	278	18	1064	300	0.2	170	73	2,340	1	0.219		15	38.50	5.60				18	7.7			7.3	172	4.00	264.08	16.00	1056.31			548.0	0.05	180	7.916	Date Week No. TSS BOD																																																																																																																																																																																																																																																																																																																			
25	Wed	82	0.01	Clear	8.660	5.244	17	7.3	246	15	1058	289	0.3	200	78	2,570	1	0.232	5,110	15	23.69	3.45	18,050.00	12,600.00	30	18	8.0		7.3	162	9.00	630.88	10.00	700.98				0.05	200	8.405																																																																																																																																																																																																																																																																																																																					
26	Thu	93	0.00	Clear	7.565	5.201	18	7.3	288	19	968	304	0.2	200	72	2,760	2	0.207		16	34.12	5.30				19	7.6			7.2	178	5.00	315.50	12.00	757.21				0.05	200	7.566	1-Apr 5 3.00 8.00																																																																																																																																																																																																																																																																																																																			
27	Fri	77	0.00	P Cloudy	7.281	5.036	19	7.4	281	12	304	249	0.1	240	91	2,650	5	0.212	5,390	15	29.32	4.27	15,300.00	18,750.00	-23	20	7.6		7.4	190							0.05	170	6.952																																																																																																																																																																																																																																																																																																																						
28	Sat	73	0.14	Cloudy	6.649	4.932	19	7.4	266	10			0.3	300				0.214								19	7.6			7.4	181							0.05	180	6.431	2-Apr 5 2.00 8.00																																																																																																																																																																																																																																																																																																																				
29	Sun	72	0.00	Clear	6.761	4.878	18	7.3	300	13	164	200	0.3	300			0	0.222								18	8.0			7.4	186	5.00	261.42	13.00	679.68				0.05	150											6.269																																																																																																																																																																																																																																																																																																										
30	Mon	65	0.68	P Cloudy	6.294	4.882	18	7.4	290	14	156	215	0.2	320	122	2,630	11	0.188	5,380	15	31.56	4.59	16,600.00	12,550.00	24	18	7.8		7.3	179	5.00	247.99	11.00	545.58				0.05	120	5.947																																																																																																																																																																																																																																																																																																																					
31	Tue	67	0.15	Clear	7.954	5.682	17	7.4	234	14	182	209	0.3	240	96	2,490	7	0.209		15	55.14	8.02				18	7.3			7.3	173	8.00	516.95	20.00	1292.37			1414.0	0.05	200											7.748																																																																																																																																																																																																																																																																																																										
TOTAL :			5.74		208.696																720.68	104.69															50.9		3710	203.373	TSS	4.20	3.60	36.20	5.60	4.60																																																																																																																																																																																																																																																																																																															



City of Broken Arrow

Request for Action

File #: 20-499, Version: 1

**Broken Arrow Municipal Authority
Meeting of: 05-19-2020**

Title:

Approval of and authorization to execute Amendment No. 1 to Professional Services Agreement with Professional Engineering Consultants, P.A. for County Line Trunk Sewer - Phase 1 (Project No. S.1609)

Background:

The County Line Trunk Sewer - Phase 1 project is currently being constructed. The original contract with Professional Engineering Consultants, P.A. (PEC) provided for design work for the project and some assistance during construction services.

This Amendment requires CONSULTANT to provide modifications to plans due to field changes, additional services during construction due to changes in the field, review of Contractor Requests for Information and response to same, and coordination with Contractor and Owner Personnel for field resolution of issues. The negotiated amount of this amendment with PEC is \$37,800.00.

Cost: \$37,800.00

Funding Source: Oklahoma Water Resources Board Loan

Requested By: Ethan J.L. Edwards, P.E., Director of Engineering & Construction

Approved By: City Manager's Office

Attachments: Amendment No. 1 to Professional Services Agreement

Recommendation:

Approve and authorize execution of Amendment No.1 to Professional Services Agreement with Professional Engineering Consultants, P.A. for County Line Trunk Sewer - Phase 1 (Project No. S.1609)

**AMENDMENT NO. 1
TO
AGREEMENT FOR PROFESSIONAL CONSULTING SERVICES
BETWEEN
BROKEN ARROW MUNICIPAL AUTHORITY
AND
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.**

**PROJECT NAME: COUNTY LINE TRUNK SEWER IMPROVEMENTS – PHASE 1
PROJECT NO. S.1609**

THIS **AMENDMENT NO. 1**, made and entered into this _____ day of MAY 2020, by and between the CITY OF BROKEN ARROW, OKLAHOMA, a municipal corporation of the State of Oklahoma, hereinafter referred to as "CITY", and Professional Engineering Consultants, P.A., hereinafter referred to as "CONSULTANT";

WITNESSETH:

WHEREAS, CITY and CONSULTANT entered into an Agreement dated May 3, 2016 "ORIGINAL AGREEMENT" for services as set forth in said Agreement; and

WHEREAS, said ORIGINAL AGREEMENT requires CONSULTANT to prepare construction documents for bidding purposes for the County Line Trunk Sewer Improvements – Phase 1.

WHEREAS, CITY and CONSULTANT propose to amend said ORIGINAL AGREEMENT to expand the project scope and compensation to include expand the project scope and compensation to include additional geotechnical investigation.

WHEREAS, the ORIGINAL AGREEMENT and Amendment No. 1 shall hereinafter collectively be referred to as the "Agreement"; and

WHEREAS, funding is now available for said additional services; and

WHEREAS, CONSULTANT is prepared to provide said additional services identified in this Amendment.

NOW THEREFORE, in consideration of the promises contained herein, the parties hereto agree to amend the Agreement as follows:

1. PROJECT SCOPE.

This Amendment requires CONSULTANT to provide modifications to plans due to field changes, additional services during construction due to changes in the field, review of Contractor Requests for Information and response to same, and coordination with Contractor and Owner Personnel for field resolution of issues.

2. CHANGE IN CONTRACT AMOUNT.

As compensation for the additional work, CITY shall pay CONSULTANT in accordance with the terms as a change in the contract amount;

Original Contract Amount executed May 3, 2016	\$ 665,150.00
Amendment No. 1	<u>\$37,800.00</u>

Revised Total Contract Amount	\$702,950.00
-------------------------------	--------------

3. AMENDED PROJECT SCHEDULE

The schedule for Amendment No. 1 is 180 days from Notice to Proceed.

4. EFFECTIVE DATE AND AUTHORIZATION TO PROCEED.

This Amendment No. 1 is effective upon signature of both parties.

5. ELECTRONIC SIGNATURES

The Parties agree this transaction may be completed by electronic means and an electronic signature on this AMENDMENT will be given the same legal effect as a handwritten signature and cannot be denied enforceability solely because is it in electronic form. If CONSULTANT signs this AMENDMENT electronically and/or submits documents electronically, CONSULTANT agrees to comply with OWNER'S requirements for submission of electronically signed and/or submitted documents.

Except as amended hereby, all terms of the Agreement shall remain in full force and effect without modification or change.

IN WITNESS WHEREOF, the parties have executed this AMENDMENT, in multiple copies on the respective dates herein below reflected.

OWNER:

City of Broken Arrow, a Municipal Corporation

By: _____

Michael L. Spurgeon,
City Manager

Date: _____

Attest: _____

City Clerk [Seal]

Date: _____

CONSULTANT:

Professional Engineering Consultants, P.A.

By: _____

Michael D. Kelsey, P.E.,
Principal

Date: _____

(CORPORATE SEAL, IF APPLICABLE)

Attest: _____

Date: _____

Approved as to form:

Leamy Ewing

Assistant City Attorney

VERIFICATION

State of Oklahoma
County of Tulsa) §

Before me, a Notary Public, on this 11th day of May, 2020, personally appeared Mike Ketsey, known to be to be the (President, Vice-President, Corporate Officer, Member, or Other: Vice President) of Professional Engineering Consultants, P.A., and to be the identical person who executed the within and foregoing instrument, and acknowledged to me that he/she executed the same as his/her free and voluntary act and deed for the uses and purposes therein set forth.

My Commission Expires:

1/18/23

Faith Pinkerton

Notary Public





City of Broken Arrow

Request for Action

File #: 20-498, Version: 1

**Broken Arrow Municipal Authority
Meeting of: 05-19-2020**

Title:

Approval of and authorization to execute Amendment No. 1 to Professional Consulting Services Agreement with HDR Engineering, Inc. for the Taste and Odor Mitigation Study at the Verdigris River Water Treatment Plant (Project No. 195425)

Background:

In 2018 the BAMA reached out to HDR Engineering, Inc. to hear more from HDR about their experience with helping municipalities deal with taste and odor issues. They have worked with several large municipalities in the past to come up with effective solutions to their water T&O issues.

In 2019 the Engineering and Construction Department negotiated a Professional Consultant Agreement with HDR Engineering, Inc. to do bench-scale evaluation of treatment technologies capable of reducing impacts of MIB and geosmin on treated water taste and odor. The negotiated amount was \$333,405.00.

This amendment is for additional laboratory analyses to determine the effectiveness of the Pilot System to remove potential contaminants. The amount of the amendment is not to exceed \$10,973.

Cost: \$10,973.00

Funding Source: Existing OWRB Loan

Requested By: Charles Vokes, Utilities Director

Approved By: City Manager's Office

Attachments: 2020-01-29 HDR Taste and Odor Study Amendment 1

Recommendation:

Approve and authorize execution of Amendment No. 1 to agreement with HDR Engineering

**AMENDMENT NO. 1
TO
AGREEMENT FOR PROFESSIONAL CONSULTING SERVICES
BETWEEN
BROKEN ARROW MUNICIPAL AUTHORITY
AND
HDR ENGINEERING, INC.**

**PROJECT NAME: TASTE AND ODOR MITIGATION STUDY AT
THE VERDIGRIS RIVER WATER TREATMENT PLANT**

THIS **AMENDMENT NO. 1**, made and entered into this ____ day of _____ 2020, by and between the BROKEN ARROW MUNICIPAL AUTHORITY, OKLAHOMA, a municipal corporation of the State of Oklahoma, hereinafter referred to as “OWNER”, and HDR ENGINEERING, INC., hereinafter referred to as “CONSULTANT”;

WITNESSETH:

WHEREAS, OWNER and CONSULTANT entered into an Agreement dated May 7, 2019 “ORIGINAL AGREEMENT” for services as set forth in said Agreement; and

WHEREAS, said ORIGINAL AGREEMENT requires CONSULTANT to conduct a Taste and Odor Mitigation Study for the Verdigris River Water Treatment Plant (Project).

WHEREAS, OWNER and CONSULTANT propose to amend said ORIGINAL AGREEMENT to expand the project scope and compensation to include additional chemical purchases and laboratory analyses for the pilot-scale study.

WHEREAS, the ORIGINAL AGREEMENT and Amendment No. 1 shall hereinafter collectively be referred to as the “Agreement”; and

WHEREAS, funding is now available for said additional services; and

WHEREAS, CONSULTANT is prepared to provide said additional services identified in this Amendment.

NOW THEREFORE, in consideration of the promises contained herein, the parties hereto agree to amend the Agreement as follows:

1. PROJECT SCOPE.

This Amendment includes reimbursement for purchase of chemicals to support the piloting efforts that were not included in CONSULTANT’s original scope of services and additional laboratory analyses for testing levels of PPCPs (pharmaceuticals and personal care products). The costs are summarized in the following table:

ITEM	DATE	COST
Chemical Purchases		
Single pack of MIB/Geosmin	9/25/2019	\$376
5-pack of MIB	10/24/2019	\$834
5-pack of MIB	11/11/2019	\$817
5-pack of MIB	12/13/2019	\$817
5-pack of MIB	1/21/2020	\$875
5-pack of MIB, single Geosmin, Manganese Chloride	2/21/2020	\$1,195
5-pack of MIB	3/30/2020	\$879
Laboratory Analyses		
PPCP (4 at \$1,295 each)	April/May 2020	\$5,180
TOTAL		\$10,973

2. CHANGE IN CONTRACT AMOUNT.

As compensation for the additional work, OWNER shall pay CONSULTANT in accordance with the terms as a change in the contract amount;

Original Contract Amount executed May 7, 2019	\$333,405.00
Amendment No. 1	\$ 10,973.00
Revised Total Contract Amount	\$344,378.00

3. AMENDED PROJECT SCHEDULE

The schedule remains the same as the original Agreement.

4. EFFECTIVE DATE AND AUTHORIZATION TO PROCEED.

This Amendment No. 1 is effective upon signature of both parties.

5. ELECTRONIC SIGNATURES

The Parties agree this transaction may be completed by electronic means and an electronic signature on this AMENDMENT will be given the same legal effect as a handwritten signature and cannot be denied enforceability solely because is it in electronic form. If CONSULTANT signs this AMENDMENT electronically and/or submits documents electronically, CONSULTANT agrees to comply with OWNER'S requirements for submission of electronically signed and/or submitted documents.

Except as amended hereby, all terms of the Agreement shall remain in full force and effect without modification or change.

IN WITNESS WHEREOF, the parties have executed this AMENDMENT, in multiple copies on the respective dates herein below reflected.

OWNER:

Broken Arrow Municipal Authority

By: _____

Michael L. Spurgeon, City Manager

Date: _____

CONSULTANT:

HDR Engineering, Inc.

By: _____

Ramon F. Miguez, Vice President

Date: _____

(CORPORATE SEAL, IF APPLICABLE)

Attest

:

City Clerk [Seal]

Date: _____

Attest: _____

Jenifer Rayshell, Eng. Admin.

Date: _____

Approved as to form:

Tenny Ewing

Assistant City Attorney

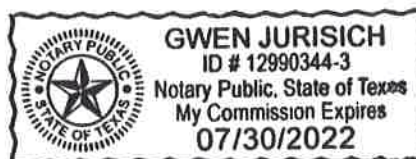
VERIFICATION

State of Texas)
County of Dallas) §

Before me, a Notary Public, on this 23rd day of April, 2020, personally appeared Ramon F. Miguez, known to be to be the (President, Vice-President, Corporate Officer, Member, or Other: _____) of HDR Engineering, Inc., and to be the identical person who executed the within and foregoing instrument, and acknowledged to me that he/she executed the same as his/her free and voluntary act and deed for the uses and purposes therein set forth.

My Commission Expires:

07/30/2022
[Signature]
Notary Public





City of Broken Arrow

Request for Action

File #: 20-492, Version: 1

**Broken Arrow Municipal Authority
Meeting of: 05-19-2020**

Title:

Award the most advantageous bid to Utility Supply Company for the purchase of water line pipes and accessories for construction of water distribution system improvements along West Galveston Street from Main Street to Elm Place

Background:

The bids solicited are for the purchase of about 3000 LF of 6" PVC pipe and required appurtenances for the construction of water line improvements along West Galveston Street from South Main Street to South Elm Place. The funding for the purchase of materials is from the Capital Outlay Improvements for FY2020. The proposed improvements replace an existing cast iron line with a PVC line. Garver Engineering has identified this line for replacement in their Old Town Water Model project. The new 6" line will improve water quality and provide improved volume and pressure to serve the area. The installation will be undertaken by Utilities Department Construction crews.

City Purchasing Department solicited bids for the supply of the 22 items listed in the bid tab from nine (9) vendors and received four (4) complete bid proposals. Staff has reviewed the bids and recommends award to Utility Supply Company, the lowest responsible bidder in the amount of \$41,884.18. Funding is from the Capital Outlay Improvements FY2020 Project 205416 Account No. 020-5400-434-7015.

Cost: \$ 41,884.18

Funding Source: BAMA

Requested By: Charles Vokes, Utilities Director

Approved By: City Manager's Office

Attachments: Bid tabulation 20.157

Recommendation:

Award the most advantageous bid to Utility Supply Company for the purchase of water line pipes and accessories.

Bid 20.157

Galveston Waterline Pipe and Supplies

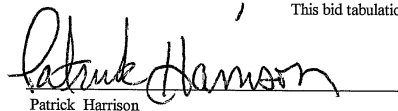
Bid Date 04/29/2020

Vendor			Utility Supply	Core & Main	Fortline	Ferguson Waterworks
Specification						
Item Number	Waterline Pipe and Supplies	Qty.	Each Price	Each Price	Each Price	Each Price
1	6" C-900 Pipe (Feet)	3,000	\$4.53	\$4.45	\$4.79	\$4.65
2	6" Flange Crosses	4	\$153.56	\$159.00	\$188.42	\$205.00
3	6" MJ X Flange Valves with Accessories	16	\$425.00	\$450.00	\$409.41	\$558.00
4	6" MJ X Flange Tee with Accessories	7	\$98.35	\$107.50	\$98.35	\$169.19
5	Fire Hydrants	7	\$1,410.00	\$1,525.00	\$1,304.91	\$1,695.00
6	6" 45 Degree Bend	4	\$36.00	\$37.00	\$52.55	\$118.25
7	6" Plug	8	\$33.88	\$25.00	\$32.02	\$42.50
8	Complete Valve Boxes with lids	16	\$31.25	\$32.00	\$36.00	\$45.95
9	Mega Lugs for 6" C-900	20	\$19.40	\$25.50	\$18.33	\$39.64
10	6" X ¾ Brass Saddles	30	\$83.72	\$82.90	\$89.99	\$44.15
11	¾" PK Corp	30	\$26.44	\$26.25	\$28.49	\$48.25
12	¾" PK X MCN Curb Stop	30	\$55.76	\$55.50	\$60.11	\$52.95
13	¾" PK X MCN Coupling	30	\$15.15	\$15.00	\$34.51	\$14.75
14	¾" Copper Tubing (60 Feet)	16	\$135.00	\$123.00	\$163.80	\$159.00
15	6" x 1" Brass Saddle	1	\$83.72	\$82.90	\$89.98	\$93.00
16	1" PK Corp	1	\$40.50	\$40.00	\$43.11	\$42.95
17	1" PK X MCN Curb Stop	1	\$84.00	\$82.00	\$88.81	\$80.25
18	1" PK X MCN Coupling	1	\$20.75	\$20.15	\$13.04	\$17.25
19	1" Copper Tubing (60 Feet)	1	\$198.00	\$157.20	\$200.40	\$210.00
20	1" PK X PK Coupling	2	\$16.99	\$16.75	\$18.20	\$20.25
21	1" x ¾" PK X PK Coupling	30	\$17.19	\$17.00	\$18.48	\$19.50
22	¾" PK x PK Coupling	30	\$14.99	\$14.65	\$15.91	\$17.25
Total			\$3,004.18	3,098.75	3,009.61	3,697.73
Total for quantities shown			\$41,884.18	42,706.25	43,423.26	48,021.78
	Meet specs.		Y	Y	Y	Y
	Delivery		14 days	15 days	14 days	10 days
	Warranty		Manufacturers	Manufacturers	Manufacturers	Manufacturers

Water Department Project 205416 Bids were sent out to 9 Vendors

This bid tabulation is true and accurate to the best of my knowledge

Wednesday, April 29, 2020



Patrick Harrison
Purchasing Manager



City of Broken Arrow

Request for Action

File #: 20-527, Version: 1

**Broken Arrow Municipal Authority
Meeting of: 5/19/2020**

Title:

Ratification of the Claims List Check Register dated May 12, 2020

Background:

Council on September 3, 2019 approved Ordinance No. 3601 allowing ratification of the claims list. For the period from April 30, 2020 through May 12, 2020. Checks, V-Cards or ACH were processed for a total of \$1,528,790.59.

(Total Includes City Council, BAMA and BAEDA)

A summary by funds and detail are attached.

Cost: \$463,227.32

Funding Source: BAMA Operational and Capital accounts

Requested By: Cynthia S. Arnold, Finance Director

Approved By: City Manager's Office

Attachments: Check Register dated May 12, 2020.

Recommendation: Approve Ratification of Claims List Check Register dated 5/12/2020

BANK	NAME	FUND	AMOUNT
01	Arkansas Valley State Bank	010 GENERAL FUND	120,637.72
		020 BAMA	461,227.32
		021 BAMA SALES TAX	2,000.00
		027 CONVENTION&VISITOR BUREAU	10,912.46
		030 SALES TAX CAPITAL IMPROV	86,804.06
		032 PARK AND RECREATION	2,450.00
		035 HOUSING URBAN DEVELOPMENT	2,517.25
		037 CRIME PREVENTION	44.81
		042 STREET LIGHT FUND	24,497.76
		043 STREET SALES TAX	59,838.01
		044 PUBLIC SAFETY SALES TAX	45,822.17
		045 PUBLIC SAFETY SALES TAX	40,388.23
		060 WORKMANS COMP	9,302.09
		061 GROUP HEALTH AND LIFE	3,776.50
		082 AGENCY	1,119.00
		087 BAEDA	132,292.00
		093 2018 GO BOND ISSUE	965.60
		900 PAYROLL FUND	524,195.61
		Total	1,528,790.59 *
		Grand Total	1,528,790.59 *

Prepared: 05/12/2020, 13:20:17
 Program: GM179L
 Bank: 01 Arkansas Valley State Bank

CITY OF BROKEN ARROW
 CHECK REGISTER BY FUND

Page 9

CHECK DATE	CHECK NUMBER	VENDOR NAME	INVOICE	DESCRIPTION	G/L NUMBER	PROJECT	PERIOD YEAR	AMOUNT
05/01/2020	268648	6375 ATWOOD DISTRIBUTING LP	J11771/M J16037/M J23613/M 001962/M 001966/M 001967/M 001971/M 001972/M 001973/M 001974/M 001978/M 001979/M 001980/M 001981/M 001982/M 001983/M 001987/M	SHOES AND BOOTS SHOES AND BOOTS SHOES AND BOOTS BLANKET ORDERS SHOES AND BOOTS SHOES AND BOOTS BLANKET ORDERS BLANKET ORDERS BLANKET ORDERS BLANKET ORDERS BLANKET ORDERS BLANKET ORDERS SHOES AND BOOTS BLANKET ORDERS BLANKET ORDERS SHOES AND BOOTS SHOES AND BOOTS	020-5305-438.60-10 020-5400-434.60-10 020-5305-438.60-10 020-5415-435.60-23 020-5410-435.60-10 020-5305-438.60-10 020-5305-438.60-23 020-5305-438.60-23 020-5115-437.60-23 020-5305-438.60-10 020-5305-438.60-24 020-5305-438.60-24 020-5415-435.60-10 020-5305-438.60-23 020-5305-438.60-23 020-5415-435.60-10 020-5125-436.60-10		11/2020 11/2020 11/2020 11/2020 11/2020 11/2020 11/2020 11/2020 11/2020 11/2020 11/2020 11/2020 11/2020 11/2020 11/2020 11/2020 11/2020 Total	125.00 125.00 125.00 19.99 125.00 125.00 23.17 12.49 34.99 14.99 1,033.94 100.00 99.99 18.99 55.23 119.99 74.94 2,233.71
05/01/2020	268649	9825 BIO-CHEM INDUSTRIES INC	A4267CK	WATER SUPPLY AND SEWAGE	020-5415-435.40-28		11/2020 Total	3,610.88 3,610.88
05/01/2020	268651	8 BRENNITAG SOUTHWEST INC	BSW195092	WATER TREATING CHEMICALS	020-5410-435.60-34		11/2020 Total	838.63 838.63
05/01/2020	268654	4960 CHEMSEARCH	3878572 3893909	CHEMICAL LAB EQUIP & SUPP CHEMICAL LAB EQUIP & SUPP	020-5410-435.60-34 020-5410-435.60-34		11/2020 11/2020 Total	1,233.97 410.00 1,643.97
05/01/2020	268655	4728 CHICKASAW TELECOM INC	53837	RADIO AND TELECOMMUNICATION	020-5404-434.60-23		11/2020 Total	398.10 398.10
05/01/2020	268661	10014 EARTH SCIENCE LABORATORY	236820	WATER SUPPLY AND SEWAGE	020-5405-434.60-34		11/2020 Total	17,820.00 17,820.00
05/01/2020	268663	625 FASTENAL COMPANY	OKTU734445	BLANKET ORDERS	020-5100-437.60-18		11/2020 Total	171.13 171.13
05/01/2020	268664	244 GREEN ACRE SOD FARMS	116579 116631	BLANKET ORDERS BLANKET ORDERS	020-5400-434.60-18 020-5400-434.60-18		11/2020 11/2020 Total	170.00 170.00 340.00
05/01/2020	268665	2227 HAYNES EQUIPMENT CO	8122949-IN 8122950-IN 8122951-IN	PLUMBING EQUIPMENT PLUMBING EQUIPMENT WATER SUPPLY AND SEWAGE	020-5415-435.60-41 020-5415-435.60-41 020-5415-435.60-41		11/2020 11/2020 11/2020 Total	5,721.95 5,329.25 1,588.60 12,639.80
05/01/2020	268672	9722 LINE-X OF TULSA, INC	20021304	AUTO BODIES & ACCESSORIES	020-5400-434.40-20		11/2020 Total	420.00 420.00
05/01/2020	268674	5941 LOWES	01282 40720 02004 42120 02627 42020	BLANKET ORDERS BLANKET ORDERS BLANKET ORDERS	020-5305-438.60-23 020-5305-438.60-20 020-5305-438.60-24		11/2020 11/2020 11/2020	92.88 4.72 350.96

Prepared: 05/12/2020, 13:20:17
 Program: GM179L
 Bank: 01 Arkansas Valley State Bank

CITY OF BROKEN ARROW
 CHECK REGISTER BY FUND

Page 10

CHECK DATE	CHECK NUMBER	VENDOR NAME	INVOICE	DESCRIPTION	G/L NUMBER	PROJECT	PERIOD YEAR	AMOUNT
05/01/2020	268674	5941 LOMES	02637 42020 12339 42220 2004 42120 2096 042220	BLANKET ORDERS BLANKET ORDERS BLANKET ORDERS BLANKET ORDERS	020-5410-435.60-23 020-5415-435.60-23 020-5305-438.60-20 020-5305-438.60-23		11/2020 11/2020 11/2020 11/2020 Total	94.72 26.16 4.72 14.29 588.45
05/01/2020	268675	10081 MECHANICAL AIR SYSTEMS	3866	BUILDING MAINTENANCE/ REPR	020-5405-434.40-07		11/2020 Total	8,673.50 8,673.50
05/01/2020	268681	309 OKLAHOMA NATURAL GAS CO	253867827 253868218	MONTHLY SERVICE 4-20-2020 MONTHLY SERVICE 4-23-2020	020-5415-435.50-24 020-5415-435.50-24		11/2020 11/2020 Total	23.36 33.61 56.97
05/01/2020	268684	11737 PETROCHOC	11423596	FUEL, OIL, GREASE & LUBRIC	020-0000-141.00-00		11/2020 Total	871.25 871.25
05/01/2020	268685	687 REV PARTS LLC	90471945	AUTO MAJOR TRANSPORTATION	020-0000-141.00-00		10/2020 Total	363.33 363.33
05/01/2020	268686	9876 RITZ/ LONE STAR SAFETY &	5906844 5913253 5940929 5940930	FIRST AID & SAFETY EQUIP FIRST AID & SAFETY EQUIP SHOES AND BOOTS SHOES AND BOOTS	020-0000-141.00-00 020-0000-141.00-00 020-0000-141.00-00 020-0000-141.00-00		11/2020 11/2020 11/2020 11/2020 Total	2,015.00 235.03 343.00 309.18 2,902.21
05/01/2020	268688	6671 TULSA CLEANING SYSTEMS	67040	EQUIPMENT MAINT/ REPAIR	020-5120-437.40-29		11/2020 Total	378.47 378.47
05/01/2020	268689	168 TULSA NEW HOLLAND	507165	ROAD/ HWY/ HEAVY EQUIPMENT	020-0000-141.00-00		11/2020 Total	22.24 22.24
05/01/2020	268691	10922 TYLER TECHNOLOGIES INC	045-296447	BLANKET ORDERS	020-1700-419.70-17	191721	11/2020 Total	1,034.40 1,034.40
05/08/2020	268694	99999 AMERICAN HATFIELD	000226727	UB CR REFUND- FINALS	020-0000-225.01-00		11/2020 Total	70.33 70.33
05/08/2020	268695	99999 ARTHUR, ROBERT	000251421	UB CR REFUND- FINALS	020-0000-225.01-00		11/2020 Total	20.39 20.39
05/08/2020	268696	99999 ASCENSION PROPERTY MANA	000234827	UB CR REFUND- FINALS	020-0000-225.01-00		11/2020 Total	17.84 17.84
05/08/2020	268697	99999 BUSTOS-BENITEZ, IRENE	000249359	UB CR REFUND- FINALS	020-0000-225.01-00		11/2020 Total	75.52 75.52
05/08/2020	268698	99999 CABRERA, GUSTAVO	000233305	UB CR REFUND- FINALS	020-0000-225.01-00		11/2020 Total	16.76 16.76
05/08/2020	268701	99999 COLBERT, STEVE	000205201	UB CR REFUND- FINALS	020-0000-225.01-00		11/2020 Total	31.66 31.66
05/08/2020	268702	99999 CORRARO, SAMANTHA	000252329	UB CR REFUND- FINALS	020-0000-225.01-00		11/2020	70.00

CHECK DATE	CHECK NUMBER	VENDOR NAME	INVOICE	DESCRIPTION	G/L NUMBER	PROJECT	PERIOD YEAR	AMOUNT
							Total	70.00
05/08/2020	268703	99999 CURTIS, TERRY A	000146831	UB CR REFUND- FINALS	020-0000-225.01-00		11/2020 Total	11.22 11.22
05/08/2020	268704	99999 DANG, VALERIE	000227191	UB CR REFUND- FINALS	020-0000-225.01-00		11/2020 Total	54.08 54.08
05/08/2020	268705	99999 DOOLIN, KAY	000231513	UB CR REFUND	020-0000-225.01-00		11/2020 Total	56.24 56.24
05/08/2020	268706	99999 GREEN COUNTRY REMODELS	000243439	UB CR REFUND- FINALS	020-0000-225.01-00		11/2020 Total	54.18 54.18
05/08/2020	268707	99999 GRUBBS, CINDY	000238115	UB CR REFUND- FINALS	020-0000-225.01-00		11/2020 Total	5.10 5.10
05/08/2020	268708	99999 HOLBERT, DALINDA	000252403	UB CR REFUND- FINALS	020-0000-225.01-00		11/2020 Total	26.76 26.76
05/08/2020	268712	99999 MERCADO, LAURA	000156029	UB CR REFUND	020-0000-225.01-00		11/2020 Total	80.00 80.00
05/08/2020	268713	99999 MULTIPLY LLC	000251423	UB CR REFUND- FINALS	020-0000-225.01-00		11/2020 Total	24.08 24.08
05/08/2020	268714	99999 MURPHY, MACY W	000245473	UB CR REFUND- FINALS	020-0000-225.01-00		11/2020 Total	7.69 7.69
05/08/2020	268715	99999 NRT PROPERTY MGMT OKLAH	000243959	UB CR REFUND- FINALS	020-0000-225.01-00		11/2020 Total	21.41 21.41
05/08/2020	268716	99999 NRT PROPERTY MGMT OKLAH	000243959	UB CR REFUND- FINALS	020-0000-225.01-00		11/2020 Total	24.98 24.98
05/08/2020	268717	99999 NRT PROPERTY MGMT OKLAH	000243959	UB CR REFUND- FINALS	020-0000-225.01-00		11/2020 Total	2.24 2.24
05/08/2020	268718	99999 OK RENT 22 LLC	000250515	UB CR REFUND- FINALS	020-0000-225.01-00		11/2020 Total	7.69 7.69
05/08/2020	268719	99999 PATRICK'S APPLIANCE	000119759	UB CR REFUND	020-0000-225.01-00		11/2020 Total	75.97 75.97
05/08/2020	268720	99999 PEREZ, CHRIS	000246499	UB CR REFUND- FINALS	020-0000-225.01-00		11/2020 Total	48.73 48.73
05/08/2020	268721	99999 QUISENBERRY, KATHLEEN	000244975	UB CR REFUND- FINALS	020-0000-225.01-00		11/2020 Total	38.92 38.92
05/08/2020	268722	99999 SELECT PORTFOLIO SERVICE	000229411	UB CR REFUND- FINALS	020-0000-225.01-00		11/2020 Total	54.08 54.08

CHECK DATE	CHECK NUMBER	VENDOR NAME	INVOICE	DESCRIPTION	G/L NUMBER	PROJECT	PERIOD YEAR	AMOUNT
05/08/2020	268723	99999 SPARTAN CONSTRUCTION INC	000196549	UB OR REFUND- FINALS	020-0000-225.01-00		11/2020	16.02
							Total	16.02
05/08/2020	268724	99999 STARO LLC, STEVE LAZZUR	000251939	UB OR REFUND- FINALS	020-0000-225.01-00		11/2020	12.49
							Total	12.49
05/08/2020	268725	99999 2800 S DOGWOOD LLC	000252241	UB OR REFUND- FINALS	020-0000-225.01-00		11/2020	24.08
							Total	24.08
05/08/2020	268726	2673 ACCURATE ENVIRONMENTAL	CD13023	WATER ANALYSIS	020-5410-435.30-34		11/2020	279.00
			CD14053	WATER ANALYSIS	020-5410-435.30-34		11/2020	279.00
			CD15134	WATER ANALYSIS	020-5405-434.30-34		11/2020	960.00
			CD15169	WATER ANALYSIS	020-5410-435.30-34		11/2020	254.00
			CD16055	WATER ANALYSIS	020-5405-434.30-34		11/2020	132.00
			CD16088	WATER ANALYSIS	020-5410-435.30-34		11/2020	279.00
			CD20029	UV PROJECT	020-5410-435.30-34		11/2020	279.00
			CD21030	WATER ANALYSIS	020-5410-435.30-34		11/2020	279.00
			CD22086	WATER ANALYSIS	020-5410-435.30-34		11/2020	279.00
			CD23051	WATER ANALYSIS	020-5410-435.30-34		11/2020	279.00
							Total	3,299.00
05/08/2020	268727	10703 ACCO INDUSTRIAL AUTOMAT INC	INV190610	ELECTRICAL WORK/PILOT PRO	020-5405-434.40-55		11/2020	8,602.51
							Total	8,602.51
05/08/2020	268729	3444 ADMIRAL EXPRESS LLC	185303-S	OFFICE SUPPLIES APR 2020	020-5400-434.60-03		11/2020	93.54
			185321-S	OFFICE SUPPLIES APR 2020	020-5400-434.60-03		11/2020	1,561.41
			185323-S	OFFICE SUPPLIES APR 2020	020-5200-419.60-03		11/2020	7.86
			185324-S	OFFICE SUPPLIES APR 2020	020-5205-419.60-03		11/2020	327.99
			185362-S	OFFICE SUPPLIES APR 2020	020-5100-437.60-03		11/2020	9.51
							Total	2,000.31
05/08/2020	268730	9700 ADVANCED INDUSTRIAL SOL	256160	PAPER & PLASTIC DISPOSABLE	020-0000-141.00-00		11/2020	1,855.42
			256160BO	JANITORIAL SUPPLIES	020-0000-141.00-00		11/2020	227.37
			257182	FIRST AID & SAFETY EQUIP	020-0000-141.00-00		11/2020	1,645.00
			257186	FIRST AID & SAFETY EQUIP	020-0000-141.00-00		11/2020	5,875.00
							Total	9,602.79
05/08/2020	268731	370 AIRGAS USA LLC	9100535294	BLANKET ORDERS	020-5130-437.60-21		11/2020	21.10
							Total	21.10
05/08/2020	268732	10407 ALLIANCE MAINTENANCE INC	125094	MONTHLY JANITORIAL	020-1700-419.40-28		11/2020	1,415.00
							Total	1,415.00
05/08/2020	268738	22 ALLIED FENCE CO OF TULSA	841408	FENCING	020-5305-438.40-28		11/2020	445.00
							Total	445.00
05/08/2020	268756	9442 AMERICAN ELECTRIC POWER	9504700320 APR	95832410302 4-28-2020	020-5415-435.50-25		11/2020	58.29
			9506407251 APR	95832410302 4-28-2020	020-5415-435.50-25		11/2020	105.84
			9509512540	MONTHLY SERVICE 4-22-20	020-5400-434.50-25		11/2020	69.65
			9511708090 APR	95584410302 4-29-2020	020-5100-437.50-25		11/2020	38.49
			9513682252 APR	95454037946 4-29-2020	020-5410-435.50-25		11/2020	4,972.85
			9514846980 APR	95584410302 4-29-2020	020-5120-437.50-25		11/2020	20.41
			9515241030 APR	95832410302 4-28-2020	020-5415-435.50-25		11/2020	913.83

CITY OF BROKEN ARROW
CHECK REGISTER BY FUND

CHECK DATE	CHECK NUMBER	VENDOR	NAME	INVOICE	CE	DESCRIPTION	G/L NUMBER	PROJECT	PERIOD YEAR	AMOUNT
05/08/2020	268756	442	AMERICAN ELECTRIC POWER	9515293420	APR	95584410302 4-29-2020	020-5100-437.50-25		11/2020	899.34
				9520400250		MONTHLY SERVICE 4-22-20	020-5400-434.50-25		11/2020	47.87
				9520493673	APR	95832410302 4-28-2020	020-5415-435.50-25		11/2020	55.07
				9521969410		9519259485 4-24-2020	020-5305-438.50-25		11/2020	63.88
				9523741030	APR	95832410302 4-28-2020	020-5415-435.50-25		11/2020	123.35
				9524580750	APR	95832410302 4-28-2020	020-5415-435.50-25		11/2020	260.00
				9525157130		MONTHLY SERVICE 4-22-20	020-5400-434.50-25		11/2020	59.10
				9526531031	APR	95454037946 4-29-2020	020-5410-435.50-25		11/2020	4,165.82
				9527441030	APR	95584410302 4-29-2020	020-5120-437.50-25		11/2020	912.37
				9528041030	APR	95832410302 4-28-2020	020-5415-435.50-25		11/2020	75.30
				9528706400	APR	95832410302 4-28-2020	020-5415-435.50-25		11/2020	49.54
				9529037750		MONTHLY SERVICE 4-22-20	020-5400-434.50-25		11/2020	255.90
				9535827230		MONTHLY SERVICE 4-22-20	020-5400-434.50-25		11/2020	594.03
				9540041030	APR	95832410302 4-28-2020	020-5415-435.50-25		11/2020	72.82
				9540921930	APR	95832410302 4-28-2020	020-5415-435.50-25		11/2020	113.67
				9544731030	APR	95832410302 4-28-2020	020-5415-435.50-25		11/2020	62.83
				9552921030	APR	95832410302 4-28-2020	020-5415-435.50-25		11/2020	36.76
				9553052871		MONTHLY SERVICE 4-14-2020	020-5405-434.50-25		11/2020	6,632.04
				9553112581	APR	95832410302 4-28-2020	020-5415-435.50-25		11/2020	5,387.06
				9562295260		9519259485 4-24-2020	020-5305-438.50-25		11/2020	37.14
				9563338071	APR	95832410302 4-28-2020	020-5415-435.50-25		11/2020	134.01
				9563531030	APR	95832410302 4-28-2020	020-5415-435.50-25		11/2020	56.00
				9565957711	APR	95832410302 4-28-2020	020-5415-435.50-25		11/2020	43.78
				9566631030	APR	95832410302 4-28-2020	020-5415-435.50-25		11/2020	45.36
				9567901211	APR	95832410302 4-28-2020	020-5415-435.50-25		11/2020	1,579.50
				9568940540		9519259485 4-24-2020	020-5305-438.50-25		11/2020	112.29
				9571918810	APR	95832410302 4-28-2020	020-5415-435.50-25		11/2020	628.73
				9572008130		MONTHLY SERVICE 4-22-20	020-5400-434.50-25		11/2020	123.45
				9572394130	APR	95832410302 4-28-2020	020-5415-435.50-25		11/2020	100.04
				9574890770	APR	95454037946 4-29-2020	020-5410-435.50-25		11/2020	12,908.50
				9579897130		MONTHLY SERVICE 4-22-20	020-5400-434.50-25		11/2020	87.13
				9579957130		MONTHLY SERVICE 4-22-20	020-5400-434.50-25		11/2020	41.36
				9581731030	APR	95832410302 4-28-2020	020-5415-435.50-25		11/2020	129.87
				9588213380		MONTHLY SERVICE 4-14-2020	020-5405-434.50-25		11/2020	33,446.67
				9588531030	APR	95832410302 4-28-2020	020-5415-435.50-25		11/2020	111.99
				9589441030	APR	95584410302 4-29-2020	020-5120-437.50-25		11/2020	591.40
				9591431030	APR	95832410302 4-28-2020	020-5415-435.50-25		11/2020	97.70
				9591574610	APR	95832410302 4-28-2020	020-5415-435.50-25		11/2020	53.34
				9593621030	APR	95832410302 4-28-2020	020-5415-435.50-25		11/2020	51.59
				9595686240	APR	95832410302 4-28-2020	020-5415-435.50-25		11/2020	3,148.93
				9597631030	APR	95832410302 4-28-2020	020-5415-435.50-25		11/2020	132.72
				9598068762	APR	95832410302 4-28-2020	020-5415-435.50-25		11/2020	84.81
									Total	79,792.42
05/08/2020	268757	8997	AMERICAN MUNICIPAL SERV	46048		COLLECTION FEE MARCH 2020	020-0000-229.16-00		11/2020	821.69
									Total	821.69
05/08/2020	268759	33	AMERICAN WATER WORKS AS	7001765078		DUES 5-1-4-30/2021	020-5205-419.30-85		11/2020	2,149.70
				7001765078		DUES 5-1-4-30/2021	020-5400-434.30-85		11/2020	716.55
				7001765078		DUES 5-1-4-30/2021	020-5401-434.30-85		11/2020	1,433.10
				7001765078		DUES 5-1-4-30/2021	020-5405-434.30-85		11/2020	1,433.10
				7001765078		DUES 5-1-4-30/2021	020-5410-435.30-85		11/2020	716.55
									Total	6,449.00

[illegible]

CHECK DATE	CHECK NUMBER	VENDOR	NAME	INVOICE	DESCRIPTION	G/L NUMBER	PROJECT	PERIOD YEAR	AMOUNT
05/08/2020	268783	12052	CHAPEL ON A HILL, LLC	2-7-2020	EASEMENT ACQUISITION	020-5400-434.70-08	VL1903	11/2020 Total	8,700.00 8,700.00
05/08/2020	268784	7296	CHRIS NIKEL CHRYSLER JE	719665	AUTO & TRUCK MAINT. ITEMS	020-0000-141.00-00		11/2020 Total	145.20 145.20
05/08/2020	268785	120	CINTAS CORPORATION	5016792984	FIRST AID & SAFETY EQUIP	020-5405-434.60-23		11/2020 Total	144.14 144.14
05/08/2020	268786	757	CITY OF BROKEN ARROW	249169	APPY REFUND TO CUST ACCT	020-0000-225.01-00		11/2020 Total	64.44 64.44
05/08/2020	268787	1307	CITY OF TULSA UTILITIES	106727183 APR 108291766 APR	WATER USAGE WATER USAGE	020-5405-434.40-93 020-5405-434.40-93		11/2020 11/2020 Total	2,661.46 732.38 3,393.84
05/08/2020	268790	9151	CLEAN THE UNIFORM COCK	501224007 50122406 50122407 50122827 50122827 50122833 50123399 50123399 50123400 50123400 50123400 50123400 50123400 50123400 50123400 50123400 50123400	RENTAL 215969 4-22-2020 RENTAL 211522 4-22-2020 RENTAL 215969 4-22-2020 RENTAL 215970 4-24-2020 RENTAL 215970 4-24-2020 RENTAL 211525 4/24/20 RENTAL 211522 4/29/2020 RENTAL 211522 4-29-2020 RENTAL 215969 4-29-2020 RENTAL 215969 4-29-2020 RENTAL 215969 4-29-2020 RENTAL 215969 4-29-2020 RENTAL 215969 4-29-2020 RENTAL 215969 4-29-2020 RENTAL 215969 4-29-2020 RENTAL 215969 4-29-2020 RENTAL 215969 4-29-2020	020-5125-436.40-31 020-5200-419.40-31 020-5115-437.40-31 020-5305-438.40-31 020-5305-438.40-33 020-5410-435.40-31 020-5100-437.40-33 020-5200-419.40-31 020-1700-419.40-33 020-5115-437.40-31 020-5120-437.40-33 020-5130-437.40-31 020-5400-434.40-31 020-5406-434.40-31 020-5415-435.40-31		11/2020 11/2020 11/2020 11/2020 11/2020 11/2020 11/2020 11/2020 11/2020 11/2020 11/2020 11/2020 11/2020 11/2020 11/2020 11/2020 Total	264.44 6.77 38.66 160.26 2.60 24.26 4.00 6.77 2.00 38.66 25.00 9.37 130.86 42.89 72.94 829.48
05/08/2020	268792	4270	CMC CONSTRUCTION SERVICE	800565 825150	MARKERS, PLAQUES, SIGN, TRAF ROAD/ HIGHWAY EQUIP-PARTS	020-5305-438.60-23 020-0000-141.00-00		11/2020 11/2020 Total	300.00 400.00 100.00
05/08/2020	268794	5936	CONTINENTAL BATTERY CO	15320422200742 32710420200841	AUTO & TRUCK MAINT. ITEMS AUTO & TRUCK MAINT. ITEMS	020-0000-141.00-00 020-0000-141.00-00		11/2020 11/2020 Total	333.60 463.50 797.10
05/08/2020	268796	6347	COCK COMMUNICATIONS	066260701 066381301	MONTHLY SERVICE 4-29-2020 MONTHLY SERVICE 4-29-2020	020-5410-435.50-23 020-5100-437.50-22		11/2020 11/2020 Total	98.99 657.00 755.99
05/08/2020	268798	11481	DAVID BRADLEY	470259	TOOL PURCHASE/ TECHNICIANS	020-5120-437.60-23		11/2020 Total	69.97 69.97
05/08/2020	268800	11760	DETECTION INSTRUMENTS C	6674-45610	FIRST AID & SAFETY EQUIP	020-5415-435.60-24		11/2020 Total	5,398.38 5,398.38
05/08/2020	268801	10293	DIAMOND MOWERS INC	0175763-IN	TRACTOR, PARTS	020-5305-438.60-20		11/2020 Total	899.49 899.49

CITY OF BROKEN ARROW
 CHECK REGISTER BY FUND

CHECK DATE	CHECK NUMBER	VENDOR NAME	INVOICE	DESCRIPTION	G/L NUMBER	PROJECT	PERIOD YEAR	AMOUNT
05/08/2020	268802	160 DOERNER SAUNDERS DANIEL	220141	PROF SERVICE MARCH 2020	020-1700-419.30-08		11/2020	5,214.00
							Total	5,214.00
05/08/2020	268806	9784 EUROFINIS EATON ANALYTICAL	L0507231 L0508348	MISCELLANEOUS PROF. SERV. MISCELLANEOUS PROF. SERV.	020-5405-434.30-34 020-5405-434.30-34		11/2020 11/2020	800.00 600.00
							Total	1,400.00
05/08/2020	268807	625 FASTENAL COMPANY	OKTU734586 OKTU734595	HOSPITAL/MEDICAL ACCESS. FIRST AID & SAFETY EQUIP	020-0000-141.00-00 020-0000-141.00-00		11/2020 11/2020	2,320.00 17,005.00
							Total	19,325.00
05/08/2020	268809	206 FERGUSON PONTIAC GMC TR	110637 147329	AUTO & TRUCK MAINT. ITEMS AUTO & TRUCK MAINT. ITEMS	020-5406-434.60-20 020-5400-434.60-20		11/2020 11/2020	146.28 86.30
							Total	232.58
05/08/2020	268810	6478 FORTILINE INC	4929126 4929144	PLUMBING EQUIPMENT WATER SUPPLY AND SEWAGE	020-0000-141.00-00 020-0000-141.00-00		11/2020 11/2020	158.70 1,663.20
							Total	1,821.90
05/08/2020	268812	4988 GARVER ENGINEERS	16078100-02 19W02110-11	CONSTRUCTION PUBLIC WORKS & RELATED SE	020-5415-435.70-16 020-5400-434.70-16	S.1905 195422	11/2020 11/2020	12,892.10 7,903.00
							Total	20,795.10
05/08/2020	268814	9892 GOODYEAR COMMERCIAL TIRE	254-1016419 254-1016467	TIRES AND TUBES TIRES AND TUBES	020-0000-141.00-00 020-0000-141.00-00		11/2020 11/2020	3,288.60 1,263.52
							Total	4,552.12
05/08/2020	268816	240 GRAINGER	9511969967	PLUMBING EQUIPMENT	020-0000-141.00-00		11/2020	566.40
							Total	566.40
05/08/2020	268817	241 GRAND RIVER DAM AUTHORITY	53889	ELECTRIC COWA PUMP MAR 20	020-5405-434.50-94		11/2020	335.25
							Total	335.25
05/08/2020	268819	6955 GREENHILL MATERIALS	163564 164619 164716 165377 165789 165935 166040	BLANKET ORDERS BLANKET ORDERS BLANKET ORDERS BLANKET ORDERS BLANKET ORDERS BLANKET ORDERS BLANKET ORDERS	020-5400-434.70-15 020-5400-434.70-15 020-5400-434.70-15 020-5305-438.60-27 020-5305-438.60-27 020-5305-438.60-27 020-5305-438.60-27	205408 205408 205408	11/2020 11/2020 11/2020 11/2020 11/2020 11/2020 11/2020	88.47 95.62 381.18 252.63 236.61 175.05 126.45
							Total	1,356.01
05/08/2020	268820	10077 GULBRANSEN TECHNOLOGIES	90800365 90800366	WATER TREATING CHEMICALS WATER TREATING CHEMICALS	020-5405-434.60-34 020-5405-434.60-34		11/2020 11/2020	11,506.32 11,274.48
							Total	22,780.80
05/08/2020	268822	2227 HAYNES EQUIPMENT CO	8123058-1N	PLUMBING EQUIPMENT	020-5415-435.60-41		11/2020	143.81
							Total	143.81
05/08/2020	268823	340 HILTI INC	4615657377	TOOLS, HAND (NOT CLASSED)	020-5400-434.60-24		11/2020	229.34
							Total	229.34
05/08/2020	268824	9794 IMPERIAL INC.	1010122	COFFEE SERVICES	020-5305-438.60-23		11/2020	52.70

Prepared: 05/12/2020, 13:20:17
 Program GMI79L
 Bank: 01 Arkansas Valley State Bank

CITY OF BROKEN ARROW
 CHECK REGISTER BY FUND

Page 17

CHECK DATE	CHECK NUMBER	VENDOR NAME	INVOICE	DESCRIPTION	G/L NUMBER	PROJECT	PERIOD YEAR	AMOUNT
							Tot al	52.70
05/08/2020	268827	371 J & R EQUIPMENT LLC	01P4739	ROAD/HGWAY HEAVY EQUI PMNT	020-0000-141.00-00		11/2020	131.07
							Tot al	131.07
05/08/2020	268829	10360 JAVA DAVES EXECUTIVE CO	037778	COFFEE SERVICES	020-5205-419.60-23		11/2020	25.00
			039046	COFFEE SERVICES	020-5205-419.60-23		11/2020	80.28
			040146	COFFEE SERVICES	020-5205-419.60-23		11/2020	29.28
							Tot al	134.56
05/08/2020	268830	374 KELLY MOORE PAINT COMPA	257212	PAINT, COATINGS, WALLPAPER	020-0000-141.00-00		11/2020	7,140.00
							Tot al	7,140.00
05/08/2020	268834	398 LOGO WEAR INC	19460	CITY LOGO APPAREL	020-5125-436.60-10		11/2020	89.37
							Tot al	89.37
05/08/2020	268835	7418 MATTHEWS FORD	F4CS250000	EQUIPMENT MAINT/REPAIR	020-5406-434.40-20		11/2020	4,099.59
							Tot al	4,099.59
05/08/2020	268837	10081 MECHANICAL AIR SYSTEMS	3867	REPAIRS/DRAIN LINES/FAN	020-5405-434.40-55		11/2020	149.28
			3868	REPAIRS/DRAIN LINES/FAN	020-5405-434.40-55		11/2020	601.32
							Tot al	750.60
05/08/2020	268839	12031 MSC INDUSTRIAL SUPPLY C	40478282	HOSPITAL/MEDICAL ACCESS.	020-0000-141.00-00		11/2020	56.90
			41498762	HOSPITAL/MEDICAL ACCESS.	020-0000-141.00-00		11/2020	512.10
							Tot al	569.00
05/08/2020	268842	90 NAPA AUTO PARTS	2210-961341	ROAD/HGWAY HEAVY EQUI PMNT	020-0000-141.00-00		11/2020	150.39
			2210-961464	ROAD/HGWAY HEAVY EQUI PMNT	020-0000-141.00-00		11/2020	161.11
			2210-961730	ROAD/HGWAY HEAVY EQUI PMNT	020-0000-141.00-00		11/2020	307.19
			2210-961825	ROAD/HGWAY HEAVY EQUI PMNT	020-0000-141.00-00		11/2020	359.67
			2210-961923	ROAD/HGWAY HEAVY EQUI PMNT	020-0000-141.00-00		11/2020	379.89
							Tot al	1,358.25
05/08/2020	268845	1078 OKLAHOMA CORP COMMISSIO	7205390/7221326	ANNUAL FUEL TANK REG FEES	020-5130-437.30-11		11/2020	125.00
							Tot al	125.00
05/08/2020	268849	309 OKLAHOMA NATURAL GAS CO	183825191	MONTHLY SERVICE 4-27-2020	020-5415-435.50-24		11/2020	33.73
			219682564	MONTHLY SERVICE 4-24-2020	020-5100-437.50-24		11/2020	122.93
			253746364	MONTHLY SERVICE 4-27-2020	020-5415-435.50-24		11/2020	38.79
			253746509	MONTHLY SERVICE 4-27-2020	020-5415-435.50-24		11/2020	37.95
			253746873	MONTHLY SERVICE 4-27-2020	020-5415-435.50-24		11/2020	38.23
							Tot al	271.63
05/08/2020	268851	8165 ONLINE INFORMATION SERV	992393	CREDIT CHECK 4-30-2020	020-0503-415.50-28		11/2020	796.50
							Tot al	796.50
05/08/2020	268853	307 OTA PIKEPASS CENTER	20200400095	PIKE PASS 5-1-2020	020-5120-437.50-03		11/2020	1.85
			20200400095	PIKE PASS 5-1-2020	020-5125-436.50-03		11/2020	391.30
			20200400095	PIKE PASS 5-1-2020	020-5200-419.50-03		11/2020	10.85
			20200400095	PIKE PASS 5-1-2020	020-5210-419.50-03		11/2020	2.05
			20200400095	PIKE PASS 5-1-2020	020-5305-438.50-03		11/2020	.70
			20200400095	PIKE PASS 5-1-2020	020-5400-434.50-03		11/2020	8.20

Prepared: 05/12/2020, 13:20:17
 Program: GM179L
 Bank: 01 Arkansas Valley State Bank

CITY OF BROKEN ARROW
 CHECK REGISTER BY FUND

Page 18

CHECK DATE	CHECK NUMBER	VENDOR NAME	INVOICE	DESCRIPTION	G/L NUMBER	PROJECT	PERIOD YEAR	AMOUNT
05/08/2020	268853	307 OTA PI KE PASS CENTER	20200400095 20200400095	PI KE PASS 5-1-2020 PI KE PASS 5-1-2020	020-5405-434.50-03 020-5410-435.50-03		11/2020 11/2020 Total	1.10 38.45 454.50
05/08/2020	268854	7803 P&K EQUIPMENT	3634262	ROAD/HIGHWAY HEAVY EQUIPMENT	020-0000-141.00-00		11/2020 Total	183.40 183.40
05/08/2020	268856	10233 PETROLEUM TRADERS CORP	1530501 1533503 1533796	FUEL, OIL, GREASE & LUBRICANT FUEL, OIL, GREASE & LUBRICANT FUEL, OIL, GREASE & LUBRICANT	020-0000-141.00-00 020-0000-141.00-00 020-0000-141.00-00		11/2020 11/2020 11/2020 Total	490.68 6,962.94 6,161.83 13,615.45
05/08/2020	268857	11931 PMWEB, INC	4-1-12-31/2020	ADDITIONAL LICENSE/PMWEB	020-5215-419.40-55		11/2020 Total	2,250.00 2,250.00
05/08/2020	268864	7499 SELECTRON TECHNOLOGIES	12683	5/01/2020-4/30/2021 MAINT	020-0503-415.40-55		11/2020 Total	12,440.00 12,440.00
05/08/2020	268866	11007 SOURCEONE	15618 15627	STORMWATER GROUNDS MAINT STORMWATER GROUNDS MAINT	020-5305-438.40-28 020-5305-438.40-28		11/2020 11/2020 Total	2,595.00 3,154.00 5,749.00
05/08/2020	268868	11332 STAND-BY PERSONNEL	222646	TEMP EMPLOYEES 4-26, 2020	020-5125-436.50-37		11/2020 Total	1,239.50 1,239.50
05/08/2020	268872	8018 THE UPS STORE #3764	21237 21272	SHIPPING APRIL 2020 SHIPPING APRIL 2020	020-5130-437.50-39 020-5130-437.50-39		11/2020 11/2020 Total	20.05 10.73 30.78
05/08/2020	268873	179 TRANS CONTINENTAL SUPPL	1039778 1039973	TOOLS, HAND (NOT CLASSED) TOOLS, HAND (NOT CLASSED)	020-0000-141.00-00 020-0000-141.00-00		11/2020 11/2020 Total	643.50 192.08 835.58
05/08/2020	268874	2585 TRUCKPRO, LLC	031-0594491	AUTO & TRUCK MAINT. ITEMS	020-0000-141.00-00		11/2020 Total	250.89 250.89
05/08/2020	268875	168 TULSA NEW HOLLAND	509411	TRACTOR, PARTS	020-0000-141.00-00		11/2020 Total	241.50 241.50
05/08/2020	268877	11558 TULSA RECYCLE & TRANSFER	2004BA	CURBSIDE RECYCLABLES 4/20	020-5125-436.70-17	165114	11/2020 Total	1,167.20 1,167.20
05/08/2020	268879	10214 TULSA'S GREEN COUNTRY S	78497 78635	TEMP EMPLOYEES 4-13-19/20 TEMP EMPLOYEES 4-20-26/20	020-5125-436.50-37 020-5125-436.50-37		11/2020 11/2020 Total	7,261.80 7,761.00 15,022.80
05/08/2020	268880	4311 UNITED FORD	3521245	AUTO & TRUCK MAINT. ITEMS	020-0000-141.00-00		11/2020 Total	237.81 237.81
05/08/2020	268881	5410 UNITED RENTALS, INC	180398530-001	HOSES/DEWATERING BASINS	020-5410-435.40-32		11/2020 Total	704.64 704.64
05/08/2020	268882	8864 USA BLUEBOOK	204912	CHEMICAL LAB EQUIP & SUPP	020-5404-434.60-23		11/2020	288.50

Prepared: 05/12/2020, 13:20:17
 Program GM179L
 Bank: 01 Arkansas Valley State Bank

CITY OF BROKEN ARROW
 CHECK REGISTER BY FUND

Page 19

CHECK DATE	CHECK NUMBER	VENDOR NAME	INVOICE	DESCRIPTION	G/L NUMBER	PROJECT	PERIOD/ YEAR	AMOUNT
							Total	288.50
05/08/2020	268887	10137 WAGONER CO RRWD DISTRICT 058		MARCH 2020 SERVICES	020-0503-415.50-28		11/2020	150.00
							Total	150.00
05/08/2020	268889	117 WAL MART STORE #0472	011400271498	AUTO & TRUCK MAINT. ITEMS	020-0000-141.00-00		11/2020	6.80
							Total	6.80
05/08/2020	268890	6454 WASTE MANAGEMENT QUARRY	2254940-1006-2	22-94287-53000 4-1-15/20	020-5410-435.40-30		11/2020	504.78
							Total	504.78
05/08/2020	268892	101 WELDON PARTS TULSA	2462061-00	AUTO & TRUCK ACCESSORIES	020-0000-141.00-00		11/2020	21.56
			2462868-00	HOSE, ALL KINDS	020-0000-141.00-00		11/2020	50.79
							Total	72.35
05/08/2020	268894	12053 WIMBER DON BUNN	2-7-2020	EASEMENT ACQUISITION	020-5400-434.70-08 WL1903		11/2020	5,300.00
							Total	5,300.00
05/11/2020	268901	11003 KBC CONSTRUCTION INC	8	WATER SUPPLY AND SEWAGE	020-5415-435.70-15 S.1504		10/2020	58,997.86
							Total	58,997.86
					125 Checks	** Fund Total		461,227.32

Prepared: 05/12/2020 13:20:17
Program: GM179L
Bank: 01 Arkansas Valley State Bank

CITY OF BROKEN ARROW
CHECK REGISTER BY FUND

Page 20

CHECK DATE	CHECK NUMBER	VENDOR	NAME	INVOICE	DESCRIPTION	G/L NUMBER	PROJECT	PERIOD/ YEAR	AMOUNT
05/08/2020	268770	1211	BANK OF OKLAHOMA N A	5117275	OWRB 7AP 2017A	021-5405-475.83-01		11/2020	1,000.00
				5117276	OWRB 7AP 2017B	021-5405-475.83-01		11/2020	1,000.00
								Total	2,000.00
						1 Checks	** Fund Total		2,000.00



City of Broken Arrow

Request for Action

File #: 20-523, Version: 1

**Broken Arrow Municipal Authority
Meeting of: 05/19/2020**

Title:

Approval of and authorization to purchase a microwave communications system from NASPO Light Speed Technologies, Inc. to replace the existing aging system at the water treatment plant facility, pursuant to the Oklahoma Statewide Contract

Background:

This new microwave system will replace the existing aging/failing microwave system for the water treatment plant facilities. This microwave system provides the water plant facilities with the abilities of telephones, data for computer use, SCADA information from our citywide tank storage facilities, cameras and security systems. With this new system, there will also be a redundant microwave system put in place to provide a secondary path of data communications for the water treatment plant facilities.

The new microwave system will be purchased under the Oklahoma Statewide Contract number 1000005715. All State Departments, boards, Commissions, Agencies and Institutions, as well as Counties, School Districts and Municipalities may purchase items from this contract. Pricing under this contract is good until November 14, 2020.

Section 2-27 of the Broken Arrow Code addresses exceptions to the established competitive bidding process. It provides that supplies, materials, equipment or contractual services when purchased at a price not exceeding a price set by the state purchasing agency or any other state agency authorized to regulate pricing for items purchased by the state are excepted from formal competitive bidding. Purchase from the state contract is, therefore, authorized under City ordinance.

Cost: \$329,983.30

Funding Source: Budgeted Capital Outlay in the Water Plant Division of BAMA

Requested By: Scott Carr, Interim Information Technology Director

Approved By: City Manager's Office

Attachments: NASPO Light Speed Technologies Inc. Quote

Recommendation:

Approve the replacement of the water treatment plant microwave system and authorize its purchase pursuant to the Oklahoma Statewide Contract



Customer: City of Broken Arrow
Project: Microwave Ring Closure 1+1 MHSB - UBT
Quote #: SN.191203AA.01
Contract #: NASPO ValuePoint - 05715
Attn: Mark Ketchum
220 South 1st Street
Broken Arrow, OK 74013
e-mail: MKetchum@BrokenArrowOK.Gov
Phone: 918-697-1980

Quoted by: LightSpeed Technologies
1829 Celeste Drive, Building 1
Wall, NJ 07719
Tel: (732) 556-0086
Fax: (732) 782-0305
Sales Person: Scott Nelson
e-mail: SNelson@LightSpeedT.com
Mobile: (972) 839-2641
Date: April 6, 2020

This quotation is valid for 60 days

Microwave System Pricing Summary - 1+1 Monitored Hot-Standby

Description	Tiger Hill	Water Plant	Yonkers	Pierce	Coweta	Spares	Undistributed	Total
Equipment								
Wavence 9500 MPR Microwave Packet Radio - 1+1 Monitored Hot-Standby, UBT-S ODU's	\$11,134.40	\$28,019.17	\$11,484.40	\$0.00	\$0.00	\$5,600.00	\$0.00	\$56,237.97
Antennas, Line and Materials	\$12,413.88	\$21,263.95	\$15,981.97	\$0.00	\$0.00	\$0.00	\$0.00	\$49,659.80
DC Power	\$1,820.00	\$1,820.00	\$1,820.00	\$0.00	\$0.00	\$910.00	\$0.00	\$6,370.00
Equipment Subtotal:	\$25,368.28	\$51,103.12	\$29,286.37	\$0.00	\$0.00	\$6,510.00	\$0.00	\$112,267.77
Services								
Microwave Engineering (Path Surveys & Design, Frequency Planning, Licensing and N/W Design)	\$3,906.50	\$6,448.00	\$3,906.50	\$0.00	\$0.00	\$0.00	\$7,610.00	\$21,871.00
Microwave Installation and Test	\$22,140.00	\$40,908.00	\$24,396.00	\$0.00	\$0.00	\$0.00	\$32,372.00	\$119,816.00
Services Subtotal:	\$26,046.50	\$47,356.00	\$28,302.50	\$0.00	\$0.00	\$0.00	\$39,982.00	\$141,687.00
Support								
Wavence Remote Technical Support, Repair and Software Subscription - 3 Years							\$5,865.00	\$5,865.00
Support Total:							\$5,865.00	\$5,865.00

Microwave System Total: \$259,819.77
Microwave System Management Adjustment: (\$35,390.00)
Adjusted Microwave System Total: \$224,429.77

IP/MPLS System

Description	Tiger Hill	Water Plant	Yonkers	Pierce	Coweta	Spares	Undistributed	Total
Equipment								
7705 SAR Service Aggregation Routers	\$5,617.85	\$5,617.85	\$5,617.85	\$15,018.85	\$15,018.85	\$6,036.28	\$0.00	\$52,927.53
Equipment Subtotal:	\$5,617.85	\$5,617.85	\$5,617.85	\$15,018.85	\$15,018.85	\$6,036.28	\$0.00	\$52,927.53
Services								
MPLS Engineering	\$2,100.00	\$2,100.00	\$2,100.00	\$2,100.00	\$2,100.00	\$0.00	\$21,000.00	\$31,500.00
MPLS Installation, Testing & Integration	\$6,072.00	\$6,072.00	\$6,072.00	\$6,072.00	\$6,072.00	\$0.00	\$24,652.00	\$55,012.00
Services Subtotal:	\$8,172.00	\$8,172.00	\$8,172.00	\$8,172.00	\$8,172.00	\$0.00	\$45,652.00	\$86,512.00
Support								
MPLS & NFM-P Remote Technical Support, Repair and Software Subscription - 3 Years							\$68,229.00	\$68,229.00
Support Total:							\$68,229.00	\$68,229.00

IP/MPLS System Total: \$207,668.53
MPLS System Management Adjustment: (\$62,675.00)
Adjusted IP/MPLS System Total: \$144,993.53

Combined System - Microwave with IP/MPLS

Combined System Grand Total (with Adjustments): \$369,423.30
Combined System Management Adjustment for Concurrent Purchase & Implementation: (\$39,440.00)
Adjusted Combined System Grand Total: \$329,983.30



Customer: City of Broken Arrow
Project: Microwave Ring Closure 1+1 MHSB - UBT
Quote #: SN.191203AA.01
Contract #: NASPO ValuePoint - 05715
Attn: Mark Ketchum
220 South 1st Street
Broken Arrow, OK 74013
e-mail: MKetchum@BrokenArrowOK.Gov
Phone: 918-697-1980

Quoted by: LightSpeed Technologies
1829 Celeste Drive, Building 1
Wall, NJ 07719
Tel: (732) 556-0086
Fax: (732) 782-0305
Sales Person: Scott Nelson
e-mail: SNelson@LightSpeedT.com
Mobile: (972) 839-2641
Date: April 6, 2020

This quotation is valid for 60 days

Training	
9500 MPR Operation & Maintenance	See Course List on Training Tab
7705 SAR Operation & Maintenance	See Course List on Training Tab
NSP/NFM-P Operation & Maintenance	See Course List on Training Tab

NOTES:

- 1) Subject to terms and conditions of NASPO Valuepoint Contract 05715. Where NASPO contract is silent, LightSpeed Technologies Terms and Conditions will apply.
- 2) Prices do not include taxes. Freight costs are included.
- 3) **Payment Terms:** Payment due Net 30 days.
- 4) **Please make Purchase Orders out to:**
LightSpeed Technologies, Inc.
Attn: John C. Brannon
1829 Celeste Drive, Building 1
Wall, NJ 07719
732-556-0086 Office
- 5) **For expedited processing, Orders should be faxed, or emailed, to John C. Brannon at fax # 732-782-0305, or (jcbrannon@lightspeedt.com).**
- 6) Prices quoted are valid for 60 days.
- 7) Pricing is valid only for the equipment, equipment features, and services included in this quote. Any equipment item, equipment feature, installation item, or service not explicitly quoted is not included in this pricing, and any addition of such will require a revised quote with modified pricing.
- 8) Pricing for equipment and services are considered budgetary until the initial engineering assessment can be made -- site surveys, path surveys, and frequency coordination (PCN). Results of the surveys and PCN may impact the antenna elevations, antenna sizes or radio frequencies, and associated materials.
- 9) Installation services are priced on the assumption of work progressing as one continuous scope with no stoppages and a 10-hour workday, Monday through Saturday. Other conditions for site readiness, site availability, permits, etc. are detailed in the accompanying Scope of Work. Project delays not due to LightSpeed or LightSpeed's Subcontractors or Suppliers may incur additional charges including remobilization costs.
- 10) The Wavence 9500 MPR, 7705 SAR and NFM-P come with a standard warranty of one year. An additional extended warranty can be provided for up to 5 years. Pricing is provided for 3 years of extended warranty coverage, including remote technical support, repair services, and software subscription services.
- 11) Remote Technical Support services do NOT include software upgrade support. A Software Subscription Plan must be purchased for upgrade support.



Customer: City of Broken Arrow
Project: Microwave Ring Closure 1+1 MHSB - UBT
Quote #: SN.191203AA.01
Ref: NASPO ValuePoint - 05715

Quoted by: LightSpeed Technologies
Sales Person Scott Nelson
e-mail: SNelson@LightSpeedT.com
Tel: (972) 839-2641

Equipment: Wavence 9500 MPR Microwave Packet Radio

Configuration: 1+1 Monitored Hot-Standby UBT-S Radios, With 1+1 Hot-Standby MSS-8

Item	Mfg.	Part Number	Description	Tiger Hill	Water Plant	Yonkers	Pierce	Coweta	Spares	Undistributed	Total	NASPO		NASPO		Ext. Price	Notes
												ValuePoint	MSRP	Discount %	ValuePoint		
UBT Outdoor Radio Units and Accessories																	
1	Nokia	3DB29106AA	UBT-S 5.8-6GHz HP		2	2			1		5	\$8,000.00	65.0%	\$2,800.00	\$14,000.00		
2	Nokia	3DB29111AA	UBT-S 10-11 GHz HP	2	2				1		5	\$8,000.00	65.0%	\$2,800.00	\$14,000.00		
3	Nokia	3DB28590AA	AIM-S 6GHz 252,04 MHz SB1		2	2					4	\$1,500.00	65.0%	\$525.00	\$2,100.00		
3	Nokia	3DB28590BA	AIM-S 6GHz 252,04 MHz SB2								0	\$1,500.00	65.0%	\$525.00	\$0.00		
4	Nokia	3DB28590CA	AIM-S 6GHz 252,04 MHz SB3								0	\$1,500.00	65.0%	\$525.00	\$0.00		
5	Nokia	3DB28210AA	AIM-S 11GHz 490-500-520-530MHz SB1	2	2						4	\$1,500.00	65.0%	\$525.00	\$2,100.00	Final selection of diplexer range following PCN	
6	Nokia	3DB28210BA	AIM-S 11GHz 490-520-530MHz SB2								0	\$1,500.00	65.0%	\$525.00	\$0.00	Final selection of diplexer range following PCN	
7	Nokia	3DB28210CA	AIM-S 11GHz 490-520-530MHz SB3								0	\$1,500.00	65.0%	\$525.00	\$0.00	Final selection of diplexer range following PCN	
8	Nokia	3DB28210DA	AIM-S 11GHz 490-500-520-530MHz SB4								0	\$1,500.00	65.0%	\$525.00	\$0.00	Final selection of diplexer range following PCN	
9	Nokia	3CC58367AA	Coupler 10 dB 6GHz UBT		1	1					2	\$886.00	65.0%	\$310.10	\$620.20		
10	Nokia	3CC58350AA	Coupler 10 dB 10/11 GHz UBT	1	1						2	\$886.00	65.0%	\$310.10	\$620.20		
UBT Licenses																	
11	Nokia	3MU00177ABAA	RTU 100Mbps UBT-S Capacity	2							2	\$3,000.00	65.0%	\$1,050.00	\$2,100.00		
12	Nokia	3MU00177ACAA	RTU 160Mbps UBT-S Capacity			2					2	\$3,500.00	65.0%	\$1,225.00	\$2,450.00		
13	Nokia	3MU00180ABAA	RTU 100Mbps UBT-S Capacity		2						2	\$3,000.00	65.0%	\$1,050.00	\$2,100.00		
14	Nokia	3MU00180ACAA	RTU 160Mbps UBT-S Capacity		2						2	\$3,500.00	65.0%	\$1,225.00	\$2,450.00		
15	Nokia	3MU00177BDAA	RTU UBT-S Adp Mod	2		2					4	\$1,500.00	65.0%	\$525.00	\$2,100.00		
14	Nokia	3MU00180BDAA	RTU UBT-S Adp Mod		4						4	\$1,500.00	65.0%	\$525.00	\$2,100.00		
Microwave Service Switch (MSS)																	
15	Nokia	3EM22715AH	9500 MPR Shelf Kit w/FanEvo - HSv2		1						1	\$2,150.00	65.0%	\$752.50	\$752.50		
16	Nokia	3DB18163AB	MSS Slot Cover - Blank Plate 1/2H		2						2	\$40.60	65.0%	\$14.21	\$28.42		
17	Nokia	3EM24105AA	Fan Alarm Cable - 25 foot		1						1	\$175.00	65.0%	\$61.25	\$61.25		
18	Nokia	3DB18788BA	CoreEvo-10G		2						2	\$3,010.00	65.0%	\$1,053.50	\$2,107.00	Common spares with Wagoner County system	
19	Nokia	3DB19017AB	Ethernet Access Module Version2 with PoE		2						2	\$2,400.00	65.0%	\$840.00	\$1,680.00	Common spares with Wagoner County system	
20	Nokia	3CC50120AA	DC injector plug-in	2	2	2					6	\$250.00	65.0%	\$87.50	\$525.00		
20	Nokia	3DB17010HAA	Wavence 18 SW Electronic Delivery Kit		1						1	\$1,000.00	65.0%	\$350.00	\$350.00		
21	Nokia	3DB17020BAAA	Wavence 18 uSD Card for CoreEvo-10G		2						2	\$100.00	65.0%	\$35.00	\$70.00		
22	Nokia	3EM23067AAAA	9500 MPR CT License (Per PC Installed)								0	\$500.00	65.0%	\$175.00	\$0.00	Not required -- Web Browser GUI in R18 and higher	
Tributary Options																	
23	Nokia	3CC50167AA	1000BASE-SX SFP (mm fiber only)	4	8	4					16	\$70.00	65.0%	\$24.50	\$392.00	Common spares with Wagoner County system	
24	Nokia	3CC50167AA	1000BASE-SX SFP (mm fiber only)	2	2	2					6	\$70.00	65.0%	\$24.50	\$147.00		
25	Nokia	3MU00085AF	20 ft RJ45 Cat5e Cable	1	1	1					3	\$103.71	65.0%	\$36.30	\$108.90		
Rack and PDU																	
26	Nokia	3EM13317AB	Power Distribution Panel with Fuse Alarm Card included		1						1	\$910.00	65.0%	\$318.50	\$318.50		
27	Nokia	695-1001-006	Aluminum Rack Screw Kit		1						1	\$100.00	65.0%	\$35.00	\$35.00		
NFM-P License Points																	
28	Nokia	3HE11801DA	NSP: NFM-P STANDARD LP	4	10	4					18	\$190.00	65.0%	\$66.50	\$1,197.00	Quantity based 2 per MSS plus 2 per UBT radio	
Manuals and Documentation																	
29	Nokia	3EM24226AA	Microwave Factory Test Certificate		1						1	\$1,500.00	65.0%	\$525.00	\$525.00		
30	Nokia	3DB19275AFAA	Wavence 18 O&M Manual Electronic Delivery OLCS								0	\$90.00	65.0%	\$31.50	\$0.00	Common documentation with Wagoner County System	
Freight																	
31	Nokia	SVC-YGRL-RF1	MW Product Freight per radio rack	1	1	1					3	\$1,142.86	65.0%	\$400.00	\$1,200.00		
Wavence Radio Equipment Subtotal:				\$11,134.40	\$28,019.17	\$11,484.40	\$0.00	\$0.00	\$5,600.00	\$0.00	\$56,237.97				\$56,237.97		



Customer: City of Broken Arrow
Project: Microwave Ring Closure 1+1 MHSB - UBT
Quote #: SN.191203AA.01
Ref: NASPO ValuePoint - 05715

Quoted by: LightSpeed Technologies
Sales Person: Scott Nelson
e-mail: SNelson@LightSpeedT.com
Tel: (972) 839-2641

Center Lines

Tiger Hill CL facing Water Plant = 136' (41.5m)
Water Plant CL facing Tiger Hill = 245' (74.7m)
Water Plant CL facing Yonkers = 85' (25.9m)
Yonkers CL facing Water Plant = 105' (32m)

Equipment: Microwave Antennas, Lines, Ice Shields & Misc. Materials

													NASPO		NASPO		Yonkers CL facing Water Plant = 105' (32m)	
Item	Mfg.	Part Number	Description	Centerline #1 (feet):	136	245	105	Pierce	Coweta	Spares	Undistributed	Total	ValuePoint	Discount	ValuePoint	Ext. Price	Notes	
				Centerline #1 (feet):	Tiger Hill	Water Plant	Yonkers						MSRP	%	Unit Price			
Integrated Antennas for UBT																		
1	Nokia	10046195	SB6-W60D2UBTR, 5.925 - 7.125 , Ant int UBT 6ft 6GHz SP			1	1					2	\$8,603.00	65.0%	\$3,011.05	\$6,022.10	Final antenna sizes and types to be determined by path surveys and RF engineering	
2	Nokia	10046181	SB4-W100EUBTR, 10 - 11.7, Ant UBT Int 4ft 10/11 GHz SP	1		1						2	\$4,250.00	65.0%	\$1,487.50	\$2,975.00	Final antenna sizes and types to be determined by path surveys and RF engineering	
RFS Antennas																		
3	RFS	37500079	PAD8-W57AC7S1R - 6 GHz parabolic ant., 8-ft dia., single pol., w/ radome & 2 struts									0	\$13,961.67	65.0%	\$4,886.59	\$0.00	Final antenna sizes and types to be determined by path surveys and RF engineering	
Ice Shields																		
4	Misc.	1AF24588AAAA	Valmont ice shield KIT - 4ft (ISMD4-R5LL = 800250 (ice shield) + 409081365 (leg mount))	1								1	\$14,770.29	65.0%	\$5,169.60	\$5,169.60	Final site materials to be determined by site surveys	
5	Misc.	1AF24589AAAA	Valmont ice shield KIT - 6ft (ISMD6-R5LL = 800251 (ice shield) + 409081365 (leg mount))			1	1					2	\$18,104.91	65.0%	\$6,336.72	\$12,673.44	Final site materials to be determined by site surveys	
6	Misc.	1AF24587AAAA	Valmont ice shield KIT - 8ft (ISMD8-R5LL = 800252 (ice shield) + 409081365 (leg mount))									0	\$21,667.89	65.0%	\$7,583.76	\$0.00	Final site materials to be determined by site surveys	
7	Misc.	SVC-YGRL-MISCHDW	Misc Hardware Kit (cut over plan)	1		1	1					3	\$2,190.00	65.0%	\$766.50	\$2,299.50	Final site materials to be determined by site surveys	
UBT Installation Material																		
8	Nokia	3CC52210BC	fiber cord MM LC-LC for UBT + MSS-O 25m									0	\$222.00	65.0%	\$77.70	\$0.00		
9	Nokia	3CC52210BD	fiber cord MM LC-LC for UBT + MSS-O 50m	2		2	2					6	\$348.00	65.0%	\$121.80	\$730.80		
10	Nokia	3CC52210BE	fiber cord MM LC-LC for UBT + MSS-O 80m			2						2	\$443.00	65.0%	\$155.05	\$310.10		
11	Nokia	3CC52210BF	fiber cord MM LC-LC for UBT + MSS-O 100m									0	\$570.00	65.0%	\$199.50	\$0.00		
12	Nokia	3CC50095AA	Fiber storage - rack mount (25 m)	2		4	2					8	\$313.71	65.0%	\$109.80	\$878.39		
13	Nokia	1AB235300005	OCTIS connector housing for fibers	2		4	2					8	\$59.00	65.0%	\$20.65	\$165.20		
14	Nokia	1AB235300004	OCTIS connector housing for RJ45	2		4	2					8	\$53.00	65.0%	\$18.55	\$148.40		
15	Nokia	3CC52199AC	75m Preassembled CAT5e R2TC/RJ45									0	\$1,081.00	65.0%	\$378.35	\$0.00		
16	Nokia	3CC52199AD	100m Preassembled CAT5e R2TC/RJ45									0	\$1,408.00	65.0%	\$492.80	\$0.00		
17	Nokia	1AD040130004	Ground kit -- (qty 3 per run, based on length)	6		16	6					28	\$58.52	65.0%	\$20.48	\$573.50		
18	Nokia	1AB328430001	Lightning arrestor RJ-45 router ouput (MPRe)	2		4	2					8	\$725.25	65.0%	\$253.84	\$2,030.70		
19	Nokia	1AB119710002	BNC-bananas adapter for antenna alignment	1		1	1					3	\$86.00	65.0%	\$30.10	\$90.30		
Other Installation Materials																		
20	Misc.	10031054	Kit Sway Bar 6ft Refl (SMA-SK-60-2000A)			1	1					2	\$1,296.00	65.0%	\$453.60	\$907.20	Final site materials to be determined by site surveys	
21	Misc.	409081635	UNIV ADJ LEG MT- UP TO 10 3/4 LEG (Ant. Pipe Mount/Ice Shield)	1		2	1					4	\$2,116.00	65.0%	\$740.60	\$2,962.40	Final site materials to be determined by site surveys	
22	Misc.	1AF25490ABAA	Angle Member Adapter Kit, 3/8in Stainless Steel (Valmont ADAP-O) (10 pack)	5		11	4					20	\$351.77	65.0%	\$123.12	\$2,462.40	Final site materials to be determined by site surveys	
23	Misc.	1AF19821AAAA	Cushion hangers - (4) 9.9mm and (5) 6.1mm barrel cushion that fits into 1 5/8in snap-in (Qty. 10) - (Valmont BC144384)	5		11	4					20	\$151.61	65.0%	\$53.06	\$1,061.28	Final site materials to be determined by site surveys	
24	Misc.	SVC-YGRL-MISCHDW	Misc Hardware Kit (cut over plan)	1		1	1					3	\$2,190.00	65.0%	\$766.50	\$2,299.50	Final site materials to be determined by site surveys	
Freight																		
25	Nokia	SVC-YGRL-AS1	MW Product Freight per small antenna									0	\$857.14	65.0%	\$300.00	\$0.00	Quantities cover addition freight ice shields, if required	
26	Nokia	SVC-YGRL-AS2	MW Product Freight per medium antenna	2		1						3	\$1,428.57	65.0%	\$500.00	\$1,500.00	Quantities cover addition freight ice shields, if required	
27	Nokia	SVC-YGRL-AS3	MW Product Freight per large antenna (or HI and AK)			2	2					4	\$2,285.71	65.0%	\$800.00	\$3,200.00	Quantities cover addition freight ice shields, if required	
28	Nokia	SVC-YGRL-RF1	MW Product Freight per radio rack	1		1	1					3	\$1,142.86	65.0%	\$400.00	\$1,200.00	For cables and materials	
Antenna Equipment Subtotal:					\$12,413.88	\$21,263.95	\$15,981.97	\$0.00	\$0.00	\$0.00	\$0.00	\$49,659.80				\$49,659.80		



Customer: City of Broken Arrow
Project: Microwave Ring Closure 1+1 MHSB - UBT
Quote #: SN.191203AA.01
Ref: NASPO ValuePoint - 05715

Quoted by: LightSpeed Technologies
Sales Person: Scott Nelson
e-mail: SNelson@LightSpeedT.com
Tel: (972) 839-2641

Equipment: -48 VDC Rectifiers

												NASPO ValuePoint MSRP	Discount %	NASPO ValuePoint Unit Price	Ext. Price	Notes
Item	Mfg.	Part Number	Description	Tiger Hill	Water Plant	Yonkers	Pierce	Coweta	Spares	Undistributed	Total					
1	DuraComm	RM-2548M	AC/DC Rack Mount Power Supply with Meter, Input 110/220VAC, Output 48VDC, 25A	2	2	2			1		7	\$2,600.00	65.0%	\$910.00	\$6,370.00	
DC Power Equipment Subtotal:				\$1,820.00	\$1,820.00	\$1,820.00	\$0.00	\$0.00	\$910.00	\$0.00	\$6,370.00				\$6,370.00	



Customer: City of Broken Arrow

Project: Microwave Ring Closure 1+1 MHSB - UBT

Proposal # SN.191203AA.01

Date: April 6, 2020

DC Power Calculations

Tiger Hill
Water Plant
Yonkers
Pierce
Coweta

Specifications

Battery Reserve Time (Hours)	8	<== 8 Hours Typical
Battery Recharge Time (Hours)	24	<== 24 Hours Typical
Battery Type Calculation Factor	1.1	<== 1.1 for Lead Acid or 1.4 for NiCad
System Voltage	48	
Load Growth Factor	25%	<== (percent desired add'l capacity.)

Equipment Load

	Watts	194	267	194
9500 MPR Shelf Kit w/Alarm FAN Evo-HSv3	25	1	1	1
CorEvo-10G	36	1	1	1
Ethernet Access Card 10G (EAC-10G)	30	2	2	2
MPT-XP-HQAM L6GHz low	73		1	1
MPT-XP-HQAM 11GHz low	73	1	1	

Calculations

Equipment Load @ 48VDC (Amps)	4	6	4
Total Load w/Growth Factor (Amps)	5	7	5
Min Battery Capacity @ 8 Hours (AH)	42	56	42
Actual Battery Size (AH)			
Calculated Charger Size	7	10	7
Actual Charger Size (Amps)			



Customer: City of Broken Arrow
 Project: Microwave Ring Closure 1+1 MHSB - UBT
 Quote #: SN.191203AA.01
 Ref: NASPO ValuePoint - 05715

Quoted by: LightSpeed Technologies
 Sales Person Scott Nelson
 e-mail: SNelson@LightSpeedT.com
 Tel: (972) 839-2641

Services: Microwave Engineering

Configuration: Path Design, Frequency Planning & Licensing, Network Design

Item	Mfg.	Part Number	Description	Tiger Hill	Water Plant	Yonkers	Pierce	Coweta	Spares	Undistributec	Total	NASPO ValuePoint MSRP	Discount %	NASPO ValuePoint Unit Price	Ext. Price	Notes
Path Survey (<= 11 GHz)																
1		SVC-KWIE-ENG-TSE10	Path Survey (1st hop for a connected multi-hop system)	0.5	0.5						1.0	\$11,237.14	65.0%	\$3,933.00	\$3,933.00	
2		SVC-KWIE-ENG-TSE11	Path Survey (Each single path in a multi-hop system, not connected)		0.5	0.5					1.0	\$11,237.14	65.0%	\$3,933.00	\$3,933.00	
3		SVC-KWIE-ENG-TSE12	Path Survey (Each single path in a multi-hop system, not connected)								0.0	\$11,237.14	65.0%	\$3,933.00	\$0.00	
4		SVC-KWIE-ENG-TSE13	Path Survey Air Fare (per survey)(1 Surveyor with equipment shipment)							1.0	1.0	\$11,428.57	65.0%	\$4,000.00	\$4,000.00	
Path Design																
5		SVC-KWIE-ENG-TSE16	System Map (1-10 paths)							1.0	1.0	\$285.71	65.0%	\$100.00	\$100.00	
6		SVC-KWIE-ENG-TSE18	Path Design (per path)	0.5	1.0	0.5					2.0	\$428.57	65.0%	\$150.00	\$300.00	
7		SVC-KWIE-ENG-TSE19	Path Performance Calculations (per path)	0.5	1.0	0.5					2.0	\$428.57	65.0%	\$150.00	\$300.00	
Frequency Selection and Coordination																
8		SVC-KWIE-ENG-TSE20	Frequency Selection (2, 6, 6.7, 11 GHz bands / per path)	0.5	1.0	0.5					2.0	\$2,428.57	65.0%	\$850.00	\$1,700.00	
9		SVC-KWIE-ENG-TSE22	Normal 30-day Prior Coordination (per system)							1.0	1.0	\$885.71	65.0%	\$310.00	\$310.00	
FCC License Application																
10		SVC-KWIE-ENG-TSE29	FCC License Application Prep (/Mod) (per site / Form 601) (2)	1.0	1.0	1.0					3.0	\$1,328.57	65.0%	\$465.00	\$1,395.00	
11		SVC-KWIE-ENG-TSE43	FCC License Fees (Note 1.5)(new site)(per site)	1.0	1.0	1.0					3.0	N/C	N/C	N/C	N/C	FCC doesn't charge govt. agencies for licensing
Network Engineering																
12		SVC-KWIE-ENG-TSE35	Network Engineer (per Hour)	4.0	4.0	4.0					16.0	\$500.00	65.0%	\$175.00	\$4,900.00	
13		SVC-KWIE-ENG-TSE36	Network Engineering Drawings (per Hour)	2.0	2.0	2.0					4.0	\$285.71	65.0%	\$100.00	\$1,000.00	
Path Design, Frequency Planning & Engineering Subtotal:				\$3,906.50	\$6,448.00	\$3,906.50	\$0.00	\$0.00	\$0.00	\$7,610.00	\$21,871.00				\$21,871.00	



Customer: City of Broken Arrow

Project: Microwave Ring Closure 1+1 MHSB - UBT

Quote #: SN.191203AA.01

Ref: NASPO ValuePoint - 05715

Quoted by: LightSpeed Technologies

Sales Person Scott Nelson

e-mail: SNelson@LightSpeedT.com

Tel: (972) 839-2641

Services: Microwave Installation & Test

Configuration: Two Hops of Wavence 9500 MPR with MSS-8, Antennas, Ice Shields, DC Power

Centerline #1 (feet):

136

245

105

Centerline #1 (feet):

85

Item	Task	Part Number	Description	Tiger Hill	Water Plant	Yonkers	Pierce	Coweta	Spares	Jndistributer	Total	NASPO ValuePoint MSRP	Discount %	NASPO ValuePoint Unit Price	Ext. Price	Notes
		<u>Site Survey</u>														
1		SVC-QHIE-ENG-FE1	Field Service Engineer (Per Man Hour)	4	8	4				12	28	\$514.29	65.0%	\$180.00	\$5,040.00	
2		SVC-QHIE-ENG-FE3	Air Fare (per man) (1 Engineer with equipment shipment)							1	1	\$11,428.57	65.0%	\$4,000.00	\$4,000.00	
		<u>Antenna, Line & Ice Shield Installation</u>														
3	Site/Tower Preparation	SVC-QHIE-INST-INCOM1	Microwave Antenna / Tower Installation Services (Per Man Hour)	12	12	12					36	\$1,074.29	65.0%	\$376.00	\$13,536.00	
4	Antenna/Line Inst.	SVC-QHIE-INST-INCOM1	Microwave Antenna / Tower Installation Services (Per Man Hour)	16	48	22					86	\$1,074.29	65.0%	\$376.00	\$32,336.00	
5	Install Ice Shields	SVC-QHIE-INST-INCOM1	Microwave Antenna / Tower Installation Services (Per Man Hour)	6	9	9					24	\$1,074.29	65.0%	\$376.00	\$9,024.00	
6	De-install existing Dragonwave ODUs	SVC-QHIE-INST-INCOM1	Microwave Antenna / Tower Installation Services (Per Man Hour)	3	3						6	\$1,074.29	65.0%	\$376.00	\$2,256.00	
7	Site/Tower Cleanup	SVC-QHIE-INST-INCOM1	Microwave Antenna / Tower Installation Services (Per Man Hour)	6	9	6					21	\$1,074.29	65.0%	\$376.00	\$7,896.00	
8		SVC-QHIE-ENG-FE2	Field Living Expenses (per man per calendar day)							22	22	\$971.43	65.0%	\$340.00	\$7,480.00	
		<u>9500 MPR Installation</u>														
9	Install MPT-HQAM ODU	SVC-QHIE-INST-INCOM1	Microwave Antenna / Tower Installation Services (Per Man Hour)	4	8	4					16	\$1,074.29	65.0%	\$376.00	\$6,016.00	
10	Install MSS-8	SVC-QHIE-INST-INCOM2	Radio Installation Services (Per Man Hour)	2	2	2					6	\$902.86	65.0%	\$316.00	\$1,896.00	
11	Test MPT-HQAM & MSS-8	SVC-QHIE-INST-INCOM3	Radio Commissioning and Test Services (Per Man Hour)	6	12	6					24	\$902.86	65.0%	\$316.00	\$7,584.00	
12	Install Power	SVC-QHIE-INST-INCOM4	Ancillary Equipment Installation and Test Services (Per Man Hour)	1	1	1					3	\$902.86	65.0%	\$316.00	\$948.00	
13	NFM-P Integration	SVC-QHIE-INST-INCOM7	Network Management Engineering (Per Man Hour)	1	1	1				8	11	\$525.71	65.0%	\$184.00	\$2,024.00	
14		SVC-QHIE-ENG-FE2	Field Living Expenses (per man per calendar day)							7	7	\$971.43	65.0%	\$340.00	\$2,380.00	
		<u>Project Management</u>														
15		SVC-QHIE-INST-INCOM5	Deployment Project Management (Per Man Hour)	4	6	4				16	30	\$514.29	65.0%	\$180.00	\$5,400.00	
		<u>Mob/ De-mob</u>														
16		SVC-QHIE-INST-INCOM9	Air Fare (per man)(1 Engineer with equipment shipment)							3	3	\$11,428.57	65.0%	\$4,000.00	\$12,000.00	
Microwave Installation, Test & Integration Subtotal:				\$22,140.00	\$40,908.00	\$24,396.00	\$0.00	\$0.00	\$0.00	\$32,372.00					\$119,816.00	



Customer: City of Broken Arrow
 Project: Microwave Ring Closure 1+1 MHSB - UBT
 Quote #: SN.191203AA.01
 Ref: NASPO ValuePoint - 05715

Quoted by: LightSpeed Technologies
 Sales Pert Scott Nelson
 e-mail: SNelson@LightSpeedT.com
 Tel: (972) 839-2641

Services: Maintenance - Microwave

Detail: Remote Technical Support, Repair and Exchange, Software Subscription

Item	Mfg.	Part Number	Description	Tiger Hill	Water Plan	Yonkers	Pierce	Coweta	Spares	Undistributec	Total	NASPO ValuePoint MSRP	Discount %	NASPO ValuePoint Unit Price	Ext. Price	Notes
Wavence 9500 MPR Microwave Packet Radio																
1	Nokia	301090767-9500	Technical Support Gold (7x24x365 annual rate per hop) - Year 1							2	2	\$628.57	65.0%	\$220.00	\$440.00	Year 1
2	Nokia	301090767-9500	Technical Support Gold (7x24x365 annual rate per hop) - Year 2							2	2	\$628.57	65.0%	\$220.00	\$440.00	Year 2
3	Nokia	301090767-9500	Technical Support Gold (7x24x365 annual rate per hop) - Year 3							2	2	\$628.57	65.0%	\$220.00	\$440.00	Year 3
4	Nokia	301090775-9500	Standard Repair 45 days (annual rate after warranty per hop) - Year 1							Warranty	0	\$2,871.43	65.0%	\$1,005.00	\$0.00	Year 1
5	Nokia	301090775-9500	Standard Repair 45 days (annual rate after warranty per hop) - Year 2							2	2	\$2,871.43	65.0%	\$1,005.00	\$2,010.00	Year 2
6	Nokia	301090775-9500	Standard Repair 45 days (annual rate after warranty per hop) - Year 3							2	2	\$2,871.43	65.0%	\$1,005.00	\$2,010.00	Year 3
7	Nokia	3EM24592AAAB	9500 MPR Software Subscription (Per Node) - Year 1							1	1	\$500.00	65.0%	\$175.00	\$175.00	Year 1
8	Nokia	3EM24592AAAB	9500 MPR Software Subscription (Per Node) - Year 2							1	1	\$500.00	65.0%	\$175.00	\$175.00	Year 2
9	Nokia	3EM24592AAAB	9500 MPR Software Subscription (Per Node) - Year 3							1	1	\$500.00	65.0%	\$175.00	\$175.00	Year 3
Maintenance Subtotal:				\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$5,865.00	\$5,865.00			Maintenance Subtotal:	\$5,865.00	



Customer: City of Broken Arrow
Project: Microwave Ring Closure 1+1 MHSB - UBT
Quote #: SN.191203AA.01
Ref: NASPO ValuePoint - 05715

Quoted by: LightSpeed Technologies
Sales Person: Scott Nelson
e-mail: SNelson@LightSpeedT.com
Tel: (972) 839-2641

Equipment: 7705 Service Aggregation Router

Configuration: With redundant CSM and redundant 8-Port GE/FE cards

Item	Mfg.	Part Number	Description	Tiger Hill	Water Plant	Yonkers	Pierce	Coweta	Spares	Undistributed	Total	NASPO	Discount	NASPO	Ext. Price	Notes	
												ValuePoint		ValuePoint			
7705 SAR-8 Service Aggregation Routers												MSRP	%	Unit Price			
1	Nokia	3HE06791AA	SAR-8 SHELF V2				1	1			2	\$4,250.00	65.0%	\$1,487.50	\$2,975.00		
2	Nokia	3HE06792EA	Fan Module (SAR-8 Shelf V2) Ext Temp				1	1	1		3	\$1,870.00	65.0%	\$654.50	\$1,963.50		
3	Nokia	3HE02784KA	SAR RELEASE 8.0 BASIC OS LICENSE	1	1	1	1	1			5	\$1,445.00	65.0%	\$505.75	\$2,528.75		
4	Nokia	3HE02774AB	CONTROL SWITCH MODULE V2 (CSMV2)				2	2	1		5	\$5,950.00	65.0%	\$2,082.50	\$10,412.50		
5	Nokia	3HE02776AB	8 PORT GE/FE ETHERNET CARD V2	1	1	1	2	2	1		8	\$8,840.00	65.0%	\$3,094.00	\$24,752.00		
6	Nokia	3HE00027CA	SFP - GIGE SX - LC ROHS 6/6 DDM -40/85C	4	4	4	4	4	1		21	\$586.50	65.0%	\$205.28	\$4,310.78		
NFM-P License Points																	
7	Nokia	3HE11801DA	NSP: NFM-P STANDARD LP	18	18	18	18	18			90	\$190.00	65.0%	\$66.50	\$5,985.00		
7705 SAR-8 Equipment Subtotal:				\$5,617.85	\$5,617.85	\$5,617.85	\$15,018.85	\$15,018.85	\$6,036.28	\$0.00	\$52,927.53						\$52,927.53

Notes:

- For calculating maintenance costs, the reference price for a single complete node (Pierce), excluding NFM-P licenses, is:
\$15,018.85 Site total for Pierce
-\$1,197.00 Less NSP/NFM-P License Points (18 @ \$66.50each.
\$13,821.85 per node
\$69,109.25 for a complete 5-node system



Customer: City of Broken Arrow
Project: Microwave Ring Closure 1+1 MHSB - UBT
Quote #: SN.191203AA.01
Ref: NASPO ValuePoint - 05715

Quoted by: LightSpeed Technologies
Sales Person Scott Nelson
e-mail: SNelson@LightSpeedT.com
Tel: (972) 839-2641

Services: MPLS Engineering

Configuration: MPLS routers connected via microwave radio, 5-node ring with fast re-route
(See summary page for discounts for engineering concurrent with microwave)

Item	Task	Part Number	Description	Tiger Hill	Water Plant	Yonkers	Pierce	Coweta	Spares	Undistributec	Total	NASPO ValuePoint MSRP	Discount %	NASPO ValuePoint Unit Price	Ext. Price	Notes
		<u>MPLS Engineering</u>														
1	Design Consultation	3HE06636AA	Professional Svcs - Remote (Includes Design, Consultation & IOT) (per day)							2.0	2.0	\$7,000.00	40.0%	\$4,200.00	\$8,400.00	
2	High- & Low- Level Design	3HE06636AA	Professional Svcs - Remote (Includes Design, Consultation & IOT) (per day)	0.5	0.5	0.5	0.5	0.5		3.0	5.5	\$7,000.00	40.0%	\$4,200.00	\$23,100.00	
MPLS Engineering Subtotal:				\$2,100.00	\$2,100.00	\$2,100.00	\$2,100.00	\$2,100.00	\$0.00	\$21,000.00	\$31,500.00				\$31,500.00	



Customer: City of Broken Arrow
Project: Microwave Ring Closure 1+1 MHSB - UBT
Quote #: SN.191203AA.01
Ref: NASPO ValuePoint - 05715

Quoted by: LightSpeed Technologies
Sales Person: Scott Nelson
e-mail: SNelson@LightSpeedT.com
Tel: (972) 839-2641

Services: 7705 SAR Installation and Test, Integration with NFM-P

Configuration: 5-node MPLS ring interconnected by microwave, non-concurrent Installation
(See summary page for discounts for installation concurrent with microwave)

(See summary page for discounts for installation concurrent with microwave)												NASPO		NASPO			
Item	Task	Part Number	Description	Tiger Hill	Water Plant	Yonkers	Pierce	Coweta	Spares	Undistributed	Total	ValuePoint MSRP	Discount %	ValuePoint Unit Price	Ext. Price	Notes	
<u>7705 SAR-8 Installation</u>																	
3	Install & Test 7705 SAR-8	301036786	Installation - OnSite (T&L not included)	4	4	4	4	4			20	\$305.00	40.0%	\$183.00	\$3,660.00	per man-hour	
4	7705 SAR NW Integration	3HE02941AA	Integration - Staging support	4	4	4	4	4		16	36	\$600.00	40.0%	\$360.00	\$12,960.00	per man-hour	
5	NFM-P Integration	3HE02941AA	Integration - Staging support	4	4	4	4	4		12	32	\$600.00	40.0%	\$360.00	\$11,520.00	per man-hour	
6		SVC-QHIE-ENG-FE2	Field Living Expenses (per man per calendar day)							11	11	\$971.43	65.0%	\$340.00	\$3,740.00		
<u>Mob/ De-mob</u>																	
7		SVC-QHIE-INST-INCOM9	Air Fare (per man)(1 Engineer with equipment shipment)							2	2	\$11,428.57	65.0%	\$4,000.00	\$8,000.00		
<u>Project Management</u>																	
8		SVC-QHIE-INST-INCOM5	Deployment Project Management (Per Man Hour)	2	2	2	2	2		8	18	\$514.29	65.0%	\$180.00	\$3,240.00		
MPLS Installation, Test & Integration Subtotal:				\$6,072.00	\$6,072.00	\$6,072.00	\$6,072.00	\$6,072.00	\$0.00	\$24,652.00	\$55,012.00						



Customer: City of Broken Arrow
 Project: Microwave Ring Closure 1+1 MHSB - UBT
 Quote #: SN.191203AA.01
 Ref: NASPO ValuePoint - 05715

Quoted by: LightSpeed Technologies
 Sales Person Scott Nelson
 e-mail: SNelson@LightSpeedT.com
 Tel: (972) 839-2641

Services: Maintenance - MPLS and NFM-P

Detail: Remote Technical Support, Repair and Exchange, Software Subscription

Item	Mfg.	Part Number	Description	Tiger Hill	Water Plant	Yonkers	Pierce	Coweta	Spares	Undistributed	Total	NASPO ValuePoint MSRP	Discount %	NASPO ValuePoint Unit Price	Ext. Price	Notes
7705 SAR-8 Service Aggregation Routers																
1	Nokia	301013231	7705 SAR - Remote Technical Support Gold - Year 1							1	1				\$3,500.00	Note 1
2	Nokia	301013231	7705 SAR - Remote Technical Support Gold - Year 2							1	1				\$3,500.00	Note 1
3	Nokia	301013231	7705 SAR - Remote Technical Support Gold - Year 3							1	1				\$3,500.00	Note 1
4	Nokia	301048468	7705 SAR - (RES-RFR) - Year 1							Warranty	0				Warranty	Note 1
5	Nokia	301048468	7705 SAR - (RES-RFR) - Year 2							1	1				\$3,750.00	Note 1
6	Nokia	301048468	7705 SAR - (RES-RFR) - Year 3							1	1				\$3,750.00	Note 1
7	Nokia	3HE05610AB	7705 SAR - Software Subscription Plan - Year 1							1	1				\$1,728.00	Note 2
8	Nokia	3HE05610AB	7705 SAR - Software Subscription Plan - Year 2							1	1				\$1,728.00	Note 2
9	Nokia	3HE05610AB	7705 SAR - Software Subscription Plan - Year 3							1	1				\$1,728.00	Note 2
NFM-P Network Function Manager, Packet																
1	Nokia	301013231	NSP/NFM-P - Remote Technical Support Gold - Year 1							1	1				\$3,500.00	Note 3
2	Nokia	301013231	NSP/NFM-P - Remote Technical Support Gold - Year 2							1	1				\$3,500.00	Note 3
3	Nokia	301013231	NSP/NFM-P - Remote Technical Support Gold - Year 3							1	1				\$3,500.00	Note 3
7	Nokia	3HE10161AA	NSP/NFM-P Software Release Subscription - Year 1							1	1				\$11,515.00	Note 4
8	Nokia	3HE10161AA	NSP/NFM-P Software Release Subscription - Year 2							1	1				\$11,515.00	Note 4
9	Nokia	3HE10161AA	NSP/NFM-P Software Release Subscription - Year 3							1	1				\$11,515.00	Note 4

Maintenance Subtotal: \$68,229.00

Notes:

- Per the IP Router Service tab of Nokia's NASPO contract # 05715, the annual price for Maintenance Services for the 7705 SAR is a percentage of the *total purchase price* for the 7705 SAR equipment (hardware, software and all associated licenses). Since some of the 7705 SAR hardware to be deployed at Tiger Hill, Water Plant and Yonkers was purchased earlier without a maintenance contract, the *total purchase price* for 7705 SAR equipment is derived using the price quoted for a full 7705 SAR node at Pierce as a reference.

a) Per Note 1 on the 7705 SAR equipment tab, the equivalent total purchase price for the 5-node 7705 SAR system is determined to be \$69,109.25.

b) 7x24 Remote Technical Support (RTS-Gold) and Standard Return for Repair service (RFR) are both calculated as 5% of the *total purchase price* for the 7705 SAR equipment. Furthermore, the minimum annual price for RTS-Gold is \$3,500.00 per network (\$5,833.00 @ 40% discount), and the minimum RES-RFR is \$3,750.00 per network (\$6,250.00 @ 40% discount).

c) The annual prices for RTS-Gold and RES-RFR are as follows. RES-RFR for the first year is covered under warranty.

+ RTS-Gold : 5% of \$69,109.25 = \$3,455. Minimum annual fee of \$3,500 applies.

+ RES-RFR : 5% of \$69,109.25 = \$3,455. Minimum annual fee of \$3,750 applies.

- Software Subscription Plan for 7705 SAR is calculated as 2.5% of the total purchase price for the equipment (hardware, software and all associated licenses).

+ SSP : 2.5% of \$69,109.25 = \$1,728

- 7x24 Remote Technical Support (RTS-Gold) for the NSP/NFM-P is calculated as 5% of the *total purchase price* for the NFM-P software, all associated licenses, and all equipment license points. Furthermore, the minimum annual price for RTS-Gold is \$3,500.00 for the base platform (\$5,833.00 @ 40% discount).

\$47,600.00 Qty 1, NSP 17: NFM-P Standard Base, P/N 3HE11799CA on Wagoner County purchase order # 001680



Customer: City of Broken Arrow
Project: Microwave Ring Closure 1+1 MHSB - UBT
Quote #: SN.191203AA.01
Ref: NASPO ValuePoint - 05715

Quoted by: LightSpeed Technologies
Sales Person Scott Nelson
e-mail: SNelson@LightSpeedT.com
Tel: (972) 839-2641

Services: Maintenance - MPLS and NFM-P

Detail: Remote Technical Support, Repair and Exchange, Software Subscription

Item	Mfg.	Part Number	Description	Tiger Hill	Water Plant	Yonkers	Pierce	Coweta	Spares	Undistributed	Total	NASPO ValuePoint MSRP	Discount %	NASPO ValuePoint Unit Price	Ext. Price	Notes
			\$2,793.00 Qty 42 @ \$66.50 each, NSP/NFM-P Standard License Points, P/N 3HE11801CA on Wagoner County purchase order # 001680													
			\$7,182.00 Qty 108 @ \$66.50 each, NSP/NFM-P Standard License Points, P/N 3HE11801CA for Wavence 9500 MPR and 7705 SAR in this Project													
			\$57,575.00 Total Purchase price of NFM-P and License Points for products being managed													
			x 5%													
			\$2,879.00 Calculated Annual Price for RTS-Gold for NSP/NFM-P, per year. Minimum annual price of \$3,500 applies.													

- 4) Per Note 1 in the IP Router Service tab of Nokia's NASPO contract # 05715, SRS pricing is an annual fee and is 20% of the NSP product purchase price including base SW and all licenses points required the BU products being managed. Purchase Prices are derived as follows:

\$47,600.00	Qty 1, NSP 17: NFM-P Standard Base, P/N 3HE11799CA on Wagoner County purchase order # 001680
\$2,793.00	Qty 42 @ \$66.50 each, NSP/NFM-P Standard License Points, P/N 3HE11801CA on Wagoner County purchase order # 001680
\$7,182.00	Qty 108 @ \$66.50 each, NSP/NFM-P Standard License Points, P/N 3HE11801CA for Wavence 9500 MPR and 7705 SAR in this Project
\$57,575.00	Total Purchase price of NFM-P and License Points for products being managed
x 20%	
\$11,515.00	Total Price for SRS for NSP/NFM-P, per year



Customer: City of Broken Arrow
Project: Microwave Ring Closure 1+1 MHSB - UBT
Quote #: SN.191203AA.01
Ref: NASPO ValuePoint - 05715

Quoted by: LightSpeed Technologies
Sales Person: Scott Nelson
e-mail: SNelson@LightSpeedT.com
Tel: (972) 839-2641

Training: Equipment Operations & Maintenance

Configuration: Courses provided online or at Nokia EDU, as noted

Item	Mfg.	Part Number	Description	Duration	Type	Level	Delivery	Location	Max # Students	Qty of Seats	NASPO ValuePoint MSRP	Discount %	NASPO ValuePoint Unit Price	Ext. Price	Notes
Wavence 9500 MPR Microwave Packet Radio															
1	Nokia	RN00571-V-19	Wavence 19 UBT based Functional and HW description RN00571-V-19	1 Day	THY	Standard	Instructor Led	Dallas	12		TBD	TBD	TBD	TBD	THY - Theoretical course
2	Nokia	RN00572-V-19	Wavence 19 UBT based Common functionality Web CT O&M RN00572-V-19	1 Day	PTB	Advanced	Instructor Led	Dallas	8		TBD	TBD	TBD	TBD	PTB - Practical and theoretical course with testbed
3	Nokia	RN00014-V-19	Wavence 19 Ethernet traffic O&M RN00014-V-19	2 Days	PTB	Advanced	Instructor Led	Dallas	8		TBD	TBD	TBD	TBD	PTB - Practical and theoretical course with testbed
7705 SAR Service Aggregation Router															
9	Nokia	3HE09335AA-TER36084W	TER36084W 7705 SAR Product Overview	3 Hours		Advanced	Web-based	Online	1		\$494.00	65.0%	\$321.00	\$172.90	
NSP / NFM-P Network Services Platform / Network Functions Manager, Packet															
14	Nokia	3HE09335AA-TOS00059W	TOS00059W NSP (Network Services Platform) Overview (Online Class)	1 Hour		Standard	Web-based	Online	1		\$165.00	65.0%	\$107.00	\$57.75	
15	Nokia	3HE09335AA-TOS00060W	TOS00060W NFM-P (Network Functions Manager – Packet) Fundamentals (Online Class)	6 Hours		Advanced	Web-based	Online	1		\$988.00	65.0%	\$642.00	\$345.80	
16	Nokia	3HE09335AA-TOS00060	TOS00060 NFM-P (Network Functions Manager - Packet) Fundamentals	2 Days		Standard	Instructor Led	Dallas	8		\$4,154.29	65.0%	\$1,454.00	\$1,454.00	
17	Nokia	3HE09335AA-TOS00061	TOS00061 NSP (Network Services Platform) Fault Management Application	1 Day		Advanced	Instructor Led	Dallas	8		\$2,077.14	65.0%	\$727.00	\$727.00	
18	Nokia	3HE09335AA-TOS00062	TOS00062 NSP (Network Services Platform) Service Supervision Application	1 Day		Advanced	Instructor Led	Dallas	8		\$2,077.14	65.0%	\$727.00	\$727.00	
19	Nokia	3HE09335AA-TOS00063	TOS00063 NFM-P (Network Functions Manager - Packet) Network Troubleshooting using Fault Analysis	4 Days		Advanced	Instructor Led	Dallas	8		\$8,309.00	65.0%	\$2,908.00	\$2,908.15	
20	Nokia	3HE09335AA-TOS41001	TOS41001 NFM-P (Network Functions Manager - Packet) IP/MPLS Network Provisioning – Fundamentals	3 Days		Standard	Instructor Led	Dallas	8		\$6,231.00	65.0%	\$2,181.00	\$2,180.85	
21	Nokia	3HE09335AA-TOS41002	TOS41002 NFM-P (Network Functions Manager - Packet) IP/MPLS Network Provisioning – Resiliency	2 Days		Advanced	Instructor Led	Dallas	8		\$4,154.29	65.0%	\$1,454.00	\$1,454.00	
22	Nokia	3HE09335AA-TOS41003	TOS41003 NFM-P (Network Functions Manager - Packet) IP/MPLS Network Provisioning - Multi-Area Scaling	3 Days		Advanced	Instructor Led	Dallas	8		\$6,231.00	65.0%	\$2,181.00	\$2,180.85	
23	Nokia	3HE09335AA-TOS42101	TOS42101 NFM-P (Network Functions Manager - Packet) Service Operations and Provisioning – Fundamentals	2 Days		Standard	Instructor Led	Dallas	8		\$4,154.29	65.0%	\$1,454.00	\$1,454.00	
24	Nokia	3HE09335AA-TOS42102	TOS42102 NFM-P (Network Functions Manager - Packet) Service Operations and Provisioning - Enhanced OAM	3 Days		Advanced	Instructor Led	Dallas	8		\$6,231.00	65.0%	\$2,181.00	\$2,180.85	
25	Nokia	3HE09335AA-TOS42103	TOS42103 NFM-P (Network Functions Manager - Packet) Rel 17 Services Operation and Provisioning - Service Interconnection	2 Days		Advanced	Instructor Led	Dallas	8		\$4,154.29	65.0%	\$1,454.00	\$1,454.00	