

RFP-RH-04-030							
RADIO FREQUENCY AUTOMATIC METER READING SYSTEM							
	Etna	SLC	Arkion Systems	Star Hexagram	Badger	National Waterworks	Datamatic
Years in business	32	25	3	32	99	37	27
Type of Organization	Corporation	Corporation	Partnership	Corporation	Corporation	Corporation	Partnership
#Full time employees	235	40	16	180	482	205	110
#Part-time employees	35	2	4	0	0	0	1
Clients your company currently serves in Michigan	City of Lapeer, MI; City of Midland, MI; Canton Township, MI - 20 Vehicle based systems, 50 handheld	Lathrup Village, MI; Southfield, MI; Redford Twp, MI; Plymouth, MI	None in Michigan - Partnering with TEPS	Michigan Consolidated Gas	City of Flint, MI; Grosse Pointe Woods, MI	Dowagiac & Woodhaven	City of Auburn Hills, MI; City of Howell, MI; City of Fraiser, MI
Client references	City of Lapeer, MI; City of Midland, MI; Canton Township, MI; Lansing Board of Water; MI; Superior Twsp; MI - Many more listed	City of Dearborn, MI; City of Mason, MI; City of Walled Lake, MI; City of Novi, MI	City of New Bedford (water), MA; City of Groton (electric), MA; Fort Hamilton (water & electric), NY	Boston Water & Sewer Commision, MA; Washing DC Water & Sewer Authority, DC; City of Caton, OH	City of Aiken, SC; City of Holly Hill, FL; Village of Mundelein, IL; Moore County Public Utilities, NC; City of West Palm Beach, FL	Village of South Holland, IL; City of Fort Wayne, IN; Town of Mooresville, NC; Woonsocket WPT, RI; City of Fayetteville, NC; City of Woohaven, MI	City of Auburn Hills, MI; City of McKinney, TX; City of Plano, TX
Number of continuous years of service for longest customer	Ypsilanti Community Utility Authority - Since 1994	City of Pasadena, TX - 5 years	City of New Bedford - Over 1 year	City of Canton, OH - Implemented in 1998	City of Holly Hill, FL - began installing in 2002	Began in 1995 and now have 80,000 points installed	City of Auburn Hills, MI
Municipalities using Sensus meters in conjunction with proposed system. State number of years using system.	City of Lapeer, MI; City of Midland, MI; Canton Township, MI -many more listed	City of Mason, MI; City of Warren, OH	Working with a Massachusetts City that has 24,000 Sensus Water Meters	Sioux Falls, SD (years not listed)	Sacramento Suburban Water District, CA	Woodhaven, MI - 2 years	City of Auburn Hills, MI; Las Virgenes, CA
Municipal clients caparable to City of Rochester Hills in size or development	Butler County, OH; Aurora, IL; Joliet, IL; Valparaiso, IN; Tyler, TX	Cincinnati, OH; Dearborn, MI; Montgomery, AL; Auburn, AL	City of New Bedford, MA; City of Groton, MA	City of Canton, OH; Des Moines, IA; Downers Grove, IL	City of West Palm Beach, FL ?????	City of Fort Wayne, IN; Colliers County, FL; City of Charlottesville, VA	City of Auburn Hills, MI; City of McKinney, TX; City of Plano, TX
Description of services	Loaner pool equipment for meter reading and installation software support/training for meter reading and installation	Help interface existing billing system to new equipment. Will train meter readers, billing clerks and assist with return of reads. Training of installation staff.	Onsite installation and operational training, maintenance support of all system components, project financing, project management	Fixed Network AMR system that serves as gateway for customer metering & billing data. DCU's are mounted on public buildings or utility poles	Supply of radio-based equipment, installation of software on the City's PCs, complete installation and operation trainingon the System, and 24/7 telephone support after the sale	Provide project implementation services. Will develop software interface and train computer operators. Will train meter readers and installers	Supply Roadrunner X7 (handheld), Firefly MIU (meter independent), software (RouteSTAR MVP software package), Installation, Training and project management
Years of experience providing this equipment	Since 1992. Authorized Sensus distributor since 1988	Neptune has over 10 years experience in RF and RE reading equipment	Over 3.5 years of experience in the field of RF AMR solutions. Disciplined in the field of electrical engineering, communications and computer science	Over 20 years of service to the utility industry. Produced over 3 million remote reading devices.	Selling fully automatic radio frequency meter reading products since 1990	One of the first manufacturers to provide an encoded register. In business since it's inception -missing year	1987 designed, developed and installed first AMR system. 1999 Firefly was introduced for AMR and is only AMR solution to offer utilities True Meter Independence combined with Integrated Usage Profiling
Qualifications of your staff	Al Weber - Specialist in Sensus AMR; Ken Knieling- AMR Specialist; Doug Vermillion- Tech support; Janet Henderson- Customer Service	Bill Traynor- 50 yrs in water works industry; Glen Michel - Meter Reading & Technology Specialist since 1985; Jim Taylor - Large meter specialist, vaults & calibration -20 yrs;	Staff assigned will have a minimum of Bachelor of Science degree in both engineering and project management	Isaiah Moss-Lead Project Manager; Laura Wainwright - Technical Customer Service Rep	Over 14 years experience with installations ranging from 100 to over 400,000 service connections. Have technical support staff, local distribution and local field support	Dave Ratter (Technical sales support specialist)	Experienced technical staff, a management team, field management and quality control

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Subcontractors	None	None	Provides turnkey AMR solutions. If required, can provide installation through third party	None	None	None	None
Listing of water meters proposed system integrates with	Neptune ARB VI - VIII along with Sensus ECR meters	Sensus ECR II and Sensus ECR III (When programed as 6 wheel ECR II Register); Neptune Ecoder; Proread; ARB III, IV, V	AMCO, Herseys, Neptune, Sensus, Badger; can auto detect meter types in field so city can mix/match any meter types	AMCO; ARAD; Badger; Hersey; Sensus; Master; Metron-Farnier; Neptune; Precision	Sensus ECR II and ICE Encoders; Neptune ProRead and E-Coder encoders; AMCO Scan coders; Hersey Translators	AMCO; Badger; Hersey; Invensys/Precision; Invensys/Sensus/Rockwell; Neptune	Meter independent and integrates with any meter
<b>METER INTERFACE UNIT</b>							
Radio frequency band proposed	902-928 MHz	910-920 MHz	902-928 MHz ISM Band FHSS radio	450-470 MHz; States 900 MHz range is subject to interference	916.45 MHz	Transmit Frequency: spread Spectrum 910-920MHz Receive Frequency: 952-956MHz	902-928 MHz
FCC license required	Yes	No	No	Yes	No	"Wake Up" mode may require FCC licensing but "bubble up" mode does not	No
# of meters that can connect to single Meter interface unit	16	Up to 2	Compound meters or multi-meter installation	Two	One	One	One
Warranty program for meter interface devices	20 yrs for electronics/battery of MIU; 10 years full with 10 years prorated	MIU R900 fully warranted (with battery) for 10 years and prorated after 20 years		5 yr coverage for failures of any type	See attached	10 Years?	Section 10
(copy of warranty included)	No	Yes	Yes	Yes	Yes	Yes	
<b>VEHICLE BASED MOBILE DATA COLLECTION</b>							
Size/weight of unit	15.1"W x 11.24"D x 5.22"H; 21lbs	17"x14"x10"	N/A	N/A	2.3"H x 11.8" W x 9.5" D; 7.94 lbs	13x16.5x6"/25 pounds	11"x26 1/2" x 30"; 2lbs
Memory or RAM available	128 MB	128MB	N/A	N/A	128MB	512MB RAM/20 GB hard drive & 64MB non-volatile compact flash	1GB
Operating System	Windows - latest version	Windows 2000	N/A	N/A	Windows 2000	Windows 2000	Windows 2000
Real time clock with continuous operation & time stamping	Yes	Yes	N/A	N/A	Yes	Yes	Yes
Type of battery power source used	12 Volt DC	Rechargeable	N/A	N/A	Both AC and DC power supplies are shipped with the laptop	Intelligent Lithium-ion with 8 12 hour battery life; 5.6 hour battery charge time	Cigarette Lighter and/or power point
Size of batteries required	City's vehicle's power through power outlet	Not specified	N/A	N/A	N/A	5880 mA	No batteries requiried except for backup and data retention
Power level usage indicator	Yes	Yes	N/A	N/A	Yes	Yes	N/A - uses vehicles power
Power Backup maintains data & application software	Does not use batteries	Yes	N/A	N/A	N/A - No battery swapping necessary	Yes	Yes
Power source utilized to operate the unit while driving	City's vehicle's power through power outlet	Operate from Standard 12 volt DC vehicle Power	N/A	N/A	AC through "cigarette lighter" connection	Direct connection to fuse block or battery; temporary use connect with 12V DC adaptor	Cigarette Lighter and/or power point
Number of accounts the unit will hold	Unlimited	30,000	N/A	N/A	8,500 per diskette	Unlimited number of routes, max per route 100,000 meters	7,500 per route; no limit to the number of meter records in laptop

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Maximum distance from the meter transmitting unit	2000 feet	One Mile	N/A	N/A	1,200 ft line of sight	2000' or greater	Specific number not given - will read from street
Can capture meter readings while driving	Yes	Yes	N/A	N/A	Yes	Yes	Yes
Warranty program for units, chargers & interface unit (copy of warranty enclosed?)	1 year on Sensus produced products with extended warranty available. Laptop registered under our name to manufacturer.	12 months after shipment	N/A	N/A	See Bid	See Bid	See Bid
<b>HANDHELD COMPUTER RADIO READER</b>	No	Yes	N/A	N/A			
Size/weight of unit	9.6"x4.1"x2.4"; 35oz	1.9lbs; 1.53-2.36"H, 4.08"W, 9.74"L	N/A	N/A	9"x 4"; 32 ounces	8.8x3x2.5"/26 ounces	9.7"L x 3.5"W; 30oz
Memory or RAM available	2M Flash - Operating Memory; 2MB data storage	8MB NAND, 4MB SRAM	N/A	N/A	32MB	8 MB RAM	upt to 16 MB (higher with PCMCIA card)
Operating System	DOS	DOS/CE	N/A	N/A	Windows CE	IBM's PC DOS 2000; General Software Bios 4.0	DOS 6.22
Real time clock with continuous operation & time stamping	Yes	Yes	N/A	N/A	Yes	Yes	Yes
Wand to read meters via touch pad?	Yes	Will read Sensus ECR I, II and III. A third party probe may be connected for other types	N/A	N/A	ECR-Yes; TTR-No	Yes - using Sensus Smartguns	Yes, the system supports these, though no wand has been proposed
Number of accounts handheld will hold	3,000	5,000	N/A	N/A	3,000	10,000	Appx 2,000 in 2MB config
Type of battery power source used	Field Replaceable NICAD	Rechargeable Lithium Ion	N/A	N/A	Lithium Ion	Intelligent Lithium-ion Battery & small, user replacable lithium coin-cell battery that power the real time clock during a loss of system power	Rechargeable Lithium-ion
Size of batteries required	NICAD by Sensus	Neptune Proprietary Lithium Ion	N/A	N/A	Lithium Ion	2,000 mA	Rechargeable Lithium-ion
Batteries recharge without removal from handheld unit	Yes	Yes	N/A	N/A	Yes	Yes	Yes
Power level usage indicator	Yes	Yes	N/A	N/A	Yes	Yes	Yes
Does it have "sleep mode"	Yes	Yes	N/A	N/A	Yes	Has suspend mode	Yes
Power Backup maintains data & application software	Yes	Yes - Separate internal backup	N/A	N/A	Yes	Yes	Yes
Length of time to bring battery to full charge	6 Hours	4-8 Hours	N/A	N/A	3-4 hours	5-6 Hours	3 Hours
Will battery or handheld be damaged if left in chrg cradle	No	No	N/A	N/A	No	No	No
Life expectancy and warranty of batteries	Handheld 2-3 years	Handheld typically 2 years; Batteries warranted for 12 months	N/A	N/A	See attached	Handheld battery 400-500 charging cycles;ERT battery 20 years if used in wake up mode	Handheld-3 years (1 year warranty); MIU: 10 -15 years, 5 years full replacement, 5 years pro-rated
Can auxiliary power source be used while driving	No	Yes	N/A	N/A	Yes	No	No
Maximum distance from meter to capture read	1,000 Feet Minimum	2,000 Feet	N/A	N/A	900 ft line of sight	750 feet or greater	Specific number not given - will read from street

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Can capture meter readings while driving	Yes	Yes	N/A	N/A	Yes	Yes	Yes
Can 5 installation units be supplied for testing	Yes	Yes. Will provide 5 MIU's and 1 handheld for evaluation for 30 days. Mobile unit will be demonstrated on request	free field trial of 10 units for 90 days. Field trial will include installation, interface to billing system and staff training	Prepared to provide a live demo of product	Yes	Yes - ReadOne Pros can be made available (on loan) during installation period	Yes, 45 day pilot program to test.
Fees?	No Charge	No Charge	None	Not Stated	None	No charge	No chrg for hardware/software BUT -- \$4,000 is required for travel expenses
<b>IMPLEMENTATION AND TRAINING</b>							
Length & location of pre-implementation training	2-4 days traning for utility billing and reading personnel. Location not stated	2 days pre-implementation training. Training will be at the City's site. Training will be conducted by Neptune Factory Implementation Spec.	DCOM installation & Training - 1/2 day class room & one day on-site training; CCOM training & installation - 1/2 day class room & one day on-site training	Four project installation phases - Duration is terminated by the goals & milestones	At our site - 2 days	3 days on-site training. Training will be both formal "classroom type" as well as actual meter reading in the City	3 days - On site
Length & location of training meter readers, PC operators, supervisors	2-4 days traning for utility billing and reading personnel	1 full day for meter readers, PC operators and supervisors. 1 day refresher training after project is started. SLC will install 50 MIU's at no charge for training purposes	User training - 2 days of class room training	Four project installation phases - Duration is terminated by the goals & milestones	At our site - 2 days	See Above	See Above Answer
Provide a description of the system documentation	Documentation either online or on a CD (HDD Training Document).	Published technical manuals for installation, operation and troubleshooting for all hardware and software provided	Not listed	Not listed	Not Listed	Operators Manual; Handheld training guide; Users reference guide; pock reference guide; MV-RS system Pre-installtion manual	Documented by the RouteSTAR MVP System Functional Specifications as well as the RouteSTAR MVP, Roadrunner and Firefly reference manuals
Vendor support personnel numbers listed	Yes	Factory support 8am-7pm EST (M-F). Local support provided by Jim Yearsin of Neptune and Factory Trained employees of SLC	Not listed	Yes	24/7 - 1-800 number; Technician available 7:45am-5:30pm CST	Provided at time of training	N/A
Can support personnel respond to failures within 24 hours	Yes	Yes	Not listed	Yes	Yes	Yes	N/A
Vendor identified single contact for implementation	Yes	Phone number given, no names	Not listed	Mr. Moss-Lead Project Manager	Done upon award	Done upon award - Dave Ratter's name given	N/A
Timeframe for implementation	Typical 30 days	Typically 6 weeks; Compatibility with transfer file between billing software & route management software - See implementation schedule	Not listed	Four project installation phases - Duration is terminated by the goals & milestones	30 - 120 days depending on complexity of the project	Typically 60-90 Days	N/A

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Compatible with City's existing equipment	Yes. Upgrade to both the software and equipment. Operational, there is not difference	Requires replacement of existing equipment. Cost proposal includes new equipment at no charge and credit to Roch Hills of \$4,000.00 for trade in of existing equipment	Yes	Yes - ???	Quite likely; the PC connected to the billing system could be used with the ORION system and the ORION universal modules can be used on Sensus ECR II and ICE encoders	Proposed system will work side-by-side with City's existing meter reading system. Both systems will interface with billing system independently of each other.	Yes
<b>SOFTWARE</b>							
How will existing meters be read while installing new system	Our choice. HHD has ability to read manual, TTR, ECR and Radioread	Read manually and keyed into handheld, probed via pocket pro reader or third party probe	Will be read with our current existing equipment - manually. A billing file compatible with the City's current billing system for those meters which are AMR enabled	Once the MTU is programmed, an automatic read will be produced with regard to the water consumption of the customer	The Badger-Radix handheld can read the meters while system is implemented	With existing meter reading system in same way they have been in the past. Or readings can be manually entered into the proposed handhelds if desired	Data can be entered manually into handheld units or gathered with a touch wand
10 year history of estimated annual maintenance cost	\$20.00 for each MIU and software maintenance is \$1,000 annually	5 year system maint included in system proposal. Estimated at less than \$10,000.00 per year after first 5 years	Charges 1% value of the project per year for complete technical support and maint	Offers a maintenance agreemtn to control the cost of maintaining system	5 year maint - 12 months included; \$16,188 for 4 additional years	Proposed system not in existence for 10 years so history is not available.	Section 10 of Bid Purchase, License and Maintenance Agreement
<b>PRODUCT SUPPORT</b>							
Product support policy	If equipment goes down, contact Etna rep and a loaner piece of equipment will be delivered. Send back what needs to be repaired	Quality System is independently audited twice per year. See customer support brochure	Once the support need is submitted, will provide answer within 72 hours	Attachment C	Uses remote control sotware to perform remote diagnostics, software changes, upgrades	N/A	Section 10 of Bid Purchase, License and Maintenance Agreement
Timeframe for repairs/service	None listed	Replacements for Mobile Data Collectors are shipped within 48 hours. Loaners not provided for handhelds	Not listed	Attachment C	N/A	2-3 days of arrival at the manufacturer's return destination	No chrg for warranty replcmt or repair. Shipping to Datamatic responsibility of the City.
Will temporary units be supplied	Yes	No	Yes	Attachment C	N/A	Yes, if desired loaner equipment can be provided	Temporary units supplied if within warranty limitations, if not, City responsible for cost
Is there a charge for temporary units	No charge as long as we are on the autoread support program	N/A	No	?	N/A	No if under warranty or service agreement is in place	See Above Answer
Service on site or will units be shipped back to manufacturer	Shipped back to manufacturer	Most will be on-site, but occasionally units will be returned to factory	Remote diagnostics tools available for monitoring and debugging. Failed modules will be required to be sent back. On site support provided through Arkion or local distributor	On-Site Service	N/A	Shipped to manufacturer	Send units to Datamatic
Hours of operation for contacting service personnel	8am-8pm EST	M-F 8am-4:30pm	7am-7pm EST	24/7 at 800 number	24/7	24/7	24/7

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Length of time for this support contract	Not stated - only said that it is a value added service and it is on going	5 Years	1st year not cost, following years 1% of value		Full support as maintenance agreements are purchased annually	1 Year	Section 10 of Bid Purchase, License and Maintenance Agreement
<b>PRODUCT ADVANCEMENTS</b>							
Describe known advances in technologies	Constantly looking at bettering our product lines, but with backward compatability in mind	Full support of current systems for a minimum of 10 years	System proposed is an open architecture that will provide a min of 15 yers and beyond lifecycle	Releasing next version of SATR NCC software - upgrades will be seamless	Fixed-base RF is variation of drive by FT. In most cases the RF units used in drive-by will need replacment if a utility changes to fixed-base. Badger is developing a fixed base system for remote applications	None at this time. New handheld is likely next year which will be backwardly compatiabile - added to system with no further modificaitons	City will be entitled to service packs containing enhancements as part of maint contract
Financial statements included (yes/no)	No - Not a public held company	Yes-Statement is from Manufacturer's present company	No - Can be provided at a later time	No. Will provide upon completion of non-disclosure statement	Yes	Yes	No - Privately held. Does not publish its financial statements
Percentage of market share company holds for meter indust	N/A	35%	Not listed	N/A - Manufacturer of AMR technology only	25%	Elter/AMCO is the global leader in Utility metering	N/A
Percentage of market share company holds for radio read indust	N/A	17%	No listed	Leading supplier - no percentage or numbers given	35%	AMCO is Itron's number one buisness partner in the water AMR market	N/A
<b>COST PROPOSAL</b>							
Handheld computer, radio frequency receiving unit, batteries (unit Price)	No charge	No Charge with Award	\$ 2,500.00	N/A	\$ 4,000.00	\$ 3,572.00	\$ 4,200.00
Vehicle base mounted radio frequency receiving unit (unit Price)	No Charge	No Charge with Award	N/A	N/A	\$ 19,500.00	\$ 32,412.00	\$ 18,000.00
Cradle for PC-to-handheld communcations and battery recharging (unit price)	No Charge	No Charge with Award	N/A	N/A	Included Above	\$ 654.00	\$ 438.00
Software licensce for route management PC and handheld computers (unit Price)	No Charge	No Charge with Award	N/A	N/A		\$ 3,000.00	\$ 3,995.00
Meter transmitting units (unit Price)	\$ 130.00	\$ 60.00	\$ 90.00	\$ 96.00	\$ 64.00	\$ 56.21	\$ 75.00
Meter transmitting units (Total Price for 23,000 units)	\$ 2,990,000.00	\$ 1,380,000.00	\$ 2,070,000.00	\$ 2,208,000.00	\$ 1,472,000.00	\$ 1,292,830.00	\$ 1,725,000.00
Itemized cost for any other components or accessories needed	No charge items being donated to City	Actual cost of the utility billing interface is the responsilby of RH but SLC will assist in the implementation and development	Estimated 30 CCOM @ \$1,000/unit = \$30,000.00 and one license for host server - up to 23,000 meters \$20,000	DCU (27) \$128,250.00; (1) Computer \$14,000; (1) STAR Software \$8,000; (5) Handheld MTU's \$9,450		\$ -	PPU with Cable \$438.00
<b>SYSTEM PURCHASE PRICE</b>							
Monthly maintenance charge for 1st 12 months - all hardware/software	Included	No Charge	\$ -	\$ -	\$ -	\$ 90.00	\$ -
Annual maintenance charge for all hardware/software after 12 months	\$ 1,000.00	5 Year Total Warranty - no chrg	\$ 21,200.00	\$ 1,950.00	Optional choices available	\$ 6,360.00	\$ 5,735.88
Warranty period	1 Year	12 Months	1 year with requested expanded of 10 years	Not listed	1 Year with option to purchase 4 additional years	1 Year	10 Years

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Implementation	Included	No Charge	\$ -	\$ 13,800.00	Included in Training	Included	\$ 3,250.00
Training	Included	No Charge	\$ 8,000.00	\$ 10,500.00	2 days included	\$ 3,500.00	\$ 3,250.00
Documentation	Included	No Charge	\$ 1,000.00	N/A	Included in system	Included	\$ -
<b>Total System Purchase Price</b>	\$ 2,991,000.00	\$ 1,380,000.00	\$ 2,150,200.00	\$ 2,392,000.00	\$ 1,495,500.00	\$ 1,332,468.00	\$ 1,764,306.88
		Plus credit of \$4,000.00 for trade in			Optional Yearly Maintenance: ORS Reading System: \$2800/yr (up to 25,000 meters);	Included	
		Blanket PO for 5,000 price drops to \$57.00 each			CONNECT reading management software: \$700/yr;		
		Blanket PO for 10,000 price drops to \$54.00 each			Badger-Radix Data Collector: \$495/yr / Loader/Charger: \$52.00/yr;		
					Training: Additional days may be purchased for \$1,700 per day		
GPS Mapping Software (Optional)	\$10,000.00	Included in Proposal Price				Included in Proposal Price	