

Date: December 2, 2020

**Torrington Fire Department
City of Torrington**



Peter A. Towey
Chief Fire Services

David A. Tripp, Jr.
Deputy Chief Operations

Robert J. Shopey III
Training/Safety Division

Edward Bascetta
Fire Prevention/Investigation Division



Date: December 3, 2020

To: Mayor Elinor Carbone, City Council

From: Peter Towey, Fire Chief

Subject: Torrington Fire Department Communications Upgrades (Updated)

CC: Pennie Zucco, Purchasing Agent

The current radio system utilized by the Torrington Fire Department has several issues that require improvements. I am recommending the Torrington Fire Department start an implementation process for a Fireground Mobile Repeater system. The total project cost of \$45,000.01 will be funded from Fire Department Capital Reserve previously set aside for improvements to the radio system. I am recommending that the City purchase the required Motorola equipment for \$43,681.79 (Quote Attached) off the existing State of Connecticut Master Contract (A-99-001) which includes additional incentive discounts that we are able to leverage. The installation and programming would be completed by the Motorola vendor, NorcomCT, off an existing State of Connecticut Contract (19PSX0088) for the amount of \$1,318.22 (Quote Attached). The purchase, installation, and programming of the referenced equipment will allow three apparatus to be outfitted with this important communications capability. This will be the initial phase of a long-term radio transition plan.

Background

Early on in my tenure, gaps within the current Fire Department communications system were identified. These gaps included coverage concerns and inability to monitor a simplex fireground frequency. The transition to the State of Connecticut Telecommunications System and implementation of a Fireground Mobile Repeater system was identified as the best solution. Use of this system will require the acquisition of mobile and portable radio equipment compatible with the State of Connecticut Telecommunications System. The City of Torrington currently has an executed MOU which provides access to this system at this time. The Torrington Fire Department submitted Assistance for Firefighters Grant applications for 2018 and 2019 to complete the entire transition. These grant applications were not successful. The Torrington Fire Department will continue to seek alternative funding sources as we implement this phased approach.

Project Overview

This initial phase will prioritize implementation of the Fireground Mobile Repeater system. Currently, all fireground communications occur on a simplex VHF frequency that only travels radio to radio and has a limited range. This prevents monitoring of this communication unless directly on the scene. This proposed project will include the installation of three mobile cross-band repeaters and one dual band portable radio. This equipment will patch the VHF fireground communications and transmit it on a 800 talkgroup on the Connecticut Telecommunications System. This will provide two-way communications beyond the direct fireground.

Equipment

Comprehensive research identified the Motorola Futurecomm DVRS and VRX cross-band mobile repeaters as the only viable solution for this project. This equipment is the only equipment that is channel steerable and has the potential to pass radio ID information through the repeater (requires Motorola portables radios at this time). In addition, the DVRS is the only equipment currently capable of transmitting on both the 800 and VHF systems. Use of the Futurecomm repeaters requires pairing with Motorola mobile radios. The following is the listing of the equipment for this project:

Dist 1

- 1 Futurecomm DVRS
- 1 Motorola 4500 mobile radio

Engine 2 and Engine 4

- 2 Futurecomm VRX
- 2 Motorola 8500 mobile radio

Additional

- 1 Motorola APX8000XE
- Installation
- Programing

Conclusion

The total cost for this initial investment is \$45,000.01 which would be funded from Capitol Reserve. I am recommending that the City complete this project utilizing the State of Connecticut Master Contract with Motorola and take advantage of the additional incentive discounts. I am continuing to seek alternative funding for the larger radio system transition. Completion of this project will greatly improve firefighter safety, while providing additional time to identify alternative funding sources for the larger project.



Torrington Fire Department
 Chief Peter Towey
 111 Water Street
 Torrington, CT 06790

Date 11/20/2020

Qty	Description	Item Number	Unit List	APC	Dis	Unit Contract	Extended Contract
2	APX8500 ALL BAND Mobile	M37TSS9PW1 N	\$4,770.00	681	25%	\$ 3,577.50	\$ 7,155.00
	ADD: 7/800 MHZ BAND						
	ADD: VHF BAND						
2	DEL: DELETE UHF BAND	GA05509	(\$800.00)	681	25%	\$ (600.00)	\$ (1,200.00)
2	ADD: ASTRO DIGITAL CAI	G806	\$515.00	656	25%	\$ 386.25	\$ 772.50
2	ENH: SMARTZONE OPERATION	G51	\$1,500.00	527	25%	\$ 1,125.00	\$ 2,250.00
2	ENH: P25 TRUNKING SOFTWARE	G361	\$300.00	656	25%	\$ 225.00	\$ 450.00
2	ADD: TDMA OPERATION	GA00580	\$450.00	471	25%	\$ 337.50	\$ 675.00
2	ADD: HARDWARE KEY	QA01648AA	\$5.00	655	25%	\$ 3.75	\$ 7.50
2	ADD: REMOTE MOUNT	G67	\$297.00	656	25%	\$ 222.75	\$ 445.50
2	ADD: CONTROL HEAD SOFTWARE	G444	\$0.00	656	25%	\$ -	\$ -
2	ADD: APX O2 CONTROL HEAD	GA00804	\$492.00	656	25%	\$ 369.00	\$ 738.00
2	ADD:IMPACT GREEN COLOR	G201	\$25.00	656	25%	\$ 18.75	\$ 37.50
2	ADD: DVRS MSU ACTIVATION	GA00631	\$250.00	656	25%	\$ 187.50	\$ 375.00
2	ADD: J600 ADAPTER CABLE	GA01515	\$ 95.00	681	25%	\$ 71.25	\$ 142.50
2	ADD: NO RF ANTENNA NEEDED	G89	\$ -	656	25%	\$ -	\$ -
2	ADD: NO GPS ANTENNA NEEDED	GA00235	\$ -	656	25%	\$ -	\$ -
2	ADD: STD PALM MICROPHONE	W22	\$ 72.00	471	25%	\$ 54.00	\$ 108.00
2	ADD: SPKR 15W WATER RESISTANT	G831	\$ 60.00	656	25%	\$ 45.00	\$ 90.00
2	ADD: 3Y ESSENTIAL SERVICE	G78	\$ 168.00	185	0%	\$ 168.00	\$ 336.00
2	ADD: GROUP SERVICES	GA09008	\$ 150.00	656	25%	\$ 112.50	\$ 225.00
2	ENH: OVER THE AIR PROVISIONIN	G996	\$ 100.00	656	25%	\$ 75.00	\$ 150.00
2	VRX1000 - VHF 136-174 MHZ	TT2792	\$3,350.00	571	15%	\$ 2,847.50	\$ 5,695.00
2	DVR/VRX FOR USE WITH DUAL BAND APX MOBILE	TT06279AA	\$ -	571	15%	\$ -	\$ -
2	VRX1000 P25 DIGITAL CONVENTIONAL	TT05951AA	\$ 1,560.00	571	15%	\$ 1,326.00	\$ 2,652.00
2	VRX1000 P25 ENHANCED TRUNKING	TT05953AA	\$ 1,680.00	571	15%	\$ 1,428.00	\$ 2,856.00
2	VRX1000 RM-OTAP	TT06569AA	\$ 151.00	571	15%	\$ 128.35	\$ 256.70
2	Single Triplexer Relay Kit (w/relay)	DDN2658A	\$ 870.00	571	15%	\$ 739.50	\$ 1,479.00
2	VRX1000 CROSS-BAND 4 YR EXT WARRANTY	DDN2079	\$ 756.00	571	15%	\$ 642.60	\$ 1,285.20
2	Configuration (additional unit)					\$ 700.00	\$ 1,400.00



Torrington Fire Department
 Chief Peter Towey
 111 Water Street
 Torrington, CT 06790

Date 11/20/2020

1	APX 6500 700/800 Mobile Full Model	M25URS9PW1BN	\$2,738.00	527	25%	\$ 2,053.50	\$ 2,053.50
1	ADD: ASTRO DIGITAL CAI	G806	\$ 515.00	656	25%	\$ 386.25	\$ 386.25
1	ENH: SMARTZONE OPERATION	G51	\$ 1,200.00	527	25%	\$ 900.00	\$ 900.00
1	ENH: P25 TRUNKING SOFTWARE	G361	\$ 300.00	656	25%	\$ 225.00	\$ 225.00
1	ADD: TDMA OPERATION	GA00580	\$ 450.00	471	25%	\$ 337.50	\$ 337.50
1	ADD: HARDWARE KEY	QA01648AA	\$ 5.00	655	25%	\$ 3.75	\$ 3.75
1	ADD: ADP ONLY (NOT-CAP)	G193	\$ -	430	25%	\$ -	\$ -
1	ADD: REMOTE MOUNT O2	G67	\$ 297.00	471	25%	\$ 222.75	\$ 222.75
1	ADD: CONTROL HEAD SOFTWARE	G444	\$ -	656	25%	\$ -	\$ -
1	ADD: APX O2 CONTROL HEAD	GA00804	\$ 492.00	656	25%	\$ 369.00	\$ 369.00
1	ADD: GREEN COLOR HOUSING	G201	\$ 25.00	656	25%	\$ 18.75	\$ 18.75
1	ADD: DVRS MSU ACTIVATION	GA00631	\$ 250.00	656	25%	\$ 187.50	\$ 187.50
1	ADD: NO RF ANTENNA NEEDED	G89	\$ -	656	25%	\$ -	\$ -
1	ADD: NO GPS ANTENNA NEEDED	GA00235	\$ -	656	25%	\$ -	\$ -
1	ADD: STD PALM MICROPHONE	W22	\$ 72.00	471	25%	\$ 54.00	\$ 54.00
1	ADD: SPEAKER, 15W	G831	\$ 60.00	656	25%	\$ 45.00	\$ 45.00
1	ADD: 3Y ESSENTIAL SERVICE	G78	\$ 168.00	185	0%	\$ 168.00	\$ 168.00
1	ADD: GROUP SERVICES	GA09008	\$ 150.00	656	25%	\$ 112.50	\$ 112.50
1	ENH: OVER THE AIR PROVISION	G996	\$ 100.00	656	25%	\$ 75.00	\$ 75.00
1	DVRS VHF VEHICLE MOUNT CROSS BAND	TT1240	\$9,809.00	571	15%	\$ 8,337.65	\$ 8,337.65
1	DVR/VRX FOR USE WITH SINGLE BAND APX MOBILE	TT05715AA	\$ -	571	15%	\$ -	\$ -
1	DVR RM-OTAP	TT06559AA	\$ 504.00	571	15%	\$ 428.40	\$ 428.40
1	DVR CROSS BAND 4 YR EXT WARRANTY	DDN2085	\$ 605.00	571	15%	\$ 514.25	\$ 514.25
1	DVR OPTIONS CABLE 2.5FT	DDN9031	\$ 203.00	571	15%	\$ 172.55	\$ 172.55
1	Configuration (first unit)					\$ 900.00	\$ 900.00

Torrington Fire Department
 Chief Peter Towey
 111 Water Street
 Torrington, CT 06790

Date 11/20/2020

1	APX8000 All-Band Portable Model 2.5 Top and Front Display	H91TGD9PW6 N	\$5,983.00	579	25%	\$ 4,487.25	\$ 4,487.25
	ADD: 7/800 MHZ BAND						
	ADD: VHF BAND						
1	DEL: DELETE UHF BAND	QA05509AA	\$ (800.00)	579	25%	\$ (600.00)	\$ (600.00)
1	ENH: APX8000XE RUGGED RADIO	QA02006	\$ 800.00	581	25%	\$ 600.00	\$ 600.00
1	ALT:APX 8000 HOUSING GREEN	QA01427	\$ 25.00	579	25%	\$ 18.75	\$ 18.75
1	ADD: ASTRO DIGITAL CAI	Q806	\$ 515.00	579	25%	\$ 386.25	\$ 386.25
1	ADD: SMARTZONE OPERATION	H38	\$ 1,500.00	655	25%	\$ 1,125.00	\$ 1,125.00
1	ADD: P25 9600 BAUD TRUNKING	Q361	\$ 300.00	655	25%	\$ 225.00	\$ 225.00
1	ADD: TDMA OPERATION	QA00580	\$ 450.00	655	25%	\$ 337.50	\$ 337.50
1	ADD: DVRS PSU ACTIVATION	QA00631	\$ 100.00	655	25%	\$ 75.00	\$ 75.00
1	ADD: APX Personnel Account	Q445	\$ 150.00	481	25%	\$ 112.50	\$ 112.50
1	ADD: PROGRAM OVER P25 (OTAP)	G996	\$ 100.00	426	25%	\$ 75.00	\$ 75.00
1	ADD: GROUP SERVICES	QA09008	\$ 150.00	655	25%	\$ 112.50	\$ 112.50
1	ADD: HARDWARE KEY	QA01648AA	\$ 5.00	655	25%	\$ 3.75	\$ 3.75
1	ADD: ADP ONLY (Not CAP)	Q667	\$ -	430	25%	\$ -	\$ -
1	ADD: 3Y ESSENTIAL SERVICE	Q58	\$ 102.00	185	0%	\$ 102.00	\$ 102.00
1	Codeplug consulting and development programming and engraving					\$ 300.00	\$ 300.00
1	BATTERY SPARE, TIA4950 3400mAh	PMNN4504	\$ 193.00	453	25%	\$ 144.75	\$ 144.75
1	XE500 SPEAKER MIC, W/O CH, GREEN	PMMN4106B	\$ 550.00	372	25%	\$ 412.50	\$ 412.50
1	ACCESSORY, RADIO STRAP,LEATHER, XL	RLN6487	\$ 28.50	742	25%	\$ 21.38	\$ 21.38
1	ACCESSORY, CARRY CASE, XE TIA BATTERY	PMLN7905	\$ 62.00	742	25%	\$ 46.50	\$ 46.50
1	CHARGER, SINGLE-UNIT, IMPRES 2, 3A, 115VAC, US/NA	NNTN8860A	\$ 165.00	785	25%	\$ 123.75	\$ 123.75

Total All Sections \$ 52,002.13
 Additional Discount* \$ (8,320.34)
 Total Price \$ 43,681.79



Torrington Fire Department
Chief Peter Towey
111 Water Street
Torrington, CT 06790

Date 11/20/2020

System License Technical Notes

Core licenses have not been included
Group services and OTAP have been included for future use
Customer is responsible for FCC licensing
Antennas and Installation are not included

Notes

Pricing is per State Master Contract A-99-001
*Price shown includes CLMRN large system discount combined with one time competitive discount
Payment terms net 30 days as shipped

Please issue PO to Motorola Solutions, Inc.

-Note on PO to ship order to 7 Great Hill Road, Naugatuck, CT 06770
-Note on PO your address as the billing address and the "Ultimate Destination"
Please allow 10-14 days after delivery to NorcomCT for programming

Prepared By

Julie Reibold

NorcomCT | 7 Great Hill Road, Naugatuck, CT 06770
Phone: 203-568-6929 | Email: jreibold@norcomct.com



Prepared For:

Torrington Fire
ATTN: Chief Peter Towey

Prepared By: Holly Brown – hbrown@norcomct.net

Date: November 20, 2020

Radio Equipment Installation	\$4,007.57
Additional discount*	(\$2,689.35)
Project Total	\$1,318.22

*additional competitive incentive one-time discount in addition to state contract.
This discount requires purchase of Motorola quote for equipment dated 11/20/2020

Statement of Work:

1. Install customer supplied APX4500 remote mount radio and VRX unit into two Fire Apparatus
2. Install customer supplied APX6500 remote mount radio and Futurecom DVRS unit into one Command vehicle

Equipment List:

Qty	Item	Description
3	ROOF-FT-NITI-M	Sti-CO Flexi-Whip Antenna (Whip Only)
3	HAF4016A	Antenna, 800 1/4 Wave Roof Mount
2	K794	Thick Roof Mount
1	0180351A78	Roof Mount (800MHz)
3	MINI_UHF	Connector, Mini_UHF

Notes:

1. Pricing is consistent with State Contract 19PSX0088
2. Assumes Setcom headset system is compatible with the APX series radios
3. Assumes installation is done at customer location



QUOTATION: C100262

7 Great Hill Road, Naugatuck, Connecticut 06770
(800) 223-9008 | customerservice@norcomct.com

Terms: Net 30 Days
Price Validity: 30 Days
Delivery: 4-6 Weeks
Warranty: 90 Days Labor Normal Business Hours

Limit of Liability:

Northeastern Communications, Inc., dba NorcomCT will not be liable for any damages, including any lost profits, lost savings, loss of life or other incidental or consequential damages arising out of the use or inability to use this product, even if Northeastern Communications, Inc. or its employee has been advised of the possibility of such damages, or for any claim by any other party. Northeastern Communications, Inc. will have its liability limited to the repair or replacement of the supplied original equipment or program diskette, associated publication and any part or parts of the product or system purchased for the period of the warranty.

Pricing, Descriptions, Quantities, Conditions and Terms have been read and accepted.

Quotation Accepted By: _____ Title _____ Date: _____
(Signature of Authorizing Person)



MOTOROLA SOLUTIONS
Radio Solutions Channel Partner

www.norcomct.com