



**CITY OF PLANO
COUNCIL AGENDA ITEM**

CITY SECRETARY'S USE ONLY				
<input type="checkbox"/> Consent <input type="checkbox"/> Regular <input type="checkbox"/> Statutory				
Council Meeting Date:		03/22/2010		
Department:		Purchasing		
Department Head		Mike Ryan		
Agenda Coordinator (include phone #): Sharron Mason x7247				
CAPTION				
Approval of change order to Motorola USA, Inc., increasing the contract by \$1,521,001.00 for CSP P25 Trunk Radio System simulcast site additions to Communications Tower and Schoolhouse, Change Order # 2. Bid No. 2009-137-C.				
FINANCIAL SUMMARY				
<input type="checkbox"/> NOT APPLICABLE <input type="checkbox"/> OPERATING EXPENSE <input type="checkbox"/> REVENUE <input checked="" type="checkbox"/> CIP				
FISCAL YEAR: 2009-10	Prior Year (CIP Only)	Current Year	Future Years	TOTALS
Budget	722,859	15,277,141	8,000,000	24,000,000
Encumbered/Expended Amount	-722,859	-13,600,196	0	-14,323,055
This Item	0	-1,521,001	0	-1,521,001
BALANCE	0	155,944	8,000,000	8,155,944
FUND(S): TECHNOLOGY IMPROVEMENTS (CO'S/TAX NOTES)				
<p>COMMENTS: Funds are available from the 2008 and 2009 sale of Tax Notes and 2010 sale of Certificates of Obligation. This change order, in the amount of \$1,521,001, will leave a re-estimated current year balance of \$155,944 for the Radio System Infrastructure Replacement project.</p> <p>STRATEGIC PLAN GOAL: The additional equipment for the radio system infrastructure replacement project relate to the City's Goals of Financially Strong City with Service Excellence and Safe Large City.</p>				
SUMMARY OF ITEM				
<p>Two additional simulcast remote sites are included in this change order which will be staged at CCSi and implemented as part of the Radio System Infrastructure Replacement project.</p> <p>Staff recommends approval of Change Order No. 2. The contract total will be \$13,792,399.00, which includes change orders of 12.39% of the original contract amount of \$12,271,398.00.</p>				
List of Supporting Documents:			Other Departments, Boards, Commissions or Agencies	
Change Order 2				

PAWM P25 Simulcast

City of Plano Change Order #2

Overview

This document details the scope changes discussed with the City of Plano during the Design Review process. Should further clarifications or changes be required, Motorola will revise our proposal and price pages to reflect final scope.

Scope Changes

1. Simulcast Site Additions at Communications Tower and Schoolhouse

Two additional Simulcast Remote Sites are included in this change order which will be staged at CCSi and implemented as part of the project. The equipment list reflects the addition of the following equipment:

- Master site licenses and site switching hardware for both sites
- Remote site infrastructure at two sites including network equipment, time synchronization, (12) GTR stations, racks, surge protection and MOSCAD site monitoring. Please note, the twelve (12) GTR stations associated with one of the sites were included in Change Order #1. This change order includes the additional site equipment and implementation services described herein
- Antenna systems at two sites including (2) 260' transmit line runs and (1) 290' receive line run with combiners and multicouplers

The pricing of this change order assumes an "Avenue N" type of installation at both new sites. Motorola assumes that Plano will provide a tower, shelter, UPS, Generator, electrical, grounding and bonding at these sites within the timeframe of the existing project schedule and no later than June 2010. As such, the Motorola project labor (Project Management, Engineering, and System Technologist) included in this change order is quoted under the assumption that the two new sites will be implemented during the same time-frame as the original seven (7) sites. Motorola will reassess the costs associated with system deployment and optimization should the City's construction of the two new sites become delayed to the point that we are unable to include these two new sites in the currently scheduled deployment phase of

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the seven (7) original sites. Motorola will provide a quote for additional Project Management, Engineering and System Technologist labor if necessary.

Plano must license their existing frequencies at these two new sites within the due dates in the project schedule. They must also provide site interconnectivity and capacity on their Microwave system based on the specifications required for the system design.

The following table provides an overview of the site development responsibilities of Plano and Motorola

Table 1: Site Development Responsibilities for Communications Tower and Schoolhouse Sites

Site Improvements	Motorola	City of Plano
Bond new equipment to existing site common ground system	X	
Provide PE sealed drawings for the site layout, grounding, as well as antennas and line installation per R56 requirements	X	
Prepare record drawings of the site showing the as-built information	X	
Perform three-point or clamp-on ground system testing	X	
Provide structural engineering analysis for antenna support structure, to support the proposed antenna system	X	
Tower mapping, structural measurement survey, materials testing, geotechnical investigation and/or other field investigation to acquire the data		X
Make structural improvements to towers that fail structural analysis		X
Design and provide multi-antenna support platform or side mounts, to support proposed antennas on guyed or self-supported towers	X	
Install antenna systems and perform sweep tests	X	
Provide AC power modifications/expansions to support proposed equipment	X	
Provide UPS systems		X
Install Type 3 Surge Protection on all Motorola-Supplied Equipment	X	
Provide and Install Type 1 and Type 2 Surge Protection as follows		X
Provide ground system upgrades to meet R56 Guidelines for Communication Sites		X
Motorola and Plano will work together to confirm existing or planned generators are adequately sized to support the proposed and existing equipment. Plano will supply new generators if existing generators are not adequately sized.		X
Provide EME plans for the sites to comply with FCC requirements, prior to starting tower work.		X

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Site Improvements	Motorola	City of Plano
As applicable, coordinate, prepare, submit, and pay for all required permits and inspections.		X
Pay for any easement or usage fees.		X
Pay for all utility connection, pole or line extensions and any easement or usage fees. Utility connections to be supplied within 50 feet of main panels supplied by Motorola.		X
Review and approve site design drawings within seven calendar days of submission by Motorola or our subcontractors. Should a re-submission be required due to errors or omissions, the Cities shall review and approve the re-submitted plans within seven calendar days from the date of submittal.		X
Pay for the usage costs of power and leased lines both during the construction/installation effort and on an ongoing basis.		X
Application fees, taxes, and recurring payments for lease/ownership of the property.		X
Provide personnel to observe construction progress and testing of site equipment according to the schedule provided by Motorola.		X
Secure clear and unencumbered title, memorandum of understanding or lease agreement with the property owners.		X
Provide a right of entry letter from the site owner for Motorola to conduct field investigations.		X
Provide clear and stable access roads to the sites for heavy-duty construction vehicles, cement trucks and cranes. Sufficient space must be available at the site for these vehicles to maneuver under their own power without assistance from other equipment.		X

2. Subscribers

2.1 Plano XTS5000 Portables

Per the City of Plano's request, we have included (65) additional XTS5000 Portables equipped with P25 digital operation, integrated voice and data, over-the-air programming, remote speaker microphones, IMPRES single unit chargers, spare batteries and additional two-year depot level service. We have included the cost to program these radios once as part of the change order. The templates used for these radios will be the same as those developed under the original contract (i.e. this change order does not include additional templates).

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2.2 Plano Motorcycle Upgrades

We have included (6) Motorcycle conversion kits to change from existing W control heads to O5 control heads. The kit includes the O5 control head, associated cables and programming services.

2.3 Logging Radio

Per the City of Plano's request we have added (1) XTL2500 radio to serve as a spare for the logging recorder solution. Motorola is providing hardware only, no configuration or installation services are necessary as this unit will serve as a spare.

2.4 Extended Warranty on Existing Subscribers

Per the City of Plano's request we have added extended coverage for existing subscriber units (3 years) to match the extended coverage of new subscriber units. The following table summarizes the quantities of existing units that are being upgraded as part of the PAWM P25 Simulcast project. The pricing given in Section 7 (Pricing) provides 3 years of extended coverage for types and quantities of radios indicated in the table below.

Table 2: Existing Subscribers for Extended Warranty Coverage

Radio Type	Plano
Motorola ASTRO Spectra Mobile **	excluded
Motorola XTL2500 Mobile	6
Motorola XTL5000 Mobile	189
Motorola XTS3000 Portable **	excluded
Motorola XTS2500 Portable	96
Motorola XTS5000 Portable	152
ASTRO Spectra Consolette **	excluded
XTL2500 Control Station	2
XTL5000 Consolette	39
Motorola XTL5000P25 Mobile	28
Motorola XTL2500P25 Mobile	7
Motorola XTS5000P25 Portable	7
Motorola XTL 5000 Consolette	24
Motorola XTS5000P25 Portable	66
Total	616

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** These units are not included in the 3 years of extended coverage. The ASTRO Spectra will be excluded from product support as of 12/31/2010 and the XTS3000 were excluded from product support as of 12/31/2009.

3. ISSI Interface

Per PAWM's request, Motorola has included (1) ISSI.1 Network Gateway with software capability for (3) ISS1.1 Gateway applications and network equipment. Our understanding is that PAWM would like to procure this equipment so it may be staged at CCSi and preliminarily tested although no ISSI connections are planned in the near future. Therefore, we have included the necessary equipment and CCSi staging services as part of this change order and installation at the Avenue N Master site as part of this project. We have not included additional services, testing or field support to interconnect ISSI to other systems or test this interface beyond CCSi testing. Please note that when the ISSI interface is implemented and depending on the timeframe and types of connections, additional services and possibly software or hardware may be required.

ISS1.1 allows connections to other Project 25 compliant systems equipped with the P25 ISSI interface which includes hardware, software and network equipment. Site links, pre-planning and configuration are required to support ISSI calls across multiple systems. ISS1.1 supports basic call services including Group Call and Emergency Calls. Currently it does not support Dynamic System Resilience (DSR) so when a switch to the Backup Master site occurs, intersystem communication will not be possible. Additionally, ISS1.1 supports P25 Phase 1 FDMA operation only at this time.

4. Site Frequency Reference Hardware

We have added (4) additional 10MHz cards to previously proposed TRAK units (one at each of the four Data Radio mobile data sites) to accommodate the City of Plano's new data system hardware. Motorola is providing equipment only and no services or support to connect, test or support the interface with the Data Radio stations.

5. Outdoor Warning System Hardware

(1) Additional portable activation unit (football) consisting of FEP, ACE3600 RTU, laptop and radio has been added for the OWS. This includes assembly and configuration services to create a fully functional portable activation unit.



6. Network Equipment

Motorola has added (2) additional Customer Enterprise Network (CEN) Ethernet switches to provide CEN LAN connectivity for the Prime Site Switching Command PC, OTAP Client and Outdoor Warning System Front End Processing equipment. One (1) switch will be located at the Avenue K dispatch center and one (1) switch will be located at the radio shop. In addition, (2) LAN extenders have been added to supply connectivity from the Avenue K dispatch center CEN LAN switch to the microwave system located at the Avenue K radio tower. Motorola will assist with the configuration of these items; however, they are intended for use in the City's enterprise network, thus the City of Plano will determine where these devices will be installed and provide assistance with the design and configuration of these network extensions. In addition, these network interface devices are intended to provide the network interfaces for the equipment described above. The City of Plano is responsible for providing the medium (e.g. wireless or wireline T1 and LAN/WAN circuits) to which the network interface devices will be attached.

7. Pricing

Equipment	\$1,027,000.00
Project Management and Installation Services	\$425,421.00
Extended Warranty for Existing Subscribers (see detail below)	\$94,580.00

TOTAL CHANGE ORDER PER SCOPE ABOVE **\$1,547,001.00**

Q1 Promotion on Subscribers @\$400.00 savings each **-26,000.00**

Subscribers must be ordered and shipped by 3/19/2010

Total Change Order **\$1,521,001.00**

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